

# Pulse Pathology (Chickpea) Report of Work

(June 1978 - May 1979)



**ICRISAT**

**International Crops Research Institute for the Semi-Arid Tropics**

**ICRISAT Patancheru P.O.**

**Andhra Pradesh, India 502 324**

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PULSE PATHOLOGY SUB-PROGRAM (CHICKPEA)

STAFF

Dr. Y.L. Nene	.....	Principal Plant Pathologist (Pulses)
Dr. M.V. Reddy	.....	Plant Pathologist S-2
Dr. M.P. Haware	.....	Plant Pathologist S-1
Mrs. Sheila Vijayakumar	.....	Technical Assistant
Mr. S.H. Mahamulkar	.....	Technical Assistant (Up to July 1979)
Mr. P. Radhakrishna	.....	Technical Assistant (From December 1978)
Mr. K. Prabhakar Reddy	.....	Field Assistant
Mr. P.R. Murthy	.....	Secretary-1 (Up to December 1978)
Mr. A. Chandar	.....	Secretary-1 (From April 1979)
Mr. R. Narsing Rao	.....	Stenographer
Md. Sharfuddin Khan	.....	Driver-cum-General Assistant
Mr. M.M.S. Ali Baig	.....	Driver-cum-General Assistant



PULSE PATHOLOGY SUB-PROGRAM (CHICKPEA)

LIST OF APPROVED PROJECTS  
(1978-1980)

Sub-program Leader : Y. L. Nene

<u>No.</u>	<u>Title</u>	<u>Project Scientist</u>	<u>Cooperators</u>
CP-Path-1	Studies on Fusarium wilt of chickpea	M.P. Haware	J. Kumar S.C. Sethi C.L.L. Gowda O. Singh
CP-Path-2	Studies on stem and root rots of chickpeas	M.P. Haware	J. Kumar S.C. Sethi C.L.L. Gowda O. Singh
CP-Path-3	Studies on chickpea stunt and other viral diseases	M.V. Reddy	J.P. Verma (H.A.U., Hissar) J. Kumar C.L.L. Gowda O. Singh W. Reed
CP-Path-4	Studies on Ascochyta blight	M.V. Reddy	O. Singh J. Kumar K.B. Singh (ICARDA)
CP-Path-5	International chickpea disease nurseries	Y.L. Nene	M.P. Haware M.V. Reddy J.M. Green L.J.G. van der Maesen

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PROJECT:CP-PATH-1(78) : STUDIES ON FUSARIUM WILT OF CHICKPEA

I. SUMMARY

1. Of the 603 lines found promising against wilt and root rots in 1977-78 season, 105 were found resistant (less than 10% mortality).
2. Two lines, ICC-2616 and -3782 which were found promising against the stunt at Hissar were found promising against the wilt also.
3. None of Ascochyta blight promising lines and All India trial entries (GCVT and GIET) were found resistant.
4. Over 4500 breeding materials were screened in the sick plots.
5. Of the 1207 new germplasm accessions screened, 36 were found resistant. These will be tested again.
6. Lentil, pea, and pigeonpea were found to be symptomless carriers of the wilt fungus—*Fusarium oxysporum* f.sp. *ciceri*.
7. Cultivar JG-62 was infected within 4 days after sowing, whereas cv. 850-3/27 was infected within 7 days. However, in the latter case it took 23 days of exposure to inoculum for getting 100% mortality. These results are very similar to those obtained last year.
8. Age of seedlings did not influence ultimate wilt incidence in susceptible cultivars.
9. Evidence has been obtained to indicate the existence of physiologic races of *F. oxysporum* f.sp. *ciceri*.
10. The wilt fungus is able to survive up to 15 months in infected stems and roots buried in soil. The experiment is continuing.
11. Leaflets and terminal branches from infected plants apparently do not support survival of the wilt fungus till the next season.
12. Planting of a different crop prior to planting chickpea in a wilt sick plot did not influence wilt incidence.
13. Considerable help was extended to breeders in their studies on inheritance of wilt resistance.



## II. INTRODUCTION

This project became operative from January 1978 with the following objectives:

1. Study survival and spread of the pathogen (*Fusarium oxysporum* f.sp. *ciceri*)
2. Study the situation on pathogenic races, if any
3. Further improve screening techniques
4. Screen germplasm/breeding material for resistance

Most of the work during the year pertained to objectives 1, 2, and 4. Screening techniques; pot and field, have now been standardized.

Since we are now able to distinguish typical wilt symptoms from those of other diseases, we were able to collect data on wilt incidence alone in a newly developed wilt sick plot.

## III. FIELD SCREENING FOR WILT RESISTANCE

During the year following chickpea material was planted in a newly developed wilt sick plot (M-5) in 4 meter rows, 75 cm apart. Periodic observations on the wilt incidence were made. All detailed data are given in APPENDIX-I.

Promising lines from 1977-78	603
Stunt promising lines	30
Ascochyta blight promising lines	78
GCVT (All India) entries	11
GIET (All India) entries	33
Crossing block entries	87
Others	10
Total	852

### A. Last year's promising lines

In 1977-78 season 603 lines were found promising against wilt as well as root rots. Those lines were re-tested in 1978-79 in a wilt sick plot. The detailed data on the performance are given in APPENDIX-I. The following 105 lines showed less than 10% wilt.

ICC-202, -338, -391, -516, -658, -858, -867, -1443, -1450, -1611, -2072, -2104, -2660, -3396, -3439, -3539, -4552, -6081, -6098, -6671,

-6880, -7111, -7248, -8222, -8446, -8933, -9001, 10104, -10130, -10394, -11088, -43, -606, -444, -449, -595, -102, -434, -104, -6743, -10809, -4485, -4994, -3439, -6411, -6480, -1910, -1913, -2204, -2337, -2461, -2616, -2660, -2774, -2803, -2812, -2835, -2872, -2874, -2883, -2917, -2934, -3935, -3943, -3058, -3103, -3117, -3354, -3392, -3428, -3513, -3528, -3531, -3533, -3534, -3782, -6098, -6366, -6385, -6386, -6440, -6455, -6488, -6494, -6501, -6608, -6815, -6817, -6926, -7489, -8166, -8990, -8999, -9021, -9023, -9030, -9034, -9035, -9036, -9039, -9040, -9041, -9042, -9043, and -9096.

B. Stunt promising lines

Of 30 lines found promising against the stunt at Hissar last year, ICC-2616 and -3782 were found promising against the wilt also.

C. Ascochyta blight promising lines

None was promising.

D. GCVT and GIET (All India) entries

None was promising.

E. Crossing block entries

Of the 87 crossing block entries tested, ICC-10, ICC-438, and -6708 were found promising.

F. Breeders' material

The material (listed below) from F<sub>2</sub> through F<sub>8</sub> generations was planted in the wilt sick plot. Progenies considered superior by the pathologists have been advanced by the breeders by individual plant selections or they were bulked. The data on wilt incidence are given in APPENDIX-II.

F <sub>2</sub> generation	..	222 populations
F <sub>3</sub> "	..	2852 progeny rows
F <sub>4</sub> "	..	385 "
F <sub>5</sub> "	..	752 "
F <sub>6</sub> "	..	1040 "
F <sub>7</sub> "	..	685 "
F <sub>8</sub> "	..	162 "

## G. Germplasm

The germplasm entries numbering 1207 were planted in the new BT-6 wilt sick plot. Wilt was uniform in the plot as indicated by 100 percent mortality in the susceptible check JG-62. The following accessions showed less than 10% wilt (for details please see APPENDIX-III).

ICC-1024, -3562, -5105, -6381, -6389, -6489, -6491, -6633, -6711, -6730, -6774, -6816, -6819, -8466, -8585, -8610, -8971, -8979, -8980, -8984, -8985, -8988, -8991, -8997, -9006, -9032, -9055, -9060, -9070, -9127, -10452, -10466, -10538, -10802, -10803, and -10823.

## IV. SYMPTOMLESS CARRIERS (HOSTS) OF THE WILT FUNGUS

Last year we conducted a few experiments to explore possibility of the existence of symptomless carriers of the chickpea wilt fungus. Even though we isolated *Fusarium oxysporum* from some hosts, we were unsuccessful in proving pathogenicity. This year we renewed our efforts and considered only those *F. oxysporum* cultures which looked morphologically/culturally identical to the *F. oxysporum* f.sp. *ciceri* (ICRISAT isolate no. 38). This way we reduced the number of isolates to a few so that the work could be carried out more thoroughly.

### A. Laboratory studies

Earthen pots of 45 cm diameter containing sick soil were used. In each pot 10 seeds of JG-62 (susceptible cultivar) and 10 seeds of test plant species were sown. In all 30 plants of each host were raised.

At regular intervals, 5 plants along with the roots were removed and washed thoroughly in running water. Tissues from different parts of root were surface-sterilized with 2.5% sodium hypochlorite solution for 2 minutes and were planted on modified Czapek-Dox agar for the detection of *Fusarium oxysporum* f.sp. *ciceri*. Colonies looking identical to the chickpea wilt pathogen were brought in pure culture and multiplied for pathogenicity tests.

No external or internal symptoms of wilt were observed up to 90 days in any of the plant species.

Table-1. Detection of *F. oxysporum* f.sp. *ciceri* from some plant species

Crop*	Isolation of <i>Fusarium</i> from plants			Remarks
	1-12-1978	1-1-1979	1-2-1979	
Sorghum	-	-	-	
Pearl millet	-	-	-	
Black gram	-	-	-	
Green gram	-	-	-	
Climbing bean ( <i>Dolichos lablab</i> )	-	-	-	
French bean ( <i>Phaseolus vulgaris</i> )	-	-	-	
Tomato	-	-	-	
Brinjal	-	-	-	
Lucern	-	-	-	
Groundnut	-	-	-	
Chilli	-	-	-	
Maize	-	-	-	
Cucumber	-	-	-	
Radish	-	-	-	
Lady's finger	-	-	-	
Pigeonpea NPWR-15	+	+	+	Pathogenic**
Pigeonpea ICP-6997	+	+	+	Pathogenic
Cowpea	-	-	-	
Watermelon	-	-	-	
Soybean	-	-	-	
Pea	+	+	+	Pathogenic
Lentil	+	+	+	Pathogenic

+ Isolated; - Not isolated

\*Sown in pots on 28-10-1978

\*\*Pathogenicity proved by inoculating JG-62 in water culture and then in pot culture

The results indicated that the chickpea wilt fungus could parasitize the roots of pea, lentil and pigeonpea without showing any apparent symptoms.

#### B. Field studies

In addition to the pot tests, plant species were sown in the wilt-sick plot on October 22, 1978 in 5 meter rows (50 seeds/row) along with the susceptible check JG-62. Isolations were attempted from roots of 5 plants of each plant species at 30-day interval during the season.

*F. oxysporum* f.sp. *ciceri* could be isolated from the roots of 3 crops; pigeonpea, pea, and lentil (Table-2). The fungal isolates were brought in pure cultures, multiplied in laboratory on potato-sucrose broth, and tested for pathogenicity using 'water-culture' and 'pot culture' techniques using the wilt susceptible cultivar JG-62. The isolates proved pathogenic and the cultures were identical to the original cultures of the chickpea wilt *Fusarium*.

Both pot and field studies thus revealed that at least 3 crops (all legumes) are 'symptomless carriers' of *F. oxysporum* f.sp. *ciceri*.

Table-2. Detection of *F. oxysporum* f.sp. *ciceri* in the roots of different plant species grown in wilt-sick plot

Crop	Isolation of <i>Fusarium</i> from 5 plants				Remarks
	25-11-78	26-12-78	26-1-79	25-2-79	
Sorghum (CSH-1)	-	-	-	-	
Pearl millet (HB-3)	-	-	-	-	
Black gram	-	-	-	-	
Green gram	-	-	-	-	
Climbing bean	-	-	-	-	
French bean	-	-	-	-	
Tomato (Pusa Ruby)	-	-	-	-	
Brinjal	-	-	-	-	
Lucern	-	-	-	-	
Groundnut (TMV-2)	-	-	-	-	
Maize	-	-	-	-	
Radish	-	-	-	-	
Cucumber (Poinsette)	-	-	-	-	
Lady's finger	-	-	-	-	
Pigeonpea (NPWR-15)	+	+	+	+	Pathogenicity proved
Pigeonpea (ICP-6997)	-	+	+	+	"
Cowpea	-	-	-	-	
Water melon	-	-	-	-	
Soybean	-	-	-	-	
Pea	+	+	+	x	Pathogenicity proved
Lentil	+	+	+	+	"

+ Isolated; - Not isolated; x Not attempted

#### V. AGE OF CHICKPEA PLANT AND WILT INCIDENCE

The experiments were conducted to confirm the observations made last year.

Seeds of cv. JG-62 and 850-3/27 were surface-sterilized in 2.5%

sodium hypochlorite solution for 5 minutes and were sown in 45-cm earthen pots containing autoclaved soil or sick soil.

Germinating seeds/seedlings were removed every 24 hours after sowing in sick soil. They were washed thoroughly in running water, surface-disinfected by dipping for 2 minutes in 2.5% sodium hypochlorite, and then planted in autoclaved soil in pots. Likewise seedlings removed from sterilized soil were transplanted into the wilt sick soil. The data are presented in Table-3.

The susceptible cultivar JG-62 required at least 4 days of root exposure to inoculum before wilting was observed. Five days exposure of roots to inoculum was sufficient to kill all the plants. Cultivar 850-3/27 required more time to get wilted completely. More than 6 days of exposure of root to inoculum was required before plants wilted and it took nearly 23 days to get 100 percent mortality.

This confirms our earlier observations.

When highly susceptible cultivar JG-62 and the 'late wilt' cultivar 850-3/27 were transplanted to the wilt sick soil in pots, they succumbed to the disease irrespective of the age of seedlings (Table-4). This indicates that plants do not develop ability to resist the pathogen even when they are over 50 days old. It is of no practical significance even if the plants develop resistance at a later age.

## VI. PHYSIOLOGIC RACES - EVIDENCE

Preliminary studies have provided us the evidence of the existence of races in *Fusarium oxysporum* f.sp. *ciceri*.

Chickpea wilt pathogen was isolated from wilted plants collected from different locations in India during our visits. The cultures were purified, single spored and pathogenicity proved. We have the isolates now from most of the chickpea growing areas of India.

For race studies, the inoculum was multiplied on sand-maize meal medium (9:1 proportion) in 250 ml flasks for 14 days. One hundred gm of inoculum was mixed in a plastic pot (15 cm dia) containing 2 kg of autoclaved soil (Vertisol) sand mixture (1:1). Before use, all the plastic pots were washed in running water, dipped in 5% CuSO<sub>4</sub> solution and air dried.

Seedlings for each cultivar were raised in autoclaved sand for a week, removed and then transplanted, 5 in each pot. Normally 20-25 seedlings of each cultivar were used for testing against each isolate. Uninoculated checks of each cultivar were kept. Pots were irrigated with sterilized water and utmost care was taken to avoid cross contamination.

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	25-11-78	26-12-78	26-1-79	25-2-79	
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Pearl millet (HB-3)	-	-	-	-	
Black gram	-	-	-	-	
Green gram	-	-	-	-	
Climbing bean	-	-	-	-	
French bean	-	-	-	-	
Tomato (Pusa Ruby)	-	-	-	-	
Brinjal	-	-	-	-	
Lucern	-	-	-	-	
Groundnut (TMV-2)	-	-	-	-	
Maize	-	-	-	-	
Radish	-	-	-	-	
Cucumber (Poinsette)	-	-	-	-	
Lady's finger	-	-	-	-	
Pigeonpea (NPWR-15)	+	+	+	+	Pathogenicity proved
Pigeonpea (ICP-6997)	-	+	+	+	"
Cowpea	-	-	-	-	
Water melon	-	-	-	-	
Soybean	-	-	-	-	
Pea	+	+	+	x	Pathogenicity proved
Lentil	+	+	+	+	"

+ Isolated; - Not isolated; x Not attempted

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Chickpea wilt pathogen was isolated from wilted plants collected from different locations in India during our visits. The cultures were purified, single spored and pathogenicity proved. We have the isolates now from most of the chickpea growing areas of India.

For race studies, the inoculum was multiplied on sand-maize meal medium (9:1 proportion) in 250 ml flasks for 14 days. One hundred gm of inoculum was mixed in a plastic pot (15 cm dia) containing 2 kg of autoclaved soil (Vertisol) sand mixture (1:1). Before use, all the plastic pots were washed in running water, dipped in 5%  $\text{CuSO}_4$  solution and air dried.

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Table-3. Incidence of wilt in two chickpea cultivars sown in wilt-sick soil and transplanted into autoclaved soil at regular intervals<sup>a</sup>

Days after sowing	Cultivar <sup>b</sup>			
	JG-62		850-3/27	
	No. of plants wilted	Percent wilt	No. of plants wilted	Percent wilt
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	13	52	0	0
5	23	92	0	0
6	25	100	2	8
7	25	100	10	40
8	25	100	15	60
9	25	100	13	52
10	25	100	12	48
11	25	100	19	76
12	25	100	19	76
13	25	100	15	60
14	Discontinued as wilt appeared in plants in sick soil		18	72
15			18	72
16			22	88
17			21	84
18			22	88
19			22	88
20			18	72
21			21	84
22			23	92
23			25	100
24			Discontinued as wilt appeared in plants in sick soil	

<sup>a</sup>Transplanting was stopped when wilting was observed in plants raised in sick soil pots

<sup>b</sup>25 seedlings were transplanted at each interval

The isolates used were from Hyderabad, Hissar, Jabalpur, Kanpur, and Gurdaspur, representing different chickpea growing areas in India. Ten genotypes, 4 resistant to wilt at Hyderabad, and 6 susceptible (4 from desi and 2 from kabuli type) were used. The test was conducted three times and reactions in most cases were consistent. However, to further confirm the findings, a trip was made in December 1978 to Hissar and Kanpur to collect wilted plants. These isolates were also

Table-4. Incidence of wilt in two chickpea cultivars raised in autoclaved soil and transplanted into wilt-sick soil<sup>a</sup>

Days after sowing in autoclaved soil	Percent wilt	
	JG-62	850-3/27
1	100	100
2	100	100
3	100	100
4	100	100
5	100	100
6	100	100
7	100	100
8	100	100
10	100	100
14	100	100
17	100	100
21	100	100
29	100	100
34	100	100
38	100	100
41	100	100
45	100	100
48	100	100
52	100	100

<sup>a</sup>20 plants were transplanted at each interval

The mortality was observed within 30 days after transplanting the cv. JG-62 and within 50 days in cv. 850-3/27

single spored and the pathogenicity was proven. They were then used in repeating the study. The cultivar reactions obtained by us confirmed earlier findings. Summarized results have been presented in Table-5.

A critical look at the results in Table-5 reveals that C-104 is resistant to Gurdaspur isolate but susceptible to all others. JG-74 is resistant to all isolates except the Kanpur isolate. CPS-1 is resistant only to the ICRISAT isolate. WR-315 is resistant to all isolates except the Gurdaspur isolate. JG-62, L-550 and Chafa are susceptible to 4 isolates and moderately susceptible to Gurdaspur isolate. 850-3/27 is susceptible to Hyderabad isolate and moderately susceptible to all others. Annigeri is susceptible to all isolates.

Hissar and Jabalpur isolates appear to be identical and can be considered nearer to ICRISAT isolate. The Kanpur isolate is more aggressive and quite distinct. It appears to be a different physiologic race. Gurdaspur isolate also give a distinct reaction on C-104 and can be considered a separate race.

Table-5. Reaction of chickpea cultivars to five isolates of *Fusarium oxysporum* f.sp. *ciceri*<sup>a</sup>

Sl. No.	Cultivars	Reaction to isolate <sup>b</sup>																			
		Hyderabad				Hissar				Jabalpur				Kanpur				Gurdaspur			
		1	2	3	4 <sup>c</sup>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1.	JG-62	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	M	M	M	M
2.	C-104	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	R	R	R	R
3.	BG-212	R	R	R	R	M	M	M	M	M	M	M	M	S	S	S	S	M	M	M	M
4.	JG-74	R	R	R	R	R	R	R	R	R	R	R	R	S	M	S	M	R	R	R	R
5.	CPS-1	R	R	R	R	M	M	M	M	S	M	M	M	S	S	S	S	S	S	S	S
6.	WR-315	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	S	M	M
7.	Annigeri	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
8.	Chafa	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	M	M	M
9.	L-550	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	M	M	M	M
10.	850-3/27	S	S	S	S	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M

<sup>a</sup> Readings were taken 40 days after inoculation.

<sup>b</sup> R = Resistant (0-20% wilt); M = Moderately susceptible (21-50% wilt); S = Susceptible (51% and above wilt). Seedling number of each cultivar varied from 20-25 in different tests.

<sup>c</sup> The test was carried out 4 times.

## VII. WILT FUNGUS SURVIVAL

The longevity of the fungus present in the roots of chickpea wilted plant is not known. To find out how long *Fusarium oxysporum* f.sp. *ciceri* survives in different plant parts, experiments were initiated in March 1978. In one experiment, roots with 5 cm stem base from naturally infected plants were buried in 45 cm pots (bottom removed). The pots themselves were buried in soil so that top of the pot was in level with soil surface. The soil was Vertisol. All the roots were weighed before burial. Four roots were carefully removed after every three months from the pots, dried, and weighed. After washing in running water, the tissues were surface-sterilized in 2.5% sodium hypochlorite for 2-3 minutes and isolations were attempted.

Identity of the fungus was verified and pathogenicity was checked. The experiment has been planned for 5 years. The data of the first 15 months are presented in Table-6.

As the wilt fungus can be isolated from all the plant parts of chickpea (ICRISAT Chickpea Pathology Annual Report 1976-77), it was pertinent to know whether it survives in these parts in the off-season. Wilted plants were collected in March 1978 and leaves, terminal branches, main stems, and roots were separated. Stem and root pieces were made approximately of 2 cm size and buried in soil in pots 7 cm deep. They

Table-6. Survival of *Fusarium oxysporum* f.sp. *ciceri* in buried roots<sup>a</sup>

Date of isolation	Original weight (gm)	Weight at the time of isolation	Isolation
10-6-1978	10.53	9.20	+
	6.88	6.24	+
	7.55	5.09	+
	6.46	5.39	+
10-9-1978	5.14	1.20	+
	4.63	1.58	+
	15.70	5.65	+
	11.74	6.00	+
10-12-1978	12.45	2.00	+
	4.45	0.72	+
	12.57	2.86	+
	11.22	2.40	+
10-3-1979	5.50	1.50	+
	11.84	1.38	+
	8.34	2.00	+
	5.25	0.59	+
10-6-1979	5.54	1.06	+
	5.42	1.05	+
	8.02	1.58	+
	8.45	1.48	+

<sup>a</sup>Roots were buried on March 10, 1978.

were also kept in the laboratory at room temperature (25-30°C). Each month isolations of *F. oxysporum* f.sp. *ciceri* were attempted. The results are presented in Table-7. Isolations were attempted from 15 pieces and 30 leaflets each time.

We have the data for the first 15 months. In all these months we could isolate the fungus successfully from roots buried in soil. But the root tissues are disintegrating fast (Table-6).

The fungus could not be isolated from the leaflets after 2 months whether stored in laboratory or in soil. It could not be isolated after 6 months from terminal branches kept at room temperature and after 9 months from those buried in soil. After 12 months, the fungus could not be isolated from the tissues stored at room temperature, but could be isolated from stem and root tissues buried in soil even after 15 months.

The observations are interesting and require further investigation to know why it is able to survive in the soil longer.

Table-7. Survival of *F. oxysporum* f.sp. *ciceri* in infected tissues of chickpea<sup>a</sup>

Date of isolation	Leaflets		Terminal branches		Stems		Roots	
	1	2	1	2	1	2	1	2
26-4-1978	+	+	+	+	+	+	+	+
31-5-1978	+	-	+	+	+	+	+	+
30-6-1978	-	-	+	+	+	+	+	+
31-7-1978	-	-	+	+	+	+	+	+
30-8-1978	-	-	+	+	+	+	+	+
30-9-1978	-	-	-	+	-	+	+	+
30-10-1978	-	-	-	+	+	+	+	+
30-11-1978	-	-	-	+	+	+	+	+
30-12-1978	-	-	-	-	-	+	+	+
30-1-1979	-	-	-	-	+	+	+	+
1-3-1979	-	-	-	-	+	+	+	+
1-4-1979	-	-	-	-	-	+	-	+
1-5-1979	-	-	-	-	-	+	-	+
1-6-1979	-	-	-	-	-	+	-	+

<sup>a</sup>Buried in soil on March 28, 1978

1 = At room temperature; 2 = Buried in soil at 7 cm depth

+ Fungus isolated; - Fungus not isolated

#### VIII. CROP ROTATION AND WILT INCIDENCE

At ICRISAT Center, the wilt becomes more severe if Fallow-chickpea rotation is followed for 2-3 consecutive seasons. On the other hand fields which are rotated with other crops do not show any significant wilt incidence. In 1977-78 post-rainy season, one particular field which had shown severe wilt in the previous season, did not show much wilt in the susceptible cultivar JG-62. The scientists of the Farming Systems Program had planted Maize in that field in the rainy season of 1977 instead of leaving it fallow. We therefore wanted to check if planting a crop in the rainy season (June-October) in a wilt sick plot, prior to planting chickpea in October, would reduce wilt incidence. An experiment was therefore carried out in cooperation with Dr. R.W. Willey of the Farming Systems Program.

The experiment was planted in a wilt sick plot (BT-6) area and each plot had 6 rows 75 cm apart and 9 meter long. The seeds were sown on ridges. The following were the treatments:

1. Sorghum (CHS-6)
2. Pearl millet (BJ-104)
3. Maize (SB-23)
4. Groundnut (TMV-2)
5. Fallow

Each treatment was replicated four times. The crops were sown on 16th June 1978. Usual interculture operation like weeding were done. The crops were harvested in the first week of October by removing plants on ridges without much disturbing the soil. The seeds of JG-62 (susceptible to wilt) were sown, on the ridges, and light irrigation was provided, to ensure seed germination, in the second week of October. JG-62 started wilting within 30 days after sowing in all the treatments. By the end of November 1979 JG-62 wilted completely in all the treatments.

By the side of this plot we kept 6 ridges of 49 meter length undisturbed during kharif. No weeding and any other operation was taken up. Weeds were removed before sowing of chickpea (JG-62) in the second week of October. Here also chickpea wilted completely.

This experiment proved that a one year crop rotation does not check the wilt in chickpea. Long term rotation might be effective.

Simultaneously a pot experiment with identical treatments was carried out. Seeds of different crops were sown on June 15th in pots filled with wilt-sick soil. Ten seeds were sown in each pot and each treatment was replicated 5 times. Harvesting was done on October 10th and JG-62 chickpea sown on October 15th. All chickpea plants wilted within 40 days confirming the field results.

## IX. INHERITANCE STUDIES

We provided assistance to the breeders in screening the breeding material to get information on inheritance of wilt resistance.

Not much work has been done on the inheritance of *Fusarium* wilt resistance in chickpeas. There are few reports which indicate simple inheritance. Our studies were conducted in field conditions and the results therefore are to be considered with caution.

We grew F<sub>1</sub>s involving highly susceptible cv. JG-62 with lines reported resistant in wilt-sick pots along with parents. F<sub>1</sub>s and JG-62 died within 21 days after sowing (Table-8).

F<sub>3</sub> progenies of resistant segregants (selected in wilt-sick plot) from a few crosses were grown in wilt-sick pots in a net-house. Likewise other breeding materials were also screened (APPENDIX-IV and V).

Table-8. Inheritance study - chickpea wilt

Sl. No	Particulars	No. of plants	No. of wilted plants	Percent wilt
1.	CPS-1	18	3	16.60
2.	F <sub>1</sub> CPS-1 X K-468	10	10	100.00
3.	F <sub>2</sub> CPS-1 X K-468	126	70	55.55
4.	K-468	19	19	100.00
5.	F <sub>1</sub> H-355 X WR-315	3	3	100.00
6.	H-355	20	20	100.00
7.	WR-315	16	3	18.75
8.	F <sub>2</sub> H-355 X WR-315	196	89	45.40

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CHICKPEAS

I. SUMMARY

1. *Rhizoctonia bataticola*, the dry root fungus, survives in the infected debris in soil at least for 15 months.
2. Media prepared from Vertisol (black soil) and Alfisol (red soil) extracts encouraged faster mycelial growth but supported less sclerotial production in *R. bataticola* when compared with potato-dextrose agar. Between the two soil media, Vertisol medium supported more sclerotial production.
3. Incubation temperature of 32°C was found favourable for *R. bataticola*. At 10°C no growth was observed.
4. Addition of phosphorus to Alfisol medium encouraged sclerotial production in *R. bataticola*.
5. Sucrose and dextrose were better carbon sources than arabinose and lactose for *R. bataticola*.
6. A technique to screen chickpea seedlings against *R. bataticola* was developed. The features are: 5-day old inoculum, 5-day old seedlings, hypocotyl injury, dipping of roots in inoculum, and incubation temperature of around 35°C. Root lesion length can be used as a criterion for evaluating genotypes.
7. Fifty-nine lines, of 603 found promising last year, were found resistant to wilt and root rots.
8. None of the stunt-promising and GCVT and GIET (All India) entries were found promising against wilt and root rots.
9. ICC-10 from ICRI-SAT and DA-1 from Kanpur were found promising against wilt and root rots.
10. The multiple disease sick plot had the following pathogens; *Fusarium oxysporum* f.sp. *ciceri*, *Rhizoctonia bataticola*, *Sclerotium rolfsii*, *R. solani*, and the white root rot fungus.
11. Critical observations on the development of black root rot (*F. solani*) symptoms after artificial inoculations were made.



## II. INTRODUCTION

This project was initiated in January 1978 with the following objectives:

1. Collect more precise information on their prevalence in the chickpea growing areas
2. Study the etiology of pathogens leading to the understanding of epiphytology of these diseases
3. Develop efficient techniques to screen for resistance

During the year under report we made some progress in understanding (i) factors influencing growth of *Rhizoctonia bataticola* which causes dry root rot, and (ii) in developing a screening technique. For field screening we had to depend on natural incidence in the multiple disease sick plot. Some observations on the pathogenicity of *Fusarium solani* and natural incidence of collar rot (*Sclerotium rolfsii*) were made.

## III. SURVIVAL OF RHIZOCTONIA BATATICOLA (DRY ROOT ROT) ON HOST DEBRIS

An attempt was made to study the longevity of survival of the fungus in the dead tissues. *Rhizoctonia bataticola* forms numerous minute sclerotia in and on the dead roots and stems. Infected chickpea debris was collected from fields. Stems and roots were cut into 2-cm pieces and then buried in Vertisol-filled earthen pots. Similar material was kept in the laboratory. Isolations were attempted every month starting from April 25, 1979 on the CMR medium described by Meyer et al. 1973 (Phytopathology 63: 613-620).

The composition of the medium is given below:

Polished rice	10 g
Agar	20 g
Chloroneb	300 mg
Mercuric chloride	7 mg
Rose Bengal	90 mg
Streptomycin Sulphate	40 mg
Potassium Penicillin	60 mg

Polished rice is boiled for 5 min in one litre water and strained through cheese cloth. Agar is added and then the medium is autoclaved. The remaining ingredients are mixed after autoclaving and the pH adjusted to 6.0 with lactic acid.

The results obtained so far indicate that the fungus is able to survive in the infected tissues for at least 15 months. The experiment is continuing.

#### IV. DEVELOPMENT OF SCREENING TECHNIQUE (*Rhizoctonia bataticola*)

##### A. Growth

In order to understand the influence of a few factors on the growth and multiplication of the *R. bataticola* isolate (Rh-3) from chickpea, a few experiments described below were carried out.

##### 1. Influence of soil extracts

Since the incidence of the dry root rot in both pigeonpea and chickpea is much less in Alfisol than in Vertisol, extracts of these soils were used in preparing media and comparing the fungus growth *in vitro*.

##### Medium preparation

##### (a) Soil extract dextrose agar

Vertisol/Alfisol (air dried)	200 g
Distilled water	1000 ml
Dextrose	20 g
Agar	20 g

Soil extract was prepared by taking 200 g of soil in 500 ml of water and allowing to stand overnight. The supernatant was filtered through Whatman filter paper (42). Dextrose and Agar were added to the filtrate and the volume made up to 1 litre. The medium was autoclaved at 15 lb/20 min. Twenty ml were poured in each petri dish.

##### (b) Potato dextrose agar (PDA) medium

Forty grams readymade PDA in 1 litre of distilled water.

Each treatment (PDA, Vertisol and Alfisol extracts) was repeated 5 times (5 petri dishes). Mycelial discs (5 mm) were cut from 10-day old culture grown on PDA. One mycelial disc was used for inoculating each petri dish. The petri dishes were incubated at 30°C. The colony diameter was measured after 2 days till the growth occupied the whole dishes. The data are presented in Table-9.

The results in Table-9 reveal that the two soil media encouraged faster mycelial growth, but supported much less sclerotial production. Between the two soils, the medium from Vertisol supported more sclerotial production than the Alfisol medium. The experiment was repeated once and similar results were obtained. The pH of the Vertisol medium was approx. 7.2 and that of Alfisol medium approx. 6.7. In another experiment we found no difference in growth on PDA with pHs varying from 5 to 8.

Table-9. Influence of Potato-dextrose agar and two soil extracts media on the growth of *Rhizoctonia bataticola*

Days after inoculation	Medium <sup>a</sup>	Average colony diameter (cm) <sup>b</sup>	Remarks
2	PDA	2.7	Sclerotia production initiated
	VDA	3.6	
	ADA	3.1	
6	PDA	6.0	--
	VDA	9.0	
	ADA	9.0	
9	PDA	8.3	--
	VDA	9.0	
	ADA	9.0	
16	PDA	9.0	Sclerotia production - excellent
	VDA	9.0	Sclerotia production - fair
	ADA	9.0	Sclerotia production - poor

<sup>a</sup>PDA: Potato-dextrose-agar; VDA: Vertisol-dextrose-agar; ADA: Alfisol-dextrose-agar

<sup>b</sup>Average from 5 replications

Thus the difference in sclerotial production on the two soil media can not be attributed to the difference in the pH.

Likewise the two soil extract media with dextrose but without agar (liquid media) were compared for growth. Vertisol extract media encouraged more sclerotial than the Alfisol extract medium but both were inferior to Potato-dextrose broth.

## 2. Influence of temperature

One mycelial disc (5 mm) of 9-day old culture grown on PDA was used for inoculating each petri dish containing 20 ml of PDA medium. The petri dishes were incubated at different temperatures ranging from 10° to 32°C and the colony diameter was measured.

The data are presented in Table-10 which indicate that 32°C was more favourable. We did not try temperatures higher than 32°C.

Table-10. Influence of incubation temperature on the growth of *Rhizoctonia bataticola*

Days after inoculation	Temperature °C	Average colony diameter (cm) <sup>a</sup>	Remarks
3	32	3.8	More sclerotia
	28	3.3	--
	22	2.2	--
	15	0.6	--
	10	0.5	No growth
6	32	7.3	--
	28	5.9	--
	22	4.7	--
	15	1.4	--
	10	0.5	No growth
10	32	9.0	Sclerotia production - excellent
	28	7.2	Sclerotia production - good
	22	6.9	Sclerotia production - fair
	15	2.3	Sclerotia production - very poor
	10	0.5	No growth

<sup>a</sup>Calculated from colony diameters in five petri dishes

### 3. Influence of phosphorus in Alfisol medium

Analysis of soil samples revealed that Alfisol has low phosphorus (3 ppm) and Vertisol has medium phosphorus (10 ppm). The Alfisol extract dextrose agar medium was supplemented with approx. 7 ppm phosphorus; i.e., 30mg KH<sub>2</sub>PO<sub>4</sub>/litre of Alfisol extract. The autoclaved media were poured into petri dishes—20 ml in each dish. One mycelial disc (5 mm) of 5-day old *R. bataticola* culture, grown on PDA, was used for inoculating each petri dish and was incubated at 32°C.

It is clear from the data in Table-11 that addition of phosphorus to Alfisol medium to bring the P level at par with that in the Vertisol ensures equal sclerotia production on both the soil media.

### 4. Influence of different sugars in growth medium

Four different sugars; arabinose, dextrose, sucrose, and lactose, were used with Potato broth (Broth from 200 g potatoes; 20 g sugar; 1000 ml water). One hundred ml medium was poured in 250 ml flask and autoclaved.

Table-11. Influence of adding phosphorus to Alfisol-dextrose-agar on the growth of *Rhizoctonia bataticola*

Days after inoculation	Medium <sup>a</sup>	Average colony diameter (cm) <sup>b</sup>	Remarks
3	ADA	4.1	
	ADA + P	4.2	
	VDA	3.5	
5	ADA	6.4	
	ADA + P	6.5	
	VDA	5.9	
11	ADA	9.0	Sclerotia production - poor
	ADA + P	9.0	" " - fair
	VDA	8.9	" " - fair

<sup>a</sup>ADA: Alfisol-dextrose-agar; ADA + P: ADA +  $\text{KH}_2\text{PO}_4$  (P=7 ppm); VDA: Vertisol-dextrose-agar

<sup>b</sup>Average of two trials with 5 replications each

Each flask was inoculated with a 5 mm mycelial disc (8-day old *Rhizoctonia bataticola* on PDA) and incubated at 30°C for 15 days. After incubation, contents were filtered and dry weight of the mycelial mats was recorded. There were 5 flasks for each treatment. The data are presented in Table-12. Lactose served as a poor source of carbon; sucrose and dextrose were almost equally better than arabinose.

Table-12. Influence of different carbon sources on the growth and sclerotial production of *R. bataticola*

Carbon source	Carbon (g)	Average dry weight (mg) <sup>a</sup>	Production of sclerotia
L-Arabinose	7.98	604	Good
Dextrose	7.99	937	Excellent
Lactose	7.99	198	Fair
Sucrose	8.41	1089	Excellent
Potato extract (no sugar)		95	Fair

<sup>a</sup>Average of five replications

### B. Seedling inoculation

*Rhizoctonia bataticola* causes substantial mortality and loss in the crop which gets caught in higher ambient temperature (30°C and above) in the post-flowering stage. That is why we see more dry root rot

of chickpea in central and southern India. Since last year we have been making attempt to develop a laboratory screening procedure based on root lesion length as the criterion for comparing the reaction among genotypes.

We decided to use water bath for maintaining the soil temperature up to 35°C which is favourable for dry root rot.

We first tried to inoculate the seeds of four cvs. Annigeri, WR-315, JG-62 and Kabuli type, before sowing in soil-sand mixture in glass tubes and keeping in water bath. In most of the inoculated seed, pre-emergence rotting was seen. The high temperature predisposed the seed to infection. Moreover this temperature was not favourable for the germination of chickpea seed. Therefore it was decided to use the young seedlings for further experiments.

The seedlings of cv. Annigeri were raised in sand for 5 days and removed. Half of the seedlings were injured in hypocotyl region by sharp scalpel. Inoculum was prepared by using 5-day old culture of the fungus in potato-dextrose broth. The growth from 3 flasks (100 ml medium in 250 ml flask) was mixed in 100 ml of sterilized water. The roots of the seedlings were dipped in inoculum and transplanted in autoclaved sand or soil in culture tubes (150 mm). One seedling was kept in each tube. Temperature of water in the bath was adjusted to 35°C (+1) and the actual soil temperature was around 34°C. Another set was kept in a net-house (25-28°C).

Final readings on mortality and also root rotting were taken 9 days after incubation. The data have been presented in Table-13. The experiment was repeated once with similar results.

Infection of root was indicated by the presence of micro-sclerotia on root surface and discoloration of root. Fungus invaded the root, caused discoloration of tissues except the lignified xylem strands in chickpea seedlings. Cotyledons were not affected in most of the cases. Mortality was very poor in the plants kept in net-house.

### C. Removal of cotyledons

To assess the role of cotyledons of the chickpea seedlings, the cotyledons were removed from seedlings at the time of inoculation.

Eight cvs. Annigeri, JG-62, JG-74, CPS-1, WR-315, Chafa, BG-212, and L-550 were used in the experiment. There were 3 treatments; (1) Cotyledon removed, (2) Hypocotyl injury, and (3) No injury. Seedlings were dipped in inoculum and transplanted in culture tubes containing Vertisol. The soil temperature was maintained around 35°C. The data have been presented in Table-14.

Table-13. Effect of incubation temperature on dry root rot of chickpea

Treatment <sup>a</sup>	Number of seedlings died	
	35°C	25-28°C <sup>b</sup>
Injured roots		
A. Soil	20 <sup>c</sup>	4
B. Sand	20	1
Non-injured roots		
A. Soil	14	2
B. Sand	12	1
Check (IR)		
A. Soil	0	0
B. Sand	0	0
Check (NR)		
A. Soil	0	0
B. Sand	0	0

<sup>a</sup>20 seedlings were inoculated for each treatment

<sup>b</sup>In net-house

<sup>c</sup>Root rotting was severe in injured roots

IR - Injured roots; NR - Non-injured roots

Table-14. Effect of root injury and cotyledon removal on dry root rot of chickpea

Cultivar <sup>a</sup>	No. of seedlings died					
	A <sup>b</sup>		B		C	
	Inocu- lated	Uninocu- lated	Inocu- lated	Uninocu- lated	Inocu- lated	Uninocu- lated
Annigeri	10	10	8	0	5	0
JG-62	10	10	4	0	1	0
JG-74	10	10	3	0	2	0
CPS-1	10	10	2	0	0	0
WR-315	10	10	4	0	0	0
Chafa	10	10	6	0	3	0
BG-212	10	10	4	0	2	0
L-550	10	10	2	0	0	0

A - Cotyledon removed; B - Hypocotyl injury; C - No injury

<sup>a</sup>10 plants were used for each treatment

<sup>b</sup>Seedlings with cotyledons removed, died within 3 days in inoculated and uninoculated checks

The data in Table-14 reveal that removal of cotyledons hastens the death of seedlings even without inoculation. Injuring hypocotyl seems to be desirable and even if seedlings are not killed we are able to see clear lesion development from hypocotyl downwards. These findings were confirmed through a repeat experiment.

#### D. Method of inoculation

Two methods were compared. In one method the inoculum was placed in the hypocotyl region of injured and non-injured seedlings transplanted in tubes containing Vertisol. In the other method both injured and non-injured seedling roots were dipped in inoculum and then the seedlings were transplanted into tubes. The data have been presented in Table-15. These results reveal that dipping roots in inoculum coupled with hypocotyl injury gives better results.

Table-15. Comparison of methods of inoculation of chickpea seedlings with *Rhizoctonia bataticola*

Treatment <sup>a</sup>	Mortality due to root rot	Average root length at the time of inoculation (mm)	Average root length at the time of observation (mm)	Extent of root rotting (mm)
Seedling injured A	80	80	75.0	22.50
B	60	80	86.4	17.71
C	0	80	140.0	0.00
Seedling non-injured A	60	80	103.0	13.30
B	50	80	95.0	12.00
C	0	80	160.0	0.00

<sup>a</sup>20 seedlings were used for each treatment

A - Root dip method; B - Inoculum kept below cotyledon; C - Check

#### E. Lesion length as criterion for disease rating

In the preceding experiments, it was established that root lesion development instead of mortality could be considered for evaluating chickpea genotypes. We therefore carried out inoculations of 10 chickpea cultivars by following the inoculation procedure of hypocotyl injury coupled with root dipping in the inoculum. Five-day old seedlings grown in autoclaved sand were removed, inoculated and then transplanted in tubes containing autoclaved Vertisol. Tubes were incubated at 35°C for 10 days in a water-bath. The results have been presented in Table-16.



more during the flowering/podding period. The high temperatures were unfavourable for chickpea and on the whole we felt that February planting will not give us a good screening against only the dry root rot. Other diseases also occur.

Table-17. Periodic isolations from dried plants of chickpea in February planting<sup>a</sup>

Date of isolation	Percentage of isolations <sup>b</sup>				
	<i>F. oxysporum</i> f.sp. <i>cicerei</i>	<i>R. batati-</i> <i>cola</i>	<i>R. solani</i>	<i>S. rolfsii</i>	White root rot fungus
3-3-1979	57	11	6	4	15
23-3-1979	46	20	5	18	3
12-4-1979 <sup>c</sup>	19	73	2	-	-
19-4-1979	20	76	3	-	-

<sup>a</sup>Sowing: 1-2-1979; Harvesting: 23-4-1979 (forced maturity)

<sup>b</sup>One hundred isolations were attempted

<sup>c</sup>Day temperatures were around 35°C

#### VI. PERIODIC ISOLATIONS FROM WILTED/DRIED PLANTS COLLECTED FROM MULTIPLE DISEASE SICK PLOT

To monitor the presence of different root pathogens from October through February (chickpea season), we made periodic isolations from diseased plants from the multiple disease sick plot. The results have been presented in Table-18. The wilt fungus, *F. oxysporum* f.sp. *cicerei* was predominant all through the season. *R. bataticola* became more dominant when the day temperatures rose close to 30°C (Table-19). *Sclerotium rolfsii*, *R. solani* and the white root rot fungus became less active after the first month. These results are similar to those obtained in the previous seasons.

Table-18. Periodic isolations from wilted/dried plants of chickpea collected from multiple disease sick plot<sup>a</sup>

Date of collection	Percentage of isolations <sup>b</sup>				
	<i>F. oxysporum</i> f.sp. <i>cicerei</i>	<i>R. batati-</i> <i>cola</i>	<i>S. rolfsii</i>	<i>R. solani</i>	White root rot fungus
30-11-1978	68	2	12	6	6
20-12-1978	70	5	4	3	4
11-1-1979	81	13	2	2	-
1-2-1979	62	31	4	2	-
21-2-1979	60	40	-	-	-

<sup>a</sup>Sowing on October 27, 1978

<sup>b</sup>One hundred isolations were attempted

Table-19. Ambient temperature data from November 1978 through April 1979

Standard week	Dates	Average temperature (°C)		Rainfall (mm)
		Maximum	Minimum	
44	29 Oct- 4 Nov	29.1	20.7	18.6
45	5 Nov-11 Nov	28.6	20.5	3.4
46	12 Nov-18 Nov	30.4	19.3	1.2
47	19 Nov-25 Nov	29.8	14.7	0.0
48	26 Nov- 2 Dec	28.5	18.5	0.0
49	3 Dec- 9 Dec	27.8	16.4	0.0
50	10 Dec-16 Dec	26.6	13.2	0.0
51	17 Dec-23 Dec	26.8	13.8	0.0
52	24 Dec-31 Dec	27.2	16.3	0.9
1	1 Jan- 7 Jan	27.9	15.8	0.0
2	8 Jan-14 Jan	27.7	13.8	0.0
3	15 Jan-21 Jan	28.4	17.8	0.0
4	22 Jan-28 Jan	28.9	17.0	0.0
5	29 Jan- 4 Feb	30.6	17.0	0.0
6	5 Feb-11 Feb	30.0	19.6	6.6
7	12 Feb-18 Feb	28.8	18.8	28.0
8	19 Feb-25 Feb	31.7	18.7	6.2
9	26 Feb- 4 Mar	29.9	18.9	0.0
10	5 Mar-11 Mar	33.3	16.7	0.0
11	12 Mar-18 Mar	35.1	17.0	0.0
12	19 Mar-25 Mar	36.5	21.5	0.0
13	26 Mar- 1 Apr	37.0	21.4	0.0
14	2 Apr- 8 Apr	38.0	21.8	0.0
15	9 Apr-15 Apr	38.6	22.8	0.0
16	16 Apr-22 Apr	37.4	23.5	3.2
17	23 Apr-29 Apr	40.0	23.6	0.0

#### VII. PATHOGENICITY OF *FUSARIUM SOLANI*

The black root rot caused by *Fusarium solani* is not widespread but can be important locally. It has more frequently been reported from areas where chickpeas are irrigated. In ICRISAT's Information Bulletin No. 3, we have described a number of root rot diseases. We admitted at that time our inability to diagnose the black root rot under field conditions. In order to have a critical look at the symptoms, we carried out artificial inoculations in a net-house and watched the development of symptoms.

*Fusarium solani* isolate from Delhi was multiplied on PDA (100 ml medium in 250 ml flask) for 10 days at 25°C. Seedlings (cv. JG-62)

were raised in plastic pots in autoclaved sand or Vertisol. Inoculations were carried out on 15-day old seedlings, five per pot. The fungal mat was removed from the medium and resuspended in 100 ml sterilized water. Some of the seedlings were injured at the collar portion with a sharp scalpel. About 3 cm soil/sand around the seedling was removed and 5 ml of inoculum per seedling was poured. The soil surface was relevelled. Proper check were kept for comparison. The symptoms seen were as follows:

Ten days after inoculation: Plants showing slight stunting and older leaves became pale. Black lesion was seen in hypocotyl region. The fungus was present in the cortex. Cotyledons were unaffected.

Fifteen days after inoculation: Stunting was conspicuous. Older leaves turned yellow. Root lesion extended downwards causing rotting of roots and retarding development.

Twenty-one days after inoculation: External symptoms conspicuous. Several seedlings collapsed after turning yellow. Blackening was evident as the base of seedlings. Tissues from soil level below were black and different stages of rotting. Cotyledons were also rotting.

Injury in hypocotyl region made no difference.

#### VIII. FIELD REACTION OF EARLY PLANTED CHICKPEA LINES TO COLLAR ROT (*Sclerotium rolfsii*)

The incidence of collar rot (*Sclerotium rolfsii*) was observed in the September planting of chickpea in BT-3. The disease was observed in mid-November on many of the chickpea lines. Therefore, it was decided to record the collar rot incidence in the field. Many lines were free from disease. Many probably escaped the infection. The observations are presented in APPENDIX-VII.

PROJECT:CP-PATH-3(78) : STUDIES ON CHICKPEA STUNT AND OTHER  
VIRAL DISEASES

I. SUMMARY

1. The causal agent of stunt was purified and found to be serologically related to pea leaf roll virus.
2. The purified preparation when observed under electron microscope, revealed spherical particles of about 25 nm in diameter.
3. Advance plantings of interlards of a mixture of hosts of pea leaf roll virus and a susceptible chickpea cultivar apparently helped in the build up of high disease incidence in the screening nursery.
4. Early plantings showed greater incidence of pea leaf roll virus (PLRV) than late plantings.
5. The inter- and intra-row spacings in a susceptible cultivar did not affect the incidence of PLRV. But significant differences were observed in a set of cultivars at different population levels.
6. A total of 2400 germplasm lines planted by Genetic Resources Unit were evaluated and 156 apparently free from stunt were identified. Three lines especially were found highly promising both for stunt and wilt.
7. Of the 22 advanced germplasm lines selected during 1976-77 season, 21 remained highly promising.
8. Of the 73 germplasm lines that were selected from last year's germplasm nursery, 16 lines showed less than 10% infection.
9. Out of 43 lines that were selected from last years crossing block nursery, 36 lines showed less than 10% infection.
10. Out of 121 Ascochyta blight promising lines, 32 lines showed less than 10% infection.
11. Out of 63 wilt and root rot promising lines, 4 lines; ICC-391, -1450, -2860, and -7254 showed less than 10% infection.
12. Of 13 ICC materials screened, 7 did not develop infection.

13. The  $F_1$  between the resistant and susceptible parents was resistant. The  $F_1$  between the resistant lines remained resistant.
14. Studies on mosaic were carried out mainly to confirm last year's observations.

## II INTRODUCTION

During the course of investigations into the etiology of the so called 'wilt-complex', two disorders of viral nature; stunt and mosaic were also found to cause pre-mature death of chickpea. A project was initiated in January 1978 to (i) identify the viruses involved, (ii) understand their epiphytology, (iii) develop efficient laboratory and field screening techniques, and (iv) identify resistance sources.

## III. STUNT

### A. Etiology

Based upon symptomatology, host range and aphid transmission pea leaf roll virus has been suspected to be the causal agent of the disease. Work on purification, serology and electron microscope was carried out to get definite information on the virus involved.

#### 1. Aphid transmission and host range

Further studies on virus-vector relationship and host range are being carried out at Hissar in collaboration with Dr. J.P. Verma, Virologist, Haryana Agricultural University, Hissar. The results are awaited.

#### 2. Purification

Even though the virus is not mechanically transmissible, efforts were made to purify it to test its serological relationship and get pictures under electron microscope. The work was carried out both at Hissar in collaboration with Dr. J.P. Verma and at Hyderabad.

The procedure developed by Dr. J.W. Ashby, Division of Scientific and Industrial Research (D.S.I.R.), Plant Diseases Division, Christchurch, Newzealand for purifying "Iuteo" viruses was followed with slight modifications.

Batches of up to 200 g of shoot and root portions from infected plants were used, both separately and together. Always fresh tissues were taken and they were thoroughly washed with tap water before extraction. Homogenisation was done by using Waring blender for 4-5 minutes with 0.1 M Phosphate buffer pH 7.4, four times the weight of the tissue. 2-Mercaptoethanol (0.1%) was added to the buffer. In case of extraction

of shoots 0.01 M EDTA was added. The extract was filtered through a layer of muslin cloth and was clarified by low speed centrifugation at 8000 RPM for 10 minutes. To the clarified sap 8% PEG and 3% NaCl were added, stirred in cold thoroughly and kept overnight in cold.

The pellet was collected by centrifuging at 10,000 RPM for 15 minutes and resuspended in 1/12 volume of the original buffer. It was thoroughly resuspended by stirring in cold for one hour and to it was added ¼ volume of 1:1 n-butanol chloroform. It was kept in cold for one hour and the phases were separated by centrifuging at 8000 RPM for 10 minutes. The aqueous phase was collected and stored in cold overnight. Then it was subjected to 2 cycles of low speed and high speed (36,000 for 120 minutes; 45,000 for 60-90 minutes). The pellet after the first high speed was suspended in 0.05 M phosphate buffer pH 6.5 without 2-mercaptoethanol. The final pellet was dissolved in 2 ml buffer.

Purification was also tried from necrotic phloem portion alone. During the season purification was done five times. Every time healthy material was purified to serve as control.

### 3. UV absorption

Each time absorption spectra of the purified virus preparation was studied using Spectrophotometer (Beckman D.B.G.T. Spectrophotometer) and they showed typical absorption spectra of a nucleoprotein. No such absorption was seen in healthy preparation. Preparations from roots, shoots, shoots and roots, and phloem portions gave typical absorption spectra indicating that the purification procedure followed was successful. However, compared to roots, shoots yielded better preparation.

### 4. Serology

The serological relationship of the purified preparation with the antiserum of pea leaf roll virus obtained from Dr. J.W. Ashby of Newzealand was studied following Ouchterlony agar double diffusion test. Sharp precipitation zones developed with the preparations from diseased plants and not with the healthy indicating the positive serological relationship of the causal agent of chickpea stunt with the pea leaf roll virus. This relationship was repeatedly proven with the isolates from Hissar and Hyderabad. However, the intensity of the bands was low indicating the possible low concentration of the virus in the preparations. The reaction was comparatively better with shallow and wider wells than with narrow and deeper wells.

### 5. Electron microscopy

The purified preparations were observed under electron microscope by Dr. J.P. Verma at Hissar. Spherical particles of about 25 nm

in diameter were observed. The particles were often seen in aggregates of 2-3.

## B. Screening techniques

The experiments on the effect of date of planting and plant spacing on the incidence of stunt to find out the optimum time and spacing for getting maximum incidence under natural conditions were repeated. The studies on the effect of planting of 'trap' hosts and spreader rows on disease incidence were also continued.

### 1. 'Trap' hosts for virus and vectors

A mixture of leguminous crops that are known to be the hosts of pea leaf roll virus and support the aphid vectors were planted as "interlards" all over the plot to be used for screening (0.75 ha) on September 15, 1978. The legumes planted were pea, beans, broad bean, soybean, lucern, berseem, lupins, chickpea, groundnut, lentil, cowpea, mung, urd, and *Trifolium* sp. The interlards were spaced 4.5 m apart.

Germination of the legumes was poor because of heavy rain immediately after planting. These crops were observed from time to time for symptoms of pea leaf roll virus and aphid infestation. Broadbean showed good infestation of *Aphis craccivora*. *Trifolium* sp., lentil, pea and broad bean developed symptoms resembling that of pea leaf roll virus.

The results of the past two years experiments indicate that planting of leguminous crops in the plot being developed as screening nursery helps in trapping and building up of both virus and vectors and high disease incidence.

### 2. Spreader rows

In between the "interlards" of the mixture of legumes, rows of WR-315, a susceptible cultivar to stunt, was planted on 30th September 1978 to serve as spreader rows. It developed good incidence of stunt (>80%) and aphid infestation was also observed.

The stunt incidence in the susceptible check (WR-315) planted along with the test material on 15th October 1978 was more than 80% indicating that planting of spreader rows and 'trap' hosts has greatly helped in disease build up in the screening nursery. This was obvious from the low disease incidence in the normal plantings around where incidence was only 5-10 percent.

### 3. Planting time and stunt incidence

The experiment to find out the effect of planting time on stunt incidence was repeated. The dates of planting were 15th September 1978,

30th September 1978, 15th October 1978, 30th October 1978, 15th November 1978, 30th November 1978. The cultivar used was susceptible WR-315. The experimental design followed was the randomised block design. The number of replications was 3. The experiment was laid out in the same plot where "interlards" of legume hosts and spreader rows of WR-315 were planted. The plot size was of 4 five-meter rows. The inter- and intra-row spacings were 75 and 20 cms, respectively.

The final observations were taken on 15th January 1979. The results are presented in Table-20. The incidence was very high in the earlier plantings than in late plantings. Last year the incidence was high in early and late plantings. The reason for variation in incidence in late plantings last year and this year is not clear. It could be due to variation in the weather conditions and the vector population. The experiment needs to be repeated along with monitoring of vector population.

#### 4. Plant spacing and stunt incidence

##### (a) Inter- and intra-row spacing

The experiment on the effect of spacing on disease incidence was repeated. Last year's experiment revealed that inter-row spacings did not show statistically significant differences in disease incidence. The experiment was repeated with variations in the intra-row spacings. The inter-row spacings were 100, 75, 50 and 25 cm. The intra-row spacings were 50 and 20 cm. The cultivar used was susceptible WR-315. The experimental design followed was randomised block design. The number of replications was 3. The date of planting was 15th October 1978.

The final observations were taken on 15th January 1979 and results are presented in Table-21. The plant population varied greatly because of poor germination. However, the differences in disease incidence among the inter- and intra-row spacings were not statistically significant. Last year also the results were similar.

##### (b) Plant populations

ICRISAT's Plant Physiology section conducted an experiment on plant elasticity with different genotypes. The plant populations studied were 4 plants/m<sup>2</sup> and 33 plants/m<sup>2</sup>. We recorded disease incidence in 10 cultivars. The results are presented in Table-22. In all the 10 cultivars, the percent disease incidence was higher in lower population treatment than in higher population treatment. The percent disease incidence at the two plant population levels studied was significantly different in all the 10 cultivars. However, the number of infected plants significantly differed in cultivars, Radhey, Hyb-16-3, L-114, and Annigeri, but not in others indicating a cultivar and population interaction.



Table-20: Effect of date of planting on the incidence of pea leaf roll virus in chickpea at Hissar (1978-79)

Date of planting (1978)	Total no. of plants			No. of infected plants			Percent infection			Average infection percent
	R1	R2	R3	R1	R2	R3	R1	R2	R3	
September 15	26	62	33	24	58	27	92.30	93.54	81.81	89.21
September 30	68	90	53	60	62	37	88.23	68.88	69.81	75.64
October 15	40	47	43	29	43	35	72.50	91.48	81.39	81.79
October 30	78	63	86	49	55	42	62.82	87.30	48.83	66.31
November 15	78	51	90	9	2	11	11.53	3.92	12.22	9.22
November 30	50	91	63	0	25	0	0.00	27.47	0.00	9.14

R - Replication

Table-21. Effect of inter- and intra-row spacing on pea leaf roll virus incidence in chickpea at Hissar (1978-79)

Inter-row spacing	Intra-row spacing	Total plants			Infected plants			Percent infection			Average percent infection
		R1	R2	R3	R1	R2	R3	R1	R2	R3	
100 cm	50 cm	110	26	24	90	20	20	81.81	76.97	83.33	80.70
	20 cm	310	32	41	220	24	36	70.96	75.00	87.80	77.92
75 cm	50 cm	43	23	30	35	12	20	81.39	52.17	66.66	66.74
	20 cm	29	38	41	21	20	36	72.41	52.63	87.80	70.94
50 cm	50 cm	23	4	33	16	3	19	69.56	75.00	57.57	67.37
	20 cm	16	61	62	13	29	46	81.25	47.54	74.19	67.66
25 cm	50 cm	14	81	89	9	23	75	64.28	28.39	84.26	58.97
	20 cm	11	141	73	9	61	63	81.81	43.26	86.30	70.45

<u>Source of variation</u>	<u>DF</u>	<u>SS</u>	<u>Mean square</u>	
Replication	2	3065.58	1532.79	
Inter-row spacing	3	8452.00	2817.33	NS
Intra-row spacing	1	2320.66	2320.66	NS
Interaction	3	1975.33	658.44	NS
Error	14	29755.75	2125.41	

Table-22. Pea leaf roll virus incidence in genotype X spacing trial at Hissar conducted by ICRISAT's Physiology section (1978-79)

Cultivar	Percent incidence						Percent average incidence	
	4 plants/m <sup>2</sup>			33 plants/m <sup>2</sup>			4 plants/m <sup>2</sup>	33 plants/m <sup>2</sup>
	R1	R2	R3	R1	R2	R3		
1. L-550	8.75	2.50	8.75	0.00	0.15	0.15	6.66	0.10
2. C-104	5.00	3.75	6.25	0.30	0.60	0.15	5.00	0.50
3. Rabat	5.00	3.75	6.25	0.60	0.45	0.30	5.00	0.45
4. Radhey	12.50	20.00	13.75	0.45	0.75	0.90	15.41	0.70
5. Hyb-16-3	6.25	8.75	11.25	0.15	0.15	0.00	8.75	0.10
6. L-144	16.25	7.50	16.25	0.30	0.90	0.75	13.30	0.65
7. Chafa	20.00	21.25	25.00	1.36	1.36	3.93	22.08	2.21
8. Annigeri	15.00	23.75	28.75	3.48	2.42	5.30	22.50	3.73
9. B-108	13.75	17.50	25.00	1.66	3.18	3.18	18.75	2.67
10. NEC-850	5.00	2.50	8.75	0.00	0.00	0.30	5.41	0.10

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<u>Source of variation</u>	<u>DF</u>	<u>SS</u>	<u>Mean square</u>	
Replications	2	72.66	36.33	
Cultivars	9	915.68	101.74	Significant
Plant population	1	1876.33	1876.33	"
Interaction	9	480.63	53.40	"
Error	38	262.01	6.89	

### C. Screening for resistance

Large scale screening of germplasm and other materials was carried out in the plot where advance planting of "interlards" of various legumes and spreader rows of susceptible cv. WR-315 was done. The materials were planted on 15th October 1978 at a spacing of 75 X 20 cm. Germination in the nursery was poor but the low plant population probably helped in high disease development. The incidence in the susceptible check WR-315 was more than 80%. Final observations were taken 3 months after sowing and the percent incidence of disease was calculated. Germplasm planted by the Genetic Resources unit was also evaluated visually to identify promising lines.

#### 1. Germplasm

The incidence of the disease in germplasm evaluation block was considerable. Some lines showed 100% susceptibility. High incidence of wilt also developed in the nursery facilitating selection of lines promising for both the diseases. Several lines showed 100% mortality due to wilt.

A total of 2400 lines were evaluated visually and the lines looking free from disease were selected. Lines showing susceptibility to wilt were discarded. A total of 155 lines were found to be free from both stunt and wilt. These were; G-130, ICC-60, -136, -137, -138, -159, -170, -174, -182, -183, -184, -248, -275, -277, -279, -282, -299, -300, -302, -303, -304, -314, -317, -327, -328, -341, -342, -345, -346, -376, -387, -400, -403, -404, -409, -421, -422, -423, -471, -526, -539, -555, -575, -577, -581, -591, -594, -599, -678, -685, -690, -691, -705, -706, -728, -735, -760, -767, -773, -774, -787, -788, -792, -817, -823, -838, -864, -925, -936, -939, -981, -982, -1009, -1017, -1021, -1025, -1027, -1067, -1109, -1112, -1113, -1122, -1126, -1127, -1136, -1166, -1172, -1208, -1217, -1219, -1296, -1306, -1314, -1375, -1404, -1416, -1460, -1477, -1510, -1513, -1516, -1537, -1538, -1563, -1564, -1618, -1876, -1880, -1881, -1882, -1892, -1893, -1902, -1963, -2021, -2037, -2039, -2089, -2090, -2092, -2106, -2108, -2131, -2135, -2191, -2192, -2204, -2212, -2226, -2228, -2236, -2259, -2265, -2267, -2276, -2277, -2287, -2289, -2292, -2388, -2485, -2516, -2519, -2521, -2534, -2542, -2546, -2572, -2604, -2607, -2710, -2713, -2720, -5008, and -5012.

Of these 155 lines, four lines ICC-2542, -2604, -2607, and -2713 showed real promise as they remained completely free when the lines on both the sides were showing 100% infection. Three lines ICC-2388, -5008, and G-130 remained free from both stunt and wilt when the lines on both the sides showed 100% incidence of stunt and wilt. All these lines will be evaluated next year in a replicated trial in the stunt screening nursery.

Thirteen lines; ICC-406, -2255, -2298, -2317, -2318, -2319, -2324, -2347, -2357, -2365, -2387, -2732, and -2733 showed high susceptibility to the disease and will be useful as susceptible checks in the screening nursery.

The preliminary evaluation of the lines in the germplasm nursery for the past three years has paid good dividends. The lines selected continued to perform well in the subsequent screenings. This has considerably reduced the work load and enabled to concentrate more on the promising lines. The procedure will be continued in future.

## 2. Advanced germplasm lines

The promising lines selected from the germplasm nursery in the previous years were evaluated in the stunt screening nursery in a replicated test.

### (a) Lines selected during 1976-77 season

The 67 lines that were selected in 1976-77 season were tested in last year's screening nursery and 22 lines that showed less than 10% incidence were selected. This year these 22 lines were retested in a replicated trial. The results are presented in APPENDIX-VIII. Except ICC-10800 which showed more than 10% incidence all others showed less incidence indicating that these lines are highly promising. Enough seed of these lines is available for use or testing by pathologists and breeders at other locations.

### (b) Lines selected during 1977-78 season

Seventy-eight lines that were selected from germplasm block were tested in replicated trial in the stunt screening nursery. The results are presented in APPENDIX-IX. Eleven lines; ICC-2336, -2341, -2352, -2356, -2367, -2617, -6371, -6459, -6634, -8786, and -8847 showed no infection. These 11 lines will be rechecked in the next year's screening nursery for further confirmation.

## 3. Advanced crossing block entries

Forty-three lines that showed less than 5% incidence in the crossing block were tested in the stunt nursery. The results are presented in APPENDIX-X. Nineteen lines/progenies did not show any infection. These were; K-468, H-208 X Pant G-114, C-235, H-208, F-370, NEC-2368, C-104, Coll.327, H-556-1, NEC-177, NEC-472, NEC-1135, NEC-2296, P-1092, P-1781, P-2019-1, P-2202-2, P-4353-1, and RS-11. Seventeen lines showed less than 10% infection. These were; ICC-5, Pant G-115, BG-203, F-378, G-130, T-3, BEG-482, Coll.238, F-61, G-24, G-543, NEC-240, NEC-550, NEC-555, NEC-701, NEC-1128, and P-1774. These 36 lines will be tested next year for further confirmation.

#### 4. Ascochyta blight promising lines

One hundred and twenty-one lines that were found promising in Isolation Plant Propagator screening were tested for their reaction against stunt. The results are presented in APPENDIX-XI. Twenty-two lines showed no infection. These were ICC-667, -693, -903, -904, -954, -1003, -1005, -1006, -1012, -1017, -1078, -1149, -1283, -1329, -1407, -1504, -1583, -1586, -4935, -4939, -4989, and -6067. Ten lines showed less than 10% infection. These were ICC-539, -567, -666, -838, -1214, -1219, -1272, -1911, -2264, and -2294. These 32 lines also will be checked next year for further confirmation.

#### 5. Wilt and root rots promising lines

Sixty-three lines that were found promising for wilt and root rots and constituted the International Chickpea Root Rots/Wilt Nursery 1978-79 were also tested. The results are presented in APPENDIX-XII. Three lines; ICC-391, -1450, and -7254 did not show any infection. One line; ICC-2860 showed less than 10% infection. All others showed more than 10% infection.

#### 6. ICCC (ICRISAT) lines

Thirteen ICCC materials were tested for their reaction against the disease. The results are presented in Table-23. Seven lines; ICCC-2, -4, -5, -7, -9, -11, and -13 did not develop any infection. ICCC-3 showed 9.09% infection.

#### 7. F<sub>1</sub> materials

Seven F<sub>1</sub>s involving resistant and susceptible lines were screened. The results are presented in Table-24. The F<sub>1</sub> between the resistant P-4353-1 and susceptible WR-315 was resistant. The F<sub>1</sub>s between the resistant lines except P-4353-1 X Pant G-114 were resistant. The number of plants for tests however was low. The information has been given to the breeders for further interpretations.

### IV. MOSAIC

Transmission of the virus through *Aphis craccivora* was confirmed. Shorter acquisition feedings (15-20 minutes) were enough for the aphids to acquire the virus indicating the stylet-borne nature of the virus.

The virus was repeatedly purified following the procedure described in Pulse Pathology (Chickpea) Report of Work, 1977-78. Purified preparations gave typical absorption spectra of Nucleo-protein.

Serological relationship of the virus with *Alfalfa* mosaic virus was repeatedly confirmed through Ouchterlony agar double-diffusion and Haemoagglutination tests.

Table-23. Reaction of ICCC materials to pea leaf roll virus (stunt) under natural conditions at Hissar during 1978-79

S.No.	Materials	Total plants	Infected plants	Percent infection
1.	ICCC-1	12	3	25.00
2.	-2	16	0	0.00
3.	-3	11	1	9.09
4.	-4	12	0	0.00
5.	-5	8	0	0.00
6.	-6	8	7	87.50
7.	-7	6	0	0.00
8.	-8	4	2	50.00
9.	-9	7	0	0.00
10.	-10	15	2	13.33
11.	-11	1	0	0.00
12.	-12	9	1	11.11
13.	-13	11	0	0.00

Table-24. Reaction of parental and F<sub>1</sub> materials to pea leaf roll virus (stunt) under natural conditions at Hissar during 1978-79

S.No.	Particulars	Total plants	Infected plants
1.	P-4353-1 (R)	12	0
2.	P-4353-1 X WR-315	4	0
3.	WR-315 (S)	10	8
4.	P-4353-1 X Pant G-114	7	1
5.	Pant G-114 (R)	8	0
6.	P-4353-1 X K-468	6	0
7.	K-468 (R)	3	0
8.	P-4353-1 X H-208	7	0
9.	H-208 (R)	8	0
10.	P-4353-1 X F-370	1	0
11.	F-370 (R)	1	0
12.	P-4353-1 X F-61	1	0
13.	F-61 (R)	3	0
14.	F-4353-1 X 850-3/27	3	0
15.	850-3/27 (R)	3	0

R - Resistant; S - Susceptible

# PROJECT:CP-PATH-4(78) : STUDIES ON ASCOCHYTA BLIGHT

## I. SUMMARY

1. Two new isolates of the blight pathogen were obtained and both were found to be highly pathogenic.
2. The minimum period for which humidity has to be maintained after inoculation in Isolation Plant Propagator for maximum development of blight in a susceptible line was found to be 4 days. In the lines tested, maintenance of humidity for longer periods did not affect their reaction.
3. The reaction of the lines was found to vary with the time of screening during the year.
4. As no resistance seems to be available, lines with good recovery potential were looked for.
5. An additional 834 germplasm accessions including "Desi" and "Kabuli" types were screened and none was found resistant. Twenty-nine lines showed moderately resistant reaction and fifty-seven showed tolerant reaction. In rechecking only 3 lines; ICC-3259, -3277, and -3531 showed 3-rating and five lines; ICC-3252, -3287, -3330, -3346, and -6293 showed 5-rating.
6. A total of 543 kabuli germplasm accessions were screened and one line; ICC-7664 was found resistant. Fourteen lines showed a recovery rating of 3 (moderately resistant) and 94 lines showed recovery rating of 5 (tolerant).
7. Out of 35 lines that were found promising under natural conditions at ICARDA, Syria only one line ICC-6293 showed a rating of 5 indicating the possibility of variation in the pathogen.
8. Out of 29 Colletotrichum blight promising lines, 3 lines showed 3-rating and 7 lines showed 5-rating. The high promise shown by the Colletotrichum blight resistant lines against Ascochyta blight indicates the possibility of similar mechanism of resistance operating against these two pathogens.
9. F<sub>2</sub> and BC-1 progenies involving *Cicer reticulatum* showed good promise and seeds from surviving plants were collected for further evaluation.
10. The seed of the lines that showed an average rating of 5 or less in replicated test was multiplied for multilocation testing through the Chickpea International Ascochyta Blight Nursery.



## II. INTRODUCTION

The work on *Ascochyta* blight at ICRISAT was so far confined to screening of germplasm accessions in Isolation Plant Propagator to identify sources of resistance. Breeding for disease resistance could not make much progress as suitable site for field screening was not available. But with the starting of a cooperative program with ICARDA, Aleppo, Syria, the problem was overcome. Field screening and breeding work will now be carried out at ICARDA where *Ascochyta* blight develops naturally in the winter crop. However, the screening of germplasm will also be continued at ICRISAT, Hyderabad using the Isolation Plant Propagators.

Blight is the major problem in countries which mainly grow "Kabuli" types. Identification of "Kabuli" lines with resistance was considered more relevant. So far screening of both "Desi" and "Kabuli" types was being carried out. But this year, screening of the remaining Kabuli germplasm lines was taken up on a priority basis.

## III. COLLECTION OF ISOLATES

Earlier work indicated the possibility of existence of the physiological races of the blight pathogen. For a successful disease resistance breeding program, it is essential to know the existing variability in the pathogen and identify resistance sources against them. As far as possible, diseased samples were obtained from various places in India and isolations were made. The cultures were tested for pathogenicity and preserved for future use.

During the year, diseased samples were obtained from Bajaura in Himachal Pradesh and Gurdaspur in Punjab states of India and pure cultures of *Ascochyta rabiei* were isolated. The isolates differed morphologically from each other in growth habit and pattern of sporulation and from those of IARI and Lahaul isolates. In chickpea flour broth medium, they produced pycnidia in large numbers. The pycnidia were grey in color and formed in small clusters uniformly distributed on surface of the media as against the dark and light dark pycnidia in IARI and Lahaul isolates, respectively. The IARI isolate produces pycnidia in comparatively bigger clusters. In Lahaul isolate the sporulation is comparatively sparse and they are produced in concentric rings. The cultures are preserved for future use.

The pathogenicity of the two cultures was tested along with IARI and Lahaul isolates already available. The results of the experiment are presented in Table-25. The pathogenicity was tested on Pb-7, a susceptible cultivar, in Isolation Plant Propagator. Both the new cultures were found to be highly pathogenic and did not show much variation in aggressiveness. Like IARI isolate both of them attacked first the terminal growth and then the lesions progressively spread downwards killing whole seedlings.

Table-25. Pathogenicity test with Bajaura (Himachal Pradesh) and Gurdaspur (Punjab) isolates of *A. rabiei*

Isolate of <i>A. rabiei</i>	Incubation period (days)	No. of plants inoculated	No. of plants infected	No. of plants killed	Average rating on 9-point scale	
					7 DAI	15 DAI
Bajaura (HP)	4	66	66	65	8	9
Gurdaspur (Punjab)	4	64	64	63	7	9
IARI (New Delhi)	4	61	61	61	7	9
Lahaul (HP)	4	63	63	57	7	9

DAI - Days after inoculation

#### IV. SCREENING TECHNIQUE

The effect of relative humidity and time of screening on the development of blight in the Isolation Plant Propagator was studied in order to further standardise the screening technique. It may be mentioned here that there is some times a problem of getting consistent results in Isolation Plant Propagator. It was suspected that the variable temperatures and relative humidity prevailing at the time of screening of different lots may be responsible for the variation in the results.

##### A. Humidity and blight development

##### 1. Duration of humidity and different fungus isolates

The plants after inoculation with the IARI isolate were subjected to different periods of humidity by covering the inoculated plants with plastic covers in the propagator. Pb-7, a susceptible cultivar was inoculated with the four isolates; IARI, Lahaul, Bajaura, and Gurdaspur and covered with the plastic covers for 7 and 15 days. Data on the number of plants infected, killed, and disease rating on 9-point scale 7 and 15 days after inoculation were recorded. The results are presented in Table-26.

There was no major difference in the development of blight in the plants that were covered for 7 and 15 days with all the four isolates. This indicates that humidity in the early stages after inoculation is more important and after a certain period, it is not critical for disease development. So covering the inoculated plants for longer periods is not necessary and their removal after the required period will also give chance for cultivars to recoup and express their potentiality for recover. Covering the plants for longer periods also seems to adversely affect the normal growth of plants.

Table-26. Effect of duration of high humidity on Ascochyta blight development in a susceptible cultivar (Pb-7) of chickpea

Isolate of <i>A. rabiei</i>	Plastic covers on for 7 days					Plastic covers on for 15 days				
	Total	Infected	Plants	Rating	Rating	Total	Infected	Plants	Rating	Rating
	plants	plants	killed	after 7 days	after 15 days	plants	plants	killed	after 7 days	after 15 days
IARI	30	30	30	7-9	9	31	31	31	6-8	9
Lahaul	30	30	25	7	8-9	33	33	32	7	9
Bajaura	36	36	35	7-8	8-9	30	30	30	7-8	9
Gurdaspur	32	32	31	6-9	8-9	32	32	32	7-8	9

## 2. Duration of humidity and different genotypes

The effect of humidity on the development of blight in four lines that showed less susceptibility in earlier screenings along with two susceptible lines was also studied. The main objective of the experiment was to find out whether the humidity has any differential effect on blight development in susceptible and less-susceptible lines. This also would give information about the period for which humidity is needed to kill a susceptible line. This information was felt necessary as no absolute resistance in chickpea germplasm appeared possible and the choice was only for comparatively less susceptible types. If the period for maintaining the humidity to kill a susceptible line is known, during the germplasm screening, the covers can be removed after the period and lines with some promise can be identified in terms of less disease as well as recovery ability.

Four lines that showed 3 and 5-rating in the previous screening and two susceptible checks were taken for this study. The lines after inoculation with IARI isolate were covered for 2, 4, 6 and 12 days. One batch of the plants was left without covers. Data on incubation period, number of plants infected, killed and disease rating on 9-point scale 10 and 20 days after inoculation were recorded. The results are presented in Table-27.

Disease developed in all the treatments, but it was heavy in plants that were covered. Disease appeared even in non-covered plants but it took more time (6-12 days) than in covered plants (5-7 days). Infection was 100% in all the treatments. Percentage of plants killed varied from treatment to treatment and the line. In case of non-covered and those covered for 2 days after inoculation even the susceptible lines (Pb-7 and ICC-460) did not show 9-rating. In case of 4, 6, and 12 days covering they developed 8-9 rating indicating that the minimum period for which high humidity should be maintained after inoculation, for maximum development of disease in a susceptible line, is 4 days. The four lines that showed 3-5 rating in the previous inoculation did not behave similarly. It could be due to heavy development of the disease in this particular experiment. There was no clear cut correlation between the disease development and period for which the plants were covered. In some lines the disease increased and in others the disease decreased.

The experiment was repeated to confirm the above results. In place of ICC-6195, ICC-3531 was substituted as enough seed of ICC-6195 was not available. This time only one susceptible line, ICC-460 was taken. The period for which the covers were put on were 2, 4, 6, 8, and 10 days. One batch was left without covers. The results are presented in Table-28. The disease development was very high. It developed even in the non-covered plants. But covering for 4 days was needed to get a rating of 9 on the susceptible check line. The disease in the other lines was also high. Removal of the covers did not make much difference on the development of the disease in all the lines tested.

Table-27. Effect of duration of humidity on the development of Ascochyta blight in several genotypes of chickpea

Period for which humidity maintained	Cultivar	Incubation period in days	Percent		Rating on 9-point scale	
			Infection	Killed	10 DAI	20 DAI
1. Nil (no covers)	Pb-7	11	100.00	50.00	5	7
	ICC-460	8	100.00	9.09	4	5
	-3277	11	100.00	0.00	3	3
	-3330	6	100.00	10.00	5	5
	-6195	12	100.00	0.00	3	1
	-6297	8	100.00	0.00	5	5
2. Covers on for 2 days	Pb-7	6	100.00	100.00	5	8
	ICC-460	6	100.00	40.00	7	8
	-3277	6	100.00	30.00	5	7
	-3330	6	100.00	18.18	5	7
	-6195	6	100.00	22.22	5	7
	-6297	6	100.00	10.00	5	8
3. Covers on for 4 days	Pb-7	6	100.00	100.00	7	9
	ICC-460	6	100.00	90.00	5	9
	-3277	6	100.00	87.50	7	8
	-3330	6	100.00	20.00	5	7
	-6195	6	100.00	10.00	7	7
	-6297	6	100.00	30.00	5	8
4. Covers on for 6 days	Pb-7	6	100.00	88.88	9	9
	ICC-460	6	100.00	30.00	7	8
	-3277	6	100.00	50.00	5	8
	-3330	6	100.00	0.00	5	5
	-6195	6	100.00	22.22	4	7
	-6297	6	100.00	0.00	5	7
5. Covers on for 12 days	Pb-7	6	100.00	100.00	7	9
	ICC-460	6	100.00	100.00	7	9
	-3277	6	100.00	9.09	5	5
	-3330	6	100.00	9.09	5	7
	-6195	6	100.00	100.00	5	9
	-6297	6	100.00	100.00	8	9

DAI - Days after inoculation

Table-28. Effect of duration of humidity on the development of Ascochyta blight in several genotypes of chickpea

Period for which humidity maintained	Cultivar	Incubation period in days	Percent		Rating on 9-point scale 20 DAI
			Infection	Killed	
. Nil (no covers)	ICC-460	-	33.33	0.00	3
	-3277	-	14.28	0.00	3
	-3330	-	12.50	0.00	3
	-3531	-	11.11	0.00	3
	-6297	-	50.00	16.66	5
. Covers on for 2 days	-460	5	100.00	66.66	7
	-3277	5	100.00	66.66	7
	-3330	5	100.00	66.66	7
	-3531	5	100.00	50.00	7
	-6297	5	100.00	100.00	9
. Covers on for 4 days	-460	5	100.00	100.00	9
	-3277	5	100.00	100.00	9
	-3330	5	100.00	100.00	9
	-3531	5	100.00	55.55	7
	-6297	5	100.00	44.44	7
. Covers on for 6 days	-460	5	100.00	90.00	9
	-3277	5	100.00	87.50	9
	-3330	5	100.00	100.00	9
	-3531	5	100.00	25.00	7
	-6297	5	100.00	80.00	7
. Covers on for 8 days	-460	5	100.00	50.00	7
	-3277	5	100.00	100.00	9
	-3330	5	100.00	66.66	7
	-3531	5	100.00	100.00	9
	-6297	5	100.00	100.00	9
. Covers on for 10 days	-460	5	100.00	100.00	9
	-3277	5	100.00	100.00	9
	-3330	5	100.00	87.50	9
	-3531	5	100.00	33.33	7
	-6297	5	100.00	100.00	9

DAI - Days after inoculation

inoculated plants were removed 10 days after inoculation. Data on incubation period, number of plants infected and killed, and the disease rating 10 and 20 days after inoculation were recorded. The summarised results are presented in Table-30. The detailed results are presented in APPENDIX-XIII.

In all 834 accessions were screened. None of the lines was found resistant (1-2 rating). Twenty-nine lines showed moderately resistant reaction (3-4 rating). These were; (3-rating) ICC-3377, -3378, -3432, -3495, -3496, -3497, -3509, -3577, -3578, -3580, -3581, -3585, -3586, -3587, -3592, -3594, -3597, -3606; (4-rating) ICC-3200, -3254, -3259, -3387, -3573, -3582, -3737, -3738, -3739, -3740, and -3744. Fifty-seven lines showed tolerant reaction. These were; ICC-3086, -3102, -3133, -3134, -3135, -3141, -3237, -3252, -3253, -3261, -3262, -3268, -3269, -3270, -3277, -3296, -3304, -3330, -3334, -3346, -3359, -3376, -3386, -3394, -3567, -3576, -3589, -3593, -3598, -3599, -3634, -3698, -3723, -3724, -3725, -3726, -3747, -3780, -3854, -3855, -3899, -3915, -3916, -3917, -3918, -3919, -3923, -3924, -3927, -3928, -3929, -3931, -3933, -3935, -3936, -3940, and -3941. The remaining lines showed ratings of 6 and above.

It is clear from the above results that the level of resistance is low in the germplasm. About 90% of the accessions showed susceptible-moderately susceptible reaction. It appears difficult to get good resistance sources and lines with other characters like good recovering ability may have to be looked for.

Table-30. Summary of results of screening of chickpea germplasm for resistance to Ascochyta blight in Isolation Plant Propagator (1978-79)

Rating on 9-point scale	No. of entries	Percent entries
1	0	0.00
2	0	0.00
3	18	2.15
4	11	1.31
5	57	6.83
6	85	10.19
7	192	23.02
8	123	14.74
9	348	41.72

#### B. Kabuli germplasm

As mentioned earlier, lines with good recovering ability were

looked for. Ten days after inoculation, the plastic covers were removed. Lines were scored on regular 9-point scale and again 10 days later the recovering ability of these lines was scored on a different 9-point scale as described earlier. Data on incubation period, number of plants infected and killed were also recorded.

So far a total of 543 additional lines were screened. The detailed results are presented in APPENDIX-XIV. The summarised results considering recovery rating are presented in Table-31.

Table-31. Summary of results of screening of Kabuli chickpea germplasm lines to *Ascochyta* blight in Isolation Plant Propagator (1978-79)

Recovery rating on 9-point scale	No. of accessions	Percent accessions
1	1	0.18
2	0	0.00
3	14	2.57
4	0	0.00
5	94	17.31
6	1	0.18
7	165	30.38
8	27	4.97
9	241	44.38

Only one line, ICC-7664 showed resistant reaction (1-rating). Fourteen lines; ICC-4751, -4762, -4765, -4907, -5252, -6354, -6843, -6856, -7560, -7563, -7589, -7611, -7633, and -7674 showed moderately resistant reaction (3-rating). Ninety-four lines showed 5-rating. These were; ICC-3975, -4784, -4785, -4787, -4826, -4827, -4855, -4856, -4857, -4860, -4861, -4864, -4882, -4885, -4892, -4899, -4900, -4903, -4906, -4927, -4962, -4967, -4983, -5013, -5046, -5056, -5102, -5103, -5106, -5119, -5122, -5123, -5124, -5241, -5244, -5247, -5248, -5360, -5362, -6045, -6235, -6243, -6254, -6312, -6314, -6345, -6837, -6838, -6840, -6847, -6854, -6887, -6888, -7198, -7206, -7212, -7237, -7242, -7243, -7246, -7249, -7251, -7260, -7287, -7288, -7291, -7299, -7359, -7553, -7559, -7562, -7567, -7592, -7597, -7608, -7609, -7612, -7627, -7634, -7636, -7638, -7640, -7653, -7655, -7668, -7675, -7676, -7677, -7716, -7718, -7725, -7767, -7773, and -7776. The remaining lines showed ratings of 6 and above.

#### C. Promising lines from ICARDA, Syria

Dr. K.B. Singh, ICRISAT Chickpea Breeder at ICARDA, Syria had sent a list of 35 lines that showed 1-2 rating on a 5-point scale under



natural conditions at Tal Hadia Farm, Syria for testing in the propagators at Hyderabad. As seed of all the 35 lines was available in ICRISAT germplasm, they were tested against IARI-isolate of the blight pathogen. The method of screening and data recording was same as mentioned earlier. The results are presented in Table-32.

Table-32. Reaction of chickpea lines found promising at Tal Hadia Farm, Syria to IARI isolate of *A. rabiei* in Isolation Plant Propagator

Sl. No.	ICC No.	Incubation period (days)	Percent infection	Percent killed	Rating on 9-point scale	
					10 DAI	20 DAI
1.	6195	6	100.00	0.00	3	7
2.	6225	5	100.00	66.66	4	7
3.	6286	4	100.00	100.00	5	9
4.	6287	4	100.00	44.44	5	8
5.	6288	4	100.00	80.00	6	9
6.	6290	4	100.00	50.00	5	7
7.	6291	5	100.00	81.81	4	9
8.	6292	4	100.00	0.00	5	6
9.	6293	5	100.00	8.33	4	5
	460	4	100.00	10.00	5	8
10.	6294	4	100.00	9.09	5	8
11.	6295	5	100.00	0.00	3	6
12.	6296	5	100.00	9.09	5	8
13.	6297	5	100.00	0.00	4	6
14.	6298	4	100.00	0.00	5	6
15.	6304	5	100.00	0.00	5	6
16.	6307	5	100.00	0.00	4	6
17.	6328	5	100.00	0.00	4	7
18.	6329	4	100.00	18.18	5	7
19.	6330	4	100.00	0.00	5	3
20.	6345	4	100.00	0.00	4	7
21.	6434	4	100.00	41.66	5	8
22.	6466	4	100.00	0.00	5	7
23.	6467	4	100.00	0.00	5	7
24.	6534	4	100.00	11.11	5	7
25.	6538	4	100.00	18.18	5	7
26.	6539	4	100.00	0.00	5	6
27.	6990	5	100.00	0.00	4	7
28.	6997	4	100.00	0.00	4	7
29.	7000	6	100.00	0.00	3	6
30.	7729	4	100.00	0.00	5	7
31.	8940	4	100.00	0.00	4	7
32.	8941	4	100.00	10.00	5	7
33.	8942	5	100.00	18.18	4	7
34.	8943	5	100.00	0.00	4	6
35.	8949	4	100.00	0.00	5	6
	4939	4	100.00	9.09	5	8

DAI - Days after inoculation

The incubation period was 4-5 days. All the lines developed 100% infection but the percent killing varied from line to line. Only one line, ICC-6330 showed 3-rating on the 9-point scale. Another line; ICC-6293 showed 5-rating. The remaining showed 6 and above rating. The above two lines were rechecked and ICC-6330 showed 7-rating and ICC-6293 showed 5-rating in the second screening.

The high susceptibility of the lines found promising in Syria at Hyderabad may be due to (i) the disease incidence under natural conditions at Syria was not very high and they escaped and (ii) the strain at Syria and the one used at Hyderabad are different.

#### D. Colletotrichum blight promising lines

Germplasm lines that were found promising under natural conditions against the Colletotrichum blight were tested for their reaction to Ascochyta blight. This was done because these lines were found to show better recovering ability and were thought to behave similarly against blight. The method of screening and data recording (Recovery rating) was same as described earlier. The results are presented in APPENDIX-XV. Compared to the trend observed in the general germplasm screening, these lines have done comparatively better. Out of 29 lines screened only two lines showed 9-rating. Three lines showed 3-rating (ICC-1903, -5127, and -8920). Seven lines; ICC-2223, -2619, -5035, -6819, -7722, -8027, and -8462 showed 5-rating. The overall performance of these lines indicate that there is a similarity in the mechanisms of resistance to Colletotrichum blight and Ascochyta blight. The lines that showed 3 and 5-rating should be quite useful, they have tolerance against the two pathogens.

#### E. F<sub>2</sub> and BC-1 material involving *Cicer reticulatum*

One hundred and nineteen F<sub>2</sub> and BC-1 progenies involving *Cicer reticulatum* (JM-2100 and -2106) which was found promising against blight were screened. The crosses involved and the number of progenies screened are given in Table-33.

For each progeny, 10 seeds were planted in two pots (5 seeds each). Inoculation and screening procedures were same as described earlier. At the end of screening the surviving plants were transplanted in pots and seeds were collected from them for further evaluation.

The detailed results of the screening are presented in APPENDIX-XVI. The summarised results are presented in Table-34. In many of the progenies all the seeds did not germinate at the same time. Some seeds germinated after inoculations. These could not be re-inoculated as the first germinated plants needed to be transplanted and could not be kept in the propagator pots for longer time. The '?' mark against the rating

Table-33. F<sub>2</sub> and BC-1 materials involving *Cicer reticulatum* (JM-2100 and -2106) screened against the Ascochyta blight

Pedigree	Generation	No. of progenies screened
JG-62 X <i>C. reticulatum</i> (JM-2100)	F <sub>2</sub>	48
G-130 X <i>C. reticulatum</i> (JM-2100)	F <sub>2</sub>	19
P-5462 X <i>C. reticulatum</i> (JM-2106)	F <sub>2</sub>	16
JG-62 X (JG-62 X <i>C. reticulatum</i> - JM-2100)	BC-1	5
JG-62 X ( <i>C. reticulatum</i> - JM-2100 X JG-62)	BC-1	3
G-130 X (G-130 X <i>C. reticulatum</i> - JM-2100)	BC-1	7
G-130 X ( <i>C. reticulatum</i> - JM-2100 X G-130)	BC-1	11

Table-34. Summary of results of screening of F<sub>2</sub> and BC materials involving *Cicer reticulatum* to Ascochyta blight in Isolation Plant Propagator (1978-79)

Rating on 9-point scale	No. of progenies	Percent progenies
1	5	4.27
3	11	9.40
5	65	55.55
7	30	25.64
9	6	5.12

of some progenies indicate that some seedlings in those progenies germinated after inoculation. The disease ratings were given to overall progeny and also to individual plants. Seeds collected from the plants were also kept individually.

Five of the progenies screened showed 1-rating. But in all these cases the germination occurred after inoculation and so need to be taken cautiously. Eleven progenies showed 3-rating and 65 showed 5-rating. Others showed 7 and 9-rating. In all the progenies two surviving plants were transplanted and seeds were collected.

In general, progenies involving G-130 fared better than those involving JG-62. This may be due to different levels of susceptibility of JG-62 and G-130. But the overall performance of these progenies when compared to the germplasm lines was better and gives the hope that they may be carrying higher level of resistance.

#### F. Repeat screening

The germplasm lines that showed 5-rating or less in the initial screening were rechecked. A total of 83 lines were rechecked and the results are presented in APPENDIX-XVII. Only three lines; ICC-3259, -3277, and -3531 showed 3-rating in repeat screening. Five lines; ICC-3252, -3287, -3330, -3346, and -6293 showed 5-rating. The remaining showed ratings of 6 and above.

#### G. Replicated screening

The lines that showed 5 or less rating in the repeated screening till last year were rechecked in a replicated test for selecting the lines for 1979-80 CIABN. A total of 114 lines were tested. There were three replications, each replication represented by a pot with 10 seedlings. The screening was done as usual. The results are presented in APPENDIX-XVIII. The disease ratings varied from replication to replication considerably. The average of three ratings was considered for selecting the lines. Lines showing an average rating of 5 and less were considered (\* marked in the appendix). Thirty-four lines scored less than 5.5 rating. These are ICC-120, -150, -204, -229, -377, -462, -468, -539, -559, -567, -595, -599, -600, -693, -703, -704, -724, -781, -816, -838, -931, -1009, -1465, -1911, -1915, -2153, -2156, -2160, -2237, -2600, -4716, -4939, -4989, and -6250.

#### H. Seed multiplication

The seed of the above 34 lines and those of the lines reported resistant by earlier workers were multiplied for CIABN, now being operated by ICARDA and ICRISAT.

### VI. DISEASE CONTROL

At ICRISAT developing resistant varieties to control the disease is given major emphasis. Fungicidal trials to control the disease have not been taken up. But in order to find out a suitable fungicide to protect the crop at off-season nursery in Kashmir, a trial with 5 fungicides was conducted in the propagator. These fungicides were Benlate, Bavistin, Dithane M-45, Daconil and Difolatan. Preliminary experiment indicated that Dithane M-45 and Daconil are better than Difolatan. Benlate and Bavistin did not give any control. The work will be continued.

In another study 100 seeds obtained from blight affected plants in Kashmir were treated with Benlate T, the fungicide formulation which eradicates the wilt fungus from the seed. Seeds of two cultivars, JG-62 and JG-74 were treated with Benlate T (0.25%) and plated on PDA. Plates

were incubated for 8 days at 20°C. Except *Ascochyta* no other fungus could be isolated from Benlate T treated seed. In JG-62, 7% non-treated seed and 3% treated seed yielded *Ascochyta*. In JG-74, 19% non-treated seed and 8% treated seed yielded *Ascochyta*. It is clear that Benlate T could not eradicate *Ascochyta* from seed.

## VII. OTHER BLIGHTS

Evaluation of chickpea germplasm against *Colletotrichum capsici* was carried out under natural conditions. Also in the off-season (summer) planting of chickpea, blights were found. The causal organism were identified. All this work was done under the leadership of Dr. M.P. Haware.

### A. Screening against Colletotrichum blight

The Microbiology sub-program had sown 468 chickpea entries from the crossing block nursery in Alfisol (R-2) on July 28, 1978 to study nodulation. Since last four years we have observed *Colletotrichum* blight in September-October in early sown chickpea. It was thought worthwhile to evaluate these cultivars during September-October for blight resistance.

Most of these cultivars, were caught by blight during August-September. To ensure the uniform disease in the field, plant debris infected by *Colletotrichum* blight were collected from breeders' field, chopped into small pieces, and distributed throughout the field in early September. Within 15 days, the disease appeared in severe form in the field killing most of the cultivars. Scoring was done on a 9-point scale during first week of October. Only some of the cultivars showed recovery during the long dry spell in October.

There was no cultivar with 1-3 rating. The scale adopted for *Ascochyta* blight was followed. Reactions of lines is given in APPENDIX-XIX.

The following lines were given a rating of 5 (tolerant).

EC-26439, NEC-1128, NEC-81, P-1863, P-1789, NEC-790, NEC-989, NEC-226, G-130, HYB-16-3, F-61, EC-26422, NEC-139, H-73-16, NEC-1057, Bengal gram, NEC-21629, F-8, NEC-970, ICC-3, NEC-900, JM-583, NEC-1660, P-2633, K-1481, P-1528-1, NEC-140, K-1170, K-1189, C-8, G-1, P-3516-1, P-1539-1, P-2098, P-1353, and P-3788-2.

During the course of screening of wild spp. of *Cicer* to *Ascochyta* blight appearance of *Colletotrichum* blight in severe form in the potted plants enabled their evaluation against it also. During the month of September when the surviving plants of different spp. of *Cicer* against

Ascochyta blight in the Isolation Plant Propagator were transplanted into bigger pots in the net-house for collecting seed severe Colletotrichum blight naturally developed because of high humidity prevailing. All the species except *C. judaicum* were completely killed indicating that *C. judaicum* has very good resistance to it.

### B. Blights in Kashmir plantings

There was a report of 'serious disease situation' on July 27, 1979. The fields were visited on August 4. The blights were seen in patches particularly on C-214, JG-74, F-378 and 850-3/27 in the first planting (May 29) and on Chafa and NEC-1572 in the second planting (June 4). The wilt was observed in JG-62. While some plants showed typical symptoms of Ascochyta blight, others did not. Infected plant parts were brought to Hyderabad for further investigations.

The fungi isolated were: *Alternaria alternata*, *Ascochyta rabiei*, *Colletotrichum dematium*, *Phoma medicagenis*. The pathogenicity of all the four fungi was proven. The symptoms produced by *Ascochyta rabiei* and *Phoma medicagenis* were strikingly similar. All the four fungi could be isolated from surface-sterilized seed collected from blight affected plants; *Ascochyta* was more frequent. The data are summarised in Table-35.

Table-35. Frequency of pathogenic fungi on chickpea seed of six cultivars harvested from diseased plants at Tapar (Kashmir)

Cultivar <sup>a</sup>	Percent infection				
	<i>F. oxysporum</i> f.sp. <i>ciceri</i>	<i>Ascochyta</i> <i>rabiei</i>	<i>Alternaria</i> <i>alternata</i>	<i>Colletotrichum</i> <i>dematium</i>	<i>Phoma</i> <i>medicagenis</i>
JG-62	2	6	4	1	0
JG-74	0	16	0	2	0
F-378	3	8	0	0	0
Chafa	0	14	0	2	0
850-3/27	0	2	3	2	1
C-214	0	.1	0	0	0

<sup>a</sup>Seed was surface-sterilized

PROJECT:CP-PATH-5(78) : INTERNATIONAL CHICKPEA DISEASE  
NURSERIES

I. SUMMARY

1. The International Chickpea Root Rots/Wilt Nursery (ICRRWN) was sent to 32 cooperators in 18 countries. The nursery was sent for planting at 37 locations and had 63 entries. A separate report will be prepared.
2. The International Chickpea Ascochyta Blight Nursery (ICABN) was sent to 10 cooperators in 8 countries. The nursery was sent for planting at 13 locations and had 46 entries. A separate report will be prepared.
3. Nursery locations in Ethiopia, Egypt, India, Syria, and Turkey were visited.
4. Several scientists visited ICRISAT to see our work and exchange information.
5. The First International Chickpea Pathology Training Course was held in Jan-Feb 1979. Ten participants from 5 countries participated.
6. A Consultant's Group Discussion on Soil-borne Disease of Legumes was held in January 1979. Ten consultants from five countries participated and made recommendations for future work on soil-borne diseases of ICRISAT's legume crops.

II. INTRODUCTION

The first Cooperative Chickpea Disease Nursery with 30 entries was operated during 1976-77. In January 1978 we formally initiated a project on nurseries with the following objectives:

1. Share promising material with cooperators in different countries
2. Identify stable sources of resistance for use in breeding program at ICRISAT, and
3. Get a feed-back on susceptibilities of the entries to other locally serious diseases.

Since 1977-78 two separate nurseries were organised. These are (i) International Chickpea Root Rots/Wilt Nursery and (ii) International

Chickpea Ascochyta Blight Nursery. The reports for 1977-78 nurseries was compiled and circulated (ICRISAT Pulse Pathology Progress Report 4). Results of 1978-79 nurseries have started coming in and we will prepare separate reports after most results are turned in.

In order to further strengthen our international activities, our staff undertook tours to different cooperating locations. We also invited well-known scientists as consultants and organized a Consultants' Group Discussion on Soil-borne Diseases.

### III. 1978-79 NURSERIES

#### A. International Chickpea Root Rots/Wilt Nursery (ICRRWN)

##### 1. List of countries and Cooperators

<u>No.</u>	<u>Country</u>	<u>Cooperator(s)</u>
1.	Algeria	Mr. M.N. Bakhtri Regional Dryland Agronomist c/o UNDP, BP 823 <u>Algiers</u>
2.	Argentina	Ing. Agr. Susana Garica Medina Mejoramiento de Legumbres Instituto Nacional de Tecnologia Agropecuaria Estacion Experimental Regional Agropecuaria Salta Cerrillos (SALTA) <u>Republica Argentina</u>
3.	Chile	Dr. Gabriel Bascur B. Programa de Leguminosas de Grano Estacion Experimental La Platina Instituto de Investigaciones Agropecuarias Casilla 5427, <u>Santiago</u>  Dr. Alonso Bravo Agronomia Universidad Catolica Casilla 114-D, <u>Santiago</u>



<u>No.</u>	<u>Country</u>	<u>Cooperator (s)</u>
4.	Egypt	Dr. Ali Abdel Aziz Head, Grain Legume Section Field Crops Institute Agricultural Research Center Giza, <u>Cairo</u>
5.	Ethiopia	Mr. Alemu Mengistu Plant Pathologist Agricultural Experiment Station Addis Ababa University P.O. Box 32 <u>Debre-Zeit</u>
6.	Iran	Dr. Malik S. Amir Shahi Vice-Dean College of Agriculture University of Teheran <u>Karaj</u>
7.	Iraq	Mr. Issam Najjar Food Legumes Programme Directorate General of Field Crops Abu-Gharib, <u>Baghdad</u>
8.	Jordan	Dr. Hassan Gharaybeh Director Department of Agricultural Research and Extension P.O. Box 226 <u>Amman</u>
9.	Lebanon	Dr. Youssef Y. Klaimi Regional Field Food Crops Improv ment Officer FAO of the United Nations UNDP, P.O. Box 3216 <u>Beirut</u>
10.	Mexico	Ing. Santiago Sanchez INIA Auxiliar de Leguminosas Comestibles Apartado Posta No. 6-882 Y 6-883 Mexico 6 D.F.

<u>No.</u>	<u>Country</u>	<u>Cooperator (s)</u>
11.	Nepal	Mr. R.P. Sah Asstt. Agronomist - Pulses Parwanipur Agriculture Station Birganj, Parwanipur <u>Narayani Zone</u>
12.	Peru	The Director Centro Regional Investigacion Agraria de Norte APTDO 116 <u>Chiclayo</u>
13.	Sudan	Dr. Farouk Ahmed Salih Agricultural Research Corporation Hudeiba Research Station P.O. Box 31 <u>Ed-Damer</u>
14.	Syria	Dr. K.B. Singh ICRISAT Chickpea Breeder ICARDA P.O. Box 5466, <u>Aleppo</u>
15.	Tunisia	Dr. Jouhri Ahmed Chef du Laboratoire des Cultures Industrielles Republique Tunisienne Ministere de L'Agriculture INRAT, Ariana <u>Tunis</u>
16.	U.S.A.	Dr. W.R. Langford Coordinator of the Southern Regional Plant Introduction Station Experiment, <u>Georgia</u>  Dr. John C. Philips Asstt. Professor Crop Science Department California Polytechnic State University San Luis Obispo California 93407

<u>No.</u>	<u>Country</u>	<u>Cooperator(s)</u>
17.	Yemen Arab Republic	Mr. K.M. Ahmed Pest Control Assistant (FAO) Central Agricultural Research and Training Center UNDP/FAO Project Post Box 4788 <u>Taiz</u>
18.	India	Dr. T.S. Sandhu/Dr. Gurdip Singh <u>Ludhiana</u>  Dr. A.S. Gill <u>Gurdaspur</u>  Dr. B.L. Jalali <u>Hissar</u>  Dr. P. Shukla <u>Kanpur</u>  Dr. J.S. Grewal <u>New Delhi</u>  Mr. S.R. Kotasthane <u>Jabalpur</u>  Mr. M. Mahmood <u>Dholi</u>  Dr. K. Sen Gupta <u>Berhampore</u>  Dr. U.P. Singh/Mr. R.B. Singh <u>Varanasi</u>  Dr. B.T. Khadilkar <u>Akola</u>  Mr. K.K. Zote <u>Badnapur</u>  Dr. R.V. Hiremath <u>Gulbarga</u>  Dr. R.N. Singh <u>Faizabad</u>  Dr. Y.L. Nene/Dr. M.P. Haware ICRISAT

## 2. Entries

Following were the entries:

<u>S.No.</u>	<u>ICC No.</u>	<u>Pedigree</u>	<u>Origin</u>
1.	121	P-99	India
2.	202	P-165	"
3.	229	P-180-1	"
4.	267	P-212-1	"
5.	338	P-253	"
6.	391	P-289	"
7.	516	P-392	"
8.	519	P-394	"
9.	554	P-436-2	"
10.	658	P-517	"
11.	858	P-678	"
12.	867	P-690	"
13.	1443	P-1265	"
14.	1450	P-1270	"
15.	1611	P-1353	"
16.	1891	P-1514	"
17.	2072	P-1670	"
18.	2083	P-1679-2	Mexico
19.	2086	P-1683	"
20.	2089	P-1684	"
21.	2104	P-1696-1	"
22.	2321	P-1994	Not known
23.	2566	P-2559	Iran
24.	2660	P-2686-2	"
25.	2812	P-3036	"
26.	2835	P-3107-1	Not known
27.	2854	P-3154-2	Iran
28.	2860	P-3167	Not known
29.	2883	P-3251	Iran
30.	3099	P-3614	"
31.	3103	P-3617	Not known
32.	3392	P-4079	Iran
33.	3396	P-4083	"
34.	3426	P-4102	Turkey
35.	3439	P-4116-1	Iran
36.	3539	P-4237	India
37.	3684	P-4321-2	Iran
38.	4519	P-6067	India
39.	4552	P-6099	"
40.	4651	P-6244	"

<u>S.No.</u>	<u>ICC No.</u>	<u>Pedigree</u>	<u>Origin</u>
41.	4716	P-6308	India
42.	4918	Annigeri	"
43.	5003	850-3/27	"
44.	5727	C-16-1	"
45.	5864	T-3 (Gwalior)	"
46.	5901	T-32	"
47.	6081	JG-57	"
48.	6098	JG-74	"
49.	6671	NEC-790	Iran
50.	6880	NEC-1089	"
51.	7111	NEC-1470	"
52.	7248	NEC-1621	India
53.	7254	NEC-1627	Pakistan
54.	7681	P-1179	India
55.	8222	NEC-2383	"
56.	8446	JM-466/DZ-10-4	Ethiopia
57.	8933	W.R.315	India
58.	9001	NEC-426	Iran
59.	9117	NEC-847	"
60.	10104	P-6131	India
61.	10130	CPS-1	"
62.	10394	Coll.No.129	"
63.	11088	BG-212	"
64.	4951*	JG-62	"

\*Susceptible check

## B. International Chickpea Ascochyta Blight Nursery (ICABN)

### 1. List of countries and cooperators

<u>No.</u>	<u>Country</u>	<u>Cooperator(s)</u>
1.	Ethiopia	Mr. Alemu Mengistu Plant Pathologist Agricultural Experiment Station Addis Ababa University P.O. Box 32 <u>Debre-Zeit</u>
2.	Iran	Dr. Malik S. Amir Shahi Vice-Dean College of Agriculture University of Teheran Karaj

<u>No.</u>	<u>Country</u>	<u>Cooperator(s)</u>
3.	Iraq	Mr. Issam Najjar Food Legumes Programme Directorate General of Field Crops Abu-Gharib <u>Baghdad</u>
4.	Lebanon	Dr. Youssef Y. Klaimi Regional Field Food Crops Improvement Officer FAO of the United Nations UNDP, P.O.Box 3216 <u>Beirut</u>
5.	Syria	Dr. K.B. Singh ICRISAT Chickpea Breeder ICARDA P.O. Box 5466 <u>Aleppo</u>
6.	Tunisia	Dr. Jouhri Ahmed Chef de Laboratoire des Cultures Industrielles Republique Tunisienne Ministere De L'Agriculture INRAT, Ariana <u>Tunis</u>
7.	Turkey	Dr. Nihat Canitez Legume Breeder Agricultural Research Institute PK 17, <u>Eskisehir</u>  Dr. Didar Eser A.U. Ziraat Fakultesi Bitki Yetistirme ve Islahi Kursusu <u>Ankara</u>  Pulse Breeder Aegean Regional Agriculture Research Institute P.O.Box 9 Menemen, <u>Izmir</u>
8.	India	Dr. T.S. Sandhu/Dr. A.S. Gill/ Dr. Gurdip Singh Research Farm Punjab Agricultural University Gurdaspur, <u>Punjab</u>

## 2. Entries

Germplasm accessions/cultivars which showed an average rating of 5 or less in several tests, carried out in Isolation Plant Propagators at Hyderabad, were included as entries in this Nursery. The list was as follows:

<u>S.No.</u>	<u>ICC No.</u>	<u>Pedigree</u>	<u>Origin</u>
1.	120	P-97	India
2.	150	P-125	"
3.	204	P-167	"
4.	229	P-180-1	"
5.	272	P-217	"
6.	280	P-221	"
7.	462	P-347	"
8.	468	P-351	"
9.	471	P-353	"
10.	539	P-424	"
11.	559	P-440-1	"
12.	561	P-442-1	"
13.	567	P-449	"
14.	595	P-471	"
15.	599	P-474	"
16.	600	P-474-1	"
17.	665	P-523	"
18.	666	P-524	"
19.	667	P-525	"
20.	693	P-542	"
21.	703	P-553-1	"
22.	704	P-554	"
23.	724	P-570	"
24.	727	P-575	"
25.	733	P-580	"
26.	780	P-619-1	"
27.	781	P-620	"
28.	788	P-623	"
29.	813	P-640	"
30.	816	P-642-1	"
31.	838	P-661	"
32.	867	P-690	"
33.	1528	P-1311	"
34.	4552	P-6099	"
35.	4716	P-6308	"
36.	4934	Chafa	"
37.	4935	C-235	"
38.	4939	F-61	"
39.	4989	Pant 104	"
40.	5006	Attock-234	Turkey

<u>S.No.</u>	<u>ICC No.</u>	<u>Pedigree</u>	<u>Origin</u>
41.	5127	F-8	India
42.	5784	F <sub>3</sub> WR gram X 38A-1-NF	"
43.	6067	JG-39	"
44.	7513	12-071-05132	Iran
45.	7514	12-071-05093	"
46.	7520	12-071-10054	"
47.	460*	P-345-1	India

\*Susceptible check

#### IV. TOURS

In August 1978, Y.L. Nene and M.V. Reddy participated in the 3rd International Congress of Plant Pathology at Munich (West Germany) and presented papers on chickpea wilt and chickpea Ascochyta blight, respectively. They also attended the meeting of the International Working Group on Legume Viruses in Zürich (Switzerland).

In October 1978, Y.L. Nene visited ICARDA in Syria for working out chickpea Ascochyta blight screening program. This became necessary because of the decision that the Ascochyta blight work will be carried out jointly by ICARDA and ICRISAT. His report is in APPENDIX-XX.

In November-December 1979, M.P. Haware visited international chickpea disease nurseries in Ethiopia, Sudan, and Egypt. His report is in APPENDIX-XXI.

In March 1979, M.P. Haware visited Hissar at the request of Dr. R.K. Grover, Professor of Plant Pathology at the Haryana Agricultural University, Hissar, to look into a *Phytophthora* root rot problem. Dr. Haware returned with specimens and after continuous efforts, it was possible to isolate a fungus and prove pathogenicity. We believe that it is a species of *Phytophthora*. Identification of the species is in progress. The report is in APPENDIX-XXII.

During the whole chickpea season (September-April), M.V. Reddy made several trips to Hissar in connection with the work on chickpea stunt. His work is already indicated in Project:CP-Path-3.

In May 1979, W. Reed and Y.L. Nene visited Jordan, Syria, Turkey, and Greece to study chickpea disease and pest situations in these countries and see experiments in Syria. The reports are appended in APPENDIX-XXIII and XXIV.



## V. VISITING SCIENTISTS

Several visitors came to see ICRISAT's Pulse Pathology work. The two distinguished visitors were:

1. Dr. D.C. Erwin, Professor & Head, Dept. of Plant Pathology  
University of California  
Riverside  
California 92521  
U.S.A.

Dr. Erwin gave two seminars, one on systemic fungicides and other on the control of Verticillium wilt in cotton.

2. Dr. C. Booth, Assistant Director  
Commonwealth Mycological Institute  
Kew, Surrey  
U.K.

Dr. Booth gave a talk on Fusarium on which he is a world authority.

We discussed with all the scientists our research program and exchanged ideas.

## VI. FIRST INTERNATIONAL CHICKPEA PATHOLOGY TRAINING COURSE

ICRISAT, with its world mandate for chickpea improvement, considered it necessary to share the knowledge on chickpea pathology with the cooperating scientists through an annual course. The major objectives of this course are:

1. To acquaint cooperating scientists with the procedures for (i) diagnosing different disease of chickpea, (ii) identifying pathogens, and (iii) screening germplasm and breeding materials for disease resistance
2. To further strengthen the links with cooperating scientists and through them with their respective countries
3. To emphasize the role of pathologists in crop improvement programs.

The program of the course was drawn up to fulfil the above objectives.

As a response to the invitations sent by ICRISAT, ten scientists

participated in the course. Their names and the countries have been listed below:

Chile

Dr. Mario Alvarez A.

India

Dr. Y.P.S. Rathi - Pantnagar  
Mr. B.L. Sharma - Gwalior  
Mr. R.R. Singh - Kanpur  
Mr. K.K. Zote - Badnapur  
Mr. Mukesh Taneja - Hissar  
Mr. V.B. Chauhan - Varanasi

Iraq

Mr. Nabil Y. Mohammad Al-Talib

Mexico

Ing. Jose Cosme Guerrero-Ruiz

Sudan

Dr. Sami Osman Freigoun

The course was started on January 15. The program included following activities:

1. Field visits at ICRISAT Center and outside to get acquainted with characteristic symptoms of diseases and to learn about developing wilt/root rot sick plots
2. Lectures on chickpea pathogens and general lectures on plant viruses and plant parasitic nematodes
3. Laboratory sessions on pathogenic fungi and viruses of chickpea. Emphasis was on the identification of pathogens, special procedures for isolations and inoculations, seed pathology, and laboratory/net-house screening procedures
4. Lectures (followed by field visits) on germplasm, breeding for disease resistance, chickpea microbiology, and chickpea entomology
5. Field visits and discussions to get acquainted with other related activities of ICRISAT, such as cereals pathology, groundnut pathology, post-entry quarantine, etc.

6. Visits to other institute/projects at Hyderabad such as Central Plant Protection Training Institute, All India Coordinated Rice Improvement Project, and All India Sorghum Improvement Project
7. Visits to farmers' fields in northern India (Delhi-Agra; Delhi-Hissar)
8. Visit to ICRISAT and Haryana Agricultural University chickpea fields at Hissar
9. Presentation by participants summaries of the research activities at their respective research stations
10. Distribution of relevant literature, sets of 40 colored transparencies, etc.

Staff members of the pulse pathology sub-program, who were closely associated with the course were Dr. M.V. Reddy, Dr. M.P. Haware, Dr. Y.L. Nene, Dr. J. Kannaiyan, and Mrs. Sheila Vijayakumar. Other ICRISAT scientists who gave lectures and/or were associated with laboratory/field activities were: Drs. P.J. Dart and O.P. Rupela (microbiology); Dr. L.J.G. van der Maesen (germplasm botany); Dr. Jagdish Kumar (breeding); Dr. S. Sithanatham (entomology); Drs. R.J. Williams, S.D. Singh, and R.P. Thakur (cereals pathology); Drs. D. McDonald, D.V.R. Reddy, Mr. V. Krishnamurthy, and Miss R. Rajeshwari (groundnut pathology); Dr. J.L. Starr (nematology); and Dr. K.K. Nirula (quarantine).

A program evaluation sheet was given to each participant and very useful comments for making improvements in the course and for further cooperation among chickpea pathologists have been received. We will make sincere efforts to act on the suggestions that have been made.

#### VII. CONSULTANTS' GROUP DISCUSSION ON SOIL-BORNE DISEASES

In January 1979, ten scientists from Australia, India, Netherlands, U.K., and U.S.A. were invited to ICRISAT to hold a group discussion on soil-borne diseases of ICRISAT's three legume crops and develop recommendations for research priorities leading to better control of diseases of these legume crops. Invited consultants were G.S. Abawi (U.S.A.), J.S. Chohan (India), D.J. Hagedorn (U.S.A.), N. Hubbeling (The Netherlands), J.M. Kraft (U.S.A.), G.S. Purss (Australia), H.K. Saksena (India), J.B. Sinclair (U.S.A.), R.S. Singh (India), and R.K.S. Wood (U.K.). Dr. David Allen, IITA, Nigeria also participated. Y.L. Nene presented a comprehensive review of the ICRISAT work on soil-borne diseases of pigeonpea and chickpea. The presentations and a field visit to review experiments at ICRISAT served as stimuli for in-depth

discussions. Consultants presented papers based on their experiences with soil-borne diseases of beans and peas. The recommendations made by the group and given below will serve as guidelines for future research on these diseases at ICRISAT.

### Recommendations

The programme of research on soil-borne pathogens of pigeonpea and chickpea has made remarkably good progress since 1974. The initial decision to concentrate on the use of host resistance as a control measure made it imperative that emphasis be placed on screening techniques. The disease plot and screen house work is impressive both in extent and its obvious success in developing high disease pressure. The level of resistance evident is encouraging. Dr. Y.L. Nene and his colleagues are to be commended for their efforts which in our opinion has resulted in a well thought out and executed programme.

It is important that this screening work be continued both on the Alfisol and Vertisol. It is considered that both individual and multiple disease nurseries be maintained. Attention will need to be given now to the development of race identification techniques. Multi-locational testing is, we understand, currently being developed. This should be encouraged and expanded to represent the diversity of the environments and the pathogens in the semi-arid tropics.

With the successful development of the screening phase of the work the Consultants group feels that a broader approach be encouraged. The long term effective control of soil-borne pathogens requires a detailed understanding of the ecology of the pathogen and the epidemiology of the pathogens they cause in different environments. Thus we strongly recommend that ICRISAT initiate work in these areas with the major diseases of pulse crops.

With the development of resistant material from the programme it is important that work be initiated on the "whole systems" approach of crop management to minimise disease incidence.

It is important to study stress physiology, especially moisture, in relation to disease and it is considered this work should have a high priority for the semi-arid tropics.

The need for the ICRISAT programme to relate to the small farmer offers an opportunity to study the effects of intercropping and other cropping patterns on disease incidence. Such work should be encouraged.

It is important that studies be initiated on the interactions of the various diseases within the "root" disease complex in both chickpea

and pigeonpea. This has important implications both in resistance and management control practices.

Several of the pathogens such as *Rhizoctonia* spp., have an extremely wide host range. Resistance is generally difficult to find for such organisms and consequently the studies on the effects of cultural practices on the incidence of disease they cause should be encouraged.

It is inevitable that as this programme develops basic studies will be required from time to time. Personnel from universities should be encouraged to visit ICRISAT to carry out such studies. In other situations it may be appropriate for universities to carry out related studies on behalf of ICRISAT at their own establishments.

APPENDIX-I

Reaction of chickpea cultivars to wilt in the wilt-sick plot (1978-79)

S.No.	ICC No.	Pedigree	No. of plants	No. of wilted plants	Percent wilt
1	2	3	4	5	6
<u>Promising lines from 1977-78</u>					
1.	121		33	4	12.12
2.	202		41	4	9.75
3.	229		29	5	17.24
4.	267		42	5	11.90
5.	338		42	4	9.52
6.	391		26	2	7.69
7.	516		37	3	8.10
8.	519		46	5	10.86
9.	554		42	6	14.28
10.	658		40	3	7.50
11.	858		41	1	2.43
12.	867		30	3	10.00
13.	1443		33	1	3.03
14.	1450		37	3	8.10
15.	1611		41	4	9.75
16.	1891		42	8	19.04
17.	2072		28	2	7.14
18.	2083		7	1	14.28
19.	2086		29	4	13.79
20.	2089		34	6	17.64
21.	2104		23	1	4.34
22.	2321		38	25	65.78
23.	2566		23	12	57.17
24.	2660		18	1	5.55
25.	2812		32	8	25.00
26.	2835		25	10	40.00
27.	2854		24	9	37.50
28.	2860		6	6	100.00
29.	2883		18	6	33.33
30.	3099		28	5	17.85
31.	3103		21	3	14.28
32.	3392		27	7	25.92
33.	3396		18	1	5.55
34.	3426		19	4	21.05
35.	3439		15	1	6.66
36.	3539		16	1	6.25
37.	3684		26	3	11.53
38.	4519		18	3	16.66
39.	4552		26	2	7.69
40.	4651		14	14	100.00

contd.

1	2	3	4	5	6
41.	4716		16	16	100.00
42.	4918		17	9	52.94
43.	5003		14	14	100.00
44.	5727		--	--	-
45.	5864		12	8	66.66
46.	5901		18	5	27.77
47.	6081		23	2	8.69
48.	6098		37	3	8.10
49.	6671		26	2	7.69
50.	6880		24	2	8.33
51.	7111		27	2	7.40
52.	7248		17	1	5.88
53.	7254		16	5	31.25
54.	7681		19	2	10.52
55.	8222		25	2	8.00
56.	8446		14	1	7.14
57.	8933		21	2	9.52
58.	9001		22	1	4.54
59.	9117		18	2	11.11
60.	10104		39	2	5.12
61.	10130		29	2	6.89
62.	10394		26	2	7.69
63.	11088		17	0	0.00
64.	43		24	2	8.33
65.	606		23	2	8.69
66.	444		18	1	5.55
67.	460		4	1	25.00
68.	182		22	4	18.18
69.	449		3	0	0.00
70.	537		0	0	0.00
71.	595		31	3	9.67
72.	599		20	6	30.00
73.	843		20	3	15.00
74.	102		33	3	9.09
75.	434		45	3	6.60
76.	104		24	2	8.33
77.	6743		29	2	6.89
78.	3034		43	8	18.60
79.	3077		34	34	100.00
80.	3181		31	4	12.90
81.	4920		23	4	17.39
82.	2200		40	17	42.50
83.	3168		36	16	44.44
84.	4953		29	29	100.00
85.	8612		33	13	39.39

contd

1	2	3	4	5	6
86.	10637		42	42	100.00
87.	10809		34	3	8.82
88.	2204		50	39	78.00
89.	4917		50	16	32.00
90.	4958		33	33	100.00
91.	5006		50	37	74.00
92.	8181		50	50	100.00
93.	1376		46	9	19.56
94.	9085		39	15	38.46
95.		BDN-9-3	38	15	39.47
96.	4485		50	1	2.00
97.	4994		41	3	7.31
98.	3439		28	1	2.57
99.	6761		47	23	48.93
100.	8250		48	7	14.58
101.	2271		31	31	100.00
102.	2369		31	9	29.03
103.	2566		34	4	11.76
104.	2664		34	6	17.64
105.	2950		38	6	15.78
106.	6411		23	2	8.69
107.	6460		15	3	20.00
108.	6474		20	4	20.00
109.	6480		24	2	8.33
110.	6754		27	27	100.00
111.	7482		20	18	90.00
112.	7882		12	11	91.66
113.	8065		20	18	90.00
114.	8142		11	11	100.00
115.	8159		21	21	100.00
116.	8200		12	12	100.00
117.	9225		12	12	100.00
118.	9341		23	23	100.00
119.	8360		18	18	100.00
120.	9386		20	17	85.00
121.	9396		16	16	100.00
122.	9397		23	20	86.95
123.	9400		16	16	100.00
124.	9499		24	12	50.00
125.	9792		16	15	93.75
126.	9853		5	5	100.00
127.	9887		22	22	100.00
128.	10317		19	19	199.00
129.	10326		16	16	100.00
130.	10340		20	20	100.00
131.	370		29	28	96.55



1	2	3	4	5	6
132.	372		34	6	17.64
133.	606		42	1	2.38
134.	609		32	11	34.37
135.	610		32	4	12.50
136.	613		46	24	52.17
137.	1910		20	0	0.00
138.	1913		46	2	4.34
139.	1918		31	5	16.12
140.	1925		25	4	16.00
141.	2204		37	1	2.70
142.	2256		38	15	39.47
143.	2278		26	14	53.84
144.	2285		29	29	100.00
145.	2286		27	27	100.00
146.	2293		22	22	100.00
147.	2311		11	6	54.54
148.	2326		6	1	16.66
149.	2328		11	2	18.18
150.	2337		44	6	13.63
151.	2339		24	7	29.16
152.	2345		8	8	100.00
153.	2350		12	4	33.33
154.	2353		34	8	23.52
155.	2354		38	6	15.78
156.	2381		19	7	36.84
157.	2401		18	8	44.44
158.	2430		23	3	13.04
159.	2450		16	2	12.50
160.	2456		7	7	100.00
161.	2461		32	1	3.12
162.	2463		29	13	44.82
163.	2474		15	14	93.33
164.	2616		25	1	4.00
165.	2660		37	2	5.40
166.	2670		21	16	76.19
167.	2774		42	3	7.42
168.	2803		17	0	0.00
169.	2810		30	30	100.00
170.	2812		13	0	0.00
171.	2828		32	19	59.37
172.	2829		42	12	28.57
173.	2835		35	3	8.57
174.	2852		17	2	11.76
175.	2854		35	4	11.42

contd.

1	2	3	4	5	6
176.	2856		36	19	52.77
177.	2858		36	4	11.11
178.	2860		36	12	33.33
179.	2862		19	2	10.52
180.	2872		31	2	6.45
181.	2874		31	1	3.22
182.	2883		33	2	6.06
183.	2896		43	19	44.18
184.	2900		34	26	76.47
185.	2917		44	1	2.27
186.	2934		38	2	5.26
187.	2935		39	1	2.56
188.	2943		31	0	0.00
189.	3034		33	6	18.18
190.	3058		30	0	0.00
191.	3083		27	25	92.59
192.	3103		22	0	0.00
193.	3117		31	1	3.22
194.	3133		36	36	100.00
195.	3142		11	9	81.81
196.	3145		36	35	97.22
197.	3147		14	14	100.00
198.	3168		33	8	24.24
199.	3181		35	14	40.00
200.	3310		18	2	11.11
201.	3354		42	2	4.76
202.	3357		3	2	66.66
203.	3368		17	11	64.70
204.	3381		-	-	-
205.	3389		31	31	100.00
206.	3392		28	2	7.14
207.	3397		28	8	28.57
208.	3398		17	17	100.00
209.	3425		34	23	67.64
210.	3426		13	6	46.15
211.	3428		32	3	9.37
212.	3438		21	21	100.00
213.	3439		10	10	100.00
214.	3440		21	21	100.00
215.	3506		29	17	58.62
216.	3513		12	1	8.33
217.	3514		5	3	60.00
218.	3520		19	4	21.05
219.	3528		35	3	8.57
220.	3531		20	1	5.00

1	2	3	4	5	6
221.	3533		31	3	9.67
222.	3534		35	3	8.57
223.	3564		30	30	100.00
224.	3595		37	8	21.62
225.	3704		24	21	87.50
226.	3735		32	32	100.00
227.	3782		22	0	0.00
228.	3959		19	19	100.00
229.	4120		8	7	87.50
230.	4129		18	3	16.66
231.	4152		35	28	80.00
232.	4185		25	25	100.00
233.	4365		37	17	45.94
234.	4839		27	27	100.00
235.	4840		40	40	100.00
236.	4846		22	22	100.00
237.	4847		20	5	20.00
238.	4848		46	10	21.73
239.	4849		31	15	48.38
240.	4850		29	3	10.34
241.	4852		17	16	94.11
242.	4853		18	16	88.88
243.	4862		23	13	56.52
244.	4864		23	17	73.91
245.	4902		17	3	17.64
246.	4909		11	11	100.00
247.	4920		28	4	14.28
248.	4934		34	34	100.00
249.	4945		29	13	44.82
250.	4955		28	11	39.28
251.	4970		17	17	100.00
252.	4984		33	33	100.00
253.	5350		15	2	13.33
254.	5351		29	29	100.00
255.	5356		30	7	23.33
256.	5359		38	13	34.21
257.	5682		24	24	100.00
258.	5683		24	23	95.83
259.	5686		30	28	93.33
260.	5688		30	29	96.66
261.	5689		32	30	93.75
262.	6037		11	11	100.00
263.	6039		20	13	65.00
264.	6098		37	3	8.10
265.	6099		16	16	100.00

contd.

1	2	3	4	5	6
266.	6101		15	15	100.00
267.	6307		13	13	100.00
268.	6309		22	16	72.72
269.	6320		29	23	79.31
270.	6361		30	20	66.66
271.	6362		40	15	37.50
272.	6363		44	44	100.00
273.	6364		31	13	41.93
274.	6366		30	3	10.00
275.	6367		35	26	74.28
276.	6368		23	12	52.17
277.	6372		13	8	61.15
278.	6376		34	34	100.00
279.	6377		22	22	100.00
280.	6378		9	9	100.00
281.	6379		31	4	12.90
282.	6384		37	4	10.81
283.	6385		19	1	5.26
284.	6386		13	1	7.69
285.	6391		18	18	100.00
286.	6393		23	13	56.52
287.	6395		23	6	26.08
288.	6401		40	40	100.00
289.	6413		18	18	100.00
290.	6421		32	7	21.87
291.	6427		20	14	70.00
292.	6437		34	23	67.64
293.	6440		30	3	10.00
294.	6444		40	22	55.00
295.	6446		29	25	86.20
296.	6453		13	13	100.00
297.	6455		28	2	7.14
298.	6456		25	25	100.00
299.	6457		46	35	76.08
300.	6458		25	20	80.00
301.	6459		6	5	83.33
302.	6471		19	19	100.00
303.	6472		36	17	47.22
304.	6482		30	14	46.66
305.	6487		32	4	12.50
306.	6488		32	3	9.37
307.	6494		36	3	8.33
308.	6501		41	3	7.31
309.	6527		32	19	59.37
310.	6535		16	2	12.50

contd.

1	2	3	4	5	6
311.	6570		28	5	17.85
312.	6588		45	45	100.00
313.	6592		44	44	100.00
314.	6605		37	37	100.00
315.	6608		42	4	9.52
316.	6611		46	33	71.73
317.	6620		39	39	100.00
318.	6643		39	6	15.38
319.	6666		42	42	100.00
320.	6689		27	4	14.81
321.	6694		19	19	100.00
322.	6697		33	4	12.12
323.	6701		34	19	55.88
324.	6718		21	21	100.00
325.	6732		31	20	64.51
326.	6737		44	44	100.00
327.	6741		27	27	100.00
328.	6753		35	29	82.85
329.	6756		27	15	55.55
330.	6772		31	4	12.90
331.	6815		31	1	3.22
332.	6817		23	2	8.69
333.	6835		7	7	100.00
334.	6836		15	13	86.66
335.	6849		28	28	100.00
336.	6856		0	-	-
337.	6858		14	13	92.85
338.	6861		19	19	100.00
339.	6871		26	24	92.30
340.	6875		25	25	100.00
341.	6876		36	13	36.11
342.	6877		15	15	100.00
343.	6879		17	17	100.00
344.	6880		41	14	34.14
345.	6881		36	36	100.00
346.	6882		29	29	100.00
347.	6883		8	8	100.00
348.	6885		6	6	100.00
349.	6894		16	16	100.00
350.	6903		11	11	100.00
351.	6906		16	7	43.75
352.	6910		21	20	95.23
353.	6914		19	19	100.00
354.	6916		24	22	91.66
355.	6917		46	46	100.00

contd.

1	2	3	4	5	6
356.	6922	32	50	32	100.00
357.	6923	50	50	50	100.00
358.	6924	50	50	50	100.00
359.	6926	50	50	0	0.00
360.	6933	36	36	29	80.55
361.	6939	20	20	3	15.00
362.	6944	22	22	12	54.54
363.	6949	35	35	35	100.00
364.	6951	36	36	36	100.00
365.	6952	41	41	41	100.00
366.	6953	37	37	37	100.00
367.	6954	22	22	22	100.00
368.	6956	31	31	31	100.00
369.	6962	27	27	27	100.00
370.	6974	30	30	30	100.00
371.	6980	35	35	35	100.00
372.	6982	3	3	3	100.00
373.	6983	18	18	18	100.00
374.	6984	18	18	18	100.00
375.	6999	30	30	30	100.00
376.	7005	41	41	41	100.00
377.	7014	32	32	32	100.00
378.	7018	40	40	40	100.00
379.	7041	30	30	30	100.00
380.	7042	55	55	55	100.00
381.	7050	38	38	38	100.00
382.	7065	34	34	34	100.00
383.	7081	31	31	31	100.00
384.	7082	46	46	46	100.00
385.	7084	35	35	35	100.00
386.	7111	36	36	7	19.44
387.	7481	37	45	7	18.91
388.	7488	45	45	37	82.22
389.	7489	30	30	2	6.66
390.	7490	48	48	14	29.16
391.	7492	29	29	19	65.51
392.	7493	32	32	5	15.62
393.	7525	46	46	44	95.65
394.	7535	46	46	45	97.82
395.	7545	50	50	50	100.00
396.	7582	43	43	10	23.25
397.	7583	43	43	41	95.34
398.	7586	45	45	45	100.00
399.	7593	40	40	13	32.50
400.	7780	50	50	50	100.00

contd.

1	2	3	4	5	6
401.	7799		8	8	100.00
402.	7807		20	20	100.00
403.	7810		40	40	100.00
404.	7824		28	28	100.00
405.	7827		13	13	100.00
406.	7840		12	12	100.00
407.	7846		20	20	100.00
408.	7853		13	13	100.00
409.	7854		3	3	100.00
410.	7856		21	21	100.00
411.	7857		32	32	100.00
412.	7868		6	6	100.00
413.	7869		8	8	100.00
414.	7870		12	12	100.00
415.	7873		4	4	100.00
416.	7881		12	12	100.00
417.	7883		19	19	100.00
418.	7885		19	19	100.00
419.	7886		10	10	100.00
420.	7888		9	9	100.00
421.	7891		10	10	100.00
422.	7892		15	15	100.00
423.	7893		4	4	100.00
424.	7900		13	13	100.00
425.	7931		18	18	100.00
426.	7938		24	24	100.00
427.	8024		11	11	100.00
428.	8048		17	17	100.00
429.	8058		10	10	100.00
430.	8062		17	17	100.00
431.	8063		23	21	91.30
432.	8066		23	23	100.00
433.	8069		19	19	100.00
434.	8070		14	11	78.57
435.	8071		18	18	100.00
436.	8072		25	25	100.00
437.	8080		14	14	100.00
438.	8087		17	17	100.00
439.	8090		8	8	100.00
440.	8091		0	-	-
441.	8092		21	21	100.00
442.	8095		21	21	100.00
443.	8096		23	23	100.00
444.	8097		32	27	84.37
445.	8100		16	16	100.00
446.	8102		15	15	100.00

contd.

1	2	3	4	5	6
447.	8103		10	10	100.00
448.	8104		26	26	100.00
449.	8108		16	16	100.00
450.	8110		20	20	100.00
451.	8112		6	6	100.00
452.	8116		31	31	100.00
453.	8117		24	24	100.00
454.	8118		20	18	90.00
455.	8122		30	30	100.00
456.	8124		16	16	100.00
457.	8125		17	17	100.00
458.	8126		23	23	100.00
459.	8128		22	22	100.00
460.	8139		22	22	100.00
461.	8145		33	33	100.00
462.	8160		20	14	70.00
463.	8164		30	23	76.66
464.	8165		15	15	100.00
465.	8166		40	3	7.50
466.	8193		40	40	100.00
467.	8204		28	28	100.00
468.	8210		19	19	100.00
469.	8211		17	17	100.00
470.	8216		21	16	76.19
471.	8221		8	7	87.50
472.	8243		48	14	29.16
473.	8448		35	33	94.28
474.	8551		31	29	93.54
475.	8679		13	13	100.00
476.	8712		13	13	100.00
477.	8753		16	16	100.00
478.	8754		36	36	100.00
479.	8756		20	20	100.00
480.	8765		20	20	100.00
481.	8784		29	29	100.00
482.	8813		22	22	100.00
483.	8818		12	12	100.00
484.	8819		13	13	100.00
485.	8844		23	23	100.00
486.	8847		41	41	100.00
487.	8872		23	23	100.00
488.	8883		21	21	100.00
489.	8909		21	21	100.00
490.	8911		24	24	100.00

contd.



1	2	3	4	5	6
491.	8978		23	23	100.00
492.	8982		45	5	11.11
493.	8989		40	20	50.00
494.	8990		32	3	9.37
495.	8993		12	12	100.00
496.	8994		25	25	100.00
497.	8996		31	31	100.00
498.	8998		21	13	61.90
499.	8999		28	2	7.14
500.	9001		40	14	35.00
501.	9003		26	12	46.15
502.	9005		17	17	100.00
503.	9008		31	11	35.48
504.	9009		25	25	100.00
505.	9011		22	16	72.72
506.	9012		25	19	76.00
507.	9013		34	28	882.35
508.	9014		36	36	100.00
509.	9015		21	21	100.00
510.	9016		39	39	100.00
511.	9018		25	1	4.00
512.	9019		26	3	11.53
513.	9020		34	12	35.29
514.	9021		31	0	0.00
515.	9023		39	3	7.69
516.	9027		34	6	17.64
517.	9028		43	6	13.95
518.	9029		26	3	11.53
519.	9030		29	1	3.44
520.	9031		46	6	13.04
521.	9033		24	3	12.50
522.	9034		23	0	0.00
523.	9035		15	0	0.00
524.	9036		24	4	4.16
525.	9037		24	3	12.50
526.	9039		35	3	8.57
527.	9040		21	1	4.76
528.	9041		23	2	8.69
529.	9042		31	0	0.00
530.	9043		17	1	5.88
531.	9045		23	3	13.04
532.	9047		25	18	72.00
533.	9048		35	35	100.00
534.	9050		27	19	70.37
535.	9067		41	41	100.00

1	2	3	4	5	6
536.	9096		32	2	6.25
537.	9143		28	28	100.00
538.	9177		5	5	100.00
539.	9183		21	21	100.00
540.	9186		20	20	100.00
541.	9221		23	23	100.00
542.	9227		16	16	100.00
543.	9228		18	18	100.00
544.	9305		41	41	100.00
545.	9311		15	11	73.33
546.	9312		44	26	59.09
547.	9313		25	22	88.00
548.	9314		24	24	100.00
549.	9325		14	7	50.00
550.	9329		22	19	86.36
551.	9330		19	18	94.73
552.	9331		11	9	81.81
553.	9332		26	24	92.30
554.	9333		22	22	100.00
555.	9335		12	12	100.00
556.	9337		33	31	93.93
557.	9340		24	22	91.66
558.	9343		25	23	92.00
559.	9348		20	17	85.00
560.	9356		28	15	53.57
561.	9358		24	21	87.50
562.	9362		26	22	84.61
563.	9363		30	24	80.00
564.	9364		17	16	94.11
565.	9383		50	36	100.00
566.	9384		27	27	100.00
567.	9387		21	15	71.42
568.	9394		39	39	100.00
569.	9395		36	36	100.00
570.	9399		25	25	100.00
571.	9404		35	34	91.14
572.	9413		20	20	100.00
573.	9489		23	23	100.00
574.	9490		25	25	100.00
575.	9496		20	20	100.00
576.	9516		32	32	100.00
577.	9519		9	9	100.00
578.	9521		24	24	100.00
579.	9522		25	25	100.00
580.	9608		38	38	100.00

contd.

1	2	3	4	5	6
581.	9622		32	32	100.00
582.	9640		28	28	100.00
583.	9642		36	36	100.00
584.	9667		21	21	100.00
585.	9668		23	23	100.00
586.	9673		25	25	100.00
587.	9677		22	22	100.00
588.	9765		21	21	100.00
589.	9771		24	24	100.00
590.	9775		10	10	100.00
591.	9791		22	22	100.00
592.	9826		11	11	100.00
593.	9866		24	24	100.00
594.	9872		38	38	100.00
595.	9878		30	30	100.00
596.	9889		19	19	100.00
597.	9891		30	30	100.00
598.	9899		22	22	100.00
599.	9901		15	15	100.00
600.	10314		26	26	100.00
601.	10328		17	17	100.00
602.	10329		12	12	100.00
603.	10375		17	17	100.00

Stunt promising lines

604.	6391		24	14	58.33
605.	2369		25	5	20.00
606.	6976		17	17	100.00
607.	3782		23	3	4.34
608.	9003		29	4	13.79
609.	9397		30	30	100.00
610.	9625		25	25	100.00
611.	9736		27	27	100.00
612.	8813		22	22	100.00
613.	4984		27	25	92.59
614.	8911		12	12	100.00
615.	8847		17	17	100.00
616.	8786		16	16	100.00
617.	4094		11	11	100.00
618.	10796		25	25	100.00
619.	10795		30	30	100.00
620.	7080		27	27	100.00
621.	7003		20	20	100.00
622.	6459		17	17	100.00
623.	6795		40	40	100.00
624.	6978		36	36	100.00
625.	2616		43	3	6.97
					<u>6.97</u>
					contd.

1	2	3	4	5	6
626.	9681		30	30	100.00
627.	6962		29	29	100.00
628.	10836		21	21	100.00
629.	6458		30	15	50.00
630.	6896		27	27	100.00
631.	613		16	13	81.25
632.	9641		23	23	100.00
633.	6849		20	20	100.00

Ascochyta blight promising lines

634.	130		17	17	100.00
635.	229		31	18	58.06
636.	595		27	14	51.85
637.	599		21	16	76.19
638.	843		29	29	100.00
639.	903		11	11	100.00
640.	904		28	28	100.00
641.	928		17	5	29.41
642.	931		24	24	100.00
643.	954		26	20	76.92
644.	999		42	8	19.04
645.	1004		17	15	88.23
646.	1005		44	44	100.00
647.	1006		21	21	100.00
648.	1009		19	18	94.73
649.	1012		7	7	100.00
650.	1016		26	26	100.00
651.	1017		35	35	100.00
652.	1018		29	29	100.00
653.	1023		25	25	100.00
654.	1024		32	32	100.00
655.	1077		21	14	66.66
656.	1078		25	25	100.00
657.	1149		30	30	100.00
658.	1159		21	21	100.00
659.	1170		32	32	100.00
660.	1179		19	18	94.73
661.	1202		14	14	100.00
662.	1209		33	33	100.00
663.	1214		18	18	100.00
664.	1219		30	27	90.00
665.	1270		25	25	100.00
666.	1271		23	17	73.91
667.	1272		19	19	100.00
668.	1273		19	19	100.00
669.	1275		10	2	20.00
670.	1283		27	27	100.00

contd.

1	2	3	4	5	6
671.	1292		-	-	-
672.	1317		22	22	100.00
673.	1329		25	25	100.00
674.	1338		19	4	21.05
675.	1407		26	26	100.00
676.	1465		20	17	85.00
677.	1468		12	12	100.00
678.	1504		31	31	100.00
679.	1583		33	32	96.96
680.	1586		35	35	100.00
681.	1607		28	28	100.00
682.	1809		35	35	100.00
683.	1827		20	20	100.00
684.	1842		15	15	100.00
685.	1871		8	8	100.00
686.	1902		33	19	57.57
687.	1908		35	35	100.00
688.	1910		36	12	33.33
689.	1911		17	12	70.58
690.	1915		42	40	95.23
691.	2117		30	30	100.00
692.	2153		39	39	100.00
693.	2156		42	42	100.00
694.	2160		27	27	100.00
695.	2172		38	38	100.00
696.	2173		46	46	100.00
697.	2237		31	31	100.00
698.	2264		46	40	86.95
699.	2266		32	32	100.00
700.	2294		49	49	100.00
701.	2295		36	36	100.00
702.	2369		49	10	20.40
703.	2370		45	39	86.66
704.	2590		45	45	100.00
705.	2599		35	35	100.00
706.	2600		37	37	100.00
707.	2601		38	38	100.00
708.	2693		35	35	100.00
709.	4934		44	44	100.00
710.	4939		35	35	100.00
711.	6067		38	38	100.00
<u>GCVT Entries</u>					
712.	Phule G-3		41	41	100.00
713.	ICCC-4		37	37	100.00
714.	Jyothi		43	43	100.00

contd.

1	2	3	4	5	6
715.		Phule G-2	39	39	100.00
716.		Annigeri-1	43	43	100.00
717.		BG-216	56	56	100.00
718.		Phule G-1	59	59	100.00
719.		RAVP-54	50	41	82.00
720.		RAVP-52	50	6	12.00
721.		Phule G-4	48	47	97.91
722.		BDN-9-3	50	36	72.00

GIET Entries

723.		BG-225	50	37	74.00
724.		BG-9 ET JG-1257	42	42	100.00
725.		BG-9 ET-1252	38	38	100.00
726.		BDN-9-3	50	29	58.00
727.		H-76-2	44	44	100.00
728.		850-3/27	38	38	100.00
729.		H-75-33	46	5	10.86
730.		H-192	50	47	94.00
731.		ICC-7	26	26	100.00
732.		BG-228	50	23	46.00
733.		BG-231	34	34	100.00
734.		ICCC-6	13	13	100.00
735.		BG-227	47	47	100.00
736.		F-496	27	3	11.11
737.		H-75-78	40	40	100.00
738.		H-75-35	19	19	100.00
739.		ICCC-9	30	29	96.66
740.		BG-230	18	18	100.00
741.		GL-766	25	23	92.00
742.		H-72-4	29	9	31.03
743.		BG-220	21	4	19.04
744.		H-76-67	31	19	61.29
745.		ICCC-10	25	4	16.00
746.		H-73-28	22	21	95.45
747.		FG-734	22	22	100.00
748.		H-73-10	15	14	93.33
749.		BG-229	18	11	61.11
750.		ICCC-13	25	10	40.00
751.		ICCC-11	17	17	100.00
752.		ICCC-8	22	22	100.00
753.		GF-744	14	8	57.14
754.		BG-226	26	26	100.00
755.		GL-769	18	18	100.00

contd.

1	2	3	4	5	6
<u>Crossing block entries</u>					
756.		ICCC-1	33	4	12.12
757.		ICCC-2	38	12	31.57
758.		ICCC-3	38	38	100.00
759.		ICCC-4	23	23	100.00
760.		ICCC-5	41	41	100.00
761.		ICCC-6	34	34	100.00
762.		ICCC-7	24	23	95.83
763.		ICCC-8	18	18	100.00
764.		ICCC-9	25	25	100.00
765.		ICCC-10	16	1	6.25
766.		ICCC-11	8	8	100.00
767.		ICCC-12	26	26	100.00
768.		ICCC-13	46	40	86.95
769.	151	P-127	17	13	76.47
770.	4955	H-223	49	42	85.71
771.	1109	P-992	48	48	100.00
772.	438	P-324	41	1	2.43
773.	5250	GL-629	45	45	100.00
774.	10136	Pant G-114	49	49	100.00
775.	4946	F-496	56	39	69.64
776.	5264	GL-645	45	45	100.00
777.	804	P-636	44	40	90.90
778.	8920	K-1170	36	36	100.00
779.	8921	K-1174	28	28	100.00
780.	8922	K-1184	45	45	100.00
781.	8923	K-1189	26	26	100.00
782.	7848	NEC-1831	22	22	100.00
783.	8926	K-1480	26	26	100.00
784.	8927	K-1481	30	30	100.00
785.	11147	P-9847	26	26	100.00
786.	7721	NEC-139	14	14	100.00
787.		Pant G-121	24	24	100.00
788.	5264	GL-645	31	31	100.00
789.		B-106	38	38	100.00
790.	4942	F-272	27	21	77.77
791.	8322	CO-1	42	42	100.00
792.	10507	Coll. 238	27	25	92.59
793.	10596	Coll. 327	41	41	100.00
794.	4946	F-496	31	2	6.45
795.	10829	G-549	21	12	100.00
796.	10805	H-556-1	33	6	18.18
797.	9009	NEC-451	50	50	100.00
798.	6609	NEC-555	38	38	100.00
799.	6708	NEC-850	21	1	4.76
800.	6805	NEC-970	29	29	100.00

1	2	3	4	5	6
801.	6808	NEC-974	34	34	100.00
802.	6905	NEC-1135	25	25	100.00
803.	226	P-179	20	20	100.00
804.	389	P-287	29	6	20.68
805.	434	P-319	30	16	53.33
806.	686	P-538	21	21	100.00
807.	954	P-753	29	29	100.00
808.	1071	P-992	15	4	26.66
809.	1082	P-946	22	5	22.72
810.	1110	P-993	20	20	100.00
811.	1134	P-1027-1	18	18	100.00
812.	1143	P-1041-1	19	19	100.00
813.	1144	P-1042	22	22	100.00
814.	1166	P-1092	24	24	100.00
815.	1265	P-1162	32	32	100.00
816.	1395	P-1242	27	27	100.00
817.	1856	P-1497	23	23	100.00
818.	1994	P-1613	20	20	100.00
819.	2210	P-1781	22	3	13.63
820.	2230	P-1798	22	22	100.00
821.	2784	P-2974	22	22	100.00
822.	3500	P-4203	14	14	100.00
823.	4464	P-5482	26	26	100.00
824.	4544	P-6090	25	25	100.00
825.	4873	P-9668	26	26	100.00
826.	10137	Pant G-115	17	17	100.00
827.	5434	Ponaflo-2	22	22	100.00
828.	7510	Jam	18	18	100.00
829.	4971	L-532	13	13	100.00
830.	7710	NEC-34	23	23	100.00
831.	7721	NEC-139	18	18	100.00
832.	7722	NEC-140	25	25	100.00
833.	7723	NEC-143	29	29	100.00
834.	6283	NEC-175	18	18	100.00
835.	7774	NEC-1572	2	2	100.00
836.	7775	NEC-1604	27	27	100.00
837.	7267	NEC-1640	15	15	100.00
838.	7778	NEC-1646	25	24	96.00
839.	7878	NEC-1831	16	16	100.00
840.	1350	P-1213-2	27	27	100.00
841.	2570	P-2571	19	19	100.00
842.	7564	P-9635	18	14	77.77
843.		GL-734	10	10	100.00
844.		GL-770	5	0	0.00
845.		GL-779	4	0	0.00

contd.



1	2	3	4	5	6
846.		GL-780	4	2	50.00
847.		GL-782	5	3	60.00
848.		GL-783	3	3	100.00
849.		GL-702	-	-	-
850.		H-75-35	2	1	50.00
851.		H-457	-	-	-
852.		No.210	13	13	100.00

APPENDIX-II

Chickpea wilt screening 1978-79 : Breeders' material

F<sub>2</sub> Generation

222 Population

Sl. No.	Particular	No. of plants	No. of wilted plants	Percent wilt
1	2	3	4	5
1.	76154 Annigeri X WP-2654-A	82	82	100.00
2.	76155 Annigeri X P-271	35	35	100.00
3.	76156 Annigeri X P-619-1	86	82	95.34
4.	76157 Annigeri X P-1198-1	230	219	95.21
5.	76162 JM-466 X B-110	350	260	74.28
6.	76163 JM-466 X GW-5/7	391	289	73.91
7.	76175 Caina X GW-5/7	144	121	84.02
8.	76184 NEC-1196 X GW-5/7	45	45	100.00
9.	76195 T-103 X B-110	46	46	100.00
10.	76196 T-103 X GW-5/7	125	125	100.00
11.	76207 P-45 X JG-71	112	98	87.50
12.	76209 P-45 X NEC-426	179	79	44.13
13.	76210 P-45 X BG-203	106	36	33.96
14.	76211 P-45 X L-550	74	55	74.32
15.	76214 P-45 X 73111-8-3-B	237	99	41.77
16.	76215 P-45 X TM-4666	43	29	67.44
17.	76216 P-45 X NEC-970	50	41	82.00
18.	76217 P-45 X P-1798	57	50	87.71
19.	76220 P-156 X 73114-15-3-B	195	188	96.41
20.	76232 P-6099 X JG-71	56	51	91.07
21.	76233 P-6099 X NEC-426	91	63	69.23
22.	76234 P-6099 X BG-203	119	111	93.27
23.	76237 P-6099 X 73111-8-3-B	150	137	91.33
24.	76238 P-6099 X NEC-970	56	51	91.07
25.	76239 P-6099 X P-1208	156	76	48.71
26.	76241 WR-315 X 73114-15-3-B	115	74	64.34
27.	76242 WR-315 X NEC-426	98	53	54.08
28.	76243 WR-315 X BG-203	110	65	59.09
29.	76244 WR-315 X NEC-970	107	67	62.61
30.	76245 WR-315 X P-1798	24	24	100.00
31.	76218 P-45 X P-9668	22	21	95.45
32.	76258 G-130 X 850-3/27	20	18	90.00
33.	76284 C-104 X 7389-21-1-B	195	190	97.43
34.	76285 C-104 X 73105-7-1-B	338	298	88.16
35.	76289 C-235 X 7389-21-1-B	309	294	95.14
36.	76290 C-235 X 73105-7-1-B	181	140	77.34
37.	76295 C-543 X 73105-7-1-B	110	77	70.00
38.	76299 JG-35 X 7389-21-1-B	105	105	99.04

contd.

1	2	3	4	5	
39.	76300	JG-35 X 73105-7-1-B	94	74	78.72
40.	76304	No. 22 X 7339-21-1-B	46	22	47.82
41.	76305	No. 22 X 73105-7-1-B	63	39	61.90
42.	76309	NEC-657 X 7389-21-1-B	125	125	100.00
43.	76310	NEC-657 X 73105-7-1-B	263	235	89.35
44.	76313	NEC-970 X 73105-7-1-B	304	249	81.90
45.	76317	P-45 X P-1798	268	256	95.52
46.	76389	7389-18-5-B-B X 7330-10-4-B-B	45	33	73.33
47.	76391	7389-18-5-B-B X 73111-8-3-B-B	63	63	100.00
48.	76393	7389-18-5-B-B X 73111-8-2-B-B	50	50	100.00
49.	76395	7389-18-5-B-B X 75387-2-B-B	89	79	88.76
50.	76396	7389-18-5-B-B X 7358-8-2-B-B	30	30	100.00
51.	76397	7389-18-B-B X JM-460	34	34	100.00
52.	76399	73114-15-3-B-B X 7332-7-2-B-B	24	22	91.66
53.	76400	73114-15-3-B-B X 73111-8-3-B-B	151	151	100.00
54.	76401	73114-15-3-B-B X 7312-6-6-2-B-B	107	107	100.00
55.	76403	7114-15-3-B-B X 7347-6-4-B-B	53	53	100.00
56.	76404	73114-15-3-B-B X 7378-7-2-B-B	115	115	100.00
57.	76405	73114-15-4-B-B X 7376-15-2-B-B	74	74	100.00
58.	76407	73164-15-3-B-B X JM-460	182	182	100.00
59.	76410	731-8-3-B-B X 73111-8-3-B-B	53	53	100.00
60.	76411	731-8-3-B-B X 73126-6-2-B-B	105	100	95.23
61.	76412	731-8-3-B-B X 73111-8-2-B-B	138	138	100.00
62.	76419	73143-5-1-B-B X 7332-7-2-B-B	95	59	62.10
63.	76420	73143-5-1-B-B X 73111-8-3-B-B	93	79	84.94
64.	76421	73143-5-1-B-B X 73126-6-2-B-B	120	104	86.66
65.	76422	73143-5-1-B-B X 73111-8-3-B-B	27	27	100.00
66.	76425	73143-5-1-B-B X 7376-15-2-B-B	78	41	52.56
67.	76426	73143-5-1-B-B X 7358-8-2-B-B	60	57	95.00
68.	76427	73143-5-1-B-B X JM-460	36	36	100.00
69.	76428	7389-15-1-B-B X 7330-10-4-B-B	66	56	84.84
70.	76430	7389-15-1-B-B X 73111-8-3-B-B	118	118	100.00
71.	76431	7389-15-1-B-B X 731-26-6-2-B-B	272	272	100.00
72.	76432	7389-15-1-B-B X 73111-8-2-B-B	270	268	99.25
73.	76433	7389-15-1-B-B X 7347-6-4-B-B	132	123	93.18
74.	76434	7389-15-1-B-B X 7358-7-2-B-B	37	23	62.16
75.	76435	7389-15-1-B-B X 7376-15-2-B-B	46	25	54.34
76.	76436	7389-15-1-B-B X 7358-8-2-B-B	53	53	100.00
77.	76440	JG-62 X 73111-8-3-B-B	7	7	100.00
78.	76441	JG-62 X 73126-6-2-B-B	1	1	100.00
79.	76442	JG-62 X 73111-8-2-B-B	11	11	100.00
80.	76448	850-3/27 X 7330-10-4-B-B	152	106	69.73
81.	76449	850-3/27 X 7332-7-2-B-B	340	313	92.05
82.	76451	850-3/27 X 73126-6-2-B-B	270	270	100.00
83.	76452	850-3/27 X 73111-8-2-B-B	83	83	100.00
84.	76453	850-3/27 X 7347-6-4-B-B	44	41	93.18

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1	2	3	4	5	
85.	76454	850-3/27 X 7358-7-2-B-B	28	28	100.00
86.	76455	850-3/27 X 7376-15-2-B-B	103	68	66.01
87.	76460	NEC-426 X 73111-8-3-B-B	50	41	82.00
88.	76462	NEC-426 X 73111-8-2-B-B	80	63	78.75
89.	76470	P-5462 X 73126-6-2-B-B	53	52	98.11
90.	76471	P-5462 X 73111-8-2-B-B	131	101	77.09
91.	76547	NEC-123 X 73126-6-2-B-B	77	51	66.23
92.	76588	NEC-249 X 73143-5-1-B-B	78	78	100.00
93.	76589	73111-8-3-B X NEC-249	80	75	93.75
94.	76604	850-3/27 X P-1092	50	47	94.00
95.	76628	850-3/27 X C-214	148	144	97.29
96.	76629	C-214 X NEC-802	140	118	84.28
97.	76630	C-214 X Annigeri	100	95	95.00
98.	76631	C-214 X CPS-1	59	34	57.62
99.	76633	H-208 X 850-3/27	51	48	94.11
100.	76634	H-208 X NEC-802	130	78	60.00
101.	76635	H-208 X Annigeri	122	100	81.96
102.	76636	H-208 X CPS-1	72	59	81.94
103.	76638	850-3/27 X F-378	29	29	100.00
104.	76639	F-378 X NEC-802	97	72	74.22
105.	76640	F-378 X Annigeri	42	42	100.00
106.	76641	F-378 X CPS-1	20	18	90.00
107.	76643	850-3/27 X USA-613	6	5	83.33
108.	76645	USA-613 X Annigeri	47	44	93.61
109.	76650	K-4 X Annigeri	147	127	86.39
110.	76651	K-4 X CPS-1	236	170	72.03
111.	76653	JG-62 X 850-3/27	212	212	100.00
112.	76654	JG-62 X NEC-802	49	49	100.00
113.	76655	JG-62 X Annigeri	34	34	100.00
114.	76656	JG-62 X CPS-1	14	11	78.57
115.	76676	Annigeri X NEC-175	21	21	100.00
116.	76677	JG-71 X Annigeri	11	11	100.00
117.	76681	H-208 X P-2559	50	19	38.00
118.	76684	H-208 X JG-74	110	50	45.45
119.	76690	C-214 X P-2550	113	58	51.32
120.	76693	C-214 X JG-74	53	33	62.26
121.	76699	K-468 X P-2559	56	35	62.50
122.	86702	K-468 X JG-74	45	34	75.55
123.	76704	K-468 X CPS-1	28	20	71.42
124.	76705	K-4 X Annigeri	16	16	100.00
125.	76708	K-468 X 850-3/27	85	85	100.00
126.	76711	G-130 X P-2559	47	31	65.95
127.	76713	G-130 X JG-74	43	33	76.74
128.	76715	G-130 X CPS-1	67	52	77.61
129.	76717	G-130 X Annigeri	105	73	69.52
130.	76765	Annigeri X GW-5,7	58	48	82.75

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1	2	3	4	5	
131.	76766	Annigeri X 723-C-2	63	63	100.00
132.	76767	Annigeri X P-1181-2	41	32	78.04
133.	76769	NEC-249 X B-110	35	35	100.00
134.	76781	P-45 X P-1179	121	76	62.80
135.	76783	P-156 X P-1179	88	38	43.18
136.	76784	P-6099 X 73114-15-3-B	131	62	47.32
137.	76785	P-6099 X L-550	167	87	52.09
138.	76787	P-6099 X P-9800	74	36	48.64
139.	76788	P-6099 X P-1179	114	32	28.07
140.	76780	P-45 X Caina	50	33	66.00
141.	76789	P-6099 X P-9668	65	41	63.07
142.	76798	P-1181-A X 73111-8-3-B	94	69	73.40
143.	76804	WR-315 X JG-71	103	41	39.80
144.	76805	WR-315 X L-550	109	98	89.90
145.	76806	WR-315 X Caina	93	75	80.64
146.	76808	WR-315 X 73111-8-3-B	86	21	24.41
147.	76810	WR-315 X P-1179	76	12	15.78
148.	76811	WR-315 X P-1208	84	12	14.28
149.	76812	WR-315 X P-9668	83	28	33.73
150.	76842	C-8 X Annigeri	64	56	87.50
151.	761047	850-3/27 X (P-1231 X CP-36071)	220	110	50.00
152.	761062	7347-6-4-B X (P-2974 X P-36)	71	52	71.83
153.	761099	P-2215-4 X (P-1363 X WR-315)	34	32	94.11
154.	761105	7389-18-5-B X (P-1363-1 X Jam)	293	173	59.04
155.	761116	850-3/27 X (P-1231 X GL-629)	326	126	38.65
156.	761122	850-3/27 X (P-1214 X 12-071-05093)	351	231	65.81
157.	761125	850-3/27 X (12-071-05093 X P-1100)	349	323	92.55
158.	761131	Chafa X (WR-315 X CPI-36071)	94	69	73.40
159.	761132	7332-7-2-B-B X (WR-315 X GL-629)	192	112	58.33
160.	761137	850-3/27 X (P-1661 X P-1222)	158	144	91.13
161.	761148	850-3/27 X (P-1214 X 12-071-04244)	148	134	90.54
162.	761152	850-3/27 X (GL-629 X P-1092)	161	151	93.78
163.	761176	Annigeri X (JG-62 X P-36)	172	124	72.09
164.	761181	GW-5/7 X (P-30 X NEC-249)	137	102	74.45
165.	761194	NEC-562 X (P-1100 X WR-315)	393	273	69.46
166.	761201	S1-972-A (P-1363-1 X WR-315)	290	153	52.75
167.	761211	(P-36 X C-214)X(P-2974 X Ofra)	276	98	35.50
168.	761214	(P-36 X PRR-1)X(P-2974 X P-36)	264	72	27.27
169.	761216	(P-36 X L-550)X(P-1013 X Giza)	126	72	57.14
170.	761218	(P-36 X Ofra)X(C-214 X P-183)	120	100	83.33
171.	761231	(P-36 X PG-72-8)X(P-1013 X NEC-248)	181	111	61.32
172.	761277	850-3/27 X P <sub>2</sub> (NEC-1639 X NEC-1640)	230	70	30.43

1	2	3	4	5	
173.	761344	P-2264 X F <sub>5</sub> (850-3/27 X Radhey)	222	172	77.47
174.	761348	Annigeri X F <sub>5</sub> (850-3/27 XF-378)	211	151	71.56
175.	761351	P-1243 X F <sub>5</sub> (Ceylon-2 X GW-5/7)	198	113	57.07
176.	761352	P-47 X F <sub>5</sub> (RS-11 X GW-5/7)	223	115	51.56
177.	761353	P-946 X F <sub>5</sub> (L-550 X F-378)	147	111	75.51
178.	761357	P-1238 X F <sub>5</sub> (850-3/27 X F-378)	182	162	89.01
179.	761359	JG-62 X F <sub>5</sub> (850-3/27 X N-59)	184	174	94.56
180.	761360	B-110 X F <sub>5</sub> (JG-62 X Chafa)	198	154	77.77
181.	761363	P-378 X F <sub>5</sub> (Rabat X GW-5/7)	178	158	88.76
182.	761365	P-514 X F <sub>5</sub> (850-3/27 X F-378)	196	71	36.22
183.	761370	P-517 X F <sub>5</sub> (H-208 X GW-5/7)	470	295	62.76
184.	761373	P-3552 X F <sub>5</sub> (850-3/27 X F-378)	360	90	25.00
185.	761374	B-108 X F <sub>5</sub> (L-550 X GW-5/7)	84	29	34.52
186.	761379	P-517 X F <sub>5</sub> (L-550 X F-378)	131	91	69.46
187.	761406	F <sub>2</sub> (Annigeri X PM from L-550)-2 F <sub>2</sub> (NEC-143 X C-214)-2 X F <sub>2</sub> (B-108 X WR-315)-2	109	54	49.54
188.	761423	F <sub>2</sub> (NEC-143 X C-214)-2 X F <sub>2</sub> (B-108 X WR-315)-2	55	27	49.09
189.	761427	F <sub>2</sub> (L-550 X P-992)-2 X F <sub>2</sub> (P-861 X NEC-759)-2	191	136	71.20
190.	761431	F <sub>2</sub> (P-297 X JG-62)-2 X F <sub>2</sub> (H-208 X WR-315)-2	643	148	23.01
191.	761433	F <sub>2</sub> (JG-62 X P-36)-3 X F <sub>2</sub> (T-703 X JM-530)-3	88	56	63.63
192.	761439	F <sub>2</sub> (F-61 X WR-315)-2 X F <sub>2</sub> (P-3090 X Pant-104)-2	190	157	82.63
193.	761440	F <sub>2</sub> (F-61 X WR-315)-3 X F <sub>2</sub> (P-3090 X Pant-102)	222	119	53.60
194.	761442	F <sub>2</sub> (P-5409 X 850-3/27) X F <sub>2</sub> (T-3 X NEC-759)	242	157	64.87
195.	761444	F <sub>2</sub> (P-5409 X 850-3/27)-1 X F <sub>2</sub> (T-3 X NEC-759)	271	241	88.92
196.	761448	F <sub>2</sub> (P-5409 X 850-3/27) X F <sub>2</sub> (B-108 X WR-315)	190	135	71.05
197.	761452	F <sub>2</sub> (P-1286 X 850-3/27) X F <sub>2</sub> (P-2591 X P-3090)-1	174	129	74.13
198.	761453	F <sub>2</sub> (P-1286 X 850-3/27)-2 X F <sub>2</sub> (P-2571 X P-3090)-2	180	140	77.77
199.	761455	F <sub>2</sub> (P-1286 X 850-3/27)-2 X F <sub>2</sub> (P-2571 X P-3090)-4	232	200	86.20
200.	761456	F <sub>2</sub> (P-1286 X 850-3/27)-5 F <sub>2</sub> (P-257 X P-3090)-5	618	446	72.16
201.	761469	F <sub>2</sub> (JG-62 X WR-315)-1 X F <sub>2</sub> (P-1363-1 X PRR-U-1)	410	288	70.24
202.	761470	F <sub>2</sub> (JG-62 X WR-315)-2 X F <sub>2</sub> (P-1363 X PRR-1)-2	409	305	74.57

1	2	3	4	5	
203.	761471	F <sub>2</sub> (JG-62 X WR-315)-3 X F <sub>2</sub> (P-1363-1 X PRR-1)-3	498	226	45.38
204.	761472	F <sub>2</sub> (JG-62 X WR-315)-4 X F <sub>2</sub> (P-1363-1 X PRR-1)-4	117	66	56.41
205.	761524	F <sub>2</sub> (12-071-04244 X P-1100)-3 X F <sub>2</sub> (P-481 X GW-5/7)	53	28	52.83
206.	761527	F <sub>2</sub> (P-1209 X NEC-249)-1 X F <sub>2</sub> (P-1100 X WR-315)-1	133	105	78.94
207.	761529	F <sub>2</sub> NEC-249 X F <sub>2</sub> (P-1100 X WR-315)	94	56	59.57
208.	761531	F <sub>2</sub> (P-1209 X NEC-249)-5 X F <sub>2</sub> (P-1115 X WR-315)-5	498	206	41.36
209.	761543	F <sub>2</sub> (P-2252 X 10-2-3)-2 X F <sub>2</sub> (P-36 X Giza)-2	410	268	65.36
210.	761545	F <sub>2</sub> (850-3/27 X WF-III)-2 X F <sub>2</sub> (P-1869 X NP-34)-2	437	387	88.55
211.	761547	F <sub>2</sub> (T-3 X L-550)-2 X F <sub>2</sub> (F-61 X NEC-759)-2	456	424	92.98
212.	761666	F <sub>5</sub> (GW-5/7 X Ceylon-2) X F <sub>5</sub> (JG-62 X Radhey)	238	203	85.29
213.	761667	F <sub>5</sub> (JG-62 X F-378) X F <sub>5</sub> (RS-11 X GW-5/7)	132	122	92.42
214.	761673	F <sub>5</sub> (P-336 X 850-3/27) X F <sub>5</sub> (JG-62 X BEG-482)	155	150	96.77
215.	761675	F <sub>5</sub> (JG-62 X Radhey) X F <sub>5</sub> (850-3/27 X N-59)	73	59	80.82
216.	761677	F <sub>5</sub> (JG-62 X BEG-482) X F <sub>5</sub> (JGC-1 X F-378)	192	192	100.00
217.	761678	F <sub>5</sub> (L-550 X CP-66) X F <sub>5</sub> (NP-34 X GW-5/7)	97	82	84.53
218.	76628	C-214 X 850-3/27	279	129	46.23
219.	76629	C-214 X NEC-802	236	91	38.55
220.	76630	Annigeri X C-214	200	147	73.50
221.	76636	H-208 X CPS-1	19	4	21.05
222.	76740	7332-7-2-B X P-2571	18	7	38.88

contd.

F<sub>3</sub> Generation: 2852 progeny rows

Sl. No.	Particular	No. of plants	No. of wilted plants	Percent wilt
1	2	3	4	5
1.	751227- 1P JG-62 X P-39	6	0	0.00
2.	- 2P "	10	1	10.00
3.	- 3P "	10	0	0.00
4.	- 4P "	11	1	9.09
5.	- 5P "	4	1	25.00
6.	- 6P "	8	1	12.50
7.	- 7P "	2	0	0.00
8.	- 8P "	7	3	42.85
9.	- 9P "	13	2	15.38
10.	-10P "	12	3	25.00
11.	-11P "	9	0	0.00
12.	-12P "	14	1	7.14
13.	-13P "	3	1	33.33
14.	-14P "	9	1	11.11
15.	-15P "	1	0	0.00
16.	-16P "	4	1	25.00
17.	751237- 1P P-36 X C-214	5	2	40.00
18.	- 2P "	3	0	0.00
19.	- 3P "	-	-	-
20.	- 4P "	6	1	16.66
21.	- 5P "	9	0	0.00
22.	- 6P "	5	1	20.00
23.	- 7P "	12	3	25.00
24.	- 8P "	13	3	23.07
25.	- 9P "	16	3	18.75
26.	-10P "	11	1	9.09
27.	-11P "	6	2	33.33
28.	-12P "	14	3	21.42
29.	-13P "	13	2	15.38
30.	-14P "	13	1	7.69
31.	-15P "	11	3	27.27
32.	-16P "	11	4	36.36
33.	-17P "	-	-	-
34.	-18P "	10	1	10.00
35.	-19P "	1	0	0.00
36.	-20P "	9	4	44.44
37.	-21P "	11	3	27.27
38.	-22P "	18	0	0.00
39.	-23P "	13	1	7.69
40.	-24P "	20	3	15.00

contd.



1	2	3	4	5	
41.	751237-25P	P-36 X C-214	12	1	8.33
42.	751245- 1P	P-2974 X P-36	11	0	0.00
43.	- 2P	"	10	3	30.00
44.	- 3P	"	12	2	16.66
45.	- 4P	"	6	0	0.00
46.	- 5P	"	12	1	8.33
47.	- 6P	"	7	1	14.38
48.	- 7P	"	8	2	25.00
49.	- 8P	"	14	2	14.28
50.	- 9P	"	18	1	5.55
51.	-10P	"	6	0	0.00
52.	-11P	"	17	3	17.64
53.	-12P	"	15	0	0.00
54.	-13P	"	14	4	28.57
55.	-14P	"	11	0	0.00
56.	-15P	"	10	2	20.00
57.	-16P	"	1	0	0.00
58.	-17P	"	7	1	14.28
59.	-18P	"	-	-	-
60.	-19P	"	11	2	18.18
61.	-20P	"	10	2	20.00
62.	-21P	"	14	0	0.00
63.	-22P	"	11	1	9.09
64.	-23P	"	10	1	10.00
65.	-24P	"	17	3	17.64
66.	-25P	"	16	3	18.75
67.	-26P	"	16	6	37.50
68.	75653- 1P	JG-71 X WR-315	16	2	12.50
69.	- 2P	"	8	1	12.50
70.	- 3P	"	7	2	28.57
71.	- 4P	"	5	2	40.00
72.	- 5P	"	8	0	0.00
73.	- 6P	"	6	0	0.00
74.	- 7P	"	9	1	11.11
75.	- 8P	"	6	0	0.00
76.	- 9P	"	8	1	12.50
77.	-10P	"	10	0	0.00
78.	-11P	"	16	1	6.25
79.	-12P	"	5	0	0.00
80.	-13P	"	17	1	5.88
81.	-14P	"	2	0	0.00
82.	-15P	"	12	2	16.66
83.	-16P	"	9	1	11.11
84.	-17P	"	11	1	9.09
85.	-18P	"	11	0	0.00

contd.

1	2	3	4	5
86.	75653-19P JG-71 X WR-315	13	2	15.38
87.	-20P "	10	1	10.00
88.	-21P "	10	1	10.00
89.	-22P "	16	1	6.25
90.	-23P "	17	0	0.00
91.	-24P "	9	2	22.22
92.	-25P "	15	4	26.66
93.	-26P "	4	1	25.00
94.	75679- 1P P-30 X WR-315	12	2	16.66
95.	- 2P "	10	1	10.00
96.	- 3P "	4	1	25.00
97.	- 4P "	11	0	0.00
98.	- 5P "	10	3	30.00
99.	- 6P "	11	1	9.09
100.	- 7P "	11	2	18.18
101.	- 8P "	4	1	25.00
102.	- 9P "	13	1	7.69
103.	-10P "	8	1	12.50
104.	-11P "	16	0	0.00
105.	-12P "	16	3	18.75
106.	-13P "	11	1	9.09
107.	-14P "	6	0	0.00
108.	-15P "	18	0	0.00
109.	-16P "	10	2	20.00
110.	-17P "	12	0	0.00
111.	-18P "	14	3	21.42
112.	-19P "	1	0	0.00
113.	-20P "	1	0	0.00
114.	-21P "	9	0	0.00
115.	-22P "	1	0	0.00
116.	-23P "	6	2	33.33
117.	-24P "	4	0	0.00
118.	-25P "	4	0	0.00
119.	-26P "	8	1	12.50
120.	-27P "	7	0	0.00
121.	-28P "	1	0	0.00
122.	-29P "	4	0	0.00
123.	-30P "	2	0	0.00
124.	-31P "	2	0	0.00
125.	-32P "	5	2	40.00
126.	-33P "	1	0	0.00
127.	-34P "	3	0	0.00
128.	-35P "	2	0	0.00
129.	-36P "	1	0	0.00
130.	-37P "	1	1	100.00

contd.

1	2	3	4	5
131.	75679-38P P-30 X WR-315	10	0	0.00
132.	-39P "	14	4	28.57
133.	-40P "	5	0	0.00
134.	-41P "	8	0	0.00
135.	-42P "	13	1	7.69
136.	-43P "	14	1	7.14
137.	-44P "	-	-	-
138.	-45P "	-	-	-
139.	-46P "	1	0	0.00
140.	-47P "	1	0	0.00
141.	-48P "	8	1	12.50
142.	-49P "	6	1	16.66
143.	-50P "	7	1	14.28
144.	75706- 1P P-36 X WR-315	4	0	0.00
145.	- 2P "	-	-	-
146.	- 3P "	2	0	0.00
147.	- 4P "	8	1	12.50
148.	- 5P "	7	1	14.28
149.	- 6P "	7	2	28.57
150.	- 7P "	7	0	0.00
151.	- 8P "	5	3	60.00
152.	- 9P "	7	0	0.00
153.	-10P "	17	6	35.29
154.	-11P "	14	3	21.42
155.	-12P "	-	-	-
156.	-13P "	-	-	-
157.	-14P "	1	0	0.00
158.	-15P "	10	0	0.00
159.	-16P "	2	1	50.00
160.	-17P "	3	0	0.00
161.	-18P "	10	0	0.00
162.	-19P "	9	0	0.00
163.	-20P "	9	0	0.00
164.	-21P "	7	0	0.00
165.	-22P "	7	0	0.00
166.	-23P "	4	0	0.00
167.	-24P "	2	0	0.00
168.	-25P "	3	0	0.00
169.	-26P "	4	0	0.00
170.	-27P "	2	1	50.00
171.	-28P "	-	-	-
172.	-29P "	2	0	0.00
173.	-30P "	-	-	-
174.	-31P "	3	1	33.33
175.	-32P "	4	0	0.00

contd.

1	2	3	4	5
176.	75706-33P	P-36 X WR-315	-	-
177.	-34P	"	0	0.00
178.	-35P	"	1	9.09
179.	-36P	"	1	10.00
180.	-37P	"	0	0.00
181.	-38P	"	0	0.00
182.	-39P	"	2	50.00
183.	-40P	"	-	-
184.	-41P	"	-	-
185.	-42P	"	1	25.00
186.	-43P	"	0	0.00
187.	-44P	"	0	0.00
188.	-45P	"	0	0.00
189.	-46P	"	1	8.33
190.	-47P	"	2	18.18
191.	-48P	"	1	12.50
192.	-49P	"	2	25.00
193.	-50P	"	0	0.00
194.	75711- 1P	P-36 X PRR-1	1	33.33
195.	- 2P	"	2	40.00
196.	- 3P	"	-	-
197.	- 4P	"	1	14.28
198.	- 5P	"	0	0.00
199.	- 6P	"	1	50.00
200.	- 7P	"	0	0.00
201.	- 8P	"	0	0.00
202.	- 9P	"	1	50.00
203.	-10P	"	0	0.00
204.	-11P	"	0	0.00
205.	-12P	"	0	0.00
206.	-13P	"	1	25.00
207.	-14P	"	0	0.00
208.	-15P	"	0	0.00
209.	-16P	"	1	20.00
210.	-17P	"	1	50.00
211.	-18P	"	3	37.50
212.	-19P	"	2	50.00
213.	-20P	"	0	0.00
214.	-21P	"	0	0.00
215.	-22P	"	0	0.00
216.	-23P	"	1	20.00
217.	-24P	"	1	33.33
218.	-25P	"	1	50.00
219.	-26P	"	2	66.66
220.	-27P	"	0	0.00

contd.

1	2	3	4	5	
221.	75711-28P	P-36 X PRR-1	4	2	50.00
222.	-29P	"	2	1	50.00
223.	-30P	"	3	2	66.66
224.	-31P	"	1	0	0.00
225.	-32P	"	4	1	25.00
226.	-33P	"	4	0	0.00
227.	-34P	"	2	0	0.00
228.	-35P	"	4	0	0.00
229.	-36P	"	7	4	57.14
230.	-37P	"	9	3	33.33
231.	-38P	"	11	1	9.09
232.	-39P	"	8	4	50.00
233.	-40P	"	5	1	20.00
234.	-41P	"	3	1	33.33
235.	-42P	"	2	1	50.00
236.	-43P	"	2	0	0.00
237.	-44P	"	4	0	0.00
238.	-45P	"	1	0	0.00
239.	-46P	"	3	0	0.00
240.	-47P	"	6	0	0.00
241.	-48P	"	6	1	16.66
242.	-49P	"	7	3	42.85
243.	-50P	"	4	1	25.00
244.	75712- 1P	P-36 X NEC-249	9	4	44.44
245.	- 2P	"	1	0	0.00
246.	- 3P	"	1	0	0.00
247.	- 4P	"	3	2	66.66
248.	- 5P	"	2	1	50.00
249.	- 6P	"	9	1	11.11
250.	- 7P	"	9	6	66.66
251.	- 8P	"	4	2	50.00
252.	- 9P	"	2	0	0.00
253.	-10P	"	9	6	66.66
254.	-11P	"	6	2	33.33
255.	-12P	"	8	5	62.50
256.	-13P	"	1	1	100.00
257.	-14P	"	1	1	100.00
258.	-15P	"	4	0	0.00
259.	-16P	"	4	1	25.00
260.	-17P	"	1	0	0.00
261.	-18P	"	3	0	0.00
262.	-19P	"	-	-	-
263.	75713- 1P	P-36 X P-3090	6	2	33.33
264.	- 2P	"	2	2	100.00
265.	- 3P	"	13	2	15.38
266.	- 4P	"	8	4	50.00
					contd.

1	2	3	4	5
267.	75713- 5P P-36 X P-3090	8	3	37.50
268.	- 6P "	9	5	55.55
269.	- 7P "	4	2	50.00
270.	- 8P "	2	0	0.00
271.	- 9P "	10	2	20.00
272.	-10P "	2	1	50.00
273.	-11P "	14	6	42.85
274.	-12P "	8	3	37.50
275.	-13P "	11	5	45.45
276.	-14P "	11	0	0.00
277.	-15P "	13	5	38.46
278.	-16P "	13	3	23.07
279.	-17P "	16	3	18.75
280.	-18P "	13	0	0.00
281.	-19P "	12	4	33.33
282.	-20P "	11	2	18.18
283.	75715- 1P P-36 X P-4306	12	0	0.00
284.	- 2P "	8	1	12.50
285.	- 3P "	16	2	12.50
286.	- 4P "	8	0	0.00
287.	- 5P "	12	1	8.33
288.	- 6P "	11	3	27.27
289.	- 7P "	15	1	6.66
290.	- 8P "	7	1	14.28
291.	- 9P "	18	5	27.77
292.	-10P "	14	4	28.57
293.	-11P "	11	2	18.18
294.	-12P "	12	3	25.00
295.	-13P "	10	3	30.00
296.	-14P "	11	3	27.27
297.	-15P "	13	1	7.69
298.	-16P "	9	4	44.44
299.	-17P "	13	6	46.15
300.	-18P "	14	2	14.28
301.	-19P "	8	1	12.50
302.	-20P "	13	4	30.76
303.	-21P "	16	2	12.50
304.	-22P "	13	1	7.69
305.	-23P "	13	0	0.00
306.	-24P "	11	0	0.00
307.	-25P "	13	1	7.69
308.	-26P "	11	1	9.09
309.	-27P "	17	2	11.76
310.	-28P "	19	2	10.52

contd.

1	2	3	4	5	
311.	75715-29P	P-36 X P-4306	13	2	15.38
312.	-30P	"	15	0	0.00
313.	-31P	"	14	4	28.57
314.	-32P	"	11	1	9.09
315.	-33P	"	8	2	25.00
316.	-34P	"	13	0	0.00
317.	-35P	"	12	3	25.00
318.	75717- 1P	P-36 X PG-72-8	12	1	8.33
319.	- 2P	"	14	2	14.28
320.	- 3P	"	11	2	18.18
321.	- 4P	"	14	4	28.57
322.	- 5P	"	17	0	0.00
323.	- 6P	"	15	2	13.33
324.	- 7P	"	11	0	0.00
325.	- 8P	"	18	1	5.55
326.	- 9P	"	10	2	20.00
327.	-10P	"	12	0	0.00
328.	-11P	"	13	2	15.38
329.	-12P	"	13	3	23.07
330.	-13P	"	11	3	27.27
331.	-14P	"	12	2	16.16
332.	-15P	"	4	0	0.00
333.	-16P	"	15	2	13.33
334.	-17P	"	16	1	6.25
335.	-18P	"	17	1	5.88
336.	-19P	"	15	3	20.00
337.	-20P	"	11	1	9.09
338.	-21P	"	5	3	60.00
339.	-22P	"	11	1	9.09
340.	-23P	"	12	6	50.00
341.	-24P	"	15	5	33.33
342.	-25P	"	14	3	21.42
343.	-26P	"	11	2	18.18
344.	-27P	"	11	4	36.36
345.	-28P	"	11	7	63.63
346.	-29P	"	10	3	30.00
347.	-30P	"	8	1	12.50
348.	-31P	"	9	2	22.22
349.	-32P	"	13	3	23.07
350.	-33P	"	10	2	20.00
351.	-34P	"	13	0	0.00
352.	-35P	"	7	0	0.00
353.	75718- 1P	P-36 X P-1613	8	3	37.50
354.	- 2P	"	8	0	0.00
355.	- 3P	"	10	1	10.00
356.	- 4P	"	7	1	14.28

1	2	3	4	5	
357.	75718- 5P	P-36 X P-1613	12	3	25.00
358.	- 6P	"	9	3	33.33
359.	- 7P	"	7	2	28.57
360.	- 8P	"	1	0	0.00
361.	- 9P	"	8	0	0.00
362.	-10P	"	8	2	25.00
363.	-11P	"	12	2	16.66
364.	-12P	"	9	0	0.00
365.	-13P	"	13	3	23.07
366.	-14P	"	6	3	50.00
367.	-15P	"	9	2	22.22
368.	-16P	"	4	1	25.00
369.	-17P	"	13	4	30.76
370.	-18P	"	7	2	28.57
371.	-19P	"	10	1	10.00
372.	75720- 1P	P-36 X P-458	10	3	30.00
373.	- 2P	"	5	1	20.00
374.	- 3P	"	2	2	100.00
375.	- 4P	"	8	0	0.00
376.	- 5P	"	12	1	8.33
377.	- 6P	"	15	3	20.00
378.	- 7P	"	10	1	10.00
379.	- 8P	"	10	1	10.00
380.	- 9P	"	7	0	0.00
381.	-10P	"	15	4	26.66
382.	-11P	"	3	0	0.00
383.	-12P	"	10	2	20.00
384.	-13P	"	5	0	0.00
385.	-14P	"	9	2	22.22
386.	-15P	"	7	3	42.85
387.	-16P	"	7	2	28.57
388.	-17P	"	6	3	50.00
389.	-18P	"	12	4	33.33
390.	-19P	"	11	4	36.36
391.	-20P	"	6	1	16.66
392.	-21P	"	10	1	10.00
393.	-22P	"	11	1	9.09
394.	-23P	"	10	1	10.00
395.	-24P	"	1	1	100.00
396.	75722- 1P	P-36 X K-56566	8	0	0.00
397.	- 2P	"	14	2	14.28
398.	- 3P	"	11	2	18.18
399.	- 4P	"	8	0	0.00
400.	- 5P	"	17	1	5.88

contd.



1	2	3	4	5	
401.	75722- 6P	P-36 X K-56566	9	2	22.22
402.	- 7P	"	8	2	25.00
403.	- 8P	"	8	1	12.50
404.	- 9P	"	3	0	0.00
405.	-10P	"	11	1	9.09
406.	-11P	"	11	2	18.18
407.	-12P	"	5	0	0.00
408.	-13P	"	7	0	0.00
409.	-14P	"	9	1	11.11
410.	-15P	"	12	2	16.16
411.	-16P	"	8	3	37.50
412.	-17P	"	9	2	22.22
413.	-18P	"	6	1	16.66
414.	-19P	"	6	0	0.00
415.	-20P	"	7	3	42.85
416.	-21P	"	5	3	60.00
417.	-22P	"	7	1	14.28
418.	-23P	"	7	3	42.85
419.	-24P	"	15	5	33.33
420.	-25P	"	6	5	83.33
421.	75726- 1P	P-36 X H-208	9	9	100.00
422.	- 2P	"	11	4	36.36
423.	- 3P	"	14	2	14.28
424.	- 4P	"	10	4	40.00
425.	- 5P	"	10	3	30.00
426.	- 6P	"	10	4	40.00
427.	- 7P	"	12	12	100.00
428.	- 8P	"	12	10	83.33
429.	- 9P	"	14	4	28.57
430.	-10P	"	12	12	100.00
431.	-11P	"	17	7	41.17
432.	-12P	"	14	4	28.57
433.	-13P	"	12	5	41.66
434.	-14P	"	12	9	75.00
435.	-15P	"	12	1	8.33
436.	-16P	"	12	6	50.00
437.	-17P	"	14	2	14.28
438.	-18P	"	14	4	28.57
439.	-19P	"	15	5	33.33
440.	-20P	"	15	7	46.66
441.	-21P	"	13	1	7.69
442.	-22P	"	17	4	23.52
443.	-23P	"	18	2	11.11
444.	-24P	"	15	1	6.66
445.	-25P	"	9	0	0.00

contd.

1	2	3	4	5	
446.	75726-26P	P-36 X H-208	14	2	14.28
447.	-27P	"	13	1	7.69
448.	-28P	"	15	0	0.00
449.	-29P	"	15	1	6.66
450.	-30P	"	14	1	7.14
451.	-31P	"	16	6	37.50
452.	-32P	"	15	4	26.66
453.	-33P	"	20	2	10.00
454.	-34P	"	21	4	19.04
455.	-35P	"	16	5	31.25
456.	-36P	"	16	3	18.75
457.	-37P	"	17	1	5.88
458.	-38P	"	15	5	33.33
459.	-39P	"	9	1	11.11
460.	-40P	"	11	1	9.09
461.	-41P	"	15	3	20.00
462.	-42P	"	18	2	11.11
463.	-43P	"	10	3	30.00
464.	-44P	"	10	0	0.00
465.	-45P	"	14	6	42.85
466.	-46P	"	12	3	25.00
467.	-47P	"	11	2	18.18
468.	-48P	"	8	3	37.50
469.	-49P	"	16	3	18.75
470.	-50P	"	12	3	25.00
471.	75728- 1P	P-36 X P-388	15	6	40.00
472.	- 2P	"	15	6	40.00
473.	- 3P	"	16	5	31.25
474.	- 4P	"	12	0	0.00
475.	- 5P	"	14	3	21.42
476.	- 6P	"	13	3	23.07
477.	- 7P	"	12	3	25.00
478.	- 8P	"	10	3	30.00
479.	- 9P	"	16	2	12.50
480.	-10P	"	13	4	30.76
481.	-11P	"	11	8	72.72
482.	-12P	"	13	1	7.69
483.	-13P	"	11	2	18.18
484.	-14P	"	11	3	27.27
485.	-15P	"	8	0	0.00
486.	-16P	"	7	1	14.28
487.	-17P	"	3	0	0.00
488.	-18P	"	1	0	0.00
489.	-19P	"	11	4	36.36
490.	-20P	"	6	1	16.66

contd.

1	2	3	4	5	
491.	75728-21P	P-36 X P-388	6	1	16.6€
492.	-22P	"	2	0	0.0C
493.	-23P	"	7	4	57.14
494.	-24P	"	3	0	0.0C
495.	-25P	"	3	1	33.33
496.	75733- 1P	P-1013' X WR-315	2	0	0.0C
497.	- 2P	"	9	4	44.44
498.	- 3P	"	5	2	40.0C
499.	- 4P	"	6	2	33.33
500.	- 5P	"	5	1	20.0C
501.	- 6P	"	3	1	33.33
502.	- 7P	"	7	1	14.28
503.	- 8P	"	3	0	0.0C
504.	- 9P	"	4	4	100.0C
505.	-10P	"	6	2	33.33
506.	-11P	"	7	7	100.0C
507.	-12P	"	-	-	-
508.	-13P	"	4	1	25.0C
509.	-14P	"	2	1	50.0C
510.	-15P	"	3	1	33.33
511.	-16P	"	2	2	100.0C
512.	-17P	"	2	1	50.0C
513.	-18P	"	4	0	0.0C
514.	-19P	"	4	1	25.0C
515.	-20P	"	7	1	14.28
516.	-21P	"	8	0	0.0C
517.	-22P	"	2	1	50.0C
518.	-23P	"	3	0	0.0C
519.	-24P	"	2	0	0.0C
520.	-25P	"	3	0	0.0C
521.	-26P	"	9	2	22.22
522.	-27P	"	12	1	8.33
523.	-28P	"	11	2	18.18
524.	-29P	"	11	0	0.0C
525.	-30P	"	2	0	0.0C
526.	-31P	"	5	3	60.0C
527.	-32P	"	3	3	100.0C
528.	-33P	"	11	7	63.63
529.	-34P	"	4	2	50.0C
530.	-35P	"	5	2	40.0C
531.	-36P	"	2	2	100.0C
532.	-37P	"	-	-	-
533.	-38P	"	4	3	75.0C
534.	-39P	"	1	0	0.0C
535.	-40P	"	3	2	66.6€

contd.

1	2	3	4	5	
536.	75733-41P	P-1013 X WR-315	4	2	50.00
537.	-42P	"	7	7	100.00
538.	-43P	"	6	6	100.00
539.	-44P	"	3	3	100.00
540.	-45P	"	6	6	100.00
541.	-46P	"	8	3	37.50
542.	-47P	"	8	6	75.00
543.	-48P	"	7	7	100.00
544.	-49P	"	8	5	62.50
545.	-50P	"	8	5	62.50
546.	75754- 1P	P-1013 X G-130	6	5	83.33
547.	- 2P	"	8	8	100.00
548.	- 3P	"	2	2	100.00
549.	- 4P	"	7	3	42.85
550.	- 5P	"	2	1	50.00
551.	- 6P	"	4	0	0.00
552.	- 7P	"	3	1	33.33
553.	- 8P	"	14	11	78.57
554.	- 9P	"	12	9	75.00
555.	-10P	"	10	6	60.00
556.	-11P	"	12	7	58.33
557.	-12P	"	8	3	37.50
558.	-13P	"	6	4	66.66
559.	-14P	"	7	3	42.85
560.	-15P	"	1	0	0.00
561.	-16P	"	4	2	50.00
562.	-17P	"	3	0	0.00
563.	-18P	"	3	1	33.33
564.	-19P	"	3	0	0.00
565.	-20P	"	10	2	20.00
566.	-21P	"	3	2	66.66
567.	-22P	"	-	-	-
568.	-23P	"	5	1	20.00
569.	-24P	"	5	4	80.00
570.	-25P	"	4	0	0.00
571.	-26P	"	5	0	0.00
572.	-27P	"	7	3	42.85
573.	-28P	"	7	3	42.85
574.	-29P	"	3	0	0.00
575.	-30P	"	4	0	0.00
576.	-31P	"	2	0	0.00
577.	-32P	"	1	0	0.00
578.	-33P	"	3	0	0.00
579.	-34P	"	3	0	0.00
580.	-35P	"	1	1	100.00

1	2	3	4	5	
581.	75754-36P	P-1013 X G-130	3	2	66.66
582.	-37P	"	2	0	0.00
583.	-38P	"	3	2	66.66
584.	-39P	"	3	0	0.00
585.	-40P	"	1	0	0.00
586.	-41P	"	2	1	50.00
587.	-42P	"	7	0	0.00
588.	-43P	"	10	2	20.00
589.	-44P	"	5	0	0.00
590.	-45P	"	3	2	66.66
591.	-46P	"	6	1	16.66
592.	-47P	"	2	0	0.00
593.	-48P	"	16	9	56.25
594.	-49P	"	17	17	100.00
595.	-50P	"	18	16	88.88
596.	75760- 1P	P-1363-1 X WR-315	14	4	28.57
597.	- 2P	"	2	0	0.00
598.	- 3P	"	3	0	0.00
599.	- 4P	"	5	2	40.00
600.	- 5P	"	4	0	0.00
601.	- 6P	"	6	3	50.00
602.	- 7P	"	8	1	12.50
603.	- 8P	"	9	3	33.33
604.	- 9P	"	9	3	33.33
605.	-10P	"	4	1	25.00
606.	-11P	"	-	-	-
607.	-12P	"	6	0	0.00
608.	-13P	"	4	0	0.00
609.	-14P	"	2	0	0.00
610.	-15P	"	3	1	33.33
611.	-16P	"	6	0	0.00
612.	-17P	"	1	0	0.00
613.	-18P	"	4	1	25.00
614.	-19P	"	1	1	100.00
615.	-20P	"	1	1	100.00
616.	-21P	"	1	1	100.00
617.	-22P	"	-	-	-
618.	-23P	"	-	-	-
619.	-24P	"	1	1	100.00
620.	-25P	"	2	0	0.00
621.	-26P	"	5	0	0.00
622.	-27P	"	10	2	20.00
623.	-28P	"	16	10	62.50
624.	-29P	"	19	4	21.05
625.	-30P	"	6	1	16.66

contd.

1	2	3	4	5	
626.	75760-31P	P-1363-1 X WR-315	7	2	28.57
627.	-32P	"	6	4	66.66
628.	-33P	"	2	0	0.00
629.	-34P	"	4	1	25.00
630.	-35P	"	6	3	50.00
631.	-36P	"	6	4	66.66
632.	-37P	"	7	0	0.00
633.	-38P	"	2	0	0.00
634.	-39P	"	2	0	0.00
635.	-40P	"	1	0	0.00
636.	-41P	"	3	0	0.00
637.	-42P	"	9	7	77.77
638.	-43P	"	1	0	0.00
639.	-44P	"	1	0	0.00
640.	-45P	"	4	1	25.00
641.	-46P	"	1	0	0.00
642.	-47P	"	5	1	20.00
643.	-48P	"	-	-	-
644.	-49P	"	-	-	-
645.	-50P	"	4	0	0.00
646.	75877- 1P	WR-315 X CPI-36071	8	2	40.00
647.	- 2P	"	5	2	40.00
648.	- 3P	"	9	4	44.44
649.	- 4P	"	9	1	11.11
650.	- 5P	"	1	1	100.00
651.	- 6P	"	3	2	66.66
652.	- 7P	"	-	-	-
653.	- 8P	"	1	0	0.00
654.	- 9P	"	7	1	14.28
655.	-10P	"	7	0	0.00
656.	-11P	"	4	4	100.00
657.	-12P	"	9	1	11.11
658.	-13P	"	3	1	33.33
659.	-14P	"	9	5	55.55
660.	-15P	"	9	4	44.44
661.	-16P	"	5	5	100.00
662.	-17P	"	6	1	16.66
663.	-18P	"	2	0	0.00
664.	-19P	"	4	1	25.00
665.	-20P	"	5	1	20.00
666.	-21P	"	8	4	50.00
667.	-22P	"	1	0	0.00
668.	-23P	"	5	4	80.00
669.	-24P	"	4	0	0.00
670.	-25P	"	7	0	0.00

1	2	3	4	5
671.	75878- 1P WR-315 X P-1265	9	0	0.00
672.	- 2P "	8	5	62.50
673.	- 3P "	10	8	80.00
674.	- 4P "	7	3	42.85
675.	- 5P "	9	4	44.44
676.	- 6P "	10	8	80.00
677.	- 7P "	-	-	-
678.	- 8P "	2	0	0.00
679.	- 9P "	5	0	0.00
680.	-10P "	11	4	36.36
681.	-11P "	17	2	11.76
682.	-12P "	15	3	20.00
683.	-13P "	16	7	43.75
684.	-14P "	15	3	20.00
685.	-15P "	3	0	0.00
686.	-16P "	3	0	0.00
687.	-17P "	5	2	40.00
688.	-18P "	9	4	44.44
689.	-19P "	-	-	-
690.	-20P "	3	0	0.00
691.	-21P "	1	0	0.00
692.	-22P "	1	0	0.00
693.	-23P "	7	0	0.00
694.	-24P "	3	0	0.00
695.	-25P "	6	1	16.66
696.	-26P "	9	1	11.11
697.	-27P "	3	0	0.00
698.	-28P "	7	2	28.57
699.	-29P "	6	0	0.00
700.	-30P "	4	0	0.00
701.	-31P "	3	0	0.00
702.	-32P "	2	0	0.00
703.	-33P "	7	2	28.57
704.	-34P "	5	0	0.00
705.	-35P "	4	1	25.00
706.	-36P "	4	0	0.00
707.	-37P "	6	1	16.66
708.	-38P "	4	0	0.00
709.	-39P "	3	0	0.00
710.	-40P "	7	2	28.57
711.	-41P "	5	0	0.00
712.	-42P "	4	0	0.00
713.	-43P "	9	2	22.22
714.	-44P "	12	2	16.66
715.	-45P "	12	7	58.33
716.	-46P "	9	2	22.22

contd.

1	2		3	4	5
717.	75878-47P	WR-315 X P-1265	7	2	28.57
718.	-48P	"	8	2	25.00
719.	-49P	"	5	1	20.00
720.	75881- 1P	WR-315 X P-726-2	9	2	22.22
721.	- 2P	"	4	1	25.00
722.	- 3P	"	9	3	33.33
723.	- 4P	"	3	0	0.00
724.	- 5P	"	3	0	0.00
725.	- 6P	"	17	16	94.11
726.	- 7P	"	15	15	100.00
727.	- 8P	"	12	12	100.00
728.	- 9P	"	16	16	100.00
729.	-10P	"	6	4	66.66
730.	-11P	"	13	11	84.61
731.	-12P	"	4	4	100.00
732.	-13P	"	5	5	100.00
733.	-14P	"	3	3	100.00
734.	-15P	"	9	9	100.00
735.	-16P	"	9	6	66.66
736.	-17P	"	9	6	66.66
737.	-18P	"	6	4	66.66
738.	-19P	"	10	5	50.00
739.	-20P	"	6	2	33.33
740.	-21P	"	10	6	60.00
741.	-22P	"	11	8	72.72
742.	-23P	"	2	0	0.00
743.	-24P	"	8	5	62.50
744.	-25P	"	4	4	100.00
745.	-26P	"	-	-	-
746.	-27P	"	-	-	-
747.	-28P	"	1	1	100.00
748.	-29P	"	-	-	-
749.	-30P	"	1	1	100.00
750.	-31P	"	6	4	66.66
751.	-32P	"	4	4	100.00
752.	-33P	"	1	1	100.00
753.	-34P	"	5	3	60.00
754.	-35P	"	9	4	44.44
755.	75882- 1P	WR-315 X P-2252	7	0	0.00
756.	- 2P	"	10	2	20.00
757.	- 3P	"	2	0	0.00
758.	- 4P	"	6	1	16.66
759.	- 5P	"	7	2	28.57
760.	- 6P	"	7	0	0.00

contd.



1	2	3	4	5	
761.	75882- 7P	WR-315 X P-2252	8	0	0.00
762.	- 8P	"	7	1	14.28
763.	- 9P	"	11	5	45.45
764.	-10P	"	4	2	50.00
765.	-11P	"	16	2	12.50
766.	-12P	"	13	0	0.00
767.	-13P	"	15	2	13.33
768.	-14P	"	14	1	7.14
769.	-15P	"	4	3	75.00
770.	-16P	"	5	1	20.00
771.	-17P	"	2	0	0.00
772.	-18P	"	5	1	20.00
773.	-19P	"	4	0	0.00
774.	-20P	"	5	1	20.00
775.	-21P	"	3	1	33.33
776.	-22P	"	2	0	0.00
777.	-23P	"	3	3	100.00
778.	-24P	"	1	0	0.00
779.	-25P	"	-	-	-
780.	75883- 1P	P-2974 X WR-315	1	0	0.00
781.	- 2P	"	2	2	100.00
782.	- 3P	"	2	2	100.00
783.	- 4P	"	6	6	100.00
784.	- 5P	"	5	5	100.00
785.	- 6P	"	4	3	75.00
786.	- 7P	"	3	0	0.00
787.	- 8P	"	8	4	50.00
788.	- 9P	"	7	3	42.85
789.	-10P	"	6	4	66.66
790.	-11P	"	5	0	0.00
791.	-12P	"	5	2	40.00
792.	-13P	"	18	10	55.55
793.	-14P	"	10	6	60.00
794.	-15P	"	15	9	60.00
795.	-16P	"	11	9	81.81
796.	-17P	"	14	5	35.71
797.	-18P	"	11	4	36.36
798.	-19P	"	14	7	50.00
799.	-20P	"	9	2	22.22
800.	-21P	"	9	1	11.11
801.	-22P	"	10	4	40.00
802.	-23P	"	10	1	10.00
803.	-24P	"	10	4	40.00
804.	-25P	"	9	1	11.11
805.	-26P	"	10	1	10.00

contd.

1	2	3	4	5	
806.	75883-27P	P-2974 X WR-315	13	2	15.38
807.	-28P	"	9	1	11.11
808.	-29P	"	11	1	9.09
809.	-30P	"	13	1	7.69
810.	-31P	"	14	2	14.28
811.	-32P	"	12	2	16.66
812.	-33P	"	16	5	31.25
813.	-34P	"	11	3	27.27
814.	-35P	"	10	2	20.00
815.	-36P	"	8	2	25.00
816.	-37P	"	8	0	0.00
817.	-38P	"	7	1	14.28
818.	-39P	"	12	1	8.33
819.	-40P	"	9	0	0.00
820.	75884- 1P	WR-315 X P-1488	7	0	0.00
821.	- 2P	"	12	0	0.00
822.	- 3P	"	15	0	0.00
823.	- 4P	"	12	1	8.33
824.	- 5P	"	9	0	0.00
825.	- 6P	"	9	4	44.44
826.	- 7P	"	10	0	0.00
827.	- 8P	"	12	1	8.33
828.	- 9P	"	7	0	0.00
829.	-10P	"	12	1	8.33
830.	-11P	"	12	1	8.33
831.	-12P	"	14	1	7.14
832.	-13P	"	13	0	0.00
833.	-14P	"	11	1	9.09
834.	-15P	"	12	0	0.00
835.	-16P	"	12	1	8.33
836.	-17P	"	13	1	7.69
837.	-18P	"	12	0	0.00
838.	-19P	"	9	0	0.00
839.	-20P	"	14	1	7.14
840.	-21P	"	14	3	21.42
841.	-22P	"	7	0	0.00
842.	-23P	"	9	2	22.22
843.	-24P	"	9	0	0.00
844.	-25P	"	8	0	0.00
845.	-26P	"	12	2	16.66
846.	-27P	"	14	4	28.57
847.	-28P	"	12	1	8.33
848.	-29P	"	13	2	15.38
849.	-30P	"	12	2	16.66
850.	-31P	"	11	0	0.00
851.	-32P	"	9	0	0.00

contd.

1	2	3	4	5	
852.	75884-33P	WR-315 X P-1488	7	0	0.00
853.	-34P	"	12	0	0.00
854.	-35P	"	2	0	0.00
855.	-36P	"	11	2	18.18
856.	-37P	"	6	0	0.00
857.	-38P	"	15	1	6.66
858.	-39P	"	12	1	8.33
859.	-40P	"	8	0	0.00
860.	-41P	"	12	1	8.33
861.	-42P	"	14	2	14.28
862.	-43P	"	10	1	10.00
863.	-44P	"	10	0	0.00
864.	-45P	"	13	1	7.69
865.	-46P	"	8	0	0.00
866.	-47P	"	8	1	12.50
867.	-48P	"	2	1	50.00
868.	-49P	"	8	1	12.50
869.	-50P	"	10	0	0.00
870.	75885- 1P	WR-315 X RS-11	9	3	33.33
871.	- 2P	"	8	3	37.50
872.	- 3P	"	10	0	0.00
873.	- 4P	"	10	0	0.00
874.	- 5P	"	3	0	0.00
875.	- 6P	"	12	0	0.00
876.	- 7P	"	12	1	8.33
877.	- 8P	"	10	0	0.00
878.	- 9P	"	10	1	10.00
879.	-10P	"	11	0	0.00
880.	-11P	"	9	0	0.00
881.	-12P	"	7	2	28.57
882.	-13P	"	11	3	27.27
883.	-14P	"	8	1	12.50
884.	-15P	"	13	6	46.15
885.	-16P	"	8	0	0.00
886.	-17P	"	8	2	25.00
887.	-18P	"	9	3	33.33
888.	-19P	"	14	2	14.28
889.	-20P	"	10	0	0.00
890.	-21P	"	8	0	0.00
891.	-22P	"	12	0	0.00
892.	-23P	"	12	1	8.33
893.	-24P	"	10	2	20.00
894.	-25P	"	11	5	45.45
895.	-26P	"	7	3	42.85

1	2	3	4	5
896.	75885-27P WR-315 X RS-11	10	0	0.00
897.	-28P "	2	0	0.00
898.	-29P *	6	0	0.00
899.	-30P "	-	-	-
900.	-31P "	7	0	0.00
901.	-32P "	13	4	30.76
902.	-33P "	7	3	42.85
903.	-34P "	4	1	25.00
904.	-35P "	9	1	11.11
905.	-36P "	13	0	0.00
906.	-37P "	10	0	0.00
907.	-38P "	10	3	30.00
908.	-39P "	10	1	10.00
909.	-40P "	3	0	0.00
910.	-41P "	8	0	0.00
911.	-42P "	7	0	0.00
912.	-43P "	14	0	0.00
913.	-44P "	13	4	30.76
914.	-45P "	12	0	0.00
915.	-46P "	8	2	25.00
916.	-47P "	8	1	12.50
917.	-48P "	3	1	33.33
918.	-49P "	7	0	0.00
919.	-50P "	4	0	0.00
920.	75886- 1P WR-315 X P-1214	10	1	10.00
921.	- 2P "	9	0	0.00
922.	- 3P "	11	2	18.18
923.	- 4P "	13	1	7.69
924.	- 5P "	10	0	0.00
925.	- 6P "	8	2	25.00
926.	- 7P "	2	0	0.00
927.	- 8P "	6	0	0.00
928.	- 9P "	7	1	14.28
929.	-10P "	8	1	12.50
930.	-11P "	10	2	20.00
931.	-12P "	11	0	0.00
932.	-13P "	9	0	0.00
933.	-14P "	5	2	40.00
934.	-15P "	11	0	0.00
935.	-16P "	2	0	0.00
936.	-17P "	10	2	20.00
937.	-18P "	10	0	0.00
938.	-19P "	11	0	0.00
939.	-20P "	9	0	0.00
940.	-21P "	12	3	25.00

1	2	3	4	5	
941.	75886-22P	WR-315 X P-1214	6	0	0.00
942.	-23P	"	11	0	0.00
943.	-24P	"	2	0	0.00
944.	-25P	"	3	0	0.00
945.	75889- 1P	WR-315 X P-1100	10	0	0.00
946.	- 2P	"	13	3	23.07
947.	- 3P	"	10	1	10.00
948.	- 4P	"	11	1	18.18
949.	- 5P	"	6	0	0.00
950.	- 6P	"	13	0	0.00
951.	- 7P	"	6	0	0.00
952.	- 8P	"	3	1	33.33
953.	- 9P	"	12	3	25.00
954.	-10P	"	14	2	14.28
955.	-11P	"	6	1	16.66
956.	-12P	"	10	0	0.00
957.	-13P	"	6	0	0.00
958.	-14P	"	7	0	0.00
959.	-15P	"	7	1	14.28
960.	-16P	"	6	0	0.00
961.	-17P	"	9	1	11.11
962.	-18P	"	11	1	9.09
963.	-19P	"	9	1	11.11
964.	-20P	"	9	0	0.00
965.	-21P	"	4	0	0.00
966.	-22P	"	14	0	0.00
967.	-23P	"	7	1	14.28
968.	-24P	"	15	1	6.66
969.	-25P	"	11	0	0.00
970.	-26P	"	15	4	26.66
971.	-27P	"	11	1	9.09
972.	-28P	"	14	5	35.71
973.	-29P	"	9	3	33.33
974.	-30P	"	12	3	25.00
975.	-31P	"	12	0	0.00
976.	-32P	"	8	0	0.00
977.	-33P	"	10	1	10.00
978.	-34P	"	11	1	9.09
979.	-35P	"	8	2	25.00
980.	-36P	"	9	0	0.00
981.	-37P	"	2	0	0.00
982.	-38P	"	7	0	0.00
983.	-39P	"	3	0	0.00
984.	-40P	"	20	4	20.00
985.	75522- 1P	NEC-1639 X P-2774	8	1	12.50

contd.

1	2	3	4	5	
986.	75522- 2P	NEC-1639 X P-2774	10	3	30.00
987.	- 3P	"	10	0	0.00
988.	- 4P	"	8	1	12.50
989.	- 5P	"	14	2	14.28
990.	- 6P	"	13	2	15.38
991.	- 7P	"	10	5	50.00
992.	- 8P	"	9	3	33.33
993.	- 9P	"	2	1	50.00
994.	7621- 1P	P-36 X P-5462	-	-	-
995.	- 2P	"	10	5	50.00
996.	- 3P	"	11	3	27.27
997.	- 4P	"	2	0	0.00
998.	- 5P	"	8	1	12.50
999.	- 6P	"	8	1	12.50
1000.	- 7P	"	9	3	33.33
1001.	- 8P	"	8	4	50.00
1002.	- 9P	"	13	5	38.46
1003.	-10P	"	7	1	14.28
1004.	-11P	"	6	1	16.66
1005.	-12P	"	11	3	27.27
1006.	-13P	"	12	10	83.33
1007.	751256 - 1P	P-36 X Lebanese local	8	2	25.00
1008.	- 2P	"	12	3	25.00
1009.	- 3P	"	11	1	9.09
1010.	- 4P	"	13	7	53.84
1011.	- 5P	"	13	1	7.69
1012.	- 6P	"	9	6	66.66
1013.	- 7P	"	3	2	66.66
1014.	- 8P	"	7	2	28.57
1015.	- 9P	"	3	1	33.33
1016.	-10P	"	8	2	25.00
1017.	-11P	"	2	0	0.00
1018.	-12P	"	2	0	0.00
1019.	-13P	"	1	0	0.00
1020.	-14P	"	1	0	0.00
1021.	-15P	"	-	-	-
1022.	-16P	"	-	-	-
1023.	-17P	"	1	-	0.00
1024.	-18P	"			
1025.	-19P	"	3	1	33.33
1026.	751257- 1P	P-36 X NEC-141	3	1	33.33
1027.	- 2P	"	2	1	50.00
1028.	- 3P	"	3	1	33.33
1029.	- 4P	"	2	0	0.00
1030.	- 5P	"	2	0	0.00

contd.

1031.	751257- 6P	P-36 X NEC-141	5	3	60.00
1032.	- 7P	"	6	3	50.00
1033.	- 8P	"	2	1	50.00
1034.	- 9P	"	6	1	16.66
1035.	-10P	"	6	4	66.66
1036.	-11P	"	4	1	25.00
1037.	-12P	"	4	3	75.00
1038.	-13P	"	7	5	71.42
1039.	-14P	"	3	1	33.33
1040.	-15P	"	1	0	0.00
1041.	-16P	"	-	-	-
1042.	-17P	"	5	1	20.00
1043.	-18P	"	1	0	0.00
1044.	-19P	"	4	2	50.00
1045.	-20P	"	9	7	77.77
1046.	-21P	"	8	2	25.00
1047.	-22P	"	-	-	-
1048.	-23P	"	1	0	0.00
1049.	-24P	"	2	1	50.00
1050.	-25P	"	2	1	50.00
1051.	751258- 1P	P-36 X Ofra	1	0	0.00
1052.	- 2P	"	-	-	-
1053.	- 3P	"	-	-	-
1054.	- 4P	"	1	1	100.00
1055.	- 5P	"	1	0	0.00
1056.	- 6P	"	-	-	-
1057.	- 7P	"	5	3	60.00
1058.	- 8P	"	1	1	100.00
1059.	- 9P	"	1	1	100.00
1060.	-10P	"	3	1	33.33
1061.	-11P	"	3	3	100.00
1062.	-12P	"	3	3	100.00
1063.	-13P	"	1	1	100.00
1064.	-14P	"	3	2	66.66
1065.	-15P	"	5	2	40.00
1066.	-16P	"	11	9	81.81
1067.	-17P	"	3	3	100.00
1068.	-18P	"	6	2	33.33
1069.	-19P	"	-	-	-
1071.	-20P	"	1	0	0.00
1071.	-21P	"	-	-	-
1072.	-22P	"	4	0	0.00
1073.	-23P	"	-	-	-
1074.	-24P	"	3	2	66.66
1075.	-25P	"	-	-	-

contd.

1	2	3	4	5
1076.	751258-26P P-36 X Ofra	1	1	100.00
1077.	-27P "	1	0	0.00
1078.	-28P "	1	1	100.00
1079.	-29P "	-	-	-
1080.	-30P "	1	0	0.00
1081.	-31P "	-	-	-
1082.	-32P "	1	0	0.00
1083.	-33P "	-	-	-
1084.	-34P "	1	0	0.00
1085.	-35P "	-	-	-
1086.	-36P "	-	-	-
1087.	-37P "	-	-	-
1088.	-38P "	-	-	-
1089.	-39P "	-	-	-
1090.	751259- 1P P-36 X NEC-139	7	1	14.28
1091.	- 2P "	7	0	0.00
1092.	- 3P "	3	0	0.00
1093.	- 4P "	2	1	50.00
1094.	- 5P "	6	0	0.00
1095.	- 6P "	2	0	0.00
1096.	- 7P "	2	1	50.00
1097.	- 8P "	-	-	-
1098.	- 9P "	-	-	-
1099.	-10P "	1	0	0.00
1100.	-11P "	-	-	-
1101.	-12P "	1	1	100.00
1102.	-13P "	2	0	0.00
1103.	-14P "	-	-	-
1104.	-15P "	3	0	0.00
1105.	-16P "	-	-	-
1106.	-17P "	6	0	0.00
1107.	-18P "	1	0	0.00
1108.	-19P "	1	0	0.00
1109.	-20P "	2	0	0.00
1110.	-21P "	-	-	-
1111.	-22P "	-	-	-
1112.	-23P "	-	-	-
1113.	-24P "	9	5	55.55
1114.	-25P "	3	0	0.00
1115.	-26P "	7	2	28.57
1116.	751260- 1P P-36 X NEC-108	1	0	0.00
1117.	- 2P "	-	-	-
1118.	- 3P "	4	1	25.00
1119.	- 4P "	-	-	-
1120.	- 5P "	1	0	0.00



1	2	3	4	5	
1121.	751260- 6P	P-36 X NEC-108	2	1	50.00
1122.	- 7P	"	-	-	-
1123.	- 8P	"	-	-	-
1124.	- 9P	"	3	1	33.33
1125.	-10P	"	2	1	50.00
1126.	-11P	"	2	0	0.00
1127.	-12P	"	-	-	-
1128.	-13P	"	5	0	0.00
1129.	-14P	"	5	0	0.00
1130.	-15P	"	2	0	0.00
1131.	-16P	"	3	0	0.00
1132.	-17P	"	-	-	-
1133.	-18P	"	11	5	45.45
1134.	-19P	"	8	5	62.50
1135.	-20P	"	5	3	60.00
1136.	-21P	"	2	2	100.00
1137.	-22P	"	1	1	100.00
1138.	-23P	"	-	-	-
1139.	-24P	"	4	1	25.00
1140.	-25P	"	4	2	50.00
1141.	-26P	"	3	1	33.33
1142.	-27P	"	1	1	100.00
1143.	-28P	"	2	1	50.00
1144.	-29P	"	-	-	-
1145.	-30P	"	2	1	50.00
1146.	-31P	"	-	-	-
1147.	-32P	"	2	2	100.00
1148.	-33P	"	-	-	-
1149.	-34P	"	-	-	-
1150.	-35P	"	-	-	-
1151.	-36P	"	-	-	-
1152.	-37P	"	-	-	-
1153.	-38P	"	10	7	70.00
1154.	-39P	"	2	1	50.00
1155.	-40P	"	4	0	0.00
1156.	-41P	"	1	0	0.00
1157.	75725- 1P	P-36 X L-534	2	0	0.00
1158.	- 2P	"	2	0	0.00
1159.	- 3P	"	1	1	100.00
1160.	- 4P	"	-	-	-
1161.	- 5P	"	9	5	55.55
1162.	- 6P	"	7	3	42.85
1163.	- 7P	"	9	1	11.11
1164.	- 8P	"	7	1	14.28
1165.	- 9P	"	12	4	33.33

contd.

1	2	3	4	5
1166.	75725-10P P-36 X L-534	11	6	54.54
1167.	-11P "	11	6	54.54
1168.	-12P "	11	4	36.36
1169.	-13P "	9	2	22.22
1170.	-14P "	10	1	10.00
1171.	-15P "	7	1	14.28
1172.	-16P "	9	5	55.55
1173.	-17P "	10	2	20.00
1174.	-18P "	7	2	28.57
1175.	-19P "	8	2	25.00
1176.	-20P "	8	1	12.50
1177.	-21P "	1	0	0.00
1178.	-22P "	8	2	25.00
1179.	-23P "	6	3	50.00
1180.	-24P "	9	3	33.33
1181.	-25P "	1	1	100.00
1182.	-26P "	5	0	0.00
1183.	-27P "	6	0	0.00
1184.	-28P "	1	0	0.00
1185.	-29P "	2	1	50.00
1186.	-30P "	11	1	9.09
1187.	75730- 1P P-36 X G-130	12	2	16.66
1188.	- 2P "	8	2	25.00
1189.	- 3P "	8	0	0.00
1190.	- 4P "	9	0	0.00
1191.	- 5P "	11	2	18.18
1192.	- 6P "	8	1	12.50
1193.	- 7P "	10	0	0.00
1194.	- 8P "	10	1	10.00
1195.	- 9P "	11	1	9.09
1196.	-10P "	8	3	37.50
1197.	-11P "	8	0	0.00
1198.	-12P "	6	2	33.33
1199.	-13P "	8	1	12.50
1200.	-14P "	3	0	0.00
1201.	75732- 1P P-36 X P-9623	10	2	20.00
1202.	- 2P "	14	2	14.28
1203.	- 3P "	3	0	0.00
1204.	- 4P "	6	0	0.00
1205.	- 5P "	9	1	11.11
1206.	- 6P "	6	0	0.00
1207.	- 7P "	11	0	0.00
1208.	- 8P "	8	1	12.50
1209.	75787- 1P G-130 X NP-34	10	1	10.00
1210.	- 2P "	4	1	25.00

contd.

1	2	3	4	5
1211.	75787- 3P G-130 X NP-34	12	3	25.00
1212.	- 4P "	8	1	12.50
1213.	- 5P "	9	0	0.00
1214.	- 6P "	6	1	16.66
1215.	- 7P "	10	2	20.00
1216.	- 8P "	9	1	11.11
1217.	- 9P "	10	1	10.00
1218.	-10P "	5	0	0.00
1219.	-11P "	9	0	0.00
1220.	-12P "	10	1	10.00
1221.	75794- 1P WR-315 X NP-34	10	0	0.00
1222.	- 2P "	3	2	66.66
1223.	- 3P "	6	6	100.00
1224.	- 4P "	9	0	0.00
1225.	- 5P "	10	1	10.00
1226.	- 6P "	7	0	0.00
1227.	- 7P "	9	1	11.11
1228.	- 8P "	8	0	0.00
1229.	- 9P "	13	0	0.00
1230.	-10P "	1	0	0.00
1231.	-11P "	10	3	30.00
1232.	-12P "	2	1	50.00
1233.	-13P "	14	2	14.28
1234.	-14P "	8	2	25.00
1235.	-15P "	9	0	0.00
1236.	75879- 1P WR-315 X GL-651	1	0	0.00
1237.	- 2P "	8	1	12.50
1238.	- 3P "	6	0	0.00
1239.	- 4P "	10	0	0.00
1240.	- 5P "	15	0	0.00
1241.	- 6P "	7	0	0.00
1242.	- 7P "	8	0	0.00
1243.	- 8P "	6	0	0.00
1244.	- 9P "	4	0	0.00
1245.	-10P "	6	0	0.00
1246.	-11P "	13	4	30.76
1247.	-12P "	12	2	16.66
1248.	-13P "	10	1	10.00
1249.	-14P "	7	1	14.28
1250.	-15P "	12	0	0.00
1251.	-16P "	10	0	0.00
1252.	-17P "	7	2	28.57
1253.	-18P "	18	2	11.11
1254.	-19P "	14	0	0.00
1255.	-20P "	17	2	11.76

contd.

1	2	3	4	5
1256.	75888- 1P WR-315 X Bet Degan-302	5	2	40.00
1257.	- 2P "	10	1	10.00
1258.	- 3P "	3	1	33.33
1259.	- 4P "	8	0	0.00
1260.	- 5P "	6	1	16.66
1261.	- 6P "	8	1	12.50
1262.	- 7P "	7	2	28.57
1263.	- 8P "	6	0	0.00
1264.	- 9P "	8	1	12.50
1265.	-10P "	10	1	10.00
1266.	-11P "	8	0	0.00
1267.	-12P "	7	3	42.85
1268.	-13P "	13	0	0.00
1269.	-14P "	10	0	0.00
1270.	-15P "	10	2	20.00
1271.	-16P "	10	2	20.00
1272.	-17P "	9	1	11.11
1273.	-18P "	9	0	0.00
1274.	-19P "	12	3	25.00
1275.	-20P "	9	0	0.00
1276.	-21P "	11	2	18.18
1277.	-22P "	6	0	0.00
1278.	-23P "	2	1	50.00
1279.	751679- 1P NEC-802 X (P-1863 X P-3827)	9	1	11.11
1280.	- 2P "	9	0	0.00
1281.	- 3P "	13	0	0.00
1282.	- 4P "	3	1	33.33
1283.	- 5P "	13	2	15.38
1284.	- 6P "	9	1	11.11
1285.	- 7P "	6	0	0.00
1286.	- 8P "	7	1	14.28
1287.	- 9P "	9	1	11.11
1288.	-10P "	11	0	0.00
1289.	-11P "	12	1	8.33
1290.	-12P "	12	1	8.33
1291.	-13P "	12	0	0.00
1292.	-14P "	11	2	18.18
1293.	-15P "	12	1	8.33
1294.	-16P "	7	0	0.00
1295.	-17P "	11	1	9.09
1296.	-18P "	6	0	0.00
1297.	-19P "	14	0	0.00
1298.	-20P "	8	0	0.00
1299.	-21P "	5	1	20.00
1300.	-22P "	6	0	0.00

contd.

1	2	3	4	5	
1301.	751679-23P	NEC-802 X (P-1863 X P-3827)	13	1	7.69
1302.	-24P	"	13	2	15.38
1303.	-25P	"	9	0	0.00
1304.	-26P	"	11	2	18.18
1305.	-27P	"	14	0	0.00
1306.	-28P	"	12	1	8.33
1307.	-29P	"	7	0	0.00
1308.	-30P	"	12	0	0.00
1309.	-31P	"	12	1	8.33
1310.	-32P	"	7	1	14.28
1311.	-33P	"	12	0	0.00
1312.	-34P	"	4	0	0.00
1313.	-35P	"	9	1	11.11
1314.	-36P	"	12	0	0.00
1315.	-37P	"	8	1	12.50
1316.	-38P	"	9	1	11.11
1317.	-39P	"	12	1	8.33
1318.	-40P	"	14	4	28.57
1319.	-41P	"	11	3	27.27
1320.	-42P	"	14	1	7.14
1321.	-43P	"	3	2	66.66
1322.	-44P	"	13	4	30.76
1323.	-45P	"	11	1	9.09
1324.	-46P	"	13	2	15.38
1325.	-47P	"	11	3	27.27
1326.	-48P	"	9	2	22.22
1327.	-49P	"	8	2	25.00
1328.	-50P	"	10	0	0.00
1329.	7668- 1P	C-214 X (WR-315 X GL-651)	8	0	0.00
1330.	- 2P	"	11	0	0.00
1331.	- 3P	"	14	1	7.14
1332.	- 4P	"	7	1	14.28
1333.	- 5P	"	7	1	14.28
1334.	- 6P	"	9	1	11.11
1335.	- 7P	"	9	1	11.11
1336.	- 8P	"	9	2	22.22
1337.	- 9P	"	11	2	18.18
1338.	-10P	"	14	3	21.42
1339.	-11P	"	14	3	21.42
1340.	-12P	"	12	1	8.33
1341.	-13P	"	11	1	9.09
1342.	-14P	"	9	0	0.00
1343.	-15P	"	10	2	20.00
1344.	-16P	"	9	1	11.11
1345.	-17P	"	12	1	8.33

contd.

1	2	3	4	5
1346.	7668-18P C-214 X (WR-315 X GL-651)	9	1	11.11
1347.	-19P "	6	0	0.00
1348.	-20P "	9	3	33.33
1349.	-21P "	6	1	16.66
1350.	-22P "	8	1	12.50
1351.	-23P "	6	0	0.00
1352.	-24P "	8	2	25.00
1353.	-25P "	10	0	0.00
1354.	-26P "	9	0	0.00
1355.	-27P "	10	1	10.00
1356.	-28P "	6	1	16.66
1357.	-29P "	5	0	0.00
1358.	-30P "	2	0	0.00
1359.	-31P "	4	1	25.00
1360.	-32P "	5	1	20.00
1361.	-33P "	12	2	16.66
1362.	-34P "	14	3	21.42
1363.	-35P "	12	3	25.00
1364.	-36P "	9	3	33.33
1365.	-37P "	9	4	44.44
1366.	-38P "	11	2	18.18
1367.	-39P "	11	1	9.09
1368.	-40P "	8	2	25.00
1369.	7670- 1P NEC-1607 X (P-1363-1 X WR-315)	15	2	13.33
1370.	- 2P "	16	5	31.25
1371.	- 3P "	13	1	7.69
1372.	- 4P "	10	0	0.00
1373.	- 5P "	13	1	7.69
1374.	- 6P "	11	0	0.00
1375.	- 7P "	8	2	25.00
1376.	- 8P "	7	1	14.28
1377.	- 9P "	13	1	7.69
1378.	-10P "	10	4	40.00
1379.	-11P "	13	2	15.38
1380.	-12P "	11	2	18.18
1381.	-13P "	12	4	33.33
1382.	-14P "	9	2	22.22
1383.	-15P "	9	1	11.11
1384.	-16P "	10	2	20.00
1385.	-17P "	12	4	33.33
1386.	-18P "	4	0	0.00
1387.	-19P "	5	3	60.00
1388.	-20P "	8	1	12.50
1389.	-21P "	3	1	33.33
1390.	-22P "	4	2	50.00

1	2	3	4	5	
1391.	7670-23P	NEC-1607 X (P-1363-1 X WR-315)	5	1	20.00
1392.	-24P	"	3	3	100.00
1393.	-25P	"	16	9	56.25
1394.	-26P	"	14	10	71.42
1395.	-27P	"	16	10	62.50
1396.	-28P	"	8	6	75.00
1397.	-29P	"	2	0	0.00
1398.	-30P	"	1	0	0.00
1399.	-31P	"	4	1	25.00
1400.	-32P	"	9	6	66.66
1401.	-33P	"	8	1	12.50
1402.	-34P	"	2	0	0.00
1403.	-35P	"	8	8	100.00
1404.	-36P	"	8	8	100.00
1405.	-37P	"	7	5	71.42
1406.	-38P	"	5	4	80.00
1407.	-39P	"	5	5	100.00
1408.	-40P	"	2	2	100.00
1409.	-41P	"	1	1	100.00
1410.	7677- 1P	Giza X (P-1363-1 X WR-315)	1	0	0.00
1411.	- 2P	"	4	0	0.00
1412.	- 3P	"	3	1	33.33
1413.	- 4P	"	5	1	20.00
1414.	- 5P	"	8	0	0.00
1415.	- 6P	"	10	2	20.00
1416.	- 7P	"	8	1	12.50
1417.	- 8P	"	3	0	0.00
1418.	- 9P	"	9	0	0.00
1419.	-10P	"	1	0	0.00
1420.	-11P	"	3	0	0.00
1421.	-12P	"	10	10	100.00
1422.	-13P	"	13	8	61.53
1423.	-14P	"	10	1	10.00
1424.	-15P	"	8	4	50.00
1425.	-16P	"	3	3	100.00
1426.	-17P	"	3	3	100.00
1427.	-18P	"	7	7	100.00
1428.	-19P	"	1	1	100.00
1429.	-20P	"	2	2	100.00
1430.	-21P	"	5	5	100.00
1431.	-22P	"	3	3	100.00
1432.	-23P	"	-	-	-
1433.	-24P	"	17	13	76.47
1434.	-25P	"	18	18	100.00
1435.	-26P	"	17	17	100.00

contd.

1	2	3	4	5	
1436.	7677-27P	Giza X (P-1363-1 X WR-315)	11	11	100.00
1437.	-28P	"	4	1	25.00
1438.	-29P	"	5	2	40.00
1439.	-30P	"	8	4	50.00
1440.	-31P	"	7	0	0.00
1441.	-32P	"	8	6	75.00
1442.	-33P	"	11	1	9.09
1443.	-34P	"	8	2	25.00
1444.	-35P	"	2	0	0.00
1445.	-36P	"	8	2	25.00
1446.	-37P	"	4	1	25.00
1447.	-38P	"	4	2	50.00
1448.	-39P	"	2	0	0.00
1449.	-40P	"	3	1	33.33
1450.	74104- 1P	Lebanese local X (P-36 X Giza)	1	0	0.00
1451.	- 2P	"	3	2	66.66
1452.	- 3P	"	2	2	100.00
1453.	- 4P	"	2	2	100.00
1454.	- 5P	"	3	3	100.00
1455.	- 6P	"	7	6	85.71
1456.	- 7P	"	5	2	40.00
1457.	- 8P	"	4	2	50.00
1458.	- 9P	"	7	4	57.14
1459.	-10P	"	2	0	0.00
1460.	-11P	"	2	1	50.00
1461.	-12P	"	3	1	33.33
1462.	-13P	"	1	0	0.00
1463.	-14P	"	4	1	25.00
1464.	-15P	"	2	1	50.00
1465.	-16P	"	6	4	66.66
1466.	-17P	"	4	1	25.00
1467.	-18P	"	6	3	50.00
1468.	-19P	"	4	0	0.00
1469.	-20P	"	2	1	50.00
1470.	-21P	"	4	2	50.00
1471.	-22P	"	4	3	75.00
1472.	-23P	"	2	1	50.00
1473.	-24P	"	16	16	100.00
1474.	-25P	"	13	13	100.00
1475.	-26P	"	11	11	100.00
1476.	-27P	"	13	7	53.84
1477.	-28P	"	1	0	0.00
1478.	-29P	"	2	1	50.00
1479.	-30P	"	1	0	0.00
1480.	-31P	"	4	2	50.00



1	2	3	4	5
1481.	752212- 1P F <sub>3</sub> (L-2 X BEG-482) X F <sub>2</sub> (H-355 X F-496) X (IGW-5/7 X GC-1)-I	1	0	0.00
1482.	- 2P "	3	0	0.00
1483.	- 3P "	3	2	66.66
1484.	- 4P "	-	-	-
1485.	- 5P "	5	1	20.00
1486.	- 6P "	1	0	0.00
1487.	- 7P "	5	1	20.00
1488.	- 8P "	-	-	-
1489.	- 9P "	1	0	0.00
1490.	-10P "	2	0	0.00
1491.	-11P "	1	0	0.00
1492.	-12P "	2	0	10.00
1493.	-13P "	2	0	0.00
1494.	-14P "	2	0	0.00
1495.	-15P "	4	0	0.00
1496.	-16P "	1	0	0.00
1497.	-17P "	9	3	33.33
1498.	-18P "	7	1	14.28
1499.	-19P "	4	1	25.00
1500.	-20P "	8	0	0.00
1501.	-21P "	4	0	0.00
1502.	-22P "	-	-	-
1503.	-23P "	2	0	0.00
1504.	-24P "	1	0	0.00
1505.	-25P "	14	2	14.28
1506.	-26P "	19	4	21.05
1507.	752226- 1P F <sub>3</sub> (P-1786 X Pb*7) X F <sub>2</sub> (G-130 X K-108) X (NP-34 X GW-5/7)	13	10	76.92
1508.	- 2P "	10	6	60.00
1509.	- 3P "	6	3	50.00
1510.	- 4P "	3	2	66.66
1511.	- 5P "	1	0	0.00
1512.	- 6P "	-	-	-
1513.	- 7P "	9	1	11.11
1514.	- 8P "	2	0	0.00
1515.	- 9P "	2	0	0.00
1516.	-10P "	1	1	100.00
1517.	-11P "	2	1	50.00
1518.	-12P "	2	0	0.00
1519.	-13P "	1	0	0.00
1520.	-14P "	2	0	0.00
1521.	-15P "	1	0	0.00
1522.	-16P "	1	0	0.00

contd.

1	2	3	4	5
1523.	752226-17P F <sub>3</sub> (P-1786 X Pb-7) X F <sub>2</sub> (G-130 X K-108) X (NP-34 X GW-5/7)	1	0	0.00
1524.	752463- 1P F <sub>4</sub> (H-208 X Radhey) X F <sub>4</sub> (850-3/27 X JG-221)-5	-	-	-
1525.	- 2P "	3	2	66.66
1526.	- 3P "	6	1	16.66
1527.	- 4P "	6	1	16.66
1528.	- 5P "	2	0	0.00
1529.	- 6P "	5	0	0.00
1530.	- 7P "	5	2	40.00
1531.	- 8P "	5	0	0.00
1532.	- 9P "	2	0	0.00
1533.	-10P "	10	3	30.00
1534.	-11P "	6	3	50.00
1535.	-12P "	8	2	25.00
1536.	-13P "	6	5	83.33
1537.	-14P "	2	1	50.00
1538.	-15P "	2	0	0.00
1539.	-16P "	4	0	0.00
1540.	-17P "	2	0	0.00
1541.	-18P "	16	9	56.25
1542.	-19P "	14	3	21.42
1543.	-20P "	16	2	12.50
1544.	-21P "	6	6	100.00
1545.	-22P "	4	1	25.00
1546.	-23P "	1	1	100.00
1547.	-24P "	4	0	0.00
1548.	-25P "	2	1	50.00
1549.	-26P "	-	-	-
1550.	-27P "	3	1	33.33
1551.	-28P "	2	1	50.00
1552.	-29P "	5	0	0.00
1553.	-30P "	13	3	23.07
1554.	-31P "	3	1	33.33
1555.	-32P "	4	2	50.00
1556.	-33P "	7	7	100.00
1557.	-34P "	1	1	100.00
1558.	-35P "	3	0	0.00
1559.	-36P "	2	0	0.00
1560.	-37P "	3	0	0.00
1561.	-38P "	6	3	50.00
1562.	-39P "	3	3	100.00
1563.	-40P "	5	5	100.00
1564.	-41P "	6	6	100.00
1565.	-42P "	4	4	100.00

contd.

1	2	3	4	5
1566.	752463-43P F <sub>4</sub> (H-208 X Radhey) X F <sub>4</sub> (850-3/27 X JG-221)-5	3	3	100.00
1567.	-44P "	9	9	100.00
1568.	-45P "	3	3	100.00
1569.	-46P "	14	14	100.00
1570.	-47P "	15	15	100.00
1571.	-48P "	12	12	100.00
1572.	-49P "	14	14	100.00
1573.	-50P "	7	2	28.57
1574.	752771- 1P F <sub>2</sub> (P-1786 X Pb-7) X F <sub>2</sub> (G-130 X B-108) X (NP-35 X GW-5/7)-2	-	-	-
1575.	- 2P "	1	1	100.00
1576.	- 3P "	2	2	100.00
1577.	- 4P "	1	1	100.00
1578.	- 5P "	1	1	100.00
1579.	- 6P "	-	-	-
1580.	- 7P "	4	1	25.00
1581.	- 8P "	1	0	0.00
1582.	- 9P "	4	0	0.00
1583.	-10P "	6	1	16.66
1584.	-11P "	-	-	-
1585.	752792- 1P F <sub>3</sub> (Pant-102 X H-208) X JGC-1 X F <sub>3</sub> (850-3/27 X GW-5/7 X JG-62)-2	5	0	0.00
1586.	- 2P "	9	0	0.00
1587.	- 3P "	7	1	14.28
1588.	- 4P "	6	0	0.00
1589.	- 5P "	13	5	38.46
1590.	- 6P "	13	3	23.07
1591.	- 7P "	13	0	0.00
1592.	- 8P "	10	5	50.00
1593.	- 9P "	3	1	33.33
1594.	-10P "	4	0	0.00
1595.	-11P "	3	0	0.00
1596.	-12P "	4	1	25.00
1597.	-13P "	6	0	0.00
1598.	-14P "	5	1	20.00
1599.	-15P "	3	0	0.00
1600.	-16P "	2	0	0.00
1601.	-17P "	1	1	100.00
1602.	-18P "	3	0	0.00
1603.	-19P "	7	2	28.57
1604.	-20P "	5	2	40.00
1605.	-21P "	5	0	0.00

contd.

1	2	3	4	5	
1606.	752792-22P	F <sub>3</sub> (Pant-102 X H-208) X JGC-1 X F <sub>3</sub> (850-3/27 X GW-5/7 X JG-62)-2	5	1	20.00
1607.	-23P	"	5	0	0.00
1608.	-24P	"	8	1	12.50
1609.	-25P	"	3	1	33.33
1610.	-26P	"	6	0	0.00
1611.	-27P	"	8	1	12.50
1612.	-28P	"	8	2	25.00
1613.	-29P	"	14	6	42.85
1614.	-30P	"	16	5	31.25
1615.	752794- 1P	F <sub>2</sub> (NEC-249 X P-2994) X P-2994 X F <sub>2</sub> (P-502 X G-130)-5	14	12	85.71
1616.	- 2P	"	12	12	100.00
1617.	- 3P	"	10	5	50.00
1618.	- 4P	"	9	9	100.00
1619.	- 5P	"	4	4	100.00
1620.	- 6P	"	7	7	100.00
1621.	- 7P	"	9	9	100.00
1622.	- 8P	"	2	2	100.00
1623.	752808- 1P	F <sub>3</sub> (H-208 X P-1630) X F <sub>3</sub> (850-3/27 X GW-5/7) X P-458 -1	12	12	100.00
1624.	- 2P	"	9	9	100.00
1625.	- 3P	"	2	2	100.00
1626.	652809- 1P	F <sub>3</sub> (H-208 X P-1630) X F <sub>3</sub> (850-3/27 X GW-5/7) X P-458-2	7	7	100.00
1627.	- 2P	"	6	6	100.00
1628.	752821- 1P	F <sub>4</sub> (H-208 X H-355) X F <sub>4</sub> (JG-62 X Radhey)	7	7	100.00
1629.	- 2P	"	1	1	100.00
1630.	- 3P	"	6	3	50.00
1631.	- 4P	"	6	2	33.33
1632.	- 5P	"	8	1	12.50
1633.	- 6P	"	6	3	50.00
1634.	- 7P	"	12	4	33.33
1635.	- 8P	"	5	5	100.00
1636.	- 9P	"	9	4	44.44
1637.	-10P	"	3	3	100.00
1638.	-11P	"	5	5	100.00
1639.	-12P	"	7	7	100.00
1640.	-13P	"	7	7	100.00

contd.

1	2	3	4	5	
1641.	752821-14P	F <sub>4</sub> (H-208 X H-355) X F <sub>4</sub> (JG-62 X Radhey)	1	1	100.00
1642.	-15P	"	8	6	75.00
1643.	-16P	"	6	6	100.00
1644.	-17P	"	7	7	100.00
1645.	-18P	"	8	2	25.00
1646.	-19P	"	5	0	0.00
1647.	-20P	"	2	0	0.00
1648.	-21P	"	7	2	28.57
1649.	-22P	"	8	4	50.00
1650.	-23P	"	10	4	40.00
1651.	-24P	"	6	3	50.00
1652.	-25P	"	3	2	66.66
1653.	-26P	"	5	2	40.00
1654.	-27P	"	3	2	66.66
1655.	-28P	"	2	1	50.00
1656.	-29P	"	3	1	33.33
1657.	751907- 1P	(F-61 X WR-315) X (P-623 X K-1481)	4	0	0.00
1658.	- 2P	"	5	2	40.00
1659.	- 3P	"	6	0	0.00
1660.	- 4P	"	4	1	25.00
1661.	- 5P	"	5	2	40.00
1662.	- 6P	"	-	-	-
1663.	- 7P	"	3	1	33.33
1664.	- 8P	"	-	-	-
1665.	- 9P	"	3	3	100.00
1666.	-10P	"	6	2	33.33
1667.	-11P	"	9	6	66.66
1668.	-12P	"	-	-	-
1669.	-13P	"	4	4	100.00
1670.	-14P	"	5	5	100.00
1671.	-15P	"	8	8	100.00
1672.	-16P	"	4	4	100.00
1673.	-17P	"	11	10	90.90
1674.	-18P	"	3	3	100.00
1675.	-19P	"	4	0	0.00
1676.	-20P	"	1	0	0.00
1677.	-21P	"	2	0	0.00
1678.	-22P	"	3	0	0.00
1679.	-23P	"	2	0	0.00
1680.	-24P	"	7	2	28.57
1681.	-25P	"	5	1	20.00
1682.	-26P	"	8	2	25.00
1683.	-27P	"	10	2	20.00
1684.	-28P	"	11	1	9.09
1685.	-29P	"	5	0	0.00
1686.	-30P	"	8	0	0.00

contd.

1	2	3	4	5	
1687.	751909- 1P	(F-378 X Ayelet) X (K-4 X WR-315)	3	1	33.33
1688.	- 2P	"	7	0	0.00
1689.	- 3P	"	12	5	41.66
1690.	- 4P	"	9	4	44.44
1691.	- 5P	"	12	7	58.33
1692.	- 6P	"	12	8	66.66
1693.	- 7P	"	11	1	9.09
1694.	- 8P	"	9	1	11.11
1695.	- 9P	"	10	3	30.00
1696.	-10P	"	12	1	8.33
1697.	-11P	"	11	4	36.36
1698.	-12P	"	12	7	58.33
1699.	-13P	"	9	2	22.22
1700.	-14P	"	14	3	21.42
1701.	-15P	"	12	4	33.33
1702.	-16P	"	11	6	54.54
1703.	-17P	"	10	6	60.00
1704.	-18P	"	10	2	20.00
1705.	-19P	"	12	3	25.00
1706.	-20P	"	10	1	10.00
1707.	-21P	"	12	7	58.33
1708.	-22P	"	11	4	36.36
1709.	-23P	"	5	0	0.00
1710.	-24P	"	11	3	27.27
1711.	-25P	"	7	2	28.57
1712.	76129- 1P	(JG-71 X PG-728) X (PRR-1 X P-1265)	12	2	16.16
1713.	- 2P	"	10	0	0.00
1714.	- 3P	"	12	2	17.66
1715.	- 4P	"	12	1	8.33
1716.	- 5P	"	10	0	0.00
1717.	- 6P	"	14	3	21.42
1718.	- 7P	"	12	1	8.33
1719.	- 8P	"	11	3	27.27
1720.	- 9P	"	11	5	45.45
1721.	-10P	"	12	5	41.66
1722.	-11P	"	15	1	6.66
1723.	-12P	"	17	4	23.52
1724.	-13P	"	11	3	27.27
1725.	-14P	"	7	1	14.28
1726.	-15P	"	9	1	11.11
1727.	-16P	"	5	2	40.00
1728.	-17P	"	11	0	0.00
1729.	-18P	"	11	1	9.09
1730.	-19P	"	14	2	14.28

1	2	3	4	5	
1731.	76129-20P	(JG-71 X PG-728) X (PRR-1 X P-1265)	11	2	18.18
1732.	-21P	"	13	1	7.69
1733.	-22P	"	7	1	14.28
1734.	-23P	"	10	1	10.00
1735.	-24P	"	12	0	0.00
1736.	-25P	"	11	1	9.09
1737.	752305- 1P	F <sub>3</sub> (850-3/27 X Chafa) X F <sub>3</sub> (E-100 X NP-34) X (Radhey X L-550)-4	15	4	26.66
1738.	- 2P	"	7	2	28.57
1739.	- 3P	"	4	1	25.00
1740.	- 4P	"	8	2	25.00
1741.	- 5P	"	9	2	22.22
1742.	- 6P	"	11	2	18.18
1743.	- 7P	"	10	1	10.00
1744.	- 8P	"	8	0	0.00
1745.	- 9P	"	11	1	9.09
1746.	-10P	"	13	4	30.76
1747.	-11P	"	14	0	0.00
1748.	-12P	"	12	1	8.33
1749.	-13P	"	9	1	11.11
1750.	-14P	"	12	2	16.16
1751.	-15P	"	9	0	0.00
1752.	-16P	"	11	1	9.09
1753.	-17P	"	16	2	12.50
1754.	-18P	"	11	2	18.18
1755.	-19P	"	10	3	30.00
1756.	-20P	"	14	1	7.14
1757.	-21P	"	7	3	42.85
1758.	-22P	"	8	3	37.50
1759.	-23P	"	5	1	20.00
1760.	-24P	"	5	4	80.00
1761.	-25P	"	11	5	45.45
1762.	752307- 1P	F <sub>3</sub> (850-3/27 X K-4) X F <sub>3</sub> (P-9623 X P-3111)-1	7	5	71.42
1763.	- 2P	"	9	9	100.00
1764.	- 3P	"	4	4	100.00
1765.	- 4P	"	6	3	50.00
1766.	- 5P	"	10	4	40.00
1767.	- 6P	"	8	1	12.50
1668.	- 7P	"	8	0	0.00
1669.	- 8P	"	15	0	0.00
1770.	- 9P	"	9	1	11.11
1771.	-10P	"	9	3	33.33
1772.	-11P	"	10	2	20.00

contd.

1	2	3	4	5	
1773.	752307-12P	F <sub>3</sub> (850-3/27 X K-4) X F <sub>3</sub> (P-9623 X P-3111)-1	7	1	14.28
1774.	-13P	"	11	1	9.09
1775.	-14P	"	4	0	0.00
1776.	-15P	"	13	5	38.46
1777.	-16P	"	10	0	0.00
1778.	-17P	"	8	0	0.00
1779.	-18P	"	8	3	37.50
1780.	-19P	"	8	1	12.50
1781.	-20P	"	11	4	36.36
1782.	752345- 1P	F <sub>3</sub> (850-3/27 X K-4) X F <sub>3</sub> (F-404 X L-551) X GW-5/7-4	9	2	22.22
1783.	- 2P	"	9	3	33.33
1784.	- 3P	"	8	1	12.50
1785.	- 4P	"	7	4	57.14
1786.	- 5P	"	9	3	33.33
1787.	- 6P	"	6	3	50.00
1788.	- 7P	"	8	3	37.50
1789.	- 8P	"	6	1	16.66
1790.	- 9P	"	9	8	88.88
1791.	-10P	"	10	2	20.00
1792.	-11P	"	11	0	0.00
1793.	-12P	"	9	1	11.11
1794.	-13P	"	14	7	50.00
1795.	-14P	"	11	7	63.63
1796.	-15P	"	11	0	0.00
1797.	-16P	"	12	2	16.66
1798.	-17P	"	10	2	20.00
1799.	752397- 1P	F <sub>4</sub> (850-3/27 X E-100) X (NP-34 X GW-5/7)	5	2	40.00
1800.	- 2P	"	7	0	0.00
1801.	- 3P	"	3	1	33.33
1802.	- 4P	"	7	2	28.57
1803.	- 5P	"	7	0	0.00
1804.	- 6P	"	9	3	33.33
1805.	- 7P	"	7	2	28.57
1806.	- 8P	"	10	3	30.00
1807.	- 9P	"	6	4	66.66
1808.	-10P	"	8	1	12.50
1809.	-11P	"	6	1	16.66
1810.	-12P	"	10	5	50.00
1811.	-13P	"	4	0	0.00
1812.	-14P	"	11	4	36.36
1813.	-15P	"	10	5	50.00
1814.	-16P	"	9	3	33.33



1	2	3	4	5	
1815.	752397-17P	F <sub>4</sub> (850-3/27 X E-100) X (NP-34 X GW-5/7)	6	1	16.66
1816.	-18P	"	5	0	0.00
1817.	-19P	"	5	1	20.00
1818.	-20P	"	9	2	22.22
1819.	-21P	"	8	0	0.00
1820.	-22P	"	8	0	0.00
1821.	-23P	"	10	0	0.00
1822.	-24P	"	8	2	25.00
1823.	-25P	"	11	1	9.09
1824.	752406- 1P	F <sub>4</sub> (JG-62 X JG-221) X (L-550 X P-1786)	10	2	20.00
1825.	- 2P	"	5	1	20.00
1826.	- 3P	"	8	2	25.00
1827.	- 4P	"	5	1	20.00
1828.	- 5P	"	9	1	11.11
1829.	- 6P	"	4	2	50.00
1830.	- 7P	"	12	3	25.00
1831.	- 8P	"	9	3	33.33
1832.	- 9P	"	10	0	0.00
1833.	-10P	"	6	0	0.00
1834.	752770- 1P	F <sub>3</sub> (850-3/27 X GW-5/7) X P-458 X F <sub>3</sub> (L-550 X Gumuchili)-2	12	2	33.33
1835.	- 2P	"	3	1	33.33
1836.	- 3P	"	6	1	16.66
1837.	- 4P	"	8	3	37.50
1838.	- 5P	"	8	1	12.50
1839.	- 6P	"	3	1	33.33
1840.	- 7P	"	3	1	33.33
1841.	- 8P	"	1	0	0.00
1842.	- 9P	"	9	0	0.00
1843.	-10P	"	5	1	20.00
1844.	-11P	"	7	1	14.28
1845.	-12P	"	4	0	0.00
1846.	-13P	"	6	0	0.00
1847.	-14P	"	6	1	16.66
1848.	-15P	"	9	2	22.22
1849.	-16P	"	8	0	0.00
1850.	-17P	"	9	3	33.33
1851.	752803- 1P	F <sub>3</sub> (850-3/27 X GW-5/7) X P-458 X F <sub>3</sub> (L-550 X Gumuchili)-1	8	2	25.00
1852.	- 2P	"	2	1	50.00
1853.	- 3P	"	2	1	50.00
1854.	- 4P	"	9	5	55.55
1855.	- 5P	"	6	1	16.66
1856.	- 6P	"	8	1	12.50

contd..

1	2	3	4	5
1857.	752803- 7P F <sub>3</sub> (850-3/27 X GW-5/7) X P-458 X F <sub>3</sub> (L-550 X Gumuchili)-1	6	1	16.66
1858.	- 8P "	4	0	0.00
1859.	- 9P "	5	4	80.00
1860.	-10P "	8	0	0.00
1861.	-11P "	6	0	0.00
1862.	-12P "	4	1	25.00
1863.	75657- 1P JG-71 X PRR-1	4	3	75.00
1864.	- 2P "	8	1	12.50
1865.	- 3P "	10	2	20.00
1866.	- 4P "	11	4	36.36
1867.	- 5P "	-	-	-
1868.	- 6P "	12	4	33.33
1869.	- 7P "	10	0	0.00
1870.	- 8P "	6	0	0.00
1871.	- 9P "	11	2	18.18
1872.	-10P "	7	0	0.00
1873.	-11P "	12	2	16.16
1874.	-12P "	13	2	15.38
1875.	-13P "	8	2	25.00
1876.	-14P "	10	3	30.00
1877.	-15P "	9	4	44.44
1878.	-16P "	8	4	50.00
1879.	-17P "	2	0	0.00
1880.	-18P "	7	1	14.28
1881.	-19P "	6	1	16.66
1882.	-20P "	12	1	8.33
1883.	-21P "	11	2	18.18
1884.	-22P "	10	0	0.00
1885.	-23P "	3	0	0.00
1886.	-24P "	9	1	11.11
1887.	-25P "	8	5	62.50
1888.	75658- 1P JG-71 X NEC-249	6	1	16.66
1889.	- 2P "	12	2	16.66
1890.	- 3P "	11	1	9.09
1891.	- 4P "	7	0	0.00
1892.	- 5P "	11	1	9.09
1893.	- 6P "	8	2	25.00
1894.	- 7P "	9	1	11.11
1895.	- 8P "	10	7	70.00
1896.	- 9P "	9	2	22.22
1897.	-10P "	6	1	16.66
1898.	-11P "	8	2	25.00
1899.	-12P "	7	3	42.85
1900.	-13P "	12	3	25.00

1	2		3	4	5
1901.	75658-14P	JG-71 X NEC-249	8	4	50.00
1902.	-15P	"	9	2	22.22
1903.	-16P	"	11	6	54.54
1904.	-17P	"	10	5	50.00
1905.	75661- 1P	JG-71 X P-4306	10	2	20.00
1906.	- 2P	"	14	12	85.71
1907.	- 3P	"	11	1	9.09
1908.	- 4P	"	9	3	33.33
1909.	- 5P	"	9	2	22.22
1910.	- 6P	"	10	4	40.00
1911.	- 7P	"	9	3	33.33
1912.	75672- 1P	JG-71 X H-208	14	4	28.57
1913.	- 2P	"	3	1	33.33
1914.	- 3P	"	11	5	45.45
1915.	- 4P	"	3	2	66.66
1916.	- 5P	"	1	0	0.00
1917.	- 6P	"	4	3	75.00
1918.	- 7P	"	3	3	100.00
1919.	- 8P	"	1	0	0.00
1920.	- 9P	"	-	-	-
1921.	-10P	"	9	7	77.77
1922.	-11P	"	4	4	100.00
1923.	-12P	"	3	2	66.66
1924.	-13P	"	3	3	100.00
1925.	-14P	"	-	-	-
1926.	-15P	"	1	1	100.00
1927.	-16P	"	4	0	0.00
1928.	-17P	"	1	1	100.00
1929.	-18P	"	1	0	0.00
1930.	-19P	"	7	3	42.85
1931.	-20P	"	3	3	100.00
1932.	-21P	"	3	3	100.00
1933.	-22P	"	7	3	42.85
1934.	-23P	"	3	3	100.00
1935.	-24P	"	2	0	0.00
1936.	-25P	"	3	1	33.33
1937.	75684- 1P	P-30 X PRR-1	-	-	-
1938.	- 2P	"	8	2	25.00
1939.	- 3P	"	3	0	0.00
1940.	- 4P	"	1	0	0.00
1941.	- 5P	"	-	-	-
1942.	- 6P	"	2	1	50.00
1943.	- 7P	"	4	3	75.00
1944.	- 8P	"	2	1	50.00
1945.	- 9P	"	1	0	0.00

contd.

1	2	3	4	5	
1946.	75684-10P	P-30 X PRR-1	3	1	33.33
1947.	-11P	"	5	2	40.00
1948.	-12P	"	6	0	0.00
1949.	-13P	"	2	0	0.00
1950.	-14P	"	6	1	16.66
1951.	-15P	"	6	3	50.00
1952.	-16P	"	8	3	37.50
1953.	-17P	"	2	0	0.00
1954.	-18P	"	4	0	0.00
1955.	-19P	"	1	0	0.00
1956.	-20P	"	-	-	-
1957.	-21P	"	-	-	-
1958.	75753- 1P	P-1030 X H-208	3	3	100.00
1959.	- 2P	"	-	-	-
1960.	- 3P	"	1	1	100.00
1961.	- 4P	"	-	-	-
1962.	- 5P	"	5	1	20.00
1963.	- 6P	"	2	1	50.00
1964.	- 7P	"	2	0	0.00
1965.	- 8P	"	2	1	50.00
1966.	- 9P	"	2	0	0.00
1967.	-10P	"	1	0	0.00
1968.	-11P	"	2	0	0.00
1969.	-12P	"	8	3	37.50
1970.	-13P	"	9	3	33.33
1971.	-14P	"	7	0	0.00
1972.	-15P	"	4	1	25.00
1973.	-16P	"	1	0	0.00
1974.	-17P	"	-	-	-
1975.	-18P	"	2	0	0.00
1976.	-19P	"	-	-	-
1977.	-20P	"	1	0	0.00
1978.	-21P	"	3	0	0.00
1979.	-22P	"	2	0	0.00
1980.	-23P	"	1	0	0.00
1981.	-24P	"	-	-	-
1982.	75761- 1P	P-1363-1 X P-993	1	1	100.00
1983.	- 2P	"	1	0	0.00
1984.	- 3P	"	1	0	0.00
1985.	- 4P	"	2	2	100.00
1986.	- 5P	"	4	2	50.00
1987.	- 6P	"	3	1	33.33
1988.	- 7P	"	7	1	14.28
1989.	- 8P	"	2	1	50.00
1990.	- 9P	"	1	1	100.00

1	2		3	4	5
1991.	75761-10P	P-1363-1 X P-993	5	0	0.00
1992.	-11P	"	-	-	-
1993.	75868- 1P	PRR-1 X P-726-2	5	1	20.00
1994.	- 2P	"	9	3	33.33
1995.	- 3P	"	5	2	40.00
1996.	- 4P	"	11	3	27.27
1997.	- 5P	"	-	-	-
1998.	- 6P	"	3	3	100.00
1999.	- 7P	"	5	4	80.00
2000.	- 8P	"	3	1	33.33
2001.	- 9P	"	1	0	0.00
2002.	-10P	"	3	1	33.33
2003.	-11P	"	2	0	0.00
2004.	-12P	"	1	1	100.00
2005.	-13P	"	3	1	33.33
2006.	-14P	"	2	1	50.00
2007.	-15P	"	5	1	20.00
2008.	-16P	"	3	1	33.33
2009.	-17P	"	3	2	66.66
2010.	-18P	"	1	0	0.00
<u>F3 WR</u>					
2011.	-19P	"	4	2	50.00
2012.	-20P	"	3	1	33.33
2013.	-21P	"	-	-	-
2014.	-22P	"	-	-	-
2015.	-23P	"	4	4	100.00
2016.	-24P	"	2	2	100.00
2017.	75869- 1P	PRR-1 X P-2252	10	0	0.00
2018.	- 2P	"	3	0	0.00
2019.	75870- 1P	P-2974 X PRR-1	1	1	100.00
2020.	- 2P	"	3	0	0.00
2021.	- 3P	"	2	0	0.00
2022.	- 4P	"	5	4	80.00
2023.	- 5P	"	13	11	84.61
2024.	- 6P	"	8	3	37.50
2025.	- 7P	"	2	0	0.00
2026.	- 8P	"	6	3	50.00
2027.	- 9P	"	6	3	50.00
2028.	-10P	"	5	2	40.00
2029.	-11P	"	6	2	33.33
2030.	-12P	"	5	2	40.00
2031.	-13P	"	2	0	0.00
2032.	-14P	"	5	2	40.00
2033.	-15P	"	3	0	0.00
2034.	-16P	"	1	0	0.00
2035.	-17P	"	3	2	66.66

contd.

1	2	3	4	5	
2036.	75870-18P	P-2974 X PRR-1	3	0	0.00
2037.	-19P	"	1	1	100.00
2038.	-20P	"	2	1	50.00
2039.	-21P	"	7	1	14.28
2040.	-22P	"	3	0	0.00
2041.	75872- 1P	PRR-1 X RS-11	9	3	33.33
2042.	- 2P	"	9	5	55.55
2043.	- 3P	"	8	6	75.00
2044.	- 4P	"	10	6	60.00
2045.	- 5P	"	2	2	100.00
2046.	- 6P	"	4	3	75.00
2047.	- 7P	"	6	6	100.00
2048.	- 8P	"	6	6	100.00
2049.	75873- 1P	PRR-1 X P-1222	6	6	100.00
2050.	- 2P	"	12	12	100.00
2051.	- 3P	"	3	2	66.66
2052.	- 4P	"	14	7	50.00
2053.	- 5P	"	7	4	57.14
2054.	- 6P	"	2	1	50.00
2055.	- 7P	"	10	1	10.00
2056.	- 8P	"	2	1	50.00
2057.	- 9P	"	10	0	0.00
2058.	-10P	"	11	2	18.18
2059.	-11P	"	14	5	35.71
2060.	-12P	"	12	3	25.00
2061.	-13P	"	10	2	20.00
2062.	-14P	"	9	1	11.11
2063.	-15P	"	4	2	50.00
2064.	-16P	"	6	2	33.33
2065.	-17P	"	13	3	23.07
2066.	-18P	"	10	2	20.00
2067.	-19P	"	9	2	22.22
2068.	-20P	"	13	3	23.07
2069.	-21P	"	10	4	40.00
2070.	-22P	"	9	0	0.00
2071.	-23P	"	5	1	20.00
2072.	-24P	"	7	1	14.28
2073.	-25P	"	9	1	11.11
2074.	-26P	"	9	0	0.00
2075.	75876- 1P	PRR-1 X P-110	15	2	13.33
2076.	- 2P	"	4	0	0.00
2077.	- 3P	"	9	0	0.00
2078.	- 4P	"	10	2	20.00
2079.	- 5P	"	10	7	70.00
2080.	- 6P	"	11	5	45.45

contd.

1	2	3	4	5	
2081.	75876- 7P	PRR-1 X P-1100	11	9	81.81
2082.	- 8P	"	11	8	72.72
2083.	- 9P	"	10	5	50.00
2084.	-10P	"	9	9	100.00
2085.	-11P	"	8	2	25.00
2086.	-12P	"	12	4	33.33
2087.	-13P	"	14	9	64.28
2088.	-14P	"	8	5	62.50
2089.	-15P	"	9	1	11.11
2090.	-16P	"	9	3	33.33
2091.	-17P	"	10	1	10.00
2092.	-18P	"	6	1	16.66
2093.	-19P	"	11	1	9.09
2094.	-20P	"	7	1	14.28
2095.	-21P	"	12	1	8.33
2096.	75549- 1P	Bengal gram X P-1081	12	1	8.33
2097.	- 2P	"	9	1	11.11
2098.	- 3P	"	9	3	33.33
2099.	- 4P	"	11	2	18.18
2100.	- 5P	"	9	1	11.11
2101.	- 6P	"	11	1	9.09
2102.	- 7P	"	13	3	23.07
2103.	- 8P	"	11	4	36.36
2104.	- 9P	"	10	4	40.00
2105.	-10P	"	12	1	8.33
2106.	-11P	"	10	3	30.00
2107.	-12P	"	11	7	63.63
2108.	-13P	"	10	6	60.00
2109.	-14P	"	10	2	20.00
2110.	-15P	"	10	3	30.00
2111.	-16P	"	11	0	0.00
2112.	-17P	"	11	1	9.09
2113.	-18P	"	11	2	18.18
2114.	-19P	"	10	2	20.00
2115.	-20P	"	10	4	40.00
2116.	-21P	"	11	0	0.00
2117.	-22P	"	9	4	44.44
2118.	-23P	"	12	1	8.33
2119.	-24P	"	9	1	11.11
2120.	-25P	"	10	1	10.00
2121.	-26P	"	11	1	9.09
2122.	-27P	"	9	2	22.22
2123.	-28P	"	10	0	0.00
2124.	-29P	"	7	1	14.28
2125.	-30P	"	10	5	50.00

contd.

1	2	3	4	5
2126.	75560- 1P P-1081 X P-5462	8	3	37.50
2127.	- 2P "	12	1	8.33
2128.	- 3P "	8	2	25.00
2129.	- 4P "	8	1	12.50
2130.	- 5P "	9	4	44.44
2131.	- 6P "	10	0	0.00
2132.	- 7P "	9	3	33.33
2133.	- 8P "	8	1	12.50
2134.	- 9P "	3	0	0.00
2135.	-10P "	10	1	10.00
2136.	-11P "	7	3	42.85
2137.	-12P "	10	0	0.00
2138.	-13P "	10	2	20.00
2139.	-14P "	4	1	25.00
2140.	-15P "	-	-	-
2141.	-16P "	8	2	25.00
2142.	-17P "	5	1	20.00
2143.	-18P "	2	1	50.00
2144.	-19P "	-	-	-
2145.	-20P "	8	3	37.50
2146.	-21P "	2	2	100.00
2147.	7636- 1P P-3090 X PRR-1	5	0	0.00
2148.	- 2P "	2	0	0.00
2149.	- 3P "	8	0	0.00
2150.	- 4P "	2	0	0.00
2151.	- 5P "	6	0	0.00
2152.	- 6P "	4	1	25.00
2153.	- 7P "	6	0	0.00
2154.	- 8P "	5	0	0.00
2155.	- 9P "	8	0	0.00
2156.	-10P "	4	3	75.00
2157.	-11P "	13	5	38.46
2158.	-12P "	11	1	9.09
2159.	-13P "	11	4	36.36
2160.	-14P "	9	2	22.22
2161.	-15P "	9	1	11.11
2162.	-16P "	4	1	25.00
2163.	-17P "	9	2	22.22
2164.	-18P "	7	2	28.57
2165.	-19P "	11	5	45.45
2166.	-20P "	4	1	25.00
2167.	-21P "	10	1	10.00
2168.	-22P "	6	1	16.66
2169.	75735- 1P P-1013 X NEC-140	11	4	36.36
2170.	- 2P "	1	0	0.00
2171.	- 3P "	11	1	9.09



1	2	3	4	5	
2172.	75735- 4P	P-1013 X NEC-140	8	0	0.00
2173.	- 5P	"	10	1	10.00
2174.	- 6P	"	8	0	0.00
2175.	- 7P	"	10	0	0.00
2176.	- 8P	"	6	1	16.66
2177.	- 9P	"	15	3	20.00
2178.	-10P	"	13	4	30.76
2179.	-11P	"	12	4	33.33
2180.	-12P	"	14	2	14.28
2181.	-13P	"	8	0	0.00
2182.	-14P	"	-	-	-
2183.	75788- 1P	H-208 X NP-34	8	1	12.50
2184.	7630- 1P	NEC-1572 X PRR-1	7	2	28.57
2185.	- 2P	"	12	3	25.00
2186.	- 3P	"	5	0	0.00
2187.	- 4P	"	9	3	33.33
2188.	7644- 1P	B-110 X (PRR-1 X P-5462)	6	0	0.00
2189.	- 2P	"	10	0	0.00
2190.	- 3P	"	9	0	0.00
2191.	- 4P	"	13	1	7.69
2192.	- 5P	"	11	1	9.09
2193.	- 6P	"	15	0	0.00
2194.	- 7P	"	6	0	0.00
2195.	- 8P	"	3	0	0.00
2196.	- 9P	"	-	-	-
2197.	-10P	"	12	3	25.00
2198.	-11P	"	14	1	7.14
2199.	-12P	"	17	5	29.41
2200.	-13P	"	5	2	40.00
2201.	-14P	"	11	3	27.27
2202.	-15P	"	5	1	20.00
2203.	-16P	"	11	4	36.36
2204.	-17P	"	3	0	0.00
2205.	-18P	"	3	0	0.00
2206.	-19P	"	2	2	100.00
2207.	-20P	"	14	1	7.14
2208.	-21P	"	5	1	20.00
2209.	-22P	"	10	1	10.00
2210.	-23P	"	13	3	23.07
2211.	-24P	"	11	5	45.45
2212.	-25P	"	8	2	25.00
2213.	-26P	"	12	4	33.33
2214.	-27P	"	9	3	33.33
2215.	-28P	"	9	0	0.00
2216.	-29P	"	5	1	20.00
2217.	-30P	"	8	0	0.00

contd.

1	2	3	4	5	
2218.	7644-31P	B-110 X (PRR-1 X P-5462)	2	0	0.00
2219.	-32P	"	7	0	0.00
2220.	-33P	"	6	0	0.00
2221.	-34P	"	15	1	6.66
2222.	-35P	"	7	1	14.28
2223.	-36P	"	13	2	15.38
2224.	-37P	"	6	0	0.00
2225.	-38P	"	8	3	37.50
2226.	-39P	"	7	3	42.85
2227.	-40P	"	4	1	25.00
2228.	-41P	"	-	-	-
2229.	-42P	"	12	0	0.00
2230.	-43P	"	5	1	20.00
2231.	-44P	"	14	2	14.28
2232.	-45P	"	11	2	18.18
2233.	-46P	"	-	-	-
2234.	-47P	"	6	2	33.33
2235.	-48P	"	12	2	16.66
2236.	-49P	"	4	2	50.00
2237.	-50P	"	15	4	26.66
2238.	7658- 1P	G-130 X (P-1081 X P-2974)	7	1	14.28
2239.	- 2P	"	15	1	6.66
2240.	- 3P	"	14	2	14.28
2241.	- 4P	"	8	1	12.50
2242.	- 5P	"	12	2	16.66
2243.	- 6P	"	15	4	26.66
2244.	- 7P	"	13	1	7.69
2245.	- 8P	"	15	2	13.33
2246.	- 9P	"	14	1	7.14
2247.	-10P	"	12	1	8.33
2248.	-11P	"	16	4	25.00
2249.	-12P	"	6	0	0.00
2250.	-13P	"	6	1	16.66
2251.	-14P	"	8	1	12.50
2252.	-15P	"	2	2	100.00
2253.	-16P	"	8	2	25.00
2254.	-17P	"	4	0	0.00
2255.	-18P	"	11	1	9.09
2256.	-19P	"	6	0	0.00
2257.	-20P	"	14	7	50.00
2258.	76110- 1P	Kaka X (P-30 X PRR-1)	7	3	42.85
2259.	- 2P	"	10	2	20.00
2260.	- 3P	"	13	3	23.07
2261.	- 4P	"	7	3	42.85
2262.	- 5P	"	5	1	20.00
2263.	- 6P	"	10	3	30.00

1	2	3	4	5
2264.	76110- 7P	Kaka X (P-30 X PRR-1)	2	0.00
2265.	- 8P	"	12	8.33
2266.	- 9P	"	9	22.22
2267.	-10P	"	14	35.71
2268.	-11P	"	11	100.00
2269.	-12P	"	12	75.00
2270.	-13P	"	12	58.33
2271.	-14P	"	13	53.84
2272.	-15P	"	11	100.00
2273.	* -16P	"	7	28.57
2274.	751675- 1P	12-071-05436 X (NEC-143 X Annigeri)	5	40.00
2275.	- 2P	"	5	40.00
2276.	- 3P	"	4	0.00
2277.	752715- 1P	Annigeri X (NEC-141 X Annigeri)	10	10.00
2278.	- 2P	"	10	20.00
2279.	- 3P	"	13	61.53
2280.	- 4P	"	12	50.00
2281.	- 5P	"	12	41.66
2282.	- 6P	"	4	50.00
2283.	- 7P	"	8	12.50
2284.	- 8P	"	22	0.00
2285.	- 9P	"	1	0.00
2286.	-10P	"	8	25.00
2287.	-11P	"	4	25.00
2288.	-12P	"	5	40.00
2289.	-13P	"	1	100.00
2290.	-14P	"	3	100.00
2291.	-15P	"	5	60.00
2292.	-16P	"	1	100.00
2293.	-17P	"	6	50.00
2294.	-18P	"	1	100.00
2295.	-19P	"	6	50.00
2296.	-20P	"	6	50.00
2297.	-21P	"	9	66.66
2298.	-22P	"	3	66.66
2299.	-23P	"	3	66.66
2300.	-24P	"	4	50.00
2301.	-25P	"	11	72.72
2302.	-26P	"	7	42.85
2303.	-27P	"	13	61.53
2304.	-28P	"	3	66.66
2305.	-29P	"	8	37.50
2306.	-30P	"	4	50.00

contd.

1	2	3	4	5
2307.	7646- 1P H-208 X (NEC-79 X JM-466)	6	2	33.33
2308.	- 2P "	3	2	66.66
2309.	- 3P "	4	4	100.00
2310.	- 4P "	10	5	50.00
2311.	- 5P "	14	9	64.28
2312.	- 6P "	6	4	66.66
2313.	- 7P "	1	1	100.00
2314.	- 8P "	-	-	-
2315.	- 9P "	2	0	0.00
2316.	-10P "	4	4	100.00
2317.	-11P "	3	3	100.00
2318.	-12P "	4	4	100.00
2319.	-13P "	7	7	100.00
2320.	-14P "	11	8	72.72
2321.	-15P "	5	3	60.00
2322.	-16P "	3	2	66.66
2323.	-17P "	6	2	33.33
2324.	-18P "	6	6	100.00
2325.	-19P "	6	6	100.00
2326.	-20P "	5	5	100.00
2327.	-21P "	3	3	100.00
2328.	-22P "	3	3	100.00
2329.	-23P "	7	7	100.00
2330.	-24P "	8	8	100.00
2331.	-25P "	6	6	100.00
2332.	7651- 1P K-4 X (IG-71 X PRR-1)	3	3	100.00
2333.	- 2P "	4	4	100.00
2334.	- 3P "	2	2	100.00
2335.	- 4P "	9	7	77.77
2336.	- 5P "	5	5	100.00
2337.	- 6P "	4	3	75.00
2338.	- 7P "	6	3	50.00
2339.	- 8P "	5	0	0.00
2340.	- 9P "	4	0	0.00
2341.	-10P "	2	0	0.00
2342.	-11P "	3	0	0.00
2343.	-12P "	1	1	100.00
2344.	-13P "	4	4	100.00
2345.	-14P "	10	10	100.00
2346.	-15P "	10	10	100.00
2347.	-16P "	5	5	100.00
2348.	-17P "	3	2	66.66
2349.	-18P "	6	1	16.66
2350.	-19P "	7	4	57.14

1	2	3	4	5	
2351.	7651-20P	K-4 (JG-71 X PRR-1)	4	1	25.00
2352.	-21P	"	4	2	50.00
2353.	-22P	"	4	0	0.00
2354.	-23P	"	3	1	33.33
2355.	-24P	"	7	2	28.57
2356.	-25P	"	2	0	0.00
2357.	-26P	"	9	2	22.22
2358.	-27P	"	4	0	0.00
2359.	-28P	"	5	0	0.00
2360.	-29P	"	4	0	0.00
2361.	-30P	"	14	4	28.57
2362.	7679- 1P	JG-62 X (PRR-1 X Bet Degan-302)	5	1	20.00
2363.	- 2P	"	13	4	30.76
2364.	- 3P	"	4	2	50.00
2365.	- 4P	"	4	0	0.00
2366.	76105- 1P	NEC-1640 X (PRR-1 X P-1488)	12	7	58.33
2367.	- 2P	"	2	1	50.00
2368.	- 3P	"	8	2	25.00
2369.	- 4P	"	4	1	25.00
2370.	- 5P	"	2	0	0.00
2371.	- 6P	"	2	0	0.00
2372.	- 7P	"	2	0	0.00
2373.	- 8P	"	6	1	16.66
2374.	- 9P	"	1	0	0.00
2375.	-10P	"	2	0	0.00
2376.	-11P	"	-	-	-
2377.	-12P	"	6	1	16.66
2378.	-13P	"	4	0	0.00
2379.	-14P	"	2	1	50.00
2380.	-15P	"	2	1	50.00
2381.	-16P	"	3	0	0.00
2382.	-17P	"	6	2	33.33
2383.	-18P	"	3	0	0.00
2384.	-19P	"	1	0	0.00
2385.	-20P	"	9	3	33.33
2386.	-21P	"	4	1	20.00
2387.	-22P	"	11	0	0.00
2388.	-23P	"	2	0	0.00
2389.	-24P	"	8	4	50.00
2390.	-25P	"	3	1	33.33
2391.	-26P	"	8	4	50.00
2392.	-27P	"	6	2	33.33
2393.	-28P	"	10	6	60.00
2394.	-29P	"	2	0	0.00
2395.	-30P	"	12	7	58.33

contd.

1	2	3	4	5	
2396.	752432- 1P	F <sub>4</sub> (JG-62 X P-378) X (RS-11 X GW-5/7)	7	4	57.14
2397.	- 2P	"	6	2	33.33
2398.	- 3P	"	4	1	25.00
2399.	- 4P	"	8	4	50.00
2400.	- 5P	"	3	2	66.66
2401.	- 6P	"	2	2	100.00
2402.	- 7P	"	9	9	100.00
2403.	- 8P	"	9	9	100.00
2404.	- 9P	"	8	8	100.00
2405.	-10P	"	6	3	50.00
2406.	-11P	"	1	1	100.00
2407.	752751- 1P	F <sub>3</sub> (N-42 X GW-5/7) X F <sub>3</sub> (H-208 X P-1630)-4	1	1	100.00
2408.	- 2P	"	4	0	0.00
2409.	- 3P	"	8	2	25.00
2410.	- 4P	"	1	0	0.00
2411.	- 5P	"	4	2	50.00
2412.	- 6P	"	9	2	22.22
2413.	- 7P	"	6	6	100.00
2414.	- 8P	"	4	4	100.00
2415.	- 9P	"	3	0	0.00
2416.	-10P	"	3	1	33.33
2417.	-11P	"	8	1	12.50
2418.	-12P	"	1	1	100.00
2419.	-13P	"	1	0	0.00
2420.	-14P	"	2	1	50.00
2421.	-15P	"	6	0	0.00
2422.	-16P	"	4	0	0.00
2423.	-17P	"	8	4	50.00
2424.	-18P	"	2	1	50.00
2425.	-19P	"	5	5	100.00
2426.	-20P	"	9	9	100.00
2427.	-21P	"	4	2	50.00
2428.	-22P	"	9	4	44.44
2429.	-23P	"	7	4	57.14
2430.	-24P	"	11	8	72.72
2431.	-25P	"	11	7	63.63
2432.	-26P	"	8	8	100.00
2433.	-27P	"	2	1	50.00
2434.	752795- 1P	F <sub>3</sub> (P-1387 X F-378) X F <sub>3</sub> (H-208 X P-1630)-4	-	-	-
2435.	- 2P	"	-	-	-
2436.	- 3P	"	3	1	33.33
2437.	- 4P	"	9	7	77.77

contd.

1	2	3	4	5	
2438.	752795- 5P	F <sub>3</sub> (P-1387 X F-378) X F <sub>3</sub> (H-208 X P-1630)-4	5	4	80.00
2439.	- 6P	"	4	1	25.00
2440.	- 7P	"	1	0	0.00
2441.	- 8P	"	-	-	-
2442.	- 9P	"	4	2	50.00
2443.	-10P	"	2	1	50.00
2444.	-11P	"	2	1	50.00
2445.	-12P	"	3	1	33.33
2446.	-13P	"	8	5	62.50
2447.	-14P	"	1	0	0.00
2448.	-15P	"	3	1	33.33
2449.	-16P	"	5	3	60.00
2450.	-17P	"	1	0	0.00
2451.	-18P	"	1	1	100.00
2452.	-19P	"	-	-	-
2453.	-20P	"	5	5	100.00
2454.	-21P	"	3	0	0.00
2455.	-22P	"	7	4	57.14
2456.	-23P	"	11	8	72.72
2457.	-24P	"	2	1	50.00
2458.	-25P	"	4	1	25.00
2459.	-26P	"	6	2	33.33
2460.	-27P	"	5	2	40.00
2461.	-28P	"	4	2	50.00
2462.	-29P	"	7	2	28.57
2463.	-30P	"	1	0	0.00
2464.	752796- 1P	F <sub>3</sub> (P-1387 X F-378) X F <sub>3</sub> (H-208 X P-1630)-1	-	-	-
2465.	- 2P	"	2	0	0.00
2466.	- 3P	"	8	1	16.66
2467.	- 4P	"	1	0	0.00
2468.	- 5P	"	-	-	-
2469.	- 6P	"	2	0	0.00
2470.	- 7P	"	3	1	33.33
2471.	- 8P	"	3	1	33.33
2472.	- 9P	"	-	-	-
2473.	-10P	"	-	-	-
2474.	-11P	"	4	0	0.00
2475.	-12P	"	1	1	100.00
2476.	-13P	"	3	3	100.00
2477.	-14P	"	-	-	-
2478.	-15P	"	2	2	100.00
2479.	-16P	"	1	1	100.00
2480.	-17P	"	-	-	-
2481.	-18P	"	15	5	33.33

cont'd.

1	2	3	4	5	
2482.	752796-19P	F <sub>3</sub> (P-1387 X F-378) X F <sub>3</sub> (H-208 X P-1630)-1	14	8	57.14
2483.	-20P	"	10	1	10.00
2484.	-21P	"	4	0	0.00
2485.	-22P	"	2	1	50.00
2486.	-23P	"	1	1	100.00
2487.	-24P	"	3	0	0.00
2488.	-25P	"	1	1	100.00
2489.	-26P	"	-	-	-
2490.	-27P	"	4	0	0.00
2491.	752798- 1P	F <sub>3</sub> (GW-5/7 X BEG-482) X F <sub>3</sub> (H-208 X P-1630)-2	1	0	0.00
2492.	- 2P	"	6	1	16.66
2493.	- 3P	"	6	1	16.66
2494.	- 4P	"	5	0	0.00
2495.	- 5P	"	6	1	16.66
2496.	- 6P	"	4	0	0.00
2497.	- 7P	"	-	-	-
2498.	- 8P	"	2	0	0.00
2499.	- 9P	"	-	-	-
2500.	-10P	"	2	0	0.00
2501.	-11P	"	5	1	20.00
2502.	-12P	"	6	1	16.66
2503.	-13P	"	11	5	45.45
2504.	-14P	"	8	2	25.00
2505.	-15P	"	8	2	25.00
2506.	-16P	"	5	0	0.00
2507.	-17P	"	1	0	0.00
2508.	-18P	"	11	4	36.36
2509.	-19P	"	5	1	20.00
2510.	-20P	"	6	2	33.33
2511.	-21P	"	8	4	50.00
2512.	-22P	"	6	0	0.00
2513.	-23P	"	9	3	33.33
2514.	-24P	"	5	2	40.00
2515.	752799- 1P	F <sub>3</sub> (GW-5/7 X BEG-482) X F <sub>3</sub> (H-208 X P-1630)-3	9	5	55.55
2516.	- 2P	"	10	6	60.00
2517.	- 3P	"	4	0	0.00
2518.	- 4P	"	5	2	40.00
2519.	- 5P	"	2	2	100.00
2520.	- 6P	"	13	10	76.92
2521.	- 7P	"	4	4	100.00
2522.	- 8P	"	3	2	66.66
2523.	- 9P	"	6	6	100.00
2524.	-10P	"	6	2	33.33
2525.	-11P	"	11	6	54.54

contd.



1	2	3	4	5	
2526.	752799-12P	F <sub>3</sub> (GW-5/7 X BEG-482) X F <sub>3</sub> (H-208 X P-1630)-3	10	6	60.00
2527.	-13P	"	16	8	50.00
2528.	-14P	"	16	9	56.35
2529.	-15P	"	8	0	0.00
2530.	-16P	"	11	7	63.63
2531.	-17P	"	6	2	33.33
2532.	-18P	"	7	3	42.85
2533.	-19P	"	5	2	40.00
2534.	-20P	"	6	4	66.66
2535.	-21P	"	3	2	66.66
2536.	-22P	"	7	7	100.00
2537.	-23P	"	2	1	50.00
2538.	-24P	"	4	2	50.00
2539.	-25P	"	7	4	57.14
2540.	752820- 1P	F <sub>3</sub> (H-208 X T-3) X F <sub>3</sub> (F-61 X P-2974)-2	3	3	100.00
2541.	- 2P	"	4	3	75.00
2542.	- 3P	"	8	3	37.50
2543.	- 4P	"	-	-	-
2544.	- 5P	"	-	-	-
2545.	- 6P	"	5	1	20.00
2546.	- 7P	"	4	2	50.00
2547.	- 8P	"	4	1	25.00
2548.	- 9P	"	3	1	33.33
2549.	-10P	"	3	3	100.00
2550.	-11P	"	6	1	16.66
2551.	-12P	"	3	1	33.33
2552.	-13P	"	1	1	100.00
2553.	-14P	"	-	-	-
2554.	-15P	"	4	1	25.00
2555.	-16P	"	2	1	50.00
2556.	-17P	"	3	1	33.33
2557.	-18P	"	8	2	25.00
2558.	-19P	"	8	2	25.00
2559.	-20P	"	6	0	0.00
2560.	-21P	"	11	2	18.18
2561.	-22P	"	14	2	14.28
2562.	-23P	"	15	5	33.33
2563.	-24P	"	15	5	33.33
2564.	-25P	"	16	6	37.50
2565.	752822- 1P	(T-3 X NEC-108) X (P-505 X H-208)	4	2	50.00
2566.	- 2P	"	12	4	33.33
2567.	- 3P	"	8	6	75.00
2568.	- 4P	"	6	3	50.00

1	2	3	4	5
2569.	752822- 5P (T-3 X NEC-108) X (P-505 X H-208)	4	2	50.00
2570.	- 6P "	2	2	100.00
2571.	- 7P "	8	8	100.00
2572.	- 8P "	6	6	100.00
2573.	- 9P "	5	1	20.00
2574.	-10P "	7	7	100.00
2575.	-11P "	5	3	60.00
2576.	-12P "	15	5	33.33
2577.	-13P "	10	5	50.00
2578.	752289- 1P F <sub>3</sub> (No. 42 X GW-5/7) X F <sub>3</sub> (H-208 X P-1630)-3	4	0	0.00
2579.	- 2P "	6	2	33.33
2580.	- 3P "	6	2	33.33
2581.	- 4P "	3	1	33.33
2582.	- 5P "	7	0	0.00
2583.	- 6P "	3	2	66.66
2584.	- 7P "	16	1	6.25
2585.	- 8P "	6	3	50.00
2586.	- 9P "	13	8	61.53
2587.	-10P "	11	1	9.09
2588.	-11P "	8	1	12.50
2589.	752337- 1P F <sub>3</sub> (F-378 X E-100) X F <sub>3</sub> (H-208 X Annigeri) X P <sup>3</sup> -99-4	2	0	0.00
2590.	- 2P "	7	0	0.00
2591.	- 3P "	9	0	0.00
2592.	- 4P "	7	0	0.00
2593.	- 5P "	13	1	7.69
2594.	- 6P "	15	0	0.00
2595.	- 7P "	13	1	7.69
2596.	- 8P "	13	0	0.00
2597.	- 9P "	-	-	-
2598.	-10P "	7	0	0.00
2599.	-11P "	6	2	33.33
2600.	-12P "	5	0	0.00
2601.	-13P "	12	5	41.66
2602.	-14P "	11	2	18.18
2603.	-15P "	10	1	10.00
2604.	-16P "	8	1	12.50
2605.	-17P "	11	2	18.18
2606.	-18P "	15	0	0.00
2607.	-19P "	12	1	8.33
2608.	-20P "	13	1	7.69
2609.	-21P "	1	0	0.00
2610.	-22P "	3	0	0.00

contd.

1	2	3	4	5	
2611.	752337-23P	F <sub>3</sub> (F-378 X E-100) X F <sub>3</sub> (H-208 X Annigeri) X P <sup>3</sup> -99-4	4	2	50.00
2612.	-24P	"	3	0	0.00
2613.	-25P	"	7	1	14.28
2614.	-26P	"	15	2	13.33
2615.	-27P	"	15	3	20.00
2616.	-28P	"	13	2	15.38
2617.	-29P	"	10	1	10.00
2618.	-30P	"	10	0	0.00
2619.	-31P	"	4	0	0.00
2620.	-32P	"	8	1	12.50
2621.	-33P	"	4	2	50.00
2622.	-34P	"	7	1	14.28
2623.	-35P	"	8	1	12.50
2624.	-36P	"	6	0	0.00
2625.	-37P	"	13	2	15.38
2626.	-38P	"	12	1	8.33
2627.	-39P	"	14	3	21.42
2628.	-40P	"	16	5	31.25
2629.	752760- 1P	F <sub>3</sub> (Annigeri X Chafa) X F <sub>3</sub> (Rabat X F-378)-2	10	1	10.00
2630.	- 2P	"	12	1	8.33
2631.	- 3P	"	9	1	11.11
2632.	- 4P	"	8	0	0.00
2633.	- 5P	"	8	0	0.00
2634.	- 6P	"	9	0	0.00
2635.	- 7P	"	7	1	14.28
2636.	- 8P	"	12	0	0.00
2637.	- 9P	"	8	0	0.00
2638.	-10P	"	11	0	0.00
2639.	-11P	"	11	0	0.00
2640.	-12P	"	8	0	0.00
2641.	-13P	"	5	2	40.00
2642.	-14P	"	12	2	16.66
2643.	-15P	"	7	1	14.28
2644.	-16P	"	10	0	0.00
2645.	-17P	"	13	2	15.38
2646.	-18P	"	11	2	18.18
2647.	-19P	"	12	0	0.00
2648.	-20P	"	14	2	14.28
2649.	-21P	"	12	0	0.00
2650.	-22P	"	10	1	10.00
2651.	-23P	"	13	1	7.69
2652.	-24P	"	11	0	0.00
2653.	-25P	"	13	1	7.69

1	2	3	4	5	
2654.	752760-26P	F <sub>3</sub> (Annigeri X Chafa) X F <sub>3</sub> (Rabat X F-378)	11	1	9.09
2655.	-27P	"	15	5	33.33
2656.	-28P	"	10	1	10.00
2657.	-29P	"	4	1	25.00
2658.	-30P	"	8	2	25.00
2659.	-31P	"	2	0	0.00
2660.	-32P	"	8	2	25.00
2661.	-33P	"	7	0	0.00
2662.	-34P	"	5	0	0.00
2663.	-35P	"	13	2	15.38
2664.	-36P	"	9	2	22.22
2665.	-37P	"	4	1	25.00
2666.	-38P	"	14	0	0.00
2667.	-39P	"	10	0	0.00
2668.	-40P	"	16	4	25.00
2669.	752816- 1P	F <sub>3</sub> (P-4357 X Lebanese local) X F <sub>3</sub> (H-208 X F-378)-1	4	2	50.00
2670.	- 2P	"	9	5	55.55
2671.	- 3P	"	14	1	7.14
2672.	- 4P	"	14	4	28.57
2673.	- 5P	"	9	9	100.00
2674.	- 6P	"	7	2	28.57
2675.	- 7P	"	12	8	66.66
2676.	- 8P	F <sub>3</sub> (P-4357 X Lebanese local) X F <sub>3</sub> (H-208 X F-378)-1	-	-	-
2677.	- 9P	"	10	2	20.00
2678.	-10P	"	5	1	20.00
2679.	-11P	"	2	0	0.00
2680.	-12P	"	1	0	0.00
2681.	-13P	"	-	-	-
2682.	-14P	"	9	5	55.55
2683.	-15P	"	9	4	44.44
2684.	-16P	"	11	6	54.54
2685.	-17P	"	8	1	12.50
2686.	-18P	"	8	3	37.50
2687.	752817- 1P	F <sub>3</sub> (P-4357 X Lebanese local) X F <sub>3</sub> (H-208 X F-378)-2	10	5	50.00
2688.	- 2P	"	9	0	0.00
2689.	- 3P	"	6	3	50.00
2690.	- 4P	"	-	-	-
2691.	- 5P	"	-	-	-
2692.	- 6P	"	1	1	100.00
2693.	- 7P	"	15	10	66.66
2694.	- 8P	"	11	11	100.00
2695.	75549-BP	Bengal gram X P-1081	16	6	37.50

contd.

1	2	3	4	5	
2696.	75653-BP	JG-71 X WR-315	13	2	18.18
2697.	75657-BP	JG-71 X PRR-1	9	2	22.22
2698.	75679-BP	P-30 X WR-315	7	2	28.57
2699.	75684-BP	P-30 X PRR-1	4	2	50.00
2700.	75706-BP	P-36 X WR-315	12	2	16.66
2701.	75711-BP	P-36 X PRR-1	8	1	12.50
2702.	75712-BP	P-36 X NEC-249	13	3	23.07
2703.	75713-BP	P-36 X P-3090	10	0	0.00
2704.	75715-BP	P-36 X P-4306	15	2	13.33
2705.	75717-BP	P-36 X JG-728	1	0	0.00
2706.	75720-BP	P-36 X P-458	8	3	37.50
2707.	75722-BP	P-36 X 56567	1	0	0.00
2708.	75725-BP	P-36 X L-534	8	1	12.50
2709.	75726-BP	P-36 X H-208	8	0	0.00
2710.	75728-BP	P-36 X P-388	4	1	25.00
2711.	75730-BP	P-36 X G-130	6	1	16.66
2712.	75732-BP	P-36 X P-9623	2	1	50.00
2713.	75733-BP	P-1013 X WR-315	7	0	0.00
2714.	75760-BP	P-1363-1 X WR-315	4	2	50.00
2716.	75753-BP	P-1013 X H-208	9	0	0.00
2717.	75794-BP	WR-315 X NP-34	12	3	25.00
2718.	75868-BP	PRR-1 X P-726-2	12	4	33.33
2719.	75870-BP	P-2974 X PRR-1	1	0	0.00
2720.	75872-BP	PRR-1 X RS-11	4	2	50.00
2721.	75873-BP	PRR-1 X P-1222	-	-	-
2722.	75876-BP	PRR-1 X P-1100	7	2	28.57
2723.	75877-BP	WR-315 X CPI-36071	8	4	50.00
2724.	75878-BP	WR-315 X P-1265	13	3	23.07
2725.	75879-BP	WR-315 X GL-651	8	0	0.00
2726.	75881-BP	WR-315 X P-726-2	14	2	14.28
2727.	75882-BP	WR-315 X P-2252	5	0	0.00
2728.	75883-BP	P-2974 X WR-315	4	1	25.00
2729.	75884-BP	WR-315 X P-1488	5	0	0.00
2730.	75885-BP	WR-315 X RS-11	7	0	0.00
2731.	75886-BP	WR-315 X P-1214	5	0	0.00
2732.	75888-BP	WR-315 X Bet Degan-302	2	0	0.00
2733.	75889-BP	WR-315 X P-1100	16	0	0.00
2734.	751227-BP	JG-62 X P-36	17	1	5.88
2735.	751237-BP	P-36 X C-214	15	2	13.33
2736.	751245-BP	P-2974 X P-36	14	1	7.14
2737.	751256-BP	P-36 X Lebanese local	14	1	7.14
2738.	751257-BP	P-36 X NEC-141	14	0	0.00
2739.	751258-BP	P-36 X Ofra	10	1	10.00
2740.	751259-BP	P-36 X NEC-139	11	4	36.36
2741.	751260-BP	P-36 X NEC-108	1	0	0.00

contd.

1	2	3	4	5
2742.	751679-BP	NEC-802 X (P-1863 X P-3827)	9	11.11
2743.	751907-BP	(F-61 X WR-315)X(P-623 X K-1481)	7	0.00
2744.	751909-BP	(F-378 X Ayelet) X (K-4 X WR-315)	11	18.18
2745.	752212-BP	F <sub>3</sub> [(L-2 X BEG-482) X F <sub>2</sub> (H-355 X F-496) GW-5/7 X JGC-1]	15	13.13
2746.	752226-BP	F <sub>3</sub> [CP-1786 X Pb-7) X (G-130 X B-108) X NP-34 X GW-5/7]	13	30.76
2747.	752305-BP	F <sub>3</sub> [(850-3/27 X Chafa) X (G-130 X F <sub>3</sub> (E-100 X NP-34) X (Radhey X L-550)]	12	8.33
2748.	752337-BP	F <sub>3</sub> [(F-378 X E-100) X F <sub>3</sub> (H-208 X Annigeri) X P-99]-4	16	18.75
2749.	752397-BP	F <sub>4</sub> (850-3/27 X E-100) X (NP-34 X GW-5/7)	6	66.66
2750.	752463-BP	F <sub>4</sub> (H-208 X Radhey) X F <sub>4</sub> (850-3/27 X JG-221)	5	0.00
2751.	752715-BP	Annigeri X (NEC-141 X Annigeri)	3	0.00
2752.	752760-BP	F <sub>3</sub> (Annigeri X F-378) X F <sub>3</sub> (Rabat X F-378)-2	11	0.00
2753.	752795-BP	F <sub>3</sub> (P-1387 X F-378) X F <sub>3</sub> (H-208 X P-1630)-4	10	0.00
2754.	752799-BP	F <sub>3</sub> (GW-5/7 X BEG-482) X F <sub>3</sub> (H-208 X P-1630)-3	14	7.14
2755.	782820-BP	F <sub>3</sub> (H-208 X T-3) X F <sub>3</sub> (F-461 X P-2974)-2	13	7.69
2756.	752821-BP	F <sub>4</sub> (H-208 X H-355) X F <sub>4</sub> (JG-62 X Radhey)	12	25.00
2757.	752822-BP	(T-108 X NEC-108) X (L-550 X H-208)	15	53.33
2758.	7636-BP	P-3090 X PRR-1	11	9.09
2759.	7644-BP	B-110 X (PRR-1 X P-5462)	13	23.07
2760.	7646-BP	H-208 X (NEC-79 X JM-466)	13	46.15
2761.	7651-BP	K-4 X (JG-71 X PRR-1)	2	0.00
2762.	7658-BP	G-130 X (P-1081 X P-2974)	8	50.00
2763.	7670-BP	NEC-1607 X (P-1363-1 X WR-315)	8	0.00
2764.	7677-BP	Giza X (P-1363 X WR-315)	10	20.00
2765.	76108-BP	Lebanese local X (P-36 X Giza)	11	27.27
2766.	76105-BP	NEC-1640 X (PRR-1 X P-1488)	10	10.00
2767.	76110-BP	Kaka X (P-30 X PRR-1)	11	9.09
2768.	76129-BP	(JG-71 X PG-72-8) X (PRR-1 X P-1265)	12	16.66
2769.	7668-BP	C-214 X (WR-315 X GL-651)	2	50.00
2770.	75725-31P	P-36 X L-532	8	25.00
2771.	75725-32P	"	8	0.00
2772.	-33P	"	5	20.00

contd.

1	2	3	4	5	
2773.	75725-34P	P-36 X L-532	6	1	16.66
2774.	-35P	"	3	2	66.66
2775.	75730-15P	P-36 X Giza	8	4	50.00
2776.	-16P	"	9	9	100.00
2777.	-17P	"	5	5	100.00
2778.	-18P	"	4	4	100.00
2779.	75879-21P	WR-315 X GL-651	10	10	100.00
2780.	-22P	"	13	13	100.00
2781.	-23P	"	9	9	100.00
2782.	751257-26P	P-36 X NEC-141	12	12	100.00
2783.	751258-40P	P-36 X Ofra	9	8	88.88
2784.	-41P	"	7	5	71.42
2785.	-42P	"	10	5	50.00
2786.	-43P	"	14	5	35.71
2787.	751259-27P	P-36 X NEC-139	9	6	66.66
2788.	-28P	"	8	3	37.50
2789.	-29P	"	-	-	-
2790.	751675- 4P	12-071-05436 X (NEC-143 X Annigeri)	2	0	0.00
2791.	751909-26P	(F-378 X Ayelet) X (K-4 X WR-315)	4	0	0.00
2792.	-27P	"	3	0	0.00
2793.	-28P	"	11	5	45.45
2794.	-29P	"	12	8	66.66
2795.	752406-11P	F <sub>4</sub> (JG-62 X JG-221) X (L-550 X P-1786)	7	2	28.57
2796.	752715-31P	Annigeri X (NEC-141 X Annigeri)-	-	-	-
2797.	752770-13P	F <sub>3</sub> (850-3/27 X GW-5/7) X (P-458 X F <sub>3</sub> (L-550 X Gummachili	-	-	-
2798.	-14P	"	-	-	-
2799.	-15P	"	-	-	-
2800.	-18P	"	3	1	33.33
2801.	7646-26P	H-208 X (NEC-79 X JM-466)	-	-	-
2802.	-27P	"	-	-	-
2803.	-28P	"	-	-	-
2804.	-29P	"	-	-	-
2805.	-30P	"	-	-	-
2806.	-31P	"	-	-	-
2807.	-32P	"	-	-	-
2808.	-33P	"	-	-	-
2809.	-34P	"	-	-	-
2810.	-35P	"	-	-	-
2811.	<del>-36P</del>	"	-	-	-
2812.	-37P	"	1	1	100.00
2813.	-38P	"	-	-	-
2814.	-39P	"	-	-	-

contd.

1	2	3	4	5	
2815.	7646-40P	H-208 X (NEC-79 X JM-466)	-	-	-
2816.	-41P	"	-	-	-
2817.	-42P	"	1	1	100.00
2818.	-43P	"	1	1	100.00
2819.	7651-31P	K-4 (JG-7 X PRR-1)	-	-	-
2820.	-32P	"	1	1	100.00
2821.	-33P	"	-	-	-
2822.	-34P	"	-	-	-
2823.	-35P	"	-	-	-
2824.	-36P	"	-	-	-
2825.	-37P	"	-	-	-
2826.	-38P	"	-	-	-
2827.	-39P	"	-	-	-
2828.	76104-32P	Lebanese local X (P-36 X Giza)	-	-	-
2829.	-33P	"	1	1	100.00
2830.	-34P	"	5	2	40.00
2831.	-35P	"	-	-	-
2832.	-36P	"	4	3	75.00
2833.	-37P	"	-	-	-
2834.	-38P	"	-	-	-
2835.	-39P	"	-	-	-
2836.	-40P	"	2	0	0.00
2837.	-41P	"	-	-	-
2838.	-42P	"	2	2	100.00
2839.	-43P	"	-	-	-
2840.	-44P	"	1	1	100.00
2841.	-45P	"	-	-	-
2842.	-46P	"	-	-	-
2843.	-47P	"	2	0	0.00
2844.	-48P	"	4	2	50.00
2845.	-49P	"	1	1	100.00
2846.	76105-31P	NEC-1640 X (PRR-1 X P-1488)	-	-	-
2847.	-32P	"	-	-	-
2848.	-33P	"	-	-	-
2849.	-34P	"	-	-	-
2850.	-35P	"	-	-	-
2851.	-36P	"	-	-	-
2852.	-37P	"	-	-	-

contd.



Sl. No.	Particular	No. of plants	No. of wilted plants	Percent wilt
1	2	3	4	5
F <sub>4</sub> (Wilt)				
1.	741196-1P-1P (G-130 X P-3090)	15	1	6.66
2.	741484-1P-1P (850-3/27 X WFWG-III)	18	13	72.22
3.	-1P-2P "	15	15	100.00
4.	-2P-1P "	18	18	100.00
5.	741533-1P-1P (P-5409 X 850-3/27)	9	9	100.00
6.	-2P-1P "	15	15	100.00
7.	-2P-2P "	18	12	66.66
8.	-3P-1P "	20	15	75.00
9.	-3P-2P "	9	7	77.77
10.	-3P-3P "	6	6	100.00
11.	-3P-4P "	19	19	100.00
12.	-4P-1P "	13	1	7.69
13.	-4P-2P "	16	12	75.00
14.	-4P-3P "	17	12	70.58
15.	-5P-1P "	14	2	14.28
16.	-5P-2P "	15	10	66.66
17.	-5P-3P "	13	0	0.00
18.	-5P-4P "	17	1	5.88
19.	741560-1P-1P (P-1276 X 850-3/27)	18	10	55.55
20.	-2P-1P "	11	10	90.90
21.	-2P-2P "	18	10	55.55
22.	-6P-1P "	14	14	100.00
23.	741568-1P-1P (850-3/27 X P-2774)	6	5	83.33
24.	-2P-1P "	3	0	0.00
25.	-3P-1P "	16	0	0.00
26.	-3P-2P "	17	2	11.76
27.	-3P-3P "	3	0	0.00
28.	-3P-4P "	4	1	25.00
29.	741574-1P-1P (P-1106 X WR-315)	10	3	30.00
30.	-1P-2P "	12	3	25.00
31.	741574-2P-1P "	5	0	0.00
32.	-2P-2P "	9	3	33.33
33.	741579-1P-1P (850-3/27 X P-2003)	9	6	66.66
34.	-1P-2P "	14	6	42.85
35.	-1P-3P "	13	7	53.84
36.	-1P-4P "	9	5	55.55
37.	7522-1P-1P (850-3/27 X NEC-108)	1	0	0.00

contd.

1	2	3	4	5	
38.	7522-2P-1P	(850-3/27 X NEC-108)	4	4	100.00
39.	-2P-2P	"	4	4	100.00
40.	-2P-3P	"	-	-	-
41.	7547-1P-1P	(G-130 X WR-315)	6	0	0.00
42.	-1P-2P	"	19	4	21.05
43.	-1P-3P	"	11	2	18.18
44.	-2P-1P	"	8	1	12.50
45.	-2P-2P	"	3	0	0.00
46.	-2P-3P	"	6	4	66.66
47.	-3P-1P	"	8	3	37.50
48.	-3P-2P	"	10	4	40.00
49.	-4P-1P	"	15	5	33.33
50.	-4P-2P	"	19	7	36.84
51.	-4P-3P	"	7	4	57.14
52.	-4P-4P	(G-130 X WR-315)	9	6	66.66
53.	-5P-1P	"	9	3	33.33
54.	-5P-2P	"	12	1	8.33
55.	7548-1P-1P	(C-235 X WR-315)	8	5	62.50
56.	-2P-1P	"	10	4	40.00
57.	-2P-2P	"	9	2	22.22
58.	-3P-1P	"	6	2	33.33
59.	-3P-2P	"	10	6	60.00
60.	-3P-3P	"	14	8	57.14
61.	-5P-1P	"	6	4	66.66
62.	-5P-2P	"	3	3	100.00
63.	-5P-3P	"	4	4	100.00
64.	7550-1P-1P	(F-61 X WR-315)	-	-	-
65.	-1P-2P	"	9	3	33.33
66.	7551-1P-1P	(F-378 X WR-315)	14	7	50.00
67.	-1P-2P	"	7	7	100.00
68.	-1P-3P	"	15	6	40.00
69.	-2P-1P	"	9	9	100.00
70.	-4P-1P	"	9	4	44.44
71.	-4P-2P	"	14	9	64.28
72.	-4P-3P	"	7	4	57.14
73.	7552-1P-1P	(K-4 X WR-315)	6	6	66.66
74.	-1P-2P	"	4	2	50.00
75.	-2P-1P	"	3	1	33.33
76.	-3P-1P	"	3	1	33.33
77.	-3P-2P	"	9	1	11.11
78.	7553-1P-1P	(JG-62 X WR-315)	10	6	60.00
79.	-1P-2P	"	4	4	100.00
80.	7554-1P-1P	(WR-315 X Annigeri)	3	3	100.00
81.	-1P-2P	"	15	12	80.00
82.	-1P-3P	"	15	13	86.66
83.	-1P-4P	"	7	7	100.00

contd.

1	2		3	4	5
84.	7554-2P-1P	(WR-315 X Annigeri)	11	11	100.00
85.	-2P-2P	"	5	5	100.00
86.	7555-1P-1P	(B-108 X WR-315)	6	3	50.00
87.	-1P-2P	"	13	6	46.15
88.	-2P-1P	"	9	5	55.55
89.	-2P-2P	"	10	5	50.00
90.	-2P-3P	"	11	4	36.36
91.	-3P-1P	"	10	0	0.00
92.	-3P-2P	"	5	3	60.00
93.	-3P-3P	"	2	1	50.00
94.	-4P-1P	"	2	2	100.00
95.	-4P-2P	"	14	14	100.00
96.	-4P-3P	"	9	9	100.00
97.	-5P-1P	"	12	12	100.00
98.	-5P-2P	"	9	9	100.00
99.	-6P-1P	"	5	0	0.00
100.	-6P-2P	"	9	5	55.55
101.	-6P-3P	"	14	4	28.57
102.	-6P-4P	"	9	2	22.22
103.	7556-1P-1P	(G-130 X PM from L-550)	9	5	55.55
104.	-1P-2P	"	6	4	66.66
105.	-2P-1P	"	3	3	100.00
106.	-2P-2P	"	-	-	-
107.	-3P-1P	"	9	4	44.44
108.	-3P-2P	"	6	1	16.66
109.	-3P-3P	"	13	4	30.76
110.	-3P-4P	"	14	6	42.85
111.	-4P-1P	"	9	5	55.55
112.	-4P-2P	"	9	1	11.11
113.	-4P-3P	"	5	1	20.00
114.	-6P-1P	"	6	4	66.66
115.	-6P-2P	"	13	6	46.15
116.	-6P-3P	"	8	3	37.50
117.	7591-1P-1P	(Radhey X NEC-128)	2	0	0.00
118.	-1P-2P	"	-	-	-
119.	-1P-3P	"	1	0	0.00
120.	75106-2P-1P	(P-1863 X WFWG-III)	6	2	33.33
121.	-2P-2P	"	10	2	20.00
122.	-2P-3P	"	14	2	14.28
123.	75159-1P-1P	(JG-62 X P-36)	9	6	66.66
124.	-2P-1P	"	12	7	58.33
125.	-4P-1P	"	11	6	54.54
126.	-4P-2P	"	14	6	42.85
127.	-4P-3P	"	2	2	100.00
128.	-4P-4P	"	2	1	50.00
129.	-5P-1P	"	8	8	100.00
130.	-5P-2P	"	4	4	100.00

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1	2	3	4	5	
131.	75159-5P-3P	(JG-62 X P-36)	9	6	66.66
132.	-6P-1P	"	7	7	100.00
133.	-6P-2P	"	14	14	100.00
134.	75169-1P-1P	(T-3 X P-36)	12	10	83.33
135.	-1P-2P	"	4	4	100.00
136.	-1P-3P	"	4	4	100.00
137.	-2P-1P	"	11	11	100.00
138.	-2P-2P	"	5	5	100.00
139.	-3P-1P	"	13	11	84.61
140.	-3P-2P	"	12	6	50.00
141.	-3P-3P	"	15	7	46.66
142.	75171-1P-1P	(NEC-1572 X P-36)	16	12	75.00
143.	-1P-2P	"	9	9	100.00
144.	75239-6P-1P	(Ceylon-2 X G-130) X (NEC-1077 X P-3090)	13	9	69.23
145.	-6P-2P	"	5	2	40.00
146.	-6P-3P	"	9	6	66.66
147.	-9P-1P	"	4	2	50.00
148.	-10P-1P	"	6	6	100.00
149.	-11P-1P	"	13	6	46.15
150.	75251-1P-1P	(NEC-249 X NEC-108) X (850-3/27 X WFWG-III)	3	3	100.00
151.	-1P-2P	"	12	7	58.33
152.	-2P-1P	"	14	10	71.42
153.	-2P-2P	"	10	8	80.00
154.	-3P-1P	"	13	5	38.46
155.	-3P-2P	"	7	3	42.85
156.	-3P-3P	"	3	2	66.66
157.	75266-2P-1P	(NEC-1639 X NEC-1604) X (F-61 X P-10)	12	8	66.66
158.	-6P-1P	"	16	11	68.75
159.	-7P-1P	"	14	6	42.85
160.	-7P-2P	"	16	16	100.00
161.	-7P-3P	"	10	10	100.00
162.	75278-1P-1P	(NEC-249 X NEC-1639) X (Chafa X P-472)	10	1	10.00
163.	-1P-2P	"	7	1	14.28
164.	-1P-3P	"	4	2	50.00
165.	-7P-1P	"	15	10	66.66
166.	-7P-2P	"	16	16	100.00
167.	-7P-3P	"	15	15	100.00
168.	-7P-4P	"	8	5	62.50
169.	-7P-5P	"	8	5	62.50
170.	75286-2P-1P	(NEC-1604 X P-493) X (850-3/27 X NEC-249)	4	2	50.00

1	2	3	4	5	
171.	95286-3P-1P	(NEC-1604 X P-493) X (850-3/27 X NEC-249)	10	8	80.00
172.	-3P-2P	"	8	5	62.50
173.	75381-2P-1P	(NEC-1639 X L-550) X JG-62	11	6	54.54
174.	75419-1P-1P	(P-99 X NEC-108) X Radhey	5	2	40.00
175.	-2P-1P	"	8	5	62.50
176.	-2P-2P	"	9	5	55.55
177.	-2P-3P	"	15	5	33.33
178.	-3P-1P	"	15	11	73.33
179.	-3P-2P	"	13	9	69.23
180.	-3P-3P	"	12	9	75.00
181.	-3P-4P	"	18	12	66.66
182.	-3P-5P	"	18	13	72.22
183.	-4P-1P	"	6	4	66.66
184.	-4P-2P	"	10	8	80.00
185.	-5P-1P	"	18	5	62.50
186.	-5P-2P	"	9	0	0.00
187.	-5P-3P	"	14	0	0.00
188.	-5P-4P	"	9	3	33.33
189.	-6P-1P	"	11	6	54.54
190.	-7P-1P	"	5	2	40.00
191.	-7P-2P	"	9	3	33.33
192.	-7P-3P	"	7	2	28.57
193.	-7P-4P	"	13	5	38.46
194.	-8P-1P	"	11	3	27.27
195.	-8P-2P	"	16	9	56.25
196.	-8P-3P	"	17	6	35.29
197.	-9P-1P	"	7	4	57.14
198.	-9P-2P	"	4	3	75.00
199.	-11P-1P	"	9	3	33.33
200.	-11P-2P	"	8	3	37.50
201.	-11P-3P	"	13	8	61.53
202.	75463-1P-1P	(JG-39 X P-240) X WR-315	20	20	100.00
203.	-1P-2P	"	12	12	100.00
204.	-1P-3P	"	8	8	100.00
205.	-1P-4P	"	10	10	100.00
206.	75710-3P-1P	(12-071-05132 X P-36)	11	11	100.00
207.	-3P-2P	"	12	12	100.00
208.	75712-4P-1P	(P-36 X NEC-249)	7	7	100.00
209.	-4P-2P	"	8	8	100.00
210.	-4P-3P	"	6	6	100.00

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1	2	3	4	5
211.	75723-5P-1P (P-36 X K-1480)	15	12	80.00
212.	-6P-1P "	16	11	68.75
213.	-6P-2P "	-	-	-
214.	-6P-3P "	2	2	100.00
215.	-6P-4P "	4	2	50.00
216.	-6P-5P "	16	11	68.75
217.	-9P-1P "	8	6	75.00
218.	-9P-2P "	5	5	100.00
219.	75724-1P-1P (P-36 X K-1481)	4	4	100.00
220.	-1P-2P "	5	5	100.00
221.	75725-1P-1P (P-36 X L-534)	8	8	100.00
222.	-1P-2P "	10	10	100.00
223.	-2P-1P "	2	2	100.00
224.	-2P-2P "	1	1	100.00
225.	-2P-3P "	5	5	100.00
226.	-2P-4P "	1	1	100.00
227.	75730-1P-1P (P-36 X Giza)	10	10	100.00
228.	-2P-1P "	14	14	100.00
229.	-3P-1P "	12	12	100.00
230.	-3P-2P "	14	14	100.00
231.	-3P-3P "	13	13	100.00
232.	-10P-1P "	10	10	100.00
233.	75733-1P-1P (P-1013 X WR-315)	10	10	100.00
234.	-1P-2P "	13	13	100.00
235.	-1P-3P "	10	8	80.00
236.	-2P-1P "	7	5	71.42
237.	-2P-2P "	12	12	100.00
238.	-2P-3P "	16	16	100.00
239.	75853-1P-1P (12-071-05193 X P-1265)	12	12	100.00
240.	-1P-2P "	5	5	100.00
241.	75853-1P-3P "	6	6	100.00
242.	-5P-1P "	5	5	100.00
243.	-5P-2P "	13	13	100.00
244.	75866-1P-1P (PRR-1 X P-1265)	9	5	55.55
245.	-1P-2P "	16	9	56.25
246.	-2P-1P "	11	11	100.00
247.	-2P-2P "	12	9	75.00
248.	-2P-3P "	5	5	100.00
249.	75889-1P-1P (P-1100 X WR-315)	7	4	57.14
250.	-1P-2P "	2	2	100.00
251.	-2P-1P "	6	2	33.33
252.	-2P-2P "	8	1	12.50
253.	-2P-3P "	9	3	33.33
254.	-3P-1P "	14	4	28.57
255.	-3P-2P "	3	1	33.33

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1	2	3	4	5	
256.	75889-3P-3P	(P-1100 X WR-315)	7	3	42.85
257.	-4P-1P	"	5	2	40.00
258.	-4P-2P	"	14	8	57.14
259.	-4P-3P	"	13	3	23.07
260.	-5P-1P	"	8	1	12.50
261.	-5P-2P	"	10	4	40.00
262.	751035-2P-1P	(NEC-1639 X NEC-249)	7	7	100.00
263.	751040-1P-1P	(NEC-1639 X NEC-1640)	5	4	80.00
264.	-3P-1P	"	3	2	66.66
265.	-3P-2P	"	17	17	100.00
266.	-3P-3P	"	17	15	88.23
267.	75194-1P-1P	(12-071-05132 X G-13) X (NEC-148 X K-567)	7	6	85.71
268.	752000-2P-1P	(L-550 X P-99) X (12-071-05132 X G-130)	9	6	66.66
269.	752014-1P-1P	(P-5409 X 850-3/27) X (B-110 X NEC-139)	4	3	75.00
270.	-1P-2P	"	7	6	85.71
271.	-1P-3P	"	18	18	100.00
272.	-2P-1P	"	16	13	81.25
273.	-2P-2P	"	12	12	100.00
274.	-2P-3P	"	7	7	100.00
275.	-4P-1P	"	13	4	30.76
276.	-4P-2P	"	5	3	60.00
277.	-5P-1P	"	4	3	75.00
278.	752079-3P-1P	(NEC-240 X NEC-1639) X (NEC-1572 X F-370)	5	5	100.00
279.	-5P-1P	"	9	9	100.00
280.	-5P-2P	"	6	6	100.00
281.	752180-2P-1P	F <sub>2</sub> (JG-34 X P-4357) X F <sub>2</sub> (L-550 X WR-315)-1	12	8	66.66
282.	-2P-2P	"	4	2	50.00
283.	-5P-1P	"	13	8	61.53
284.	-7P-1P	"	4	0	0.00
285.	752292-3P-1P	F <sub>3</sub> (850-3/27 X Chafa) X JG-62)-2 X F <sub>3</sub> (P-9623 X P-3111)-2	4	3	75.00
286.	-3P-2P	"	9	6	66.66
287.	752296-1P-1P	F <sub>3</sub> (850-3/27 X BG-1) X K-4)-1 X F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1	18	5	27.77
288.	-1P-2P	"	14	12	85.71
289.	-1P-3P	"	10	1	10.00
290.	-2P-1P	"	-	-	-
291.	-2P-2P	"	1	1	100.00
292.	-4P-1P	"	2	2	100.00

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1	2	3	4	5	
293.	752296-4P-2P	F <sub>3</sub> (850-3/27 X BG-1) X K-4)-1 F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1	8	4	50.00
294.	-5P-1P	"	6	0	0.00
295.	-5P-2P	"	10	1	10.00
296.	-5P-3P	"	2	1	50.00
297.	-6P-1P	"	10	1	10.00
298.	-7P-1P	"	4	1	25.00
299.	-7P-2P	"	4	1	25.00
300.	-7P-3P	"	7	2	28.57
301.	-8P-1P	"	1	0	0.00
302.	-8P-2P	"	3	0	0.00
303.	752301-3P-1P	F <sub>3</sub> (GW-5/7 X P-979)-2 X F <sub>3</sub> (850-3/27 X Chafa)-2	2	2	100.00
304.	-3P-1P	F <sub>3</sub> (850-3/27 X Chafa) X G-130)-2 - F <sub>3</sub> (E-100 X NP-34)X(Radhey X L-550)-2		-	-
305.	-3P-2P	"	15	15	100.00
306.	-3P-3P	"	14	14	100.00
307.	752303-4P-1P	"	7	7	100.00
308.	752304-1P-1P	F <sub>3</sub> (850-3/27XChafa)XG-130)-3 F <sub>3</sub> (E-100 X NP-34) X (Radhey X L-550)	4	4	100.00
309.	-1P-2P	"	11	11	100.00
310.	-1P-3P	"	11	11	100.00
311.	752424-4P-1P	F <sub>4</sub> (JG-62 X F-496) X F <sub>4</sub> (850- 3/27 X Radhey)	7	7	100.00
312.	-5P-1P	"	9	9	100.00
313.	752424-6P-1P	F <sub>4</sub> (JG-62 X F-496) X F <sub>4</sub> (850-3/27 X Radhey)	12	11	91.66
314.	-7P-1P	"	16	3	18.75
315.	-7P-2P	"	18	11	61.11
316.	752427-1P-1P	(JG-62 X L-2) X (850-3/27 X Annigeri)	14	10	71.42
317.	-1P-2P	"	1	0	0.00
318.	741533-2P-BP	(P-5409 X 850-3/27)	6	4	66.66
319.	-3P-BP	"	18	18	100.00
320.	-4P-BP	"	19	10	100.00
321.	-5P-BP	"	8	8	100.00
322.	741568-3P-BP	(850-3/27 X P-2774)	5	5	100.00
323.	741574-1P-BP	(P-1106 X WR-315)	5	5	100.00
324.	-2P-BP	(P-1106 X WR-315)	8	8	100.00
325.	741579-1P-BP	(850-3/27 X P-2003)	11	11	100.00
326.	7547-1P-BP	(G-130 X WR-315)	10	10	100.00
327.	-2P-BP	"	17	17	100.00
328.	7548-2P-BP	(C-235 X WR-315)	18	18	100.00
329.	-3P-BP	"	9	9	100.00
330.	7552-3P-BP	(K-4 X WR-315)	6	4	66.66

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1	2	3	4	5
331.	7555-3P-BP (B-108 X WR-315)	2	2	100.00
332.	-6P-BP "	6	3	50.00
333.	75106-2P-BP (P-1863 X WFWG-III)	9	6	66.66
334.	75159-4P-BP (JG-62 X P-36)	12	8	66.66
335.	75278-1P-BP (NEC-249 X NEC-1639) X (Chafa X P-472)	7	3	42.85
336.	-7P-BP "	4	3	75.00
337.	75419-2P-BP (P-99 X NEC-108) X Radhey	1	1	100.00
338.	75419-5P-BP "	6	2	33.33
339.	-7P-BP "	7	4	57.14
340.	-8P-BP "	3	1	33.33
341.	-9P-BP "	16	12	75.00
342.	-11P-BP "	17	8	47.05
343.	75463-1P-BP (JG-39 X P-240) X WR-315	11	10	90.90
344.	75723-6P-BP (P-36 X K-1480)	2	1	50.00
345.	75725-1P-BP (P-36 X L-534)	10	10	100.00
346.	-2P-BP "	2	2	100.00
347.	75730-3P-BP (P-36 X Giza)	9	9	100.00
348.	75733-1P-BP (P-1013 X WR-315)	11	11	100.00
349.	-2P-BP "	15	15	100.00
350.	75853-5P-BP (12-071-05193 X P-1265)	12	7	58.33
351.	75866-1P-BP (PRR-1 X P-1265)	9	6	66.66
352.	-2P-BP "	6	4	66.66
353.	75889-2P-BP (P-110 X WR-315)	17	4	23.52
354.	752296-7P-BP F <sub>3</sub> (850-3/27 X Chafa) X K-4)-1 X F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1	14	6	42.85
355.	7552-2P-2P (K-4 X WR-315)	-	-	-
356.	-2P-3P "	-	-	-
357.	-3P-3P "	-	-	-
358.	75171-1P-3P (NEC-1572 X P-36)	2	2	100.00
359.	-1P-4P "	1	1	100.00
360.	-1P-5P "	1	1	100.00
361.	75724-1P-3P (P-36 X K-1481)	-	-	-
362.	75730-1P-2P (P-36 X Giza)	7	7	100.00
363.	752296-1P-4P F <sub>3</sub> (850-3/27 X BG-1) X K-4)-1 X F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1	-	-	-
364.	-2P-3P "	-	-	-
365.	-2P-4P "	1	1	100.00
366.	-2P-5P "	-	-	-
367.	-4P-3P "	1	0	0.00
368.	-4P-4P "	-	-	-
369.	-6P-2P "	-	-	-
370.	-6P-3P "	-	-	-
371.	-6P-4P "	-	-	-
372.	-7P-4P "	-	-	-
373.	-7P-5P "	3	2	66.66
374.	-8P-3P "	-	-	-
375.	-8P-4P "	3	2	66.66

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1	2	3	4	5	
376.	752296-8P-5P	F <sub>3</sub> (850-3/27 X BG-1) X K-4)-1 X	-	-	-
		F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1			
377.	752303-4P-2P	F <sub>3</sub> (850-3/27 X Chafa) X G-130)-2 X	6	6	100.00
		F <sub>3</sub> (E-100 X NP-34) X (Radhey X L-550)-2			
378.	-4P-3P	"	4	4	100.00
379.	-4P-4P	"	3	3	100.00
380.	-4P-5P	"	4	4	100.00
381.	-4P-6P	"	5	5	100.00
382.	752303-4P-7P	"	-	-	-
383.	-4P-8P	"	2	2	100.00
384.	-4P-9P	"	-	-	-
<u>Bulk</u>					
385.	752296-6P-BP	F <sub>3</sub> (850-3/27 X BG-1) X K-4)-1 X	-	-	-
		F <sub>3</sub> (F-404 X L-550) X GW-5/7)-1			
<u>F<sub>5</sub></u>					
1.	74334-3H-1P-1P	F <sub>2</sub> (H-355 X F-496) X	5	1	20.00
		F <sub>2</sub> (L-550 X H-355)			
2.	74338-2H-1P-1P	(L-550 X K-468) X	-	-	-
		(P-1786 X C-214)			
3.	-3P-1P-1P	"	1	1	100.00
4.	-3P-1P-2P	"	3	3	100.00
5.	-3P-1P-3P	"	6	6	100.00
6.	-4P-1P-1P	"	9	4	44.44
7.	-6P-1P-1P	"	10	6	60.00
8.	-7P-1P-1P	"	2	1	50.00
9.	74349-1P-1P-1P	(P-1786 X C-214) X	9	8	88.88
		(P-496 X L-550)			
10.	-1P-1P-2P	"	10	6	60.00
11.	-3P-1P-1P	"	9	4	44.44
12.	-3P-1P-2P	"	8	4	50.00
13.	-4P-1P-1P	"	5	5	100.00
14.	-5P-1P-1P	"	7	2	28.57
15.	-5P-1P-2P	"	7	5	71.42
16.	-5P-1P-3P	"	1	0	0.00
17.	-5P-1P-4P	"	12	6	50.00
18.	-6P-1P-1P	"	9	5	55.55
19.	-6P-1P-2P	"	4	3	75.00
20.	-6P-1P-3P	"	8	4	50.00
21.	-6P-1P-4P	"	7	5	71.42
22.	-6P-1P-5P	"	6	3	50.00
23.	74356-1P-1P-1P	(P-1786 X C-214) X	6	6	100.00
		(C-104 X L-550)			
24.	-3P-1P-1P	"	7	5	71.42
25.	-3P-1P-2P	"	1	1	100.00
26.	-3P-1P-3P	"	10	7	70.00

1	2	3	4	5
27.	74356-3P-1P-4P (P-1786 X C-214) X (C-104 X L-550)	8	5	62.50
28.	74361-1P-1P-1P (H-355 X BR-70) X (L-550 X USA-613)	18	18	100.00
29.	-1P-1P-2P "	17	17	100.00
30.	-2H-1P-1P "	14	14	100.00
31.	-2H-1P-2P "	10	10	100.00
32.	-3P-2P-1P "	-	-	-
33.	-4P-1P-1P "	14	12	85.71
34.	-4P-1P-2P "	7	5	71.42
35.	-4P-1P-3P "	12	12	100.00
36.	-5P-1P-1P "	12	12	100.00
37.	-5P-1P-2P "	12	10	83.33
38.	-5P-1P-3P "	12	9	75.00
39.	-5P-1P-4P "	14	14	100.00
40.	-7P-1P-1P "	4	4	100.00
41.	-8P-1P-1P "	15	9	60.00
42.	-8P-1P-2P "	13	10	76.92
43.	-8P-1P-3P "	8	6	75.00
44.	-8P-1P-4P "	6	5	83.33
45.	-8P-1P-5P "	12	8	66.66
46.	74362-1P-1P-1P (P-1786 X C-214) X (K-4 X L-144)	1	1	100.00
47.	-2P-1P-1P "	9	9	100.00
48.	-2P-1P-2P "	13	13	100.00
49.	74365-1H-1P-1P F <sub>2</sub> (850-3/27 X Annigeri) X F <sub>2</sub> (JG-62 X BEG-482)	14	14	100.00
50.	-1H-1P-2P "	15	15	100.00
51.	74371-5P-1P-1P F <sub>2</sub> (850-3/27 X BEG-482) X (JG-62 X JG-221)	18	4	22.22
52.	-5P-1P-2P "	17	10	58.82
53.	-5P-1P-3P "	18	18	100.00
54.	-28P-1P-1P "	16	16	100.00
55.	-28P-1P-2P "	13	13	100.00
56.	74374-2P-1P-1P (G-130 X P-4250) X (Radhey X L-550)	11	11	100.00
57.	-2P-1P-2P "	14	14	100.00
58.	-2P-1P-3P "	7	7	100.00
59.	-2P-1P-4P "	9	9	100.00
60.	74378-6H-1P-1P F <sub>2</sub> (G-130 X P-4250-1) X F <sub>2</sub> (Radhey X L-550)	17	17	100.00
61.	-6H-1P-2P "	18	18	100.00
62.	-6H-1P-3P "	17	17	100.00
63.	-6H-1P-4P "	17	17	100.00
64.	-6H-1P-5P "	18	18	100.00
65.	-6H-1P-6P "	20	20	100.00

contd.

1	2	3	4	5	
66.	74380-2H-1P-1P	F <sub>2</sub> (850-3/27 X H-355) X F <sub>2</sub> (JG-62 X BR-70)	16	16	100.00
67.	-2H-1P-2P	"	16	16	100.00
68.	-2H-1P-3P	"	16	16	100.00
69.	74381-1H-1P-1P	F <sub>2</sub> (850-3/27 X No.56) X F <sub>2</sub> (G-130 X P-5384)	17	17	100.00
70.	-1H-1P-2P	"	17	17	100.00
71.	74392-2P-1P-1P	F <sub>2</sub> (P-1786 X C-214) X F <sub>2</sub> (Ceylon-2 X L-550)	12	12	100.00
72.	-3P-1P-1P	"	16	16	100.00
73.	-3P-1P-2P	"	18	18	100.00
74.	-3P-1P-3P	"	7	7	100.00
75.	-4P-1P-1P	"	3	3	100.00
76.	-4P-1P-2P	"	3	3	100.00
77.	-5H-1P-1P	"	11	11	100.00
78.	-5P-1P-2P	"	10	10	100.00
79.	74395-4H-1P-1P	P-3111 X F <sub>2</sub> (850-3/27 X RS-11)	16	16	100.00
80.	-4H-1P-2P	"	15	15	100.00
81.	74408-3H-1P-1P	F <sub>2</sub> (850-3/27 X JG-221) X F <sub>2</sub> (H-208 X JG-24)	17	17	100.00
82.	-3H-1P-2P	"	15	15	100.00
83.	-3H-1P-3P	"	14	14	100.00
84.	-3H-1P-4P	"	18	18	100.00
85.	74412-1P-1P-2P	(850-3/27 X Radhey) X (H-208 X F-378)	13	13	100.00
86.	-3P-1P-1P	"	19	19	100.00
87.	-3P-1P-2P	"	15	15	100.00
88.	-4P-1P-1P	"	18	18	100.00
89.	-10P-1P-1P	"	12	12	100.00
90.	-10P-1P-2P	"	12	12	100.00
91.	-10P-1P-3P	"	14	14	100.00
92.	-10P-1P-4P	"	14	14	100.00
93.	74428-4P-1P-1P	(850-3/27 X JG-221) X P-36	17	17	100.00
94.	-4P-1P-2P	"	16	16	100.00
95.	-4P-1P-3P	"	9	6	66.66
96.	-4P-1P-4P	"	10	7	70.00
97.	-7P-1P-1P	"	13	13	100.00
98.	-7P-1P-2P	"	10	10	100.00
99.	-7P-1P-3P	"	14	11	78.57
100.	74432-11P-1P-1P	(850-3/27 X G-543) X (H-208 X EC-12409)	17	17	100.00
101.	74441-1P-1P-1P	(JG-62 X Radhey) X (H-208 X F-378)	8	8	100.00
102.		"	8	8	100.00
103.	-3P-1P-2P	"	10	10	100.00
104.	-3P-1P-3P	"	5	5	100.00
105.	-3P-1P-4P	"	4	4	100.00

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1	2	3	4	5
106.	74441-3P-1P-5P (JG-62 X Radhey) X (H-208 X F-378)	9	9	100.00
107.	-10P-1P-1P "	3	3	100.00
108.	-10P-1P-2P "	5	5	100.00
109.	74451-8H-1P-1P F <sub>2</sub> (850-3/27 X N-59) X F <sub>2</sub> (H-208 X F-378)	-	-	-
110.	-8H-1P-2P "	2	1	50.00
111.	-8H-1P-3P "	2	1	50.00
112.	74454-6H-1P-1P (850-3/27 X JG-62) X L-550	2	1	50.00
113.	-6H-1P-2P "	3	2	66.66
114.	-6H-1P-3P "	2	2	100.00
115.	-13P-1P-1P "	-	-	-
116.	-13P-1P-2P "	-	-	-
117.	-15P-1P-1P "	-	-	-
118.	-20P-1P-1P "	-	-	-
119.	-20P-1P-2P "	4	2	50.00
120.	74462-3H-1P-1P F <sub>2</sub> (RS-11 X P-1786) X F <sub>2</sub> (L-550 X P-66)	-	-	-
121.	-5H-1P-1P "	4	4	100.00
122.	-5H-1P-2P "	1	1	100.00
123.	-11H-1P-1P "	6	6	100.00
124.	-11H-1P-2P "	3	3	100.00
125.	-11H-2P-1P "	-	-	-
126.	-11H-2P-2P "	3	3	100.00
127.	-16H-1P-1P "	-	-	-
128.	74465-1P-1P-1P (850-3/27 X RS-11) X P-4779	-	-	-
129.	-1P-1P-2P "	-	-	-
130.	74469-2P-1P-1P F <sub>2</sub> (T-3 X G-24) X F <sub>2</sub> (H-355 X BR-70)	-	-	-
131.	-2P-1P-2P "	-	-	-
132.	-2P-1P-3P "	-	-	-
133.	-4H-1P-1P "	-	-	-
134.	-4H-1P-2P "	-	-	-
135.	-4H-1P-3P "	-	-	-
136.	-4H-1P-4P "	-	-	-
137.	-6H-1P-1P "	1	0	0.00
138.	-6H-1P-2P "	-	-	-
139.	-6H-1P-3P "	-	-	-
140.	-6H-1P-4P "	-	-	-
141.	-6H-2P-1P "	-	-	-
142.	-6H-2P-2P "	-	-	-
143.	-6H-2P-3P "	-	-	-
144.	-6H-2P-4P "	-	-	-
145.	-7P-1P-1P "	-	-	-
146.	-7P-1P-2P "	-	-	-
147.	-7P-1P-3P "	-	-	-

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1	2	3	4	5	
148.	74469-7P-1P-4P	F <sub>2</sub> (T-3 X G-24) X F <sub>2</sub> (H-355 X BR-70)	-	-	-
149.	74481-4P-1P-1P	(JG-62 X F-378) X (850-3/27 X Radhey)	-	-	-
150.	-4P-1P-2P	"	7	7	100.00
151.	-8P-1P-1P	"	7	7	100.00
152.	-8P-1P-2P	"	3	3	100.00
153.	-8P-1P-3P	"	2	1	50.00
154.	74483-6P-1P-1P	(JG-62 X F-378) X (850-3/27 X Annigeri)	1	1	100.00
155.	74485-1P-1P-1P	(H-208 X B-110) X (850-3/27 X Annigeri)	5	5	100.00
156.	-1P-1P-2P	"	-	-	-
157.	-1P-1P-3P	"	1	1	100.00
158.	-1P-1P-4P	"	2	2	100.00
159.	-1P-1P-5P	"	7	7	100.00
160.	-6P-1P-1P	"	-	-	-
161.	-6P-1P-2P	"	4	4	100.00
162.	-6P-1P-3P	"	3	3	100.00
163.	74487-2H-1P-1P	(850-3/27 X USA-613) X P-2003	2	2	100.00
164.	74495-4P-1P-1P	(H-208 X Radhey) X (JG-62 X Annigeri)	2	2	100.00
165.	-4P-1P-2P	"	2	2	100.00
166.	74498-4P-1P-1P	(JG-62 X 850-3/27) X (L-550 X H-208)	-	-	-
167.	-4P-1P-2P	"	3	3	100.00
168.	-8P-1P-1P	"	-	-	-
169.	-8P-1P-2P	"	-	-	-
170.	-8P-1P-3P	"	-	-	-
171.	-8P-1P-4P	"	-	-	-
172.	-10P-1P-1P	"	3	3	100.00
173.	-10P-1P-2P	"	-	-	-
174.	-12P-1P-1P	"	-	-	-
175.	-12P-1P-2P	"	1	1	100.00
176.	-12P-1P-3P	"	-	-	-
177.	-12P-1P-4P	"	-	-	-
178.	-13P-1P-1P	"	2	2	100.00
179.	-13P-1P-2P	"	2	2	100.00
180.	-13P-1P-3P	"	1	1	100.00
181.	-13P-1P-4P	"	1	1	100.00
182.	74501-2P-1P-1P	(G-130 X P-5384) X (850-3/27 X USA-613)	1	1	100.00
183.	-2P-1P-2P	"	3	2	66.66
184.	-2P-1P-3P	"	2	2	100.00
185.	74502-1H-1P-1P	F <sub>2</sub> (850-3/27 X Chafa) X F <sub>2</sub> (JG-62 X T-3)	4	4	100.00

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1	2	3	4	5
186.	74502-1H-1P-2P F <sub>2</sub> (850-3/27 X Chafa) X F <sub>2</sub> (JG-62 X T-3)	6	6	100.00
187.	-1H-1P-3P	15	15	100.00
188.	-1H-1P-4P	5	5	100.00
189.	-1H-1P-5P	2	2	100.00
190.	-1H-2P-1P	5	5	100.00
191.	-1H-2P-2P	5	5	100.00
192.	-1H-2P-3P	3	3	100.00
193.	-1H-2P-4P	8	8	100.00
194.	74505-2H-1P-1P (H-208 X No.40) X (850-3/27 X BG-1)	5	5	100.00
195.	-2H-1P-2P	8	8	100.00
196.	-2H-1P-3P	6	6	100.00
197.	-4P-1P-1P	4	4	100.00
198.	-5P-1P-1P	12	12	100.00
199.	-7H-1P-1P	2	2	100.00
200.	74507-1H-1P-1P (F-61 X 850-3/27) X Pant-110	7	7	100.00
201.	-1H-1P-2P	8	8	100.00
202.	-1H-1P-3P	2	2	100.00
203.	-1H-1P-4P	2	2	100.00
204.	-4P-1P-1P	2	2	100.00
205.	74511-7P-1P-1P (P-1786 X C-214) X (USA-613 X L-550)	-	-	-
206.	-7P-1P-2P	3	3	100.00
207.	-7P-1P-3P	5	5	100.00
208.	74512-2P-1P-1P (H-208 X F-404) X (G-130 X P-4779)	1	1	100.00
209.	74513-3P-1P-1P	-	-	-
210.	-3P-1P-2P	1	0	0.00
211.	-3P-1P-3P	1	1	100.00
212.	74518-1P-1P-1P (G-130 X P-5409) X (Radhey X L-550)	2	2	100.00
213.	-1P-1P-2P	5	5	100.00
214.	-1P-1P-3P	2	2	100.00
215.	-4P-1P-1P	5	5	100.00
216.	-4P-1P-2P	9	9	100.00
217.	-5P-1P-1P	-	-	-
218.	-5H-1P-1P	2	2	100.00
219.	-5H-1P-2P	-	-	-
220.	-6P-1P-1P	2	2	100.00
221.	-6P-1P-2P	2	2	100.00
222.	-6P-1P-3P	3	3	100.00
223.	-6P-1P-4P	7	5	71.42
224.	-8P-1P-1P	-	-	-
225.	-8P-1P-2P	1	1	100.00
226.	-8P-1P-3P	7	4	57.14

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1	2	3	4	5
227.	74518-9P-1P-1P (G-130 X P-5409) X (Radhey X L-550)	3	3	100.00
228.	-10H-1P-1P "	4	4	100.00
229.	-10H-1P-2P "	3	3	100.00
230.	-10H-1P-3P "	2	2	100.00
231.	-10H-1P-4P "	4	4	100.00
232.	74523-1H-1P-1P F <sub>2</sub> (P-1786 X L-550) X F <sub>2</sub> (F-378 X Chafa)	3	2	66.66
233.	-1H-1P-2P "	2	1	50.00
234.	-2H-1P-1P "	4	4	100.00
235.	-2H-2P-1P "	5	5	100.00
236.	-2H-2P-2P "	-	-	-
237.	-2H-2P-3P "	1	1	100.00
238.	-2H-2P-4P "	5	5	100.00
239.	-2H-2P-5P "	10	10	100.00
240.	-4H-1P-1P "	10	10	100.00
241.	-4H-1P-2P "	9	9	100.00
242.	-4H-1P-3P "	7	7	100.00
243.	-4H-2P-1P "	4	4	100.00
244.	-4H-2P-2P "	9	9	100.00
245.	74524-2P-1P-1P (850-3/27 X GW-5/7) X (H-208 X Annigeri)	9	8	88.88
246.	-2P-1P-2P "	3	2	66.66
247.	-2P-1P-3P "	6	6	100.00
248.	-2P-1P-4P "	6	4	66.66
249.	-3P-1P-1P "	2	0	0.00
250.	-3P-1P-2P "	4	2	50.00
251.	-3P-1P-3P "	2	0	0.00
252.	-3P-1P-4P "	1	0	0.00
253.	74527-4P-1P-1P (G-130 X B-108) X (No.34 X GW-5/7)	12	3	25.00
254.	-4P-1P-2P "	12	6	50.00
255.	-4P-1P-3P "	15	7	46.66
256.	-4P-1P-4P "	6	5	83.33
257.	74528-8P-1P-1P (850-3/27 X N-56) X (G-130 X Chafa)	18	18	100.00
258.	74529-3P-1P-1P "	-	-	-
259.	-3P-1P-2P "	-	-	-
260.	-3P-1P-3P "	-	-	-
261.	-4P-1P-1P "	10	10	100.00
262.	-4P-1P-2P "	6	6	100.00
263.	74531-2P-1P-1P (850-3/27 X B-110) X P-3172	10	10	100.00
264.	-2P-1P-2P "	4	4	100.00
265.	-2P-1P-3P "	7	7	100.00
266.	74536-2P-1P-1P (G-130 X P-5409) X (L-550 X BG-1)	-	-	-

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1	2	3	4	5
267.	74536-2P-1P-2P (G-130 X P-5409) X (L-550 X BG-1)	-	-	-
268.	-2P-1P-3P "	-	-	-
269.	-4P-1P-1P "	8	8	100.00
270.	74536-4P-1P-2P "	7	7	100.00
271.	-6P-1P-1P "	-	-	-
272.	-6P-1P-2P "	-	-	-
273.	-6P-1P-3P "	-	-	-
274.	74540-10H-1P-1P F <sub>2</sub> (850-3/27 X T-3) X F <sub>2</sub> (JG-62 X BEG-482)	3	3	100.00
275.	-10H-1P-2P "	8	8	100.00
276.	-10H-1P-3P "	6	6	100.00
277.	-10H-1P-4P "	10	6	60.00
278.	-14H-1P-1P "	8	6	75.00
279.	-17H-1P-1P "	5	5	100.00
280.	-21P-1P-1P "	9	3	33.33
281.	-21P-1P-2P "	13	5	38.46
282.	-21P-1P-3P "	14	4	28.57
283.	-21P-1P-4P "	5	1	20.00
284.	-21P-1P-5P "	5	3	60.00
285.	-22H-1P-1P "	8	3	37.50
286.	-22H-1P-2P "	5	1	20.00
287.	-22H-1P-3P "	11	4	36.36
288.	-22H-1P-4P "	6	3	50.00
289.	-22H-1P-5P "	11	8	72.72
290.	-22H-1P-6P "	9	8	88.88
291.	-23H-1P-1P "	6	5	83.33
292.	-25H-1P-1P "	2	2	100.00
293.	-25H-1P-2P "	10	10	100.00
294.	-25H-1P-3P "	5	5	100.00
295.	-25H-1P-4P "	15	15	100.00
296.	-25H-1P-5P "	6	6	100.00
297.	-25H-2P-1P "	12	12	100.00
298.	-25H-2P-2P "	11	11	100.00
299.	-25H-2P-3P "	6	6	100.00
300.	-25H-2P-4P "	2	2	100.00
301.	-25H-2P-5P "	4	4	100.00
302.	-27H-1P-1P "	7	7	100.00
303.	-27H-1P-2P "	10	10	100.00
304.	-27H-1P-3P "	2	2	100.00
305.	74589-2H-1P-1P (Pant-102 X BR-70) X (RS-11 X Ahmedabad-52)	7	7	100.00
306.	-2H-1P-2P "	2	2	100.00
307.	74590-3P-1P-1P "	6	6	100.00
308.	-3P-1P-2P "	8	8	100.00
309.	74591-6P-1P-1P (Radhey X 850-3/27) X (GW-5/7 X C-375)	6	6	100.00

contd.

1	2	3	4	5
310.	74591-6P-1P-2P (Radhey X 850-3/27) X (GW-5/7 X C-375)	1	1	100.00
311.	-6P-1P-3P "	9	9	100.00
312.	74593-3P-1P-1P (850-3/27 X RS-11) X (L-550 X F-378)	1	1	100.00
313.	-3P-1P-2P "	4	4	100.00
314.	-5H-1P-1P "	7	7	100.00
315.	-5H-1P-2P "	11	11	100.00
316.	-5H-1P-3P "	7	7	100.00
317.	-6P-1P-1P "	9	7	77.77
318.	-6P-1P-2P "	12	9	75.00
319.	-6P-1P-3P "	8	8	100.00
320.	74594-4H-1P-1P (G-130 X K-4) X (RS-11 X No.42)	-	-	-
321.	-6H-1P-1P "	5	5	100.00
322.	-23H-1P-1P "	1	1	100.00
323.	-23H-1P-2P "	4	2	50.00
324.	74597-9H-1P-1P (850-3/27 X L-345) X (H-208 X BR-70)	10	9	90.00
325.	-9H-1P-2P "	10	10	100.00
326.	-9H-1P-3P "	8	8	100.00
327.	-10H-1P-1P "	8	8	100.00
328.	-10H-1P-2P "	6	6	100.00
329.	-10H-1P-3P "	7	7	100.00
330.	74599-4P-1P-1P (850-3/27 X RS-11) X (L-2 X BEG-482)	10	10	100.00
331.	-4P-1P-2P "	12	12	100.00
332.	74602-3P-1P-1P (RS-11 X L-550) X (BR-70 X G-130)	15	15	100.00
333.	Annigeri (Filler)	8	8	100.00
334.	74602-3P-1P-2P (RS-11 X L-550) X (BR-70 X G-130)	9	9	100.00
335.	-3P-1P-3P "	12	12	100.00
336.	-3P-1P-4P "	5	5	100.00
337.	-4H-1P-1P "	10	10	100.00
338.	-4H-1P-2P "	10	10	100.00
339.	-4H-1P-3P "	8	8	100.00
340.	-6P-1P-1P "	8	8	100.00
341.	-6P-1P-2P "	4	4	100.00
342.	-7P-1P-1P "	6	6	100.00
343.	74604-3P-1P-1P (850-3/27 X USA-613) X (JG-221 X BEG-482)	13	13	100.00
344.	74606-5P-1P-1P (G-130 X JG-221) X (E-100 X H-355)	12	12	100.00
345.	-5P-1P-2P "	6	6	100.00
346.	-5P-1P-3P "	6	6	100.00
347.	-5P-1P-4P "	15	15	100.00

contd.

1	2	3	4	5
348.	74606-5P-1P-5P (G-130 X JG-221) X (E-100 X H-355)	14	13	92.85
349.	74609-5H-1P-1P (850-3/27 X C-235) X (B-110 X L-550)	2	2	100.00
350.	-5H-1P-2P "	6	6	100.00
351.	-5H-1P-3P "	10	10	100.00
352.	-7H-1P-1P "	5	4	80.00
353.	-7H-1P-2P "	7	7	100.00
354.	-7H-1P-3P "	7	7	100.00
355.	-7H-1P-4P "	7	7	100.00
356.	-8H-1P-1P "	13	13	100.00
357.	-8H-1P-2P "	11	10	90.90
358.	-8H-1P-3P "	6	6	100.00
359.	-8H-1P-4P "	3	3	100.00
360.	-9H-1P-1P "	4	4	100.00
361.	-9H-1P-2P "	17	17	100.00
362.	-9H-1P-3P "	13	13	100.00
363.	-9H-1P-4P "	11	11	100.00
364.	74610-3H-1P-1P (CP-66 X G-130) X (10-2-3 X Chafa)	8	6	75.00
365.	-3H-1P-2P "	10	9	90.00
366.	-3H-1P-3P "	10	7	70.00
367.	-3H-1P-4P "	9	9	100.00
368.	-3H-1P-5P "	12	12	100.00
369.	-3H-2P-1P "	12	12	100.00
370.	-3H-2P-2P "	10	10	100.00
371.	-3H-2P-3P "	9	9	100.00
372.	-4H-1P-1P "	1	1	100.00
373.	-4H-1P-2P "	12	12	100.00
374.	-4H-2P-1P "	6	6	100.00
375.	-4H-2P-2P "	6	6	100.00
376.	-4H-2P-3P "	1	1	100.00
377.	-6H-1P-1P "	5	5	100.00
378.	-6H-1P-2P "	12	12	100.00
379.	-8H-1P-1P "	7	7	100.00
380.	-8H-1P-2P "	6	6	100.00
381.	-8H-1P-3P "	4	4	100.00
382.	-8H-1P-4P "	5	5	100.00
383.	-11H-1P-1P "	2	2	100.00
384.	-11H-1P-2P "	9	9	100.00
385.	-11H-1P-3P "	7	7	100.00
386.	-13H-1P-1P "	12	9	75.00
387.	-13H-1P-2P "	7	7	100.00
388.	-13H-1P-3P "	15	15	100.00
389.	-13H-1P-4P "	10	6	60.00
390.	74613-1H-1P-1P (E-100 X P-436) X (H-355 X G-130)	9	9	100.00

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1	2	3	4	5	
391.	74613-1H-1P-2P	(E-100 X P-436) X (H-355 X G-130)	14	14	100.00
392.	-1H-1P-3P	"	10	10	100.00
393.	-1H-1P-4P	"	13	13	100.00
394.	74614-9H-1P-1P	(850-3/27 X BG-1) X (JG-62 X Chafa)	10	10	100.00
395.	-9H-1P-2P	"	12	12	100.00
396.	-9H-1P-3P	"	8	8	100.00
397.	74662-3H-1P-1P	(850-3/27 X C-235) X (B-110 X L-550)	5	5	100.00
398.	-3H-1P-2P	"	3	3	100.00
399.	74627-1P-1P-1P	(F-378 X P-3090) X (Radhey X G-130)	13	13	100.00
400.	-2P-1P-2P	"	6	6	100.00
401.	-2P-1P-3P	"	6	6	100.00
402.	-2H-1P-1P	"	1	1	100.00
403.	-2H-1P-2P	"	3	0	0.00
404.	-2H-1P-3P	"	5	1	20.00
405.	-2H-1P-4P	"	2	0	0.00
406.	-2H-1P-5P	"	3	2	66.66
407.	74627-6H-1P-1P	"	8	6	75.00
408.	-6H-1P-2P	"	10	9	90.00
409.	-7P-1P-1P	"	9	7	77.77
410.	-8P-1P-1P	"	13	11	84.61
411.	-8P-1P-2P	"	5	3	60.00
412.	-8P-1P-3P	"	5	5	100.00
413.	74632-1H-1P-1P	(H-355 X BEG-482) X (JG-62 X P-1387)	10	10	100.00
414.	-3P-1P-1P	"	9	7	77.77
415.	-5P-1P-1P	"	6	2	33.33
416.	-5P-1P-2P	"	6	3	50.00
417.	74638-3H-1P-1P	F <sub>2</sub> (USA-613 X P-1137) X F <sub>2</sub> (G-130 X F-61)	6	2	33.33
418.	-3H-1P-2P	"	4	2	50.00
419.	-3H-1P-3P	"	5	3	60.00
420.	-3H-1P-4P	"	8	6	75.00
421.	74644-1H-1P-1P	(P-99 X G-130) X (Chafa X Rabat)	4	1	25.00
422.	-1H-1P-2P	"	1	0	0.00
423.	-1H-1P-3P	"	11	4	36.36
424.	74651-7H-1P-1P	(Pant-102 X SP-405) X (Radhey X C-235)	10	10	100.00
425.	-11P-1P-1P	"	6	5	83.33
426.	-11P-1P-2P	"	6	4	66.66
427.	-11P-1P-3P	"	6	2	33.33
428.	-12P-1P-1P	"	9	3	33.33

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1	2	3	4	5
429.	74652-1P-1P-1P (P-502 X G-130) X (C-156 X P-2940)	3	1	33.33
430.	-9P-1P-1P "	8	4	50.00
431.	-9P-1P-2P "	6	5	83.33
432.	74660-5H-1P-1P (Annigeri X H-208) X (850-3/27 X C-235)	1	1	100.00
433.	-5H-1P-2P "	13	13	100.00
434.	-5H-1P-3P "	12	12	100.00
435.	-5H-1P-4P "	11	11	100.00
436.	-9H-1P-1P "	5	5	100.00
437.	-9H-1P-2P "	9	9	100.00
438.	-9H-1P-3P "	5	4	80.00
439.	-9H-1P-4P "	8	6	75.00
440.	-16P-1P-1P "	9	9	100.00
441.	74663-2H-1P-1P (JG-62 X C-235) X (850-3/27 X BG-1)	3	3	100.00
442.	-2H-1P-2P "	7	7	100.00
443.	-2H-2P-1P "	2	2	100.00
444.	-2H-2P-2P "	10	10	100.00
445.	-2H-2P-3P "	12	12	100.00
446.	-4P-1P-1P "	9	9	100.00
447.	-4P-1P-2P "	11	11	100.00
448.	-4P-1P-3P "	11	11	100.00
449.	74668-5P-1P-1P (850-3/27 X USA-613) X (GW-5/7 X BEG-482)	12	12	100.00
450.	74669-3P-1P-1P (L-550 X K-4) X (850-3/27 X H-208)	7	3	42.85
451.	-3P-1P-2P "	3	1	33.33
452.	-3P-1P-3P "	4	4	100.00
453.	-4P-1P-1P "	3	2	66.66
454.	74711-1H-1P-1P (C-235 X (G-130 X F-61)	6	6	100.00
455.	-1H-1P-2P "	11	11	100.00
456.	74729-2P-1P-1P (H-355 X 850-3/27) X NEC-240)	16	3	18.75
457.	-2P-1P-2P "	15	1	6.66
458.	-2P-1P-3P "	18	7	38.88
459.	-2P-1P-4P "	12	0	0.00
460.	74752-3H-1P-1P P-472 X (G-130 X K-4)	12	12	100.00
461.	-3H-1P-2P "	4	4	100.00
462.	-4H-1P-1P "	5	5	100.00
463.	-6H-1P-1P "	11	11	100.00
464.	-6H-1P-2P "	6	6	100.00
465.	74759-1P-1P-1P (Radhey X BEG-482) X F-61	7	4	57.14
466.	-1P-1P-2P "	7	4	57.14
467.	-1P-1P-3P "	13	5	38.46
468.	-17H-1P-1P "	14	14	100.00
469.	-17H-1P-2P "	8	8	100.00

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1	2	3	4	5
470.	74760-1P-1P-1P (JG-62 X P-99) X Radhey	2	0	0.00
471.	-1P-1P-2P "	5	1	20.00
472.	-1P-1P-3P "	4	0	0.00
473.	74763-10H-1P-1P 850-3/27 X (Radhey X No.42)	2	2	100.00
474.	-10H-1P-2P "	7	7	100.00
475.	-10H-1P-3P "	1	1	100.00
476.	-10H-1P-4P "	4	4	100.00
477.	-10H-1P-5P "	8	7	87.50
478.	-11H-1P-1P "	8	8	100.00
479.	-12H-1P-1P "	8	7	87.50
480.	-12H-1P-2P "	10	9	90.00
481.	-12H-1P-3P "	9	8	88.88
482.	-12H-1P-4P "	3	3	100.00
483.	-12H-1P-5P "	8	8	100.00
484.	-12H-1P-6P "	3	3	100.00
485.	-15H-1P-1P "	8	8	100.00
486.	-15H-1P-2P "	6	6	100.00
487.	-15H-1P-3P "	10	10	100.00
488.	74773-1P-1P-1P (JG-62 X P-1630) X 850-3/27	6	6	100.00
489.	-1P-1P-2P "	4	4	100.00
490.	74794-2P-1P-1P (850-3/27 X RS-11) X NEC-1030	13	13	100.00
491.	-2P-1P-2P "	8	8	100.00
492.	74807-2P-1P-1P (850-3/27 X C-235) X NEC-1077	-	-	-
493.	-2P-1P-2P "	1	1	100.00
494.	-2P-1P-3P "	3	1	33.33
495.	7570-1-1P-1P (G-130 X K-1189)	-	-	-
496.	-1-1P-2P "	-	-	-
497.	-3-1P-1P "	1	1	100.00
498.	-5-1P-1P "	1	1	100.00
499.	-5-1P-2P "	3	3	100.00
500.	-5-1P-3P "	4	4	100.00
501.	-5-2P-1P "	5	5	100.00
502.	-5-2P-2P "	10	10	100.00
503.	-5-2P-3P "	12	12	100.00
504.	-5-2P-4P "	3	3	100.00
505.	-5-2P-5P "	4	4	100.00
506.	-5-2P-6P "	15	15	100.00
507.	-6-1P-1P "	5	5	100.00
508.	-6-1P-2P "	2	2	100.00
509.	-6-1P-3P "	-	-	-
510.	-6-1P-4P "	-	-	-
511.	7570-7-1P-1P "	-	-	-
512.	-10-1P-1P "	-	-	-
513.	-11-2P-1P "	5	5	100.00
514.	-11-2P-2P "	-	-	-
515.	-11-3P-1P "	4	4	100.00

contd.

1	2	3	4	5
516.	7570-11-3P-2P (G-130 X K-1189)	5	5	100.00
517.	-11-3P-3P "	4	4	100.00
518.	-11-3P-4P "	4	3	75.00
519.	-11-3P-5P "	3	3	100.00
520.	-15-1P-1P "	5	5	100.00
521.	-15-1P-2P "	1	1	100.00
522.	-15-1P-3P "	5	5	100.00
523.	-15-2P-1P "	10	10	100.00
524.	-15-2P-2P "	4	4	100.00
525.	-15-2P-3P "	5	5	100.00
526.	-16-1P-1P "	8	7	87.50
527.	-16-1P-2P "	5	4	80.00
528.	-16-1P-3P "	3	3	100.00
529.	-16-1P-4P "	-	-	-
530.	-16-1P-5P "	9	9	100.00
531.	-16-3P-1P "	5	5	100.00
532.	-24-1P-1P "	3	3	100.00
533.	-31-1P-1P "	-	-	-
534.	-41-1P-1P "	3	3	100.00
535.	-41-1P-2P "	5	5	100.00
536.	-45-1P-1P "	8	8	100.00
537.	-45-1P-2P "	-	-	-
538.	-45-2P-1P "	2	2	100.00
539.	-48-1P-1P "	3	3	100.00
540.	-49-1P-1P "	7	7	100.00
541.	-49-1P-2P "	12	12	100.00
542.	-49-1P-3P "	5	5	100.00
543.	-49-1P-4P "	2	1	50.00
544.	-65-1P-1P "	5	3	60.00
545.	-65-1P-2P "	-	-	-
546.	-65-1P-3P "	-	-	-
547.	-65-1P-4P "	-	-	-
548.	-65-1P-5P "	-	-	-
549.	Annigeri (Filler)	-	-	-
550.	74338-3P-1P-BP (L-550 X K-468) X (P-1786 X C-214)	5	5	100.00
551.	-4P-1P-BP "	-	-	-
552.	74349-3P-1P-BP (P-1786 X C-214) X (F-496 X L-550)	3	3	100.00
553.	-4P-1P-BP "	-	-	-
554.	-5P-1P-BP "	1	1	100.00
555.	-6P-1P-BP "	2	2	100.00
556.	74356-1P-1P-BP (P-1786 X C-214) X (C-104 X L-550)	1	1	100.00
557.	-3P-1P-BP "	-	-	-

contd.

1	2	3	4	5
558.	74361-1P-1P-BP (H-355 X BP-70) X (L-550 X USA-613)	7	7	100.00
559.	-4P-1P-BP "	2	2	100.00
560.	-5P-1P-BP "	6	6	100.00
561.	-7P-1P-BP "	3	3	100.00
562.	-8P-1P-BP "	8	8	100.00
563.	74362-1P-1P-BP (P-1786 X C-214) X (K-4 X L-144)	-	-	-
564.	-2P-1P-BP "	5	5	100.00
565.	74371-28-1P-BP (850-3/27 X BEG-482) X (JG-62 X JG-221)	-	-	-
566.	74374-2P-1P-BP (G-130 X P-4250) X (Radhey X L-550)	1	1	100.00
567.	74378-6H-1P-BP F <sub>2</sub> (G-130 X P-4250-1) X F <sub>2</sub> (Radhey X L-550)	-	-	-
568.	74380-2H-1P-BP F <sub>2</sub> (850-3/27 X H-355) X F <sub>2</sub> (JG-62 X BR-70)	-	-	-
569.	74381-1H-1P-BP F <sub>2</sub> (850-3/27 X No. 56) X F <sub>2</sub> (G-130 X P-5384)	4	4	100.00
570.	74392-3P-1P-BP F <sub>2</sub> (P-1786 X C-214) X F <sub>2</sub> (Ceylon-2 X L-550)	3	3	100.00
571.	-4P-1P-BP "	-	-	-
572.	-5H-1P-BP "	4	4	100.00
573.	74408-3H-1P-BP F <sub>2</sub> (850-3/27 X JG-221) F <sub>2</sub> (H-208 X JG-24)	-	-	-
574.	74412-10-1P-BP F <sub>2</sub> (850-3/27 X Radhey) X F <sub>2</sub> (H-208 X F-378)	2	2	100.00
575.	74428-4P-1P-BP (850-3/27 X JG-221) X P-36	1	1	100.00
576.	-7P-1P-BP "	1	0	0.00
577.	74441-3P-1P-BP (JG-62 X Radhey) X (H-208 X F-378)	-	-	-
578.	-10P-1P-BP "	-	-	-
579.	74451-8H-1P-BP F <sub>2</sub> (850-3/27 X N-59) X F <sub>2</sub> (H-208 X F-378)	1	1	100.00
580.	74454-6H-1P-BP (850-3/27 X JG-221) X L-550	1	1	100.00
581.	-20P-1P-BP "	-	-	-
582.	74462-5H-1P-BP F <sub>2</sub> (RS-11 X P-1756) X F <sub>2</sub> (L-550 X CP-66)	1	1	100.00
583.	-11H-1P-BP "	1	1	100.00
584.	-11H-2P-BP "	-	-	-
585.	-16H-1P-BP "	-	-	-
586.	74465-1P-1P-BP (850-3/27 X RS-11) X P-4779	3	3	100.00
587.	74469-2P-1P-BP F <sub>2</sub> (T-3 X G-24) X F <sub>2</sub> (H-355 X BR-70)	-	-	-
588.	-4H-1P-BP "	-	-	-

contd.



1	2	3	4	5	
589.	74469-6H-1P-BP	F <sub>2</sub> (T-3 X G-24) X F <sub>2</sub> (H-355 X BR-70)	1	1	100.00
590.	-6H-2P-BP	"	2	2	100.00
591.	-7H-1P-BP	"	-	-	-
592.	74481-8P-1P-BP	(JG-62 X F-378) X (850-3/27 X Radhey)	6	6	100.00
593.	74483-6P-1P-BP	(JG-62 X F-378) X (850-3/27 X Annigeri)	-	-	-
594.	74485-1P-1P-BP	(H-208 X B-110) X (850-3/27 X Annigeri)	7	4	57.14
595.	-6P-1P-BP	"	6	6	100.00
596.	74487-2H-1P-BP	(850-3/27 X USA-613) X P-2003	3	3	100.00
597.	74498-8P-1P-BP	(JG-62 X 850-3/27) X (L-550 X H-208)	-	-	-
598.	-10P-1P-BP	"	2	2	100.00
599.	-12P-1P-BP	"	-	-	-
600.	-13P-1P-BP	"	-	-	-
601.	74499-2P-1P-BP	(H-59 X L-550) X (G-190 X P-4779)	-	-	-
602.	74501-2P-1P-BP	(G-130 X P-538) X (850-3/27 X USA-613)	5	2	40.00
603.	74502-1H-1P-BP	F <sub>2</sub> (850-3/27 X Chafa) X F <sub>2</sub> (JG-62 X T-3)	5	3	60.00
604.	-1H-2P-BP	"	9	9	100.00
605.	74505-2H-1P-BP	(H-208 X No.40) X (850-3/27 X BG-1)	2	2	100.00
606.	74505-5P-1P-BP	"	4	4	100.00
607.	-7H-1P-BP	"	2	2	100.00
608.	-9P-1P-BP	"	2	2	100.00
609.	74507-1H-1P-BP	(F-61 X 850-3/27) X Pant-110	3	3	100.00
610.	74511-7P-1P-BP	(P-1786 X C-214) X (USA-613 X L-550)	5	5	100.00
611.	74513-3P-1P-BP	(L-550 X T-3) X (G-130 X JG-221)	5	2	40.00
612.	74518-1P-1P-BP	(G-130 X P-5409) X (Radhey X L-550)	6	6	100.00
613.	-4P-1P-BP	"	13	13	100.00
614.	-5H-1P-BP	"	3	3	100.00
615.	-6P-1P-BP	"	11	2	18.18
616.	-8P-1P-BP	"	11	7	63.63
617.	-10H-1P-BP	"	12	12	100.00
618.	74523-1H-1P-BP	F <sub>2</sub> (P-1786 X L-550) X F <sub>2</sub> (F-378 X Chafa)	8	5	62.50
619.	-2H-1P-BP	"	4	4	100.00
620.	-2H-2P-BP	"	-	-	-

contd.

1	2	3	4	5	
621.	74523-4H-1P-BP	F <sub>2</sub> (P-1786 X L-550) X F <sub>2</sub> (F-378 X Chafa)	8	8	100.00
622.	-4H-2P-BP	"	13	13	100.00
623.	74524-2P-1P-BP	(850-3/27 X GW-5/7) X (H-208 X Annigeri)	15	14	93.33
624.	-3P-1P-BP	"	5	3	60.00
625.	74527-3P-1P-BP	(G-130 X B-108) X (NP-34 X GW-5/7)	-	-	-
626.	-4P-1P-BP	"	16	10	62.50
627.	74528-8P-1P-BP	(850-3/27 X N-56) X (G-130 X Chafa)	9	9	100.00
628.	74531-2P-1P-BP	(850-3/27 X B-110) X (P-3172 X Chafa)	7	7	100.00
629.	74536-2P-1P-BP	(G-130 X P-5409) X (L-550 X BG-1)	-	-	-
630.	-6P-1P-BP	"	-	-	-
631.	74540-10H-1P-BP	F <sub>2</sub> (850-3/27 X T-3) X F <sub>2</sub> (JG-62 X BEG-482)	10	10	100.00
632.	-14H-1P-BP	"	9	9	100.00
633.	-17H-1P-BP	"	17	17	100.00
634.	-21H-1P-BP	"	17	2	11.76
635.	-22H-1P-BP	"	17	3	17.64
636.	-23H-1P-BP	"	15	11	73.33
637.	-25P-1P-BP	"	18	18	100.00
638.	-25P-2P-BP	"	19	19	100.00
639.	-27P-1P-BP	"	18	18	100.00
640.	74591-6P-1P-BP	(Radhey X 850-3/27) X (GW-5/7 X C-375)	15	15	100.00
641.	74593-3P-1P-3P	(850-3/27 X RS-11) X (L-550 X F-378)	2	2	100.00
642.	-5H-1P-BP	"	16	10	62.50
643.	-6P-1P-BP	"	17	17	100.00
644.	74597-9H-1P-BP	(850-3/27 X L-345) X (H-208 X BR-70)	12	12	100.00
645.	-10H-1P-BP	"	9	9	100.00
646.	74599-4P-1P-BP	(850-3/27 X RS-11) X (L-2 X BEG-482)	11	11	100.00
647.	74602-3P-1P-BP	(RS-11 X L-550) X (BR-70 X G-130)	15	15	100.00
648.	-4H-1P-BP	"	11	11	100.00
649.	-6P-1P-BP	"	14	14	100.00
650.	74604-3P-1P-BP	(850-3/27 X USA-613) X (JG-221 X BEG-482)	14	8	57.14
651.	74606-5P-1P-BP	(G-130 X JG-221) X (E-100 X H-355)	14	9	64.28
652.	74609-5H-1P-BP	(850-3/27 X C-235) X (B-110 X L-550)	13	13	100.00

contd.

1	2	3	4	5
653.	74609-7H-1P-BP (850-3/27 X C-235) X (B-110 X L-550)	16	16	100.00
654.	-8H-1P-BP "	9	9	100.00
655.	-9H-1P-BP "	10	10	100.00
656.	74160-3H-1P-BP (CP-66 X G-130) X (10-2-3 X Chafa)	17	17	100.00
657.	-3H-2P-BP "	18	18	100.00
658.	-8H-1P-BP "	17	17	100.00
659.	-11H-1P-BP "	15	15	100.00
660.	-13H-1P-BP "	18	18	100.00
661.	74613-1H-1P-BP (E-100 X P-436) X (H-355 X G-130)	6	6	100.00
662.	74614-9H-1P-BP (850-3/27 X BG-1) X (JG-62 X Chafa)	12	12	100.00
663.	74627-2P-1P-BP (F-378 X P-3090) X (Radhey X G-130)	8	8	100.00
664.	-2H-1P-BP "	2	2	100.00
665.	-7P-1P-BP "	10	10	100.00
666.	-8P-1P-BP "	6	6	100.00
667.	74638-3H-1P-BP F <sub>2</sub> (USA-613 X P-1137) X F <sub>2</sub> (G-130 X F-61)	6	6	100.00
668.	74644-1H-1P-BP (P-99 X G-130) X (Chafa X Rabat)	1	1	100.00
669.	74651-11P-1P-BP (Pant-102 X SP-405) X (Radhey X C-235)	4	4	100.00
670.	74660-5H-1P-BP (Annigeri X H-208) X (850-3/27 X C-235)	5	5	100.00
671.	-9H-1P-BP "	5	5	100.00
672.	-16P-1P-BP "	12	12	100.00
673.	74663-4P-1P-BP (JG-62 X C-235) X (850-3/27 X BG-1)	3	3	100.00
674.	74669-3P-1P-BP (L-550 X K-4) X (850-3/27 X H-208)	5	5	100.00
675.	-4P-1P-BP "	8	8	100.00
676.	74729-2P-1P-BP (H-355 X 850-3/27) X NEC-240	13	5	38.46
677.	74752-4H-1P-BP P-472 X (G-130 X K-4)	10	10	100.00
678.	74759-1P-1P-BP (Radhey X BEG-482) X F-61)	13	13	100.00
679.	74760-1P-1P-BP (JG-62 X P-99) X Radhey	6	6	100.00
680.	74763-10H-1P-BP 850-3/27 X (Radhey X No. 42)	11	11	100.00
681.	-12H-1P-BP "	6	6	100.00
682.	-15H-1P-BP "	13	13	100.00
683.	74807-2P-1P-BP (850-3/27 X C-235) X NEC-1077	-	-	-
684.	7570-3-1P-BP (G-130 X K-1189)	4	4	100.00
685.	-5-1P-BP "	5	2	40.00
686.	-5-2P-BP "	5	3	60.00
687.	-6-1P-BP "	8	8	100.00

contd.

1	2	3	4	5	
688.	7570-11-3P-BP	(G-130 X K-1189)	9	6	66.66
689.	-15-1P-BP	"	1	1	100.00
690.	-15-2P-BP	"	1	1	100.00
691.	-16-1P-BP	"	1	1	100.00
692.	-16-2P-BP	"	-	-	-
693.	-16-3P-BP	"	3	2	66.66
694.	-41-1P-BP	"	-	-	-
695.	-45-1P-BP	"	-	-	-
696.	-48-1P-BP	"	1	1	100.00
697.	-49-1P-BP	"	-	-	-
698.	-65-1P-BP	"	-	-	-
<u>Kabuli</u>					
699.	74434-2P-1P-1P	(P-1786 X L-550) X (T-3 X G-24)	1	1	100.00
700.	-2P-1P-2P	"	2	2	100.00
701.	-2P-1P-3P	"	-	-	-
702.	-2P-1P-4P	"	-	-	-
703.	-2P-2P-1P	"	-	-	-
704.	-2P-2P-2P	"	-	-	-
705.	-3P-1P-1P	"	2	2	100.00
706.	-3P-1P-2P	"	2	2	100.00
707.	-3P-1P-3P	"	-	-	-
708.	-3P-1P-4P	"	2	2	100.00
709.	-3P-1P-5P	"	1	1	100.00
710.	-11P-1P-1P	"	-	-	-
711.	-11P-1P-2P	"	2	2	100.00
712.	-11P-1P-3P	"	-	-	-
713.	-12P-1P-1P	"	-	-	-
714.	-12P-1P-2P	"	-	-	-
715.	74450-3P-1P-1P	P-9800 X (850-3/27 X JG-24)	3	1	33.33
716.	-3P-1P-2P	"	4	3	75.00
717.	-3P-1P-3P	"	3	2	66.66
718.	-3P-1P-4P	"	4	2	50.00
719.	74454-1H-1P-1P	(850-3/27 X JG-221) X L-550	-	-	-
720.	-1H-1P-2P	"	4	4	100.00
721.	-1H-1P-3P	"	-	-	-
722.	-3P-1P-1P	"	15	10	66.66
723.	-3P-1P-2P	"	4	3	75.00
724.	-3P-1P-3P	"	9	5	55.55
725.	-11H-1P-1P	"	2	1	50.00
726.	-11H-1P-2P	"	-	-	-
727.	74477-2P-1P-1P	(850-3/27 X H-355) X NEC-1572	6	2	33.33
728.	-2P-1P-2P	"	8	7	87.50
729.	-2P-1P-3P	"	3	2	66.66
730.	-2P-1P-4P	"	3	2	66.66

1	2	3	4	5	
653.	74609-7H-1P-BP	(850-3/27 X C-235) X (B-110 X L-550)	16	16	100.00
654.	-8H-1P-BP	"	9	9	100.00
655.	-9H-1P-BP	"	10	10	100.00
656.	74160-3H-1P-BP	(CP-66 X G-130) X (10-2-3 X Chafa)	17	17	100.00
657.	-3H-2P-BP	"	18	18	100.00
658.	-8H-1P-BP	"	17	17	100.00
659.	-11H-1P-BP	"	15	15	100.00
660.	-13H-1P-BP	"	18	18	100.00
661.	74613-1H-1P-BP	(E-100 X P-436) X (H-355 X G-130)	6	6	100.00
662.	74614-9H-1P-BP	(850-3/27 X BG-1) X (JG-62 X Chafa)	12	12	100.00
663.	74627-2P-1P-BP	(F-378 X P-3090) X (Radhey X G-130)	8	8	100.00
664.	-2H-1P-BP	"	2	2	100.00
665.	-7P-1P-BP	"	10	10	100.00
666.	-8P-1P-BP	"	6	6	100.00
667.	74638-3H-1P-BP	F <sub>2</sub> (USA-613 X P-1137) X F <sub>2</sub> (G-130 X F-61)	6	6	100.00
668.	74644-1H-1P-BP	(P-99 X G-130) X (Chafa X Rabat)	1	1	100.00
669.	74651-11P-1P-BP	(Pant-102 X SP-405) X (Radhey X C-235)	4	4	100.00
670.	74660-5H-1P-BP	(Annigeri X H-208) X (850-3/27 X C-235)	5	5	100.00
671.	-9H-1P-BP	"	5	5	100.00
672.	-16P-1P-BP	"	12	12	100.00
673.	74663-4P-1P-BP	(JG-62 X C-235) X (850-3/27 X BG-1)	3	3	100.00
674.	74669-3P-1P-BP	(L-550 X K-4) X (850-3/27 X H-208)	5	5	100.00
675.	-4P-1P-BP	"	8	8	100.00
676.	74729-2P-1P-BP	(H-355 X 850-3/27) X NEC-240	13	5	38.46
677.	74752-4H-1P-BP	P-472 X (G-130 X K-4)	10	10	100.00
678.	74759-1P-1P-BP	(Radhey X BEG-482) X F-61)	13	13	100.00
679.	74760-1P-1P-BP	(JG-62 X P-99) X Radhey	6	6	100.00
680.	74763-10H-1P-BP	850-3/27 X (Radhey X No. 42)	11	11	100.00
681.	-12H-1P-BP	"	6	6	100.00
682.	-15H-1P-BP	"	13	13	100.00
683.	74807-2P-1P-BP	(850-3/27 X C-235) X NEC-1077	-	-	-
684.	7570-3-1P-BP	(G-130 X K-1189)	4	4	100.00
685.	-5-1P-BP	"	5	2	40.00
686.	-5-2P-BP	"	5	3	60.00
687.	-6-1P-BP	"	8	8	100.00

contd.

1	2	3	4	5
688.	7570-11-3P-BP (G-130 X K-1189)	9	6	66.66
689.	-15-1P-BP "	1	1	100.00
690.	-15-2P-BP "	1	1	100.00
691.	-16-1P-BP "	1	1	100.00
692.	-16-2P-BP "	-	-	-
693.	-16-3P-BP "	3	2	66.66
694.	-41-1P-BP "	-	-	-
695.	-45-1P-BP "	-	-	-
696.	-48-1P-BP "	1	1	100.00
697.	-49-1P-BP "	-	-	-
698.	-65-1P-BP "	-	-	-
<u>Kabuli</u>				
699.	74434-2P-1P-1P (P-1786 X L-550) X (T-3 X G-24)	1	1	100.00
700.	-2P-1P-2P "	2	2	100.00
701.	-2P-1P-3P "	-	-	-
702.	-2P-1P-4P "	-	-	-
703.	-2P-2P-1P "	-	-	-
704.	-2P-2P-2P "	-	-	-
705.	-3P-1P-1P "	2	2	100.00
706.	-3P-1P-2P "	2	2	100.00
707.	-3P-1P-3P "	-	-	-
708.	-3P-1P-4P "	2	2	100.00
709.	-3P-1P-5P "	1	1	100.00
710.	-11P-1P-1P "	-	-	-
711.	-11P-1P-2P "	2	2	100.00
712.	-11P-1P-3P "	-	-	-
713.	-12P-1P-1P "	-	-	-
714.	-12P-1P-2P "	-	-	-
715.	74450-3P-1P-1P P-9800 X (850-3/27 X JG-24)	3	1	33.33
716.	-3P-1P-2P "	4	3	75.00
717.	-3P-1P-3P "	3	2	66.66
718.	-3P-1P-4P "	4	2	50.00
719.	74454-1H-1P-1P (850-3/27 X JG-221) X L-550	-	-	-
720.	-1H-1P-2P "	4	4	100.00
721.	-1H-1P-3P "	-	-	-
722.	-3P-1P-1P "	15	10	66.66
723.	-3P-1P-2P "	4	3	75.00
724.	-3P-1P-3P "	9	5	55.55
725.	-11H-1P-1P "	2	1	50.00
726.	-11H-1P-2P "	-	-	-
727.	74477-2P-1P-1P (850-3/27 X H-355) X NEC-1572	6	2	33.33
728.	-2P-1P-2P "	8	7	87.50
729.	-2P-1P-3P "	3	2	66.66
730.	-2P-1P-4P "	3	2	66.66

1	2	3	4	5	
731.	74477-2P-1P-5P	(850-3/27 X H-355) X NEC-1572	2	1	50.00
732.	74536-1P-1P-1P	(G-130 X P-5409) X (L-550 X BG-1)	2	2	100.00
733.	-1P-1P-2P	"	7	7	100.00
734.	-1P-1P-3P	"	7	7	100.00
735.	-4P-1P-3P	"	4	4	100.00
736.	-4P-1P-4P	"	1	1	100.00
737.	-4P-1P-5P	"	1	1	100.00
738.	-4P-1P-6P	"	4	4	100.00
739.	-4P-1P-7P	"	3	3	100.00
740.	-4P-1P-8P	"	2	2	100.00
741.	-6P-1P-4P	"	6	6	100.00
742.	-6P-1P-5P	"	7	7	100.00
743.	-6P-1P-6P	"	2	2	100.00
744.	-6P-2P-1P	"	2	2	100.00
745.	-6P-2P-2P	"	2	2	100.00
746.	-6P-2P-3P	"	-	-	-
747.	7570-11P-1P-1P	G-130 X K-1189)	1	1	100.00
748.	-11P-1P-2P	"	4	4	100.00

Bulks

749.	74434-2P-1P-BP	(P-1786 X L-550) X (T-3 X G-24)	-	-	-
750.	-3P-1P-BP	"	4	4	100.00
751.	74450-3P-1P-BP	(P-9800 X (850-3/27X JG-24)	1	0	0.00
752.	74477-2P-1P-BP	(850-3/27 X H-355) X NEC-1572	2	1	50.00

F 6

1.	7336-B-1H-1H-1P	(H-208 X No. 40)	4	4	100.00
2.	-2P-LB-BH-1P	"	8	8	100.00
3.	-2P	"	6	6	100.00
4.	-3P	"	10	10	100.00
5.	73137-B-2H-1H-1P	(JG-62 X Pant-110)	4	4	100.00
6.	-2P	"	11	11	100.00
7.	73186-B-1H-BH-1P	(G-130 X B-108)	5	5	100.00
8.	-2P	"	12	12	100.00
9.	-3H-BH-1P	"	6	6	100.00
10.	-2P	"	12	12	100.00
11.	73216-B-5H-BH-1P	(No. 42 X Pant-104)	7	7	100.00
12.	-2P	"	13	13	100.00
13.	73410-B-4H-BH-1P	(Pb-7 X P-5408)	8	8	100.00
14.	-2P	(P-2974 X G-130)	14	14	100.00
15.	7417-B-1P-1P-1P	"	11	11	100.00
16.	-2P	"	16	16	100.00

contd.

17.	7428-B-8P-2P-1P	(P-2003 X P-3090)	1	1	100.00
18.	-2P	"	5	5	100.00
19.	7433-B-2H-BH-1P	(L-Local X H-355)	10	10	100.00
20.	7445-B-2H-1H-1P	(T-3 X L-550) X (C-156 X F-404)	6	6	100.00
21.	-2P	"	5	5	100.00
22.	-3H-1H-1P	"	3	3	100.00
23.	7446-B-4H-BH-1P	(H-355 X L-550) X (JG-62 X G-543)	3	3	100.00
24.	2P	"	4	4	100.00
25.	7451-1-1H-BH-1P	(CP-66 X F-404) X (C-235 X 850-3/27)	1	1	100.00
26.	-2P	"	1	1	100.00
27.	-3P	"	2	2	100.00
28.	7453-B-4P-1H-1P	(H-208 X BG-1) X (JG-62 X Ceylon-2)	5	5	100.00
29.	-2P	"	3	3	100.00
30.	7457-B-6H-BH-1P	(Radhey X L-550) X (E-100 X NP-34)	5	5	100.00
31.	-B-8H-BH-1P	"	5	5	100.00
32.	-2P	"	10	10	100.00
33.	7461-BH-4-1P-1P	(850-3/27 X K-468) X (Chafa X K-4)	6	6	100.00
34.	-2P	"	4	4	100.00
35.	-B-11H-BH-1P	"	7	7	100.00
36.	7466-BH-1-1P-1P	RS-11 X (GW-5/7 X L-550)	7	7	100.00
37.	-2P	"	10	10	100.00
38.	-B-3P-1P-1P	"	10	10	100.00
39.	-2P	"	10	10	100.00
40.	-B-3P-1P-3P	"	13	13	100.00
41.	-1-1H-BH-1P	"	1	1	100.00
42.	-4-1P-1P-1P	"	2	2	100.00
43.	-2P	"	7	7	100.00
44.	-5-2H-1H-1P	"	4	4	100.00
45.	-2P	"	3	3	100.00
46.	7469-1-1H-1H-1P	BG-1 X (H-355 X L-550)	1	1	100.00
47.	-2P	"	2	2	100.00
48.	-3P	"	2	2	100.00
49.	-4P	"	1	1	100.00
50.	-1-2H-1H-1P	"	1	1	100.00
51.	-2P	"	3	3	100.00
52.	-1-1H-2H-1P	"	3	2	66.66
53.	-2P	"	1	1	100.00
54.	-2-2H-1P-1P	"	-		
55.	-3-1P-1P-1P	"	1		100.00
					<u>100.00</u>
					contd.



1	2	3	4	5	
56.	7469-3-1P-1P-2P	BG-1 X (H-355 X L-550)	-	-	-
57.	-11-1P-1H-1P	"	1	1	100.00
58.	-2P	"	2	2	100.00
59.	-2H-1P	"	-	-	-
60.	-2P	"	-	-	-
61.	-3P	"	1	1	100.00
62.	-12-1P-BH-1P	"	-	-	-
63.	-2P	"	1	1	100.00
64.	-3P	"	3	3	100.00
65.	-4P	"	2	2	100.00
66.	-2P-1P-1P	"	2	2	100.00
67.	-2P	"	1	1	100.00
68.	-3P-BH-1P	"	5	5	100.00
69.	-2P	"	1	1	100.00
70.	7472-BH-6-1P-1P	(P-272 X (F-61 X L-550)	5	5	100.00
71.	-2P	"	4	4	100.00
72.	-2P-1P	"	4	4	100.00
73.	-2P	"	3	3	100.00
74.	-BH-11-1P-1P	"	5	5	100.00
75.	7473-BH-1-1P-1P	GW-5/7 X (F-404 X L-550)	4	4	100.00
76.	7473-BH-1-1P-2P	"	4	4	100.00
77.	7475-BH-4-1P-1P	(T-3 X (No.56 X H-208)	-	-	-
78.	-2P	"	2	2	100.00
79.	7478-B-1H-BH-1P	850-3/27 X (G-130 X JG-62)	-	-	-
80.	-2P	"	2	1	50.00
81.	7481-B-1H-BH-1P	F-61 X (G-543 X 850-3/27	3	3	100.00
82.	-2P	"	11	5	45.45
83.	-6-3P-BH-1P	"	4	4	100.00
84.	-2P	"	1	1	100.00
85.	7486-B-2P-1P-1P	(C-156 X 850-3/27 X F-378	-	-	-
86.	-2P	"	2	2	100.00
87.	7499-B-7H-BH-1P	(P-3111 X G-130)	3	3	100.00
88.	-2P	"	9	9	100.00
89.	74100-B-3H-1H-1P	(P-3111 X H-208)	4	4	100.00
90.	-2P	"	10	10	100.00
91.	74103-B-2H-1H-1P	(P-502 X BG-1)	8	8	100.00
92.	-2P	"	10	10	100.00
93.	-3P	"	6	6	100.00
94.	74105-BH-3-1P-1P	(P-502 X H-208)	9	9	100.00
95.	-2P	"	8	8	100.00
96.	-B-8H-1H-1P	"	7	7	100.00
97.	-2P	"	12	12	100.00
98.	-3P	"	14	14	100.00
99.	74109-B-2H-BH-1P	(P-436 X G-130)	13	13	100.00
100.	-2P	"	11	11	100.00

contd.

1	2	3	4	5
101.	74109-B-2H-BH-3P (P-436 X G-130)	11	11	100.00
102.	-B-7H-1H-1P "	10	10	100.00
103.	-2P "	10	10	100.00
104.	-8H-1H-1P "	13	13	100.00
105.	-2P "	6	6	100.00
106.	74113-B-2H-1H-1P (P-505 X BG-1)	13	13	100.00
107.	-2P "	9	9	100.00
108.	-3P "	12	9	75.00
109.	-B-3H-BH-1P "	10	10	100.00
110.	-2P "	11	11	100.00
111.	74126-B-1H-BH-1P (P-99 X F-378)	13	13	100.00
112.	-2P-BH-1P "	15	15	100.00
113.	-2P "	12	12	100.00
114.	-2H-1H-1P "	6	6	100.00
115.	-2P "	6	6	100.00
116.	-3P "	10	10	100.00
117.	-3P-1P-1P "	7	7	100.00
118.	74129-B-1H-BH-1P (P-99 X G-130)	13	13	100.00
119.	-2P "	11	11	100.00
120.	-5P-BH-1P "	8	2	25.00
121.	-2P "	13	13	100.00
122.	-3P "	12	12	100.00
123.	74130-B-3P-1H-1P (P-99 X H-208)	14	14	100.00
124.	-2P "	6	6	100.00
125.	-3P "	15	15	100.00
126.	74132-B-1H-1H-1P (G-130 X BG-1)	17	17	100.00
127.	-2P "	17	17	100.00
128.	-B-4H-1H-1P "	13	2	15.38
129.	-2P "	10	10	100.00
130.	-3P "	16	16	100.00
131.	74135-B-1H-BH-1P (G-130 X GW-5/7)	14	14	100.00
132.	74137-B-8H-1H-1P (G-130 X CP-66)	12	12	100.00
133.	-11H-1H-1P "	18	18	100.00
134.	-2P "	16	16	100.00
135.	74138-B-1H-1H-1P (G-130 X Pant-104)	15	15	100.00
136.	-2P "	19	19	100.00
137.	74140-B-1H-BH-1P (G-130 X Radhey)	16	16	100.00
138.	-2P "	18	18	100.00
139.	-3P "	14	14	100.00
140.	74141-B-2P-1H-1P (G-130 X JG-221)	16	16	100.00
141.	74142-B-1H-1H-1P (C-235 X F-378)	19	19	100.00
142.	-2P "	16	16	100.00
143.	-2H-1H-1P "	9	9	100.00
144.	-2P "	16	16	100.00
145.	-3H-BH-1P "	17	17	100.00

contd.

1	2	3	4	5
146.	74142-B-4H-1H-1P (C-235 X F-378)	16	16	100.00
147.	-2P "	17	17	100.00
148.	-5H-BH-1P "	20	20	100.00
149.	-2P "	18	18	100.00
150.	-3P "	19	19	100.00
151.	-7H-1H-1P "	22	22	100.00
152.	-2P "	19	19	100.00
153.	-1H-1H-1P "	16	16	100.00
154.	-2P "	18	18	100.00
155.	74144-B-2H-BH-1P (C-235 X BG-1)	16	16	100.00
156.	-5H-1H-1P "	13	13	100.00
157.	-2P "	14	14	100.00
158.	-3P "	13	13	100.00
159.	-6H-1H-1P "	19	19	100.00
160.	-8H-1H-1P "	19	19	100.00
161.	-2P "	16	16	100.00
162.	-3P "	17	17	100.00
163.	-9H-1H-1P "	15	15	100.00
164.	74145-B-1H-1H-1P (C-235 X T-3)	14	14	100.00
165.	-2P "	13	13	100.00
166.	-2P-BH-1P "	14	14	100.00
167.	-2P "	12	12	100.00
168.	-3P "	15	15	100.00
169.	-4P "	2	2	100.00
170.	-2H-BH-1P "	8	8	100.00
171.	-2P "	5	5	100.00
172.	-3H-BH-1P "	5	5	100.00
173.	-2P "	3	3	100.00
174.	-5H-BH-1P "	7	7	100.00
175.	-2P "	9	9	100.00
176.	74146-B-1H-1P-1P (C-235 X B-108)	9	9	100.00
177.	-2H-1P-1P "	5	5	100.00
178.	-2P-1P "	2	2	100.00
179.	-3H-1H-1P "	2	2	100.00
180.	-2P "	6	6	100.00
181.	74148-B-1P-1H-1P (C-235 x JG-62)	8	8	100.00
182.	-2P "	4	4	100.00
183.	-1H-1H-1P "	-	-	-
184.	-5H-BH-1P "	3	2	66.66
185.	-2P "	4	2	50.00
186.	-3P "	4	2	50.00
187.	-4P "	9	9	100.00
188.	74156-B-1H-1H-1P (C-235 X JG-221)	4	4	100.00
189.	-2H-1P-1P "	6	6	100.00
190.	-2P "	5	5	100.00

contd.

1	2	3	4	5
191.	74156-B-3P-1H-1P (C-235 X JG-221)	3	2	66.66
192.	-2P "	4	2	50.00
193.	-3P "	4	2	50.00
194.	-5H-1H-1P "	5	2	40.00
195.	-2P "	9	4	44.44
196.	-2-1P-BH-1P "	10	10	100.00
197.	-3-2P-1H-1P "	1	1	100.00
198.	74157-B-2H-1H-1P (C-235 X USA-613)	5	5	100.00
199.	74159-B-2P-1H-1P (BEG-482 X H-355)	4	4	100.00
200.	74161-B-2P-BH-1P (BEG-482 X T-3)	4	4	100.00
201.	74169-B-1H-1H-1P (BEG-482 X P-66)	13	8	61.53
202.	-2P "	3	3	100.00
203.	-2P-1H-1P "	8	8	100.00
204.	-2P "	3	3	100.00
205.	-3P-BH-1P "	1	1	100.00
206.	-3H-3H-1P "	4	4	100.00
207.	-2P "	4	2	50.00
208.	74170-B-1H-BH-1P (BEG-482 X Pant-104)	4	4	100.00
209.	-2P "	5	4	80.00
210.	-2P-BH-1P "	10	5	50.00
211.	-2P "	-	-	-
212.	-3P "	4	2	50.00
213.	-2H-BH-1P "	7	5	71.42
214.	-2P "	9	6	66.66
215.	-4P-BH-1P "	10	10	100.00
216.	-2P "	9	9	100.00
217.	-3P "	8	7	87.50
218.	-5P-BH-1P "	7	4	57.14
219.	-2P "	2	2	100.00
220.	-3P "	4	4	100.00
221.	74171-B-3H-BH-1P (BEG-482 X E-100)	4	2	50.00
222.	-2P "	1	1	100.00
223.	74172-B-1P-1P-1P (BEG-482 X Radhey)	2	2	100.00
224.	-2P "	8	8	100.00
225.	74175-B-1H-BH-1P (RS-11 X C-235)	8	8	100.00
226.	-3H-1H-1P "	9	6	66.66
227.	-2P "	3	1	33.33
228.	-4H-BH-1P "	6	5	83.33
229.	-2P "	1	1	100.00
230.	-5H-BH-1P "	3	3	100.00
231.	-2P "	8	8	100.00
232.	-3P "	6	6	100.00
233.	-7H-BH-1P "	1	1	100.00
234.	-2P "	3	2	66.66
235.	-3P "	-	-	-

1	2	3	4	5
236.	74176-B-2H-BH-1P (RS-11 X Pb-7)	-	-	-
237.	-2P "	3	1	33.33
238.	73190-B-2P-1P-1P (F-378 X Chafa)	3	0	0.00
239.	-2P "	6	6	100.00
240.	-3P "	7	2	28.57
241.	74191-B-2H-BH-1P (F-61 X BG-1)	1	1	100.00
242.	-2P "	1	0	0.00
243.	-4H-1H-1P "	9	9	100.00
244.	-2P "	4	2	50.00
245.	-3P "	5	5	100.00
246.	74192-B-1H-BH-1P (F-61 X T-3)	1	1	100.00
247.	-2P "	3	3	100.00
248.	74193-B-1P-1H-1P (F-61 X K-468)	6	6	100.00
249.	-2P "	5	5	100.00
250.	-3P "	8	8	100.00
251.	-1H-BH-1P "	5	5	100.00
252.	-2P "	10	10	100.00
253.	74193-B-3H-BH-1P (F-61 X K-468)	5	5	100.00
254.	-2P "	2	2	100.00
255.	-4H-1P-1P "	3	3	100.00
256.	-2P "	3	3	100.00
257.	-8H-BH-1P "	4	4	100.00
258.	-2P "	7	7	100.00
259.	-9H-BH-1P "	4	4	100.00
260.	-2P "	3	3	100.00
261.	-10H-BH-1P "	6	6	100.00
262.	-2P "	6	6	100.00
263.	-3P "	5	5	100.00
264.	-5-1P-BH-1P "	4	4	100.00
265.	-2P "	3	3	100.00
266.	-3P "	2	2	100.00
267.	-4P "	5	5	100.00
268.	-8-1P-BH-1P "	3	3	100.00
269.	-2P "	4	4	100.00
270.	-3P "	4	4	100.00
271.	-4P "	4	4	100.00
272.	-10-2P-1H-1P "	5	5	100.00
273.	-12-1H-BH-1P "	8	8	100.00
274.	-2P "	3	3	100.00
275.	74194-B-1P-BH-1P (L-345 X K-468)	7	7	100.00
276.	-2P "	12	10	83.33
277.	-3P "	-	-	-
278.	-4P "	6	6	100.00
279.	74203-B-1H-1P-1P (Pant-102 X N-59)	4	4	100.00
280.	-2P "	-	-	-

contd.

1	2	3	4	5
281.	74203-B-2P-BH-1P (Pant-102 X N-59)	5	5	100.00
282.	-2P "	7	7	100.00
283.	-3P "	2	2	100.00
284.	-3P-1H-1P "	1	1	100.00
285.	-2P "	5	5	100.00
286.	74204-B-1P-BH-1P (Pant-102 X SP-405)	1	1	100.00
287.	-2P "	3	3	100.00
288.	-3P "	2	1	50.00
289.	74209-B-1H-BH-1P (BEG-482 X F-496)	4	1	25.00
290.	-2P "	6	4	66.66
291.	74213-B-3P-BH-1P (E-100 X F-378)	1	1	100.00
292.	74216-B-1H-1H-1P (10-2-3 X B-108)	4	4	100.00
293.	-2P "	4	4	100.00
294.	-3P "	4	4	100.00
295.	-2H-BH-1P "	6	6	100.00
296.	-2P "	6	5	83.33
297.	-3P "	11	11	100.00
298.	-3H-1H-1P "	9	6	66.66
299.	-5H-BH-1P "	4	4	100.00
300.	74216-B-5H-BH-2P "	3	3	100.00
301.	-3P "	6	6	100.00
302.	-4P "	4	4	100.00
303.	-6H-BH-1P "	4	4	100.00
304.	-2P "	7	7	100.00
305.	74223-B-2H-1P-1P (No. 42 X H-223)	3	3	100.00
306.	-2P "	2	2	100.00
307.	-4H-1P-1P "	5	3	60.00
308.	-2P "	4	2	50.00
309.	74224-B-1H-BH-1P (No. 42 X P-66)	1	1	100.00
310.	-2H-1P-1P "	1	1	100.00
311.	-2P "	1	0	0.00
312.	74233-B-1P-1H-1P (K-4 X P-9791)	12	12	100.00
313.	-2P "	4	4	100.00
314.	74235-B-2P-1P-1P (GW-5/7 X C-375)	-	-	-
315.	74243-1-2H-1P-1P (H-208 X P-4804)	3	3	100.00
316.	-2P "	-	-	-
317.	74249-7-3P-1P-1P (No. 42 X P-502)	8	8	100.00
318.	-2P "	5	5	100.00
319.	-2P-1P "	1	1	100.00
320.	74255-B-1H-BH-1P (850-3/27 X GW-5/7) X (JG-62 X No. 56)	4	4	100.00
321.	-3H-BH-1P "	4	4	100.00
322.	-2P "	4	4	100.00
323.	74256-B-1H-BH-1P (H-208 X CP-66) X (H-208 X F-496)	7	6	85.71

contd.

1	2	3	4	5	
324.	74256-B-1H-BH-2P	(H-208 X CP-66) X (H-208 X F-496)	6	5	83.33
325.	-2H-1H-1P	"	-	-	-
326.	-2P	"	6	5	83.33
327.	-3H-BH-1P	"	6	6	100.00
328.	-2P	"	6	6	100.00
329.	-3P	"	10	10	100.00
330.	-4H-BH-1P	"	10	10	100.00
331.	-2P	"	1	0	0.00
332.	-5H-BH-1P	"	3	3	100.00
333.	-2P	"	11	11	100.00
334.	-7H-BH-1P	"	8	8	100.00
335.	-2P	"	-	-	-
336.	-8H-BH-1P	"	5	5	100.00
337.	-2P	"	14	14	100.00
338.	-3P	"	14	14	100.00
339.	-9H-BH-1P	"	11	11	100.00
340.	-2P	"	15	15	100.00
341.	-10-H-BH-1P	"	17	17	100.00
342.	-2P	"	19	19	100.00
343.	-3P	"	17	17	100.00
344.	-13H-BH-1P	"	14	14	100.00
345.	-2P	"	17	17	100.00
346.	-3P	"	17	17	100.00
347.	-14H-BH-1P	"	16	16	100.00
348.	-2P	"	18	18	100.00
349.	-3P	"	15	15	100.00
350.	74257-3-4P-1H-1P	(JG-62 X (H-208 X T-3)	14	14	100.00
351.	-2P	"	15	15	100.00
352.	-3P	"	11	11	100.00
353.	-4P	"	18	18	100.00
354.	-5-1P-1H-1P	"	19	19	100.00
355.	-2P	"	18	18	100.00
356.	74258-B-2H-BH-1P	850-3/27 X (H-208 X B-108)	20	20	100.00
257.	-2P	"	14	14	100.00
258.	-3P	"	11	11	100.00
359.	-3H-BH-1P	"	12	12	100.00
360.	-2P	"	15	15	100.00
361.	-4H-BH-1P	"	15	15	100.00
362.	-2P	"	15	15	100.00
363.	-3P	"	16	16	100.00
364.	-5H-1H-1P	"	18	18	100.00
365.	-2P	"	17	17	100.00

contd.

1	2	3	4	5	
366.	74258-B-5H-1H-3P	850-3/27 X (H-208 X B-108)	18	18	100.00
367.	-4P	"	17	17	100.00
368.	-6H-BH-1P	"	20	20	100.00
369.	-2P	"	20	20	100.00
370.	-7H-BH-1P	"	16	16	100.00
371.	-2P	"	19	19	100.00
372.	-3P	"	15	15	100.00
373.	-8H-BH-1P	"	15	15	100.00
374.	-2P	"	17	17	100.00
375.	73259-B-1H-BH-1P	(P-1786 X C-214)	16	16	100.00
376.	-2P	"	14	14	100.00
377.	74261-B-1H-1H-1P	P-387 X (H-208 X F-378)	9	9	100.00
378.	-2P	"	14	14	100.00
379.	-2H-BH-1P	"	16	16	100.00
380.	-2P	"	7	7	100.00
381.	-3P	"	9	9	100.00
382.	-4P	"	13	13	100.00
383.	-4H-BH-1P	"	15	15	100.00
384.	-6H-BH-1P	"	15	15	100.00
385.	-2P	"	19	19	100.00
386.	-3P	"	14	14	100.00
387.	-7H-BH-1P	"	15	15	100.00
388.	-2P	"	18	18	100.00
389.	-3P	"	15	15	100.00
390.	74263-B-6H-2H-1P	P-505 X (H-208 X F-370)	19	12	63.15
391.	-2P	"	16	16	100.00
392.	-9H-BH-1P	"	17	17	100.00
393.	-2P	"	15	15	100.00
394.	-10H-BH-1P	"	13	13	100.00
395.	-2P	"	18	18	100.00
396.	-3P	"	14	14	100.00
397.	74264-2-1H-BH-1P	K-4 X (L-550 X H-355)	13	13	100.00
398.	-3-2P-1P-1P	"	19	19	100.00
399.	-2P	"	14	14	100.00
400.	-2P-1H-1P	"	6	6	100.00
401.	-2P	"	8	8	100.00
402.	-3P	"	4	4	100.00
403.	-4P	"	6	6	100.00
404.	-5P	"	9	9	100.00
405.	-11-1P-1P-1P	"	-	-	-
406.	-2P	"	1	1	100.00
407.	74268-B-8H-BH-1P	K-4 X (850-3/27 X BG-1)	1	1	100.00
408.	-2P	"	10	10	100.00
409.	74269-12-1H-1H-1P	H-208 X (850-3/27 X C-214)	1	1	100.00
410.	-2P	"	5	5	100.00

contd.



1	2	3	4	5	
411.	74269-12-1H-2H-1P	H-208 X (850-3/27 X C-214)	2	2	100.00
412.	74273-B-1H-BH-1P	P+82 X (850-3/27 X H-223)	7	7	100.00
413.	-2P	"	2	2	100.00
414.	-3P	"	3	3	100.00
415.	-3H-1H-1P	"	5	5	100.00
416.	-2P	"	3	1	33.33
417.	-3P	"	5	3	60.00
418.	-7H-BH-1P	"	2	2	100.00
419.	-2P	"	5	5	100.00
420.	-8H-1P-1P	"	1	1	100.00
421.	-2P	"	5	5	100.00
422.	-9P-1P-1P	"	2	2	100.00
423.	-2P	"	3	3	100.00
424.	74274-B-1P-1P-1P	JG-62 X (850-3/27 X Chafa)	-	-	-
425.	-2P	"	2	2	100.00
426.	-3P	"	5	5	100.00
427.	74276-B-3H-1H-1P	JG-62 X (850-3/27 X H-208)	2	2	100.00
428.	-9P-1P-1P	"	-	-	-
429.	-2P	"	-	-	-
430.	74278-BH-2P-1P-1P	P-1387 X (850-3/27 X N-59)	1	1	100.00
431.	-2P	"	5	5	100.00
432.	-B-3P-1P-1P	"	-	-	-
433.	74281-B-3H-1H-1P	(JG-62 X 850-3/27 X Hima)	1	1	100.00
434.	74286-B-2P-1H-1P	(P-4027 X (850-3/27 X No. 56)	4	4	100.00
435.	-2P	"	1	1	100.00
436.	-3P	"	-	-	-
437.	-4H-1H-1P	"	5	5	100.00
438.	-2P	"	1	1	100.00
439.	-13H-BH-1P	"	6	6	100.00
440.	-2P	"	-	-	-
441.	74289-B-2H-1H-1P	(C-235 X (JG-62 X T-3)	2	2	100.00
442.	-2P	"	1	1	100.00
443.	74290-BH-1-1P-1P	CP-271 X (JG-62 X Chafa)	-	-	-
444.	-B-9P-1H-1P	"	1	1	100.00
445.	-2P	"	3	3	100.00
446.	-3P	"	3	3	100.00
447.	-4P	"	2	2	100.00
448.	-5P	"	-	-	-
449.	74298-6-2P-1H-1P	C-104 X (JG-62 X B-110)	2	2	100.00
450.	-2P	"	-	-	-

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1	2	3	4	5	
451.	74298-B-1P-1P-1P	C-104 X (JG-62 X B-110)	3	3	100.00
452.	-2P	"	-	-	-
453.	74301-B-1P-1P-1P	P-82 X (JG-62 X BG-1)	3	3	100.00
454.	-2P	"	2	2	100.00
455.	-1H-1H-1P	"	3	3	100.00
456.	-2P	"	3	3	100.00
457.	-3P	"	1	1	100.00
458.	-2H-BH-1P	"	2	2	100.00
459.	-2P	"	3	3	100.00
460.	-3P	"	2	2	100.00
461.	-3H-BH-1P	"	4	4	100.00
462.	-2P	"	2	2	100.00
463.	74304-B-7P-1H-1P	P-1022 X (JG-62 X Chafa)	2	2	100.00
464.	74311-B-10H-BH-1P	G-543 X (Ceylon-2 X CP-66)	2	2	100.00
465.	-2P	"	3	3	100.00
466.	-3P	"	2	2	100.00
467.	-18H-BH-1P	"	1	1	100.00
468.	-2P	"	2	2	100.00
469.	-3P	"	2	2	100.00
470.	74314-B-8H-1H-1P	E-100 X (JG-62 X C-235)	1	1	100.00
471.	-2P	"	3	3	100.00
472.	-2H-1P	"	1	1	100.00
473.	-2P	"	6	6	100.00
474.	74315-B-1P-1P-1P	C-4 X (Rabat X F-378)	2	2	100.00
475.	-2P	"	4	4	100.00
476.	74317-B-1H-BH-1P	(Radhey X (JG-62 X K-468)	6	6	100.00
477.	-2P	"	7	7	100.00
478.	-3P	"	8	8	100.00
479.	-3P-1H-1P	"	8	8	100.00
480.	-2P	"	4	4	100.00
481.	-7H-1H-1P	Radhey X (JG-62 X K-468)	11	11	100.00
482.	-2P	"	10	10	100.00
483.	74320-B-5P-1P-1P	(L-550 X (JG-62 X F-496)	5	5	100.00
484.	-2P	"	2	2	100.00
485.	-5H-1H-1P	"	4	4	100.00
486.	-2P	"	2	2	100.00
487.	-BH-11-1P-1P	"	15	15	100.00
488.	-2P	"	4	4	100.00
489.	74324-B-2P-1P-1P	(JG-62 X F-378) X L-550	6	6	100.00
490.	-2P	"	1	1	100.00
491.	-5H-BH-1P	"	5	5	100.00
492.	-2P	"	9	9	100.00
493.	-6H-BH-1P	"	12	12	100.00
494.	-2P	"	10	10	100.00
495.	-9H-1P-1P	"	1	1	100.00

contd.

1	2	3	4	5
496.	74324-B-9H-1P-2P (JG-62 X F-378) X L-550	-	-	-
497.	-BH-1P	"	3	100.00
498.	-2P	"	1	100.00
499.	-13H-1P-1P	"	4	100.00
500.	-2P	"	4	100.00
501.	-BH-1P	"	9	100.00
502.	-2P	"	13	100.00
503.	-3P	"	14	100.00
504.	73377-B-1P-1P-1P (GW-5/7 X No. 42)	8	8	100.00
505.	-2P	"	16	100.00
506.	74380-B-2H-BH-1P F <sub>2</sub> (850-3/27 X H-355) X F <sub>2</sub> (JG-62 X BR-70)	5	5	100.00
507.	-2P	"	2	100.00
508.	73385-B-2P-1P-1P (F-378 X P-3090)	13	13	100.00
509.	-5-1P-1P-1P	"	14	100.00
510.	-2P	"	15	100.00
511.	-2P-1P-1P	"	18	100.00
512.	-2P	"	12	100.00
513.	73392-BH-4-1P-1P (BR-70 X G-130)	8	8	100.00
514.	-2P	"	10	100.00
515.	73148-2-1P-1H-1P (P-502 X F-378)	13	13	100.00
516.	-2P	"	4	100.00
517.	74589-5P-LB-BH-1P (T-3 X G-543) X (850-3/27 X B-108)	3	3	100.00
518.	-2P	"	3	100.00
519.	-3P	"	1	100.00
520.	54597-1P-LB-1H-1P (850-3/27 X L-345) X (H-208 X BR-70)	2	2	100.00
521.	-2P	"	6	100.00
522.	74601-1P-LB-BH-1P (T-3 X C-235) X (10-2-3 X B-108)	4	4	100.00
523.	-2P	"	7	100.00
524.	74611-3P-LB-BH-1P (F-378 X E-100) X (10-2-3 X B-108)	5	5	100.00
525.	-2P	"	8	100.00
526.	-6P-LB-BH-1P	"	4	100.00
527.	-2P	"	3	100.00
528.	-8P-LB-BH-1P	"	6	100.00
529.	-2P	"	8	100.00
530.	-3P	"	8	100.00
531.	74620-1P-LB-1P-1P (P-6308 X F-240) X (No. 42 X GW-5/7)	5	4	80.00
532.	-2P	"	7	57.14
533.	-LB-2P-1P	"	5	60.00
534.	-2P	"	7	57.14
535.	-2P-LB-BH-1P	"	10	100.00

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1	2	3	4	5	
536.	74621-2P-LB-1H-1P	(JG-62 X BEG-482) X (K-468 X F-61)	4	4	100.00
537.	74632-1P-LB-BH-1P	(H-355 X BEG-482) X (JG-62 X P-1387)	4	3	75.00
538.	-2P	"	5	1	20.00
539.	74647-15P-LB-1P-1P	(GW-5/7 X F-370) X (USA-613 X BEG-482)	8	8	100.00
540.	-2P	"	9	9	100.00
541.	-3P	"	5	5	100.00
542.	-26P-LB-1H-1P	"	4	4	100.00
543.	-2P	"	8	8	100.00
544.	74649-10P-LB-BH-1P	(P-505 X F-378) X (B-108 X C-235)	2	2	100.00
545.	-2P	"	-	-	-
546.	74660-B-3P-1H-1P	(Annigeri X H-208) X (850-3/27 X C-235)	3	3	100.00
547.	-2P	"	-	-	-
548.	-3P	"	3	3	100.00
549.	-4P	"	2	2	100.00
550.	74685-5P-LB-1P-1P	(P-436 X (P-1307 X F-378)	5	5	100.00
551.	-2P	"	7	7	100.00
552.	74686-3H-LB-BH-1P	P-272 X (GW-5/7 X BEG-482)	5	5	100.00
553.	-8P-LB-1P-1P	"	4	4	100.00
554.	74687-1P-LB-BH-1P	(P-1242 X F-378 X GW-5/7)	13	13	100.00
555.	-2P	"	11	11	100.00
556.	-2P-LB-1P-1P	"	5	5	100.00
557.	-2P	"	7	7	100.00
558.	-3P	"	5	5	100.00
559.	74692-4P-LB-1H-1P	K-468 X (BG-1 X F-61)	2	2	100.00
560.	74693-1P-LB-1P-1P	(P-2252 X F-378 X GW-5/7)	10	10	100.00
561.	-2P	"	10	10	100.00
562.	74697-1P-LB-1H-1P	(C-214 X BG-1 X P-99)	8	6	75.00
563.	-2P	"	6	3	50.00
564.	74710-9P-LB-1P-1P	P-314 X (JG-62 X C-156)	7	7	100.00
565.	-2P	"	8	8	100.00
566.	74721-7P-LB-1P-1P	NEC-759 X (GW-5/7 X Annigeri)	2	2	100.00
567.	74747-1P-LB-1P-1P	(P-10 X BEG-482 X BR-70)	10	10	100.00
568.	-2P	"	11	11	100.00
569.	74754-2P-LB-1P-1P	P-481 X (JG-62 X P-1630)	7	7	100.00
570.	-2P	"	10	10	100.00

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1	2	3	4	5	
571.	74754-4P-LB-1P-1P	P-481 X (JG-62 X P-1630)	9	9	100.00
572.	-2P	"	14	14	100.00
573.	74768-4P-LB-BH-1P	P-1243 X (H-223 X GW-5/7)	9	9	100.00
574.	-2P	"	4	3	75.00
575.	74786-2P-LB-1H-1P	P-1630 X (JG-24 X JG-62)	12	12	100.00
576.	-2P	"	7	7	100.00
577.	-2H-1P	"	9	9	100.00
578.	-2P	"	2	2	100.00
579.	74787-5P-LB-1P-1P	No.296 X (F-378 X E-100)	2	2	100.00
580.	-8P-LB-1P-1P	"	7	7	100.00
581.	-2P-1P	"	10	6	60.00
582.	-9P-LB-1P-1P	"	12	12	100.00
583.	-13P-LB-1P-1P	"	6	6	100.00
584.	74798-1P-LB-1H-1P	CP-2974 X (CP-2974 X C-235)	5	5	100.00
585.	-2P	"	9	9	100.00
586.	-2P-LB-1H-1P	"	5	5	100.00
587.	-2P	"	11	11	100.00
588.	-3P	"	12	12	100.00
589.	74799-1P-LB-2P-1P	Pant-104 X (C-156 X No.40)	2	2	100.00
590.	-5P-LB-1H-1P	"	12	12	100.00
591.	-2P	"	11	11	100.00
592.	74842-2P-LB-1P-1P	(NEC-240 X H-208)	12	8	66.66
593.	-3P-LB-BH-1P	"	7	7	100.00
594.	-2P	"	11	11	100.00
595.	-7P-LB-BH-1P	"	11	11	100.00
596.	-2P	"	8	8	100.00
597.	-8P-LB-BH-1P	"	16	10	62.50
598.	-2P	"	13	11	84.61
599.	-3P	"	11	9	81.81
600.	-11P-LB-1H-1P	"	7	7	100.00
601.	-2P	"	9	9	100.00
602.	-2H-1P	"	9	9	100.00
603.	-3H-1P	"	8	8	100.00
604.	-13P-LB-BH-1P	"	5	5	100.00
605.	-2P	"	7	7	100.00
606.	-3P	"	12	12	100.00
607.	-17P-LB-1H-1P	"	11	11	100.00
608.	-2P	"	3	3	100.00
609.	-2H-1P	"	12	12	100.00
610.	-2P	"	4	4	100.00

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1	2	3	4	5	
611.	74842-25P-LB-BH-1P	(NEC-240 X H-208)	11	11	100.00
612.	-2P	"	11	11	100.00
613.	-3P	"	16	16	100.00
614.	74845-2P-LB-1P-1P	(NEC-240 X NEC-1646)	-	-	-
615.	-2P	"	8	6	75.00
616.	74869-7H-1LB-BH-1P	(Kaka X F-378)	7	7	100.00
617.	74874-5P-LB-1H-1P	(Kaka X NEC-1639)	14	14	100.00
618.	-2P	"	13	13	100.00
619.	74910-5H-LB-1H-1P	(P-99 X F-1378)	12	12	100.00
620.	-2P	"	13	13	100.00
621.	-3P	"	11	11	100.00
622.	-4P	"	11	11	100.00
623.	74911-1H-LB-BH-1P	(P-99 X H-208)	13	13	100.00
624.	-2P	"	8	8	100.00
625.	-3P	"	7	7	100.00
626.	74927-1P-LB-BH-1P	(WFWG-III X C-235)	5	5	100.00
627.	-2P	"	12	12	100.00
628.	74941-1P-LB-BH-1P	(F-378 X NEC-53)	3	3	100.00
629.	74966-1P-LB-BH-1P	(NEC-249 X NEC-1639)	5	5	100.00
630.	-2P-LB-1H-1P	"	7	7	100.00
631.	-4P-LB-1H-1P	"	8	8	100.00
632.	-7P-LB-BH-1P	"	10	8	80.00
633.	-8P-LB-1P-1P	"	6	5	83.33
634.	-8P-LB-1P-2P	"	5	5	100.00
635.	-10-LB-BH-1P	"	11	11	100.00
636.	-2P	"	9	9	100.00
637.	741660-B-1H-1H-1P	P-104 X (JG-62 X C-235)	13	13	100.00
638.	-2H-1H-1P	"	19	19	100.00
639.	-2P	"	16	16	100.00
640.	-3P	"	15	15	100.00
641.	-4H-1H-1P	"	14	14	100.00
642.	-2P	"	10	10	100.00
643.	-3P	"	6	6	100.00
644.	-5H-BH-1P	"	9	9	100.00
645.	-2P	"	13	13	100.00
646.	-6H-BH-1P	"	10	10	100.00
647.	-2P	"	8	8	100.00
648.	-3P	"	-	-	-
649.	741661-B-2H-BH-1P	JGC-1 X (Pant-102 X H-208)	5	5	100.00
650.	-2P	"	13	13	100.00
651.	-3P	"	8	8	100.00
652.	741663-B-2H-BH-1P	(H-208 X RS-11)X (JG-221 X L-550)	9	9	100.00
653.	-2P	"	3	3	100.00
654.	-3P	"	8	8	100.00
655.	-2-1P-1P-1P	"	5	1	20.00

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1	2	3	4	5	
656.	741663-2-1P-1P-2P	(H-208 X RS-11) X (JG-221 X L-550)	10	0	0.00
657.	-3-1P-1P-1P	"	5	4	80.00
658.	-2P	"	13	2	15.38
659.	-3P	"	3	1	33.33
660.	-BH-1P	"	6	2	33.33
661.	-2P	"	4	3	75.00
662.	-3P	"	13	7	53.84
663.	-4P	"	5	1	20.00
664.	-2P-1P	"	8	4	50.00
665.	-2P	"	3	1	33.33
666.	-3P	"	10	4	40.00
667.	-3P-BH-1P	"	9	3	33.33
668.	-2P	"	6	6	100.00
669.	-3P	"	3	0	0.00
670.	-6-1P-1P-1P	"	9	8	88.88
671.	-1P-1P-2P	"	10	2	20.00
672.	-3P	"	5	5	100.00
673.	-2P-1P-1P	"	14	11	78.57
674.	-2P	"	11	7	63.63
675.	-3P	"	14	10	71.42
676.	-8-2P-1P-1P	"	4	4	100.00
677.	-2P	"	4	4	100.00
678.	-BH-1P	"	14	14	100.00
679.	-2P	"	6	6	100.00
680.	-3P	"	-	-	-
681.	-10-1P-1P-1P	"	3	3	100.00
682.	-2P	"	6	6	100.00
683.	-BH-1P	"	10	10	100.00
684.	-2P	"	13	13	100.00
685.	-3P	"	4	4	100.00
686.	7336-B-1H-1H-BP	(H-208 X No.40)	13	13	100.00
687.	7379-B-1H-BH-BP	(L-550 X F-370)	4	4	100.00
688.	7381-B-2H-1H-BP	(L-550 X No.56)	9	8	88.88
689.	7390-B-2P-1P-BP	(850-3/27 X Radhey)	12	8	66.66
690.	73137-B-2H-1H-BP	(JG-62 X Pant-110)	10	7	70.00
691.	73186-B-1H-BH-BP	(G-130 X B-108)	3	3	100.00
692.	73216-B-5H-BH-BP	(No.42 X Pant-104)	3	3	100.00
693.	73259-B-1H-BH-BP	(P-1786 X C-214)	1	1	100.00
694.	73286-B-13H-BH-BP	(BG-2 X F-62)	2	2	100.00
695.	73301-B-3H-BH-BP	(G-543 X Annigeri)	1	1	100.00
696.	73377-B-1P-1P-BP	(GW-5/7 X No.42)	7	7	100.00
697.	73385-5-1P-1P-BP	(F-378 X P-3090)	2	2	100.00
698.	-B-2P-1P-BP	"	1	1	100.00
699.	73392-BH-4-1P-BP	(BR-70 X G-130)	6	6	100.00
700.	73410-B-4H-BH-BP	(Pb-7 X P-5408)	3	3	100.00

contd.

1	2	3	4	5
701.	73418-2-1P-1H-BP	(P-502 X F-378)	1	100.00
702.	7413-B-3H-BH-BP	(P-4357 X Lebanese local)	5	100.00
703.	7417-BH-1-1P-BP	(P-2974 X G-130)	3	100.00
704.	7428-BH-6-1P-BP	(P-2003 X P-3090)	4	100.00
705.	7433-B-2H-BH-BP	(Labenese local X H-355)	5	100.00
706.	7436-2P-LB-BH-BP	(Labenese local X BR-70)	7	71.42
707.	7445-B-2H-1H-BP	(T-3 X L-550) X (C-256 X F-404)	4	100.00
708.	-BH-3-1P-BP	"	1	100.00
709.	7446-B-4H-BH-BP	(H-355 X L-550) X (JG-62 X G-543)	1	100.00
710.	7451-1-1H-BH-BP	(CP-66 X F-404) X (C-235 X 850-3/27)	3	100.00
711.	7453-B-4P-1H-BP	(H-208 X BG-1) X (JG-62 X Ceylon-2)	5	100.00
712.	7457-B-6H-BH-BP	(Radhey X L-550) X (E-100 X P-34)	8	25.00
713.	-8H-BH-BP	"	6	50.00
714.	7461-BH-1-1P-BP	(850-3/27 X K-468) X (Chafa X K-4)	3	100.00
715.	-2-1P-BP	"	4	100.00
716.	-11H-BH-BP	"	7	100.00
717.	7464-6P-LB-BH-BP	(H-208 X Chafa) X (GW-5/7 X JGC-1)	6	100.00
718.	7466-BH-1-1P-BP	(RS-11 X (GW-5/7 X L-550)	6	100.00
719.	-4-1P-1P-BP	"	4	100.00
720.	-2P-BP	"	5	100.00
721.	-B-3P-1P-BP	RS-11 X (GW-5/7 X L-550)	9	100.00
722.	-5-2H-1H-BP	"	7	100.00
723.	-1H-1P-BP	"	7	100.00
724.	7469-1-1H-1H-BP	BG-1 X (H-355 X L-550)	5	100.00
725.	-2H-1H-BP	"	6	100.00
726.	-2H-BP	"	7	100.00
727.	-2-1H-1H-BP	"	5	100.00
728.	-2H-1P-BP	"	7	100.00
729.	-3-1P-1P-BP	"	4	100.00
730.	-11-1P-1H-BP	"	10	100.00
731.	-2H-BP	"	10	100.00
732.	-12-1P-BH-BP	(BG-1 X (H-355 X L-550)	8	100.00
733.	-2P-1P-BP	"	5	100.00
734.	-3P-3H-BP	"	11	100.00
735.	7472-BH-6-1P-BP	P-272 X (F-61 X L-550)	10	100.00

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1	2	3	4	5	
736.	7472-BH-6-2P-BP	P-272 X (F-61 X L-550)	6	6	100.00
737.	-11-1P-BP	"	7	7	100.00
738.	-2P-BP	"	2	2	100.00
739.	-14-1P-BP	"	9	9	100.00
740.	7473-BH-1-1P-BP	GW-5/7 X (F-404 X L-550)	10	10	100.00
741.	7475-BH-4-1P-BP	T-3 X (No.56 X H-208)	10	10	100.00
742.	7478-B-1H-BH-BP	(850-3/27 X (G-130 X JG-62)	11	11	100.00
743.	7481-B-1H-BH-BP	F-61 X (G-543 X 850-3/27)	7	7	100.00
744.	-13-1H-1H-BP	"	4	4	100.00
745.	7486-B-2P-1P-BP	C-156 X (850-3/27 X F-378)	2	2	100.00
746.	7491-BH-2-1P-BP	(P-9623 X P-1387)	9	9	100.00
747.	7497-1-2P-1H-BP	(P-3111 X JG-62)	7	7	100.00
748.	7498-B-1H-BH-BP	(P-3111 X BG-1)	7	7	100.00
749.	7499-B-7H-BH-BP	(P-3111 X G+130)	4	4	100.00
750.	74109-B-3H-1H-BP	(P-3111 X H-208)	6	6	100.00
751.	74103-B-2H-1H-BP	(P-502 X BG-1)	2	2	100.00
752.	74105-BH-3-1P-BP	(P-502 X H-208)	8	8	100.00
753.	-B-8H-1H-BP	"	14	14	100.00
754.	74109-B-1H-BH-BP	(P-43 X G-130)	16	16	100.00
755.	-B-2H-BH-BP	"	8	8	100.00
756.	-7H-BH-BP	"	11	11	100.00
757.	-8H-1H-BP	"	5	5	100.00
758.	74111-B-1-1P-BP	(P-505 X F-378)	4	4	100.00
759.	74113-B-2H-1H-BP	(P-505 X BG-1)	2	2	100.00
760.	74126-B-2P-BH-BP	(P-99 X F-378)	4	4	100.00
761.	-2H-1H-BP	"	3	3	100.00
762.	-3P-1P-3P	"	7	7	100.00
763.	-2H-BP	"	7	7	100.00
764.	74129-B-1P-BH-BP	(P-99 X G-130)	7	7	100.00
765.	-1H-BH-BP	"	10	10	100.00
766.	-5P-BH-BP	"	6	6	100.00
767.	74130-B-4H-1H-BP	(P-99 X H-208)	2	2	100.00
768.	-3P-1H-BP	"	4	4	100.00
769.	74135-B-1H-BH-BP	(G-130 X GW-5/7)	3	3	100.00
770.	74137-B-11H-1H-BP	(G-130 X CP-66)	5	5	100.00
771.	74138-B-10H-1H-BP	(G-130 X Pant-104)	2	2	100.00
772.	74140-B-1H-BH-BP	(G-130 X Radhey)	6	6	100.00
773.	-2P-BH-BP	"	3	3	100.00
774.	74142-B-2H-1H-BP	(C-235 X F-378)	8	8	100.00
775.	-B-3H-BH-BP	"	7	7	100.00
776.	-5H-BH-BP	"	11	11	100.00
777.	-7H-1H-BP	"	1	1	100.00
778.	-11H-1H-BP	"	6	6	100.00
779.	74144-B-5H-1H-BP	(C-235 X BG-1)	3	3	100.00
780.	-6H-1H-BP	"	8	8	100.00

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1	2	3	4	5
781.	74144-B-8H-1H-BP (C-235 X BG-1)	7	7	100.00
782.	-9H-1H-BP "	2	2	100.00
783.	74145-B-1H-1H-BP (C-235 X T-3)	1	1	100.00
784.	-2P-BH-BP "	3	3	100.00
785.	-2H-BH-BP "	2	2	100.00
786.	-3H-BH-BP "	2	2	100.00
787.	74146-B-1H-1P-BP (C-235 X B-108)	-	-	-
788.	-2P-BP "	-	-	-
789.	-2H-1P-BP "	-	-	-
790.	-2P-BP "	1	1	100.00
791.	-3H-1H-BP "	-	-	-
792.	74147-B-1H-1P-BP (C-235 X B-110)	1	1	100.00
793.	74148-B-1P-1H-BP (C-235 X JG-24)	-	-	-
794.	-5H-BH-BP "	2	2	100.00
795.	74155-B-1H-1P-BP (C-235 X Radhey)	2	2	100.00
796.	74156-B-2H-BH-BP (C-235 X JG-221)	1	1	100.00
797.	-3P-1H-BP "	-	-	-
798.	-2-1P-BH-BP "	2	2	100.00
799.	-3-2P-1H-BP "	1	1	100.00
800.	74159-B-2P-1H-BP (BEG-482 X H-355)	-	-	-
801.	74161-B-2P-BH-BP (BEG-482 X T-3)	-	-	-
802.	74169-B-1H-1H-BP (BEG-482 X CP-66)	2	2	100.00
803.	74170-B-1H-BH-BP (BEG-482 X Pant-104)	1	1	100.00
804.	-2P-BH-BP "	6	6	100.00
805.	-2H-BH-BP "	1	1	100.00
806.	-4P-BH-BP "	6	4	66.66
807.	-5P-BH-BP "	1	1	100.00
808.	74171-B-3H-BH-BP (BEG-482 X E-100)	2	2	100.00
809.	74172-B-1P-1P-BP (BEG-482 X Radhey)	-	-	-
810.	74175-B-3H-1H-BP (RS-11 X C-235)	4	4	100.00
811.	-4H-BH-BP "	5	4	80.00
812.	-5H-BH-BP "	4	3	75.00
813.	-7H-BH-BP "	1	1	100.00
814.	74176-B-2H-BH-BP (RS-11 X Pb-7)	5	5	100.00
815.	-7H-BH-BP "	8	8	100.00
816.	74186-B-3H-BH-BP (G-543 X BG-2)	10	10	100.00
817.	74189-B-1H-1H-BP (F-61 X G-130)	1	1	100.00
818.	74191-B-1H-1H-1B (F-61 X BG-1)	6	6	100.00
819.	-2H-BH-BP "	1	1	100.00
820.	-4H-1H-BP "	1	1	100.00
821.	74192-B-1H-1H-BP (F-61 X T-3)	-	-	-
822.	74193-B-1P-1H-BP (F-61 X K-468)	3	3	100.00
823.	-1H-BH-BP "	9	9	100.00
824.	-3H-BH-BP "	2	2	100.00
825.	-4H-1P-BP "	4	4	100.00

1	2	3	4	5
826.	74193-5-1P-BH-BP (F-61 X K-468)	9	9	100.00
827.	-B-8H-BH-BP "	9	9	100.00
828.	-8-1P-BH-BP "	4	4	100.00
829.	-9H-BH-BP "	2	2	100.00
830.	-B-10H-BH-BP "	2	2	100.00
831.	-10-2P-1H-BP "	7	7	100.00
832.	-12-1H-BH-BP "	11	11	100.00
833.	74194-B-1P-BH-BP (L-345 X K-468)	8	8	100.00
834.	74203-B-1H-1P-BP (Pant-102 X N-59)	3	3	100.00
835.	-1H-BP "	9	9	100.00
836.	-2P-BH-BP "	10	10	100.00
837.	74204-B-1P-BH-BP (Pant-102 X SP-405)	16	16	100.00
838.	74209-B-1H-BH-BP (BEG-482 X F-496)	15	15	100.00
839.	-2H-BH-BP "	14	14	100.00
840.	74216-B-1H-1H-BP (10-2-3 X B-108)	12	12	100.00
841.	-2H-BH-BP "	15	15	100.00
842.	-3H-1H-BP "	19	19	100.00
843.	-5H-1H-BP "	11	11	100.00
844.	-6H-BH-BP "	15	15	100.00
845.	74223-B-2H-1P-BP (No. 42 X H-223)	13	13	100.00
846.	-4H-1P-BP "	12	1	8.33
847.	74224-B-1H-BH-BP (No. 42 X CP-66)	5	5	100.00
848.	-2H-1P-BP "	9	9	100.00
849.	74233-B-1P-1H-BP (K-4 X P-9791)	17	17	100.00
850.	74235-B-2P-1P-BP (GW-5/7 X C-375)	12	9	75.00
851.	74241-7-1P-1P-BP (850-3/27 X K-4)	16	16	100.00
852.	74243-1-2H-1P-BP (H-208 X P-4804)	14	14	100.00
853.	74249-1-2P-1P-BP (No. 42 X P-502)	14	14	100.00
854.	74249-1-2P-2P-BP "	14	14	100.00
855.	-7-3P-1P-BP "	13	13	100.00
856.	74255-B-1H-BH-BP (850-3/27 X GW-5/7) X (JG-62 X No. 56)	16	16	100.00
857.	-3H-1H-BP "	11	11	100.00
858.	74256-BH-1H-BH-BP (H-208 X CP-66) X (H-208 X F-496)	18	18	100.00
859.	-B-2H-1H-BP "	18	18	100.00
860.	-3H-BH-BP "	17	17	100.00
861.	-4H-BH-BP "	16	12	75.00
862.	-7H-BH-BP "	19	15	78.94
863.	-8H-BH-BP "	17	17	100.00
864.	-9H-BH-BP "	15	15	100.00
865.	-10H-BH-BP "	18	14	77.77
866.	-13H-BH-BP "	15	15	100.00
867.	74257-3-4P-1H-BP JG-62 X (H-208 X T-3)	15	15	100.00
868.	-5-1P-1H-BP (JG-62 X (H-208 X T-3)	20	14	70.00
869.	74258-B-2H-BH-BP 850-3/27 X (H-208 X B-108)	20	17	85.00

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1	2	3	4	5	
870.	74258-B-4H-BH-BP	850-3/27 X (H-208 X B-108)	20	20	100.00
871.	-5H-1H-BP	"	19	19	100.00
872.	-6H-BH-BP	"	19	19	100.00
873.	-7H-BH-BP	"	17	17	100.00
874.	-8H-BH-BP	"	13	13	100.00
875.	74261-B-1H-1H-BP	P-1387 X (H-208 X F-378)	17	17	100.00
876.	-1H-BH-BP	"	17	17	100.00
877.	-4H-BH-BP	"	17	17	100.00
878.	74263-B-9H-BH-BP	P-505 X (H-208 X F-378)	20	20	100.00
879.	-10H-BH-BP	"	10	10	100.00
880.	74264-2-1H-BH-BP	K-4 X (L-550 X H-355)	20	20	100.00
881.	-3-2P-1P-BP	"	18	18	100.00
882.	-B-12P-1H-BP	"	19	19	100.00
883.	-10-1H-1H-BP	"	16	16	100.00
884.	-11-1P-1P-BP	"	16	16	100.00
885.	74264-12-1H-1H-BP	K-4 X (L-550 X H-355)	15	15	100.00
886.	-2H-BP	"	21	21	100.00
887.	74267-B-2P-1H-BP	P-1387 X (L-550 X E-100)	14	14	100.00
888.	74268-B-8H-BH-BP	K-4 X (850-3/27 X BG-1)	18	18	100.00
889.	74273-B-1H-BH-BP	CP-82 X (850-3/27 X H-223)	18	18	100.00
890.	-3H-1H-BP	"	19	6	31.57
891.	-7H-BH-BP	"	17	17	100.00
892.	-8H-1P-BP	"	18	12	66.66
893.	-9H-1P-BP	"	16	4	25.00
894.	74274-B-1P-1P-BP	JG-62 X (850-3/27 X Chafa)	4	4	100.00
895.	74276-B-9P-1P-BP	(JG-62 X (850-3/27 X H-208)	16	16	100.00
896.	74278-BH-2P-1P-BP	P-1387 X (850-3/27 X N-59)	16	16	100.00
897.	-B-3P-1P-BP	"	15	15	100.00
898.	74286-B-2P-1H-BP	CP-4027 X (850-3/27 X No. 56)	19	19	100.00
899.	-4H-1H-BP	"	14	14	100.00
900.	74289-B-2H-1H-BP	C-235 X JG-62 X T-3	17	13	76.47
901.	74290-B-9P-1H-BP	P-271 X (JG-62 X Chafa)	18	18	100.00
902.	74298-B-2P-1H-BP	C-104 X (JG-62 X B-110)	15	15	100.00
903.	-8-1P-1P-BP	"	16	16	100.00
904.	74301-B-1H-1H-BP	P-82 X (JG-62 X BG-1)	18	18	100.00
905.	-2H-BH-BP	"	8	8	100.00
906.	74311-B-10H-BH-BP	(G-543 X (Ceylon-2 X CP-66)	11	11	100.00
907.	-16H-1-BH-BP	"	4	4	100.00
908.	74317-B-1H-BH-BP	Radhey X (JG-62 X K-468)	10	10	100.00

1	2	3	4	5
909.	74317-B-3P-1H-BP Radhey X (JG-62 X K-468)	7	7	100.00
910.	74320-B-5P-1P-BP L-550 X (JG-62 X F-496)	6	6	100.00
911.	-5H-1H-BP "	9	9	100.00
912.	-BH-11-1P-BP "	7	7	100.00
913.	74324-B-2P-1P-BP (JG-62 X F-378) X L-550	8	8	100.00
914.	-3H-1P-BP "	10	5	50.00
915.	-5H-BH-BP "	-	-	-
916.	-6H-BH-BP "	1	1	100.00
917.	-9H-1P-BP "	7	7	100.00
918.	-BH-BP "	4	4	100.00
919.	-13H-BH-BP "	-	-	-
920.	74332-B-4H-1P-BP (L-550 X E-100) X L-550	3	3	100.00
921.	74249-7-1P-1P-BP (No. 42 X P-502)	2	2	100.00
922.	74361-B-6H-BH-BP F <sub>2</sub> (H-355 X BR-70) X F <sub>2</sub> (L-550 X USA-613)	1	1	100.00
923.	74367-B-1P-1P-BP F <sub>2</sub> (850-3/27 X F-378) X (JG-62 X B-10)	-	-	-
924.	74380-B-2H-BH-BP F <sub>2</sub> (850-3/27 X H-355) X F <sub>2</sub> (JG-62 X BR-70)	4	2	50.00
925.	74385-5-2P-1P-BP F <sub>2</sub> (Annigeri X G-543) X F <sub>2</sub> (No. 96 X L-550)	3	3	100.00
926.	74589-5P-LB-BH-BP (T-3 X G-543) X (850-3/27 X B-108)	1	1	100.00
927.	74597-1P-LB-1H-BP (850-3/27 X L-345) X (H-208 X BR-70)	2	2	100.00
928.	74598-2P-LB-1P-BP (JG-62 X P-1630) X (JG-62 X C-235)	4	4	100.00
929.	74601-1P-LB-BH-BP (T-3 X C-235) X (10-2-3 X B-108)	5	5	100.00
930.	74606-1P-LB-BH-BP (G-130 X JG-221) X (E-100 X H-355)	5	5	100.00
931.	74611-3P-LB-BH-BP (F-378 X E-100) X (10-2-3 X B-108)	9	7	77.77
932.	-8P-LB-BH-BP "	2	2	100.00
933.	74620-1P-LB-1P-BP (P-6308 X F-240) X (No. 42 X GW-5/7)	2	2	100.00
934.	-2P-BP "	2	2	100.00
935.	-2P-LB-BH-BP "	4	4	100.00
936.	74621-2P-LB-1P-BP (JG-62 X BEG-482) X (K-468 X F-61)	4	4	100.00
937.	74632-1P-LB-BH-BP (H-355 X BEG-482) X (JG-62 X P-1387)	4	0	0.00
938.	74643-2P-LB-1P-BP (T-3 X C-235) X (C-156 X No. 40)	2	2	100.00
939.	74647-16P-LB-1P-BP (GW-5/7 X F-378) X (USA-613 X BEG-482)	4	4	100.00
940.	-26P-LB-BH-BP "	2	2	100.00

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1	2	3	4	5	
941.	74649-10P-LB-BH-BP	(P-505 X F-378) X (B-108 X C-235)	-	-	-
942.	74660-B-3P-1H-BP	(Annigeri X H-208) X (850-3/27 X C-235)	-	-	-
943.	74685-5P-LB-1P-BP	P-436 X (P-1387 X F-378)	4	4	100.00
944.	74686-8P-LB-1P-BP	P-272 X (GW-5/7 X BEG-482)	4	4	100.00
945.	74687-2P-LB-1P-BP	CP-1242 X (F-378 X GW-5/7)	8	8	100.00
946.	74692-4P-LB-1H-BP	K-468 X (BG-1 X F-61)	5	5	100.00
947.	74693-1P-LB-1P-BP	P-225 X (F-371 X GW-5/7)	3	3	100.00
948.	74697-1P-LB-1H-1P	C-214 X (BG-1 X P-99)	5	0	0.00
949.	74702-2P-LB-2P-BP	P-272 X (L-345 X Pant- 102)	1	1	100.00
950.	74708-1P-LB-2P-BP	(USA-613 X (JG-62 X P-3111)	1	1	100.00
951.	74710-9P-LB-1P-BP	(P-314 X (JG-62 X C-156)	5	5	100.00
952.	74721-7P-LB-1P-BF	NEC-759 X (GW-5/7 X Annigeri)	3	3	100.00
953.	74747-1P-LB-1P-BP	P-10 X (BEG-482 X BR-70)	1	1	100.00
954.	74754-2P-LB-1P-BP	P-481 X (JG-62 X P-1630)	6	6	100.00
955.	-4P-LB-1P-BP	"	4	4	100.00
956.	74768-4P-LB-BH-BP	P-1243 X (H-208 X GW-5/7)	5	3	60.00
957.	74786-2P-LB-1H-BP	P-1630 X (JG-24 X JG-62)	2	2	100.00
958.	-2H-LB-1H-BP	"	2	2	100.00
959.	74787-1P-LB-1P-BP	(No.296 X F-378 X E-100)	9	6	100.00
960.	-5P-LB-1P-BP	"	6	6	100.00
961.	-7P-LB-1P-BP	"	1	1	100.00
962.	-8P-LB-1P-BP	"	3	3	100.00
963.	74798-1P-LB-1H-BP	(P-2974 X (P-2974 X C-235)	-	-	-
964.	-2P-LB-1H-BP	"	11	6	54.54
965.	74799-5P-LB-1H-BP	(Pant-104 X (C-151 X No.40)	7	7	100.00
966.	74842-2P-LB-1P-BP	(NEC-240 X H-208)	16	9	56.25
967.	-BH-BP	"	-	-	-
968.	-3P-LB-BH-BP	"	8	8	100.00
969.	-8P-LB-BH-BP	"	9	5	55.55
970.	-11P-LB-1H-BP	"	3	3	100.00
971.	-11P-LB-2H-BP	"	10	10	100.00
972.	-3H-BP	"	5	5	100.00
973.	-13P-LB-BH-BP	"	1	1	100.00
974.	-17P-LB-1H-BP	"	1	1	100.00
975.	-2H-BP	"	1	0	0.00
976.	-25P-LB-BH-BP	"	5	2	40.00
977.	74844-4P-LB-BH-BP	(NEC-240 X NEC-1639)	4	2	50.00

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1	2	3	4	5	
978.	74844-6P-LB-1P-BP	(NEC-240 X NEC-1639)	6	6	100.00
979.	-10P-LB-1H-BP	"	6	5	83.33
980.	74845-2P-LB-1P-BP	(NEC-240 X NEC-1646)	2	1	50.00
981.	74867-7H-LB-BH-BP	(Kaka X P-99)	7	7	100.00
982.	74874-5P-LB-1H-BP	(Kaka X NEC-1639)	7	5	71.42
983.	74886-3H-LB-BH-BP	(K-4 X WFWG-III)	6	4	66.66
984.	74910-5H-LB-1H-BP	(P-99 X F-378)	8	6	75.00
985.	74911-1H-LB-BH-BP	(P-99 X H-208)	4	2	50.00
986.	74912-2H-LB-1P-BP	(P-99 X C-214)	-	-	-
987.	74927-1P-LB-BH-BP	(WFWG-III X C-235)	2	2	100.00
988.	74966-2P-LB-1H-BP	(NEC-249 X NEC-1639)	2	2	100.00
989.	04P-LB-1H-BP	"	7	7	100.00
990.	-7P-LB-BH-BP	"	14	12	85.71
991.	74966-8P-LB-1P-BP	(NEC-249 X NEC-1639)	12	11	91.66
992.	-10P-LB-BH-BP	"	10	7	70.00
993.	74991-1P-LB-BH-BP	(NEC-1607 X P-2994)	1	0	0.00
994.	741108-1P-LB-BH-BP	(Ceylon-2 X P-1243)	3	1	33.33
995.	741660-B-1H-1H-BP	(P-104 X (JG-62 X C-235)	2	2	100.00
996.	-2H-1H-BP	"	3	3	100.00
997.	-4H-1H-BP	"	4	2	50.00
998.	-5H-BH-BP	"	6	6	100.00
999.	-6H-BH-BP	"	1	1	100.00
1000.	741661-B-2H-BH-BP	JGC-1 X (Pant-102 X H-208)	-	-	-
1001.	741663-2-1P-1P-BP	(H-208 X RS-11) X (JG-221 X L-550)	4	3	75.00
1002.	-3-1P-1P-BP	"	6	2	33.33
1003.	-BH-BP	"	3	0	0.00
1004.	-2P-BP	"	3	0	0.00
1005.	-3P-BH-BP	"	6	1	16.66
1006.	-6-1-1P-BP	"	16	9	56.25
1007.	-6-2P-1P-BP	"	11	5	45.45
1008.	-8-2H-1P-BP	"	6	6	100.00
1009.	-2P-BH-BP	"	13	6	46.15
1010.	-10-1P-BH-BP	"	8	8	100.00
1011.	7566-1-1H-BH-BP	"	-	-	-
1012.	7379-BH-2-1P-1P	(L-550 X F-378)	5	5	100.00
1013.	-2P	"	1	1	100.00
1014.	-3P	"	2	2	100.00
1015.	-4P	"	2	2	100.00
1016.	-5P	"	1	1	100.00
1017.	7380-13-2H-1H-P	(L-550 X F-496)	7	1	14.28
1018.	7452-BH-4-1P-1P	(850-3/27 X CP-66) X (Rabat X L-550)	6	4	66.66
1019.	-2P	"	9	6	66.66
1020.	-3P	"	5	2	40.00

contd.

1021.	7452-BH-4-1H-4P	(850-3/27 X CP-66) X (Rabat X L-550)	4	2	50.00
1022.	-5P	"	5	5	100.00
1023.	7461-BH-1-1P-3P	(850-3/27 X K-468) X (Chafa X K-4)	4	3	75.00
1024.	-4P	"	2	1	50.00
1025.	-5P	"	4	2	50.00
1026.	-6P	"	6	4	66.66
1027.	74226-1P-2P-1P-1P	(L-550 X Gumachili 916)	1	1	100.00
1028.	-2P	"	-	-	-
1029.	-3P	"	4	4	100.00
1030.	-4P	"	2	2	100.00
1031.	-5P	"	3	3	100.00
1032.	-6P	"	1	1	100.00
1033.	74845-2P-LB-1P-3P	(NEC-240 X NEC-1646)	1	1	100.00
1034.	-4P	"	5	2	40.00
1035.	74941-1P-LB-BH-2P	(F-378 X NEC-53)	1	1	100.00
1036.	-3P	"	3	1	33.33
1037.	-4P	"	1	1	100.00
1038.	7379-BH-2-1P-BP	(F-378 X L-550)	5	3	60.00
1039.	7452-BH-4-1P-BP	(850-3/27 X CP-66) X (Rabat X L-550)	7	4	57.14
1040.	74226-1-2P-1P-BP	(L-550 X Gumachili 916)	5	5	100.00

F<sub>7</sub>

1.	733-7-1-1H-1H-1P	(H-208 X G-130)	13	13	100.00
2.	-2P	"	11	11	100.00
3.	737-14-4-1H-2H-1P	(H-208 X BG-1)	5	5	100.00
4.	-2P	"	10	10	100.00
5.	739-5-1-1P-1P-1P	(H-208 X Pant-110)	4	4	100.00
6.	-2P	"	5	5	100.00
7.	-3P	"	5	5	100.00
8.	7310-3-3-1H-1P-1P	(C-214 X Radhey)	6	6	100.00
9.	-2P	"	12	12	100.00
10.	-22-1-1H-BH-1P	"	12	12	100.00
11.	-2P	"	13	13	100.00
12.	7312-3-1-1P-BH-1P	(H-208 X K-4)	11	11	100.00
13.	-8-1-1H-1P-1P	"	5	5	100.00
14.	-2P	"	5	5	100.00
15.	7314-20-1-1H-1P-1P	(H-208 X Annigeri)	8	8	100.00
16.	-2P	"	12	12	100.00
17.	7315-3-3-1H-1H-1P	(H-208 X B-108)	11	11	100.00
18.	-2P	"	10	10	100.00
19.	-2H-1P	"	5	5	100.00
20.	-2P	"	10	10	100.00



1	2	3	4	5	
21.	7315-3-3-1H-3H-1P	(H-208 X B-108)	4	4	100.00
22.	-2P	"	7	7	100.00
23.	-2H-1P-1P	"	6	6	100.00
24.	-2P	"	5	5	100.00
25.	-3P	"	2	1	50.00
26.	-9-1-1H-1H-1P	"	13	13	100.00
27.	-2P	"	9	9	100.00
28.	-2H-1P	"	8	8	100.00
29.	-15-1-2H-1P-1P	"	11	11	100.00
30.	-2P	"	13	13	100.00
31.	-BH-1P	"	5	5	100.00
32.	-2P	"	14	14	100.00
33.	-20-1-1P-1H-1P	"	3	3	100.00
34.	-2P	"	5	2	40.00
35.	-27-3-2H-1P-1P	"	7	7	100.00
36.	-2P	"	3	3	100.00
37.	-3P	"	2	2	100.00
38.	-39-1-2H-1P-1P	"	3	3	100.00
39.	-2P	"	5	5	100.00
40.	-2-2H-1P-1P	"	2	2	100.00
41.	-2P	"	-	-	-
42.	-3P	"	3	3	100.00
43.	7316-9-3-1P-BH-1P	(H-208 X B-110)	8	8	100.00
44.	-2P	"	9	9	100.00
45.	7320-11-1-2H-BH-1P	(H-208 X RS-11)	7	7	100.00
46.	-2P	"	12	12	100.00
47.	-3-1H-BH-1P	"	12	12	100.00
48.	-2P	"	8	8	100.00
49.	-2H-1H-1P	"	14	14	100.00
50.	-2P	"	17	17	100.00
51.	7322-5-3-1H-BH-1P	(H-208 X Ceylon-2)	20	16	80.00
52.	7324-20-3-1H-BH-1P	(H-208 X No. 42)	20	8	40.00
53.	-2P	"	20	10	50.00
54.	7325-11-2-1H-2H-1P	(H-208 X F-404)	18	18	100.00
55.	-2P	"	19	15	78.94
56.	-2H-1P-1P	"	20	20	100.00
57.	-2P	"	16	16	100.00
58.	-1H-1P	"	19	19	100.00
59.	-2P	"	20	20	100.00
60.	-4-1H-1P-1P	"	19	19	100.00
61.	-2P	"	15	15	100.00
62.	-3P	"	17	17	100.00
63.	-2H-BH-1P	"	17	17	100.00
64.	-2P	"	16	16	100.00
65.	7332-1-2-1H-BH-1P	(H-208 X F-370)	10	10	100.00

contd.

1	2	3	4	5	
66.	7332-1-2-1H-BH-2P	(H-208 X F-370)	10	10	100.00
67.	-3-1H-1H-1P	"	10	10	100.00
68.	-2P	"	10	10	100.00
69.	-2-4-2H-2H-1P	"	12	12	100.00
70.	-6-2-1H-1H-1P	"	10	10	100.00
71.	-7-1-1H-BH-1P	"	5	5	100.00
72.	-7-1-1H-BH-2P	"	8	8	100.00
73.	-2-1H-BH-1P	"	12	12	100.00
74.	-2P	"	10	10	100.00
75.	-11-1-1H-BH-1P	"	4	2	50.00
76.	-2P	"	12	8	66.66
77.	-3-2H-1H-1P	"	13	5	38.46
78.	-2P	"	11	6	54.54
79.	-12-1-1H-BH-1P	"	11	8	72.72
80.	-2P	"	17	12	70.58
81.	-3-1H-1H-1P	"	16	12	75.00
82.	-2P	"	14	14	100.00
83.	-3H-1P	"	12	12	100.00
84.	-2P	"	14	14	100.00
85.	-4-1H-1H-1P	"	17	17	100.00
86.	-2P	"	18	18	100.00
87.	-2H-1P	"	17	17	100.00
88.	-2P	"	16	16	100.00
89.	-2H-1H-1P	"	15	15	100.00
90.	-2P	"	10	5	50.00
91.	-BH-1P	"	14	12	85.71
92.	-2P	"	13	6	46.15
93.	-5-1H-BH-1P	"	10	9	90.00
94.	-2P	"	12	12	100.00
95.	7333-4-2-1H-1H-1P	(H-208 X F-496)	11	11	100.00
96.	-2P	"	11	11	100.00
97.	-2H-1P	"	15	15	100.00
98.	-2P	"	12	12	100.00
99.	-5-2-1H-BH-1P	"	14	14	100.00
100.	-2P	"	14	14	100.00
101.	-6-2-1H-3H-1P	"	12	12	100.00
102.	-2P	"	17	17	100.00
103.	-2H-BH-1P	"	12	12	100.00
104.	-12-2-1H-1H-1P	"	17	17	100.00
105.	-2P	"	16	16	100.00
106.	-BH-1P	"	14	14	100.00
107.	-2P	"	19	19	100.00
108.	-1H-1P	"	17	17	100.00
109.	-2P	"	16	16	100.00
110.	-2H-1P	"	18	12	66.66

1	2	3	4	5
111.	7333-12-3-1H-2H-2P (H-208 X F-496)	19	13	68.42
112.	-3H-1P "	16	13	81.25
113.	-2P "	17	17	100.00
114.	-4-1H-BH-1P "	16	16	100.00
115.	-2P "	16	16	100.00
116.	-13-1-1H-BH-1P "	18	18	100.00
117.	-2P "	18	18	100.00
118.	-2-1H-BH-1P "	17	17	100.00
119.	-2P "	19	19	100.00
120.	-3-1H-1H-1P "	20	20	100.00
121.	-2H-1P "	15	15	100.00
122.	-3H-1P "	18	18	100.00
123.	-4-1H-BH-1P "	18	18	100.00
124.	-2P "	19	19	100.00
125.	-5-1H-1H-1P "	13	13	100.00
126.	-2P "	17	17	100.00
127.	-15-1-1H-BH-1P "	14	14	100.00
128.	-2P "	15	15	100.00
129.	-2-2H-BH-1P "	13	13	100.00
130.	-2P "	15	15	100.00
131.	-4-2H-BH-1P "	4	4	100.00
132.	7334-3-4-1P-1H-1P "	8	8	100.00
133.	-2P "	10	10	100.00
134.	-8-3-1P-1P-1P "	8	2	25.00
135.	-2P "	10	8	80.00
136.	-3P "	6	2	33.33
137.	7336-1-3-1H-BH-1P (H-208 X No.40)	2	0	0.00
138.	-2P "	4	2	50.00
139.	7339-1-1-1H-BH-1P (H-208 X E-100)	9	3	33.33
140.	-2P "	10	4	40.00
141.	-3-2-1P-1H-1P "	13	13	100.00
142.	-2P "	9	8	88.88
143.	-2H-1P "	13	11	84.61
144.	-2P "	5	3	60.00
145.	-3H-1P "	7	7	100.00
146.	-2P "	4	4	100.00
147.	7340-5-1-1P-BH-1P (H-208 X Radhey)	6	4	66.66
148.	-2P "	4	1	25.00
149.	7341-5-3-1P-1H-1P (H-208 X N-59)	4	4	100.00
150.	-10-2-1P-1P-1P "	5	5	100.00
151.	-2P "	11	9	81.81
152.	-3P "	4	4	100.00
153.	-1H-1P-1P "	10	10	100.00
154.	-2P "	12	9	75.00
155.	-20-2-1P-1P-1P "	2	2	100.00

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1	2	3	4	5
156.	7341-20-2-1P-1P-2P (H-208 X H-59)	8	8	100.00
157.	-1H-1P "	3	3	100.00
158.	-2P "	2	2	100.00
159.	-3P "	2	1	50.00
160.	-3-1P-BH-1P "	5	5	100.00
161.	-2P "	3	3	100.00
162.	-3P "	6	6	100.00
163.	-2P-1H-1P "	1	0	0.00
164.	7344-7-2-2H-BH-1P (L-550 X F-61)	4	2	50.00
165.	-2P "	7	5	71.42
166.	-13-2-1P-1P-1P "	6	2	33.33
167.	-2P "	7	1	14.28
168.	7353-12-2-1H-1P-1P (L-550 X BEG-482)	13	2	15.38
169.	-2P "	7	2	28.57
170.	7356-18-5-1H-1P-1P (L-550 X T-3)	1	0	0.00
171.	-2P "	4	2	50.00
172.	-3P "	4	3	75.00
173.	7357-13-1-2H-BH-1P (L-550 X K-468)	5	4	80.00
174.	-2P "	4	2	50.00
175.	-22-4-1H-1H-1P "	6	6	100.00
176.	7359-3-2-1P-1P-1P (L-550 X Chafa)	3	3	100.00
177.	-2P "	10	7	70.00
178.	7367-4-1-1P-1P-1P (L-550 X P-1786)	8	6	75.00
179.	-2P "	15	13	86.66
180.	-17-4-1H-BH-1P "	7	2	28.57
181.	-2P "	6	1	16.66
182.	-2H-1P "	4	0	0.00
183.	-2P "	7	4	57.14
184.	-40-1-1P-1H-1P "	7	4	57.14
185.	-2P "	8	5	62.50
186.	7369-2-2-1H-1P-1P (L-550 X USA-613)	4	2	50.00
187.	-2P "	3	1	33.33
188.	-5-4-1P-1P-1P "	4	1	25.00
189.	-2P "	4	2	50.00
190.	7375-1-1-1P-1P-1P (L-550 X CP-66)	4	4	100.00
191.	-2P "	5	5	100.00
192.	7376-9-1-2H-1P-1P (L-550 X SP-405)	7	4	57.14
193.	7380-1-1-1H-1P-1P (L-550 X F-496)	11	3	27.27
194.	-2P "	7	5	71.42
195.	-3H-1H-1P "	7	1	14.28
196.	7380-1-2-2H-BH-1P "	14	6	42.85
197.	-2P "	10	9	90.00
198.	-3-1H-1P-1P "	6	3	50.00
199.	-BH-1P "	3	2	66.66
200.	-2H-1P-1P "	8	6	75.00

1	2	3	4	5
201.	7380-1-3-2H-1P-2P (L-550 X F-496)	5	2	40.00
202.	7384-3-3-1P-1P-1P (L-550 X Pant-104)	6	3	50.00
203.	-2P "	2	1	50.00
204.	7389-2-2P-1P-1P-1P (850-3/27 X F-378)	12	11	91.66
205.	-2P "	8	8	100.00
206.	-22-5-2P-1P-1P "	2	2	100.00
207.	-2P "	4	4	100.00
208.	-33-3-1P-1P-1P "	3	3	100.00
209.	-2P "	11	11	100.00
210.	7390-7-2-2H-1P-1P (850-3/27 X Radhey)	3	3	100.00
211.	-2P "	8	8	100.00
212.	-3P "	5	5	100.00
213.	7391-7-1-1P-BH-1P (850-3/27 X G-130)	6	6	100.00
214.	-2P "	2	2	100.00
215.	-3-1H-BH-1P "	4	4	100.00
216.	-2P "	10	6	60.00
217.	-8-1-1P-BH-1P "	1	0	0.00
218.	73111-12-1-1P-1P-2P (850-3/27 X H-208)	2	0	0.00
219.	7392-3-1-1H-1P-1P (850-3/27 X C-235)	7	7	100.00
220.	-2P "	11	11	100.00
221.	-2-1P-1P-1P "	6	6	100.00
222.	-2P "	3	3	100.00
223.	-1H-1P-1P "	8	8	100.00
224.	7394-15-1-1P-2P-1P (850-3/27 X N-59)	5	5	100.00
225.	-2P "	10	10	100.00
226.	-18-3-1P-1P-1P "	5	5	100.00
227.	-2P "	6	6	100.00
228.	7395-39-1-1P-1P-1P (850-3/27 X H-355)	4	2	50.00
229.	-2P "	5	2	40.00
230.	-40-1-2H-BH-1P "	-	-	-
231.	-2P "	8	3	37.50
232.	7397-5-1-1H-1P-1P (850-3/27 X BEG-482)	4	4	100.00
233.	-2P "	3	3	100.00
234.	-3P "	2	2	100.00
235.	7398-13-2-1H-BH-1P (850-3/27 X Pant-110)	5	5	100.00
236.	-2P "	1	1	100.00
237.	7399-2-1-1P-BH-1P (850-3/27 X JG-221)	6	6	100.00
238.	-2P "	8	8	100.00
239.	73103-5-2-1P-1P-1P (850-3/27 X Chafa)	3	3	100.00
240.	-2P "	5	5	100.00
241.	-10-2-1P-1P-1P "	4	4	100.00
242.	-2P "	8	.8	100.00
243.	73105-14-2-1P-1P-1P (850-3/27 X B-108)	7	6	85.71
244.	-2P "	7	3	42.85
245.	-2P-1P-1P "	12	4	33.33
246.	-2P "	3	0	0.00
247.	73111-12-1-1P-1P-1P (850-3/27 X H-208)	7	7	100.00

contd.

1	2	3	4	5	
248.	73111-12-1-1P-1P-2P	(850-3/27 X H-208)	3	3	100.00
249.	-4-1H-1H-1P	"	9	9	100.00
250.	-2P	"	6	6	100.00
251.	-3P	"	9	9	100.00
252.	-13-1-1H-BH-1P	"	12	12	100.00
253.	-2P	"	1	1	100.00
254.	-19-2-1H-BH-1P	"	3	3	100.00
255.	-2P	"	9	9	100.00
256.	73114-20-1-2P-1P-1P	(850-3/27 X GW-5/7)	13	9	69.23
257.	-2P	"	7	7	100.00
258.	73119-4-1-1H-BH-1P	(850-3/27 X H-223)	3	2	66.66
259.	-2P	"	2	2	100.00
260.	-7-2-1H-BH-1P	"	6	6	100.00
261.	-2P	"	7	7	100.00
262.	-2H-1P-1P	"	4	4	100.00
263.	73128-3-2-2P-1P-1P	(JG-62 X F-378)	5	5	100.00
264.	-11-1-1P-1P-1P	"	8	4	50.00
265.	-2P	"	8	4	50.00
266.	73129-5-1-2P-1P-1P	(JG-62 X Radhey)	7	7	100.00
267.	-2P	"	8	8	100.00
268.	-16-4-1P-1P-1P	"	4	4	100.00
269.	73136-7-1-1P-1H-1P	(JG-62 X BEG-482)	2	2	100.00
270.	-2P	"	2	2	100.00
271.	-2-1P-1P-1P	"	4	4	100.00
272.	-15-5-1P-1P-1P	"	2	2	100.00
273.	-2P	"	3	3	100.00
274.	73138-2-1-1H-1P-1P	(JG-62 X JS-221)	-	-	-
275.	-2P	"	3	3	100.00
276.	-2P-1P	"	6	6	100.00
277.	-2P	"	8	7	87.50
278.	73142-8-3-1P-1P-1P	(JG-62 X Chafa)	9	8	88.88
279.	-2P	"	4	4	100.00
280.	-12-1-1H-1P-1P	"	10	10	100.00
281.	-2-2H-1P-1P	"	5	5	100.00
282.	-2P	"	14	14	100.00
283.	73143-1-1-2P-1P-1P	(JG-62 X Annigeri)	3	3	100.00
284.	73144-6-1-2P-1P-1P	(JG-62 X B-108)	4	4	100.00
285.	73145-2-1-1H-1P-1P	(JG-62 X B-110)	7	7	100.00
286.	73150-12-2-1P-1H-1P	(JG-62 X P-1786)	13	11	84.61
287.	-2P	"	12	12	100.00
288.	-BH-1P	"	6	5	83.33
289.	-2P	"	13	11	84.61
290.	-3P	"	19	19	100.00
291.	-2H-1P	"	18	18	100.00
292.	-2P	"	15	15	100.00
293.	-15-3-2H-BH-1P	"	18	18	100.00

contd.

1	2	3	4	5	
294.	73150-15-3-2H-BH-2P	(JG-62 X P-1786)	19	19	100.00
295.	73151-5-2-1P-1H-1P	(JG-62 X Ceylon-2)	20	20	100.00
296.	-2P	"	20	20	100.00
297.	73152-3-1-1H-1P-1P	(JG-62 X USA-613)	18	18	100.00
298.	-4-3-1H-BH-1P	"	16	16	100.00
299.	-2P	"	18	18	100.00
300.	73154-2-1-1H-1P-1P	(JG-62 X No.42)	16	16	100.00
301.	-2P	"	13	13	100.00
302.	-6-4-2P-1P-1P	"	19	19	100.00
303.	-2P	"	17	17	100.00
304.	-9-1-1P-1P-1P	"	6	6	100.00
305.	-2P	"	12	12	100.00
306.	73155-3-3-1P-BH-1P	(JG-62 X F-404)	20	18	90.00
307.	-2P	"	19	16	84.21
308.	73161-23-1-1H-BH-1P	(JG-62 X H-223)	19	17	89.47
309.	73162-2-2-2P-1P-1P	(JG-62 X F-370)	16	16	100.00
310.	73163-18-3-1H-1P-1P	(JG-62 X No.56)	18	18	100.00
311.	-2P	"	16	16	100.00
312.	-20-2-2H-1P-1P	"	19	19	100.00
313.	-2P	"	15	15	100.00
314.	73166-6-1-1H-1P-1P	(JG-62 X Pant-104)	4	4	100.00
315.	-9-1-1H-1P-1P	"	15	15	100.00
316.	-2P	"	15	15	100.00
317.	-1P-BH-1P	"	14	14	100.00
318.	-2P	"	16	16	100.00
319.	-3-1H-BH-1P	"	20	6	30.00
320.	-2P	"	15	15	100.00
321.	-2H-1H-1P	"	14	14	100.00
322.	-2P	"	14	14	100.00
323.	-BH-1P	"	14	14	100.00
324.	73167-3-1-1P-1P-1P	(JG-62 X F-496)	11	11	100.00
325.	-5-2-1H-1P-1P	"	17	17	100.00
326.	-2P-1H-1P	"	18	18	100.00
327.	-2P	"	17	17	100.00
328.	-2H-1P-1P	"	10	10	100.00
329.	-5-3-1P-2H-1P	"	13	10	76.92
330.	-2P	"	13	13	100.00
331.	-3H-1P	"	15	15	100.00
332.	-1H-BH-1P	"	14	14	100.00
333.	-2P-1H-1P	"	12	12	100.00
334.	-2P	"	12	12	100.00
335.	-2H-BH-1P	"	8	8	100.00
336.	-11-2-1H-1P-1P	"	10	10	100.00
337.	73170-6-3-1P-1H-1P	(JG-62 X E-100)	10	10	100.00
338.	-2P-1H-1P	"	10	10	100.00
339.	-2P	"	10	10	100.00
340.	-2H-1P	"	4	4	100.00

contd.

1	2		3	4	5
341.	73170-6-3-2P-2H-2P	(JG-62 X E-100)	5	5	100.00
342.	-3H-1P	"	7	7	100.00
343.	-2P	"	7	7	100.00
344.	-18-1-1H-1P-1P	"	7	7	100.00
345.	-2P	"	11	11	100.00
346.	-4-1P-2H-1P	"	14	14	100.00
347.	-2P	"	5	5	100.00
348.	-3H-1P	"	5	5	100.00
349.	-2P	"	7	7	100.00
350.	73173-2-1-1H-1P-1P	"	10	10	100.00
351.	-2P	"	10	10	100.00
352.	-3P	"	9	9	100.00
353.	73175-1-1-1H-BH-BP	(G-130 X P-4779)	13	13	100.00
354.	73179-14-1-1H-1H-1P	(G-130 X P-5409)	8	8	100.00
355.	-2P	"	12	12	100.00
356.	-24-1-1H-1H-1P	"	11	11	100.00
357.	-2P	"	11	11	100.00
358.	-2H-1H-1P	"	11	11	100.00
359.	-2P	"	17	17	100.00
360.	-3P	"	10	10	100.00
361.	73185-1-5-1H-BH-1P	(G-130 X Chafa)	10	10	100.00
362.	-2P	"	3	3	100.00
363.	-2-1-1H-BH-1P	"	14	14	100.00
364.	-2P	"	10	10	100.00
365.	-2-1H-BH-1P	"	6	6	100.00
366.	-2P	"	11	11	100.00
367.	-4-1H-BH-1P	"	3	3	100.00
368.	-2P	"	-	-	-
369.	-3P	"	6	6	100.00
370.	-7-1-1H-1H-1P	"	1	1	100.00
371.	-2H-1P	"	6	6	100.00
372.	-2P	"	1	1	100.00
373.	-2-1H-1P-1P	"	1	1	100.00
374.	-2P	"	2	2	100.00
375.	-2-1H-BH-1P	"	3	3	100.00
376.	-2P	"	4	4	100.00
377.	-2H-BH-1P	"	-	-	-
378.	-3-1H-BH-1P	"	5	5	100.00
379.	-2P	"	5	5	100.00
380.	-12-3-1H-1H-1P	"	-	-	-
381.	-2P	"	5	5	100.00
382.	-2H-1P	"	6	6	100.00
383.	-2P	"	6	6	100.00
384.	73187-1-1-1H-BH-1P	(G-130 X JG-24)	-	-	-
385.	-2H-BH-1P	"	3	3	100.00

contd.



1	2	3	4	5	
386.	73187-1-1-2H-BH-2P	(G-130 X JG-24)	1	1	100.00
387.	-2-1H-BH-1P	"	1	1	100.00
388.	-2P	"	2	2	100.00
389.	-3-1-1H-1H-1P	"	8	8	100.00
390.	-2P	"	6	6	100.00
391.	-2H-1P	"	-	-	-
392.	-2P	"	4	4	100.00
393.	-3H-1P	"	7	7	100.00
394.	-2P	"	7	7	100.00
395.	-2-1H-BH-1P	"	2	2	100.00
396.	-2P	"	3	3	100.00
397.	73190-6-1-1H-BH-1P	(F-378 X Chafa)	2	2	100.00
398.	-2P	"	8	8	100.00
399.	73196-5-3-1H-BH-1P	(T-3 X JG-24)	11	11	100.00
400.	-2P	"	2	2	100.00
401.	73204-6-1H-LB-1P-1P	(RS-11 X No. 42)	6	6	100.00
402.	-2P	"	6	6	100.00
403.	73205-8-4-1H-1P-1P	(RS-11 X F-404)	3	3	100.00
404.	-2P	"	3	3	100.00
405.	73208-1-1-1H-BH-1P	(RS-11 X F-378)	12	12	100.00
406.	-2H-BH-1P	"	4	4	100.00
407.	-2P	"	7	7	100.00
408.	73210-3-1-1H-1P-1P	(GW-5/7 X F-404)	7	7	100.00
409.	-2P	"	1	1	100.00
410.	-6-1-2P-1P-1P	"	3	3	100.00
411.	-2P	"	3	3	100.00
412.	73211-1-1-1H-1P-1P	(GW-5/7 X Ceylon-2)	7	6	85.71
413.	-2P	"	10	8	80.00
414.	-4-1H-1P-1P	"	14	14	100.00
415.	-2P	"	4	4	100.00
416.	73212-7-3-1P-1P-1P	(GW-5/7 X Pant-104)	6	6	100.00
417.	-2P	"	5	5	100.00
418.	-1H-1P	"	4	4	100.00
419.	-2P	"	10	10	100.00
420.	73213-2-2-1P-1P-1P	(GW-5/7 X H-223)	5	5	100.00
421.	-2P	"	-	-	-
422.	-9-1-1H-1H-1P	"	2	2	100.00
423.	-2P	"	6	6	100.00
424.	-1H-3H-1P	"	7	7	100.00
425.	-2P	"	6	6	100.00
426.	-2H-1P-1P	"	4	4	100.00
427.	-2P	"	6	6	100.00
428.	-2-1H-1P-1P	"	2	2	100.00
429.	-2P	"	7	7	100.00
430.	-3-1H-1P-1P	"	4	4	100.00

contd.

1	2	3	4	5
431.	73213-9-3-1H-1P-2P (GW-5/7 X H-223)	2	2	100.00
432.	-3P "	3	3	100.00
433.	73217-2-4-1H-2H-1P (F-404 X Ceylon-2)	7	7	100.00
434.	-3-1-1H-BH-1P "	7	7	100.00
435.	-1H-2P "	4	4	100.00
436.	73218-13-3-1H-1P-1P (F-404 X Pant-104)	6	6	100.00
437.	-2P "	12	12	100.00
438.	73219-2-1-1H-1P-1P (F-404 X H-223)	13	13	100.00
439.	-2P "	2	2	100.00
440.	-2H-1H-1P "	4	4	100.00
441.	-2H-1P "	10	10	100.00
442.	-2P "	9	9	100.00
443.	73219-2-4-1H-1H-1P (F-404 X H-220)	3	3	100.00
444.	-2P "	5	5	100.00
445.	-2H-1P "	6	6	100.00
446.	-3-1-2H-1H-1P "	6	6	100.00
447.	-4-1H-1H-1P "	8	8	100.00
448.	-2P "	3	3	100.00
449.	-2H-1P "	9	9	100.00
450.	-2P "	5	5	100.00
451.	-2H-BH-1P "	4	4	100.00
452.	-2H-BH-2P "	7	7	100.00
453.	-4-2-1H-BH-1P "	3	3	100.00
454.	-2P "	6	6	100.00
455.	-3-1H-1P-1P "	6	6	100.00
456.	-3-1H-1P-2P "	12	12	100.00
457.	-4-3H-1H-1P "	6	6	100.00
458.	-2P "	4	4	100.00
459.	73222-4-2-1H-1P-1P (Ceylon-2 X Pant-104)	9	9	100.00
460.	-2P "	3	3	100.00
461.	-19-3-1H-BH-1P "	3	3	100.00
462.	-2P "	6	6	100.00
463.	-22-2-2H-1P-1P "	8	6	75.00
464.	-2P "	5	5	100.00
465.	73223-1-2-1H-1H-1P (Ceylon X F-370)	5	5	100.00
466.	-2P "	3	3	100.00
467.	-2H-1P "	3	3	100.00
468.	-2P "	11	11	100.00
469.	73241-3-1-1H-1P-1P (JGC-1 X Chafa)	7	7	100.00
470.	-2P "	5	5	100.00
471.	73250-15-1-1H-1H-1P (RS-11 X Ceylon-2)	8	8	100.00
472.	73252-5-3-1H-BH-1P "	3	3	100.00
473.	-2P "	10	10	100.00
474.	-6-3-1H-BH-1P "	8	8	100.00
475.	-2P "	8	8	100.00

contd.

1	2	3	4	5
476.	73252-6-3-2H-1H-1P (RS-11 X Ceylon-2)	4	4	100.00
477.	-2P "	7	7	100.00
478.	-7-2-1H-BH-1P "	7	7	100.00
479.	-11-4-1P-1H-1P "	8	8	100.00
480.	-2P "	6	6	100.00
481.	73257-7-1-1H-BH-1P (Ceylon-2 X Ahmedabad-52)	14	13	92.85
482.	-2P "	8	8	100.00
483.	73259-20-2-2H-BH-1P (P-1786 X C-214)	9	9	100.00
484.	-3-2H-BH-1P "	8	8	100.00
485.	-2P "	8	8	100.00
486.	73264-1-1-1H-BH-1P (Ahmedabad-52 X 850-3/27)	4	4	100.00
487.	-2P "	8	8	100.00
488.	-3H-1P "	4	4	100.00
489.	-2P "	9	9	100.00
490.	-2-3-1H-BH-1P "	14	14	100.00
491.	73273-5-4-1H-1P-1P (L-2 X EC-1538)	8	8	100.00
492.	-2P "	10	10	100.00
493.	73275-10-1-2H-BH-1P (F-378 X P-4642)	10	10	100.00
494.	-2P "	11	11	100.00
495.	73278-8-2-3-1H-1P-1P (F-61 X P-2974)	12	12	100.00
496.	-2P "	10	10	100.00
497.	73301-7-4-1H-1H-1P (G-543 X Annigeri)	9	9	100.00
498.	-2P "	5	5	100.00
499.	-13-1-1H-1P-1P "	15	15	100.00
500.	-2P "	19	19	100.00
501.	-3-1H-1H-1P "	15	15	100.00
502.	-19-1-1H-1H-1P "	11	11	100.00
503.	-2P "	14	13	92.85
504.	-2H-1P "	10	10	100.00
505.	-2P "	7	4	57.14
506.	-3H-1P "	9	8	88.88
507.	-2P "	3	3	100.00
508.	-19-3-1H-1H-1P "	7	7	100.00
509.	-2P "	7	5	71.42
510.	73307-10-4-1H-1H-1P (K-468 X F-378)	6	6	100.00
511.	-2P "	6	6	100.00
512.	-2H-2H-1P "	8	8	100.00
513.	-2P "	9	9	100.00
514.	-14-2-1H-BH-1P "	11	10	90.90
515.	-2H-1P-1P "	9	8	88.88
516.	-2P "	9	7	77.77
517.	-3-1H-1P-1P "	11	11	100.00
518.	-2P "	12	12	100.00
519.	-BH-1P "	11	11	100.00
520.	-2P "	7	7	100.00

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1	2	3	4	5
521.	73308-1-3-1H-2H-1P (F-378 X USA-613)	8	8	100.00
522.	-2P "	8	8	100.00
523.	-7-4-1H-BH-1P "	7	4	57.14
524.	-2P "	4	4	100.00
525.	-17-1-1H-BH-1P "	9	8	88.88
526.	-2P "	10	8	80.00
527.	73310-3-3-1H-1P-1P (C-214 X Radhey)	16	16	100.00
528.	-18-4-1H-1H-1P "	16	11	68.75
529.	73312-1-4-1H-BH-1P (T-3 X G-24)	11	11	100.00
530.	-2P "	9	9	100.00
531.	-3-3H-1H-1P-1P "	2	2	100.00
532.	73315-16-2-1H-BH-1P (H-355 X F-496)	3	3	100.00
533.	-2P "	10	10	100.00
534.	-18-5-1H-1P-1P "	6	6	100.00
535.	-2P "	9	8	88.88
536.	73318-11-3-1H-2H-1P (G-24 X Annigeri)	4	1	25.00
537.	-2P "	11	9	81.81
538.	-3H-1P "	7	7	100.00
539.	-2P "	7	7	100.00
540.	73320-1-1-2H-1H-1P (USA-613 X Bengal gram)	9	7	77.77
541.	73324-3-1-1P-1P-1P (Hima X L-345)	14	9	64.28
542.	-3-1-1P-1P-2P "	11	6	54.54
543.	-2P-1P "	10	6	60.00
544.	-2P "	2	2	100.00
545.	73326-7-2-1H-1H-1P (C-235 X No.55)	10	9	90.00
546.	-2P "	2	2	100.00
547.	-11-3-1H-1H-1P "	8	8	100.00
548.	-2P "	11	11	100.00
549.	73344-7-4-1P-1P-1P (NP-34 X P-3806)	11	11	100.00
550.	73348-5-4-1H-1H-1P (BN-10 X H-223)	5	5	100.00
551.	-2P "	8	8	100.00
552.	-6-1-1P-1P-1P "	2	2	100.00
553.	-2P "	12	8	66.66
554.	73363-2-2-1P-1P-1P (BEG-482 X Annigeri)	10	6	60.00
555.	-2P "	14	7	50.00
556.	73377-1-2-1H-1H-1P (GW-5/7 X No.42)	7	5	71.42
557.	7417-B-1P-LB-1P-1P (P-2974 X G-130)	9	9	100.00
558.	-2P "	6	5	83.33
559.	7443-B-1H-LB-1H-1P (Lebanese local X H-355)	9	7	77.77
560.	7458-B-1H-LB-BH-1P (SP-405 X H-208) X (RS-11 X GW-5/7)	12	6	50.00
561.	-2P "	8	4	50.00
562.	7469-1-1H-LB-BH-1P BG-1 (H-355 X L-550)	3	2	66.66
563.	-7-2H-LB-1P-1P "	11	11	100.00
564.	-2P "	8	8	100.00
565.	7478-B-3P-LB-1P-1P (850-3/27 XG-130 X JG-62)	4	4	100.00

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1	2	3	4	5	
566.	7478-B-3P-LB-1P-2P	(850-3/27 X (G-130 X JG-62)	9	9	100.00
567.	7481-B-1H-LB-1H-1P	(F-61 X (G-543 X 850-3/27)	8	8	100.00
568.	-2P	"	9	9	100.00
569.	7486-B-9P-LB-1P-1P	(C-156 X (850-3/27 X F-378)	10	10	100.00
570.	-2P	"	11	11	100.00
571.	74103-B-2H-LB-1H-1P	(P-502 X BG-1)	14	14	100.00
572.	-2P	"	15	15	100.00
573.	-2H-1P	"	11	11	100.00
574.	-2P	"	8	8	100.00
575.	74109-B-4H-LB-BH-1P	(P-436 X G-130)	8	8	100.00
576.	-9H-LB-BH-1P	"	3	3	100.00
577.	-2P	"	12	12	100.00
578.	74113-B-1H-LB-BH-1P	(P-505 X BG-1)	11	11	100.00
579.	-2P	"	8	8	100.00
580.	-3H-LB-BH-1P	"	8	8	100.00
581.	-2P	"	5	5	100.00
582.	74126-B-1H-LB-BH-1P	(P-99 X F-378)	6	4	66.66
583.	-2P	"	15	15	100.00
584.	74132-B-1H-LB-BH-1P	(G-130 X BG-1)	14	14	100.00
585.	-2P	"	8	8	100.00
586.	74193-B-3P-LB-1P-1P	(F-61 X K-468)	8	8	100.00
587.	-2P	"	11	11	100.00
588.	74204-B-2P-LB-1P-1P	(Pant-102 X SP-405)	9	8	88.88
589.	-2P	"	5	3	60.00
590.	74280-B-3P-LB-1P-1P	(C-156 X 850-3/27 X B-110)	4	2	50.00
591.	-2P	"	9	6	66.66
592.	74286-B-1P-LB-1P-1P	(P-4027 X (850-3/27 X No.56)	2	2	100.00
593.	-2P	"	6	6	100.00
594.	7314-20-1-1H-1P-1P	(H-208 X Annigeri)	11	11	100.00
595.	-2P	"	6	6	100.00
596.	7338-2-4-1H-1P-1P	(H-208 X C-104)	8	6	75.00
597.	7344-19-2-2-2P-1P-1P	(L-550 X F-61)	1	1	100.00
598.	7353-2-3-1P-1P-1P	(L-550 X BEG-482)	7	3	42.85
599.	-1H-1P-1P	"	8	6	75.00
600.	7358-4-3-1H-1P-1P	(L-550 X K-4)	7	3	42.85
601.	-2P	"	12	7	58.33
602.	-3P	"	14	11	78.57
603.	-4P	"	8	6	75.00
604.	-8-2-1H-1P-1P	"	8	8	100.00
605.	7367-15-3-1P-1P-1P	(L-550 X P-1786)	12	5	41.66

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1	2	3	4	5
606.	7369-2-2-1P-1P (L-550 X USA-613)	10	2	20.00
607.	-2P "	4	3	75.00
608.	-3P "	10	8	80.00
609.	-4P "	8	6	75.00
610.	-5P "	7	4	57.14
611.	-1H-1P-1P "	7	5	71.42
612.	-2P "	5	5	100.00
613.	-3P "	5	5	100.00
614.	-4P "	5	2	40.00
615.	-5P "	2	2	100.00
616.	-4-1-1P-1P-1P "	4	4	100.00
617.	-2P "	14	8	57.14
618.	7380-8-3-1P-2P-1P (L-550 X GW-5/7)	17	16	94.11
619.	-2P "	-	-	-
620.	-13-1-1P-1P-1P "	5	5	100.00
621.	-15-3-1P-1P-1P "	16	8	50.00
622.	-2P "	13	9	69.23
623.	7376-12-1-1H-1P-1P (L-550 X SP-405)	3	3	100.00
624.	-2P "	3	3	100.00
625.	7380-3-2-1H-1P-1P (L-550 X F-496)	5	5	100.00
626.	7385-1-2-1H-1P-1P (L-550 X L-2)	1	1	100.00
627.	-2P "	4	4	100.00
628.	-3P "	7	7	100.00
629.	-4P "	5	5	100.00
630.	-5P "	7	7	100.00
631.	-6P "	7	7	100.00
632.	-8-2-1P-1P-1P "	9	9	100.00
633.	-2P "	16	16	100.00
634.	-3P "	10	10	100.00
635.	-10-2-1P-1P-1P "	5	5	100.00
636.	-BH-1P "	12	12	100.00
637.	-12-1-1H-1P-1P "	7	7	100.00
638.	-2P "	8	8	100.00
639.	7387-3-3-2H-BH-1P (L-550 X E-100)	8	7	87.50
640.	-2P "	2	2	100.00
641.	-12-1-1H-BH-1P "	2	2	100.00
642.	73242-17-2-1H-1P-1P (K-4 X L-144)	4	4	100.00
643.	-2P "	8	8	100.00
644.	-1P-1P-1P "	-	-	-
645.	-2P "	4	4	100.00
646.	-3P "	6	6	100.00
647.	73352-2-1-1H-1P-1P (JG-62 X P-252)	7	6	85.71
648.	7461-B-8H-LB-1H-1P (850-3/27 X K-468) X (Chafa X K-4)	9	9	100.00
649.	-2P "	2	2	100.00
650.	-3P "	4	4	100.00

1	2	3	4	5	
651.	74243-B-5P-LB-1P-1P	(H-208 X P-4804)	-	-	-
652.	-2P	"	14	14	100.00
653.	7312-4-1-1H-1H-BP	(H-208 X K-4)	9	9	100.00
654.	7338-2-4-1H-1P-BP	(H-208 X C-104)	9	9	100.00
655.	"	"	7	7	100.00
656.	7344-19-2-2P-1P-BP	(L-550 X F-61)	10	10	100.00
657.	-3-1H-1P-BP	"	9	9	100.00
658.	7345-6-1-1P-1P-BP	(L-550 X F-378)	11	8	72.72
659.	7353-2-3-1P-1P-BP	(L-550 X BEG-482)	2	2	100.00
660.	-1H-1P-BP	"	4	4	100.00
661.	-6-1-1P-1P-BP	"	3	2	66.66
662.	-1H-1P-BP	"	4	1	25.00
663.	"	"	7	2	28.57
664.	-2-1P-1P-BP	"	9	3	33.33
665.	-2P-1P-BP	"	9	5	55.55
666.	7358-11-3-1P-1P-BP	(L-550 X K-4)	-	-	-
667.	7367-8-2-1H-1H-BP	(L-550 X P-1786)	-	-	-
668.	-15-3-1P-1P-BP	"	4	4	100.00
669.	-1H-1H-BP	"	10	10	100.00
670.	7369-4-1-1P-1P-BP	(L-550 X USA-613)	12	12	100.00
671.	7370-8-3-1P-1P-BP	(L-550 X GW-5/7)	10	10	100.00
672.	-2P-BP	"	10	10	100.00
673.	-2P-1P-BP	"	7	7	100.00
674.	-15-3-1P-1P-BP	"	3	3	100.00
675.	7376-12-1-1H-1P-BP	(L-550 X SP-405)	4	4	100.00
676.	7385-8-2-1P-1P-BP	(L-550 X L-2)	6	6	100.00
677.	-10-2-1P-1P-BP	"	3	3	100.00
678.	-1H-1P-BP	"	5	5	100.00
679.	-12-2-1H-1H-BP	"	4	4	100.00
680.	-15-1-1H-1P-BP	"	6	5	83.33
681.	7387-3-3-2H-BH-BP	(L-550 X E-100)	7	5	71.42
682.	-12-1-1H-BH-BP	"	7	7	100.00
683.	73235-5-2-1P-1P-BP	(Rabat X F-378)	11	11	100.00
684.	73247-17-2-1P-1P-BP	(K-4 X L-144)	1	1	100.00
685.	73277-1-1-2H-1P-BP	(F-61 X P-480)	3	3	100.00
686.	73352-2-1-1H-1P-BP	(JG-62 X P-2252)	1	1	100.00
687.	7452-B-4H-LB-1P-BP	(850-3/27 X CP-66) X (Rabat X L-550)	3	3	100.00

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1.	739-5-2-2H-LB-1H-1P	(H-208 X Pant-102)	6	5	83.33
2.	7310-22-1-1H-LB-1H-BP	(H-208 X T-3)	12	12	100.00
3.	7314-11-1P-LB-1H-BP	(H-208 X Annigeri)	7	7	100.00
4.	7315-26-1-1P-LB-BH-BP	(H-208 X B-108)	13	7	53.84
5.	-2-1P-LB-BH-BP	"	14	14	100.00

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1	2	3	4	5	
6.	7322-5-3-3H-LB-1H-BP	(H-208 X RS-11)	15	13	86.66
7.	-6-3-2H-LB-1H-BP	"	9	5	55.55
8.	7326-12-3-1H-LB-BH-BP	(H-208 X BR-70)	6	6	100.00
9.	7328-8-4-1P-LB-1H-BP	(H-208 X CP-66)	6	6	100.00
10.	7330-3-5-2P-LB-BH-BP	(H-208 X EC-12409)	5	5	100.00
11.	7332-7-1-2H-LB-1H-BP	(H-208 X F-370)	17	9	52.94
12.	-2-1H-LB-BH-BP	"	11	7	63.63
13.	-11-1-1H-LB-1H-BP	"	7	7	100.00
14.	-2H-BP	"	5	4	80.00
15.	-3-1H-LB-1H-BP	"	3	3	100.00
16.	-2H-LB-BH-BP	"	7	3	42.85
17.	-4-1H-LB-1H-BP	"	13	9	69.23
18.	-2H-LB-BH-BP	"	10	5	50.00
19.	-12-2-1H-LB-1H-BP	"	6	6	100.00
20.	-2H-LB-1H-BP	"	1	1	100.00
21.	-4-2H-LB-1H-BP	"	10	3	30.00
22.	7333-2-4-1H-LB-BH-BP	(H-208 X F-496)	17	8	47.05
23.	-13-1-1H-LB-1H-BP	"	11	5	45.45
24.	-2H-LB-1H-BP	"	7	5	71.42
25.	-15-2-1H-LB-BH-BP	"	6	3	50.00
26.	-3H-LB-1H-BP	"	7	6	85.71
27.	-2H-BP	"	9	5	55.55
28.	-4-2H-LB-BH-BP	"	8	3	37.50
29.	7336-3-2-1P-LB-1H-BP	(H-208 X No.40)	-	-	-
30.	7338-1-1-3H-LB-1H-BP	(H-208 X C-104)	1	1	100.00
31.	-3-1-1H-LB-1H-BP	"	10	2	20.00
32.	7339-3-3-1H-LB-1H-BP	(H-208 X E-100)	13	13	100.00
33.	-7-2-1P-LB-1H-BP	"	6	6	100.00
34.	-9-3-1P-LB-1H-BP	"	8	8	100.00
35.	7341-10-2-1H-LB-2H-BP	(H-208 X N-59)	15	15	100.00
36.	-16-2-1H-LB-1H-BP	"	16	16	100.00
37.	7343-16-4-1H-LB-BH-BP	(H-208 X USA-613)	5	2	40.00
38.	7341-20-3-1P-LB-2H-BP	(H-208 X N-59)	7	7	100.00
39.	7343-19-1-1H-LB-BH-BP	(H-209 X USA-613)	17	11	64.70
40.	7344-11-1-1H-LB-BH-BP	(L-550 X F-61)	13	10	76.92
41.	-13-3-1P-LB-1P-BP	"	3	3	100.00
42.	7374-4-1-1H-LB-1H-BP	(L-550 X Pant-102)	3	1	33.33
43.	7378-20-3-2H-LB-BH-BP	(L-550 X H-223)	8	6	75.00
44.	7387-12-1-2H-LB-1H-BP	(L-550 X E-100)	7	6	85.71
45.	7389-30-4-1P-LB-BH-BP	(850-3/27 X F-378)	13	10	76.92
46.	7390-5-1-1H-LB-1H-BP	(850-3/27 X Radhey).	8	8	100.00
47.	7391-7-1-1P-LB-BH-BP	(850-3/27 X G-130)	10	7	70.00
48.	7395-35-2-1P-LB-1P-BP	(850-3/27 X H-355)	7	7	100.00
49.	-40-1-2H-LB-1H-BP	"	7	4	57.14
50.	7397-5-1-1H-LB-BH-BP	(850-3/27 X BEG-482)	12	12	100.00

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1	2	3	4	5	
51.	73111-8-1-1H-LB-BH-BP	(850-3/27 X H-208)	10	10	100.00
52.	-3-1H-LB-1H-BP	"	4	4	100.00
53.	-BH-BP	"	14	14	100.00
54.	-5-1H-LB-BH-BP	"	16	16	100.00
55.	73113-5-1-2P-LB-1H-BP	(850-3/27 X USA-613)	7	7	100.00
56.	73126-2-3-1P-LB-1H-BP	(850-3/27 X E-100)	10	10	100.00
57.	73136-7-1-1P-LB-1H-BP	(JG-62 X BEG-482)	11	11	100.00
58.	-27-4-1H-LB-1H-BP	"	7	7	100.00
59.	73138-8-2-1P-LB-1H-BP	(JG-62 X JG-221)	12	12	100.00
60.	-2H-BP	"	9	9	100.00
61.	73140-6-3-1H-LB-BH-BP	(JG-62 X K-468)	11	11	100.00
62.	73142-12-1-1H-LB-1H-BP	(JG-62 X Chafa)	7	7	100.00
63.	-2-2H-LB-BH-BP	"	6	6	100.00
64.	73145-5-1-1H-LB-BH-BP	(JG-62 X B-110)	7	7	100.00
65.	73150-11-3-1H-LB-1H-BP	(JG-62 X P-1786)	14	14	100.00
66.	-2H-LB-1H-BP	"	20	20	100.00
67.	-12-2-1H-LB-1H-BP	"	17	17	100.00
68.	-1P-LB-2H-BP	"	18	18	100.00
69.	-13-1-1H-LB-1H-BP	"	3	3	100.00
70.	73152-5-2-1H-LB-BH-BP	(JG-62 X USA-613)	3	3	100.00
71.	-3-1H-LB-1H-BP	"	3	3	100.00
72.	73154-11-3-1H-LB-BH-BP	(JG-62 X No. 42)	4	4	100.00
73.	-15-1-1H-LB-1H-BP	"	3	3	100.00
74.	73166-6-2-1H-LB-1H-BP	(JG-62 X Pant-104)	7	7	100.00
75.	-9-2-1H-LB-BH-BP	"	10	10	100.00
76.	73167-3-1-1H-LB-1H-BP	(JG-62 X F-496)	8	8	100.00
77.	-5-2-1H-LB-1H-BP	"	13	13	100.00
78.	-2H-LB-1H-BP	"	10	10	100.00
79.	-3-1H-LB-BH-BP	"	8	8	100.00
80.	-2H-LB-BH-BP	"	11	11	100.00
81.	-10-1-1H-LB-1H-BP	"	9	9	100.00
82.	-3-1H-LB-1H-BP	"	12	12	100.00
83.	-11-3-3P-LB-1H-BP	"	9	9	100.00
84.	73168-8-3-1H-2P-1H-BP	(JG-62 X L-2)	10	7	70.00
85.	73170-3-2-1H-LB-1H-BP	(JG-62 X E-100)	12	12	100.00
86.	-54-2-1P-LB-1H-BP	"	12	12	100.00
87.	73175-1-1-2H-LB-BH-BP	(G-130 X P-4779)	6	6	100.00
88.	73185-7-2-1H-LB-1H-BP	(G-130 X Chafa)	10	10	100.00
89.	73187-1-1-1H-LB-1H-BP	(G-130 X JG-24)	16	16	100.00
90.	-2H-LB-1H-BP	"	11	11	100.00
91.	-3-2-2H-LB-1H-BP	"	12	12	100.00
92.	-6-2-1H-LB-1H-BP	"	10	10	100.00
93.	73190-1-1-1H-LB-1H-BP	(F-378 X Chafa)	11	11	100.00
94.	-2H-LB-1H-BP	"	11	11	100.00
95.	-2H-BP	"	10	10	100.00

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1	2	3	4	5	
96.	73190-2-2-1P-LB-1H-BP	(F-378 X Chafa)	12	12	100.00
97.	73205-2-1-1H-LB-1H-BP	(RS-11 X F-104)	8	8	100.00
98.	-8-4-1H-LB-1H-BP	"	7	7	100.00
99.	73208-1-3-1H-LB-BH-BP	(RS-11 X F-378)	9	9	100.00
100.	73211-1-1-1H-LB-BH-BP	(GW-5/7 X Ceylon-2)	3	3	100.00
101.	-2P-LB-1P-BP	"	14	12	85.71
102.	73213-1-1-1P-LB-1H-BP	(GW-5/7 X H-223)	9	9	100.00
103.	-9-3-1P-LB-1H-BP	(GW-5/7 X H-223)	7	7	100.00
104.	-1H-LB-1H-BP	"	11	11	100.00
105.	-2P-LB-1H-BP	"	15	15	100.00
106.	-2H-BP	"	7	7	100.00
107.	73217-3-1-1H-LB-1H-BP	(F-404 X Ceylon-2)	12	9	75.00
108.	-2H-LB-1H-BP	"	10	8	80.00
109.	73219-2-2-3H-LB-BH-BP	(F-404 X H-223)	7	7	100.00
110.	-3-3-1H-LB-1H-BP	"	10	10	100.00
111.	-3-4-1H-LB-1H-BP	"	10	10	100.00
112.	-2H-LB-BH-BP	"	11	11	100.00
113.	73222-4-3-1H-LB-1H-BP	(Ceylon-2 X Pant-104)	8	8	100.00
114.	-18-1-1H-LB-BH-BP	"	14	14	100.00
115.	-27-2-1H-LB-BH-BP	"	6	6	100.00
116.	73250-15-1-1H-LB-BH-BP	(RS-11 X Ceylon-2)	7	7	100.00
117.	-2H-LB-1H-BP	"	7	7	100.00
118.	73252-1-5-1H-LB-1H-BP	(RS-11 X C-214)	6	6	100.00
119.	-5-2-1H-LB-BH-BP	"	1	1	100.00
120.	-6-3-1H-LB-1H-BP	"	3	3	100.00
121.	73252-6-3-2H-LB-BH-BP	"	9	9	100.00
122.	-11-1-1H-LB-BH-BP	"	5	5	100.00
123.	-11-2-1P-LB-BH-BP	"	7	7	100.00
124.	-11-2-1H-LB-1H-BP	"	8	8	100.00
125.	-11-3-1H-LB-BH-BP	"	14	14	100.00
126.	-11-3-2H-LB-1H-BP	"	11	11	100.00
127.	73256-5-1-2H-LB-1H-BP	(Ceylon-2 X P-1786)	11	11	100.00
128.	73257-2-2-2H-LB-1H-BP	(Ceylon-2 X Ahmedabad-52)	2	2	100.00
129.	-16-1-1H-LB-1H-BP	"	3	3	100.00
130.	73300-1-1-1P-LB-BH-BP	(P-179 X E-100)	2	2	100.00
131.	7301-13-3-1H-LB-1H-BP	(G-543 X Annigeri)	13	13	100.00
132.	73307-6-1-1H-LB-1H-BP	(K-468 X F-378)	6	6	100.00
133.	-2H-LB-1H-BP	"	2	2	100.00
134.	-8-1-1H-LB-1H-BP	"	6	6	100.00
135.	-2H-LB-1H-BP	"	6	6	100.00
136.	-3H-LB-BH-BP	"	5	5	100.00
137.	-14-1-1H-LB-BH-BP	"	1	1	100.00
138.	-2H-LB-1H-BP	"	7	7	100.00
139.	-2-1H-LB-BH-BP	"	6	6	100.00
140.	-1H-BP	"	4	4	100.00

contd.

1	2	3	4	5	
141.	73307-14-2-1H-LB-2H-BP	(K-468 X F-378)	9	9	100.00
142.	-14-2-1H-LB-3H-BP	"	11	11	100.00
143.	-3-1H-LB-1H-BP	"	2	2	100.00
144.	73308-7-4-1H-LB-1H-BP	(F-378 X USA-613)	6	6	100.00
145.	-8-3-1H-LB-1H-BP	"	13	13	100.00
146.	73315-22-2-1P-LB-1H-BP	(H-355 X F-496)	8	8	100.00
147.	73326-1-2-1H-LB-1H-BP	(C-235 X No.55)	10	10	100.00
148.	-11-3-1H-LB-BH-BP	"	7	7	100.00
149.	73327-5-1-1P-LB-BH-BP	(C-235 X P-1137)	2	2	100.00
150.	73344-7-2-1H-LB-1H-BP	(NP-34 X P-3896)	8	8	100.00
151.	73348-5-3-1H-LB-1H-BP	(BN-10 X H-220)	6	6	100.00
152.	-6-1-2P-LB-1P-BP	"	9	9	100.00
153.	73352-4-4-1P-LB-BH-BP	(JG-62 X P-2252)	13	13	100.00
154.	73353-2-1-2H-LB-BH-BP	(Chafa X C-235)	10	10	100.00
155.	7338-1-1-2H-LB-1H-1P	(H-208 X C-104)	3	3	100.00
156.	-2P	"	8	8	100.00
157.	7384-3-2-2H-LB-BH-BP	(L-550 X Pant-104)	2	2	100.00
158.	7385-17-3-2H-LB-1H-1P	(L-550 X L-2)	-	-	-
159.	7571-1-1-2H-LB-1H-1P	(L-550 X No.42)	5	5	100.00
160.	7338-1-1-2H-LB-1H-BP	(H-208 X C-104)	4	4	100.00
161.	7353-6-1-1P-LB-1H-BP	(L-550 X BEG-482)	8	8	100.00
162.	-2H-LB-1H-BP	"	4	4	100.00

APPENDIX-III

Screening of chickpea germplasm for resistance to wilt (1978-79)

Sl. No.	ICC No.	No. of plants	No. of wilted plants	Per-cent wilt	Sl. No.	ICC No.	No. of plants	No. of wilted plants	Per-cent wilt
1	2	3	4	5	1	2	3	4	5
1.	10378	37	29	78.37	38.	10422	31	30	96.77
2.	10379	35	12	34.28	39.	10423	29	23	79.31
3.	10382	33	4	12.12	40.	10424	46	42	91.30
4.	10384	28	4	14.28	41.	10425	37	20	54.05
5.	10385	33	33	100.00	42.	10426	39	12	30.76
6.	10386	27	7	25.92	43.	10427	43	22	51.16
7.	10387	36	36	100.00	44.	10428	10	7	70.00
8.	10388	41	17	41.46	45.	10429	35	12	34.28
9.	10389	39	13	33.33	46.	10430	49	23	46.93
10.	10390	30	6	20.00	47.	10432	21	17	80.95
11.	10391	30	14	46.66	48.	10433	27	27	100.00
12.	10392	29	11	37.93	49.	10436	28	22	78.57
13.	10393	19	11	57.89	50.	10438	43	30	69.76
14.	10394	38	11	28.94	51.	10439	33	33	100.00
15.	10395	43	17	39.53	52.	10440	42	38	90.47
16.	10396	44	10	22.72	53.	10441	39	33	84.61
17.	10397	32	6	18.75	54.	10443	41	31	75.60
18.	10398	31	10	32.25	55.	10444	43	35	81.39
19.	10399	34	5	14.70	56.	10445	32	26	81.25
20.	10400	41	41	100.00	57.	10446	40	34	85.00
21.	10401	45	21	46.66	58.	10447	49	49	100.00
22.	10402	31	30	96.77	59.	10448	36	8	22.22
23.	10403	26	11	42.30	60.	10449	47	47	100.00
24.	10404	20	14	70.00	61.	10451	31	26	83.87
25.	10407	33	27	81.81	62.	10452	43	4	9.30
26.	10408	32	31	96.87	63.	10453	40	17	42.50
27.	10409	24	19	79.16	64.	10454	36	36	100.00
28.	10410	28	24	85.71	65.	10456	26	26	100.00
29.	10411	17	14	82.35	66.	10458	24	24	100.00
30.	10413	25	25	100.00	67.	10460	25	25	100.00
31.	10414	15	6	40.00	68.	10465	39	4	10.25
32.	10415	21	17	80.95	69.	10466	35	2	5.71
33.	10416	19	19	100.00	70.	10467	30	10	33.33
34.	10417	15	12	80.00	71.	10468	38	22	57.89
35.	10418	37	22	59.45	72.	10469	41	32	78.04
36.	10419	25	14	56.00	73.	10470	40	26	65.00
37.	10420	24	15	62.50	74.	10471	28	21	75.00

contd

1	2	3	4	5	1	2	3	4	5
75.	10473	45	27	60.00	121.	10521	42	10	23.80
76.	10474	34	11	32.35	122.	10522	42	33	78.57
77.	10475	26	4	15.38	123.	10523	35	26	74.28
78.	10476	42	18	42.85	124.	10524	41	27	65.85
79.	10477	37	13	35.13	125.	10525	37	31	83.78
80.	10478	37	37	100.00	126.	10526	43	27	62.79
81.	10479	36	7	19.44	127.	10527	32	8	25.00
82.	10480	32	12	37.50	128.	10528	42	32	76.19
83.	10481	27	10	37.03	129.	10529	44	20	45.45
84.	10482	42	11	26.19	130.	10530	29	5	17.24
85.	10483	30	13	43.33	131.	10531	37	8	21.62
86.	10484	31	13	41.93	132.	10532	30	12	40.00
87.	10485	38	13	34.21	133.	10533	34	17	50.00
88.	10486	22	10	45.45	134.	10534	31	18	58.06
89.	10487	19	7	36.84	135.	10535	35	15	42.85
90.	10488	23	11	47.82	136.	10536	40	5	12.50
91.	10489	26	12	46.15	137.	10537	32	6	18.75
92.	10490	24	11	45.83	138.	10538	32	2	6.25
93.	10491	15	6	40.00	139.	10539	36	6	16.66
94.	10492	19	3	15.78	140.	10540	38	29	76.31
95.	10493	27	6	22.22	141.	10541	32	8	25.00
96.	10494	41	17	41.46	142.	10542	36	36	100.00
97.	10495	35	22	62.85	143.	10543	22	13	59.09
98.	10496	41	20	48.78	144.	10544	40	33	82.50
99.	10497	28	19	67.85	145.	10545	38	28	73.68
100.	10498	32	25	78.12	146.	10546	28	24	85.71
101.	10500	27	5	18.51	147.	10547	23	10	43.47
102.	10501	39	7	17.94	148.	10548	26	20	76.92
103.	10502	46	21	45.65	149.	10549	33	5	15.15
104.	10504	39	14	35.89	150.	10550	39	8	20.51
105.	10505	45	9	20.00	151.	10551	37	9	24.32
106.	10506	48	19	39.58	152.	10552	28	10	35.71
107.	10507	41	13	31.70	153.	10553	34	8	23.52
108.	10508	33	31	93.93	154.	10554	34	18	52.94
109.	10509	26	6	23.07	155.	10555	37	8	21.62
110.	10510	38	37	97.36	156.	10556	35	5	14.28
111.	10511	35	8	22.85	157.	10557	40	12	30.00
112.	10512	47	8	17.02	158.	10558	32	11	34.37
113.	10513	46	10	21.73	159.	10559	44	9	20.45
114.	10514	37	7	18.91	160.	10560	40	19	47.50
115.	10515	37	13	35.13	161.	10561	45	37	82.22
116.	10516	50	13	26.00	162.	10562	44	12	27.27
117.	10517	41	8	19.51	163.	10563	46	8	17.39
118.	10518	46	18	39.13	164.	10564	39	32	82.05
119.	10519	45	34	75.55	165.	10565	45	33	73.33
120.	10520	42	6	14.28	166.	10566	44	17	38.63

cont

1	2	3	4	5	1	2	3	4	5
167.	10567	36	12	33.33	213.	10634	12	6	50.00
168.	10568	39	13	33.33	214.	10635	9	9	100.00
169.	10569	29	11	37.93	215.	10636	33	32	96.96
170.	10570	30	12	40.00	216.	10637	36	36	100.00
171.	10571	40	16	40.00	217.	10638	22	21	95.45
172.	10572	40	10	25.00	218.	10639	24	24	100.00
173.	10573	50	15	30.00	219.	10641	16	12	75.00
174.	10574	40	15	37.50	220.	10642	33	14	42.42
175.	10575	36	18	50.00	221.	10645	16	16	100.00
176.	10576	44	22	50.00	222.	10657	26	26	100.00
177.	10577	38	11	28.94	223.	10659	29	29	100.00
178.	10578	43	17	39.53	224.	10660	20	12	60.00
179.	10579	46	36	78.26	225.	10661	32	31	96.87
180.	10580	47	14	29.78	226.	10662	35	5	14.28
181.	10581	38	12	31.57	227.	10663	48	17	35.41
182.	10582	48	12	25.00	228.	10664	42	40	95.23
183.	10583	35	17	48.57	229.	10665	26	12	46.15
184.	10584	37	12	32.43	230.	10666	32	10	31.25
185.	10586	35	16	45.71	231.	10667	28	28	100.00
186.	10587	37	37	100.00	232.	10668	41	37	90.24
187.	10588	50	50	100.00	233.	10669	12	12	100.00
188.	10589	41	25	60.97	234.	10793	16	16	100.00
189.	10590	42	16	38.09	235.	10794	38	20	52.63
190.	10591	36	23	63.88	236.	10795	50	34	68.00
191.	10592	28	19	67.85	237.	10796	35	33	94.28
192.	10593	31	17	54.83	238.	10797	29	16	55.17
193.	10594	29	29	100.00	239.	10798	36	36	100.00
194.	10595	31	31	100.00	240.	10799	29	10	34.48
195.	10596	30	28	93.33	241.	10801	38	11	28.94
196.	10597	50	17	34.00	242.	10802	38	2	5.26
197.	10598	32	32	100.00	243.	10803	45	3	6.66
198.	10609	34	29	85.29	244.	10804	42	23	54.76
199.	10610	28	28	100.00	245.	10805	32	7	21.87
200.	10611	36	36	100.00	246.	10806	40	10	25.00
201.	10615	26	22	84.61	247.	10807	35	10	28.57
202.	10617	39	37	94.87	248.	10808	48	47	97.91
203.	10618	14	14	100.00	249.	10809	19	3	15.78
204.	10619	23	20	86.95	250.	10810	40	26	65.00
205.	10621	11	4	36.36	251.	10811	39	39	100.00
206.	10624	11	11	100.00	252.	10814	41	41	100.00
207.	10625	14	13	92.85	253.	10820	31	9	29.03
208.	10626	24	17	70.83	254.	10821	33	33	100.00
209.	10628	13	13	100.00	255.	10822	29	26	89.65
210.	10630	30	5	16.66	256.	10823	22	2	9.09
211.	10632	5	5	100.00	257.	10827	34	34	100.00
212.	10633	9	4	44.44	258.	10828	29	16	55.17

contd.

1	2	3	4	5	1	2	3	4	5
259.	10829	40	14	35.00	305.	2399	41	27	65.45
260.	10830	28	25	89.28	306.	2405	31	31	100.00
261.	10831	45	35	77.77	307.	2407	15	15	100.00
262.	10832	23	18	78.26	308.	2409	15	15	100.00
263.	10833	30	9	30.00	309.	2414	16	16	100.00
264.	10834	19	5	26.31	310.	2419	19	19	100.00
265.	10836	21	16	76.19	311.	2438	12	12	100.00
266.	10837	17	17	100.00	312.	2441	16	16	100.00
267.	371	35	31	88.57	313.	2447	14	14	100.00
268.	997	38	35	92.10	314.	2496	21	21	100.00
269.	1001	18	17	94.44	315.	2498	19	19	100.00
270.	1002	15	15	100.00	316.	2507	24	24	100.00
271.	1003	21	9	42.85	317.	2561	9	9	100.00
272.	1011	20	17	85.00	318.	2605	8	8	100.00
273.	1024	34	3	8.82	319.	2608	10	10	100.00
274.	1026	35	15	42.85	320.	2621	43	43	100.00
275.	1071	17	14	82.35	321.	2623	17	17	100.00
276.	1079	10	8	80.00	322.	2624	20	20	100.00
277.	1091	19	19	100.00	323.	2625	25	25	100.00
278.	1096	38	13	34.21	324.	2628	25	25	100.00
279.	1162	37	34	91.89	325.	2629	35	14	40.00
280.	1899	24	4	16.66	326.	2632	15	15	100.00
281.	1909	25	9	36.00	327.	2641	33	31	93.93
282.	1916	36	11	30.55	328.	2642	43	41	95.34
283.	1919	27	17	62.96	329.	2652	20	20	100.00
284.	1920	31	17	54.83	330.	2657	23	23	100.00
285.	2205	20	20	100.00	331.	2659	18	18	100.00
286.	2210	35	12	34.28	332.	2662	21	21	100.00
287.	2214	13	13	100.00	333.	2679	30	30	100.00
288.	2215	37	10	27.02	334.	2688	18	7	38.88
289.	2216	31	16	51.61	335.	2818	31	19	61.29
290.	2217	28	10	35.71	336.	2850	38	36	94.73
291.	2218	32	11	34.37	337.	2853	39	36	92.30
292.	2221	30	5	16.66	338.	2871	40	40	100.00
293.	2222	15	15	100.00	339.	2922	35	5	14.28
294.	2230	14	14	100.00	340.	2957	41	34	82.92
295.	2231	40	11	27.50	341.	3040	44	25	56.81
296.	2232	31	12	38.70	342.	3056	50	50	100.00
297.	2234	19	19	100.00	343.	3065	28	28	100.00
298.	2235	31	7	22.58	344.	3088	30	30	100.00
299.	2329	38	37	97.36	345.	3124	38	38	100.00
300.	2349	33	17	51.51	346.	3125	15	15	100.00
301.	2371	24	24	100.00	347.	3127	40	40	100.00
302.	2384	10	10	100.00	348.	3134	39	22	56.41
303.	2386	31	8	25.80	349.	3135	35	27	77.14
304.	2394	24	24	100.00	350.	3152	16	16	100.00

contd.

1	2	3	4	5	1	2	3	4	5
351.	3158	16	16	100.00	400.	3673	18	18	100.00
352.	3172	34	28	82.35	401.	3674	15	15	100.00
353.	3174	18	18	100.00	402.	3675	10	10	100.00
354.	3183	7	7	100.00	403.	3678	23	23	100.00
355.	3184	24	12	50.00	404.	3683	8	8	100.00
356.	3201	34	7	20.58	405.	3684	18	3	16.66
357.	3284	28	11	39.28	406.	3686	30	8	26.66
358.	3308	15	15	100.00	407.	3690	16	15	93.75
359.	3348	35	11	31.42	408.	3692	15	12	80.00
360.	3350	28	12	42.85	409.	3694	20	20	100.00
361.	3356	40	10	25.00	410.	3695	16	7	43.75
362.	3370	20	7	35.00	411.	3700	12	12	100.00
363.	3376	18	18	100.00	412.	3702	28	9	32.14
364.	3384	16	15	93.75	413.	3703	13	13	100.00
365.	3388	38	38	100.00	414.	3709	11	11	100.00
366.	3396	25	11	44.00	415.	3725	14	14	100.00
367.	3404	25	25	100.00	416.	3736	34	34	100.00
368.	3408	20	18	90.00	417.	3738	33	33	100.00
369.	3414	32	9	28.12	418.	3740	22	22	100.00
370.	3415	28	4	14.28	419.	3764	27	27	100.00
371.	3427	35	19	54.28	420.	3767	47	47	100.00
372.	3454	15	3	20.00	421.	3775	18	18	100.00
373.	3455	19	14	73.69	422.	3776	28	28	100.00
374.	3556	29	21	72.41	423.	3780	42	42	100.00
375.	3562	25	2	8.00	424.	3784	38	38	100.00
376.	3565	20	20	100.00	425.	3785	32	32	100.00
377.	3566	16	15	93.75	426.	3790	17	17	100.00
378.	3567	38	33	86.84	427.	3810	27	27	100.00
379.	3572	34	12	35.29	428.	3811	43	43	100.00
380.	3573	17	17	100.00	429.	3812	15	15	100.00
381.	3582	25	3	12.00	430.	3822	22	22	100.00
382.	3584	32	9	28.12	431.	3849	38	38	100.00
383.	3592	16	16	100.00	432.	3875	25	25	100.00
384.	3593	4	4	100.00	433.	3876	18	18	100.00
385.	3596	30	30	100.00	434.	3882	10	10	100.00
386.	3597	14	14	100.00	435.	3883	29	29	100.00
387.	3603	19	6	31.57	436.	3884	19	19	100.00
388.	3605	5	5	100.00	437.	3885	17	17	100.00
389.	3607	11	11	100.00	438.	3886	11	11	100.00
390.	3608	23	23	100.00	439.	3887	27	27	100.00
391.	3621	25	25	100.00	440.	3890	32	32	100.00
392.	3622	18	18	100.00	441.	3896	36	36	100.00
393.	3630	21	21	100.00	442.	3899	28	28	100.00
394.	3634	28	28	100.00	443.	3900	24	24	100.00
395.	3638	15	15	100.00	444.	3954	20	20	100.00
396.	3643	23	23	100.00	445.	4114	26	26	100.00
397.	3665	21	21	100.00	446.	4121	32	32	100.00
398.	3666	33	33	100.00	447.	4124	21	21	100.00
399.	3671	33	33	100.00	448.	4125	32	32	100.00

contd.



1	2	3	4	5	1	2	3	4	5
449.	4126	28	28	100.00	495.	5072	13	3	23.07
450.	4127	28	28	100.00	496.	5097	33	27	81.81
451.	4132	14	14	100.00	497.	5098	16	16	100.00
452.	4374	37	6	16.21	498.	5100	37	11	29.72
453.	4392	32	32	100.00	499.	5104	52	11	21.15
454.	4422	40	14	35.00	500.	5105	41	3	7.31
455.	4424	42	40	95.23	501.	5107	11	9	81.81
456.	4479	37	22	59.45	502.	5115	29	29	100.00
457.	4494	17	17	100.00	503.	5117	30	29	96.66
458.	4726	26	23	88.46	504.	5118	8	7	87.50
459.	4774	14	14	100.00	505.	5120	17	17	100.00
460.	4803	16	16	100.00	506.	5122	19	12	63.15
461.	4833	45	44	97.77	507.	5123	24	23	95.83
462.	4834	35	30	85.71	508.	5124	36	36	100.00
463.	4835	9	9	100.00	509.	5214	30	30	100.00
464.	4841	28	28	100.00	510.	5332	40	15	37.50
465.	4843	50	8	16.00	511.	5576	46	42	91.30
466.	4844	30	22	73.33	512.	5583	37	16	43.23
467.	4857	25	25	100.00	513.	5585	26	4	15.38
468.	4865	15	4	26.66	514.	5586	35	34	97.14
469.	4867	37	37	100.00	515.	6139	14	12	85.71
470.	4868	16	15	93.75	516.	6140	40	39	97.50
471.	4869	24	24	100.00	517.	6141	19	17	89.47
472.	4870	24	18	75.00	518.	6142	19	19	100.00
473.	4884	4	4	100.00	519.	6143	17	17	100.00
474.	4887	22	22	100.00	520.	6144	38	38	100.00
475.	4888	43	17	39.53	521.	6145	31	30	96.77
476.	4916	12	12	100.00	522.	6148	20	17	85.00
477.	4921	11	11	100.00	523.	6149	20	20	100.00
478.	4924	16	16	100.00	524.	6151	19	19	100.00
479.	4939	20	18	90.00	525.	6152	12	12	100.00
480.	4940	32	31	96.87	526.	6154	8	8	100.00
481.	4941	34	34	100.00	527.	6155	13	9	69.23
482.	4943	26	25	96.15	528.	6157	4	4	100.00
483.	4944	25	24	96.00	529.	6159	23	21	91.30
484.	4949	13	9	69.23	530.	6160	11	9	81.81
485.	4950	34	33	97.05	531.	6161	11	11	100.00
486.	4954	27	22	81.48	532.	6162	20	20	100.00
487.	4956	21	7	33.33	533.	6164	23	23	100.00
488.	4969	10	6	60.00	534.	6165	18	18	100.00
489.	4988	43	32	74.41	535.	6166	12	7	58.33
490.	4989	40	11	27.50	536.	6167	15	15	100.00
491.	4990	38	28	73.68	537.	6168	20	19	95.00
492.	4994	37	7	18.91	538.	6169	14	14	100.00
493.	5024	31	4	12.90	539.	6171	13	13	100.00
494.	5033	16	16	100.00	540.	6172	8	8	100.00

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541.	6173	10	10	100.00	586.	6408	46	14	30.43
542.	6174	21	21	100.00	587.	6409	32	13	40.62
543.	6175	10	9	90.00	588.	6414	37	37	100.00
544.	6180	4	2	50.00	589.	6415	22	17	77.27
545.	6182	19	13	68.42	590.	6417	32	8	25.00
546.	6188	8	8	100.00	591.	6418	30	9	30.00
547.	6196	20	20	100.00	592.	6419	32	22	68.75
548.	6209	16	10	62.50	593.	6420	19	19	100.00
549.	6218	3	3	100.00	594.	6426	27	27	100.00
550.	6224	14	11	78.57	595.	6483	19	19	100.00
551.	6225	25	12	48.00	596.	6485	31	6	19.35
552.	6234	16	16	100.00	597.	6489	32	3	9.37
553.	6235	10	5	50.00	598.	6490	33	8	24.24
554.	6240	12	11	91.66	599.	6491	43	4	9.30
555.	6244	28	28	100.00	600.	6502	42	7	16.66
556.	6247	14	13	92.85	601.	6503	34	11	32.35
557.	6250	34	30	88.23	602.	6509	30	30	100.00
558.	6251	7	7	100.00	603.	6512	39	27	69.23
559.	6252	8	8	100.00	604.	6513	17	17	100.00
560.	6254	12	12	100.00	605.	6514	25	25	100.00
561.	6256	17	17	100.00	606.	6524	37	33	89.18
562.	6258	33	33	100.00	607.	6528	50	25	50.00
563.	6259	23	23	100.00	608.	6531	42	9	21.42
564.	6260	25	25	100.00	609.	6561	29	29	100.00
565.	6261	32	32	100.00	610.	6563	30	29	96.66
566.	6262	27	27	100.00	611.	6564	31	11	35.48
567.	6276	12	12	100.00	612.	6565	37	34	91.89
568.	6283	10	10	100.00	613.	6569	43	20	46.51
569.	6284	23	18	78.26	614.	6571	46	8	17.39
570.	6285	34	7	20.58	615.	6573	37	14	37.83
571.	6286	35	10	28.57	616.	6574	43	18	41.86
572.	6287	9	9	100.00	617.	6576	48	48	100.00
573.	6298	28	28	100.00	618.	6577	49	45	91.83
574.	6299	14	7	50.00	619.	6579	44	40	90.90
575.	6304	22	17	77.27	620.	6581	41	39	95.12
576.	6311	28	28	100.00	621.	6582	42	40	95.23
577.	6312	17	17	100.00	622.	6585	39	38	97.43
578.	6315	37	16	43.24	623.	6587	36	35	97.22
579.	6316	50	45	90.00	624.	6591	41	33	80.48
580.	6381	40	3	7.50	625.	6594	41	41	100.00
581.	6382	39	12	30.76	626.	6597	41	36	87.80
582.	6383	39	6	15.38	627.	6607	44	41	93.18
583.	6388	41	11	26.82	628.	6610	40	7	17.50
584.	6389	49	4	8.16	629.	6612	32	12	37.50
585.	6399	29	5	17.24	630.	6613	41	32	78.04

contd.

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631.	6614	36	28	77.77	676.	6757	50	47	94.00
632.	6622	21	21	100.00	677.	6758	23	15	65.21
633.	6624	37	37	100.00	678.	6759	35	16	45.71
634.	6628	38	14	36.84	679.	6760	35	35	100.00
635.	6630	38	7	18.42	680.	6761	31	11	35.48
636.	6633	44	4	9.09	681.	6764	37	19	51.35
637.	6642	29	6	20.68	682.	6765	44	6	13.63
638.	6644	36	10	27.77	683.	6766	30	5	16.66
639.	6652	34	34	100.00	684.	6768	37	8	21.62
640.	6656	23	23	100.00	685.	6771	34	23	67.64
641.	6657	27	26	96.29	686.	6773	29	8	27.58
642.	6660	32	32	100.00	687.	6774	40	3	7.50
643.	6668	20	3	15.00	688.	6775	37	16	43.24
644.	6670	21	21	100.00	689.	6776	40	8	20.00
645.	6671	33	0	0.00	690.	6778	22	22	100.00
646.	6672	38	38	100.00	691.	6781	29	29	100.00
647.	6674	23	17	73.91	692.	6784	34	34	100.00
648.	6677	27	26	96.29	693.	6786	41	9	21.95
649.	6679	16	6	37.50	694.	6788	31	6	19.35
650.	6687	38	4	10.52	695.	6791	50	10	20.00
651.	6690	40	39	97.50	696.	6792	27	10	37.03
652.	6691	55	55	100.00	697.	6793	31	27	87.09
653.	6695	20	20	100.00	698.	6794	34	9	26.47
654.	6698	31	31	100.00	699.	6796	28	5	17.85
655.	6699	39	39	100.00	700.	6797	33	33	100.00
656.	6704	38	36	94.73	701.	6798	48	14	29.16
657.	6709	35	35	100.00	702.	6799	43	11	25.58
658.	6711	35	2	5.71	703.	6800	40	5	12.50
659.	6714	43	41	95.34	704.	6801	45	5	11.11
660.	6727	41	5	12.19	705.	6802	40	39	97.50
661.	6729	27	27	100.00	706.	6803	38	7	18.42
662.	6730	50	4	8.00	707.	6804	41	41	100.00
663.	6738	35	21	60.00	708.	6806	34	30	88.23
664.	6739	40	40	100.00	709.	6808	20	20	100.00
665.	6740	28	28	100.00	710.	6810	38	10	26.31
666.	6742	35	26	74.28	711.	6811	36	20	55.55
667.	6743	28	7	25.00	712.	6816	29	2	6.89
668.	6744	16	16	100.00	713.	6818	47	9	19.14
669.	6745	25	25	100.00	714.	6819	36	2	5.55
670.	6746	33	25	75.75	715.	6821	38	6	15.78
671.	6747	30	30	100.00	716.	6822	28	3	10.71
672.	6748	28	22	78.57	717.	6846	42	42	100.00
673.	6749	33	29	87.87	718.	6857	36	36	100.00
674.	6750	40	39	97.50	719.	6867	20	20	100.00
675.	6752	19	17	89.47	720.	6870	28	26	92.85

contd.

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721.	6874	35	5	14.28	766.	7669	47	35	74.46
722.	6892	30	30	100.00	767.	7674	33	30	90.90
723.	6900	39	39	100.00	768.	7675	5	5	100.00
724.	6905	33	18	54.54	769.	7676	2	2	100.00
725.	6908	35	13	37.14	770.	7677	12	12	100.00
726.	6911	31	14	45.16	771.	7678	39	39	100.00
727.	6913	40	32	80.00	772.	7680	31	31	100.00
728.	7202	25	25	100.00	773.	7713	46	46	100.00
729.	7203	35	32	91.42	774.	7776	18	18	100.00
730.	7205	18	18	100.00	775.	7802	23	23	100.00
731.	7206	29	28	96.55	776.	7858	23	23	100.00
732.	7228	34	34	100.00	777.	7872	31	13	41.93
733.	7284	28	19	67.85	778.	7874	21	21	100.00
734.	7302	45	10	22.22	779.	7875	27	27	100.00
735.	7313	10	10	100.00	780.	7876	12	12	100.00
736.	7314	36	6	16.66	781.	7877	39	34	87.17
737.	7319	33	33	100.00	782.	7878	26	20	76.92
738.	7320	30	30	100.00	783.	7879	27	20	74.07
739.	7321	33	33	100.00	784.	7880	31	17	54.83
740.	7324	17	16	94.11	785.	7887	32	32	100.00
741.	7326	46	40	86.95	786.	8054	43	38	88.37
742.	7328	44	40	90.90	787.	8074	37	37	100.00
743.	7330	20	20	100.00	788.	8075	30	30	100.00
744.	7333	38	7	18.42	789.	8078	47	40	85.10
745.	7335	35	35	100.00	790.	8079	33	25	75.75
746.	7336	40	6	15.00	791.	8081	30	30	100.00
747.	7338	40	8	20.00	792.	8083	13	7	53.84
748.	7384	28	5	17.85	793.	8085	18	14	77.77
749.	7386	27	27	100.00	794.	8086	32	8	25.00
750.	7526	33	8	24.24	795.	8113	40	40	100.00
751.	7559	33	33	100.00	796.	8115	43	43	100.00
752.	7562	38	35	92.10	797.	8119	27	27	100.00
753.	7563	47	26	55.31	798.	8121	25	12	48.00
754.	7564	21	19	90.47	799.	8127	41	31	75.60
755.	7567	50	31	62.00	800.	8129	30	30	100.00
756.	7569	43	41	95.34	801.	8131	47	10	21.27
757.	7571	25	25	100.00	802.	8132	37	27	72.97
758.	7572	36	36	100.00	803.	8133	45	20	44.44
759.	7573	26	26	100.00	804.	8134	34	21	61.76
760.	7574	23	19	82.60	805.	8136	45	45	100.00
761.	7585	46	33	71.73	806.	8140	38	38	100.00
762.	7595	30	30	100.00	807.	8143	39	39	100.00
763.	7606	34	34	100.00	808.	8149	43	39	90.69
764.	7661	13	11	84.61	809.	8152	40	37	92.50
765.	7663	31	29	93.54	810.	8153	40	40	100.00

contd.

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811.	8157	32	32	100.00	856.	8468	37	26	70.27
812.	8158	50	50	100.00	857.	8469	35	9	25.71
813.	8162	20	20	100.00	858.	8470	41	7	17.07
814.	8163	26	26	100.00	859.	8471	25	23	92.00
815.	8167	27	27	100.00	860.	8472	46	32	69.56
816.	8169	25	25	100.00	861.	8477	21	21	100.00
817.	8170	46	5	10.86	862.	8480	9	9	100.00
818.	8172	46	16	34.78	863.	8484	10	10	100.00
819.	8176	40	40	100.00	864.	8486	35	32	91.42
820.	8181	49	10	20.40	865.	8487	37	37	100.00
821.	8182	41	5	12.19	866.	8488	36	15	41.66
822.	8183	26	26	100.00	867.	8489	36	10	27.77
823.	8184	36	8	22.22	868.	8490	16	5	31.25
824.	8185	48	9	18.75	869.	8491	34	29	85.29
825.	8186	38	34	89.47	870.	8492	36	20	55.55
826.	8189	30	30	100.00	871.	8493	31	21	67.74
827.	8194	23	11	47.82	872.	8494	22	22	100.00
828.	8195	37	11	29.72	873.	8498	26	26	100.00
829.	8196	44	37	84.09	874.	8503	32	32	100.00
830.	8198	41	27	65.85	875.	8504	38	33	86.84
831.	8202	24	18	75.00	876.	8505	27	27	100.00
832.	8203	18	10	55.55	877.	8506	5	5	100.00
833.	8205	31	18	58.06	878.	8507	17	12	70.58
834.	8207	38	14	36.84	879.	8509	33	27	81.81
835.	8208	35	5	14.28	880.	8510	18	9	50.00
836.	8212	30	5	16.66	881.	8511	33	27	81.81
837.	8222	40	14	35.00	882.	8514	40	35	87.50
838.	8224	39	18	46.15	883.	8515	37	34	91.89
839.	8234	18	18	100.00	884.	8516	32	32	100.00
840.	8237	47	47	100.00	885.	8517	27	27	100.00
841.	8239	43	14	32.55	886.	8518	5	5	100.00
842.	8249	44	8	18.18	887.	8519	34	34	100.00
843.	8250	43	12	27.90	888.	8520	37	31	83.78
844.	8267	30	30	100.00	889.	8521	41	35	85.36
845.	8272	19	19	100.00	890.	8523	40	32	80.00
846.	8444	42	29	69.04	891.	8526	26	15	57.69
847.	8471	39	8	20.51	892.	8528	3	2	66.66
848.	8454	31	6	19.35	893.	8529	29	24	82.75
849.	8460	38	36	94.73	894.	8530	31	31	100.00
850.	8461	38	38	100.00	895.	8531	10	10	100.00
851.	8462	26	26	100.00	896.	8539	27	19	70.37
852.	8463	30	28	93.93	897.	8568	37	15	40.54
853.	8465	36	36	100.00	898.	8569	36	14	38.88
854.	8466	30	2	6.66	899.	8570	49	11	22.44
855.	8467	43	30	69.76	900.	8572	29	24	82.75

contd.

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901.	8573	34	26	76.47	946.	8628	22	22	100.00
902.	8574	12	11	91.66	947.	8632	19	6	31.57
903.	8575	23	23	100.00	948.	8633	24	24	100.00
904.	8576	50	27	54.00	949.	8636	39	14	35.89
905.	8577	43	22	51.16	950.	8638	37	31	83.78
906.	8578	33	14	42.42	951.	8640	20	20	100.00
907.	8579	46	42	91.30	952.	8641	25	25	100.00
908.	8580	34	30	88.23	953.	8643	22	22	100.00
909.	8581	44	33	75.00	954.	8644	26	26	100.00
910.	8583	49	28	57.14	955.	8646	25	25	100.00
911.	8584	10	2	20.00	956.	8647	21	21	100.00
912.	8585	43	1	2.38	957.	8650	12	12	100.00
913.	8586	44	9	20.45	958.	8652	18	18	100.00
914.	8588	29	13	44.82	959.	8656	30	30	100.00
915.	8589	10	4	40.00	960.	8657	15	15	100.00
916.	8590	41	31	75.60	961.	8660	12	12	100.00
917.	8591	31	21	67.74	962.	8662	22	22	100.00
918.	8592	32	31	96.87	963.	8663	29	29	100.00
919.	8593	24	17	70.83	964.	8664	29	29	100.00
920.	8595	39	12	30.76	965.	8668	29	29	100.00
921.	8596	34	16	47.05	966.	8673	28	28	100.00
922.	8597	24	8	33.33	967.	8678	27	27	100.00
923.	8598	22	12	54.54	968.	8695	25	25	100.00
924.	8599	33	26	78.78	969.	8696	19	19	100.00
925.	8600	41	41	100.00	970.	8708	22	22	100.00
926.	8601	40	33	82.50	971.	8710	25	25	100.00
927.	8602	34	30	88.23	972.	8716	23	23	100.00
928.	8603	44	10	22.72	973.	8719	32	30	93.75
929.	8604	30	13	43.33	974.	8720	33	31	93.93
930.	8605	26	13	50.00	975.	8721	22	21	95.45
931.	8606	31	31	100.00	976.	8722	15	15	100.00
932.	8607	42	20	47.61	977.	8726	23	21	91.30
933.	8609	15	7	46.66	978.	8729	38	38	100.00
934.	8610	24	1	4.16	979.	8730	29	29	100.00
935.	8612	36	4	11.11	980.	8732	15	15	100.00
936.	8613	41	22	53.65	981.	8735	24	24	100.00
937.	8614	26	7	26.92	982.	8736	39	39	100.00
938.	8615	37	36	97.29	983.	8737	22	22	100.00
939.	8616	24	20	83.33	984.	8738	25	25	100.00
940.	8617	24	9	37.50	985.	8739	33	33	100.00
941.	8621	28	28	100.00	986.	8740	20	20	100.00
942.	8622	28	4	14.28	987.	8774	35	29	82.85
943.	8623	34	25	73.52	988.	8777	31	31	100.00
944.	8625	37	35	94.59	989.	8779	20	20	100.00
945.	8627	40	17	42.50	990.	8787	16	16	100.00

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1	2	3	4	5	1	2	3	4	5
991.	8791	14	14	100.00	1036.	8895	34	34	100.00
992.	8796	37	37	100.00	1037.	8896	24	24	100.00
993.	8797	33	33	100.00	1038.	8897	38	38	100.00
994.	8798	44	42	95.45	1039.	8899	33	33	100.00
995.	8800	38	37	97.36	1040.	8901	38	38	100.00
996.	8803	31	31	100.00	1041.	8902	38	38	100.00
997.	8804	38	38	100.00	1042.	8904	36	36	100.00
998.	8814	37	36	97.29	1043.	8905	20	20	100.00
999.	8815	28	26	92.85	1044.	8906	31	31	100.00
1000.	8816	43	43	100.00	1045.	8907	33	33	100.00
1001.	8817	35	35	100.00	1046.	8908	34	34	100.00
1002.	8820	25	25	100.00	1047.	8912	21	20	95.23
1003.	8821	24	24	100.00	1048.	8913	12	12	100.00
1004.	8822	19	19	100.00	1049.	8916	34	33	97.95
1005.	8823	36	36	100.00	1050.	8935	44	27	61.36
1006.	8825	37	37	100.00	1051.	8967	32	4	12.50
1007.	8827	41	41	100.00	1052.	8968	46	7	15.21
1008.	8828	34	34	100.00	1053.	8969	41	8	19.51
1009.	8829	37	37	100.00	1054.	8970	30	6	20.00
1010.	8831	39	38	97.43	1055.	8971	32	2	6.25
1011.	8832	15	15	100.00	1056.	8975	47	7	14.89
1012.	8833	34	34	100.00	1057.	8976	47	15	31.91
1013.	8836	38	38	100.00	1058.	8977	31	6	19.35
1014.	8837	38	38	100.00	1059.	8979	41	4	9.75
1015.	8838	20	20	100.00	1060.	8980	35	3	8.57
1016.	8841	25	25	100.00	1061.	8981	49	11	22.44
1017.	8842	36	36	100.00	1062.	8983	41	7	17.07
1018.	8845	35	35	100.00	1063.	8984	36	1	2.77
1019.	8850	16	16	100.00	1064.	8985	47	3	6.38
1020.	8851	19	19	100.00	1065.	8986	37	7	18.91
1021.	8852	35	35	100.00	1066.	8988	40	2	5.00
1022.	8853	39	39	100.00	1067.	8991	38	1	2.63
1023.	8858	35	35	100.00	1068.	8992	48	10	20.83
1024.	8870	36	36	100.00	1069.	8997	35	2	5.71
1025.	8873	13	13	100.00	1070.	9006	28	2	7.14
1026.	8874	20	20	100.00	1071.	9022	44	18	40.90
1027.	8875	35	35	100.00	1072.	9024	44	30	68.18
1028.	8876	34	34	100.00	1073.	9025	25	3	12.00
1029.	8878	27	24	88.88	1074.	9032	43	1	2.32
1030.	8881	30	27	90.00	1075.	9038	47	18	38.29
1031.	8887	23	23	100.00	1076.	9049	32	31	96.87
1032.	8888	22	22	100.00	1077.	9051	34	34	100.00
1033.	8889	31	31	100.00	1078.	9053	44	12	27.27
1034.	8893	38	38	100.00	1079.	9054	35	10	28.57
1035.	8894	29	29	100.00	1080.	9055	43	2	4.65

contd..

1	2	3	4	5	1	2	3	4	5
1081.	9056	42	35	83.33	1126.	9128	46	14	30.43
1082.	9057	38	37	97.36	1127.	9129	39	13	33.33
1083.	9058	39	23	58.97	1128.	9130	29	4	31.03
1084.	9059	31	24	77.41	1129.	9131	37	15	40.54
1085.	9060	43	4	9.30	1130.	9135	32	12	37.50
1086.	9062	45	8	17.77	1131.	9136	17	6	35.29
1087.	9065	44	7	15.90	1132.	9152	13	13	100.00
1088.	9069	35	5	14.28	1133.	9160	5	5	100.00
1089.	9070	46	3	6.52	1134.	9171	7	7	100.00
1090.	9072	41	13	31.70	1135.	9179	18	18	100.00
1091.	9073	43	12	27.90	1136.	9182	10	10	100.00
1092.	9074	35	6	17.14	1137.	9226	20	20	100.00
1093.	9075	48	22	45.83	1138.	9243	6	6	100.00
1094.	9077	50	25	50.00	1139.	9430	4	4	100.00
1095.	9078	45	15	33.33	1140.	9482	12	12	100.00
1096.	9079	43	14	32.55	1141.	9483	11	11	100.00
1097.	9080	44	13	29.54	1142.	9492	14	14	100.00
1098.	9081	34	25	73.52	1143.	9520	8	8	100.00
1099.	9082	41	38	92.68	1144.	9523	8	8	100.00
1100.	9083	46	42	91.30	1145.	9609	14	14	100.00
1101.	9084	24	9	37.50	1146.	9624	14	14	100.00
1102.	9086	40	10	25.00	1147.	9646	27	27	100.00
1103.	9089	44	17	38.63	1148.	9647	12	12	100.00
1104.	9091	37	13	35.13	1149.	9654	9	9	100.00
1105.	9092	39	25	64.10	1150.	9666	8	8	100.00
1106.	9093	42	17	40.47	1151.	9670	16	16	100.00
1107.	9094	19	16	84.21	1152.	9671	9	9	100.00
1108.	9097	27	19	70.37	1153.	9675	13	13	100.00
1109.	9101	47	9	19.14	1154.	9705	1	1	100.00
1110.	9103	45	8	17.77	1155.	9716	10	10	100.00
1111.	9104	37	34	91.89	1156.	9727	9	9	100.00
1112.	9106	39	5	12.82	1157.	9728	10	10	100.00
1113.	9109	37	35	94.59	1158.	9752	11	11	100.00
1114.	9110	12	10	83.33	1159.	9761	12	12	100.00
1115.	9111	29	14	48.27	1160.	9767	11	11	100.00
1116.	9112	32	4	12.50	1161.	9774	4	4	100.00
1117.	9113	38	11	28.94	1162.	9811	10	10	100.00
1118.	9114	37	15	40.54	1163.	9817	11	11	100.00
1119.	9117	33	10	30.30	1164.	9824	7	7	100.00
1120.	9118	39	34	87.17	1165.	9825	5	5	100.00
1121.	9119	43	15	34.88	1166.	9836	18	18	100.00
1122.	9122	46	14	30.43	1167.	9844	6	6	100.00
1123.	9123	49	35	71.42	1168.	9851	16	16	100.00
1124.	9125	41	25	60.97	1169.	9858	11	11	100.00
1125.	9127	44	3	6.81	1170.	9870	15	15	100.00

cont'd



1	2	3	4	5	1	2	3	4	5
1171.	10331	18	18	100.00	1190.	10601	26	15	57.69
1172.	10333	16	16	100.00	1191.	10602	20	15	75.00
1173.	10348	14	14	100.00	1192.	10603	17	14	82.35
1174.	10349	27	27	100.00	1193.	10604	16	6	37.50
1175.	10352	15	15	100.00	1194.	10605	14	8	57.14
1176.	10360	23	23	100.00	1195.	10606	26	19	73.07
1177.	10361	13	13	100.00	1196.	10607	30	30	100.00
1178.	10362	17	10	58.82	1197.	10622	23	20	86.95
1179.	10363	25	20	80.00	1198.	10627	11	11	100.00
1180.	10365	17	17	100.00	1199.	10643	30	29	96.66
1181.	10367	6	3	50.00	1200.	10646	22	17	77.27
1182.	10369	13	11	84.61	1201.	10648	9	8	88.88
1183.	10377	26	26	100.00	1202.	10651	21	8	38.09
1184.	10380	7	5	71.42	1203.	10653	12	12	100.00
1185.	10381	27	15	55.55	1204.	10839	19	7	36.84
1186.	10383	18	6	33.33	1205.	10840	14	12	85.71
1187.	10585	26	24	92.30	1206.	10841	18	9	50.00
1188.	10599	16	11	68.75	1207.	10842	16	15	93.75
1189.	10600	27	24	88.88					

## APPENDIX-IV

Pot screening of breeding material

Sl. No.	Particular	No. of plants	No. of wilted plants	Sl. No.	Particular	No. of plants	No. of wilted plants
1	2	3	4	1	2	3	4
1.	Double-podded plants	8	8	40.	Stray plants	10	5
2.		-	-	41.		10	2
3.		10	10	42.		10	2
4.		9	9	43.		10	10
5.		10	10	44.		5	5
6.		10	10	45.		10	3
7.		10	10	46.		10	2
8.		10	10	47.		10	2
9.		1	1	48.		10	10
10.		10	10	49.		10	3
11.		10	10	50.		8	8
12.		9	9	51.		10	2
13.		10	10	52.		10	3
14.		10	10	53.		10	2
15.		10	10	54.		10	3
16.		10	10	55.		9	9
17.		9	9	56.		8	8
18.		10	10	57.		8	2
19.		7	7	58.		10	10
20.		6	6	59.		-	-
21.		3	3	60.		10	10
22.		6	6	61.		10	10
23.		9	9	62.		10	10
24.		10	10	63.		10	10
25.		4	4	64.		10	10
26.		6	6	65.		7	7
27.		6	6	66.		1	1
28.		7	7	67.		-	-
29.		7	7	68.		6	1
30.		5	5	69.		7	1
31.		6	6	70.		X	-
32.		10	10	71.		8	2
33.		-	-	72.		10	10
34.		10	10	73.		10	2
35.		10	10	74.		10	2
36.		10	10	75.		3	3
37.		10	2	76.		X	-
38.		10	2	77.		X	-
39.		10	10	78.		X	-
				79.		10	2

contd.

1	2	3	4	1	2	3	4
80.	F <sub>3</sub> P-36 X WR-315 (Single plant progenies)	9	5	108.		10	1
				109.		9	2
				110.		10	3
81.		10	3	111.		10	3
82.		10	5	112.		10	2
83.		8	5	113.		10	2
84.		10	2	114.		10	0
85.		10	5	115.		10	4
86.		10	8	116.		10	2
87.		10	6	117.		9	1
88.		10	2	118.		-	-
89.		10	8	119.		10	2
90.		10	5	120.		10	1
91.		10	3	121.		10	5
92.		9	9	122.		10	3
93.		10	9	123.		10	3
94.		10	9	124.		10	6
95.		10	3	125.		10	2
96.		9	7	126.		10	2
97.		10	4	127.		10	6
98.		10	1	128.		9	1
99.		10	2	129.		10	3
100.		8	4	130.	F <sub>1</sub> P-36 X WR-315	19	12
101.		10	9	131.	P-36	18	5
102.		10	7	132.	WR-315	19	2
103.		10	2	133.	F <sub>2</sub> C-214 X CPS-1	219	78
104.		10	1	134.	F <sub>1</sub> C-214 X CPS-1	8	8
105.		10	5	135.	CPS-1	29	5
106.		3	3	136.	C-214	28	23
107.		10	8				

APPENDIX-V

Pot screening of chickpea breeding material for wilt resistance

Sl. No.	Particulars	No. of plants	No. of plants wilted
1	2	3	4
<u>F<sub>3</sub></u>			
1.	P-36 X Ofra (751258-40P) SP	5	5
2.	P-36 X L-532 (75725-31P) SP	9	9
3.	P-36 X Giza (75730-15P) SP	1	1
4.	WR-315 X GL-651 (75879-21P) SP	8	6
5.	" (75879-22P) SP	9	9
6.	" (75879-23P) SP	9	9
7.	Lebanese local X (P-36 X Giza) (76104-34P) SP	9	7
8.	" (76104-36P) SP	3	1
9.	" (76104-45P) SP	9	9
10.	F <sub>3</sub> (850-3/27 X GW-5/7) X P-458 X	8	8
	F <sub>3</sub> (L-550 X Gaumuchil)-2 (752770-18P) SP		
11.	" -1 (752803-14P) SP	3	3
12.	" -1 (752803-15P) SP	10	8
13.	12-071-05436 X (NEC-143 X Annigeri) (751675-4P) SP	10	10
14.	H-208 X (NEC-79 X JM-466) (7646-31P)	8	2
15.	H-208 X (NEC-79 X JM-466) (7646-32P) SP	-	-
16.	" (7646-37P) SP	9	5
17.	" (7646-38P) SP	8	6
18.	NEC-1640 X (PRR-1 X P-1488) (76105-31P) SP	8	4
19.	" (76105-34P) SP	5	5
20.	" (76105-37P) SP	10	6
<u>F<sub>4</sub></u>			
21.	NEC-1572 X P-36 (75171-1P-3P) SP	6	2
<u>F<sub>5</sub></u>			
22.	(850-3/27 X JG-221) X L-550 (74454-3P-1P-1P) SP	10	3
23.	(850-3/27 X JG-221) X L-550 (74454-3P-1P-2P) SP	2	2
24.	(850-3/27 X JG-221) X L-550 (74454-3P-1P-3P) SP	-	-
25.	(P-1786 X L-550) X (T-3 X G-24) (74434-2P-1P-1P)	10	10
26.	(P-1786 X L-550) X (T-3 X G-24) (74434-3P-1P-3P) SP	6	6
27.	P-9800 X (850-3/27 X JG-24) (74450-3P-1P-1P) SP	10	10

contd.

1	2	3	4
28.	P-9800 X (850-3/27 X JG-24) (74450-3P-1P-2P) SP	10	10
29.	P-9800 X (850-3/27 X JG-24) (74450-3P-1P-3P) SP	-	-
30.	P-9800 X (850-3/27 X JG-24) (74450-3P-1P-4P) SP	6	6
31.	(G-130 X P-5409) X (L-550 X BG-1) (74536-1P-1P-1P) SP	10	10
32.	(G-130 X P-5409) X (L-550 X BG-1) (74536-1P-1P-2P)	8	8
33.	(G-130 X P-5409) X (L-550 X BG-1) (74536-6P-1P-4P) SP	5	5
34.	(G-130 X P-5409) X (L-550 X BG-1) (74536-6P-1P-5P) SP	9	9
35.	(G-130 X P-5409) X (L-550 X BG-1) (74536-6P-1P-6P) SP	6	6
36.	(P-1786 X L-550) X (T-3 X G-24) (74434-2P-1P- <u>BP</u> )	-	-
37.	(P-1786 X L- <u>550</u> ) X (T-3 X G-24) (74434-3P-1P- <u>BP</u> )	17	17
38.	P-9800 X (850-3/27 X JG-24) (74450-3P-1P- <u>BP</u> )	13	13
<u>F6</u>			
39.	L-550 X Gaumuchil (74226-1-2P-1P-1P) SP	1	1
40.	" (74226-1-2P-1P-2P) SP	6	6
41.	" (74226-1-2P-1P-3P) SP	2	2
42.	" (74226-1-2P-1P-4P) SP	5	5
43.	" (74226-1-2P-1P-5P) SP	9	9
44.	" (74226-1-2P-1P- <u>BP</u> )	20	20
45.	F-370 X L-550 (7379-BH-2-1P- <u>BP</u> )	20	16
46.	(850-3/26 X CP-66) X (Rabat X L-550) (7452-BH-4-1P- <u>BP</u> )	15	10
<u>F7</u>			
47.	L-550 X K-4 (7358-4-3-1H-1P-1P) SP	8	8
48.	" (7358-4-3-1H-1P-2P) SP	10	9
49.	" (7358-4-3-1H-1P-3P) SP	9	9
50.	" (7358-4-3-1H-1P-4P) SP	9	9
51.	" (7358-8-2-1H-1P-1P) SP	7	7
52.	K-4 X L-144 (73242-17-2-1H-1P-1P) SP	5	5
53.	L-550 X K-4 (7358-11-3-1P-1P- <u>BP</u> )	29	14

1	2	3	4
	<u>Parents</u>		
54.	P-36	7	2
55.	Ofra	8	8
56.	L-532	10	10
57.	Giza	10	10
58.	WR-315	10	1
59.	GL-651	8	8
60.	Lebanese local	10	10
61.	12-071-05436	10	10
62.	H-208	10	10
63.	NEC-1640	10	10
64.	NEC-1572	10	10
65.	L-550	10	10
66.	P-9800	7	7
67.	Gaumuchili	-	-
68.	K-4	9	9
69.	L-144	9	9
70.	GW-5/7	10	10
71.	850-3/27	10	10
72.	P-458	10	10
73.	NEC-14	10	6
74.	Annigeri	10	10
75.	NEC-79	10	10
76.	JM-466	10	10
77.	PRR-1	9	9
78.	P-1488	10	10
79.	JG-221	10	10
80.	P-1786	10	2
81.	T-3	10	10
82.	G-24	8	8
83.	JG-24	9	5
84.	G-130	10	10
85.	P-5409	10	4
86.	BG-1	10	10

APPENDIX-VI

Wilt/root rots in chickpea cultivars in the multiple disease nursery  
(1978-79)

S.No.	ICC No.	Pedigree	No. of plants	No. of dried plants	Percent dried plants
1	2	3	4	5	6
<u>Promising lines from 1977-78</u>					
1.	121		30	11	36.66
2.	202		38	8	21.05
3.	229		29	8	27.58
4.	267		20	6	30.00
5.	338		37	1	2.77
6.	391		34	2	5.88
7.	516		37	1	2.70
8.	519		29	3	10.34
9.	554		37	6	16.21
10.	658		34	5	14.70
11.	858		43	6	13.95
12.	867		43	4	9.30
13.	1443		33	4	12.12
14.	1450		33	4	12.12
15.	1611		35	7	25.00
16.	1891		35	8	22.85
17.	2072		35	4	11.42
18.	2083		7	0	0.00
19.	2086		29	4	13.79
20.	2089		29	3	10.34
21.	2104		28	2	7.14
22.	2321		31	22	70.96
23.	2566		22	3	13.63
24.	2660		21	2	9.52
25.	2812		31	6	19.35
26.	2835		35	5	15.15
27.	2854		26	11	42.30
28.	2860		23	23	100.00
29.	2883		27	3	11.11
30.	3099		28	6	21.42
31.	3103		28	2	7.14
32.	3392		31	4	14.81
33.	3396		27	3	11.11
34.	3426		27	11	40.74
35.	3429		29	3	10.34
36.	3539		23	2	8.69
37.	3684		40	4	10.00

1	2	3	4	5	6
38.	4519		30	5	16.66
39.	4552		29	3	10.34
40.	4651		31	17	54.83
41.	4716		37	5	13.51
42.	4918		29	6	20.68
43.	5003		15	11	73.33
44.	5727		2	1	50.00
45.	5864		24	3	12.50
46.	5901		14	3	21.42
47.	6081		25	2	8.00
48.	6098		23	3	13.04
49.	6671		45	4	8.88
50.	6880		39	3	7.69
51.	7111		27	2	7.40
52.	7248		30	3	10.00
53.	7254		30	4	13.33
54.	7681		28	1	3.57
55.	8222		37	7	18.91
56.	8446		24	7	29.16
57.	8933		35	1	2.85
58.	9001		38	2	5.26
59.	9117		30	5	16.66
60.	10104		34	1	2.94
61.	10130		30	1	3.33
62.	10394		37	7	18.91
63.	11088		38	22	57.39
64.	43		38	14	36.84
65.	606		26	2	7.69
66.	444		36	3	9.09
67.	460		36	6	16.66
68.	182		40	6	15.00
69.	449		47	4	8.51
70.	537		28	3	10.71
71.	595		44	7	15.90
72.	599		25	25	100.00
73.	843		40	20	50.00
74.	102		44	4	9.09
75.	434		31	2	6.45
76.	104		33	3	9.09
77.	6743		41	4	9.75
78.	3034		33	33	100.00
79.	3077		39	29	74.35
80.	3181		22	12	54.54
81.	4920		32	6	18.75
82.	2200		31	6	19.35
83.	3168		39	18	46.15

contd.



1	2	3	4	5	6
84.	4953		23	20	86.95
85.	8612		31	5	16.12
86.	10637		37	37	100.00
87.	10809		33	4	12.12
88.	2204		39	32	82.05
89.	4917		36	9	25.00
90.	4958		28	24	85.71
91.	5006		40	8	20.00
92.	8181		41	16	39.02
93.	1376		33	4	13.79
94.	9085		42	5	11.90
95.		BDN-9-3	39	6	15.38
96.	4485		38	4	10.52
97.	4994		41	28	68.29
98.	3439		41	2	4.87
99.	6761		40	8	20.00
100.	8250		44	18	40.90
101.	2271		16	16	100.00
102.	2369		44	33	75.00
103.	2566		39	6	15.38
104.	2664		29	15	51.72
105.	2950		32	4	12.50
106.	6411		49	5	10.20
107.	6460		35	4	11.42
108.	6474		35	8	22.85
109.	6480		36	4	11.11
110.	6754		37	37	100.00
111.	7482		34	34	100.00
112.	7882		22	17	77.27
113.	8065		22	22	100.00
114.	8142		19	19	100.00
115.	8159		36	36	100.00
116.	8200		29	29	100.00
117.	9225		25	25	100.00
118.	9341		21	21	100.00
119.	9360		41	41	100.00
120.	9386		24	24	100.00
121.	9396		42	42	100.00
122.	9397		14	14	100.00
123.	9400		15	15	100.00
124.	9499		44	25	56.81
125.	9792		13	13	100.00
126.	9853		10	10	100.00
127.	9887		25	25	100.00
128.	10317		22	22	100.00
129.	10326		14	14	100.00
130.	10340		15	15	100.00

contd.

1	2	3	4	5	6
131.	370		30	30	100.00
132.	372		40	40	100.00
133.	606		26	6	23.07
134.	609		38	28	73.68
135.	610		38	38	100.00
136.	613		26	26	100.00
137.	1910		39	2	5.12
138.	1913		40	4	10.00
139.	1918		37	3	8.10
140.	1925		48	48	100.00
141.	2204		45	38	84.44
142.	2256		40	40	100.00
143.	2278		46	42	91.30
144.	2285		32	32	100.00
145.	2286		32	32	100.00
146.	2293		29	25	86.20
147.	2311		31	11	35.48
148.	2326		42	36	85.71
149.	2328		39	23	58.97
150.	2337		37	17	45.94
151.	2339		41	19	46.34
152.	2345		48	35	72.91
153.	2350		19	19	100.00
154.	2353		36	36	100.00
155.	2354		44	4	9.09
156.	2381		38	38	100.00
157.	2401		30	10	33.33
158.	2430		37	12	32.43
159.	2450		34	7	20.58
160.	2456		19	19	100.00
161.	2461		41	3	7.89
162.	2463		37	10	27.02
163.	2474		21	21	100.00
164.	2616		48	8	16.66
165.	2660		40	4	10.00
166.	2670		40	20	50.00
167.	2774		31	22	70.96
168.	2803		36	29	80.55
169.	2810		50	35	70.00
170.	2812		41	6	14.63
171.	2828		42	42	100.00
172.	2829		43	43	100.00
173.	2835		40	20	50.00
174.	2852		38	23	60.52
175.	2854		36	22	61.11

contd.

1	2	3	4	5	6
176.	2856		45	45	100.00
177.	2858		46	7	15.21
178.	2860		49	49	100.00
179.	2862		40	12	30.00
180.	2872		38	17	44.73
181.	2874		44	6	13.63
182.	2883		40	6	15.00
183.	2896		36	36	100.00
184.	2900		35	35	100.00
185.	2917		40	22	55.55
186.	2934		47	28	59.57
187.	2935		40	5	12.50
188.	2943		35	6	17.14
189.	3034		46	30	65.21
190.	3058		32	3	9.37
191.	3083		20	20	100.00
192.	3103		41	5	12.19
193.	3117		48	22	45.83
194.	3133		42	42	100.00
195.	3142		37	30	81.08
196.	3145		20	20	100.00
197.	3147		32	32	100.00
198.	3168		39	5	12.82
199.	3181		39	7	17.94
200.	3310		39	5	12.82
201.	3354		36	17	47.22
202.	3357		36	14	38.88
203.	3368		30	6	20.00
204.	3381		33	4	12.12
205.	3389		28	23	82.14
206.	3392		31	6	19.35
207.	3397		36	12	33.33
208.	3398		35	31	88.57
209.	3425		32	32	100.00
210.	3426		39	28	71.79
211.	3428		37	8	21.62
212.	3438		25	25	100.00
213.	3439		31	31	100.00
214.	3440		45	45	100.00
215.	3506		35	26	74.28
216.	3513		25	2	8.00
217.	3514		47	47	100.00
218.	3520		37	19	51.35
219.	3528		36	12	33.33
220.	3531		39	3	7.69
221.	3533		32	2	6.25
222.	3534		46	4	8.69
223.	3564		35	35	100.00

contd.

1	2	3	4	5	6
224.	3595		32	7	21.87
225.	3704		26	26	100.00
226.	3735		42	42	100.00
227.	3782		30	3	10.00
228.	3959		27	18	66.66
229.	4120		31	31	100.00
230.	4129		34	4	11.76
231.	4152		36	12	33.33
232.	4185		33	33	100.00
233.	4365		26	6	23.07
234.	4839		40	40	100.00
235.	4840		23	23	100.00
236.	4846		30	25	83.33
237.	4847		31	6	19.35
238.	4848		42	7	16.66
239.	4849		27	27	100.00
240.	4850		44	5	11.36
241.	4852		39	39	100.00
242.	4853		27	8	29.62
243.	4862		32	14	43.75
244.	4864		34	6	17.64
245.	4902		35	13	37.14
246.	4909		25	25	100.00
247.	4920		31	5	16.12
248.	4934		29	29	100.00
249.	4945		49	40	100.00
250.	4955		27	27	100.00
251.	4970		37	37	100.00
252.	4984		43	40	93.02
253.	5350		40	29	72.50
254.	5351		34	34	100.00
255.	5356		26	26	100.00
256.	5359		42	42	100.00
257.	5682		40	40	100.00
258.	5683		27	27	100.00
259.	5686		31	31	100.00
260.	5688		45	45	100.00
261.	5689		28	19	67.85
262.	6037		25	25	100.00
263.	6039		21	12	57.14
264.	6098		28	4	14.28
265.	6099		27	27	100.00
266.	6101		36	9	25.00
267.	6307		36	36	100.00
268.	6309		34	17	50.00
269.	6320		39	6	15.38
270.	6361		26	6	23.07

contd.

1	2	3	4	5	6
271.	6362		31	6	19.35
272.	6363		40	40	100.00
273.	6364		30	21	70.00
274.	6366		34	3	8.82
275.	6367		34	34	100.00
276.	6368		35	35	100.00
277.	6372		26	4	15.38
278.	6376		27	27	100.00
279.	6377		40	40	100.00
280.	6378		42	42	100.00
281.	6379		35	4	11.42
282.	6384		22	2	9.09
283.	6385		44	3	6.81
284.	6386		25	2	8.00
285.	6391		41	21	51.21
286.	6393		41	21	51.21
287.	6395		30	6	20.00
288.	6401		30	30	100.00
289.	6413		35	35	100.00
290.	6421		35	5	14.28
291.	6427		27	17	62.96
292.	6437		29	4	13.79
293.	6440		36	3	8.33
294.	6444		29	25	86.20
295.	6446		46	46	100.00
296.	6453		39	39	100.00
297.	6455		43	4	9.30
298.	6456		41	26	63.41
299.	6457		37	37	100.00
300.	6458		31	7	22.58
301.	6459		24	24	100.00
302.	6471		37	37	100.00
303.	6472		42	42	100.00
304.	6482		39	7	17.94
305.	6487		39	39	100.00
306.	6488		38	4	10.52
307.	6494		41	2	4.87
308.	6501		37	2	5.40
309.	6527		31	25	81.45
310.	6535		34	15	44.11
311.	6570		30	6	20.00
312.	6588		37	37	100.00
313.	6592		34	34	100.00
314.	6605		37	37	100.00
315.	6608		41	3	7.31

contd

1	2	3	4	5	6
316.	6611		40	28	70.00
317.	6620		31	31	100.00
318.	6643		40	6	15.00
319.	6666		38	34	89.47
320.	6689		31	14	45.16
321.	6694		28	28	100.00
322.	6697		40	24	60.00
323.	6701		35	11	31.42
324.	6718		26	26	100.00
325.	6732		36	36	100.00
326.	6737		47	47	100.00
327.	6741		37	37	100.00
328.	6753		36	30	83.33
329.	6756		42	35	83.33
330.	6772		35	10	28.57
331.	6815		29	4	13.79
332.	6817		37	6	16.21
333.	6835		24	24	100.00
334.	6836		20	20	100.00
335.	6849		30	30	100.00
336.	6856		14	14	100.00
337.	6858		39	39	100.00
338.	6861		20	20	100.00
339.	6871		33	33	100.00
340.	6875		18	18	100.00
341.	6876		50	50	100.00
342.	6877		24	24	100.00
343.	6879		30	30	100.00
344.	6880		37	7	18.91
345.	6881		47	47	100.00
346.	6882		30	30	100.00
347.	6883		41	41	100.00
348.	6885		20	20	100.00
349.	6894		15	15	100.00
350.	6903		11	11	100.00
351.	6906		29	6	20.68
352.	6910		34	26	77.23
353.	6914		27	27	100.00
354.	6916		40	37	92.50
355.	6917		39	39	100.00
356.	6922		42	42	100.00
357.	6923		31	31	100.00
358.	6924		30	30	100.00
359.	6926		36	1	2.77
360.	6933		37	16	43.24

contd.

1	2	3	4	5	6
271.	6362		31	6	19.35
272.	6363		40	40	100.00
273.	6364		30	21	70.00
274.	6366		34	3	8.82
275.	6367		34	34	100.00
276.	6368		35	35	100.00
277.	6372		26	4	15.38
278.	6376		27	27	100.00
279.	6377		40	40	100.00
280.	6378		42	42	100.00
281.	6379		35	4	11.42
282.	6384		22	2	9.09
283.	6385		44	3	6.81
284.	6386		25	2	8.00
285.	6391		41	21	51.21
286.	6393		41	21	51.21
287.	6395		30	6	20.00
288.	6401		30	30	100.00
289.	6413		35	35	100.00
290.	6421		35	5	14.28
291.	6427		27	17	62.96
292.	6437		29	4	13.79
293.	6440		36	3	8.33
294.	6444		29	25	86.20
295.	6446		46	46	100.00
296.	6453		39	39	100.00
297.	6455		43	4	9.30
298.	6456		41	26	63.41
299.	6457		37	37	100.00
300.	6458		31	7	22.58
301.	6459		24	24	100.00
302.	6471		37	37	100.00
303.	6472		42	42	100.00
304.	6482		39	7	17.94
305.	6487		39	39	100.00
306.	6488		38	4	10.52
307.	6494		41	2	4.87
308.	6501		37	2	5.40
309.	6527		31	25	81.45
310.	6535		34	15	44.11
311.	6570		30	6	20.00
312.	6588		37	37	100.00
313.	6592		34	34	100.00
314.	6605		37	37	100.00
315.	6608		41	3	7.31

contd.

1	2	3	4	5	6
316.	6611		40	28	70.00
317.	6620		31	31	100.00
318.	6643		40	6	15.00
319.	6666		38	34	89.47
320.	6689		31	14	45.16
321.	6694		28	28	100.00
322.	6697		40	24	60.00
323.	6701		35	11	31.42
324.	6718		26	26	100.00
325.	6732		36	36	100.00
326.	6737		47	47	100.00
327.	6741		37	37	100.00
328.	6753		36	30	83.33
329.	6756		42	35	83.33
330.	6772		35	10	28.57
331.	6815		29	4	13.79
332.	6817		37	6	16.21
333.	6835		24	24	100.00
334.	6836		20	20	100.00
335.	6849		30	30	100.00
336.	6856		14	14	100.00
337.	6858		39	39	100.00
338.	6861		20	20	100.00
339.	6871		33	33	100.00
340.	6875		18	18	100.00
341.	6876		50	50	100.00
342.	6877		24	24	100.00
343.	6879		30	30	100.00
344.	6880		37	7	18.91
345.	6881		47	47	100.00
346.	6882		30	30	100.00
347.	6883		41	41	100.00
348.	6885		20	20	100.00
349.	6894		15	15	100.00
350.	6903		11	11	100.00
351.	6906		29	6	20.68
352.	6910		34	26	77.23
353.	6914		27	27	100.00
354.	6916		40	37	92.50
355.	6917		39	39	100.00
356.	6922		42	42	100.00
357.	6923		31	31	100.00
358.	6924		30	30	100.00
359.	6926		36	1	2.77
360.	6933		37	16	43.24

contd



1	2	3	4	5	6
361.	6939		42	4	9.52
362.	6944		38	34	89.47
363.	6949		21	21	100.00
364.	6951		28	28	100.00
365.	6952		27	27	100.00
366.	6953		4	4	100.00
367.	6954		15	15	100.00
368.	6956		22	22	100.00
369.	6962		18	18	100.00
370.	6974		15	15	100.00
371.	6980		12	12	100.00
372.	6982		15	15	100.00
373.	6983		20	20	100.00
374.	6984		21	21	100.00
375.	6999		19	19	100.00
376.	7005		17	17	100.00
377.	7014		16	16	100.00
378.	7018		13	13	100.00
379.	7041		10	10	100.00
380.	7042		14	14	100.00
381.	7050		7	7	100.00
382.	7065		35	35	100.00
383.	7081		22	22	100.00
384.	7082		35	35	100.00
385.	7084		29	29	100.00
386.	7111		29	2	7.40
387.	7481		40	7	17.50
388.	7488		44	31	70.45
389.	7489		34	2	5.88
390.	7490		39	6	15.38
391.	7492		35	5	14.28
392.	7493		49	6	12.24
393.	7525		41	21	51.21
394.	7535		30	30	100.00
395.	7545		30	30	100.00
396.	7582		45	9	20.00
397.	7583		39	12	30.76
398.	7586		35	10	28.57
399.	7593		41	7	17.07
400.	7780		37	37	100.00
401.	7799		30	30	100.00
402.	7807		24	24	100.00
403.	7810		26	26	100.00
404.	7824		35	23	65.71
405.	7827		36	36	100.00
406.	7840		30	30	100.00

contd.

1	2	3	4	5	6
407.	7846		24	24	100.00
408.	7853		32	32	100.00
409.	7854		17	17	100.00
410.	7856		21	21	100.00
411.	7857		33	26	78.78
412.	7868		15	13	86.66
413.	7869		16	13	81.25
414.	7870		41	41	100.00
415.	7873		32	32	100.00
416.	7881		26	26	100.00
417.	7883		32	32	100.00
418.	7885		29	29	100.00
419.	7886		37	37	100.00
420.	7888		25	25	100.00
421.	7891		26	26	100.00
422.	7892		32	32	100.00
423.	7893		25	25	100.00
424.	7900		14	14	100.00
425.	7931		9	9	100.00
426.	7938		15	15	100.00
427.	8024		7	7	100.00
428.	8048		21	21	100.00
429.	8058		14	14	100.00
430.	8062		10	10	100.00
431.	8063		28	28	100.00
432.	8066		13	13	100.00
433.	8069		23	23	100.00
434.	8070		29	29	100.00
435.	8071		31	31	100.00
436.	8072		26	26	100.00
437.	8080		21	17	80.95
438.	8087		30	30	100.00
439.	8090		17	17	100.00
440.	8091		17	17	100.00
441.	8092		16	16	100.00
442.	8095		29	29	100.00
443.	8096		23	23	100.00
444.	8097		25	25	100.00
445.	8100		26	26	100.00
446.	8102		38	38	100.00
447.	8103		24	24	100.00
448.	8104		28	28	100.00
449.	8108		11	11	100.00
450.	8110		10	10	100.00
451.	8112		34	34	100.00
452.	8116		11	11	100.00

contd.

1	2	3	4	5	6
361.	6939		42	4	9.52
362.	6944		38	34	89.47
363.	6949		21	21	100.00
364.	6951		28	28	100.00
365.	6952		27	27	100.00
366.	6953		4	4	100.00
367.	6954		15	15	100.00
368.	6956		22	22	100.00
369.	6962		18	18	100.00
370.	6974		15	15	100.00
371.	6980		12	12	100.00
372.	6982		15	15	100.00
373.	6983		20	20	100.00
374.	6984		21	21	100.00
375.	6999		19	19	100.00
376.	7005		17	17	100.00
377.	7014		16	16	100.00
378.	7018		13	13	100.00
379.	7041		10	10	100.00
380.	7042		14	14	100.00
381.	7050		7	7	100.00
382.	7065		35	35	100.00
383.	7081		22	22	100.00
384.	7082		35	35	100.00
385.	7084		29	29	100.00
386.	7111		29	2	7.40
387.	7481		40	7	17.50
388.	7488		44	31	70.45
389.	7489		34	2	5.88
390.	7490		39	6	15.38
391.	7492		35	5	14.28
392.	7493		49	6	12.24
393.	7525		41	21	51.21
394.	7535		30	30	100.00
395.	7545		30	30	100.00
396.	7582		45	9	20.00
397.	7583		39	12	30.76
398.	7586		35	10	28.57
399.	7593		41	7	17.07
400.	7780		37	37	100.00
401.	7799		30	30	100.00
402.	7807		24	24	100.00
403.	7810		26	26	100.00
404.	7824		35	23	65.71
405.	7827		36	36	100.00
406.	7840		30	30	100.00

contd.

1	2	3	4	5	6
407.	7846		24	24	100.00
408.	7853		32	32	100.00
409.	7854		17	17	100.00
410.	7856		21	21	100.00
411.	7857		33	26	78.78
412.	7868		15	13	86.66
413.	7869		16	13	81.25
414.	7870		41	41	100.00
415.	7873		32	32	100.00
416.	7881		26	26	100.00
417.	7883		32	32	100.00
418.	7885		29	29	100.00
419.	7886		37	37	100.00
420.	7888		25	25	100.00
421.	7891		26	26	100.00
422.	7892		32	32	100.00
423.	7893		25	25	100.00
424.	7900		14	14	100.00
425.	7931		9	9	100.00
426.	7938		15	15	100.00
427.	8024		7	7	100.00
428.	8048		21	21	100.00
429.	8058		14	14	100.00
430.	8062		10	10	100.00
431.	8063		28	28	100.00
432.	8066		13	13	100.00
433.	8069		23	23	100.00
434.	8070		29	29	100.00
435.	8071		31	31	100.00
436.	8072		26	26	100.00
437.	8080		21	17	80.95
438.	8087		30	30	100.00
439.	8090		17	17	100.00
440.	8091		17	17	100.00
441.	8092		16	16	100.00
442.	8095		29	29	100.00
443.	8096		23	23	100.00
444.	8097		25	25	100.00
445.	8100		26	26	100.00
446.	8102		38	38	100.00
447.	8103		24	24	100.00
448.	8104		28	28	100.00
449.	8108		11	11	100.00
450.	8110		10	10	100.00
451.	8112		34	34	100.00
452.	8116		11	11	100.00

contd.

1	2	3	4	5	6
453.	8117		19	19	100.00
454.	8118		20	20	100.00
455.	8122		10	10	100.00
456.	8124		22	22	100.00
457.	8125		10	10	100.00
458.	8126		11	11	100.00
459.	8128		21	21	100.00
460.	8139		21	21	100.00
461.	8145		28	28	100.00
462.	8160		24	24	100.00
463.	8164		34	24	70.58
464.	8165		21	21	100.00
465.	8166		29	29	100.00
466.	8193		16	16	100.00
467.	8204		16	16	100.00
468.	8210		12	12	100.00
469.	8211		18	18	100.00
470.	8216		14	14	100.00
471.	8221		28	28	100.00
472.	8243		29	22	75.86
473.	8448		11	11	100.00
474.	8551		18	18	100.00
475.	8679		12	12	100.00
476.	8712		10	10	100.00
477.	8753		8	8	100.00
478.	8754		3	3	100.00
479.	8756		8	8	100.00
480.	8765		10	10	100.00
481.	8784		16	16	100.00
482.	8813		16	16	100.00
483.	8818		7	7	100.00
484.	8819		10	10	100.00
485.	8844		20	20	100.00
486.	8847		12	12	100.00
487.	8872		11	11	100.00
488.	8883		14	14	100.00
489.	8909		11	11	100.00
490.	8911		15	15	100.00
491.	8978		26	26	100.00
492.	8982		45	3	6.66
493.	8989		35	35	100.00
494.	8990		31	31	100.00
495.	8993		29	29	100.00
496.	8994		23	23	100.00
497.	8996		19	19	100.00
498.	8998		35	35	100.00
499.	8999		29	2	6.89
500.	9001		28	5	17.85

contd.

1	2	3	4	5	6
501.	9003		25	9	36.00
502.	9005		28	28	100.00
503.	9008		42	7	16.66
504.	9009		30	30	100.00
505.	9011		15	6	40.00
506.	9012		38	38	100.00
507.	9013		38	33	86.84
508.	9014		28	28	100.00
509.	9015		31	31	100.00
510.	9016		20	20	100.00
511.	9018		36	14	38.88
512.	9019		32	14	43.75
513.	9020		28	8	28.57
514.	9021		33	7	21.21
515.	9023		34	1	2.94
516.	9027		31	26	83.87
517.	9028		28	7	25.00
518.	9029		31	6	19.35
519.	9030		37	8	21.62
520.	9031		28	4	14.28
521.	9033		32	4	12.50
522.	9034		38	2	5.26
523.	9035		24	2	8.33
524.	9036		22	15	68.18
525.	9037		25	8	32.00
526.	9039		30	6	20.00
527.	9040		38	4	10.52
528.	9041		32	7	21.87
529.	9042		36	2	5.55
530.	9043		22	4	18.18
531.	9045		26	26	100.00
532.	9047		38	38	100.00
533.	9048		24	24	100.00
534.	9050		25	15	60.00
535.	9067		26	19	73.07
536.	9096		41	7	17.07
537.	9143		23	23	100.00
538.	9177		16	16	100.00
539.	9183		19	19	100.00
540.	9186		10	10	100.00
541.	9221		23	23	100.00
542.	9227		19	19	100.00
543.	9228		25	25	100.00
544.	9305		35	35	100.00
545.	9311		39	39	100.00

contd.

1	2	3	4	5	6
546.	9312		34	34	100.00
547.	9313		45	45	100.00
548.	9314		28	28	100.00
549.	9325		31	31	100.00
550.	9329		28	22	78.57
551.	9330		27	14	51.85
552.	9331		33	15	45.45
553.	9332		28	14	50.00
554.	9333		25	25	100.00
555.	9335		34	34	100.00
556.	9337		24	4	16.66
557.	9340		37	37	100.00
558.	9343		22	4	18.18
559.	9348		36	36	100.00
560.	9356		42	42	100.00
561.	9358		35	35	100.00
562.	9362		48	48	100.00
563.	9363		41	41	100.00
564.	9364		27	23	85.18
565.	9383		25	25	100.00
566.	9384		33	33	100.00
567.	9387		24	24	100.00
568.	9394		24	24	100.00
569.	9395		14	14	100.00
570.	9399		18	18	100.00
571.	9404		29	29	100.00
572.	9413		21	21	100.00
573.	9489		17	17	100.00
574.	9490		10	10	100.00
575.	9496		42	39	92.85
576.	9516		10	10	100.00
577.	9519		11	11	100.00
578.	9482		25	25	100.00
579.	9522		14	14	100.00
580.	9608		22	22	100.00
581.	9622		11	11	100.00
582.	9640		10	10	100.00
583.	9642		24	24	100.00
584.	9667		13	13	100.00
585.	9668		6	6	100.00
586.	9673		15	15	100.00
587.	9677		8	8	100.00
588.	9765		12	12	100.00
589.	9771		16	16	100.00
590.	9775		13	13	100.00
591.	9791		13	13	100.00

contd.

1	2	3	4	5	6
592.	9826				
593.	9866		6	6	100.00
594.	9872		10	10	100.00
595.	9878		13	13	100.00
596.	9889		14	14	100.00
597.	9891		20	20	100.00
598.	9899		6	6	100.00
599.	9901		14	14	100.00
600.	10314		10	10	100.00
601.	10328		29	29	100.00
602.	10329		12	12	100.00
603.	10375		11	11	100.00
			35	35	100.00

Stunt promising lines

604.	6391		33	15	45.45
605.	2369		34	31	91.17
606.	6976		12	12	100.00
607.	3782		34	24	70.58
608.	9003		31	20	64.51
609.	9397		23	23	100.00
610.	9625		9	9	100.00
611.	9736		5	5	100.00
612.	8813		14	14	100.00
613.	4984		32	27	84.37
614.	8911		8	8	100.00
615.	8847		4	4	100.00
616.	8786		4	4	100.00
617.	4096		5	5	100.00
618.	10796		29	29	100.00
619.	10795		23	23	100.00
620.	7080		14	14	100.00
621.	7003		14	14	100.00
622.	6459		10	10	100.00
623.	6795		21	21	100.00
624.	6978		5	5	100.00
625.	2616		20	20	100.00
626.	9681		3	3	100.00
627.	6962		17	17	100.00
628.	10836		18	18	100.00

contd



1	2	3	4	5	6
629.	6458		13	13	100.00
630.	6896		8	8	100.00
631.	613		22	22	100.00
632.	9641		24	24	100.00
633.	6849		10	10	100.00

Ascochyta promising lines

634.	130		14	14	100.00
635.	229		33	7	21.21
636.	595		11	11	100.00
637.	599		22	22	100.00
638.	843		26	21	80.76
639.	903		26	26	100.00
640.	904		28	28	100.00
641.	928		24	16	66.66
642.	931		12	12	100.00
643.	954		28	28	100.00
644.	999		29	3	10.34
645.	1004		35	35	100.00
646.	1005		25	25	100.00
647.	1006		38	38	100.00
648.	1009		29	29	100.00
649.	1012		22	22	100.00
650.	1016		28	28	100.00
651.	1017		20	20	100.00
652.	1018		20	20	100.00
653.	1023		32	18	56.25
654.	1024		38	14	36.84
655.	1077		37	32	86.48
656.	1078		34	34	100.00
657.	1149		42	42	100.00
658.	1159		14	7	50.00
659.	1170		35	35	100.00
660.	1179		36	12	33.33
661.	1202		33	33	100.00
662.	1209		32	16	50.00
663.	1214		37	37	100.00
664.	1219		41	41	100.00
665.	1270		28	28	100.00
666.	1271		27	4	14.81
667.	1272		41	41	100.00
668.	1273		33	23	69.69
669.	1275		32	4	12.50
670.	1283		40	40	100.00
671.	1292		23	8	34.78
672.	1317		28	28	100.00

contd.

1	2	3	4	5	6
673.	1329				
674.	1338		24	24	100.00
675.	1407		37	4	10.81
676.	1465		36	36	100.00
677.	1468		39	9	23.07
678.	1504		11	11	100.00
679.	1583		37	21	56.75
680.	1586		30	15	50.00
681.	1607		33	33	100.00
682.	1809		38	38	100.00
683.	1827		40	30	75.00
684.	1842		41	19	46.34
685.	1871		16	16	100.00
686.	1902		17	17	100.00
687.	1908		24	3	12.50
688.	1910		38	38	100.00
689.	1911		35	3	8.57
690.	1915		29	29	100.00
691.	2117		27	21	77.77
692.	2153		7	7	100.00
693.	2156		34	34	100.00
694.	2160		38	38	100.00
695.	2172		19	19	100.00
696.	2173		33	33	100.00
697.	2173		37	37	100.00
698.	2237		13	13	100.00
699.	2264		35	25	71.42
700.	2266		18	18	100.00
701.	2294		33	33	100.00
702.	2295		20	20	100.00
703.	2369		7	5	71.42
704.	2370		41	41	100.00
705.	2590		25	25	100.00
706.	2599		13	13	100.00
707.	2600		20	20	100.00
708.	2601		21	21	100.00
709.	2693		33	33	100.00
710.	4934		33	33	100.00
711.	4939		36	23	63.88
711.	6067		39	39	100.00

GCVT Entries

712.	Phule G-3	15	15	100.00
713.	ICCC-4	39	39	100.00
714.	Jyothi	33	29	87.87
715.	Phule G-2	25	25	100.00

contd.

1	2	3	4	5	6
716.		Annigeri-1	35	14	40.00
717.		BG-216	39	39	100.00
718.		Phule G-1	32	32	100.00
719.		RAVP-54	46	37	80.43
720.		RAVP-52	45	9	20.00
721.		Phule G-4	27	19	70.37
722.		BDN-9-3	41	18	43.90

GIET Entries

723.		BG-225	29	21	72.41
724.		BG-9 ET-JG-1257	30	30	100.00
725.		BG-9 ET-JG-1252	16	10	62.50
726.		BDN-9-3	38	19	50.00
727.		H-76-2	35	35	100.00
728.		850-3/27	26	26	100.00
729.		H-75-33	33	33	100.00
730.		H-192	40	40	100.00
731.		ICCC-71	26	21	80.76
732.		BG-228	27	5	18.51
733.		BG-231	15	15	100.00
734.		ICCC-6	18	18	100.00
735.		BG-227	23	23	100.00
736.		F-496	47	7	14.89
737.		H-75-78	50	50	100.00
738.		H-75-35	27	27	100.00
739.		ICCC-9	21	21	100.00
740.		BG-230	28	28	100.00
741.		GL-766	25	25	100.00
742.		H-72-4	16	16	100.00
743.		BG-220	11	11	100.00
744.		H-76-67	27	27	100.00
745.		ICCC-10	13	2	15.38
746.		H-73-28	21	21	100.00
747.		FG-734	5	5	100.00
748.		H-73-10	13	13	100.00
749.		BG-229	27	27	100.00
750.		ICCC-13	18	18	100.00
751.		ICCC-11	9	9	100.00
752.		ICCC-8	7	7	100.00
753.		GF-744	6	6	100.00
754.		BG-226	7	7	100.00
755.		GL-769	35	35	100.00

contd.

1	2	3	4	5	6
<u>Crossing block Entries</u>					
756.		ICCC-1	32	32	100.00
757.		ICCC-2	45	32	71.11
758.		ICCC-3	50	50	100.00
759.		ICCC-4	36	36	100.00
760.		ICCC-5	38	38	100.00
761.		ICCC-6	45	45	100.00
762.		ICCC-7	42	31	73.80
763.		ICCC-8	47	47	100.00
764.		ICCC-9	40	40	100.00
765.		ICCC-10	40	3	7.50
766.		ICCC-11	35	35	100.00
767.		ICCC-12	34	34	100.00
768.		ICCC-13	37	37	100.00
769.	151	P-127	11	8	72.72
770.	4955	H-223	34	34	100.00
771.	1109	P-992	35	35	100.00
772.	438	P-324	32	4	12.50
773.	5250	GL-629	27	27	100.00
774.	10136	Pant G-114	40	40	100.00
775.	4946	F-496	36	26	72.22
776.	5264	GL-645	27	27	100.00
777.	804	P-636	33	33	100.00
778.	8920	K-1170	29	29	100.00
779.	8921	K-1174	24	24	100.00
780.	8922	K-1184	31	31	100.00
781.	8923	K-1189	32	32	100.00
782.	7848	NEC-1831	33	33	100.00
783.	8926	K-1480	32	32	100.00
784.	8927	K-1481	39	39	100.00
785.	11142	P-9847	39	39	100.00
786.	7721	NEC-139	31	31	100.00
787.		Pant G-121	31	31	100.00
788.	5264	GL-645	40	40	100.00
789.		B-106	41	41	100.00
790.	4942	F-272	42	22	52.38
791.	8322	CO-1	41	41	100.00
792.	10507	Coll. 238	31	18	58.06
793.	10596	Coll. 327	50	50	100.00
794.	6946	F-496	50	34	68.00
795.	10829	G-549	48	38	79.16
796.	10805	H-556-1	50	31	62.00
797.	9009	NEC-451	39	39	100.00
798.	6609	NEC-555	50	50	100.00
799.	6708	NEC-850	50	26	52.00
800.	6805	NEC-970	49	49	100.00

contd.

1	2	3	4	5	6
801.	6808	NEC-974	45	45	100.00
802.	6905	NEC-1135	34	34	100.00
803.	226	P-179	34	34	100.00
804.	389	P-287	44	18	40.90
805.	434	P-319	35	4	11.42
806.	686	P-538	41	41	100.00
807.	954	P-753	39	34	87.17
808.	1071	P-922	39	39	100.00
809.	1082	P-946	32	32	100.00
810.	1110	P-993	35	35	100.00
811.	1134	P-1027-1	44	44	100.00
812.	1143	P-1041-1	37	37	100.00
813.	1144	P-1042	32	32	100.00
814.	1166	P-1092	37	37	100.00
815.	1265	P-1162	43	43	100.00
816.	1395	P-1242	45	45	100.00
817.	1856	P-1497	29	29	100.00
818.	1994	P-1613	41	41	100.00
819.	2210	P-1781	34	34	100.00
820.	2230	P-1798	33	33	100.00
821.	2784	P-2974	48	48	100.00
822.	3500	P-4203	17	17	100.00
823.	4464	P-5482	30	30	100.00
824.	4544	P-6090	26	26	100.00
825.	4873	P-9668	50	50	100.00
826.	10137	Pant G-115	44	44	100.00
827.	5434	Ponaflo-2	30	30	100.00
828.	7510	Jam	28	28	100.00
829.	4971	L-532	30	30	100.00
830.	7710	NEC-34	12	12	100.00
831.	7721	NEC-139	20	20	100.00
832.	7722	NEC-140	32	32	100.00
833.	7723	NEC-143	14	14	100.00
834.	6283	NEC-175	14	14	100.00
835.	7774	NEC-1572	8	8	100.00
836.	7775	NEC-1604	7	7	100.00
837.	7267	NEC-1640	7	7	100.00
838.	7778	NEC-1646	12	12	100.00
839.	7848	NEC-1831	15	15	100.00
840.	1350	P-1213-2	15	15	100.00
841.	2570	P-2571	7	7	100.00
842.	7564	P-9635	14	14	100.00
843.		GL-734	30	30	100.00
844.		GL-770	35	35	100.00
845.		GL-779	28	6	21.42

contd.

1	2	3	4	5	6
846.		GL-780	31	18	58.06
847.		GL-782	40	40	100.00
848.		GL-783	35	35	100.00
849.		GL-702	8	8	100.00
850.		H-75-35	17	17	100.00
851.		H-457	15	15	100.00
852.		DA-1	19	1	5.26
853.		BA-1	19	13	68.42
854.		RRAN-76	10	5	50.00
855.		GW-1	25	25	100.00
856.		GW-9	17	3	17.64
857.		R-2	20	13	65.00
858.		KW-3	22	22	100.00
859.		GL-661	14	3	21.42
860.		GW-30	29	13	44.82
861.		GW-7	39	35	89.74
862.		GW-3	23	13	56.52
863.		GW-5	24	16	66.66
864.		NO. 3	27	7	25.92
865.		KW-1	29	13	44.82
866.		KW-5	35	16	45.71
867.		GW-8	30	16	53.33

APPENDIX-VI A

Wilt/root rot incidence in late planting of chickpea

Date of sowing: 1-2-1979

Sl. No.	ICC No.	No. of plants	No. of dried plants	Percent dried plants	Percent stunt
1	2	3	4	5	6
1.	121	46	3	6.52	-
2.	202	50	4	8.00	-
3.	229	44	3	6.81	-
4.	267	44	2	4.54	-
5.	338	40	2	5.00	-
6.	391	50	5	10.00	-
7.	516	43	0	0.00	-
8.	658	45	3	6.66	-
9.	858	50	3	6.00	-
10.	867	50	3	6.00	-
11.	1443	41	4	9.75	-
12.	1450	45	1	2.22	-
13.	1611	43	17	39.53	13.95
14.	1891	42	8	19.04	4.76
15.	2072	37	4	10.81	-
16.	2089	46	4	8.69	2.17
17.	2104	50	3	6.00	2.00
18.	2321	50	3	6.00	-
19.	2566	50	5	10.00	6.00
20.	2812	50	5	10.00	-
21.	2835	50	4	8.00	-
22.	2854	50	3	6.00	-
23.	2883	50	3	6.00	2.00
24.	3099	50	0	0.00	-
25.	3103	50	0	0.00	-
26.	3392	50	1	2.00	-
27.	3396	50	3	6.00	10.00
28.	3426	50	3	6.00	-
29.	3439	47	2	4.25	10.41
30.	3684	50	2	4.00	-
31.	4519	50	7	14.00	2.00
32.	4552	50	9	18.00	2.00
33.	4651	50	2	4.00	2.00
34.	4716	50	8	16.00	2.00
35.	4918	40	1	2.50	-

contd.

1	2	3	4	5	6
36.	5003	45	4	8.88	-
37.	5864	48	3	6.25	4.16
38.	5901	47	1	2.12	2.12
39.	6671	42	5	11.90	2.30
40.	6880	48	3	6.25	2.08
41.	7111	50	2	4.00	4.00
42.	7248	45	3	6.66	2.22
43.	7254	45	3	6.66	-
44.	8222	46	10	21.73	-
45.	8446	50	4	8.00	-
46.	8933	49	4	8.16	6.81
47.	9117	45	2	4.44	2.22
48.	10104	50	3	6.00	2.00
49.	10130	50	6	12.00	-
50.	10394	50	7	14.00	-
51.	11088	45	3	6.66	-
52.	43	50	10	20.00	-
53.	606	50	10	20.00	-
54.	444	50	2	4.00	-
55.	460	50	9	18.00	2.00
56.	182	50	5	10.00	-
57.	537	50	8	16.00	4.00
58.	599	50	14	28.00	4.00
59.	843	50	11	22.00	-
60.	102	50	9	18.00	-
61.	434	50	7	14.00	-
62.	104	47	2	4.25	-
63.	6743	50	11	22.00	-
64.	3034	50	10	20.00	-
65.	3181	50	8	16.00	-
66.	2200	50	6	12.00	-
67.	4953	50	9	18.00	2.00
68.	8612	44	6	13.63	2.27
69.	2204	50	11	22.00	-
70.	1376	50	4	8.00	2.00
71.	9085	41	10	24.39	7.31
72.	4485	50	1	2.00	-
73.	6761	50	10	20.00	-
74.	8250	50	4	8.00	-
75.	512	44	3	6.81	-
76.	4918	39	3	9.00	0.75
77.	4969	41	3	7.31	-
78.	554	48	5	10.41	2.08
79.	499	48	4	8.30	0.85
80.	10894	36	1	2.77	-

contd.



1	2	3	4	5	6
81.	4963	49	6	12.24	-
82.	11088	41	6	14.63	2.26
83.	8970	50	4	8.00	-
84.	250	50	7	14.00	-
85.	1967	44	11	25.00	2.27
86.	2299	50	27	54.00	-
87.	4991	48	10	20.83	0.20
88.	3797	46	11	23.91	-
89.	6679	46	1	2.17	-
90.	4923	48	13	27.08	0.60
91.	10384	44	0	0.00	-
92.	3356	50	8	16.00	-
93.	4951	45	43	97.77	-
94.	8642	50	3	6.00	-
95.	4994	50	10	20.00	-
96.	3493	44	7	15.90	-
97.	10301	49	3	6.12	-
98.	7526	50	7	14.00	2.00
99.	1909	50	11	22.00	-
100.	4973	44	27	61.36	0.78
101.	1749	49	13	26.53	2.04
102.	389	50	6	12.00	-
103.	4956	44	4	9.09	2.27
104.	2267	50	4	8.00	-
105.	4954	50	5	10.00	-
106.	2346	49	6	8.16	-
107.	606	50	0	0.00	-
108.	435	48	1	2.08	-
109.	190	47	2	4.25	-
110.	539	50	10	20.00	-
111.	788	46	0	0.00	-
112.	959	50	8	16.00	-
113.	7777	50	6	12.00	-
114.	4485	50	1	2.00	-
115.	7385	49	6	12.24	-
116.	6786	50	11	22.00	-
117.	6153	50	7	14.00	2.00
118.	57	50	4	8.00	-
119.	6462	50	7	14.00	-
120.	4928	47	33	70.21	0.60
121.	1294	50	3	6.00	-
122.	3479	50	1	2.00	-
123.	9070	50	2	4.00	-
124.	4948	50	6	12.00	-
125.	1097	50	2	4.00	-

contc

1	2	3	4	5	6
126.	2217	50	9	18.00	-
127.	3168	47	0	0.00	2.12
128.	860	50	5	10.00	2.00
129.	3437	50	24	48.00	-
130.	10637	50	6	12.00	-
131.	8181	50	14	28.00	2.00
132.	4917	50	30	60.00	4.00
133.	4950	50	13	26.00	-
134.	10809	50	8	16.00	-
135.	BDN-9-3	50	12	24.00	-
136.	5006	50	4	8.00	-
137.	3077	50	5	10.00	-
138.	4920	50	25	50.00	-
139.	4934	50	35	70.00	-
140.	6098	50	13	26.00	-
141.	595	50	12	24.00	-

APPENDIX-VII

Collar rot incidence in early planting of chickpea

Date of sowing: 16-9-1978

Sl. No.	ICC No.	Pedigree	No. of plants	Infected plants	Percent infection
1.	7310-8-2-B-BP	H-208 X T-3	69	8	11.59
2.	7343-14-3B-BP	H-208 X USA-613	66	1	1.51
3.	7310-8-2-B-BP	H-208 X T-3	61	5	8.19
4.	73129-16-1-B-BP	JG-62 X Radhey	54	7	12.96
5.	7389-20-3-B-BP	850-3/27 X F-378	34	0	0.00
6.	7394-14-2-B-BP	850-3/27 X N-59	37	4	10.81
7.	739-3-4-B-BP	H-208 X Pant-110	58	2	3.44
8.	73105-7-1-B-BP	850-3/27 X B-108	64	7	10.93
9.	73167-5-3-B-BP	JG-62 X F-496	69	2	2.89
10.	73152-3-3-B-BP	JG-62 X USA-613	42	6	14.28
11.	7389-18-3-B-BP	850-3/27 X F-378	63	2	3.17
12.	7389-32-2-B-BP	850-3/27 X F-378	66	0	0.00
13.	7341-12-1-B-BP	H-208 X N-59	55	4	7.27
14.	73111-8-2-B-BP	850-3/27 X H-208	47	0	0.00
15.	73217-2-2-B-BP	F-404 X Ceylon-2	35	3	8.57
16.	73129-16-1-1P-BP	JG-62 X Radhey	46	0	0.00
17.	73136-3-3-2P-BP	JG-62 X BEG-482	54	4	7.40
18.	7394-18-2-1P-BP	850-3/27 X N-59	74	4	5.40
19.	73141-3-2-1P-BP	JG-62 X K-4	77	1	1.29
20.	73153-15-1-2P-BP	JG-62 X GW-5/7	60	1	1.66
21.	73136-3-1-1P-BP	JG-62 X BEG-482	62	1	1.61
22.	73136-31-2-1P-BP	JG-62 X BEG-482	60	0	0.00
23.	73167-11-1-1P-BP	JG-62 X F-496	59	1	1.69
24.	73357-1-2-1P-BP	P-502 X P-736	55	4	7.27
25.	7394-18-3-1P-BP	850-3/27 X N-59	83	2	2.40
26.	7388-4-1-2P-BP	850-3/27 X F-61	75	1	1.33
27.	7362-5-2-1P-BP	L-550 X B-110	83	15	18.07
28.	7375-1-4-1P-BP	L-550 X GP-66	63	6	9.52
29.	738-8-1-1P-BP	H-208 X BEG-482	78	0	0.00
30.	73136-31-4-1H-BP	JG-62 X BEG-482	81	2	2.46
31.	73167-8-1-1H-BP	JG-62 X F-496	81	1	1.23
32.	73271-1-2-1H-BP	JG-62 X C-156	40	1	2.50
33.	73301-17-3-2H-BP	G-543 X Annigeri	57	2	3.50
34.	7342-6-4-1H-BP	JG-221 X H-208	65	0	0.00
35.	74279-B-5P-1B-BP	(850-3/27 X T-3) X P-4245-1	70	0	0.00
36.	7472-B-5H-LB-BP	P-272 X (F-61 X L-550)	74	5	6.75
37.	7472-B-11H-LB-BP	"	71	2	2.81

contd.

1	2	3	4	5	6
38.	73187-3-3-3H-BP	G-130 X JG-24	69	2	2.89
39.	737-14-2-B-BP	H-208 X BG-1	61	2	3.27
40.	73128-1-1-B-BP	JG-62 X F-378	63	0	0.00
41.	73241-3-1-1P-LB-BP	Chafa X JGC-1	73	2	2.73
42.	73357-1-1-1P-LB-BP	P-502 X P-756	77	0	0.00
43.	7352-15-3-1P-LB-BP	L-500 X BG-1	74	0	0.00
44.	73128-10-1-2P-LB-BP	JG-62 X F-378	80	00	0.00
45.	73211-2-3-1P-LB-BP	GW-5/7 X Ceylon-2	73	0	0.00
46.	73357-1-1-2P-LB-BP	P-502 X P-736	84	3	3.57
47.	73154-12-1-1P-BP	JG-62 X No.42	63	0	0.00
48.	73211-2-1-B-BP	Ceylon-2 X GW-5/7	71	3	4.22
49.		Annigeri	73	5	6.84
50.		G-130	57	6	10.52
51.	7310-8-2-B-BP		80	4	5.00
52.	7394-18-2-1P-BP		69	1	1.44
53.	73167-8-1-1H-BP		75	0	0.00
54.	73128-1-1-B-BP		60	4	6.66
55.		Annigeri	79	13	16.45
56.	73211-2-1-B-BP		75	4	5.33
57.	73301-17-3-2H-BP		63	1	1.58
58.	73167-5-3-B-BP		61	0	0.00
59.	73357-1-2-1P-BP		71	1	1.40
60.	73211-2-3-1P-LB-BP		62	2	3.22
61.	73271-1-2-1H-BP		74	1	1.35
62.	73271-2-2-B-BP		51	6	11.76
63.	74279-B-5P-LB-BP		74	5	6.75
64.	7310-8-2-B-BP		82	9	10.97
65.	73141-3-2-1P-BP		65	8	12.30
66.	73142-6-4-1H-BP		57	5	8.77
67.	7343-14-3-B-BP		58	2	3.44
68.	7388-1-1P-BP		87	1	1.14
69.	73136-31-4-1H-BP		77	00	0.00
70.	73153-15-1-2P-BP		72	5	6.94
71.	7389-32-2-B-BP		71	0	0.00
72.	73154-12-1-1P-BP		72	7	9.72
73.	7352-15-3-1P-LB-BP		82	1	1.21
74.	7394-14-2-B-BP		71	5	7.04
75.	73136-3-1-1P-BP		62	0	0.00
76.	73152-3-3-B-BP		64	3	4.68
77.	73129-16-1-B-BP		71	2	2.81
78.	7472-B-11H-2B-BP		74	12	16.21
79.	73167-11-1-1P-BP		57	26	45.61
80.	7389-20-3-B-BP		64	11	17.18
81.	7341-12-1-B-BP		66	7	10.60
82.	7388-4-1-2P-BP		74	13	17.56

contd.

1	2	3	4	5	6
83.	73128-10-1-2P-LB-BP		73	0	0.00
84.	73105-7-1-B-BP		57	15	26.31
85.	73241-3-1-1P-LB-BP		66	18	27.27
86.	73111-8-2-B-BP		81	5	6.17
87.	73136-3-3-2P-BP		69	31	44.92
88.	737-14-2-B-BP		65	8	12.30
89.	73357-1-1-2P-2B-BP		80	12	15.00
90.	73136-31-2-1P-BP		77	5	6.49
91.	7389-18-3-B-BP		70	12	17.14
92.	7362-5-2-1P-BP		76	4	5.26
93.	7394-18-3-1P-BP		65	8	12.30
94.		G-130	69	2	2.89
95.	7472-B-5H-LB-BP		69	4	5.79
96.	739-3-4-B-BP		72	0	0.00
97.	7375-1-4-1P-BP		70	15	21.42
98.	73357-1-1-1P-LB-BP		63	17	26.98
99.	73129-16-1-1P-BP		68	1	1.47
100.	73187-3-3-3H-BP		76	4	5.26
101.	73217-2-2-B-BP		72	8	11.11
102.	73211-2-3-1P-LB-BP		74	5	6.75
103.	7389-18-3-B-BP		82	2	2.43
104.	7342-6-4-1H-BP		72	1	1.38
105.	7341-12-1-B-BP		76	12	15.78
106.	73357-1-1-2P-LB-BP		66	4	6.06
107.	7472-B-5H-LB-BP		61	0	0.00
108.	7389-20-3-B-BP		63	3	4.76
109.	7362-5-2-1P-BP		71	3	4.22
110.	74279-B-5P-LB-BP		70	9	12.85
111.	7310-8-2-B-BP		74	2	2.70
112.	73105-7-1-B-BP		68	2	2.94
113.	73153-15-1-2P-BP		67	4	5.97
114.	73128-10-1-2P-LB-BP		79	3	3.79
115.		Annigeri	72	9	12.50
116.	7389-32-2-B-BP		75	15	20.00
117.	73301-17-3-2H-BP		62	6	9.67
118.	7472-B-11H-LB-BP		55	10	18.18
119.	7343-14-3-B-BP		51	20	39.20
120.	73136-31-4-1H-BP		72	36	49.13
121.	73152-3-3-B-BP		72	1	1.38
122.	7310-8-2-B-BP		82	10	12.19
123.	7394-18-2-1P-BP		76	7	9.21
124.	73111-8-2-B-BP		88	5	5.68
125.	73357-1-2-1P-BP		82	2	2.43
126.	7375-1-4-1P-BP		91	5	5.49
127.	73211-2-1-B BP		81	4	4.93

contd.

1	2	3	4	5	6
128.	73154-12-1-1P-BP		75	2	2.66
129.	7394-18-3-1P-BP		87	11	12.64
130.	73136-31-2-1P-BP		61	19	31.14
131.	737-14-2-B-BP		65	11	16.92
132.	73167-8-1-1H-BP		64	8	12.50
133.	73357-1-1-1P-LB-BP		72	1	1.38
134.	738-8-1-1P-BP		62	7	11.29
135.	739-3-4-B-BP		76	7	9.21
136.		G-130	61	14	22.95
137.	73167-11-1-1P-BP		65	0	0.00
138.	7352-15-3-1P-LB-BP		64	9	14.06
139.	73129-16-1-1P-BP		64	1	1.56
140.	73129-16-1-B-BP		67	0	0.00
141.	73136-3-3-2P-BP		68	0	0.00
142.	7388-4-1-2P-BP		67	3	4.47
143.	73271-1-2-1H-BP		70	1	1.42
144.	73141-3-7-1P-BP		52	0	0.00
145.	73167-5-3-B-BP		54	0	0.00
146.	73187-3-3-BH-BP		46	0	0.00
147.	9394-14-2-B-BP		63	2	3.17
148.	73136-3-1-1P-BP		64	3	4.68
149.	73241-3-1-1P-LB-BP		76	0	0.00
150.	73128-1-1-B-BP		63	0	0.00
151.	7332-11-4-2H-BH-BH		81	1	1.23
152.	73190-1-2-1H-BH-BH		77	9	11.68
153.	73167-1-1-2H-BH-BH		70	4	5.71
154.	7343-10-2-1H-BH-BH		55	4	7.27
155.	7333-12-3-1H-BH-BH		60	0	0.00
156.	73213-9-3-1H-BH-BH		72	2	2.77
157.	73308-1-1-BH-BH		65	0	0.00
158.	7380-1-4-B-BH-BH		45	1	2.22
159.	7380-1-1-B-BH-BH		78	0	0.00
160.	73126-6-2-B-BH-BH		63	1	1.58
161.	73111-8-1-B-BH-BH		71	1	1.40
162.	73167-5-3-B-BH-BH		71	0	0.00
163.	7310-22-1-B-BH-BH		81	1	1.23
164.	7357-22-3-B-BH-BH		82	6	7.31
165.	73162-2-2-2P-BH-BH		55	10	18.18
166.	73367-11-4-1P-BH-BH		49	2	4.08
167.	7332-1-1-1H-BH-BH		56	7	12.50
168.	74167-1-1H-LB-BH-BH		70	3	4.28
169.	7357-2-3-1H-BH-BH		44	19	43.18
170.	73167-5-3-1P-BH-BH		63	13	20.63

contd.

1	2	3	4	5	6
171.	7339-3-2-1P-BH-BH		72	8	11.11
172.	7341-8-1-B-BH-BH		79	2	2.53
173.	7313-2-3-1H-BH-BH		75	0	0.00
174.	737-18-1-B-BH-BH		58	4	6.89
175.	731-8-3-B-BH-BH		67	0	0.00
176.	7389-32-2-B-BH		71	0	0.00
177.	7389-18-6-B-BH-BH		82	0	0.00
178.	73103-6-4-B-BH-BH		67	0	0.00
179.	73170-3-1-1H-BH-BH		63	0	0.00
180.	7339-3-3-1H-BH-BH		74	2	2.70
181.	7325-11-2-1H-BH-BH		73	0	0.00
182.	7332-12-4-1H-BH-BH		58	1	1.72
183.	7333-10-3-1H-BH-BH		64	0	0.00
184.	7320-11-2-1H-BH-BH		61	6	9.83
185.	73185-7-1-2H-BH-BH		62	0	0.00
186.	7320-11-1-1H-BH-BH		63	9	14.28
187.	731-9-2-1H-BH-BH		64	7	10.93
188.	73304-10-4-2H-BH-BH		58	2	3.44
189.	73187-3-2-1H-BH-BH		49	2	4.08
190.	73174-24-1-1H-BH-BH		55	0	0.00
191.	7343-14-3-B-BH-BH		66	3	4.54
192.	7310-26-2-B-BH-BH		64	4	6.25
193.	73252-11-2-B-BH-BH		60	2	3.33
194.	7328-8-5-B-BH-BH		62	4	6.45
195.	73111-7-2-B-BH-BH		61	2	3.27
196.	7310-3-1-B-BH-BH		64	19	29.68
197.	7341-12-1-B-BH-BH		70	13	18.57
198.	7332-7-3-B-BH-BH		68	0	0.00
199.		Annigeri	61	3	4.91
200.		G-130	65	0	0.00
201.	7332-11-4-2H-BH-BH		85	1	1.17
202.	74167-1-1H-LB-BH-BH		66	0	0.00
203.	7325-11-2-1H-BH-BH		67	2	2.98
204.	73179-24-1-1H-BH-BH		65	0	0.00
205.		Annigeri	85	8	9.41
206.	7332-7-3-B-BH-BH		72	6	8.33
207.	7333-10-3-1H-BH-BH		61	0	0.00
208.	7380-1-1-B-BH-BH		64	0	0.00
209.	737-18-1-B-BH-BH		66	2	3.03
210.	73111-7-2-B-BH-BH		55	0	0.00
211.	7332-12-4-1H-BH-BH		72	1	1.38
212.	73162-2-2-2P-BH-BH		63	1	1.58
213.	7320-11-2-1H-BH-BH		65	1	1.53
214.	73167-1-1-2H-BH-BH		69	7	10.14
215.	7357-2-3-1H-BH-BH		59	0	0.00

contd.

1	2	3	4	5	6
216.	73185-7-1-2H-BH-BH		76	0	0.00
217.	73190-1-2-1H-BH-BH		69	3	4.34
218.	73170-3-1-1H-BH-BH		78	0	0.00
219.	7339-3-3-1H-BH-BH		74	3	4.05
220.	73167-5-3-1P-BH-BH		77	1	1.29
221.	73167-5-3-B-BH-BH		71	0	0.00
222.	7341-12-1-B-BH-BH		86	1	1.16
223.	73252-11-2-B-BH-BH		65	0	0.00
224.	7339-3-2-1P-BH-BH		69	0	0.00
226.	73126-6-2-B-BH-BH		65	17	26.15
227.	7343-10-2-1H-BH-BH		76	1	1.31
228.	731-9-2-1H-BH-BH		71	1	1.40
229.	7313-2-3-1H-BH-BH		62	7	11.29
230.	7333-12-3-1H-BH-BH		61	1	1.63
231.	7310-22-1-B-BH-BH		76	0	0.00
232.	7389-32-2-B-BH-BH		66	1	1.51
233.	7328-8-5-B-BH-BH		67	0	0.00
234.	7380-1-4-B-BH-BH		73	0	0.00
235.	7343-14-3-B-BH-BH		66	2	3.03
236.	7357-22-3-B-BH-BH		69	2	2.89
237.	7332-1-1-1H-BH-BH		68	0	0.00
238.	73187-3-2-1H-BH-BH		68	1	1.47
239.	7310-3-1-B-BH-BH		63	0	0.00
240.	7341-8-1-B-BH-BH		74	0	0.00
241.	73111-8-1-B-BH-BH		70	5	7.14
242.	7389-18-6-B-BH-BH		83	0	0.00
243.	731-8-3-B-BH-BH		66	4	6.06
244.		G-130	70	0	0.00
245.	73308-1-1-1H-BH-BH		82	4	4.87
246.	73103-6-4-B-BH-BH		70	2	2.85
247.	7310-26-2-B-BH-BH		79	4	5.06
248.	73367-11-4-1P-BH-BH		71	0	0.00
249.	7320-11-1-1H-BH-BH		66	0	0.00
250.	73304-10-4-2H-BH-BH		53	2	3.72
251.	73162-2-2P-BH-BH		83	2	2.40
252.	73111-7-2-B-BH-BH		76	2	2.63
253.	73111-8-1-B-BH-BH		70	0	0.00
254.	73185-7-1-2H-BH-BH		57	8	14.03
255.	7319-22-1-B-BH-BH		76	5	6.57
256.	7310-3-1-B-BH-BH		87	4	4.59
257.	7320-11-1-1H-BH-BH		58	25	43.10
258.	7333-12-3-1H-BH-BH		61	2	3.27
259.	7389-18-6-B-BH-BH		76	9	11.84
260.	7320-11-2-1H-BH-BH		63	0	0.00

contd.



1	2	3	4	5	6
261.	7332-11-4-2H-BH-BH		68	7	10.29
262.	7380-1-4-B-BH-BH		70	0	0.00
263.	73167-5-3-B-BH-BH		67	2	2.98
264.	7328-8-5-B-BH-BH		69	5	7.24
265.		Annigeri	63	0	0.00
266.	73167-5-3-1P-BH-BH		73	1	1.36
267.	7333-10-3-1H-BH-BH		67	11	16.41
268.	731-9-2-1H-BH-BH		75	9	12.00
269.	73190-1-2-1H-BH-BH		75	7	9.33
270.	7339-3-3-1H-BH-BH		65	4	6.15
271.	73126-6-2-B-BH-BH		82	1	1.21
272.	73167-1-1-2H-BH-BH		67	2	2.98
273.	74167-1-1H-LB-BH-BH		78	0	0.00
274.	7357-22-3-B-BH-BH		78	3	3.84
275.	737-18-1-B-BH-BH		64	5	7.81
276.	73103-6-4-B-BH-BH		73	0	0.00
277.	7332-7-3-B-BH-BH		79	0	0.00
278.	7341-12-1-B-BH-BH		70	6	8.57
279.	731-8-3-B-BH-BH		72	1	1.38
280.	7341-8-1-B-BH-BH		83	4	4.81
281.	73187-3-2-1H-BH-BH		81	2	2.46
282.	7325-11-2-1H-BH-BH		75	0	0.00
283.	7310-26-2-B-BH-BH		75	3	4.00
284.	73170-3-1-1H-BH-BH		82	16	19.51
285.	73308-1-1-1H-BH-BH		69	3	4.34
286.		G-130	65	4	6.15
287.	7313-2-3-1H-BH-BH		61	3	4.91
288.	73252-11-2-B-BH-BH		54	1	1.85
289.	73367-11-4-1P-BH-BH		67	3	4.47
290.	7343-10-2-1H-BH-BH		70	3	4.28
291.	7332-1-1-1H-BH-BH		69	0	0.00
292.	7389-32-2-B-BH-BH		75	1	1.33
293.	7332-1-4-1H-BH-BH		76	0	0.00
294.	7357-2-3-1H-BH-BH		69	1	1.44
295.	7380-1-1-B-BH-BH		80	1	1.25
296.	73304-10-4-2H-BH-BH		69	0	0.00
297.	73213-9-3-1H-BH-BH		76	3	3.94
298.	7379-3-2-1P-BH-BH		64	0	0.00
299.	7343-14-3-B-BH-BH		67	1	1.49
300.	73179-24-1-1H-BH-BH		48	3	6.25
301.	ICC-1		55	1	1.81
302.		Phule G-2	63	12	19.04
303.		Phule G-3	47	2	4.25
304.	1154	P-1054-2	63	0	0.00
305.	1257	P-1157	77	0	0.00

contd.

1	2	3	4	5	6
306.	1294	P-1181-A	65	2	3.07
307.	1392	P-1240	64	0	0.00
308.	1913	P-1546	83	6	7.52
309.	2022	P-1630-1	67	0	0.00
310.	2038	P-1639	73	0	0.00
311.	2810	P-3030	78	0	0.00
312.	3314	P-3951	63	3	4.76
313.	4934	Chafa	68	3	4.41
314.	5676	K-4-1	80	3	3.75
315.	5689	BN-9	77	18	23.87
316.	5729	C-19-18	81	3	3.70
317.	5757	Dharwar C	71	12	16.90
318.	5764	Dhulia 70-10	68	0	0.00
319.	5781	Pamer-4-14-I	81	0	0.00
320.	5783	F <sub>3</sub> WF X 16 BR	75	1	1.33
321.	5798	G Ram-3 Gwalior	58	2	3.44
322.	5804	GS-138	72	1	1.38
323.	5825	K-504	67	1	1.49
324.	5936	F-56	74	1	1.35
325.	5948	F-68	77	1	1.29
326.	5954	F-81	60	0	0.00
327.	6001	T-120	74	1	1.35
328.	6101	JG-82	76	3	3.94
329.	6121	JG-112	73	0	0.00
330.	7423	1-57-2	69	2	2.89
331.	7424	2-41-3	58	4	6.89
332.	7458	6127	64	0	0.00
333.	7496	M-72	67	5	7.46
334.	7539	H-27-2	75	1	1.33
335.	7698	20-1	36	0	0.00
336.	7755	NEC-760	72	2	2.77
337.	8171	NEC-2319	80	0	0.00
338.	8932	N-31	76	21	27.63
339.	10130	CPS-1	44	2	4.54
340.	10256	H-73-13	61	12	19.67
341.	10387	Coll.No.122	81	2	2.46
342.	10390	Coll.No.125	75	0	0.00
343.	10432	Coll.No.166	90	3	3.33
344.	10436	Coll.No.170	63	2	3.17
345.	10449	Coll.No.183	65	10	15.38
346.	10806	H-1022-1	70	2	2.85
347.	10810	H-75-6-1	72	0	0.00
348.	10826	C-28	67	5	7.46
349.		Annigeri	77	2	2.59
350.		G-130	76	0	0.00

contd.

1	2	3	4	5	6
351.	10432		83	0	0.00
352.	8171		92	2	2.17
353.	10387		74	2	2.70
354.	10130		37	0	0.00
355.	10806		58	0	0.00
356.	10436		60	0	0.00
357.	8932		78	0	0.00
358.	10256		72	1	1.38
359.	10826		78	8	10.25
360.	10390		77	5	6.49
361.	10449		64	0	0.00
362.	10810		58	0	0.00
363.	5825		83	0	0.00
364.	5781		67	1	1.49
365.	5936		76	0	0.00
366.	5757		69	1	1.44
367.	5783		62	1	1.61
368.	5689		80	1	1.25
369.		Annigeri	79	2	2.53
370.	5764		77	0	0.00
371.	5804		66	0	0.00
372.	4934		74	1	1.35
373.	5798		76	0	0.00
374.	5729		84	0	0.00
375.	5676		72	3	4.16
376.	5948		72	0	0.00
377.	7755		76	0	0.00
378.		G-130	76	0	0.00
379.	6101		66	0	0.00
380.	7539		82	0	0.00
381.	7458		74	0	0.00
382.	7423		72	0	0.00
383.	7496		80	3	3.75
384.	5954		60	0	0.00
385.	7698		44	1	2.27
386.	7424		79	0	0.00
387.	6001		76	1	1.31
388.	6121		74	2	2.70
389.	1294		64	1	1.56
390.		C-1	80	0	0.00
391.		Phule G-3	44	0	0.00
392.	1392		69	0	0.00
393.	3314		65	4	6.15
394.	1257		71	0	0.00
395.	1913		77	5	6.49

contd.

1	2	3	4	5	6
396.	1154				
397.	2810		63	1	1.58
398.	2038		86	4	4.85
399.			78	13	16.66
400.	2022	Phule G-2	82	0	0.00
401.	5757		69	2	2.89
402.	5676		70	0	0.00
403.	5825		84	24	28.57
404.	5781		81	5	6.17
405.	5804		76	0	0.00
406.	5729		73	2	2.73
407.	5798		78	1	1.28
408.	5783		68	0	0.00
409.	5689		66	2	3.03
410.	5936		75	0	0.00
411.	5936		76	0	0.00
412.	5764		61	5	8.19
413.	4934		73	0	0.00
414.	6001		58	3	5.17
415.	7698		53	0	0.00
416.	7458		70	2	2.85
417.	7424		59	2	3.38
418.	7755		72	3	4.16
419.		Annigeri	79	3	3.79
420.	7423		68	2	2.94
421.	6121		73	2	2.73
422.	5954		55	0	0.00
423.	6101		61	5	8.19
424.	7539		69	1	1.44
425.	5948		55	1	1.81
426.	2022		59	0	0.00
427.	1257		72	2	2.77
428.	1913		75	2	2.66
429.	1154		51	0	0.00
430.	1392		70	0	0.00
431.	2810		69	0	0.00
432.	2038		75	4	5.33
433.		Phule G-2	74	0	0.00
434.	ICC-1		64	0	0.00
435.	1294		67	1	1.49
436.		Phule G-3	46	0	0.00
437.	3314		74	0	0.00
438.	10432		75	0	0.00
439.	10449		68	1	1.47
440.	10810		71	0	0.00
441.	10256		67	2	2.98

contd.

1	2	3	4	5	6
442.	10130		61	1	1.49
443.		G-130	63	0	0.00
444.	8171		74	29	39.18
445.	10436		81	8	9.87
446.	10390		67	4	5.97
447.	10826		73	9	12.32
448.	10806		68	1	1.47
449.	8932		75	7	9.33
450.	10387		66	1	1.51
451.	25	P-18	61	12	19.67
452.	33	-23	68	1	1.47
453.	152	-128-1	63	1	1.58
454.	180	-148	61	16	26.22
456.	182	-149-1	68	5	7.35
457.	183	-150	66	1	1.51
458.	214	-172-1	69	1	1.44
459.	246	-194	60	4	6.66
460.	250	-199	69	9	13.04
461.	363	-270-1	62	5	8.06
462.	372	-275	73	2	2.73
463.	404	-299	69	4	5.79
464.	433	-318	75	0	0.00
465.	439	-325	69	0	0.00
466.	445	-332-1	66	0	0.00
467.	459	-345	74	2	2.70
468.	495	-375	59	3	5.08
469.	515	-391	69	0	0.00
470.	517	-392-1	73	0	0.00
471.	520	-394-1	72	0	0.00
472.	640	-502	66	0	0.00
473.	867	-690	74	5	6.75
474.	870	-691-1	68	0	0.00
475.	915	-726-1	51	1	1.96
476.	930	-736-3	78	0	0.00
477.	949	-748	76	5	6.57
478.	1053	-890	75	6	8.00
479.	1126	-1017	64	14	21.87
480.	1173	-1103	69	32	46.37
481.	1223	P-1132-1	58	4	6.89
482.	1310	-1194	67	2	2.98
483.	1316	-1199	61	3	4.91
484.	1503	-1294	65	0	0.00
485.	2083	-1679-2	66	0	0.00

contd.

1	2	3	4	5	6
486.	2133	P-1713	84	3	3.57
487.	2269	-1869	67	1	1.49
488.	2660	-2686-2	82	4	4.87
489.	2812	-3036	68	0	0.00
490.	3099	-3614	72	1	1.38
491.	3145	-3665-1	60	9	15.00
492.	3147	-3665-3	68	0	0.00
493.	4951	JG-62	70	2	2.85
494.	4953	GW-5/7	82	2	2.43
495.	5032	Bijapur-G-G	57	0	0.00
496.	5087	CP-377	81	2	2.46
497.	5593	WF WG X 150	87	17	29.82
498.	5711	Bold chafa	63	0	0.00
499.		Annigeri	75	5	6.66
500.		G-130	68	6	8.82
501.	25		59	18	30.15
502.	495		66	0	0.00
503.	1223		78	14	17.94
504.	3099		77	19	24.67
505.		Annigeri	80	34	42.50
506.	5711		54	7	12.96
507.	1316		50	12	24.00
508.	246		58	14	24.12
509.	870		70	16	22.85
510.	5032		74	2	2.70
511.	1310		60	5	8.33
512.	439		64	1	1.56
513.	2083		62	1	1.61
514.	60		62	0	0.00
515.	515		61	2	3.27
516.	1503		81	2	2.46
517.	33		67	3	4.47
518.	1126		62	2	3.22
519.	1173		71	1	1.40
520.	517		73	1	1.36
521.	372		76	14	18.42
522.	5593		70	7	10.00
523.	4951		70	4	5.71
524.	182		56	1	1.78
525.	520		60	0	0.00
526.	250		44	0	0.00
527.	152		56	4	7.14
528.	2269		58	2	3.44
529.	867		61	3	4.91
530.	180		66	1	1.51

contd.

1	2	3	4	5	6
531.	404		61	1	1.63
532.	930		53	3	5.66
533.	4953		82	3	3.65
534.	214		64	1	1.56
535.	3145		53	0	0.00
536.	433		76	0	0.00
537.	459		64	0	0.00
538.	2812		61	5	8.19
539.	5087		67	6	8.95
540.	640		62	0	0.00
541.	363		65	0	0.00
542.	949		66	1	1.51
543.	915		57	10	17.54
544.		G-130	71	47	66.19
545.	2133		59	9	15.25
546.	183		58	29	50.00
547.	1053		64	44	68.75
548.	3147		68	7	10.29
549.	445		71	7	9.85
550.	2660		66	7	10.60
551.	439		70	2	2.85
552.	5032		62	2	3.22
553.	363		72	0	0.00
554.	1503		72	26	36.11
555.	404		73	13	17.86
556.	5087		70	2	2.85
557.	2133		67	4	5.97
558.	180		84	10	11.90
559.	949		78	3	3.84
560.	2083		83	1	1.20
561.	25		77	7	9.09
562.	214		71	28	39.43
563.	517		78	1	1.28
564.	4953		68	3	4.41
565.		Annigeri	62	3	4.83
566.	372		70	4	5.71
567.	1316		64	1	1.56
568.	2269		80	0	0.00
569.	33		73	1	1.36
570.	1173		79	0	0.00
571.	250		81	0	0.00
572.	60		77	0	0.00
573.	495		82	1	1.21
574.	433		79	1	1.26
575.	870		90	2	2.22

contd.

1	2	3	4	5	6
576.	1053				
577.	5711		85	4	4.70
578.	915		80	0	0.00
579.	640		79	2	2.53
580.	2812		81	2	2.46
581.	1223		86	5	5.81
582.	3147		82	2	2.43
583.	1126		81	0	0.00
584.	183		68	0	0.00
585.			78	1	1.28
586.	867	G-130	77	2	2.59
587.	4951		83	1	1.20
588.	445		72	1	1.38
589.	152		81	1	1.23
590.	459		78	3	3.84
591.	930		75	0	0.00
592.	1310		60	3	5.00
593.	515		77	3	3.89
594.	246		89	0	0.00
594.	246		79	9	11.39
595.	2660		74	4	5.40
596.	182		56	50	89.28
597.	520		76	49	52.63
598.	3145		71	12	16.90
599.	3099		69	14	20.28
600.	5593		64	15	23.43
601.	17	P-10	75	0	0.00
602.	96	-75	79	0	0.00
603.	128	-103-1	55	0	0.00
604.	136	-110-1	56	5	8.92
605.	144	-120	62	0	0.00
606.	181	-149	71	1	1.40
607.	219	-174-1	69	16	23.18
608.	231	-182	77	2	2.59
609.	247	-195	75	1	1.33
610.	258	-204	82	0	0.00
611.	261	-209	74	2	2.70
612.	350	-261-1	74	1	1.35
613.	362	-270	70	0	00.00
614.	398	-293	73	0	0.00
615.	411	-304-1	67	0	0.00
616.	442	-331	70	0	0.00
617.	452	-337-1	77	1	1.29
618.	465	-349-1	80	2	2.50
619.	524	-406	74	1	1.35
620.	535	-416	65	0	0.00

contd



1	2	3	4	5	6
621.	540	P-424-1	74	7	9.33
622.	577	-454-1	73	1	1.36
623.	612	-481-1	78	1	1.28
624.	629	-494-1	70	1	1.42
625.	638	-500	64	2	3.12
626.	689	-539-A	77	0	0.00
627.	694	-542-1	72	2	2.77
628.	724	-570	74	0	0.00
629.	730	-579	69	2	2.89
630.	1098	-972	53	0	0.00
631.	1156	-1067-1	70	5	7.14
632.	1550	-1321-5	73	0	0.00
633.	1629	-1360	79	0	0.00
634.	1896	-1515-3	72	0	0.00
635.	2139	-1717	89	3	3.37
636.	2390	-2164	79	2	2.53
637.	2772	-2945	60	2	3.33
638.	2874	-3230	62	0	0.00
639.	3405	-4089-1	86	0	0.00
640.	3503	-4205-1	69	0	0.00
641.	3533	-4235-1	63	3	4.76
642.	3857	-4559	68	14	20.58
643.	4259	-5189	77	33	42.85
644.	4368	-5346	75	4	5.33
645.	4377	-5357	67	3	4.47
646.	4488	-5807-1	58	2	3.44
647.	4494	-6001-2	81	2	2.46
648.	4717	-6308-1	76	2	2.63
649.		Annigeri	73	2	2.73
650.		G-130	78	0	0.00
651.	17		67	0	0.00
652.	465		84	8	9.52
653.	1156		83	1	1.20
654.	3503		79	10	12.65
655.		Annigeri	65	0	0.00
656.	4717		80	2	2.50
657.	1629		70	0	0.00
658.	247		55	1	1.81
659.	629		66	0	0.00
660.	4377		68	0	0.00
661.	1550		70	0	0.00
662.	411		44	1	2.27
663.	2139		73	1	1.36
664.	128		76	1	1.31
665.	524		64	0	0.00

contd.

1	2	3	4	5	6
666.	1896		58	0	0.00
667.	96		64	0	0.00
668.	730		66	1	1.51
669.	1098		69	1	1.44
670.	535		71	0	0.00
671.	350		72	1	1.38
672.	4494		72	0	0.00
673.	4259		70	1	1.42
674.	181		68	2	2.94
675.	540		58	3	5.17
676.	258		66	0	0.00
677.	136		56	0	0.00
678.	2772		32	0	0.00
679.	612		45	0	0.00
680.	144		42	0	0.00
681.	362		60	5	8.33
682.	689		57	10	17.54
683.	4368		66	5	7.57
684.	231		52	2	3.84
685.	3533		72	2	2.77
686.	398		67	1	1.49
687.	451		61	2	3.27
688.	3405		72	0	0.00
689.	4488		68	1	1.47
690.	577		58	1	1.72
691.	261		60	5	8.33
692.	694		67	3	4.47
693.	638		75	0	0.00
694.		G-130	71	0	0.00
695.	2390		63	0	0.00
696.	219		65	4	6.15
697.	724		64	3	4.68
698.	3887		85	11	12.94
699.	442		51	9	17.64
700.	2874		55	3	5.45
701.	411		74	2	2.70
702.	4377		62	4	6.45
703.	261		61	2	3.27
704.	1896		71	0	0.00
705.	362		62	1	1.61
706.	4488		57	0	0.00
707.	2390		79	2	2.53
708.	144		67	1	1.49
709.	694		73	0	0.00
710.	2139		81	0	0.00

contd.

1	2	3	4	5	6
711.	17		84	0	0.00
712.	231		73	1	1.36
713.	535		72	0	0.00
714.	4368		63	0	0.00
715.		Annigeri	42	0	0.00
716.	350		66	0	0.00
717.	1629		62	0	0.00
718.	2772		81	1	1.23
719.	96		63	0	0.00
720.	1098		69	3	4.34
721.	258		64	2	3.12
722.	128		63	0	0.00
723.	465		66	2	3.03
724.	398		57	1	1.75
725.	629		67	2	2.98
726.	724		67	0	0.00
727.	4717		75	0	0.00
728.	4494		74	0	0.00
729.	638		60	0	0.00
730.	577		79	0	0.00
731.	3405		69	0	0.00
732.	1156		50	1	2.00
733.	3887		68	2	2.94
734.	730		84	0	0.00
735.	219		71	0	0.00
736.		G-130	53	1	1.88
737.	612		54	0	0.00
738.	4259		56	0	0.00
739.	442		61	7	11.47
740.	136		71	0	0.00
741.	451		72	0	0.00
742.	689		65	1	1.53
743.	1550		72	0	0.00
744.	524		73	0	0.00
745.	247		68	1	1.47
746.	2874		77	0	0.00
747.	181		74	4	5.40
748.	540		54	2	3.70
749.	3533		70	0	0.00
750.	3503		79	1	1.26
751.		CO-1	65	1	1.53
752.	149	P-124-2	62	0	0.00
753.	346	-258	73	2	2.73
754.	435	-319-1	81	0	0.00
755.	527	-409	76	0	0.00

contd.

1	2	3	4	5	6
756.	599	P-474	71	1	1.40
757.	678	-533	72	0	0.00
758.	726	-573	78	6	7.69
759.	772	-613	71	2	2.81
760.	779	-619	80	0	0.00
761.	803	-635	47	2	4.25
762.	885	-702	71	0	0.00
763.	916	-726-2	72	0	0.00
764.	952	-750	75	0	0.00
765.	1017	-848	64	2	3.12
766.	1022	-852-1	76	5	6.57
767.	1025	-855	86	2	2.32
768.	1078	-922-12	79	2	2.53
769.	1113	-997	59	2	3.38
770.	1160	-1071-1	68	2	2.94
771.	1218	-1129-1	64	3	4.68
772.	1248	-1148	67	8	11.94
773.	1582	-1337-1	62	34	54.83
774.	1715	-1417-1	58	4	6.89
775.	1721	-1421	80	7	8.75
776.	1743	-1434	76	0	0.00
777.	1745	-1435	80	1	1.25
778.	1816	-1477	70	1	1.42
779.	2151	-1726	72	1	1.38
780.	2168	-1749	60	0	0.00
781.	2190	-1765-1	59	1	1.69
782.	2210	-1781	58	1	1.72
783.	2260	-1855	75	0	0.00
784.	2267	-1863	88	0	0.00
785.	2237	-2023-1	57	0	0.00
786.	2939	-3371-1	60	2	3.33
787.	3024	-3503	62	0	0.00
788.	3034	-3522	73	11	15.00
789.	3201	-3759	58	18	31.03
790.	3514	-4220	70	26	37.14
791.	3554	-4243-1	80	7	8.75
792.	3556	-4243-3	76	2	2.63
793.	3567	-4249-1	82	0	0.00
794.	3738	-4354-1	62	6	9.67
795.	3753	-4363	57	1	1.75
796.	4023	-4729	52	23	44.23
797.	4219	-5088	57	0	0.00
798.	4612	-6201	52	6	11.50
799.		Annigeri	62	9	14.50
800.		G-130	64	19	29.64

contd

1	2	3	4	5	6
801.		CO-1	57	19	33.33
802.	1073		58	5	8.62
803.	2190		68	3	4.41
804.	3514		69	6	8.69
805.		Annigeri	75	5	6.66
806.	4612		67	8	11.94
807.	2260		63	12	19.04
808.	772		44	34	77.27
809.	1715		58	18	31.03
810.	3753		58	11	18.96
811.	2210		70	5	7.14
812.	1017		66	10	15.15
813.	2337		79	0	0.00
814.	346		67	3	4.47
815.	1113		48	0	0.00
816.	2267		68	0	0.00
817.	149		54	0	0.00
818.	2151		70	11	15.71
819.	2168		60	5	8.33
820.	1160		58	3	5.17
821.	885		68	1	1.47
822.	4219		61	0	0.00
823.	3567		73	0	0.00
824.	599		50	0	0.00
825.	1218		69	1	1.44
826.	779		66	2	3.03
827.	435		64	2	3.12
828.	3024		62	4	6.45
829.	1582		62	6	9.67
830.	527		57	3	5.26
831.	916		64	0	0.00
832.	1743		69	2	2.89
833.	3738		55	2	3.63
834.	726		41	6	14.63
835.	3554		51	14	27.45
836.	952		61	6	9.83
837.	1025		52	8	15.38
838.	3201		74	27	36.48
839.	4023		51	17	33.33
840.	1248		72	22	30.55
841.	803		47	7	14.89
842.	1745		82	1	1.21
843.	1721		93	4	4.30
844.		G-130	99	3	3.03
845.	2939		89	23	25.84

contd.

1	2	3	4	5	6
846.	678				
847.	1816		64	31	48.43
848.	3556		70	19	27.14
849.	1022		94	1	1.06
850.	3034		95	1	1.05
851.	1017		63	22	34.92
852.	3753		69	3	4.34
853.	803		60	17	28.33
854.	2267		44	10	22.72
855.	916		58	19	32.75
856.	4023		85	9	10.58
857.	2939		68	16	18.60
858.	527		77	1	1.29
859.	1745		71	4	5.63
860.	2337		60	13	21.66
862.	726		87	3	3.44
863.	1160		84	0	0.00
864.	3730		83	1	1.20
865.		Annigeri	78	0	0.00
866.	885		79	12	15.18
867.	2260		41	21	51.21
868.	3024		52	16	30.76
869.	149		65	22	33.84
870.	2168		69	12	17.39
871.	779		85	0	0.00
872.	346		66	4	6.06
873.	1073		73	0	0.00
874.	952		55	1	1.81
875.	1715		67	0	0.00
876.	1816		67	6	8.95
877.	4612		78	1	1.28
878.	4219		72	8	11.11
879.	1721		68	2	2.94
880.	1248		70	0	0.00
881.	3201		70	0	0.00
882.	2190		84	0	0.00
883.	3556		72	0	0.00
884.	2151		84	0	0.00
885.	678		70	0	0.00
886.		G-130	84	0	0.00
887.	1582		80	5	6.25
888.	3567		79	9	11.39
889.	1022		77	1	1.29
890.	435		78	7	8.97
			64	8	12.50

contd.

1	2	3	4	5	6
891.	1025		77	9	11.68
892.	1743		93	3	3.22
893.	2210		55	5	9.09
894.	1113		73	13	17.80
895.	772		61	8	13.11
896.	3034		60	14	23.33
897.	599		44	11	25.00
898.	1218		68	12	17.64
899.	3554		68	13	19.11
900.	3514		75	19	25.33
901.	979	P-790	63	10	15.87
902.	1166	-1092	61	9	14.75
903.	1686	-1397-1	54	24	44.44
904.	1966	-1589-1	56	11	19.64
905.	2003	-1620-1	69	38	55.07
906.	2115	-1701-1	61	31	50.81
907.	2270	-1872	41	16	39.02
908.	2279	-1884	47	13	27.65
909.	2284	-1888	62	19	30.64
910.	2991	-3455	68	45	66.17
911.	3020	-3497	39	19	48.71
912.	3238	-3800-1	54	22	40.74
913.	3376	-4062	68	26	38.23
914.	3603	-4271-1	51	10	19.60
915.	4241	-5127	54	24	44.44
916.	4780	-6447	59	23	38.98
917.	4782	-6449	57	43	75.43
918.	4788	-6457	61	24	39.34
919.	4818	-6574	29	20	68.96
920.	4824	-6590	39	29	74.35
921.	4830	-6598	26	4	15.38
922.	4943	F-370	34	12	35.29
923.	510	EC-26415-1	46	9	19.56
924.	5312	Lahore-16	74	8	10.81
925.	5345	NP-6	71	21	29.57
926.	5354	NP-17-1	58	3	5.17
927.	5357	NP-23	59	3	5.08
928.	5415	PB-14	58	0	0.00
929.	5453	Teheran-24	64	7	10.93
930.	5486	V-27	53	10	18.86
931.	5617	1834	73	5	6.84
932.	5622	1432/13	70	9	12.85
933.	6288	NEC-180	56	15	26.78
934.	6289	NEC-184	60	6	10.00
935.	6306	NEC-208	71	2	2.81

contd.

1	2	3	4	5	6
936.	6349				
937.	6609	NEC-271	59	6	10.16
938.	6872	NEC-692	68	5	7.35
939.	6938	NEC-1074	69	2	2.89
940.	7906	NEC-1178	45	1	2.22
941.	8172	NEC-1978	40	2	5.00
942.	8199	NEC-2320	73	7	9.58
943.	8228	NEC-2553	56	3	5.35
944.	8240	NEC-2389	55	4	7.27
945.	8282	NEC-2403	44	3	6.81
946.	8457	FG-661	64	11	17.18
947.	8928	C-162	76	3	3.94
948.	9279	56566	49	4	8.16
949.	4918	NEC-1760	46	4	8.69
950.	4948	Annigeri	86	0	0.00
951.	5415	G-130	85	0	0.00
952.	5622		60	0	0.00
953.	6306		54	0	0.00
954.	5486		71	3	4.22
955.	6289		57	2	3.50
956.	6288		66	4	6.06
957.	5345		53	2	3.77
958.	6349		66	10	15.15
959.	5617		68	26	38.23
960.	5354		70	32	45.71
961.	5357		49	16	32.65
962.	5453		67	27	40.29
963.	4824		51	0	0.00
964.	4818		53	1	1.88
965.	4788		52	2	3.84
966.	4943		65	5	7.69
967.		Annigeri	56	8	14.28
968.	4782		65	8	12.30
969.	3376		56	17	3.35
970.	4241		62	37	59.67
971.	3603		42	19	45.23
972.	5101		77	16	20.77
973.	4780		27	17	62.96
974.	5312		16	15	93.75
975.	4830		46	22	47.82
976.	2270		36	10	27.77
977.	2284		58	25	43.10
978.	3238		47	11	23.40
979.	2991		66	14	21.20
980.	2279		48	19	39.50
			42	1	2.3

contd



1	2	3	4	5	6
981.	1966		41	9	21.95
982.	2115		58	9	15.51
983.	979		37	0	0.00
984.	11766		44	2	4.54
985.	3020		55	1	1.81
986.	1686		60	0	0.00
987.		G-130	67	5	7.46
988.	2003		56	6	10.71
989.	7906		45	1	2.22
990.	6872		40	10	22.72
991.	8928		53	14	26.41
992.	6938		48	7	14.58
993.	8199		70	1	1.42
994.	8282		49	0	0.00
995.	9279		52	3	5.76
996.	8228		82	0	0.00
997.	8240		57	0	0.00
998.	8172		67	2	2.98
999.	6609		71	0	0.00
1000.	8457		111	0	0.00
1001.	6872		63	1	1.58
1002.	8928		47	2	4.25
1003.	6938		58	2	3.44
1004.	8199		55	1	1.81
1005.	7906		51	1	1.96
1006.	8457		78	0	0.00
1007.	8228		58	2	3.44
1008.	8240		63	4	6.34
1009.	9279		49	1	2.50
1010.	6609		77	3	3.89
1011.		Annigeri	76	21	27.63
1012.	8282		69	5	7.24
1013.	8172		53	1	1.88
1014.	6289		59	2	3.38
1015.	5622		41	0	0.00
1016.	6306		40	2	5.00
1017.	5486		22	2	9.09
1018.	5345		29	0	0.00
1019.	5617		55	2	3.62
1020.	5453		30	0	0.00
1021.	6288		23	0	0.00
1022.	5357		36	0	0.00
1023.	6349		34	0	0.00
1024.	5354		54	3	5.55
1025.	5415		52	0	0.00

contd.

1	2	3	4	5	6
1026.	4788		40	0	0.00
1027.	4241		52	2	3.84
1028.	4830		30	2	6.66
1029.		G-130	63	4	6.34
1030.	4780		40	0	0.00
1031.	4824		56	1	1.78
1032.	3376		57	3	5.26
1033.	4818		69	2	2.89
1034.	5101		49	0	0.00
1035.	4943		51	0	0.00
1036.	4782		53	3	5.66
1037.	5312		54	14	25.92
1038.	3603		40	4	10.00
1039.	2270		44	2	4.54
1040.	2284		42	0	0.00
1041.	2279		51	6	11.76
1042.	1166		44	4	9.09
1043.	3020		49	3	6.12
1044.	2991		46	6	13.04
1045.	1966		50	0	0.00
1046.	979		27	1	3.70
1047.	1686		50	1	2.00
1048.	2003		67	1	1.49
1049.	2115		40	0	0.00
1050.	3238		26	5	19.23

APPENDIX-VIII

Reaction of advanced chickpea germplasm lines (selected during 1976-77)  
to pea leaf roll virus at Hissar during 1978-79

Sl. No.	Particular	Total plants	Infected plants	Percent infection
1	2	3	4	5
1.	ICC-1003	19	0	0.00
2.	-2233	34	0	0.00
3.	-2385	24	0	0.00
4.	-2430	20	0	0.00
5.	-2925	26	2	7.69
6.	-3034	24	1	4.16
7.	-3133	32	1	3.12
8.	-3718	35	1	2.85
9.	-3735	49	2	4.08
10.	-4869	41	1	2.43
11.	-6433	29	0	0.00
12.	-6934	23	0	0.00
13.	-8252	26	1	3.84
14.	-10490	28	0	0.00
15.	-10495	16	0	0.00
16.	-10508	17	0	0.00
17.	-10586	12	1	8.33
18.	-10587	10	1	10.00
19.	-10592	4	0	0.00
20.	-10594	9	0	0.00
21.	-10597	7	0	0.00
22.	-10800	8	1	12.50

APPENDIX-IX

Reaction of chickpea germplasm lines selected in 1977-78  
to pea leaf roll virus at Hissar during 1978-79

Sl. No.	Particular	Total plants	Infected plants	Percent infection
1.	ICC-601	1	1	100.00
2.	-613	10	1	10.00
3.	-2308	2	1	50.00
4.	-2309	-	-	-
5.	-2336	4	0	0.00
6.	-2341	2	0	0.00
7.	-2346	18	5	27.77
8.	-2352	2	0	0.00
9.	-2356	3	0	0.00
10.	-2358	8	5	62.50
11.	-2362	8	1	12.50
12.	-2367	8	0	0.00
13.	-2369	12	1	8.33
14.	-2406	5	1	20.00
15.	-2417	13	6	46.15
16.	-2451	5	1	20.00
17.	-2453	7	6	85.71
18.	-2457	14	5	35.71
19.	-2459	21	5	23.80
20.	-2608	13	6	46.15
21.	-2616	28	9	32.14
22.	-2617	12	0	0.00
23.	-2838	19	5	26.31
24.	-2859	21	3	14.28
25.	-2875	17	7	41.17
26.	-2882	16	5	31.25
27.	-3137	17	3	17.64
28.	-3151	16	15	93.75
29.	-3159	15	6	40.00
30.	-3393	22	4	18.18
31.	-3561	4	3	75.00
32.	-3561	11	1	9.09
33.	-3637	11	2	18.18
34.	-3639	7	3	42.85
35.	-3669	30	7	23.33
36.	-3677	28	3	10.71
37.	-3782	28	13	50.00
38.	-3892	26	8	33.33
39.	-3895	24	3	10.34
40.	-4094	29	3	10.34
	-4137	8	2	25.00

contd

1	2	3	4	5
41.	ICC-4140	11	2	18.18
42.	-4984	20	7	35.00
43.	-6371	20	0	0.00
44.	-6391	10	3	30.00
45.	-6458	10	2	20.00
46.	-6459	8	0	0.00
47.	-6634	8	0	0.00
48.	-6795	14	3	21.42
49.	-6849	8	3	37.50
50.	-6896	10	1	10.00
51.	-6950	3	1	33.33
52.	-6962	10	2	20.00
53.	-6976	18	5	27.77
54.	-6978	6	3	50.00
55.	-7003	18	2	11.11
56.	-7027	16	5	31.25
57.	-7080	17	9	52.94
58.	-8651	13	2?	15.38
59.	-8724	10	2	20.00
60.	-8786	7	0?	0.00
61.	-8813	13	2	15.38
62.	-8830	21	4	19.04
63.	-8847	16	0	0.00
64.	-8856	17	1?	5.88
65.	-8864	12	2	16.66
66.	-8867	13	1	7.69
67.	-8911	9	2	22.22
68.	-9003	21	9	42.85
69.	-9211	4	1?	25.00
70.	-9397	7	1?	14.28
71.	-9625	4	2	50.00
72.	-9641	19	14	73.68
73.	-9681	33	30	90.90
74.	-9711	14	9	64.28
75.	-9736	42	33	78.57
76.	-10795	50	18	36.00
77.	-10796	40	11	27.50
78.	-10836	18	14	77.77

APPENDIX-X

Reaction of crossing block entries of chickpea to  
pea leaf roll virus at Hissar during 1978-79

Sl. No.	Particular	Total plants	Infected plants	Percent infection
1	2	3	4	5
1.	ICCC-5	36	1	2.77
2.	Pant G-115	28	1	3.57
3.	BG-203	45	3	6.66
4.	K-468	39	0	0.00
5.	H-208 X Pant G-114	26	0	0.00
6.	C-235	29	0	0.00
7.	F-378	30	1	3.33
8.	H-208	31	0	0.00
9.	F-370	34	0	0.00
10.	G-130	31	1	3.03
11.	GL-629	21	4	19.04
12.	NEC-2368	14	0	0.00
13.	P-1209-1	35	6	17.14
14.	T-3	42	3	7.14
15.	BEG-482	34	1	2.94
16.	BG-1	37	5	13.51
17.	C-104	44	0	0.00
18.	Coll.238	59	1	1.69
19.	Coll.327	51	0	0.00
20.	F-61	18	1	2.08
21.	G-24	22	2	9.09
22.	G-543	29	1	3.44
23.	H-556-1	49	0	0.00
24.	NEC-177	30	0	0.00
25.	-240	46	1	2.17
26.	-308	35	5	14.28
27.	-472	26	0	0.00
28.	-550	19	1	5.26
29.	-555	36	2	5.55
30.	-701	37	2	5.40
31.	-746	18	2	11.11
32.	-1128	25	2	8.00
33.	-1135	11	0	0.00
34.	-2296	13	0	0.00
35.	P-156	16	3	18.75
36.	P-992	10	4	40.00
37.	P-1092	15	0	0.00
38.	P-1774	13	1	7.69
39.	P-1781	8	0	0.00
40.	P-2019-1	6	0	0.00
41.	P-2202-2	5	0	0.00
42.	P-4353-1	13	0	0.00
43.	RS-11	28	0	0.00

APPENDIX-XI

Reaction of Ascochyta blight promising lines of chickpea to pea leaf roll virus at Hissar during 1978-79

Sl. No.	Particular	Total plants	Infected plants	Percent infection
1.	ICC-120	52	19	36.53
2.	-130	36	16	44.44
3.	-150	47	15	31.91
4.	-204	56	28	50.00
5.	-229	48	22	45.83
6.	-272	40	5	12.50
7.	-280	45	21	46.66
8.	-377	47	16	34.04
9.	-462	36	19	52.77
10.	-468	31	6	19.35
11.	-469	17	3	17.64
12.	-471	43	22	51.16
13.	-539	37	1?	3.22
14.	-559	34	13	38.23
15.	-561	8	2	25.00
16.	-567	20	1	5.00
17.	-595	24	9	37.50
18.	-599	20	4	20.00
19.	-600	20	3	15.00
20.	-666	12	1?	8.33
21.	-667	4	0	0.00
22.	-693	13	0	0.00
23.	-703	4	2	50.00
24.	-704	4	2	50.00
25.	-723	16	3	18.75
26.	-724	15	2	13.33
27.	-733	6	2	33.33
28.	-780	11	3	27.27
29.	-781	8	1	12.50
30.	-813	23	4	17.39
31.	-816	33	16	48.48
32.	-838	24	2	8.33
33.	-843	18	2	11.11
34.	-903	7	0	0.00
35.	-904	8	0	0.00
36.	-928	2	2	100.00
37.	-931	4	1	25.00
38.	-954	2	0	0.00
39.	-999	7	5	71.42
40.	-1003	5	0	0.00

contd.

1	2	3	4	5
41.	ICC-1004	7	2	28.57
42.	-1005	6	0	0.00
43.	-1006	9	0	0.00
44.	-1009	6	1	16.66
45.	-1012	3	0	0.00
46.	-1016	7	1	14.28
47.	-1017	4	0	0.00
48.	-1018	4	1	25.00
49.	-1023	7	2	28.57
50.	-1024	32	4	12.50
51.	-1077	28	8	28.57
52.	-1078	27	0	0.00
53.	-1149	33	0	0.00
54.	-1159	26	19	57.57
55.	-1170	19	10	52.63
56.	-1179	38	9	23.68
57.	-1202	23	2	8.69
58.	-1209	19	8	42.10
59.	-1214	19	1	5.26
60.	-1219	29	2	6.89
61.	-1270	19	3	15.78
62.	-1271	20	11	55.00
63.	-1272	11	1	9.09
64.	-1273	10	4	40.00
65.	-1275	14	6	42.85
66.	-1283	12	0	0.00
67.	-1292	14	5	35.71
68.	-1317	12	4	33.33
69.	-1329	2	0	0.00
70.	-1338	4	1	25.00
71.	-1407	5	0	0.00
72.	-1465	8	1	12.50
73.	-1468	6	2	33.33
74.	-1504	6	0	0.00
75.	-1583	1	0	0.00
76.	-1586	-	-	-
77.	-1607	4	2	50.00
78.	-1809	11	2	18.18
79.	-1827	29	9	31.03
80.	-1842	27	23	85.18
81.	-1871	14	12	85.71
82.	-1902	13	4	30.76
83.	-1903	13	8	61.53
84.	-1908	13	5	38.46
85.	-1910	19	9	47.36

contd.



1	2	3	4	5
86.	ICC-1911	11	1	9.09
87.	-1915	12	3	25.00
88.	-2117	12	3	25.00
89.	-2153	3	1	33.33
90.	-2156	3	1	33.33
91.	-2160	19	17	89.47
92.	-2172	29	12	41.37
93.	-2173	23	9	39.13
94.	-2237	13	2	15.38
95.	-2264	37	1	2.70
96.	-2266	30	7	23.33
97.	-2294	23	2	8.69
98.	-2295	11	2	18.18
99.	-2364	22	10	45.45
100.	-2369	29	6	20.68
101.	-2370	23	4	17.39
102.	-2590	23	14	60.86
103.	-2599	23	19	82.60
104.	-2600	13	13	100.00
105.	-2601	14	11	78.57
106.	-2693	20	18	90.00
107.	-3259	28	23	82.14
108.	-3277	19	6	31.57
109.	-3330	18	2	11.11
110.	-4716	12	3	25.00
111.	-4934	22	4	18.18
112.	-4935	11	0	0.00
113.	-4939	25	0	0.00
114.	-4989	19	0	0.00
115.	-5127	18	5	27.77
116.	-5784	29	13	44.82
117.	-6067	19	0	0.00
118.	-6250	17	13	76.47
119.	-6260	17	14	82.35
120.	-7513	18	2	11.11
121.	-7520	22	4	18.18

APPENDIX-XII

Reaction of wilt and root rot resistant lines of chickpea to  
pea leaf roll virus at Hissar during 1978-79

1	2	3	4	5
1.	ICC- 121	17	8	47.05
2.	- 202	14	9	64.28
3.	- 229	7	3	42.85
4.	- 267	17	8	47.05
5.	- 338	38	30	78.94
6.	-391	13	0	0.00
7.	- 516	11	4	36.36
8.	- 519	19	15	78.94
9.	- 554	10	7	70.00
10.	- 658	6	2	33.33
11.	- 858	24	10	41.66
12.	- 867	9	5	55.55
13.	-1443	7	4	57.14
14.	-1450	3	0	0.00
15.	-1611	14	8	57.14
16.	-1891	2	2	100.00
17.	-2072	9	3	33.33
18.	-2083	4	1	25.00
19.	-2086	4	3	75.00
20.	-2089	15	4	26.66
21.	-2321	5	1	20.00
22.	-2566	12	8	66.66
23.	-2660	7	5	71.42
24.	-2812	10	7	70.00
25.	-2835	4	2	50.00
26.	-2854	24	14	58.33
27.	-2860	26	2	7.69
28.	-3092	27	4	14.81
29.	-3103	19	4	21.05
30.	-3104	26	8	30.76
31.	-3392	9	4	44.44
32.	-3396	27	20	74.07
33.	-3426	28	3	10.71
34.	-3439	25	14	56.00
35.	-3539	21	4	19.04
36.	-3684	20	12	60.00
37.	-4519	13	10	76.92
38.	-4552	5	4	80.00
39.	-4651	9	4	44.44
40.	-4716	18	10	55.55

contd.

1	2	3	4	5
41.	ICC-4918	4	1	25.00
42.	-4951	19	5	26.31
43.	-5003	15	5	33.33
44.	-5727	16	14	87.50
45.	-5864	21	8	38.09
46.	-5901	8	5	62.50
47.	-6081	16	4	25.00
48.	-6098	4	2	50.00
49.	-6671	10	2	20.00
50.	-6880	7	5	71.42
51.	-7111	6	1	16.66
52.	-7248	6	1	16.66
53.	-7254	3	0	0.00
54.	-7681	2	1	50.00
55.	-8222	5	1	20.00
56.	-8446	4	1	25.00
57.	-8933	5	2	40.00
58.	-9001	5	2	40.00
59.	-9117	-	-	-
60.	-10104	18	8	44.44
61.	-10130	14	10	71.42
62.	-10394	5	1	20.00
63.	-11088	6	4	66.66

APPENDIX-XIII

Screening of chickpea germplasm lines for resistance to Ascochyta  
blight in Isolation Plant Propagator (1978-79)

Sl. No.	ICC No.	Incubation period in days	Percent infection	Percent killed	Rating on 9-point scale	
					10th day after inoculation	20th day after inoculation (Recovery rating)
1	2	3	4	5	6	7
1.	3080	5	100.00	0.00	7	8
2.	3081	5	100.00	20.00	7	9
	Pb-7	5	100.00	0.00	7	9
3.	3082	5	100.00	50.00	7	9
4.	3083	5	100.00	40.00	8	9
5.	3084	5	100.00	25.00	7	8
6.	3085	5	100.00	0.00	7	9
7.	3086	5	100.00	0.00	5	5
8.	3087	5	100.00	0.00	6	7
9.	3088	5	100.00	0.00	7	7
10.	3089	5	100.00	28.57	7	9
11.	3090	5	100.00	0.00	6	9
12.	3091	5	100.00	22.22	7	8
13.	3092	5	100.00	0.00	7	9
14.	3093	5	100.00	14.28	7	9
15.	3094	5	100.00	0.00	7	9
16.	3095	5	100.00	0.00	7	9
17.	3096	5	100.00	0.00	7	9
18.	3097	5	100.00	0.00	7	8
19.	3098	5	100.00	0.00	7	8
20.	3099	5	100.00	0.00	7	7
21.	3100	5	100.00	0.00	7	7
22.	3101	5	100.00	0.00	6	7
23.	3102	5	100.00	0.00	5	5
24.	3103	5	100.00	0.00	7	7
25.	3104	5	100.00	0.00	7	7
26.	3105	5	100.00	100.00	9	9
27.	3106	5	100.00	0.00	7	8
28.	3107	5	100.00	0.00	7	8
29.	3108	5	100.00	0.00	7	7
30.	3109	6	100.00	0.00	6	6
31.	3110	7	100.00	0.00	7	7
	Pb-7	5	100.00	0.00	7	7
32.	3111	5	100.00	0.00	7	7
33.	3112	5	100.00	0.00	7	7
34.	3113	5	100.00	0.00	7	7
35.	3114	5	100.00	0.00	7	7

contd.

1	2	3	4	5	6	7
36.	3115	7	100.00	0.00	6	6
37.	3116	5	100.00	0.00	6	6
38.	3117	5	100.00	0.00	6	6
39.	3118	5	100.00	0.00	6	7
40.	3119	5	100.00	0.00	7	7
41.	3120	5	100.00	11.11	7	7
42.	3121	5	100.00	0.00	7	7
43.	3122	5	100.00	0.00	7	7
44.	3123	5	100.00	0.00	7	7
45.	3124	5	100.00	0.00	7	7
46.	3125	5	100.00	0.00	7	7
47.	3126	5	100.00	0.00	6	7
48.	3127	5	100.00	0.00	6	7
49.	3128	5	100.00	10.00	7	7
50.	3129	5	100.00	0.00	7	7
51.	3130	5	100.00	0.00	5	6
52.	3131	5	100.00	0.00	7	7
53.	3132	5	100.00	0.00	7	7
54.	3133	5	100.00	0.00	5	5
55.	3134	5	100.00	0.00	5	5
56.	3135	5	100.00	0.00	5	5
57.	3136	5	100.00	0.00	6	6
58.	3137	5	100.00	0.00	7	7
59.	3138	5	100.00	0.00	6	7
60.	3139	5	100.00	0.00	7	7
	Pb-7	5	100.00	0.00	7	7
61.	3141	5	100.00	0.00	5	5
62.	3142	5	100.00	0.00	7	7
63.	3143	5	100.00	0.00	7	8
64.	3144	5	100.00	0.00	7	7
65.	3145	5	100.00	0.00	7	7
66.	3146	7	100.00	0.00	7	7
67.	3147	7	100.00	0.00	6	6
68.	3148	7	100.00	0.00	7	7
69.	3149	7	100.00	0.00	7	7
70.	3150	5	100.00	0.00	7	8
71.	3151	5	100.00	14.28	7	8
72.	3152	5	100.00	12.50	6	6
73.	3153	5	100.00	0.00	7	7
74.	3154	7	100.00	0.00	7	7
75.	3155	5	100.00	0.00	7	7
76.	3156	5	100.00	0.00	6	6
77.	3157	5	100.00	0.00	7	7
78.	3158	5	100.00	0.00	7	8
79.	3159	5	100.00	0.00	7	8
80.	3160	7	100.00	0.00	6	6

contd.

1	2	3	4	5	6	7
81.	3161	5	100.00	0.00	7	7
82.	3162	7	100.00	0.00	7	7
83.	3163	7	100.00	0.00	6	7
84.	3164	5	100.00	0.00	6	6
85.	3165	7	100.00	0.00	7	7
86.	3166	5	100.00	0.00	7	7
87.	3167	7	100.00	0.00	6	6
88.	3168	4	100.00	45.45	5	8
89.	3169	5	100.00	0.00	5	6
90.	3170	4	100.00	0.00	5	6
91.	3171	4	100.00	10.00	5	7
92.	3172	4	100.00	30.00	5	7
93.	3173	4	100.00	0.00	3-5	7
94.	3174	5	100.00	20.00	3-5	7
95.	3175	4	100.00	60.00	5	8
96.	3176	4	100.00	54.54	5	8
97.	3177	4	100.00	100.00	5	9
98.	3178	6	100.00	0.00	3	6
99.	3179	4	100.00	33.33	5	7
100.	3180	4	100.00	60.00	5	7
101.	3181	4	100.00	80.00	5	9
	460	4	100.00	100.00	5-7	9
102.	3182	4	90.90	27.27	5	7
103.	3183	4	100.00	44.44	3-5	8
104.	3184	4	100.00	44.44	5	7
105.	3185	4	100.00	16.66	3-5	6
106.	3186	6	100.00	0.00	3	7
107.	3187	4	100.00	60.00	5	9
108.	3188	4	100.00	18.18	5	7
109.	3189	4	100.00	30.00	5	7
110.	3190	5	100.00	20.00	3	6
111.	3191	5	100.00	9.09	1	6
112.	3192	4	100.00	100.00	5	8
113.	3193	4	100.00	60.00	3-5	7
114.	3195	4	100.00	27.27	5	7
115.	3196	4	100.00	33.33	5	7
116.	3197	4	100.00	10.00	5	7
117.	3198	4	100.00	72.72	3-5	8
118.	3199	4	100.00	100.00	5	9
119.	3200	6	100.00	0.00	1-3	4
120.	3201	4	100.00	66.66	5	8
121.	3203	4	100.00	72.72	5	8
122.	3204	4	100.00	54.54	5	7
123.	3205	4	100.00	100.00	5	9
124.	3206	4	100.00	75.00	5	8
	460	4	100.00	100.00	5	9

contd.

1	2	3	4	5	6	7
125.	3207	4	100.00	100.00	5	9
126.	3208	4	100.00	100.00	5	9
127.	3209	4	100.00	72.72	5	7
128.	3210	4	100.00	100.00	5	9
129.	3211	4	100.00	100.00	5	9
130.	3212	4	100.00	100.00	5	9
131.	3213	4	100.00	100.00	5	9
132.	3214	4	100.00	100.00	5	9
133.	3215	4	100.00	100.00	5	9
134.	3216	4	100.00	100.00	5	9
135.	3217	4	100.00	90.00	3-5	9
136.	3218	4	100.00	100.00	5	9
137.	3219	4	100.00	100.00	5	9
138.	3220	4	100.00	100.00	5	9
139.	3221	5	100.00	90.00	3-5	9
140.	3222	5	100.00	100.00	5	9
141.	3223	4	100.00	100.00	5	9
142.	3224	4	100.00	40.00	3-5	8
143.	3225	4	100.00	90.90	5	8
144.	3226	4	100.00	8.33	5	6
145.	3227	4	100.00	60.00	5	7
146.	3228	4	100.00	66.66	5	7
147.	3229	5	100.00	0.00	3-5	6
148.	3230	4	100.00	100.00	5	9
149.	3231	5	100.00	11.11	5	7
150.	3232	4	100.00	100.00	5	9
151.	3233	4	100.00	18.18	5	8
152.	3234	6	100.00	0.00	3	6
153.	3235	4	100.00	9.09	5	6
154.	3236	4	100.00	0.00	5	7
155.	3237	6	100.00	0.00	3	5
156.	3238	4	100.00	10.00	5	7
157.	3239	4	100.00	9.09	5	7
158.	3240	4	100.00	18.18	3-5	7
159.	3241	4	100.00	20.00	5	7
160.	3242	4	100.00	90.90	5	9
161.	3243	6	100.00	10.00	4	7
162.	3244	4	100.00	9.09	4	6
163.	3245	4	100.00	45.45	5	8
164.	3246	5	100.00	55.55	5	8
165.	3247	4	100.00	0.00	5	7
166.	3248	4	100.00	0.00	4	6
167.	3249	4	100.00	60.00	4	8
168.	3250	4	100.00	36.36	4	8
169.	3251	4	100.00	9.09	4	7
170.	3252	4	100.00	0.00	4	5

contd.

1	2	3	4	5	6	7
171.	3253	6	100.00	0.00	4	5
172.	3254	6	100.00	0.00	3	4*
173.	3255	4	100.00	0.00	5	6
174.	3256	4	100.00	81.81	5	8
	460	4	100.00	30.00	5	7
175.	3257	6	100.00	9.09	4	6
176.	3258	4	100.00	0.00	4	6
177.	3259	4	100.00	0.00	3	4
178.	3260	4	100.00	100.00	6	9
179.	3261	4	100.00	0.00	5	5
180.	3262	6	100.00	0.00	4	5
181.	3263	5	100.00	0.00	4	6
182.	3264	4	100.00	9.09	5	7
183.	3265	6	100.00	0.00	4	7
184.	3266	4	100.00	100.00	3	9
185.	3268	4	100.00	0.00	4	5
186.	3269	5	100.00	0.00	4	5
187.	3270	6	100.00	0.00	3	5
188.	3271	4	100.00	30.00	5	7
189.	3272	4	100.00	16.66	5	7
190.	3273	4	100.00	0.00	5	7
191.	3274	4	100.00	10.00	5	6
192.	3275	6	100.00	0.00	3	6
193.	3276	4	100.00	66.66	5	8
194.	3277	6	100.00	0.00	4	5
195.	3278	4	100.00	11.11	5	6
196.	3279	5	100.00	90.90	5	8
197.	3280	4	100.00	18.18	5	8
198.	3281	5	100.00	18.18	5	7
199.	3282	4	100.00	20.00	5	6
200.	3283	4	100.00	8.33	5	7
201.	3284	4	100.00	10.00	5	6
202.	3285	5	100.00	0.00	3	6*
203.	3286	4	100.00	0.00	3	6
204.	3287	4	100.00	0.00	3	3
205.	3288	4	100.00	80.00	5	9
206.	3289	4	100.00	25.00	3	7
207.	3290	5	100.00	45.45	5	7
208.	3292	4	100.00	81.81	5	9
209.	3293	4	100.00	30.00	5	8
210.	3294	4	100.00	0.00	5	6
211.	3295	4	100.00	10.00	5	8
212.	3296	5	100.00	0.00	3	5
213.	3297	4	100.00	77.77	5	8
214.	3298	4	100.00	0.00	5	6
215.	3299	4	100.00	45.45	7	9

contd



1	2	3	4	5	6	7
216.	3300	5	100.00	9.09	5	7
217.	3301	4	100.00	8.33	5	7
218.	3302	4	100.00	9.09	3	7
219.	3303	4	100.00	10.00	5	8
220.	3304	4	100.00	0.00	3	5
221.	3305	4	100.00	10.00	3	7
222.	3306	4	100.00	100.00	5	9
223.	3307	4	100.00	100.00	5	9
224.	3308	4	100.00	0.00	5	6
225.	3309	4	100.00	44.44	5	7
226.	3310	4	100.00	33.33	5	8
227.	3311	5	100.00	10.00	3	6
228.	3312	5	100.00	100.00	5	9
229.	3313	4	100.00	100.00	6	9
230.	3314	4	100.00	80.00	5	8
231.	3315	4	100.00	54.54	5	9
232.	3316	4	100.00	45.45	5	8
233.	3317	4	100.00	20.00	5	6
234.	3318	4	100.00	0.00	5	6
235.	3319	4	100.00	0.00	5	8
236.	3320	4	100.00	10.00	5	7
237.	3321	4	100.00	0.00	5	7
238.	3322	4	100.00	40.00	4	8
239.	3323	5	100.00	0.00	4	6
240.	3324	4	100.00	11.11	5	6
241.	3325	4	100.00	100.00	5	9
242.	3326	5	100.00	0.00	5	6
243.	3327	4	100.00	0.00	5	6
244.	3328	4	100.00	45.45	5	9
245.	3329	4	100.00	18.18	5	8
246.	3330	6	100.00	0.00	3	5
247.	3331	4	100.00	100.00	5	9
248.	3332	5	100.00	18.18	3	6
249.	3333	4	100.00	16.66	5	8
250.	3334	6	100.00	20.00	3	5
251.	3335	4	100.00	100.00	6	9
252.	3336	4	100.00	100.00	6	9
253.	3337	5	100.00	100.00	5	9
254.	3338	5	100.00	18.18	4	8
255.	3339	4	100.00	100.00	5	9
256.	3340	6	100.00	27.27	3	6
257.	3341	4	100.00	100.00	5	9
258.	3342	4	100.00	100.00	5	9
259.	3343	4	100.00	80.00	5	9
260.	3344	4	100.00	100.00	5	9

contd.

1	2	3	4	5	6	7
261.	3345	4	100.00	100.00	6	9
262.	3346	4	100.00	0.00	4	5*
263.	3347	5	100.00	0.00	4	6
264.	3348	4	100.00	100.00	6	9
265.	3349	4	100.00	0.00	5	7
266.	3350	4	100.00	70.00	5	8
267.	3351	4	100.00	20.00	5	7
268.	3352	4	100.00	11.11	5	7
269.	3353	4	100.00	88.88	5	9
270.	3354	4	100.00	18.18	5	7
271.	3355	4	100.00	100.00	6	9
272.	3356	4	100.00	63.63	5	8
273.	3357	4	100.00	72.72	5	8
274.	3358	4	100.00	36.36	5	8
275.	3359	5	100.00	0.00	4	5
276.	3360	4	100.00	0.00	4	6
277.	3361	4	100.00	36.36	5	8
278.	3362	4	100.00	45.45	5	8
279.	3363	4	100.00	81.81	4	8
280.	3364	5	100.00	22.22	5	7
281.	3365	5	100.00	18.18	5	7
282.	3366	5	100.00	10.00	5	8
283.	3367	6	100.00	0.00	3	6
	460	4	100.00	100.00	6	9
284.	3375	5	100.00	75.00	7	7
285.	3376	5	100.00	33.33	6	5
286.	3377	5	100.00	12.50	5	3
287.	3378	5	100.00	10.00	5	3
288.	3379	4	100.00	80.00	6	9
289.	3380	4	100.00	50.00	6	6
290.	3381	5	100.00	75.00	7	9
291.	3382	4	100.00	100.00	7	9
292.	3383	5	100.00	60.00	6	7
293.	3384	5	100.00	100.00	7	9
294.	3385	4	100.00	70.00	7	8
295.	3386	4	100.00	40.00	7	5
296.	3387	4	100.00	27.27	6	4
297.	3388	5	100.00	72.72	7	8
298.	3389	5	100.00	90.90	8	9
299.	3390	5	100.00	100.00	6	9
300.	3391	5	100.00	90.90	7	9
301.	3392	4	100.00	100.00	8	9
302.	3393	4	100.00	75.00	7	7
303.	3394	5	100.00	80.00	7	5
304.	3395	4	100.00	100.00	7	9
305.	3396	4	100.00	100.00	9	9

contd.

1	2	3	4	5	6	7
306.	3397	4	100.00	100.00	9	9
307.	3398	4	100.00	100.00	9	9
308.	3399	4	100.00	100.00	8	9
309.	3401	4	100.00	100.00	9	9
310.	3402	4	100.00	100.00	9	9
311.	3403	4	100.00	100.00	9	9
312.	3404	4	100.00	100.00	5	9
313.	3405	4	100.00	100.00	9	9
314.	3406	4	100.00	100.00	9	9
315.	3407	4	100.00	100.00	8	9
316.	3408	4	100.00	100.00	9	9
317.	3409	4	100.00	100.00	9	9
318.	3410	4	100.00	100.00	9	9
319.	3412	4	100.00	100.00	9	9
320.	3413	4	100.00	100.00	9	9
321.	3414	4	100.00	100.00	9	9
322.	3415	4	100.00	100.00	9	9
323.	3416	4	100.00	100.00	9	9
324.	3417	4	100.00	100.00	9	9
325.	3418	4	100.00	100.00	9	9
326.	3419	4	100.00	100.00	9	9
327.	3420	4	100.00	100.00	9	9
328.	3421	4	100.00	100.00	9	9
329.	3422	4	100.00	100.00	9	9
330.	3423	4	100.00	100.00	9	9
331.	3424	4	100.00	100.00	9	9
332.	3425	4	100.00	100.00	7	9
333.	3426	4	100.00	100.00	7	9
334.	3427	4	100.00	100.00	7	9
335.	3428	5	100.00	100.00	7	9
336.	3429	4	100.00	100.00	9	9
337.	3430	4	100.00	100.00	9	9
338.	3431	4	100.00	100.00	7	9
339.	3432	4	100.00	40.00	7	3
340.	3433	4	100.00	100.00	8	9
341.	3435	4	100.00	100.00	9	9
342.	3436	4	100.00	100.00	7	9
343.	3437	4	100.00	100.00	9	9
344.	3438	4	100.00	100.00	5	9
345.	3439	4	100.00	100.00	7	9
346.	3440	4	100.00	100.00	9	9
347.	3443	5	100.00	100.00	9	9
348.	3444	4	100.00	100.00	9	9
349.	3445	4	100.00	100.00	9	9
350.	3446	4	100.00	100.00	9	9

contd.

1	2	3	4	5	6	7
351.	3447	4	100.00	100.00	9	9
352.	3448	4	100.00	100.00	9	9
353.	3449	4	100.00	100.00	9	9
354.	3450	4	100.00	100.00	9	9
355.	3451	4	100.00	100.00	9	9
356.	3452	4	100.00	100.00	8	9
357.	3453	4	100.00	100.00	9	9
	Pb-7	4	100.00	100.00	9	9
358.	3454	4	100.00	100.00	9	9
359.	3456	4	100.00	100.00	9	9
360.	3456	4	100.00	100.00	9	9
361.	3457	4	100.00	100.00	9	9
362.	3458	4	100.00	100.00	9	9
363.	3459	4	100.00	100.00	8	9
364.	3461	4	100.00	100.00	8	9
365.	3462	4	100.00	91.66	8	9
366.	3463	4	100.00	100.00	9	9
367.	3464	4	100.00	100.00	9	9
368.	3465	4	100.00	100.00	9	9
369.	3467	4	100.00	100.00	9	9
370.	3468	4	100.00	100.00	9	9
371.	3469	4	100.00	100.00	9	9
372.	3470	4	100.00	100.00	9	9
373.	3471	4	100.00	100.00	9	9
374.	3472	4	100.00	100.00	9	9
375.	3473	4	100.00	100.00	9	9
376.	3474	4	100.00	100.00	9	9
377.	3475	4	100.00	100.00	7	9
378.	3476	4	100.00	100.00	8	9
379.	3477	5	100.00	100.00	9	9
380.	3478	4	100.00	100.00	7	9
381.	3479	4	100.00	100.00	8	9
382.	3480	4	100.00	100.00	7	9
383.	3481	5	100.00	100.00	8	9
384.	3484	4	100.00	100.00	8	9
385.	3485	4	100.00	88.88	7	9
386.	3486	4	100.00	100.00	9	9
387.	3487	4	100.00	91.66	7	9
388.	3488	4	100.00	83.33	7	9
389.	3489	4	100.00	100.00	8	9
390.	3490	4	100.00	100.00	7	9
391.	3491	4	100.00	100.00	9	9
392.	3492	4	100.00	100.00	9	9
393.	3493	4	100.00	100.00	8	9
394.	3494	4	100.00	100.00	8	9
395.	3495	4	100.00	100.00	8	9
396.	3496	4	100.00	70.00	7	3

contd

1	2	3	4	5	6	7
306.	3397	4	100.00	100.00	9	9
307.	3398	4	100.00	100.00	9	9
308.	3399	4	100.00	100.00	8	9
309.	3401	4	100.00	100.00	9	9
310.	3402	4	100.00	100.00	9	9
311.	3403	4	100.00	100.00	9	9
312.	3404	4	100.00	100.00	5	9
313.	3405	4	100.00	100.00	9	9
314.	3406	4	100.00	100.00	9	9
315.	3407	4	100.00	100.00	8	9
316.	3408	4	100.00	100.00	9	9
317.	3409	4	100.00	100.00	9	9
318.	3410	4	100.00	100.00	9	9
319.	3412	4	100.00	100.00	9	9
320.	3413	4	100.00	100.00	9	9
321.	3414	4	100.00	100.00	9	9
322.	3415	4	100.00	100.00	9	9
323.	3416	4	100.00	100.00	9	9
324.	3417	4	100.00	100.00	9	9
325.	3418	4	100.00	100.00	9	9
326.	3419	4	100.00	100.00	9	9
327.	3420	4	100.00	100.00	9	9
328.	3421	4	100.00	100.00	9	9
329.	3422	4	100.00	100.00	9	9
330.	3423	4	100.00	100.00	9	9
331.	3424	4	100.00	100.00	9	9
332.	3425	4	100.00	100.00	7	9
333.	3426	4	100.00	100.00	7	9
334.	3427	4	100.00	100.00	7	9
335.	3428	5	100.00	100.00	7	9
336.	3429	4	100.00	100.00	9	9
337.	3430	4	100.00	100.00	9	9
338.	3431	4	100.00	100.00	7	9
339.	3432	4	100.00	40.00	7	3
340.	3433	4	100.00	100.00	8	9
341.	3435	4	100.00	100.00	9	9
342.	3436	4	100.00	100.00	7	9
343.	3437	4	100.00	100.00	9	9
344.	3438	4	100.00	100.00	5	9
345.	3439	4	100.00	100.00	7	9
346.	3440	4	100.00	100.00	9	9
347.	3443	5	100.00	100.00	9	9
348.	3444	4	100.00	100.00	9	9
349.	3445	4	100.00	100.00	9	9
350.	3446	4	100.00	100.00	9	9

contd.

1	2	3	4	5	6	7
351.	3447	4	100.00	100.00	9	9
352.	3448	4	100.00	100.00	9	9
353.	3449	4	100.00	100.00	9	9
354.	3450	4	100.00	100.00	9	9
355.	3451	4	100.00	100.00	9	9
356.	3452	4	100.00	100.00	8	9
357.	3453	4	100.00	100.00	9	9
	Pb-7	4	100.00	100.00	9	9
358.	3454	4	100.00	100.00	9	9
359.	3456	4	100.00	100.00	9	9
360.	3456	4	100.00	100.00	9	9
361.	3457	4	100.00	100.00	9	9
362.	3458	4	100.00	100.00	9	9
363.	3459	4	100.00	100.00	8	9
364.	3461	4	100.00	100.00	8	9
365.	3462	4	100.00	91.66	8	9
366.	3463	4	100.00	100.00	9	9
367.	3464	4	100.00	100.00	9	9
368.	3465	4	100.00	100.00	9	9
369.	3467	4	100.00	100.00	9	9
370.	3468	4	100.00	100.00	9	9
371.	3469	4	100.00	100.00	9	9
372.	3470	4	100.00	100.00	9	9
373.	3471	4	100.00	100.00	9	9
374.	3472	4	100.00	100.00	9	9
375.	3473	4	100.00	100.00	9	9
376.	3474	4	100.00	100.00	9	9
377.	3475	4	100.00	100.00	7	9
378.	3476	4	100.00	100.00	8	9
379.	3477	5	100.00	100.00	9	9
380.	3478	4	100.00	100.00	7	9
381.	3479	4	100.00	100.00	8	9
382.	3480	4	100.00	100.00	7	9
383.	3481	5	100.00	100.00	8	9
384.	3484	4	100.00	100.00	8	9
385.	3485	4	100.00	88.88	7	9
386.	3486	4	100.00	100.00	9	9
387.	3487	4	100.00	91.66	7	9
388.	3488	4	100.00	83.33	7	9
389.	3489	4	100.00	100.00	8	9
390.	3490	4	100.00	100.00	7	9
391.	3491	4	100.00	100.00	9	9
392.	3492	4	100.00	100.00	9	9
393.	3493	4	100.00	100.00	9	9
394.	3494	4	100.00	100.00	8	9
395.	3495	4	100.00	100.00	8	9
396.	3496	4	100.00	70.00	7	3

contd.

1	2	3	4	5	6	7
397.	3497	4	100.00	62.50	7	3
398.	3498	5	100.00	90.00	8	9
399.	3499	4	100.00	100.00	8	9
400.	3500	4	100.00	100.00	8	9
401.	3501	4	100.00	100.00	9	9
402.	3502	4	100.00	100.00	8	9
403.	3503	4	100.00	100.00	9	9
404.	3504	4	100.00	100.00	9	9
405.	3505	4	100.00	100.00	9	9
406.	3506	4	100.00	90.90	7	9
407.	3507	4	100.00	80.00	7	9
408.	3508	4	100.00	100.00	9	9
409.	3509	4	100.00	16.66	6	3
410.	3510	4	100.00	100.00	8	9
411.	3511	4	100.00	100.00	9	9
412.	3512	4	100.00	100.00	9	9
	Pb-7	4	100.00	100.00	9	9
413.	3513	4	100.00	100.00	8	9
414.	3514	4	100.00	100.00	9	9
415.	3515	4	100.00	100.00	9	9
416.	3516	4	100.00	100.00	8	9
417.	3517	4	100.00	100.00	9	9
418.	3518	4	100.00	100.00	9	9
419.	3519	4	100.00	100.00	9	9
420.	3520	4	100.00	100.00	9	9
421.	3521	4	100.00	100.00	9	9
422.	3522	4	100.00	100.00	9	9
423.	3523	4	100.00	100.00	9	9
424.	3524	4	100.00	100.00	7	9
425.	3525	4	100.00	100.00	9	9
426.	3526	4	100.00	100.00	9	9
427.	3528	4	100.00	100.00	7	9
428.	3529	4	100.00	100.00	7	9
429.	3530	4	100.00	100.00	9	9
430.	3531	4	100.00	100.00	6	9
431.	3532	4	100.00	100.00	7	9
432.	3535	4	100.00	100.00	9	9
433.	3536	4	100.00	100.00	7	9
434.	3537	4	100.00	100.00	6	9
435.	3538	4	100.00	100.00	6	9
436.	3539	4	100.00	100.00	8	9
437.	3540	4	100.00	100.00	8	9
	Pb-7	4	100.00	100.00	9	9
438.	3541	4	100.00	100.00	9	9
439.	3542	4	100.00	100.00	8	9
440.	3543	4	100.00	100.00	9	9

contd.

1	2	3	4	5	6	7
441.	3544	4	100.00	100.00		
442.	3545	4	100.00	100.00	9	9
443.	3546	4	100.00	100.00	9	9
444.	3547	4	100.00	100.00	9	9
445.	3548	4	100.00	100.00	9	9
446.	3549	4	100.00	100.00	9	9
447.	3550	4	100.00	100.00	9	9
448.	3551	4	100.00	100.00	9	9
449.	3552	4	100.00	100.00	9	9
450.	3553	4	100.00	100.00	9	9
451.	3554	4	100.00	100.00	9	9
452.	3555	4	100.00	100.00	9	9
453.	3556	4	100.00	100.00	9	9
454.	3557	4	100.00	100.00	9	9
455.	3558	4	100.00	100.00	9	9
456.	3559	4	100.00	100.00	9	9
457.	3560	4	100.00	100.00	9	9
458.	3561	4	100.00	100.00	9	9
459.	3562	4	100.00	100.00	9	9
460.	3563	4	100.00	100.00	9	9
461.	3564	4	100.00	100.00	9	9
462.	3565	4	100.00	100.00	9	9
463.	3566	4	100.00	100.00	9	9
464.	3567	4	100.00	66.66	7	5
	Pb-7	4	100.00	33.33	7	9
465.	3568	5	100.00	100.00	7	9
466.	3569	4	100.00	100.00	8	9
467.	3570	4	100.00	69.23	7	7
468.	3571	4	100.00	88.88	8	9
469.	3572	4	100.00	100.00	9	9
470.	3573	4	100.00	30.76	5	4
471.	3574	4	100.00	100.00	7	9
472.	3575	5	100.00	100.00	8	9
473.	3576	5	100.00	30.00	6	5
474.	3577	5	100.00	18.18	7	3
475.	3578	4	100.00	84.61	7	3
476.	3579	4	100.00	100.00	7	9
477.	3580	4	100.00	16.66	6	3
478.	3581	4	100.00	58.33	7	3
479.	3582	5	100.00	30.00	6	4
480.	3583	4	100.00	64.28	6	7
481.	3584	4	100.00	75.00	7	7
482.	3585	4	100.00	35.71	6	3
483.	3586	5	100.00	40.00	6	3
484.	3587	4	100.00	58.33	7	3
485.	3588	4	100.00	100.00	7	9

contd.



1	2	3	4	5	6	7
486.	3589	5	100.00	88.88	7	5
487.	3590	5	100.00	54.54	6	7
488.	3591	5	100.00	100.00	8	9
489.	3592	5	100.00	66.66	7	3
490.	3593	5	100.00	75.00	7	5
491.	3594	4	100.00	26.66	7	3
492.	3596	4	100.00	100.00	7	7
493.	3597	4	100.00	63.63	6	3
494.	3598	4	100.00	45.45	6	5
495.	3599	4	100.00	90.00	6	5
496.	3500	4	100.00	100.00	9	9
497.	3601	4	100.00	100.00	7	9
498.	3602	4	100.00	100.00	7	7
499.	3603	4	100.00	100.00	9	9
500.	3604	4	100.00	100.00	9	9
501.	3605	4	100.00	100.00	9	9
502.	3606	4	100.00	27.27	5	3
503.	3607	6	100.00	0.00	5	6
504.	3608	7	100.00	10.00	4	7
505.	3609	7	100.00	22.22	5	7
506.	3610	8	100.00	0.00	3	7
507.	3611	7	100.00	18.18	4	6
508.	3612	7	100.00	6.66	5	7
509.	3613	7	100.00	0.00	3	7
510.	3614	6	100.00	15.38	5	8
511.	3615	6	100.00	0.00	4	7
512.	3616	7	100.00	0.00	5	8
513.	3617	7	100.00	8.33	6	7
514.	3618	6	100.00	8.33	4	9
515.	3619	6	100.00	9.09	4	8
516.	3620	6	100.00	27.27	6	9
517.	3621	6	100.00	0.00	5	7
518.	3622	7	100.00	0.00	4	8
519.	3624	6	100.00	18.18	7	8
520.	3625	6	100.00	18.18	5	8
521.	3626	6	100.00	7.14	5	8
522.	3627	7	100.00	0.00	4	8
523.	3628	7	100.00	36.36	4	8
524.	3629	7	100.00	7.69	4	8
525.	3630	7	100.00	7.69	4	9
526.	3631	7	100.00	9.09	4	9
527.	3632	7	100.00	0.00	4	8
528.	3633	6	100.00	9.09	7	9
529.	3634	6	100.00	25.00	5	5
530.	3635	6	100.00	55.55	6	7

contd.

1	2	3	4	5	6	7
531.	3636	7	100.00	21.42	7	7
	Pb-7	7	100.00	27.27	6	6
532.	3637	6	100.00	100.00	8	9
533.	3638	6	100.00	33.33	7	8
534.	3639	6	100.00	0.00	6	7
535.	3640	6	100.00	20.00	6	8
536.	3641	6	100.00	100.00	8	9
537.	3642	6	100.00	10.00	5	7
538.	3643	6	100.00	100.00	7	9
539.	3644	6	72.72	72.72	8	9
540.	3645	6	100.00	50.00	6	8
541.	3646	6	100.00	100.00	6	9
542.	3647	6	100.00	12.50	5	8
543.	3648	6	100.00	60.00	6	8
544.	3649	6	100.00	36.36	6	8
545.	3650	6	100.00	88.88	8	9
546.	3651	6	100.00	100.00	7	9
547.	3652	6	100.00	100.00	8	9
548.	3653	7	100.00	100.00	7	9
549.	3654	7	100.00	50.00	6	8
560.	3655	7	100.00	90.00	7	9
561.	3656	6	100.00	70.00	7	8
562.	3658	7	100.00	11.11	4	8
563.	3659	6	100.00	90.00	7	9
564.	3660	7	100.00	10.00	4	7
565.	3661	6	100.00	54.54	7	8
566.	3662	6	100.00	100.00	7	9
557.	3663	6	100.00	66.66	6	9
558.	3664	6	100.00	50.00	5	9
559.	3665	7	100.00	11.11	5	8
	Pb-7	6	100.00	8.33	5	8
560.	3666	6	100.00	75.00	7	9
561.	3667	7	100.00	100.00	7	9
562.	3668	6	100.00	100.00	7	9
563.	3669	6	100.00	90.00	7	9
564.	3670	6	100.00	100.00	7	9
565.	3671	6	100.00	11.11	7	7
566.	3672	7	100.00	16.66	5	8
567.	3673	6	100.00	100.00	7	9
568.	3674	6	100.00	100.00	7	9
569.	3675	6	100.00	100.00	7	9
570.	3676	6	100.00	100.00	6	9
571.	3677	6	100.00	10.00	5	7
572.	3678	6	100.00	80.00	7	9
573.	3679	6	100.00	100.00	7	9
574.	3680	6	100.00	20.00	7	8
575.	3681	7	100.00	30.76	7	8

cont'd

1	2	3	4	5	6	7
576.	3682	6	100.00	58.33	7	9
577.	3683	7	100.00	100.00	4	9
578.	3684	6	100.00	100.00	8	9
579.	3685	6	100.00	100.00	8	9
580.	3686	6	100.00	90.90	8	9
581.	3687	6	100.00	100.00	6	9
582.	3688	6	100.00	90.00	6	9
583.	3689	6	100.00	100.00	7	9
584.	3690	6	100.00	100.00	7	9
585.	3691	6	100.00	100.00	8	9
586.	3692	6	100.00	100.00	9	9
587.	3693	6	100.00	20.00	4	6
588.	3694	6	100.00	0.00	3	6
	Pb-7	6	100.00	16.66	5	9
589.	3695	6	100.00	50.00	7	7
590.	3696	6	100.00	10.00	5	9
591.	3697	7	100.00	0.00	5	8
592.	3698	6	100.00	10.00	6	5
593.	3699	7	100.00	27.27	5	8
594.	3700	6	100.00	30.00	5	6
595.	3701	7	100.00	8.33	5	7
596.	3702	6	100.00	10.00	5	8
597.	3703	6	100.00	11.11	4	7
598.	3704	6	100.00	10.00	5	8
599.	3705	6	100.00	11.11	5	8
600.	3706	6	100.00	44.44	5	9
601.	3707	6	100.00	100.00	6	9
602.	3708	6	100.00	14.28	5	8
603.	3709	6	100.00	10.00	5	8
604.	3710	6	100.00	10.00	5	9
605.	3711	6	100.00	9.09	5	8
606.	3712	6	100.00	9.09	5	7
607.	3713	6	100.00	7.69	5	8
608.	3714	6	100.00	14.28	4	6
609.	3715	7	100.00	0.00	4	6
610.	3716	6	100.00	10.00	6	7
611.	3717	6	100.00	9.09	6	7
612.	3718	6	100.00	20.00	7	8
613.	3719	6	100.00	12.50	5	8
614.	3720	6	100.00	0.00	5	6
615.	3721	7	100.00	0.00	5	7
616.	3722	7	100.00	0.00	4	6
617.	3723	6	100.00	0.00	4	5
618.	3724	6	100.00	0.00	5	5
	Pb-7	6	100.00	0.00	5	5
619.	3725	7	100.00	9.09	5	5

contd.

1	2	3	4	5	6	7
520.	3726	6	100.00	10.00	5	5
521.	3727	6	100.00	10.00	5	6
522.	3728	6	100.00	0.00	5	7
523.	3729	6	100.00	0.00	5	6
524.	3730	6	100.00	0.00	4	7
525.	3731	6	100.00	0.00	5	6
526.	3732	8	100.00	0.00	4	6
527.	3733	7	100.00	10.00	5	6
528.	3734	7	100.00	11.11	4	7
529.	3735	6	100.00	0.00	5	7
530.	3736	7	100.00	0.00	4	6
531.	3737	6	100.00	0.00	4	4
532.	3738	6	100.00	0.00	4	4
533.	3739	6	100.00	0.00	4	4
534.	3740	6	100.00	0.00	5	4
535.	3741	6	100.00	11.11	5	7
536.	3742	6	100.00	0.00	5	7
537.	3743	6	100.00	11.11	5	7
538.	3744	6	100.00	0.00	5	4
539.	3745	6	100.00	11.11	5	6
540.	3746	6	100.00	30.00	5	6
541.	3747	6	100.00	12.50	4	5
542.	3748	7	100.00	100.00	5	9
543.	3749	7	100.00	18.18	6	7
544.	3750	6	100.00	22.22	5	7
545.	3751	6	100.00	50.00	7	8
546.	3752	6	100.00	23.07	5	8
	Pb-7	6	100.00	15.38	7	8
547.	3753	6	100.00	10.00	5	7
548.	3754	7	100.00	10.00	5	7
549.	3755	6	100.00	100.00	5	9
550.	3756	6	100.00	62.50	7	8
551.	3757	6	100.00	100.00	8	9
552.	3758	6	100.00	40.00	7	8
553.	3759	6	100.00	44.44	5	7
554.	3760	7	100.00	9.09	5	7
555.	3761	7	100.00	20.00	5	8
556.	3762	6	100.00	80.00	7	9
557.	3763	6	100.00	60.00	6	9
558.	3764	7	100.00	10.00	5	7
559.	3765	7	100.00	77.77	5	9
560.	3766	7	100.00	100.00	6	9
561.	3767	6	100.00	60.00	6	9
562.	3768	7	100.00	11.11	7	8
563.	3769	7	100.00	0.00	5	6
564.	3770	6	100.00	80.00	5	9
565.	3771	6	100.00	88.88	5	9

contd.

1	2	3	4	5	6	7
666.	3772	7	100.00	100.00	9	9
667.	3773	7	100.00	50.00	5	9
668.	3774	6	100.00	100.00	9	9
669.	3775	6	100.00	10.00	5	7
670.	3776	6	100.00	90.00	8	9
671.	3777	6	100.00	100.00	8	9
672.	3778	7	100.00	70.00	5	9
673.	3779	6	100.00	80.00	7	9
674.	3780	6	100.00	10.00	4	5
675.	3781	6	100.00	11.11	5	7
	Pb-7	7	100.00	10.00	5	7
676.	3782	7	100.00	11.11	5	8
677.	3783	7	100.00	11.11	5	7
678.	3784	6	100.00	22.22	5	9
679.	3785	6	100.00	100.00	7	9
680.	3786	6	100.00	100.00	7	9
681.	3787	6	100.00	10.00	5	7
682.	3788	6	100.00	25.00	5	8
683.	3789	6	100.00	100.00	7	9
684.	3790	7	100.00	40.00	6	9
685.	3791	6	100.00	100.00	7	9
686.	3792	6	100.00	30.00	5	8
687.	3793	6	100.00	77.77	7	9
688.	3794	6	100.00	100.00	7	9
689.	3795	6	100.00	90.00	7	9
690.	3796	6	100.00	100.00	8	9
691.	3797	6	100.00	100.00	5	9
692.	3798	6	100.00	100.00	7	9
693.	3799	7	100.00	80.00	7	9
694.	3800	6	100.00	100.00	6	9
695.	3801	6	100.00	100.00	8	9
696.	3802	6	100.00	100.00	8	9
697.	3803	7	100.00	20.00	7	8
698.	3804	6	100.00	100.00	8	9
699.	3805	6	100.00	100.00	9	9
700.	3806	6	100.00	100.00	9	9
701.	3807	6	100.00	100.00	7	9
702.	3808	6	100.00	100.00	8	9
703.	3809	6	100.00	72.72	8	8
704.	3810	6	100.00	22.22	4	7
705.	3811	6	100.00	0.00	5	7
	Pb-7	7	100.00	9.09	4	7
706.	3812	7	100.00	9.09	5	8
707.	3813	7	100.00	20.00	7	8
708.	3814	7	100.00	10.00	4	8
709.	3815	6	100.00	11.11	5	7
710.	3816	7	100.00	0.00	4	6

contd.

1	2	3	4	5	6	7
711.	3817	6	100.00	10.00	4	6
712.	3818	6	100.00	30.00	4	7
713.	3819	7	100.00	11.11	4	7
714.	3820	6	100.00	0.00	5	7
715.	3821	7	100.00	22.22	5	8
716.	3822	7	100.00	9.09	5	7
717.	3823	6	100.00	100.00	9	9
718.	3824	6	100.00	10.00	7	8
719.	3825	7	100.00	12.50	7	7
720.	3826	6	100.00	0.00	5	7
721.	3827	6	100.00	15.38	7	7
722.	3828	6	100.00	0.00	5	6
723.	3829	7	100.00	20.00	5	8
724.	3830	6	100.00	16.66	7	8
725.	3831	7	100.00	11.11	5	7
726.	3832	6	100.00	27.27	6	8
727.	3833	6	100.00	33.33	7	8
728.	3834	6	100.00	77.77	7	9
729.	3835	7	100.00	27.27	5	7
730.	3836	6	100.00	20.00	5	7
731.	3837	6	100.00	33.33	5	7
732.	3838	7	100.00	10.00	4	7
733.	3839	6	100.00	14.28	5	8
	Pb-7	6	100.00	8.33	5	7
734.	3840	7	100.00	0.00	5	7
735.	3841	6	100.00	0.00	4	7
736.	3842	6	100.00	18.18	6	7
737.	3843	7	100.00	0.00	5	7
748.	3844	7	100.00	9.09	5	7
749.	3845	7	100.00	9.09	5	8
740.	3846	7	100.00	8.33	5	8
741.	3847	6	100.00	44.44	5	8
742.	3848	6	100.00	41.66	7	8
743.	3849	7	100.00	38.46	6	8
744.	3850	7	100.00	0.00	5	6
745.	3851	7	100.00	8.33	6	7
746.	3852	6	100.00	0.00	5	7
747.	3853	6	100.00	0.00	5	7
748.	3854	6	100.00	0.00	5	5
749.	3855	6	100.00	0.00	5	5
750.	3856	6	100.00	55.55	6	9
751.	3857	6	100.00	30.00	5	8
752.	3858	6	100.00	27.27	5	8
753.	3859	7	100.00	10.00	5	8
754.	3860	6	100.00	16.66	6	6
755.	3861.	6	100.00	20.00	7	8

contd.

1	2	3	4	5	6	7
756.	3862	6	100.00	30.00	7	8
757.	3863	7	100.00	16.66	6	8
758.	3864	7	100.00	0.00	4	6
759.	3865	6	100.00	25.00	7	6
760.	3866	7	100.00	33.33	7	8*
761.	3867	5	100.00	50.00	-	7
762.	3868	5	100.00	75.00	-	9
763.	3869	5	100.00	90.00	-	9
764.	3870	5	100.00	100.00	-	9
765.	3871	5	100.0	10.00	-	6
766.	3872	5	100.00	55.55	-	7
767.	3873	5	100.00	91.66	-	9
768.	3874	5	100.00	80.00	-	9
769.	3875	5	100.00	72.72	-	9
770.	3876	5	100.00	63.63	-	9
771.	3877	5	100.00	100.00	-	9
772.	3878	5	100.00	100.00	-	9
773.	3879	5	100.00	100.00	-	9
774.	3880	5	100.00	66.66	-	9
775.	3881	5	100.00	66.66	-	7
776.	3882	5	100.00	100.00	-	9
777.	3884	5	100.00	66.66	-	9
778.	3885	5	100.00	18.18	-	7
779.	3886	5	100.00	100.00	-	7
780.	3887	5	100.00	83.33	-	9
781.	3888	5	100.00	60.00	-	9
782.	3889	5	100.00	50.00	-	7
783.	3890	5	100.00	36.36	-	6
784.	3891	5	100.00	16.66	-	6
785.	3892	5	100.00	10.00	-	6
786.	3893	5	100.00	16.66	-	7
787.	3894	5	100.00	81.81	-	9
788.	3895	5	100.00	18.18	-	9
789.	3896	5	100.00	45.45	-	7
790.	3897	5	100.00	10.00	-	6
791.	3898	5	100.00	9.09	-	6
792.	3899	5	100.00	0.00	-	5
793.	3900	5	100.00	54.54	-	7
794.	3901	5	100.00	20.00	-	6
795.	3902	5	60.00	10.00	-	6
796.	3903	5	100.00	18.18	-	7
797.	3904	5	100.00	18.18	-	7
798.	3905	5	100.00	11.11	-	6
799.	3906	5	100.00	25.00	-	9
800.	3907	5	100.00	100.00	-	9

contd.

1	2	3	4	5	6	7
801.	3908	5	100.00	30.00	-	9
802.	3909	5	100.00	100.00	-	9
803.	3910	5	100.00	66.66	-	7
804.	3911	5	100.00	62.50	-	9
805.	3912	5	100.00	10.00	-	6
806.	3913	5	100.00	63.63	-	7
807.	3914	5	100.00	50.00	-	7
808.	3915	5	100.00	8.33	-	5
809.	3916	5	100.00	0.00	-	5
810.	3917	5	100.00	0.00	-	5
811.	3918	5	100.00	9.09	-	5
812.	3919	5	100.00	100.00	-	5*
813.	3920	5	100.00	10.00	-	7
814.	3921	5	100.00	10.00	-	7
815.	3922	5	100.00	20.00	-	7
816.	3923	5	100.00	10.00	-	5
817.	3924	5	100.00	0.00	-	5
818.	3925	5	100.00	20.00	-	7
819.	3926	5	100.00	30.00	-	7
820.	3927	5	100.00	22.22	-	5
821.	3928	5	100.00	0.00	-	5
822.	3929	5	100.00	22.22	-	5
823.	3930	5	100.00	0.00	-	7
824.	3931	5	100.00	0.00	-	5
825.	3932	5	100.00	0.00	-	7
826.	3933	5	100.00	0.00	-	5
827.	3934	5	100.00	22.22	-	7
828.	3935	5	100.00	0.00	-	5
829.	3936	5	100.00	20.00	-	5
830.	3937	5	100.00	0.00	-	7
831.	3938	5	100.00	0.00	-	7
832.	3939	5	100.00	72.72	-	9
833.	3940	5	100.00	0.00	-	5
834.	3941	5	100.00	12.50	-	5
835.	3942	5	80.00	60.00	-	7

\*To be checked again



APPENDIX-XIV

Results of screening of kabuli germplasm lines against Ascochyta blight in Isolation Plant Propagator (1978-79)

Sl. No.	ICC No.	Incubation period in days	Percent infection	Percent killed	Rating on 9-point scale	
					10 days after inoculation	20 days after inoculation (Recovery rating)
1	2	3	4	5	6	7
1.	3974	5	100.00	100.00	7	9
2.	3975	5	100.00	70.00	5	5
	Pb-7	4	100.00	70.00	8	9
3.	3976	4	100.00	37.50	7	7
4.	3977	5	100.00	?	7	7
5.	4101	5	100.00	90.00	7	7
6.	4173	5	100.00	100.00	7	9
7.	4258	5	100.00	70.00	7	9
8.	4372	5	100.00	40.00	7	9
9.	4457	5	100.00	30.00	7	7
10.	4461	5	100.00	90.00	7	7
11.	4497	5	100.00	6.00	7	9
12.	4498	5	100.00	80.00	7	7
13.	4676	4	100.00	100.00	8	9
14.	4727	5	100.00	80.00	8	9
15.	4736	4	100.00	100.00	7	7
16.	4740	4	100.00	30.00	7	9
17.	4741	5	100.00	0.00	7	7
18.	4744	5	100.00	50.00	7	9
19.	4750	5	100.00	55.55	7	7
20.	4751	5	100.00	20.00	5	3
21.	4753	5	100.00	60.00	8	9
22.	4754	5	100.00	44.44	7	7
23.	4756	4	100.00	100.00	9	9
24.	4758	5	100.00	100.00	8	9
25.	4760	5	100.00	66.66	6	7
26.	4762	5	100.00	10.00	5	3
27.	4765	7	22.22	11.11	3	3
28.	4766	5	100.00	90.00	7	8
29.	4768	5	100.00	100.00	7	9
30.	4774	5	100.00	90.00	7	7
31.	4783	5	100.00	100.00	8	9
	Pb-7	4	100.00	100.00	8	5
32.	4784	5	100.00	20.00	5	5
33.	4785	6	100.00	40.00	5	5
34.	4787	5	100.00	20.00	5	5
35.	4789	5	100.00	44.44	5	7
36.	4780	5	100.00	77.77	7	7
37.	4791	4	100.00	100.00	8	9
38.	4792	5	100.00	100.00	8	9
39.	4795	5	100.00	100.00	7	9
40.	4820	5	100.00	100.00	7	9

1	2	3	4	5	6	7
41.	4822	5	100.00	100.00	8	9
42.	4825	5	100.00	90.00	7	9
43.	4826	7	100.00	0.00	3	5
44.	4827	5	100.00	30.00	5	5
45.	4834	5	100.00	100.00	7	9
46.	4835	5	100.00	100.00	7	9
47.	4837	4	100.00	100.00	8	9
48.	4840	5	100.00	100.00	7	9
49.	4841	4	100.00	100.00	8	9
50.	4842	5	100.00	100.00	8	9
51.	4853	5	100.00	11.11	5	7
52.	4854	4	100.00	100.00	8	9
53.	4855	5	100.00	10.00	5	5
54.	4856	5	100.00	0.00	3	5*
55.	4857	7	100.00	0.00	5	5
56.	4859	5	100.00	80.00	5	7
57.	4860	5	100.00	0.00	5	5
58.	4861	5	100.00	0.00	5	5
59.	4864	4	100.00	60.00	8	5
	Pb-7	3	100.00	100.00	9	9
60.	4867	5	100.00	20.00	8	7
61.	4868	5	100.00	70.00	8	7
62.	4870	5	100.00	44.44	8	7
63.	4882	5	100.00	20.00	7	5
64.	4885	5	100.00	10.00	8	5
65.	4891	5	100.00	21.43	7	8
66.	4892	4	100.00	33.33	8	5
67.	4895	4	100.00	40.00	8	7
68.	4899	4	100.00	40.00	8	5
69.	4900	4	100.00	11.11	8	5
70.	4901	5	100.00	12.50	7	7
71.	4903	5	100.00	37.50	5	5
72.	4906	5	100.00	10.00	8	5
73.	4907	5	100.00	25.00	8	3
74.	4908	4	100.00	55.55	8	7
75.	4926	4	100.00	87.50	8	7
76.	4927	7	100.00	33.33	5	5
77.	4928	5	100.00	20.00	7	7
78.	4962	5	100.00	28.50	7	5
79.	4967	5	100.00	12.50	7	5
80.	4971	5	90.00	28.50	7	7
81.	4972	4	100.00	28.88	7	7
82.	4973	4	90.00	12.50	8	7
83.	4983	4	100.00	0.00	8	5
84.	4993	4	100.00	14.28	3	7
85.	5013	4	100.00	20.00	7	5

contd.

1	2	3	4	5	6	7
86.	5038	5	100.00	100.00	7	7
87.	5046	5	100.00	?	7	5
	Pb-7	4	100.00	10.00	7	5
88.	5052	4	100.00	100.00	8	9
89.	5053	4	100.00	80.00	7	7
90.	5055	4	100.00	10.00	7	7
91.	5056	5	100.00	0.00	5	5
92.	5057	5	100.00	0.00	7	7
93.	5095	4	100.00	77.77	8	9
94.	5096	5	100.00	0.00	5	7
95.	5098	5	100.00	30.00	5	7
96.	5102	5	100.00	0.00	5	5
97.	5103	5	100.00	0.00	5	5
98.	5106	5	100.00	0.00	5	5
99.	5107	5	100.00	20.00	7	9
100.	5112	5	100.00	0.00	7	7
101.	5115	5	100.00	33.33	7	6
102.	5116	5	100.00	0.00	7	7
103.	5118	5	100.00	10.00	7	7
104.	5119	5	100.00	10.00	5	5
105.	5122	4	100.00	20.00	5	5
106.	5123	5	100.00	30.00	5	5
107.	5124	5	100.00	0.00	5	5
108.	5241	4	100.00	20.00	7	5
109.	5243	4	100.00	0.00	7	7
110.	5244	4	100.00	100.00	7	5
111.	5245	5	100.00	57.14	8	9
112.	5246	5	100.00	22.22	7	8
113.	5247	5	100.00	0.00	7	5
114.	5248	5	100.00	33.33	8	5
115.	5249	5	100.00	75.00	7	7
116.	5250	4	100.00	100.00	8	9
	Pb-7	4	100.00	80.00	8	9
117.	5252	6	70.00	0.00	3	3*
118.	5253	5	100.00	37.50	7	7
119.	5254	4	100.00	100.00	7	9
120.	5255	5	100.00	50.00	7	8
121.	5256	4	100.00	100.00	8	9
122.	5257	4	100.00	87.50	8	9
123.	5258	5	100.00	44.44	5	7
124.	5260	5	100.00	100.00	7	9
125.	5261	4	100.00	83.33	7	8
126.	5262	5	100.00	100.00	9	9
127.	5263	5	100.00	100.00	7	9
128.	5264	5	100.00	28.57	7	8
129.	5270	4	100.00	44.44	7	7
130.	5289	4	100.00	100.00	7	7

contd.

1	2	3	4	5	6	7
131.	5293	4	100.00	100.00	8	9
132.	5295	5	100.00	100.00	7	9
133.	5298	4	100.00	70.00	7	8
134.	5299	4	100.00	100.00	7	7
135.	5300	5	100.00	100.00	7	7
136.	5301	5	100.00	80.00	7	9
137.	5320	4	100.00	100.00	8	8
138.	5321	5	100.00	100.00	8	9
139.	5337	5	100.00	100.00	8	9
140.	5338	5	100.00	100.00	8	8
141.	5339	5	100.00	100.00	8	9
142.	5340	4	100.00	100.00	8	9
143.	5341	5	100.00	80.00	5	7
144.	5342	5	100.00	55.55	7	8
	Pb-7	5	100.00	20.00	5	7
145.	5347	5	100.00	66.66	8	9
146.	5360	5	100.00	0.00	7	5
147.	5362	5	100.00	10.00	5	5
148.	5363	5	100.00	100.00	8	9
149.	5467	5	100.00	100.00	8	9
150.	5422	4	100.00	55.55	5	7
151.	5448	4	100.00	100.00	8	9
152.	5619	4	100.00	90.00	5	7
153.	5620	4	90.00	90.00	7	9
154.	5629	5	90.00	30.00	7	7
155.	5644	5	100.00	77.77	8	9
156.	5654	4	100.00	33.33	5	7
157.	5675	5	100.00	40.00	5	7
158.	5703	5	100.00	30.00	7	7
159.	5704	4	100.00	100.00	8	9
160.	5721	5	100.00	100.00	8	9
161.	5809	5	100.00	100.00	8	9
162.	5811	4	100.00	100.00	8	9
163.	5812	4	100.00	100.00	8	9
164.	5833	5	100.00	100.00	8	9
165.	5835	5	100.00	50.00	5	7
166.	5899	5	100.00	90.00	7	9
167.	6011	4	100.00	100.00	8	9
168.	6012	4	100.00	90.00	8	8
169.	6032	4	100.00	100.00	8	9
170.	6041	5	100.00	100.00	8	9
171.	6042	5	100.00	100.00	7	9
172.	6043	5	100.00	62.50	8	8
173.	6044	5	100.00	100.00	8	9
	Pb-7	4	100.00	100.00	8	9
174.	6045	5	100.00	11.11	7	5
175.	6046	5	100.00	33.33	7	7

cont'd

1	2	3	4	5	6	7
176.	6047	5	100.00	100.00	7	9
177.	6048	5	100.00	100.00	7	9
178.	6049	5	100.00	0.00	7	7
179.	6050	5	100.00	20.00	7	7
180.	6051	5	100.00	33.33	7	8
181.	6052	4	100.00	33.33	7	7
182.	6053	5	100.00	20.00	7	7
183.	6139	5	100.00	40.00	7	7
184.	6140	5	100.00	10.00	7	8
185.	6142	4	100.00	100.00	7	9
186.	6143	4	100.00	100.00	7	9
187.	6144	5	100.00	0.00	7	8
188.	6145	5	100.00	0.00	7	8
189.	6147	5	100.00	33.33	7	7
190.	6148	5	100.00	0.00	7	7
191.	6149	4	100.00	20.00	7	8
192.	6151	5	100.00	0.00	7	7
193.	6154	5	100.00	100.00	7	7
194.	6155	5	100.00	12.50	7	7
195.	6156	7	100.00	30.00	7	7
196.	6157	6	100.00	30.00	7	7
197.	6158	6	100.00	100.00	7	9
198.	6159	6	100.00	90.00	7	9
199.	6160	6	100.00	100.00	7	7
200.	6161	6	100.00	0.00	7	7
201.	6162	6	100.00	37.50	7	7
	Pb-7	4	100.00	60.00	8	7
202.	6163	4	100.00	?	8	?
203.	6164	5	100.00	30.00	7	7
204.	6165	4	100.00	0.00	7	8
205.	6166	4	100.00	50.00	7	8
206.	6167	5	100.00	30.00	7	7
207.	6168	5	100.00	0.00	7	8
208.	6169	5	100.00	0.00	7	7
209.	6171	4	100.00	100.00	7	9
210.	6172	4	100.00	100.00	7	8
211.	6173	4	100.00	30.00	7	7
212.	6174	4	100.00	40.00	7	7
213.	6175	4	100.00	25.00	7	7
214.	6176	5	100.00	0.00	7	7
215.	6177	5	100.00	22.22	7	7
216.	6178	5	100.00	40.00	7	7
217.	6179	5	100.00	33.33	7	9
218.	6180	5	100.00	0.00	7	7
219.	6182	4	100.00	0.00	7	7
220.	6185	5	100.00	10.00	7	9

contd.

1	2	3	4	5	6	7
221.	6188	5	100.00	90.00	7	7
222.	6194	5	100.00	0.00	7	7
223.	6196	5	100.00	60.00	7	8
224.	6198	5	100.00	100.00	7	9
225.	6207	5	100.00	50.00	7	7
226.	6209	5	100.00	0.00	7	7
227.	6220	5	100.00	100.00	7	8
228.	6222	5	100.00	100.00	7	9
229.	6227	4	100.00	11.11	7	7
	Pb-7	4	100.00	90.00	9	9
230.	6234	4	100.00	0.00	7	7
231.	6235	7	100.00	0.00	7	5
232.	6236	5	100.00	100.00	8	9
233.	6237	4	100.00	12.50	7	9
234.	6238	6	100.00	33.33	7	7
235.	6239	7	100.00	20.00	7	9
236.	6240	4	100.00	100.00	7	9
237.	6241	7	100.00	100.00	7	9
238.	6242	5	100.00	100.00	7	9
239.	6243	5	100.00	16.66	7	5
240.	6244	7	100.00	37.50	7	7
241.	6245	6	100.00	100.00	7	9
242.	6247	4	100.00	37.50	7	9
243.	6249	4	100.00	11.11	7	9
244.	6251	6	100.00	0.00	7	7
245.	6252	5	100.00	100.00	7	9
246.	6254	5	100.00	0.00	7	5
247.	6255	5	100.00	20.00	7	7
248.	6256	5	100.00	30.00	7	9
249.	6258	5	100.00	100.00	8	9
250.	6261	5	100.00	100.00	7	9
251.	6262	5	100.00	0.00	5	7
252.	6264	5	100.00	100.00	9	9
253.	6265	6	100.00	100.00	8	9
254.	6266	6	100.00	100.00	8	9
255.	6283	5	100.00	100.00	8	9
256.	6299	6	100.00	100.00	8	9
257.	6300	4	100.00	100.00	7	9
	Pb-7	4	100.00	100.00	7	9
258.	6301	4	100.00	9.09	7	7
259.	6302	5	100.00	22.22	7	7
260.	6309	5	100.00	100.00	7	9
261.	6310	4	100.00	0.00	7	7
262.	6311	4	100.00	88.88	7	7
263.	6312	4	100.00	0.00	5	5
264.	6313	4	100.00	10.00	5	7
265.	6314	4	100.00	0.00	7	5

contd.

1	2	3	4	5	6	7
266.	6331	4	100.00	100.00	7	9
267.	6345	4	100.00	12.50	7	5
268.	6354	4	100.00	0.00	5	3
269.	6355	6	100.00	25.00	7	7
270.	6357	5	100.00	11.11	5	7
271.	6369	4	100.00	16.66	7	7
272.	6823	4	100.00	80.00	7	9
273.	6824	4	100.00	77.77	7	7
274.	6827	6	100.00	90.00	7	9
275.	6828	6	100.00	0.00	7	7
276.	6829	5	100.00	0.00	8	7
277.	6831	5	100.00	0.00	8	7
278.	6832	4	100.00	0.00	7	7
279.	6833	4	100.00	80.00	8	9
280.	6834	5	100.00	100.00	8	9
281.	6835	5	100.00	90.00	7	9
282.	6836	5	100.00	0.00	7	7
283.	6837	5	100.00	11.11	7	5
284.	6838	5	100.00	0.00	7	5
285.	6840	5	100.00	0.00	7	5
286.	6841	4	100.00	11.11	7	7
287.	6842	4	100.00	11.11	7	7
	Pb-7	4	100.00	100.00	9	9
288.	6843	7	100.00	0.00	5	3
289.	6844	6	100.00	10.00	7	7
290.	6845	6	100.00	25.00	7	7
291.	6847	4	100.00	0.00	7	5
292.	6849	4	100.00	0.00	7	7
293.	6851	4	100.00	33.33	7	7
294.	6852	4	100.00	100.00	7	9
295.	6853	6	100.00	100.00	7	9
296.	6854	4	100.00	0.00	7	5
297.	6855	6	100.00	9.09	7	7
298.	6856	6	100.00	0.00	7	3
299.	6859	4	100.00	0.00	7	7
300.	6860	4	100.00	0.00	5	7
301.	6862	4	100.00	90.00	7	9
302.	6863	4	100.00	20.00	7	7
303.	6864	5	100.00	100.00	7	9
304.	6870	4	100.00	77.77	7	9
305.	6885	5	100.00	62.50	7	9
306.	6887	4	100.00	0.00	7	5
307.	6888	5	100.00	0.00	7	5
308.	6891	4	100.00	75.00	7	7
309.	6892	5	100.00	100.00	7	9
310.	6894	5	100.00	100.00	7	9

contd.

1	2	3	4	5	6	7
311.	6895	5	100.00	100.00	7	8
312.	6897	5	100.00	100.00	7	9
313.	6899	5	100.00	100.00	7	9
314.	6902	5	100.00	100.00	7	9
315.	6904	4	100.00	85.71	7	8
316.	6909	4	100.00	44.44	7	9
317.	6912	4	100.00	37.50	7	7
318.	6969	4	100.00	100.00	7	9
	Pb-7	4	100.00	100.00	9	9
319.	7102	5	100.00	100.00	8	9
320.	7112	4	100.00	63.63	7	9
321.	7113	4	100.00	88.88	8	9
322.	7114	5	100.00	80.00	8	9
323.	7115	7	100.00	100.00	7	9
324.	7118	4	100.00	100.00	7	9
325.	7119	5	100.00	100.00	7	9
326.	7122	6	100.00	100.00	8	9
327.	7123	7	100.00	100.00	7	9
328.	7125	4	100.00	100.00	7	9
329.	7126	4	100.00	100.00	7	9
330.	7127	5	100.00	100.00	8	9
331.	7128	4	100.00	55.55	7	9
332.	7130	4	100.00	100.00	7	9
333.	7131	5	100.00	80.00	7	9
334.	7135	5	100.00	100.00	9	9
335.	7137	4	100.00	100.00	8	9
336.	7139	5	100.00	100.00	9	9
337.	7144	5	100.00	100.00	7	9
338.	7148	4	100.00	100.00	7	9
339.	7152	4	100.00	100.00	8	9
340.	7154	5	100.00	100.00	8	9
341.	7155	5	100.00	80.00	9	9
342.	7156	5	100.00	60.00	8	9
343.	7158	6	100.00	100.00	7	9
344.	7159	5	100.00	90.00	7	9
	Pb-7	5	100.00	100.00	9	9
345.	7160	5	100.00	100.00	7	9
346.	7161	5	100.00	100.00	7	9
347.	7162	4	100.00	100.00	7	9
348.	7163	5	100.00	100.00	7	9
349.	7165	5	100.00	100.00	7	9
350.	7166	3	100.00	83.33	7	9
351.	7167	6	100.00	80.00	7	9
352.	7168	6	100.00	77.77	7	9
353.	7169	6	100.00	100.00	7	9
354.	7172	4	100.00	100.00	9	9
355.	7175	4	100.00	100.00	7	9

contd.



1	2	3	4	5	6	7
356.	7177	4	100.00	100.00	7	9
357.	7181	4	100.00	90.00	7	9
358.	7185	4	100.00	62.50	7	7
359.	7187	6	100.00	100.00	7	9
360.	7188	4	100.00	50.00	7	7
361.	7189	4	100.00	100.00	7	9
362.	7190	3	100.00	100.00	7	9
363.	7194	3	100.00	100.00	9	9
364.	7195	3	100.00	100.00	7	9
365.	7196	3	100.00	100.00	7	9
366.	7197	3	100.00	85.70	9	7
367.	7198	5	100.00	10.00	7	5*
368.	7199	6	100.00	77.77	7	9
369.	7200	6	100.00	87.50	9	9
370.	7201	3	100.00	85.70	7	7
371.	7202	4	100.00	77.77	7	9
372.	7203	4	100.00	100.00	7	9
373.	7204	4	100.00	85.70	7	9
	Pb-7	2	100.00	100.00	9	9
374.	7205	6	100.00	100.00	7	9
375.	7206	3	100.00	11.11	7	5*
376.	7207	6	100.00	75.00	7	9
377.	7208	5	100.00	100.00	7	9
378.	7209	7	100.00	100.00	7	9
379.	7210	6	100.00	80.00	7	7
380.	7211	7	100.00	100.00	7	9
381.	7212	7	100.00	22.22	7	5
382.	7213	7	100.00	50.00	7	7
383.	7214	7	100.00	100.00	7	9
384.	7215	7	100.00	100.00	7	9
385.	7216	7	100.00	100.00	7	9
386.	7217	7	100.00	80.00	7	9
387.	7218	7	100.00	100.00	7	9
388.	7219	7	100.00	100.00	7	9
389.	7220	7	100.00	85.71	7	7
390.	7221	7	100.00	100.00	7	9
391.	7222	7	100.00	60.00	7	9
392.	7223	7	100.00	80.00	7	9
393.	7224	7	100.00	80.00	7	9
394.	7225	7	100.00	100.00	7	9
395.	7227	7	100.00	77.77	9	9
396.	7228	7	100.00	80.00	9	9
397.	7229	7	100.00	100.00	7	9
398.	7231	7	100.00	100.00	7	9
399.	7232	7	100.00	100.00	7	9
400.	7233	7	100.00	100.00	7	9

contd.

1	2	3	4	5	6	7
401.	7234	7	100.00	90.00	7	8
402.	7235	7	100.00	100.00	7	9
403.	7237	7	100.00	20.00	7	5*
	Pb-7	3	100.00	80.00	9	9
404.	7239	4	100.00	88.88	7	9
405.	7240	7	100.00	36.36	7	9
406.	7241	7	100.00	77.77	7	9
407.	7242	7	100.00	11.11	7	5
408.	7243	7	100.00	11.11	7	5
409.	7244	7	100.00	100.00	7	9
410.	7245	7	100.00	66.66	7	7
411.	7246	7	100.00	50.00	7	5
412.	7247	7	100.00	90.00	7	9
413.	7249	3	100.00	11.11	7	5
414.	7250	7	100.00	66.66	7	7
415.	7251	7	100.00	0.00	7	5
416.	7252	7	100.00	60.00	7	7
417.	7255	7	100.00	70.00	7	9
418.	7259	7	100.00	30.00	7	7
419.	7260	7	100.00	0.00	7	5
420.	7263	7	100.00	60.00	7	7
421.	7267	7	100.00	60.00	7	7
422.	7269	7	100.00	100.00	7	9
423.	7271	7	100.00	100.00	7	9
424.	7272	7	100.00	90.00	7	9
425.	7273	7	100.00	60.00	7	7
426.	7284	7	100.00	87.50	7	9
427.	7286	7	100.00	100.00	7	9
428.	7287	7	100.00	0.00	7	5*
429.	7288	7	100.00	9.09	7	5
430.	7291	7	100.00	20.00	7	5
431.	7292	7	100.00	80.00	7	8
432.	7293	7	100.00	100.00	8	9
	Pb-7	3	100.00	90.00	8	9
433.	7295	7	100.00	90.00	8	9
434.	7296	7	100.00	20.00	7	7
435.	7297	7	100.00	54.54	7	7
436.	7298	7	100.00	90.00	8	9
437.	7299	7	100.00	10.00	7	5
438.	7308	7	100.00	100.00	8	9
439.	7313	5	100.00	100.00	8	9
440.	7328	5	100.00	50.00	8	7
441.	7329	7	100.00	100.00	8	9
442.	7330	7	100.00	100.00	8	9
443.	7331	7	100.00	100.00	7	7
444.	7334	7	100.00	100.00	8	9
445.	7349	7	100.00	88.88	8	9

contd.

1	2	3	4	5	6	7
446.	7350	7	100.00	100.00	8	9
447.	7354	7	100.00	100.00	8	9
448.	7357	7	100.00	100.00	7	9
449.	7359	7	100.00	30.00	5	5
450.	7360	7	100.00	85.71	9	9
451.	7361	7	100.00	100.00	8	9
452.	7365	7	100.00	100.00	8	9
453.	7510	7	100.00	100.00	8	9
454.	7512	7	100.00	100.00	8	9
455.	7225	7	100.00	100.00	7	9
456.	7532	7	100.00	80.00	7	9
457.	7534	7	100.00	91.66	8	9
458.	7536	7	100.00	30.00	7	7
459.	7553	7	100.00	60.00	8	5
460.	7556	7	100.00	33.33	5	7
461.	7559	7	100.00	12.50	7	5
	Pb-7	3	100.00	33.33	5	7
462.	7560	7	100.00	10.00	5	3
463.	7562	7	100.00	18.18	5	5
464.	7563	7	100.00	10.00	7	3
465.	7564	3	100.00	66.66	8	7
466.	7565	7	100.00	50.00	7	7
467.	7567	7	100.00	9.09	7	5
468.	7569	7	100.00	60.00	7	7
469.	7571	7	100.00	70.00	7	7
470.	7572	7	100.00	100.00	7	9
471.	7576	7	100.00	90.00	7	9
472.	7577	7	100.00	100.00	7	9
473.	7588	7	100.00	44.44	7	7
474.	7589	7	100.00	0.00	7	3
475.	7590	7	100.00	100.00	7	9
476.	7591	7	100.00	20.00	7	7
477.	7592	7	100.00	10.00	7	5
478.	7594	7	100.00	100.00	7	9
479.	7595	7	100.00	100.00	7	9
480.	7597	7	100.00	20.00	7	5
481.	7598	7	100.00	100.00	8	9
482.	7599	7	100.00	100.00	8	9
483.	7600	7	100.00	100.00	8	9
484.	7605	7	100.00	100.00	8	9
485.	7606	7	100.00	100.00	8	9

contd.

1	2	3	4	5	6	7
486.	7608	7	100.00	0.00	5	5*
487.	7609	7	100.00	0.00	5	5
488.	7610	7	100.00	10.00	7	7
489.	7611	7	100.00	0.00	5	3
490.	7612	4	100.00	0.00	7	5
	Pb-7	2	100.00	0.00	7	7
491.	7618	7	100.00	12.50	7	7
492.	7626	7	100.00	22.22	7	7
493.	7627	7	100.00	0.00	5	5
494.	7628	7	100.00	88.88	7	7
495.	7629	7	100.00	30.00	7	7
496.	7630	7	100.00	12.50	7	7
497.	7631	7	100.00	20.00	8	7
498.	7632	7	100.00	0.00	5	7
499.	7633	7	100.00	0.00	5	3
500.	7634	7	100.00	0.00	7	5
501.	7636	7	100.00	0.00	7	5
502.	7638	7	100.00	0.00	5	5
503.	7640	7	100.00	0.00	7	5
504.	7644	7	100.00	0.00	7	7
505.	7645	7	100.00	30.00	7	9
506.	7650	7	100.00	90.00	7	9
507.	7651	7	100.00	80.00	7	7
508.	7652	7	100.00	10.00	7	7
509.	7653	7	100.00	0.00	5	5
510.	7654	7	100.00	90.00	7	9
511.	7655	7	100.00	10.00	7	5
512.	7658	7	100.00	80.00	7	9
513.	7661	7	100.00	80.00	7	9
514.	7662	7	100.00	70.00	7	7
515.	7663	7	100.00	71.47	7	9
516.	7664	7	100.00	90.00	5	1
517.	7668	7	100.00	0.00	5	5
518.	7674	7	100.00	0.00	5	3*
519.	7675	7	100.00	0.00	5	5
520.	7676	7	100.00	0.00	5	5
	Pb-7	7	100.00	30.00	8	7
521.	7677	7	100.00	12.50	7	5
522.	7680	7	100.00	100.00	7	9
523.	7709	7	100.00	10.00	8	7
524.	7710	7	100.00	14.28	5	7
525.	7711	7	100.00	20.00	5	7
526.	7716	7	100.00	10.00	7	5
527.	7717	7	100.00	10.00	5	7
528.	7718	7	100.00	10.00	5	5

contd.

1	2	3	4	5	6	7
529.	7719	7	100.00	11.11	7	7
530.	7722	7	100.00	100.00	5	9
531.	7723	7	100.00	0.00	7	7
532.	7725	7	100.00	14.28	7	5
533.	7731	7	100.00	80.00	7	7
534.	7732	4	100.00	90.00	7	8
535.	7733	5	100.00	10.00	7	7
536.	7767	5	100.00	0.00	5	5
537.	7773	7	100.00	11.11	3	5
538.	7774	7	100.00	11.11	7	7
539.	7775	7	100.00	10.00	7	7*
540.	7776	4	100.00	0.00	7	5
541.	7778	7	100.00	100.00	8	9
542.	7779	7	100.00	100.00	8	9
543.	7781	3	100.00	0.00	8	7

\*To be checked again

APPENDIX-XV

Results of screening of Colletotrichum blight promising chickpea  
germplasm lines against Ascochyta blight in Isolation Plant Propagator  
(1978-79)

Sl. No.	ICC No.	Incubation period in days	Percent infection	Percent killed	Rating on 10th day	Rating on 20th day (Recovery rating)
1.	1903	7	100.00	0.00	5	3*
2.	2223	7	100.00	0.00	7	5
	Pb-7	7	100.00	70.00	9	9
3.	2225	7	100.00	0.00	7	7
4.	2267	7	100.00	30.00	7	7
5.	2619	7	100.00	11.11	7	5
6.	4925	7	100.00	0.00	7	7
7.	4939	7	100.00	0.00	7	7
8.	4948	7	100.00	11.11	7	7
9.	5035	7	100.00	0.00	5	5
10.	5107	3	100.00	33.33	7	7
11.	5119	7	100.00	11.11	7	7
12.	5127	7	100.00	0.00	7	3
13.	6213	7	100.00	9.09	7	7
14.	6319	7	100.00	77.77	9	9
15.	6671	7	100.00	0.00	9	7
16.	6743	7	100.00	10.00	9	7
17.	6805	7	100.00	30.00	7	7
18.	6819	7	100.00	0.00	7	5
19.	6901	7	100.00	54.54	9	7
20.	7287	7	100.00	33.33	7	7
21.	7721	7	100.00	0.00	7	7
22.	7722	7	100.00	0.00	7	5
23.	8027	7	100.00	0.00	7	5
24.	8284	7	100.00	14.28	9	7
25.	8462	7	100.00	0.00	7	5
26.	8542	7	100.00	81.81	7	7
27.	8920	7	100.00	0.00	7	3
28.	8923	7	100.00	14.28	7	7
29.	8927	7	100.00	25.00	7	7

\*To be checked again

APPENDIX-XVI

Results of screening of F<sub>2</sub> and back cross materials involving *C. reticulatum*  
against *Ascochyta* blight in Isolation Plant Propagator during 1978-79

Sl. No.	Particular	Incuba- tion period (days)	Percent infec- tion	Percent killed	Rating on 9-point scale	
					10th day after ino- culation	20th day after inoculation (Recovery rating)
1	2	3	4	5	6	7
1.	JG-62 X <u>C. reti- culatum</u> (JM-2100)-					
	1	5	100.00	10.00	5	7
2.	- 3	5	14.28	0.00	5	5
3.	- 4	5	50.00	50.00	7	9
4.	- 5	5	100.00	0.00	5	5
5.	- 6	5	75.00	25.00	7	7
6.	- 7	5	75.00	0.00	7	6
7.	- 8	5	87.50	25.00	7	7
8.	-10	9	60.00	20.00	-	5
9.	-11	9	0.00	0.00	-	1?
10.	-13	5	88.88	0.00	6	5
11.	-15	5	20.00	0.00	3	5
12.	-16	5	25.00	0.00	3	5
13.	-17	5	16.66	0.00	3	5
14.	-19	5	50.00	0.00	5	5
15.	-20	5	16.66	0.00	3	3
16.	-21	5	75.00	0.00	6	5
17.	-23	5	100.00	0.00	5	3
18.	-24	5	0.00	0.00	-	1?
19.	-27	5	83.33	0.00	5	7
20.	-28	5	12.50	0.00	3	3
21.	-29	5	100.00	14.28	6	7
22.	-30	5	40.00	20.00	3	7
23.	-31	5	50.00	0.00	5	5
24.	-33	5	100.00	20.00	6	7
25.	-34	5	100.00	22.22	6	7
26.	-36	5	57.14	28.57	5	7
27.	-38	5	33.33	0.00	6	7
28.	-39	5	33.33	0.00	6	7
29.	-40	5	0.00	0.00	-	1?
30.	-41	5	71.42	14.28	5	5
31.	-42	5	100.00	0.00	5	5
32.	-44	5	100.00	0.00	5	5
33.	-45	5	22.22	0.00	5	5
34.	-49	?	40.00	0.00	1	3?
35.	-50	?	0.00	0.00	1	1?

contd.

1	2	3	4	5	6	7	
36.	JG-62 X <u>C. reti-</u> <u>culatum</u> (JM-2100)	-51	5	25.00	0.00	3	5
37.		-52	5	50.00	0.00	5	5
38.		-53	5	33.33	0.00	3	5
39.		-55	5	57.14	12.85	5	5
40.		-56	5	57.14	0.00	5	5
41.		-59	5	100.00	0.00	5	7
42.		-60	5	25.00	0.00	5	5
43.		-61	5	66.66	0.00	3	5
44.		-63	5	87.50	0.00	3	5
45.		-66	5	100.00	0.00	5	5
46.		-67	5	75.00	25.00	6	7
47.		-68	5	-	-	-	-
48.		-71	5	100.00	10.00	6	7
49.	G-130 X <u>C. reti-</u> <u>culatum</u> (JM-2100)	- 1	5	90.00	0.00	5	5
50.		- 2	5	100.00	0.00	5	3
51.		- 4	5	66.66	0.00	5	5
52.		- 5	5	33.33	0.00	3	3?
53.		- 6	5	71.44	0.00	5	5
54.		- 9	5	71.44	12.85	5	5
55.		-10	5	100.00	0.00	5	5
56.		-11	5	25.00	0.00	3	5
57.		-12	5	60.00	0.00	5	5
58.		-13	5	44.44	0.00	5	5
59.		-14	5	50.00	0.00	5	3
60.		-15	5	100.00	11.11	5	7
61.		-16	5	60.00	0.00	3	3
62.		-17	5	100.00	0.00	5	3
63.		-18	5	60.00	0.00	5	5
64.		-19	5	75.00	0.00	5	5
65.		-20	5	100.00	14.28	5	5
66.		-21	5	50.00	0.00	5	5
67.		-22	5	33.33	0.00	3	5
68.	P-5462 X <u>C. reti-</u> <u>culatum</u> (JM-2106)	- 1	5	100.00	0.00	5	5
69.		- 2	5	100.00	0.00	3	5
70.		- 3	5	100.00	40.00	5	7
71.		- 5	5	33.33	0.00	3	5
72.		- 7	-	50.00	0.00	1	5
73.		- 8	-	-	-	-	-
74.		- 9	5	100.00	100.00	5	9
75.		-10	5	100.00	75.00	5	7

contd



1	2	3	4	5	6	7
76.	P-5462 X <u>C. reti-</u> <u>culatum</u>					
	(JM-2106)-12	5	85.71	57.12	6	7
77.	-13	5	60.00	0.00	5	5
78.	-14	5	100.00	66.66	6	7
79.	-15	5	100.00	0.00	5	5
80.	-16	5	88.88	11.11	4	5
81.	-17	5	100.00	77.77	6	7
82.	-18	5	66.66	33.33	5	7
83.	-19	5	77.77	55.55	5	7
84.	JG-62 X (JG-62 X <u>C. reticulatum</u> )					
	(JM-2100)- 1	5	100.00	50.00	6	7
85.	- 2	5	100.00	90.00	7	9
86.	- 3	5	100.00	100.00	7	9
87.	- 5	5	30.00	20.00	5	5
88.	- 6	5	100.00	90.00	7	9
89.	JG-62 X ( <u>C. reti-</u> <u>culatum</u> X JG-62)					
	(JM-2100)- 1	5	62.50	37.50	7	7
90.	- 2	5	100.00	25.00	6	5
91.	- 3	5	100.00	33.33	5	5
92.	- 4	5	100.00	12.50	5	7
93.	- 5	5	75.00	0.00	4	5
94.	- 6	5	100.00	30.00	5	5
95.	- 7	5	100.00	40.00	5	5
96.	- 8	5	40.00	0.00	6	5?
97.	- 9	5	77.77	0.00	5	3
98.	-10	5	100.00	0.00	4	5
99.	-11	5	50.00	16.66	5	7
100.	-12	5	100.00	44.44	7	7
101.	-13	5	0.00	0.00	3	1?
102.	G-130 X (G-130 X <u>C. reticulatum</u> )					
	(JM-2100)- 1	5	100.00	22.22	5	5
103.	- 2	5	100.00	40.00	5	5
104.	- 3	5	57.14	28.57	6	7
105.	- 4	5	60.00	0.00	5	5
106.	- 6	5	71.42	0.00	5	5
107.	- 7	5	100.00	30.00	5	5
108.	- 8	5	100.00	11.11	5	5
109.	G-130 X ( <u>C. reti-</u> <u>culatum</u> X G-130)					
	(JM-2100)- 1	5	90.00	0.00	5	5
110.	- 2	?	80.00	0.00	3	5
111.	- 3	5	37.50	0.00	5	5

contd.

1	2	3	4	5	6	7
112.	G-130 X ( <u>C. reticulatum</u> X G-130)					
	(JM-2100) - 4	5	100.00	0.00	5	5
113.	- 5	5	60.00	20.00	5	5
114.	- 6	5	66.66	0.00	6	5
115.	- 7	5	90.90	45.45	7	7
116.	- 8	5	33.33	0.00	3	3
117.	- 9	5	90.00	10.00	5	5
118.	-10	5	100.00	20.00	5	5
119.	-11	5	66.66	50.00	6	7
120.	ICC-4454	5	100.00	11.11	5	6
121.	-4948	5	100.00	0.00	5	5
122.	-4951	5	100.00	62.50	6	7
123.	<u>C. reticulatum</u>	5	0.00	0.00	1	1?
	JM-2100					

? = Plants germinated after inoculation

APPENDIX-XVII

Results of repeated screening of chickpea germplasm lines initially  
found promising against Ascochyta blight in Isolation Plant Propagator  
(1978-79)

Sl. No.	ICC No.	Incubation period in days	Percent infection	Percent killed	Rating on 9-point scale	
					10 days after inoculation	20 days after inoculation (Recovery rating)
1	2	3	4	5	6	7
1.	3200	4	100.00	55.55	6	7
2.	3237	4	100.00	80.00	6	7
	Pb-7	4	100.00	100.00	8	9
3.	3252	5	100.00	60.00	7	5
4.	3253	4	100.00	92.30	6	9
5.	3254	4	100.00	100.00	6	9
6.	3259	4	100.00	46.66	5	3
7.	3261	4	100.00	91.66	5	7
8.	3262	4	100.00	100.00	7	9
9.	3268	5	100.00	100.00	7	9
10.	3269	4	100.00	100.00	7	9
11.	3270	4	100.00	100.00	7	9
12.	3277	4	100.00	16.66	6	3
13.	3287	4	100.00	50.00	7	5
14.	3296	4	100.00	100.00	7	9
15.	3304	4	100.00	90.90	7	9
16.	3330	5	100.00	40.00	5	5
17.	3346	5	100.00	81.81	5	5
18.	3347	4	100.00	90.00	6	9
19.	3359	4	100.00	100.00	6	9
20.	3531	4	100.00	50.00	6	3
21.	6195	5	100.00	90.00	5	9
22.	6293	5	100.00	60.00	6	5
23.	6297	4	100.00	57.14	5	7
24.	6330	4	100.00	91.66	5	7
25.	3343	6	100.00	20.00	5	7
26.	3351	6	100.00	0.00	5	6
	Pb-7	6	100.00	100.00	7	9
27.	3376	6	100.00	53.84	7	8
28.	3377	6	100.00	50.00	7	8
29.	3378	7	100.00	10.00	5	8
30.	3379	6	100.00	55.55	7	8
31.	3380	6	100.00	10.00	5	6
32.	3383	6	100.00	20.00	5	8
33.	3385	6	100.00	30.00	5	9
34.	3387	6	100.00	100.00	7	9

contd.

1	2	3	4	5	6	7
35.	3388	6	100.00	100.00	7	8
36.	3432	6	100.00	40.00	5	9
37.	3496	6	100.00	60.00	7	9
38.	3497	6	100.00	50.00	5	8
39.	3509	6	100.00	44.44	5	9
40.	3567	6	100.00	50.00	7	9
41.	3573	6	100.00	20.00	5	9
42.	3577	7	100.00	90.00	7	9
43.	3578	6	100.00	26.66	5	9
44.	3580	6	100.00	16.66	4	8
45.	3581	6	100.00	11.11	5	8
46.	3582	7	100.00	0.00	4	7
47.	3585	6	100.00	0.00	5	7
48.	3586	6	100.00	37.50	6	9
49.	3587	6	100.00	0.00	4	6
50.	3592	6	100.00	100.00	7	9
51.	3594	7	100.00	0.00	1	6
52.	3597	6	100.00	83.33	5	9
53.	3598	6	100.00	20.00	6	7
54.	3606	8	100.00	20.00	6	9
55.	3252	-	100.00	20.00	3	8
	Pb-7	6	100.00	0.00	5	7
56.	3259	6	100.00	0.00	4	8
57.	3277	6	100.00	0.00	4	7
58.	3531	7	100.00	0.00	5	7
59.	3295	7	100.00	20.00	5	8*
60.	3302	6	100.00	0.00	5	8
61.	3328	6	100.00	0.00	5	7
62.	3329	7	100.00	0.00	4	7
63.	3336	7	100.00	45.45	7	8
64.	3337	8	100.00	0.00	5	7
65.	3340	7	100.00	9.09	5	8
66.	3341	7	100.00	0.00	4	8
67.	3368	7	100.00	33.33	7	8
68.	3369	7	100.00	0.00	7	8
69.	3370	7	100.00	0.00	5	8
70.	3371	6	100.00	0.00	6	7
71.	3372	6	100.00	10.00	6	8
72.	3374	6	100.00	0.00	5	6
73.	3400	6	100.00	18.18	7	7
74.	3411	7	100.00	0.00	5	6
75.	3434	6	100.00	9.09	5	8
76.	3441	6	100.00	44.44	7	9
77.	3442	6	100.00	9.09	7	8
78.	3533	6	100.00	10.00	7	7

contd.

1	2	3	4	5	6	7
79.	3483	6	100.00	0.00	5	7
80.	3482	6	100.00	9.09	5	8
81.	3466	6	100.00	9.09	5	8
82.	3460	6	100.00	10.00	5	7
83.	3434	7	100.00	0.00	4	7
	Pb-7	6	100.00	20.00	5	8

\*To be checked again

APPENDIX-XVIII

Results of replicated screening of chickpea germplasm lines initially found promising against Ascochyta blight in Isolation Plant Propagator (1978-79)

Sl. No.	ICC No.	Percent infection			Percent killed			Rating on 9-point scale					
		R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	Average	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	Average	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	Average
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	120	77.77	100.00	100.00	92.59	0.00	0.00	0.00	0.00	3	5	5	4.33*
2.	130	75.00	100.00	100.00	91.66	0.00	0.00	0.00	0.00	3	6	5	4.66*
3.	150	100.00	100.00	100.00	100.00	0.00	88.88	0.00	29.62	5	9	6	6.66
4.	204	80.00	100.00	100.00	93.33	0.00	0.00	0.00	0.00	3	6	7	5.33*
5.	229	80.00	100.00	100.00	93.33	0.00	0.00	0.00	0.00	3	6	5	4.66*
6.	272	100.00	100.00	100.00	100.00	0.00	60.00	0.00	20.00	4	7	6	5.66
7.	280	100.00	100.00	100.00	100.00	0.00	30.00	0.00	10.00	4	6	7	5.66
8.	377	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	6	5.33*
9.	462	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	5	4	4.66*
10.	468	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	4	5	4.33*
11.	469	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	7	6	6.00
12.	471	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
13.	539	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	5	5.00*
14.	559	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	5	4	4.66*
15.	561	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	7	7	7.00
16.	567	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	5	5.00*
17.	595	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	5	5.00*
18.	599	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	6	5.33*
19.	600	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	5	5.00*
20.	665	100.00	100.00	100.00	100.00	50.00	88.88	20.00	52.96	8	8	7	7.66
21.	667	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	8	5	6.00
22.	693	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	5	5.33*
23.	703	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	5	5.33*
24.	704	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	5	7	5.33*
25.	723	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
26.	724	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	5	5.33*
27.	733	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	7	6	6.66
28.	780	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	5	5	5.66
29.	781	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	5	5.00*
30.	813	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	4	6	5.66

contd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
31.	816	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	6	5.33*
32.	838	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	5	5.00*
33.	843	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	4	6	5.66
34.	903	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	5	6	5.66
35.	904	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	7	7	6.66
36.	928	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
37.	931	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	6	5.33*
38.	954	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	5	6	5.66
39.	999	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	6	5	6.00
40.	1003	100.00	100.00	100.00	100.00	50.00	0.00	0.00	16.66	8	6	5	6.33
41.	1004	100.00	100.00	100.00	100.00	0.00	10.00	0.00	3.33	6	7	6	6.33
42.	1005	100.00	100.00	100.00	100.00	0.00	22.22	0.00	7.40	7	7	5	6.33
43.	1006	100.00	100.00	100.00	100.00	50.00	0.00	0.00	16.66	8	7	6	7.00
44.	1009	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	4	5	5.33*
45.	1012	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	5	6	6.00
46.	1016	100.00	100.00	100.00	100.00	40.00	0.00	0.00	0.00	7	5	7	6.33
47.	1017	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	5	5	5.66
48.	1018	100.00	100.00	100.00	100.00	75.00	0.00	0.00	25.00	8	6	5	6.33
49.	1023	100.00	100.00	100.00	100.00	77.77	0.00	0.00	25.92	8	6	6	6.66
50.	1024	100.00	100.00	100.00	100.00	66.66	0.00	0.00	22.22	8	5	6	6.33
51.	1077	100.00	100.00	100.00	100.00	60.00	0.00	0.00	20.00	8	6	6	6.66
52.	1078	100.00	100.00	100.00	100.00	70.00	0.00	0.00	23.33	8	6	6	6.66
53.	1149	100.00	100.00	100.00	100.00	77.77	0.00	0.00	25.92	8	5	5	6.00
54.	1159	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	5	7	6.00
55.	1170	100.00	100.00	100.00	100.00	100.00	0.00	0.00	33.33	9	6	5	6.66
56.	1179	100.00	100.00	100.00	100.00	57.14	0.00	0.00	19.04	7	5	5	5.66
57.	1202	100.00	100.00	100.00	100.00	100.00	0.00	0.00	33.33	9	6	6	7.00
58.	1209	100.00	100.00	100.00	100.00	33.33	0.00	0.00	11.11	7	6	5	6.00
59.	1214	100.00	100.00	100.00	100.00	30.00	0.00	0.00	10.00	7	6	5	6.00
60.	1219	100.00	100.00	100.00	100.00	50.00	0.00	0.00	16.66	7	7	5	6.33
61.	1270	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	7	6	6.00
62.	1271	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
63.	1272	100.00	100.00	100.00	100.00	66.66	0.00	0.00	22.22	7	7	6	6.66
64.	1273	100.00	100.00	100.00	100.00	70.00	0.00	0.00	23.33	8	7	5	6.66
65.	1275	100.00	100.00	100.00	100.00	77.77	0.00	0.00	25.92	8	7	5	6.66

contd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
66.	1283	100.00	100.00	100.00	100.00	70.00	10.00	0.00	26.66	8	7	5	6.66
67.	1292	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
68.	1317	100.00	100.00	100.00	100.00	66.66	0.00	0.00	22.22	8	4	6	6.00
69.	1329	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
70.	1338	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	7	5	5.66
71.	1407	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	7	5	5.66
72.	1465	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	6	5.33*
73.	1468	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	6	5	5.66
74.	1504	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	7	5.66
75.	1583	100.00	100.00	100.00	100.00	100.00	0.00	0.00	33.33	9	5	6	6.66
76.	1586	100.00	100.00	100.00	100.00	70.00	0.00	0.00	23.33	8	6	6	6.66
77.	1607	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	6	5	5.66
78.	1809	100.00	100.00	100.00	100.00	50.00	0.00	0.00	16.66	7	6	5	6.00
79.	1827	100.00	100.00	100.00	100.00	0.00	100.00	0.00	33.33	4	8	6	6.00
80.	1842	100.00	100.00	100.00	100.00	0.00	80.00	0.00	26.66	5	8	6	6.33
81.	1871	100.00	100.00	100.00	100.00	80.00	33.33	0.00	37.77	8	7	6	7.00
82.	1902	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	6	5	6.00
83.	1903	100.00	100.00	100.00	100.00	0.00	50.00	0.00	16.66	6	8	5	6.33
84.	1908	100.00	100.00	100.00	100.00	100.00	80.00	0.00	60.00	9	8	8	8.33
85.	1910	100.00	100.00	100.00	100.00	77.77	22.22	0.00	33.33	8	6	6	6.66
86.	1911	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	6	5.33*
87.	1915	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	5	5.00*
88.	2117	100.00	100.00	100.00	100.00	0.00	30.00	0.00	10.00	5	7	7	6.33
89.	2153	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	4	4.66*
90.	2156	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	5	5.00*
91.	2160	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	5	7	5.33*
92.	2172	100.00	100.00	100.00	100.00	0.00	0.00	100.00	33.33	5	5	7	5.66
93.	2173	100.00	100.00	100.00	100.00	0.00	0.00	55.55	18.51	4	6	8	6.00
94.	2237	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	6	4	4.66*
95.	2264	100.00	100.00	100.00	100.00	0.00	60.00	100.00	53.33	5	7	9	7.00
96.	2266	100.00	100.00	100.00	100.00	0.00	55.55	0.00	18.51	6	7	6	6.33
97.	2294	100.00	100.00	100.00	100.00	0.00	0.00	37.50	12.50	6	5	7	6.00
98.	2295	100.00	100.00	100.00	100.00	0.00	0.00	55.55	18.51	7	5	7	6.33
99.	2364	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	6	6	5.66
100.	2369	100.00	100.00	100.00	100.00	25.00	0.00	50.00	25.00	7	6	7	6.66

contd.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
101.	2370	100.00	100.00	100.00	100.00	100.00	0.00	0.00	70.00	23.33	7	6	7	6.66
102.	2590	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	7	4	6	5.66
103.	2599	100.00	100.00	100.00	100.00	100.00	0.00	0.00	66.66	* 22.22	4	6	8	6.00
104.	2600	100.00	100.00	100.00	100.00	100.00	0.00	0.00	100.00	33.33	5	5	0	3.33*
105.	2601	100.00	100.00	100.00	100.00	100.00	42.85	0.00	100.00	47.61	7	5	9	7.00
106.	2693	100.00	100.00	100.00	100.00	100.00	22.22	0.00	50.00	24.07	7	6	7	6.66
107.	4716	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	5	5	5.33*
108.	4934	100.00	100.00	100.00	100.00	100.00	20.00	0.00	0.00	6.66	7	7	6	6.66
109.	4939	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	4	4	6	4.66*
110.	4989	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	5	6	5.33*
111.	5127	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	6	7	6	6.33
112.	5784	100.00	100.00	100.00	100.00	100.00	50.00	0.00	0.00	16.66	7	7	6	6.66
113.	6067	100.00	100.00	100.00	100.00	100.00	0.00	0.00	66.66	22.22	5	7	8	6.66
114.	6250	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	5	4	6	5.00*

\*To be checked again

APPENDIX -XIX

Screening of chickpea crossing block material for Colletotrichum blight

Location: R-2

Date of sowing: 28-7-1978

S.No.	Cultivar	Average disease rating	S.No.	Cultivar	Average disease rating
1	2	3	1	2	3
1.	P-15	9.0	39.	CHECK-3	9.0
2.	NEC-1651	9.0	40.	Collection-68	9.0
3.	P-1786	6.3	41.	Ludhiana-1	9.0
4.	244C/NEC-2544	7.0	42.	NEC-143	7.0
5.	NEC-1598	8.3	43.	JG-112	7.0
6.	F <sub>3</sub> WF X 384-1-HF	9.0		Sell from local	
7.	NEC-144	6.3	44.	P-1-1	9.0
8.	NEC-13	7.0	45.	CAINA	7.0
9.	NEC-1427	7.0	46.	NEC-396	9.0
10.	850-3/27	6.3	47.	NEC-175	6.3
11.	NEC-1376	8.3	48.	NEC-2381	7.6
12.	EC-26439	5.0	49.	P-2202-2	7.0
13.	CHECK-1	9.0	50.	NEC-2147	7.0
14.	CO-1	7.6	51.	P-18	7.0
15.	NEC-1646	7.0	52.	CHECK-4	9.0
16.	NEC-2259	6.3	53.	NEC-658	7.0
17.	No. 22	5.6	54.	775C/NEC-2704	7.6
18.	P-2236	8.3	55.	ANM-838	9.0
19.	NEC-1910	7.0	56.	JM-524G/S-168-258	5.6
20.	NEC-1781	7.6	57.	NEC-2333	5.6
21.	NEC-1128	5.0	58.	NEC-1918	7.6
22.	P-5	5.6	59.	P-13	7.6
23.	NEC-81	5.0	60.	NEC-2383	7.6
24.	P-17-1	7.6	61.	JGC-1	7.0
25.	NEC-1640	6.3	62.	ANM-822	7.0
26.	CHECK-2	9.0	63.	P-149-1	8.3
27.	NEC-1579	7.6	64.	B-108	7.0
28.	NEC-1777	7.0	65.	CHECK-5	9.0
29.	H-1082	6.3	66.	NEC-344	7.6
30.	Collection-69	9.0	67.	BR-198	7.6
31.	P-753	7.0	68.	C-104	7.6
32.	Ludhiana-8	8.3	69.	P-2178-1	7.6
33.	P-2994	7.6	70.	NEC-2296	9.0
34.	P-693	9.0	71.	NEC-2413	7.0
35.	NEC-2227	7.0	72.	P-319	7.0
36.	PP-1	7.0	73.	P-9847	9.0
37.	P-45	8.3	74.	NEC-2368	7.0
38.	NEC-671	5.6	75.	Collection-66	9.0

contd.

1	2	3	1	2	3
76.	NEC-141	7.0	122.	P-289	7.6
77.	NEC-369	8.3	123.	E-100	8.3
78.	CHECK-6	9.0	124.	P-17	9.0
79.	P-759	7.0	125.	NEC-2179	8.3
80.	GL-645	6.3	126.	H-552	8.3
81.	P-1863	5.0	127.	H-73-1	8.3
82.	P-478	9.0	128.	EC-26422	5.0
83.	NEC-2330	6.3	129.	NEC-1466	8.3
84.	P-1789	5.0	130.	CHECK-10	9.0
85.	10-2-3	9.0	131.	NEC-139	5.0
86.	851C/NEC-2753	5.6	132.	NEC-214	8.3
87.	P-1954	8.3	133.	POONA FLOR-2	8.3
88.	NEC-790	5.0	134.	F <sub>3</sub> WF X 16BR	8.3
89.	Collection-269	8.3	135.	NEC-1650	9.0
90.	NEC-233	7.6	136.	NEC-420	7.6
91.	CHECK-7	9.0	137.	NEC-158	7.0
92.	P-4241	7.0	138.	H-556-1	8.3
93.	F-272	7.0	139.	H-73-16	5.0
94.	NEC-989	5.0	140.	NEC-701	6.3
95.	H-355	5.6	141.	JG-95/P-690	9.0
96.	Collection-192	7.6	142.	P-179	9.0
97.	P-966	9.0	143.	CHECK-11	8.3
98.	P-7	9.0	144.	NEC-472	7.0
99.	Ludhiana-10	6.3	145.	C-46	7.0
100.	NEC-1921	7.0	146.	NEC-1085	8.3
101.	NEC-1831	7.0	147.	864C/NEC-2761	7.0
102.	NEC-550	7.0	148.	NEC-2304	6.3
103.	P-813-1	6.3	149.	P-3	7.0
104.	CHECK-8	9.0	150.	P-6090-1	6.3
105.	PRR-1	9.0	151.	NEC-2314	9.0
106.	NEC-226	5.0	152.	NEC-690	7.0
107.	C-309	7.0	153.	JG-110/P-1444	9.0
108.	P-1590	8.3	154.	NEC-15	7.0
109.	NEC-474	9.0	155.	P-5-1	8.3
110.	NEC-2274	7.0	156.	CHECK-12	9.0
111.	G-130	5.0	157.	P-3516-1	5.0
112.	Local Chaffa	7.0	158.	NEC-2322	5.6
113.	ICC-4	6.3	159.	T-103	8.3
114.	HYB-16-3	5.0	160.	Leb-local-pm.	7.0
115.	G-1	5.0	161.	NEC-2261	6.3
116.	NEC-10	6.3	162.	NEC-139	5.6
117.	CHECK-9	9.0	163.	H-834	7.0
118.	F-61	5.0	164.	HIMA	9.0
119.	NEC-2138	7.0	165.	K-1480	8.3
120.	NEC-974	7.6	166.	F <sub>3</sub> White flower- 29-B2	6.3
121.	H-547	7.6			

contd.

1	2	3	1	2	3
167.	BG-14	6.3	213.	P-5482	7.0
168.	NEC-1057	5.0	214.	1252	6.3
169.	CHECK-13	9.0	215.	EC-26443	9.0
170.	Bengal gram	5.0	216.	P-681	7.0
171.	NEC-426	6.3	217.	NEC-2446	8.3
172.	NEC-692	5.6	218.	P-156	9.0
173.	NEC-21629	5.0	219.	NEC-239	8.3
174.	F-8	5.0	220.	NEC-1470	9.0
175.	P-8	9.0	221.	CHECK-17	9.0
176.	M-3	5.6	222.	P-1539-1	5.0
177.	NEC-1037	7.0	223.	NEC-2404	5.6
178.	BDN-9-3	9.0	224.	P-6-2	9.0
179.	NEC-26435	7.0	225.	P-3642-1	9.0
180.	P-1798	7.6	226.	JM-475/Green grain	9.0
181.	P-4379	7.0	227.	NEC-712	7.0
182.	CHECK-14	9.0	228.	Ahmadabad-52	5.6
183.	P-2-1	7.0	229.	P-14	9.0
184.	Kaka	8.3	230.	NEC-901	9.0
185.	NEC-815	7.0	231.	NEC-850	5.6
186.	P-1	7.0	232.	Hingoli-5	9.0
187.	P-1311	5.6	233.	Collection-238	5.6
188.	NEC-970	5.0	234.	CHECK-18	9.0
189.	ICC-3	5.0	235.	P-2215	7.0
190.	NEC-2262	7.0	236.	311C/NEC-2553	8.3
191.	NEC-1118	7.0	237.	NEC-213	7.0
192.	BR-78	7.0	238.	L-146	7.0
193.	NEC-900	5.0	239.	H-223	7.0
194.	JM-583	5.0	240.	P-2098	5.0
195.	CHECK-15	9.0	241.	Part-6-114	5.6
196.	P-1270	7.0	242.	NEC-660	6.3
197.	NEC-1660	5.0	243.	12-071-10054	8.3
198.	P-422	7.0	244.	Ludhiana-26	7.0
199.	P-3655	6.3	245.	BEG-482	8.3
200.	P-99	9.0	246.	P-2633	5.0
201.	H-870-1	8.3	247.	CHECK-19	9.0
202.	Collection-28	7.6	248.	P-2632	6.3
203.	NEC-308	7.0	249.	NEC-451	9.0
204.	NEC-1628	7.0	250.	C-233	9.0
205.	NEC-2401	5.6	251.	K-1481	5.0
206.	824C/NEC-2736	7.0	252.	Radhey	6.3
207.	NEC-1775	8.3	253.	NEC-1589	7.0
208.	CHECK-16	9.0	254.	EC-26432	7.0
209.	NEC-1578	9.0	255.	P-3765	7.0
210.	NEC-229	9.0	256.	H-7313	7.0
211.	NEC-1627	9.0	257.	JG-113/Sell from	7.0
212.	FRONTIER-1	6.3		local	

cont

1	2	3	1	2	3
258.	NEC-18	9.0	305.	783 C/-	7.0
259.	P-4031	5.6	306.	EC-26426	6.3
260.	CHECK-20	9.0	307.	NEC-755	9.0
261.	C-382	7.6	308.	NEC-1348	9.0
262.	H-75-30	9.0	309.	NEC-2209	7.0
263.	Chaffa	9.0	310.	P-5044-1	7.6
264.	NEC-1298	7.0	311.	Gatagiri-1-4	8.3
265.	C-369	8.3	312.	CHECK-24	9.0
266.	P-6333-1	7.0	313.	P-1528-1	5.0
267.	231C-2	7.0	314.	EC-26425	7.0
268.	P-1092	7.6	315.	P-485	6.3
269.	NEC-1163	9.0	316.	P-1231	6.3
270.	NEC-1079	7.6	317.	H-6195	7.0
271.	NEC-1203	6.3	318.	Annegiri	7.0
272.	NEC-277	7.0	319.	P-1805	7.0
273.	CHECK-21	9.0	320.	NEC-2218	7.0
274.	P-9635	7.0	321.	RS-11	9.0
275.	H-532	8.3	322.	NEC-1629	7.0
276.	EC-26419	7.0	323.	P-4235-1	9.0
277.	EC-26420	9.0	324.	12-071-05093	8.3
278.	NEC-2382	7.0	325.	CHECK-25	9.0
279.	JM-481/Ruggossa Bonti	6.3	326.	EC-26423	7.0
280.	P-1179	9.0	327.	P-221	9.0
281.	P-1242	7.0	328.	F-229	7.0
282.	P-2302	6.3	329.	EC-26420-1	7.0
283.	P-16	9.0	330.	Teharan-32	9.0
284.	NEC-1135	7.6	331.	JG-74	9.0
285.	GC-607	9.0	332.	NEC-392	9.0
286.	CHECK-22	9.0	333.	P-3190	9.0
287.	NEC-578	7.0	334.	NEC-2263	7.0
288.	NEC-1004	6.3	335.	Collection-16	9.0
289.	NEC-750	9.0	336.	NEC-759	8.3
290.	NEC-527	9.0	337.	Ofra	7.0
291.	845C-2/NEC-2749-2	7.0	338.	CHECK-26	9.0
292.	BR-70	7.0	339.	P-1214-1	9.0
293.	P-2503	7.0	340.	Collection-327	9.0
294.	71C-2/NEC-2498-2	7.0	341.	Harigantus	9.0
295.	WR-315	9.0	342.	NEC-2229	7.0
296.	NEC-529	9.0	343.	P-9-1	8.3
297.	Collection-104	9.0	344.	NEC-437	9.0
298.	Collection-108	9.0	345.	NEC-356	8.3
299.	CHECK-23	8.3	346.	L-550	7.6
300.	NEC-2024	9.0	347.	P-6-1	9.0
301.	NEC-473	8.3	348.	NEC-2381	6.3
302.	NEC-1596	9.0	349.	723 C-2	7.6
303.	NEC-318	7.0	350.	Mackan-A/2	6.3
304.	P-4	9.0	351.	CHECK-27	7.6

contd.

1	2	3	1	2	3
352.	P-3788-2	5.0	398.	EC-26431	6.3
353.	NEC-189	8.3	399.	NEC-584	6.3
354.	G-549	7.6	400.	NEC-381	7.0
355.	P-287	7.6	401.	GC-607-1	6.3
356.	NEC-2238	5.6	402.	Collection-102	9.0
357.	P-11	9.0	403.	CHECK-31	9.0
358.	NEC-140	5.0	404.	Bada Chaffa	8.3
359.	P-165	8.3	405.	NEC-1356	9.0
360.	P-180-1	9.0	406.	P-9636	7.0
361.	NEC-177	7.0	407.	L-496	9.0
362.	NEC-248	7.0	408.	H-75-1	7.0
363.	K-1170	5.0	409.	CPS-1	7.0
364.	CHECK-28	9.0	410.	P-6099	6.3
365.	L-149	6.3	411.	No.163	7.0
366.	P-1437	6.3	412.	839C/NEC-2744	7.0
367.	P-636	9.0	413.	P-922	7.6
368.	U-165	5.6	414.	P-319-1	7.6
369.	NEC-1308	7.6	415.	C-161	6.3
370.	C-387	7.6	416.	CHECK-32	9.0
371.	Negro	7.0	417.	P-4386	9.0
372.	P-4249-1	7.6	418.	K-1189	5.0
373.	NEC-639	7.0	419.	ICC-1	7.0
374.	P-6613	7.6	420.	GL-642	7.0
375.	P-2	6.3	421.	K-1174	7.0
376.	P-1781	7.6	422.	NEC-345	7.0
377.	CHECK-29	9.0	423.	P-30	8.3
378.	NEC-1971	9.0	424.	B-106	7.0
379.	NEC-1858	7.6	425.	P-2293	6.3
380.	ICC-5	7.0	426.	ICC-2	7.6
381.	NEC-2211	9.0	427.	NEC-2409	9.0
382.	P-141	9.0	428.	P-1353	5.0
383.	NEC-149	7.0	429.	CHECK-33	9.0
384.	NEC-8	7.0	430.	Attock-234	6.3
385.	Collection-121-4	9.0	431.	NEC-833	9.0
386.	NEC-370	9.0	432.	JM-581/Caina-68	7.0
387.	NEC-2325	9.0	433.	NEC-1676	7.6
388.	NEC-800	7.0	434.	NEC-719	8.3
389.	P-9668	7.6	435.	WP-2654-A	9.0
390.	CHECK-30	8.3	436.	C-376	7.0
391.	P-3743-2	6.3	437.	NEC-1103	9.0
392.	BR-98	7.6	438.	P-2511	9.0
393.	Collection-268	5.6	439.	P217	7.0
394.	NEC-672	7.0	440.	CP-14	7.0
395.	NEC-1357	9.0	441.	JG-82	7.6
396.	NEC-1869	7.0	442.	CHECK-34	9.0
397.	P-9	7.0	443.	P-9800	6.3

cont

1	2	3	1	2	3
444.	JM-480/Calicon-14	6.3	457.	Giza	7.6
445.	P-7-1	7.6	458.	ANM-830	9.0
446.	M <sub>2</sub> X M <sub>3</sub>	9.0	459.	746C/NEC-2679	9.0
447.	NEC-1173	9.0	460.	P-2605	7.6
448.	P-1198-1	9.0	461.	NEC-2415	7.0
449.	P-1162	9.0	462.	BG-1	7.6
450.	NEC-847	6.3	463.	NEC-2305	5.6
451.	Ludhiana-23	7.0	464.	NEC-1196	5.6
452.	C-8	5.0	465.	NEC-340	9.0
453.	K-1184	6.3	466.	P-1174	7.0
454.	GL-651	8.3	467.	P-4181-1	7.0
455.	CHECK-35	7.0	468.	CHECK-36	9.0
456.	P-110	7.6			

APPENDIX-XX

REPORT ON THE TRIP TO SYRIA

(October 16-23, 1978)

Y.L. Nene

- Visit to : ICARDA, Aleppo
- Purpose : Planning of chickpea Ascochyta blight screening program in view of the recent decision that the blight screening work will be coordinated through ICARDA
- Contacts : Dr. K.B. Singh, Chickpea Breeder and Dr. G.C. Hawtin, Leader, Food Legume Improvement Program at ICARDA
- Other persons met : Dr. M.C. Saxena, Legume Agronomist; Dr. Salim, Pathologist in Tobacco Monopoly of Syria (Latakia); Dr. E. Saari, CIMMYT Pathologist in U.A.R. visiting ICARDA; Dr. C. Bernier, Visiting Professor from University of Manitoba, Canada, who is spending his sabbatical in U.A.R. and assisting ICARDA program; Dr. J.P. Srivastava, Leader, Cereal Improvement Program

Notes

1. Had long discussions mainly with Dr. K.B. Singh on plans for Ascochyta blight screening. The International Chickpea Ascochyta Blight Nursery (ICABN) of 1978-79 operated from ICRISAT will be planted in November 1978 at Aleppo and Latakia (Syria) and the Chickpea International Ascochyta Blight Nursery (CIABN) of 1978-79 operated from ICARDA will be planted at Aleppo and Latakia (Syria), Tal Amara (Lebanon), and Tabriz (Iran). From next year the two nurseries will be integrated into one and operated as CIABN from ICARDA. In ICABN 1-9 raint scale and in CIABN 1-5 rating scale are being followed for scoring the disease. We agreed that in CIABN we will follow 1-5 rating scale in the interest of continuity and uniformity with other ICARDA nurseries. We agreed that we will work towards simplifying the recording procedures.
2. We discussed the program for screening the breeding material in the coming autumn season. Dr. Singh has collected over 45 cloth bags full of diseased plant debris from last year's affected crop. We agreed that an infector row after every two test rows will be planted throughout the entire breeding



material area. The infector rows (approx. 1,500 in all) will be dusted (10 g powdered debris/row of 5 m) in afternoons some time in January 1979. The crop row direction will be across the wind direction to ensure good spread of the disease. As a standby arrangement, the fungus will be multiplied on chickpea flour broth. One hundred ml medium with 30 to 60-day old fungus growth will be mixed with approx. 10 litres of water. One litre diluted spore suspension will be adequate for one 5 m row. Arrangement for sprinkler irrigation, in case rains fail, will be made. An additional inoculation procedure will be to suspend spores from early, naturally infected plants in water and spray on infector rows.

3. In all 15 'resistant' lines were identified last year. Five of these (all desis) are from ICRISAT's ICABN (1977-78). These are ICC-4935, -7513, -7520, -5127, and -7514. Kabuli NEC lines are -63, -190, -195, and -245. Of the remaining six is NEC-2305 (desi) which was found resistant in last two seasons. All these will be grown in autumn and spring, and resistant ones will be used for crossing in the spring season.
4. During my stay I demonstrated the preparation of potato-dextrose-agar and chickpea flour broth media to Dr. K.B. Singh and an assistant in the breeding program. Also demonstrated the procedure for isolating *Ascochyta* in pure culture. I checked the viability of the spores of *Ascochyta* (from diseased plant debris collected by Dr. Singh last season) and found them viable. I wrote down procedures for fungus isolation and multiplication and gave them to Dr. Singh. The facilities for microbiological work which Dr. Islam has developed are good and served my purpose.
5. In discussions with Drs. Hawtin and Singh, it was suggested that I should visit ICARDA in March 1979 to evaluate the performance of breeding material and nurseries. Again in June 1979 I should visit the disease nurseries, with Dr. Singh, in Syria, Lebanon, Jordan, Turkey, Greece, and perhaps Spain.
6. Dr. Singh took me to Sarghaya, 60 km from Damascus, where a small date of planting trial was shown. I could notice only one plant each of *Sclerotium*, stunt, and mosaic. He showed me some plants from July planting at Terbol (Lebanon). These had about 50% rust severity.
7. Currently there is no pathologist in the Legume Program at ICARDA. Dr. Hawtin discussed the staff needs. He stated that the Principal Plant Pathologist will be expected to spend most of his time on broad bean diseases. I suggested

that two pathologists should be appointed, one for lentil and one for chickpea diseases. That would ensure proper attention to diseases and support to the breeding program.

8. Dr. J.P. Srivastava gave me addresses of senior agricultural ministry officials of Morocco, who have shown interest in chickpea. I have already passed on these addresses to Dr. John M. Green.

APPENDIX-XXI

REPORT ON THE TRIP TO ETHIOPIA, SUDAN & EGYPT

(November 23 through December 7, 1978)

M.P. Haware

The main objectives of undertaking this trip were (i) to take observations on International Chickpea Root Rots/Wilt Nursery (ICRRWN) planted at Debre-Zeit (Ethiopia), Ed-Damer (Sudan), and Giza (Egypt), and (ii) to identify the disease problems in chickpea in these countries.

ETHIOPIA

I left Hyderabad on 23rd evening and reached Addis Ababa on 24th. Mr. Alemu Mengistu, Plant Pathologist at Debre Zeit Research Station met me at Airport. We went straight to Debre Zeit. In the afternoon I was in experimental fields along with Mr. Alemu and Mr. Geletu Bejiga, Pulse Breeder.

Debre-Zeit Research Station is nearly 50 km from Addis Ababa in Central Ethiopia. Chickpea is planted in northern and central Ethiopia and in Chercher Highland. It is the most important pulse crop and sown after the main rainy season, at the end of September. Harvesting is done around February. In the Yerer Kereyu Highlands, east of Addis Ababa, a second chickpea crop is sown on the same field after the onset of the small rains at the end of April. It is an important rotation crop. Average yield is 620 kg/ha. Chickpea is consumed as green seed, roasted or in 'wot' (local preparation). The farmers grow mostly 'desi' type chickpea.

Pigeonpea is of locally importance (southern parts). It is grown in Konso area (between about 1700 m and 1900 m). In Hararge it is grown as garden crop.

Blight

Two sets of Ascochyta blight nursery (ICABN) were sown at Debre-Zeit on September 10 and September 18. As both the sets were planted after rains, all the lines including susceptible checks escaped blight. Most of the entries were showing wilt. Mr. Alemu was afraid to plant them early lest the disease may spread up in chickpea on experimental field. NEC-1431 and NEC-1433 which were planted early escaped blight.

### Wilt/Root Rots

Mr. Alemu has marked the area (50 X 50 m) for chickpea wilt sick plot. One set of ICRRWN with 63 entries is sown here on September 19. I have examined many dead plants of chickpea. The disease was a vascular wilt. Stunt was sporadic. Mr. Alemu mentioned that there is not such stunt but mostly vascular wilt this year. The wilt was not uniformly distributed in the field; ranging from 5 to 100% in susceptible cultivars. In the first count of disease incidence, record showed mostly root rots. Though I presumed that there might have been early wilting. Examination of cultures confirmed it. All of our entries (63) were looking good without any wilt and only sporadic root rot incidence.

I met Dr. Tessema Megenassa, who joined recently as Entomologist at Debre-Zeit. They are having pod borer (*Heliothis*) problem in chickpea.

Nearly 5 ha is occupied by chickpea on experimental farm. Advance chickpea lines are sown and multiplied. NEC-756 is included as best yielder in National yield trial (30 q/ha). Another entry NEC-249 was showing 80% wilt incidence. Cross 850-3/27 X F-378 is also included in NYT planted at 8 locations.

### Rhizobium inoculation trial

They have a trial where local cultivar CN-17 is (i) inoculated with rhizobium from ICRISAT (culture no. 3827), (ii) uninoculated (iii) and with N application (Urea). I could not see any difference on vegetative growth. Nodule formation was seen in inoculated and uninoculated. Mr. Alemu will be taking detail observations.

### Date of planting experiment

Three chickpea cultivars DZ-10-2, NEC-756, and Dubie were included at five different dates (July 31, August 14, August 28, September 13, and September 25) in 4 replications. All the plants in July and August 14 planting were caught by *Asochyta* blight. Plants in September 13 were looking good. This experiment is planted at 7 different locations in the country.

On November 25, we (with Mr. Alemu Mengistu and Mr. Geletu Bejiga) went to visit agricultural research station at Arussi Neghele (1960 m) which is in south-east of Debre-Zeit, 175 km away. ICABN (1977-78) entries were planted in two replications on September 2. The wilt was 50% in the field. Initially the plants were affected by blight but they recovered as soon as rain stopped. The following entries were good in both replications: ICC-280, ICC-1903, ICC-4939, and ICC-5127.

The soil is sandy loam and overall crop growth was very good. Chickpea pre-NYT is planted. The following entries were good against blight: Kaka, C-235 and P-222. Date of planting experiment was also observed here. September sowing was very good. Looking at the incidence of wilt I requested Mr. Alemu to plant one set of ICRRWN next year.

#### Farmers' fields

On 27th November the farmers fields were surveyed for diseases in chickpea. We have seen 10 fields, the area ranging from 1 to 4 ha. Soil was deep black. Most of the crop was in flowering-podding stage. The plant population in many fields was less because of method of sowing (broadcasting). In two fields wilt was nearly 5%. In others, we could observe sporadic wilt and stunt. In all the fields I could not see any typical root rot affected plant.

Identification of cultures, isolated by Mr. Alemu Mengistu from chickpea wilt/root rots affected plants during the season were made. Cultures were observed under microscope. I could identify *Fusarium oxysporum* and *Rhizoctonia bataticola*. The frequency of *F. oxysporum* was more. There was a culture probably *R. solani* but in absence of sclerotia I was not sure of its identification. *S. rolfsii* was isolated by him from seedling collar rot.

I had a good discussion with Dr. Taye Bezuneh, Dean of Junior College of Agriculture and Research Centre, Debre-Zeit. He is very keen to have ICRISAT's co-operation in chickpea improvement in Ethiopia. He particularly mentioned breeding and pathology where they need our support.

#### SUDAN

I arrived in Khartoum on 28th November afternoon. Dr. Osman Khalifa from Ministry of Agriculture was present at Airport to receive me. We went to railway station to book my seat on train for Ed-Damer for 29th November, which is 260 km from Khartoum. Next day in the morning I went to railway station and got in compartment. The train did not move at 7-30 a.m. as there was accident on railway track. It is the only train which goes and returns. I waited up to 6-00 p.m. and ultimately decided to return to hotel. Meanwhile I contacted Mr. Osman Khalifa on telephone, he said he could send me by air on 30th but could not assure about my arrival at Khartoum on 1st December. Since Ed-Damer was 260 km away without assured transport, I stayed in Khartoum and left for Cairo in the morning of 2nd December.

At Cairo Airport I was received by Mr. Tewfik G. Yanni, Administrative Assistant, CIMMYT, Cairo.

## GIZA (EGYPT)

On 3rd morning I went to Field Crop Institute of Agricultural Research Centre located at Giza. That is the main research centre of agriculture in Egypt with Field Crop Institute, Plant Pathology Institute, Plant Protection Institute and so on. Field Crop Institute have different sections for each or group of crops. Dr. Ali Abdel Aziz is head of grain legume section, who was away to University of Cairo for official meetings. I was received by Dr. Abdullah M. Nassib (Acting Head) and Mohamed H. El-sherbeeney (Agronomist). They explained me about the activities in grain legume programme. Grain legume section works on broad beans (*Vicia faba*), Lentil, Fenugreek (*Trigonella foenum graecum*), Chickpea, Soyabeans and Egyptian lopins (*Lupinus termis*). Chickpea has gained interest from the growers in the last few years due to its utilization in baby food and few other purposes. It is one of the oldest crop with long association with Egyptian people. They are consumed as green and dry beans.

For chickpea there is a need for early maturing varieties, resistant to root rots/wilt disease. They prefer to grow white, light brown, medium seeded chickpea.

Breeding in chickpea is selection in the local populations and in segregating progenies of intervarietal crosses (individual plant selection following the pedigree breeding system). This resulted in release of two cultivars--Giza-1 and Family-2. Average yield for Giza-1 is reported as 1888.7 kg/ha on experimental fields. Average yield of chickpea on farmer field is 600 kg/ha.

The constraints in chickpea production are lack of varieties physiologically efficient, well nodulated and resistant to wilt and root rots. I may add that lack of sufficient fund is also a major constraint.

The seed of ICRRWN which was despatched in June 1978 was received late in November. So it was sown on 30th November 1978. The soil is sandy loam on Giza farm. The seed was sown on ridges at 60 cm apart. Pre-sowing irrigation was given. Incidentally their experience showed that pre-sowing irrigation in chickpea was good than post-sowing irrigation which resulted in seed rotting.

On 5th December, I had discussions on chickpea disease with Dr. Husni Abdel Rahman Mohamed and Mr. Kamal Mansour Tadrous, Plant Pathologists working on grain legume diseases from Plant Pathology

Institute. They are familiar with chickpea wilt, which they consider as important disease, followed by root rots. They were not aware of stunt. I described the symptoms. They will watch for stunt in this season.

The water culture technique and pot screening for wilt resistance was discussed with them. As they are short of land at Giza, they were anxious to develop 'sick-pot' technique to screen chickpeas for wilt resistance. They put me lot of questions on chickpea diseases and promised to help in recording data on diseases in ICRRWN planted at Giza. Since blight does not occur in Egypt, grain legume scientists will welcome the chickpea lines promising against wilt and root rots.

APPENDIX-XXII

TRIP TO HISSAR

(March 26-27, 1979)

M.P. Haware

The letter was received from Dr. Grover to Dr. Nene, informing the appearance of Phytophthora blight in chickpea at Hissar. Since Dr. Nene could not go, he asked me to visit Hissar to study the new disease. The purpose of my visit was also to bring diseased material at Hyderabad for isolation of pathogen.

I left on 26th March by morning flight for Delhi and immediately left for Hissar. In the afternoon I contacted Dr. Grover and with him visited chickpea fields.

The disease (stem/root rot ?) was noticed by Dr. Grover before 3 weeks in the field where chickpea (C-214) was planted for multiplication. During that period there were rains and humid condition, with lot of canopy of leaves which helped in appearance of disease I could observe many plants affected with Sclerotinia stem rot also. One reason for the appearance of stem rot could be a lot of vegetative growth of chickpea plants, providing favourable microclimate for pathogen to act.

We examined many of the diseased plants. Most of the plants had dried and so the symptoms were not clearly visible. The base of the stem was brittle and discoloured. It could break with a slight jerk. The discoloration was seen upward spreading to branches and partial drying of the branches was observed. Some necrotic lesions on main stem and branches were observed. Lodging of affected plants was conspicuous in the field and one could notice the drying of foliage of the plant which was different from wilt (drooping) or root rots (yellowing). Entire plant gave the 'blighting effect'. Discoloration towards root in soil was limited to 3-5 cm deep with cortical rot. If these symptoms had to be contributed to any pathological malady then the affected plants in the plot were close to 20%.

The above disease could be differentiated from Sclerotinia blight because of white fungal mat present on stem or branch and discoloration (whitish) associated with shredding of the tissues.

Some plants were taken to Dr. Grover's laboratory. Diseased stem, particularly the base portion was examined under microscope.



Double walled oospore like bodies were observed in the pith region. With some mycelial fragments which was aseptate. These spores were also present in cortical tissues of the stem of chickpea.

Next day, I spent morning taking pictures and collecting diseased specimens for isolation at Hyderabad. With specimens of new disease of chickpea to work on, I left Hissar at 11-30 a.m. to catch afternoon flight from Delhi to Hyderabad.

APPENDIX-XXIII

TOUR REPORT CHICKPEA DISEASE AND PEST OBSERVATIONS JORDAN - SYRIA - GREECE

(May 23 - June 2, 1979)

W. Reed and Y.L. Nene

ITINERARY

23 May	Arrived Amman, Jordan by air
24 May	To Damascus - Syria (road)
25 May	To ICARDA, Aleppo (road)
26 May	At ICARDA
27 May	To Latakia, returned to ICARDA
28 May	To Keyseri, Turkey (road)
29 May	To Ankara, Turkey
30 May	To Ikizce Research Centre, returned to Ankara
31 May	To Athens via Istanbul and Rome
1 June	To Bombay
2 June	To Hyderabad

JORDAN

We were welcomed at Amman airport by Dr. K.B. Singh who then accompanied us for the rest of the tour.

On May 24th accompanied by Abdul Aziz Quoul, Agronomist, Jordan Department of Research and Extension we first drove south to Rabah Seed Multiplication Station. Along the road we saw some fields of chickpea in the green pod stage, with moderate leaf miner (*Liriomyza cicerina* ?) and *Heliothis* damage but virtually no disease. The Rabah station is mainly for wheat and barley nucleus seed production, but some chickpea was grown, with trials from ICARDA in the green pod stage. Here there was a heavy infestation of *Heliothis* with very many green larvae (which did not look to be typical *H. armigera*) feeding on leaves and pods. An estimated 40% of the green pods had been damaged, with larvae frequently being found feeding completely inside the pods (not a *H. armigera* characteristic). About one percent incidence of chickpea stunt was observed. This station had a long term average of 350 mm of rain, but with only 250 mm per year in the last five.

We returned to Amman where we talked with the Director of Agricultural Research, Dr. Z. Gosheh. He told us that Jordan had 4,000 ha of chickpea, 20,000 ha of lentils and 200,000 ha of wheat, but that there was an enormous demand for chickpea both as a green snack vegetable

and for dried peas for hommos preparation. The current price of chickpea is US \$ 1.40 per kg (an agricultural labour is paid \$ 6.00 per day) and he expects the chickpea areas to expand. Dr. Gosheh was particularly interested in the ICARDA development of winter sown, Ascochyta blight resistant chickpea.

In the afternoon we drove from Amman to Damascus.

## SYRIA

On May 25th we first drove to Qarhateh Experimental Farm, near Damascus airport. This is in a low rainfall (150 mm) area and crops are grown with irrigation. ICARDA trials were in the green pod stage with little insect damage. A few aphid colonies, some pod borer damage and a light leaf miner attack were noticed. A root rot, possibly due to *Fusarium solani*, had caused 25-30% mortality.

We then drove north to Hamma Experimental Farm. Here the ICARDA trials were very well grown and tended. The crop was irrigated and in the late green pod stage. There was little insect attack, although leaf miner and *Heliothis* were present in low number. Chickpea stunt was present to the extent of 5%. A root rot, similar to that observed at Qarhateh was seen.

During this day we had hoped to drive to ICARDA through Lebanon, but visa problems made this impossible. The road to Aleppo from Damascus is generally through dry areas where wheat and lentil are the main crops and very little chickpea was seen in farmers' fields. We arrived at ICARDA, Aleppo in the evening.

On May 26th we visited the ICARDA farm at Tal Hadia. Separate reports concerning the entomology and pathology situation at ICARDA have been prepared.

On May 27th, we drove to Latakia. Along the "back road" we saw many large areas of chickpea, mostly in the mid-green pod stage. The insect pest attack on the fields examined was variable with two suffering severe *Heliothis* damage (30% on pods destroyed) but other fields had a negligible attack. Leaf miner was common in all fields. Traces of chickpea stunt and collar rot (*Sclerotium rolfsii*) were seen in some fields.

At the ICARDA rented experimental farm near Latakia the trials had matured and most had been harvested. Plenty of leaf miner was seen but there was little evidence of *Heliothis* damage. ICRISAT's Ascochyta blight nursery was tended well and clear-cut differences in resistance were observed. Details are included in a separate report.

After visiting Dr. Salim (tobacco pathologist who is helping with the disease nurseries on the Latakia ICARDA farm), we returned to Aleppo via the main road. There was relatively little chickpea to be seen along this road.

#### TURKEY

On May 28th we drove from Aleppo through Azad - Adhana to Keyseri in central Turkey. We were accompanied by Dr. Mahmoud el Solh, lentil breeder at ICARDA.

We saw many large fields of chickpea during the early part of this trip. Most of the fields were pre-flowering but some were in the early green pod stage. We saw no *Heliothis* but farmers assured us that it would be a common problem later in the season. We saw plenty of leaf miner and were told that insecticides, including malathion would be used on the crop mainly against this pest. No disease problems worth mentioning were seen. The agriculture was generally of a high standard with large fields of well grown crops. The wheat looked particularly good. Farmers were progressive, with some tractor drawn equipment, including a locally fabricated four row planter that was used primarily for lentils and sesame, but also for chickpea.

The day's travel proved to be longer than expected, although we cut short our stops in farmers' fields and drove as fast as possible we reached Keyseri at 11-00 p.m., about five hours later than the estimate.

On May 29th we drove from Keyseri to Ankara, a pleasant morning's journey through hilly country, with plenty of wheat and cotton, but only a few fields of chickpea and all of these in the seedling stage. All fields had some leaf miner attack. At Ankara we were welcomed by Dr. Mike Prescott, CIMMYT pathologist.

On May 30th we first drove to Ikizce Research Centre with Nadu Isgin of the Department of Agriculture. Ikizce, which is 30 km to the south west of Ankara, is a recently expanded research and development farm of 1,275 ha including a large lake. It is mainly to be developed for research and seed multiplication of wheat and barley, but some area is to be devoted to lentils and chickpea. The winter temperatures go down to  $-30^{\circ}\text{C}$  but winter wheat survives because of a good snow cover. Chickpea is normally sown April 1st and harvested in August.

In this year various problems including those of wind erosion and management in this newly expanded farm, had led to the abandonment of the ICARDA chickpea and lentil trials. A few chickpea plants were

visible amongst the weeds and all had leaf miner. There is a problem of staffing the farm and labour is in short supply, at the minimum wage of about \$ 5 per day.

We returned to Ankara and visited the University, where we were first talked to by Prof. Osman Tosum on selection for low temperature and disease tolerance in various crops including chickpea.

He is selecting for chickpeas that can survive  $-25^{\circ}\text{C}$  without snow cover! Prof. Eser then showed us the University plots which included chickpea and lentil trials from ICARDA. Here there was plenty of leaf miner and some *Heliothis* damage. About 1% incidence of root rot caused by *Rhizoctonia solani* was evident. ICC-460, the Ascochyta blight susceptible check included in the international nursery, was showing striking chlorosis due to iron deficiency.

On May 31st we flew from Ankara to Athens. This involved a lengthy trip via Istanbul and Rome because of the political problems of the area.

On June 1st we were scheduled to visit Larisa Research Station, which had been estimated to be 60 miles from Athens, and then return to Athens for the late afternoon flight to Bombay. Unfortunately Larisa proved to be 360 km from Athens and there was no way in which we could visit the Research Centre and catch our flight. We decided to keep to our schedule by missing out Larisa. Drs. Singh and el Solh had a day extra in Athens, so they departed for Larisa and will inform us of the situation there.

APPENDIX-XXIV

REPORT ON THE VISIT TO TAL HADIA FARM (ALEPPO) AND LATAKIA IN SYRIA

(May 26, 1979)

Y.L. Nene

This report should be read with the West Asia trip report prepared jointly by Drs. W. Reed and Y.L. Nene. This one covers the chickpea pathology work at Tal Hadia and discussion with Dr. K.B. Singh, ICRISAT Chickpea Breeder at ICARDA.

TAL HADIA

Notes

1. Two Ascochyta blight nurseries were planted. These were the International Chickpea Ascochyta Blight Nursery (ICABN) - 1978-79 composed by ICRISAT and Chickpea International Ascochyta Blight Nursery (CIABN) - 1978-79 composed by ICARDA. Incidentally from next season, there will be only one joint nursery.
2. For ICABN the disease rating scale is a 9-point scale (1-9) but for CIABN it is a 6-point scale (0-6). Dr. K.B. Singh and I had a detailed discussion on advantages/disadvantages of the two scales. This question will need further discussion although I am convinced that 1-9 scale is more convenient, practical, simple, and flexible. However, KBS had used 0-6 scale for both the nurseries.
3. Both the nurseries were planted in the winter since Ascochyta blight is the major problem in the winter plantings only. Spring plantings are not much affected.
4. The nurseries were looked after very well. Dr. K.B. Singh had taken lot of pains to make artificial inoculations successful (in Oct. 1978 KBS & YLN had worked out procedure for artificial inoculations). The differences between resistance and susceptibility were very clearcut.
5. Of the 46 ICABN entries, the promising were:

<u>Rating (0-6)</u>	<u>Entry Nos.</u>
0	Nil
1	ICC-280, -4935, -6067, -7513
2	ICC-7514, -7520
3	ICC-561, -666, -724, -781, -4939, -5127

All other entries showed ratings of 4-6. ICC-462, -471, and -667 showed 5 rating but with good recovery. ICC-4939 (3 rating) also showed good recovery.

- It may be pointed out here that last year also ICC-4935, -5127, -7513, -7514, and -7520 had shown low disease at Tal Hadia (see 1977-78 ICABN report).

All the promising entries were desi types and none was tall.

- Of the CIABN entries, the promising were:

<u>Rating (0-6)</u>	<u>Entry Nos.</u>
0	ILC-182, -183, -191, -192, -194
1	NEC-2388, NEC-138-2, NEC-1256, ILC-210
1.5	ILC-195, -202, -215, 74TA290

All others showed ratings of 2-6. Almost all the promising lines were tall and kabuli types. It is possible that the tall genotypes with a different microclimate around, may be "escaping" infection even under artificial inoculation conditions.

- From the germplasm sent by LJGM, the lines which showed 1 rating were: ICC-2459, -4111, -4112, -4113, and -5889. Their performance will be checked through artificial inoculations at ICRISAT.
- In a meeting with Drs. Singh and Hawtin, it was decided that about 2000 desi germplasm accessions should be screened against the blight at ICARDA. This is because the disease develops well over there.
- One pathologist from ICRISAT should stay at ICARDA from Feb. 15-May 15, 1980 and assist in the work on Ascochyta blight screening. He should also travel in that region and survey chickpea for other diseases. The name of Dr. M.V. Reddy, who has been doing work on the blight at ICRISAT, will be recommended.
- JMG, during his visit to Aleppo in the second week of May, had made the suggestion of "on the farm testing" of blight promising lines. The suggestion was accepted, but the decision on the

entries will be made after the yield data had been looked at.

11. It was decided that all the promising lines of CIABN (ICARDA) should be screened artificially at ICRISAT. This will be done but I suggest that ICARDA buys at least one unit of the Isolation Plant Propagator to carry out artificial inoculations at ICARDA itself.
12. We discussed the composition of the next year's nursery. It was agreed that ICRISAT should send the following entries:

Old entries

ICC-280, -935, -6067, -7513, -7514, -7520.

New entries

ICC-150, -377, -931, -1009, -1465, -1903, -1911, -2153, -2156, -2160, -2232, -3259, -3277, -3330.

It is expected that each set of the Nursery will have about 60 entries and a total of 40 sets will be required. There will be 2 single-row replications, each having 30 seeds. I suggested that a standard susceptible check should be included in the Nursery. Row spacing of 45 cm was considered optimal for getting good infection.

13. It was recognized that there is a need to further improve the screening technique. We will do the necessary thinking and plan out studies for next season. It may be necessary to invite Dr. K.B. Singh to ICRISAT to have discussion on this in July/August 1979. It will also be necessary for me to go once or twice to Syria during October-December 1979, for isolation and multiplication of inoculum.
14. Chickpea stunt was observed up to about 1% in the spring plantings; winter plantings showed only traces.

LATAKIA

1. Dr. Salim (tobacco pathologist) has been helping ICARDA in chickpea pathology work. He had planted a set of ICABN and followed 1-9 rating scale. The Nursery was looked after very well. Once again resistance and susceptibility were clearcut.



2. No ICABN line was disease-free. Lines which showed 3-5 ratings were ICC-280\*, -559, -561, -665, -666, -667, -724, -781, -788\*, -838, -4935\*, -4939\*, -5127\*, -6067, -7513\*, -7514\*, -7520\*.

The lines marked with (\*) were found promising at Latakia last year also.

3. Of the CIABN entries two lines which showed 1 rating (no disease) were ILC-201 and ILC-202. ILC-202 was rated 1.5 (0-6 scale) at Tal Hadia.

### General

I was greatly impressed with the excellent management of the chickpea experiments including the pathology experiments. Notwithstanding very little man power and technical help, the chickpea breeding program at ICARDA seems to have made an excellent beginning.

## APPENDIX-XXV

### Papers published, accepted, communicated, and presented

#### Published

1. Haware, M.P., Y.L. Nene, and R. Rajeshwari. 1978. Eradication of *Fusarium oxysporum* f.sp. *ciceri* transmitted in chickpea seed. *Phytopathology* 68: 1364-1367.
2. Haware, M.P., and Y.L. Nene. 1978. A root rot of chickpea seedlings caused by a sterile fungus. *Legume Research* 1(2): 65-68.
3. Nene, Y.L. 1978. A world list of pigeonpea (*Cajanus cajan* (L.) Millsp.) and chickpea (*Cicer arietinum* L.) pathogens. *ICRISAT Pulse Pathology Progress Rep.* 3, 15 pp.
4. Nene, Y.L., M.P. Haware, and M.V. Reddy. 1978. Diagnosis of some wilt-like disorders of chickpea (*Cicer arietinum* L.). *ICRISAT Information Bulletin* No.3, 44 pp.
5. Nene, Y.L., A. Mengistu, J.B. Sinclair, and D.J. Royse. 1978. An annotated bibliography of chickpea diseases 1915-1976. *ICRISAT Information Bulletin* No.1, 43 pp.
6. Nene, Y.L. 1979. The second international chickpea cooperative disease nursery (1977-78) report. *ICRISAT Pulse Pathology Progress Rep.* 4, 21 pp.

#### Accepted

1. Haware, M.P., and Y.L. Nene. Studies on pathogenicity and non-seed-borne nature of powdery mildew of chickpea. *PANS* (U.K.)

#### Communicated

1. Haware, M.P., and Y.L. Nene. Influence of wilt at different growth stages on the yield loss in chickpea. *Tropical Grain Legume Bull.*
2. Nene, Y.L., and M.P. Haware. Screening of chickpea for resistance to wilt. *Plant Disease Reporter*.

#### Presented

1. Haware, M.P., M.V. Reddy, and J. Kumar. 1979. Disease resistance in kabuli-desi chickpea introgression. *International Workshop on Chickpea Improvement*, Feb.28-Mar.2, 1979, ICRISAT, Hyderabad, India.

2. Nene, Y.L. 1979. Diseases of chickpea. International Workshop on Chickpea Improvement, Feb.28-Mar.2, 1979, ICRISAT, Hyderabad, India.
3. Nene, Y.L. 1979. Disease resistance for control of viral diseases. Indian Agricultural Research Institute - Summer Institute in Plant Virology, New Delhi, India.
4. Nene, Y.L. 1979. Diseases of chickpea and pigeonpea. Central Plant Protection Training Center, Rajendranagar, Hyderabad, India.
5. Nene, Y.L., and M.P. Haware. 1978. Screening of chickpea for resistance to wilt. 3rd International Congress of Plant Pathology, Aug. 1978, Munich, West Germany.
6. Nene, Y.L., M.P. Haware, and M.V. Reddy. 1979. International Disease Nurseries. International Workshop on Chickpea Improvement, Feb.28-Mar.2, 1979, ICRISAT, Hyderabad, India.
7. Reddy, M.V., and Y.L. Nene. 1978. Screening of *Cicer* spp. for resistance to *Ascochyta* blight. 3rd International Congress of Plant Pathology, Aug. 1978, Munich, West Germany.