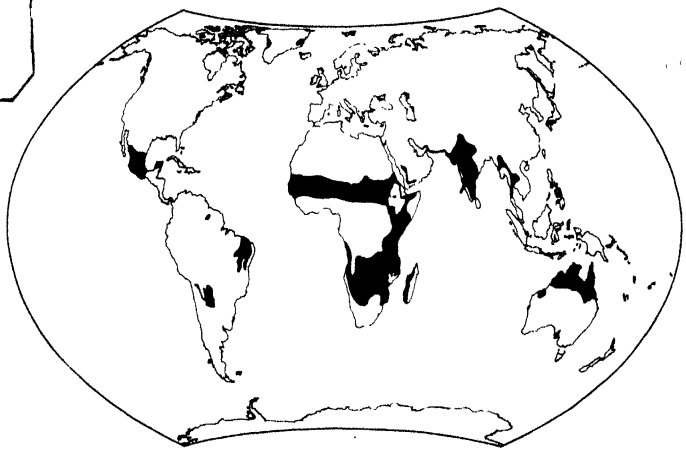
INTERNATIONAL PEARL MILLET DISEASE RESISTANCE TESTING PROGRAM (IPMDRTP)

PROGRESS REPORT: PM Path.-66



REPORT OF THE 1981 INTERNATIONAL PEARL MILLET RUST NURSERY (IPMRN)

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ABSTRACT

The 1981 International Pearl Millet Rust Nursery (IPMRN), containing 45 entries, was sent to cooperators at eight Indian locations. Results were received from seven locations. Screening of test entries was effective at all the locations except at ICRISAT Center. One entry P-1581 had ≤10 percent rust at all the locations. Several entries including 700481-21-8, D 212 P_1, 700481-35-7, IP 537 B, IP 2084-1, Sowna Mali and 700481-7-5 that had shown high levels of rust resistance in previous years' trials, showed high resistance this year also.

RESUME

La Pépinière internationale de la rouille de petit mil (IPMRN) composée de 45 entrées a été expédiée aux coopérateurs à huit emplacements en Inde. Les résultats ont été reçus de sept emplacements. Le criblage était efficace à tous les emplacements sauf au Centre ICRISAT. Une entrée P-1581, a manifesté une infestation de ≤10% sur tous les emplacements. Cette année encore, les entrées 700481-21-8, D 212 P_1, 700481-35-7, IP 537 B, IP 2084-1, Sowna Mali et 700481-7-5 ont maintenu leur niveau élevé de résistance.

INTERNATIONAL PEARL MILLET RUST NURSERY

INTRODUCTION

One of the major objectives of the ICRISAT Pearl Millet Pathology Program is to identify broad-spectrum stable resistance to the important pearl millet diseases. The approach adopted to meet this objective is to expose promising lines to many populations of the pathogens under wide range of environmental conditions. In 1977 a Preliminary Pearl Millet Rust Nursery (PPMRN) with 74 test entries selected in two seasons screening at Hyderabad and Bhavanisagar was tested at six locations in India with the help of cooperators. Considerable interest was shown in this nursery and requests were received from additional scientists to participate in the nursery. In view of this, the International Pearl Millet Rust Nursery (IPMRN) was initiated in 1978. Since then the trial is continued every year. In 1981 the trial was sent to eight locations in India. At the time of preparation of this report results were received from seven locations.

A brief report on results is given here so that breeders and pathologists can make use of the data in planning their future activities.

TEST LOCATIONS AND COOPERATORS

Details of the test locations and cooperators from whom results were received by March 30, are given in Table 1. The locations represent an excellent coverage of Indian locations where severe rust pressure occurs annually.

ENTRIES

The trial contained 45 entries, including 24 germplasm accessions selected at ICRISAT and [illegible] and 21 best entries from the 1980 IPMRN. The cooperators were invited to include a local susceptible check as an indicator of local rust pressure.

SCREENING AND SCORING METHODS

Screening was conducted under natural rust occurrence. The incidence assessment was made using Cobb's modified scale. A visual score of 20 plants per entry randomly selected in each replication was taken and an average was calculated. The rust scores of lower and upper leaves (top four leaves) were taken separately.

RESULTS

Detailed data separately for the lower and upper leaves and separately for the two replications at each of the seven locations are presented in Tables 2-5. However, the results obtained from the top four leaves only are being explained here since they are of most importance in contributing to yield. A summary of rust infection on the top four leaves at all locations is presented in Table 6.

Rust Pressures at Test Locations

ICRISAT Center: Twenty one entries were rust free and the rust infection on the remaining 24 entries ranged from 1 to 6 percent only. Local susceptible checks averaged 13 percent rust with a range of 13 to 18 percent.

Kudumiamalai: Six entries were rust free and 30 entries had <5 percent rust. P-1566 developed 19 percent rust, greatest of all the test entries. Rust infection on the local susceptible checks ranged from 11 to 18 percent with a mean of 13 percent.

Ludhiana: No entry was rust free. Sixteen entries developed <5 percent rust and 21 entries had 6 to 10 percent. The highest rust infection on test entries was 19 percent. Local suceptible checks averaged 17 percent rust.

Kovilpatti: All the entries developed rust and the range of infection was from 10-43 percent. Local susceptible check averaged 21 percent rust.

Pune: Only one entry P-545 was rust free. However, 28 entries developed <5 percent rust. Rust infection on the remaining entries ranged from 10 to 21 percent except for 700481-22-8, 700481-35-7, 700481-10-1, and P-1449 which had less than 10 percent rust. Local susceptible checks developed 25 percent mean rust.

Durgapura: Fourteen entries were rust free and 18 had <5 percent

rust. Remaining entries developed 10 to 29 percent rust with the exception of 700481-33-1, 700481-23-14 and D-130 which had less than 10 percent rust. Local susceptible checks averaged 38 percent rust.

Bhavanisagar: Four entries -- P-1581, P-1578, P-139, and P-130 were rust free and 25 entries developed <5 percent rust. The remaining entries also developed less than 10 percent rust except for MLC-SN-6-1-2 and MLC-SN-92-1-1 which developed 18 and 25 percent rust, respectively. Local susceptible checks developed 43 to 58 percent rust with a mean of [illegible].

Performance of Entries Across Locations

Across location performance of entries based on the mean of the two replications at each location are presented in Table 6. Entries were ranked on the basis of maximum rust incidence at any location. Where the rust incidence values are the same for more than one entry, these entries are ranked on across location mean incidence values.

No entry was rust free at all locations. Five entries including 700481-33-1, P-1581, P-1564, 700481-21-8, and P-1578, averaged <5 percent rust and 27 entries averaged <10 percent rust. Of these only one entry P-1581 developed <10 percent rust at all locations.

Local susceptible checks showed large variation in rust infection among locations. Mean rust infection recorded was lowest at ICRISAT Center (12.8%) and highest (53%) at Bhavanisagar. However, mean rust infection for test entries was greatest at Kovilpatti (23.3%) and it was more than mean rust infection obtained on local susceptible checks

(21.5%) at that location.

OTHER DISEASES

Downy mildew (DM): Records on DM incidence occurring under natural condition, except at the ICRISAT Center where the trial was planted in DM nursery, were taken at Durgapura and Kovilpatti. Detailed data are presented in Table 7.

Eleven entries - P-545, P-555, P-542, P-543, 700557-10-1, D-212P1 P-24, P-15, IP-2084-1, MLC-SN-6-1-2, and D-130 were DM free at all the three locations. All the other entries also except IP-1662-L, 700481-34-8, collection-63 and collection-41 at ICRISAT Center and P-1581, collection-41 and collection-91 at Kovilpatti were either free or had less than 10 percent DM. incidence.

Local suscpetible checks were DM free at Durgapura and Kovilpatti. At ICRISAT Center, however, susceptible check averaged 86 percent DM with a range of 79-94 percent.

Ergot: Natural ergot incidence was recorded at Durgapura, Kovilpatti, Kudumiamalai and Pune. No entry developed ergot at Durgapura. The greatest ergot occurred at Pune followed by Kudumiamalai and Kovilpatti.

At Pune, entry P-1578 was free, 700481-21-8 had 5 percent ergot and six other entries developed 10-15 percent ergot. The remaining entries developed 18-50 percent ergot.

No entry at Kovilpatti and Kudumiamalai was ergot free. However several entries had <5 percent ergot at the two locations. The most susceptible entry at the two locations was collection-63. Detailed data are presented in Table 8.

Smut: Records on smut incidence were taken at Durgapura, Kovilpatti and Kudumiamalai. No entry developed smut at Kovilpatti. At the other two locations also smut occurred in traces. Five entries at Durgapura and six entries at Kudumiamalai developed <10 percent smut.

DISCUSSION

Bhavanisagar is a place where rust occurs in epiphytotic form every year. This year [illegible] susceptible checks averaged 53 percent mean rust which is an evidence for an adequate rust pressure at that location. Low levels of rust infection on test entries have been due to their high levels of rust resistance at that location. Screening has been effective at Kovilpatti, Pune and Durgapura also. At Kudumiamalai, Ludhiana and ICRISAT Center rust pressure was inadequate.

Many entries showed high levels of rust resistance and stability of rust resistance in several entries including 700481-21-8, 700481-35-7, IP-537 B, 700481-7-5, IP-2084-1, Souna Mali and D 212 P1 was confirmed.

The 1982 IPMRN

The IPMRN will becontinued in 1982. Several new sources of resistance from germplasm identified at Bhavanisagar during 1981 will be included. Entries for this trial are welcome from scientists in the national programs provided they have been shown to be rust resistant at the home locations.

SEED SUPPLY

Scientists who want seed of any entry listed in this report should send a request to Pathologist (Millet) at ICRISAT (address given inside back cover of this report) indicating that seed request is from the 1981 IPMRN.

Table 1. **Cooperators and locations in the 1981 IPMRN**

Location	Cooperators
Ludhiana	S.S. Chahal
Durgapura	Govind Singh
Pune	M.S. Rane
ICRISAT	S.D. Singh & P. S. Reddy
Bhavanisagar	S.D. Singh
Kudumiamalai	S. Muthusamy
Kovilpatti	D.S. Aaron

Table 2. Percent rust incidence in 45 entries and local susceptible in the 1981 IPMRN at ICRISAT Center and Kudumiamalai

Entry	ICRISAT Center				Kudumiamalai			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
700481-7-5	5	3	1	0	9	8	4	4
700481-21-8	0	0	0	0	2	2	1	1
700481-22-8	0	0	0	0	2	3	1	1
700481-23-2	3	0	0	0	1	1	1	1
700481-23-14	0	5	0	2	3	3	3	3
700481-27-5	0	0	0	0	3	3	2	2
700481-33-1	5	5	0	1	5	5	3	3
700481-34-8	8	8	2	3	13	11	5	4
700481-35-5	3	5	0	1	6	5	3	3
700481-35-7	0	3	0	0	0	0	1	1
700557-10-1	18	10	5	5	23	18	13	11
Souna Mali	0	5	0	1	0	0	0	0
MLC-SN-6-1-2	10	0	2	0	15	15	8	8
MLC-SN-92-1-1	10	25	5	8	6	6	5	4
Collection-29	0	0	0	0	5	4	3	3
Collection-41	0	5	0	1	6	6	3	3
Collection-45	0	0	0	0	7	8	5	4
Collection-63	5	5	1	1	15	14	4	4
Collection-75	0	0	0	0	3	2	1	1
Collection-91	0	0	0	0	0	0	0	0
Collection-95	10	0	2	0	25	25	9	9
IP-537-B	0	5	0	0	2	1	1	1
IP-1662-L	10	10	4	5	20	21	9	8
IP-2084-1	5	5	0	0	1	1	1	1
D-72	8	5	2	0	11	10	7	6
D-130	5	8	3	6	18	20	11	11
D-212-P1	0	0	0	0	7	6	5	4
P-15	0	0	0	0	20	23	14	13
P-24	3	0	0	0	3	3	9	8
P-29	10	0	4	0	13	11	3	3
P-104	3	18	0	7	5	5	3	2
P-105	0	10	0	5	11	9	5	4
P-107	0	0	0	0	2	2	2	2
P-130	5	8	1	4	3	3	1	1
P-139	10	0	2	0	10	9	2	2

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Table 2 (Contd.)

Entry	ICRISAT Center				Kudumiamalai			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
P-542	3	5	0	2	2	3	2	2
P-543	3	10	1	5	1	1	0	0
P-544	10	10	1	5	5	6	3	3
P-545	10	8	0	4	1	3	1	1
P-555	0	5	0	3	5	5	4	4
P-1449	[illegible]	[illegible]	0	0	5	4	3	3
P-1564	[illegible]	[illegible]	0	3	0	0	0	0
P-1566	[illegible]	[illegible]	0	0	28	27	19	20
P-1578	[illegible]	[illegible]	0	7	0	0	0	0
P-1581	5	0	2	0	2	1	0	0
Location mean for entries	4	6	1	2	7	7	[illegible]	4
Local susceptibles[a]	28	36	10	16	31	32	12	14

[a] Mean of five plots in each replication

Table 3. Percent rust incidence in 45 entries and local susceptible in the 1981 IPMRN at Ludhiana and Kovilpatti

Entry	Ludhiana				Kovilpatti			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
700481-7-5	28	38	13	5	10	10	15	12
700481-21-8	18	15	7	2	18	10	11	11
700481-22-8	5	43	1	10	25	18	15	15
700481-23-2	38	30	10	3	10	25	18	23
700481-23-14	38	15	14	0	25	25	23	21
700481-27-5	40	23	9	3	33	25	27	14
700481-33-1	5	40	1	10	18	10	15	15
700481-34-8	45	40	15	3	10	25	14	27
700481-35-5	15	60	3	10	10	18	22	18
700481-35-7	8	10	4	2	18	40	20	25
700557-10-1	58	30	17	7	25	18	17	21
Souna Mali	15	15	9	4	33	25	20	21
MLC-SN-6-1-2	28	15	13	2	18	25	22	23
MLC-SN-92-1-1	60	33	10	4	25	25	24	24
Collection-29	33	30	16	3	25	65	16	51
Collection-41	33	23	8	4	40	33	40	42
Collection-45	40	5	9	2	10	25	13	25
Collection-63	60	30	9	7	25	33	24	27
Collection-75	40	33	6	3	25	18	18	21
Collection-91	15	10	7	2	18	18	21	22
Collection-95	50	43	17	7	25	25	24	22
IP-537-B	10	20	8	4	18	10	21	14
IP-1662-L	40	50	6	7	25	40	36	35
IP-2084-1	23	40	16	8	10	18	10	21
D-72	38	60	6	13	10	33	19	25
D-130	65	60	10	4	18	40	18	31
D-212-P1	50	40	1	8	10	33	22	27
P-15	13	5	3	8	18	25	19	24
P-24	48	40	14	7	10	18	13	17
P-29	13	20	3	3	25	33	14	30
P-104	58	35	21	8	40	65	30	55
P-105	23	40	9	8	25	25	26	25
P-107	30	20	3	6	25	40	20	29
P-130	58	45	29	8	10	40	18	42
P-139	53	43	16	3	25	40	26	27

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Table 3 (Contd..)

Entry	Ludhiana				Kovilpatti			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
P-542	8	10	3	2	33	33	24	36
P-543	5	5	1	0	33	40	28	42
P-544	40	20	15	1	33	25	20	17
P-545	30	40	10	4	25	53	14	43
P-555	50	60	19	19	53	40	38	35
P-1449	15	15	5	1	33	65	13	35
P-1564	18	20	7	5	18	33	15	20
P-1566	78	63	22	11	33	33	29	32
P-1578	5	9	3	1	33	33	24	31
P-1581	5	5	1	0	10	10	13	8
Location mean for entries	32	30	10	5	23	30	20	26
Local susceptibles[a]	63	64	22	13	24	27	19	24

[a] Mean of five plots in each replication

Table 4. Percent rust incidence in 45 entries and local susceptible in the 1981 IPMRN at Pune and Durgapura

Entry	Pune				Durgapura			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
700481-7-5	40	10	7	3	0	8	0	8
700481-21-8	5	10	0	3	0	10	0	9
700481-22-8	25	10	8	8	18	0	9	0
700481-23-2	5	10	2	7	18	0	9	0
700481-23-14	40	5	14	8	8	10	8	9
700481-27-5	5	10	2	4	53	10	50	9
700481-33-1	10	10	2	4	10	0	9	0
700481-34-8	10	65	10	31	10	40	9	40
700481-35-5	10	10	4	5	0	0	0	0
700481-35-7	25	25	11	7	0	0	0	0
700557-10-1	25	25	7	7	10	0	9	0
Souna Mali	10	10	4	3	10	0	5	0
MLC-SN-6-1-2	65	10	21	17	10	0	10	0
MLC-SN-92-1-1	40	40	16	19	0	10	0	9
Collection-29	25	25	13	7	10	0	5	0
Collection-41	10	25	8	16	10	0	9	0
Collection-45	25	10	5	4	10	33	10	24
Collection-63	40	10	21	5	40	33	36	23
Collection-75	25	10	7	2	18	25	14	21
Collection-91	25	65	6	4	10	0	5	0
Collection-95	40	25	7	13	0	10	0	9
IP-537-B	25	10	12	8	0	0	0	0
IP-1662-L	40	40	20	22	10	33	14	24
IP-2084-1	25	10	4	5	0	10	0	9
D-72	25	10	18	5	33	0	27	0
D-130	10	10	6	2	10	10	9	9
D-212-P1	10	10	2	7	0	0	0	0
P-15	5	10	1	2	10	0	9	0
P-24	10	10	2	7	0	0	0	0
P-29	5	5	1	1	10	0	9	0
P-104	25	10	4	1	0	0	0	0
P-105	25	10	5	3	0	0	0	0
P-107	5	10	1	4	0	0	0	0
P-130	5	10	0	2	10	0	8	0
P-139	5	8	0	2	33	0	26	0

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Table 4. (Contd..)

Entry	Pune				Durgapura			
	Lower leaves		Upper leaves		Lower leaves		Upper leaves	
	R1	R2	R1	R2	R1	R2	R1	R2
P-542	10	5	1	1	40	0	21	0
P-543	25	5	4	1	0	0	0	0
P-544	25	5	9	2	0	0	0	0
P-545	5	5	1	0	33	0	20	0
P-555	25	25	1	8	10	0	5	0
P-1449	25	40	6	12	0	0	0	0
P-1564	10	5	2	1	0	0	0	0
P-1566	40	33	16	5	0	33	0	21
P-1578	5	5	1	0	0	0	0	0
P-1581	5	10	0	2	0	0	0	0
Location mean for entries	20	16	6	6	10	6	8	5
Local susceptibles[a]	55	55	24	27	54	40	41	33

[a] Mean of five plots in each replication.

Table 5. Percent rust incidence in 45 entries and local susceptible in the 1981 IPMRN at Bhavanisagar

Entry	Bhavanisagar			
	Lower leaves		Upper leaves	
	R1	R2	R1	R2
700481-7-5	25	10	8	3
700481-21-8	25	10	2	2
700481-22-8	10	25	2	4
700481-23-2	10	10	3	6
700481-23-14	10	10	3	3
700481-27-5	18	10	7	3
700481-33-1	10	10	1	2
700481-34-8	25	10	3	3
700481-35-5	25	25	8	5
700481-35-7	18	10	3	2
700557-10-1	25	10	7	5
Souna Mali	25	25	9	7
MLC-SN-6-1-2	25	40	9	28
MLC-SN-92-1-1	40	65	19	32
Collection-29	25	25	8	4
Collection-41	10	10	2	0
Collection-45	25	10	8	3
Collection-63	25	25	8	5
Collection-75	10	10	1	3
Collection-91	25	5	6	0
Collection-95	25	18	6	7
IP-537-B	40	5	12	0
IP-1662-L	25	10	6	4
IP-2084-1	10	0	2	1
D-72	25	25	2	4
D-130	10	25	1	8
D-212-P1	10	25	1	10
P-15	10	10	2	5
P-24	10	10	2	5
P-29	40	25	9	4
P-104	10	10	4	2
P-105	40	10	9	3
P-107	10	25	4	9
P-130	5	10	0	1
P-139	10	10	1	0

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Table 5. (Contd..)

Entry	Bhavanisagar			
	Lower leaves		Upper leaves	
	R1	R2	R1	R2
P-542	10	10	1	2
P-543	10	10	2	2
P-544	25	25	5	6
P-545	10	5	3	0
P-555	25	10	7	3
P-1449	25	25	7	7
P-1564	10	5	2	0
P-1566	18	10	4	2
P-1578	5	10	0	0
P-1581	5	5	0	0
Location mean for entries	19	16	5	5
Local susceptibles[a]	79	65	57	49

[a] Mean of five plots in each replication.

Table 6. Percent mean rust incidence, location mean and range of 45 IPMRN entries and means of local susceptible checks at seven locations during 1981 rainy season.

Entry	ICRISAT	Kudumi-amalai	Ludhiana	Kovil-patti	Pune	Durga-pura	Bhavani-sagar	Mean[a]	Range[b]
700481-21-8	0	1	5	11	1	5	2	3.5	0-11
P-1581	1	0	1	10	1	0	0	1.8	0-13
700481-33-1	0	3	5	15	3	5	1	4.6	0-15
700481-22-8	0	1	5	15	8	4	3	5.1	0-15
700481-7-5	1	4	9	13	5	4	6	5.8	0-15
P-24	0	8	11	15	4	0	3	5.9	0-17
P-1564	2	0	6	17	1	0	1	3.9	0-20
P-544	3	3	8	18	5	0	6	6.2	0-20
IP-2084-1	0	1	12	16	5	4	2	5.5	0-21
IP-537-B	0	1	6	17	10	0	6	5.6	0-21
Souna Mali	0	0	6	21	4	3	8	5.9	0-21
Collection-75	0	1	4	20	4	18	2	6.9	0-21
700557-10-1	5	12	12	19	7	5	6	9.3	0-21
Collection-91	0	0	5	21	5	3	3	5.2	0-22
700481-35-5	0	3	6	20	5	0	6	5.7	0-22
700481-23-2	0	1	6	20	4	5	4	5.7	0-23
700481-23-14	1	3	7	22	11	8	3	7.7	0-23
P-15	0	14	5	22	1	4	3	7.0	0-24
Collection-95	1	9	12	23	10	5	6	9.4	0-24
700481-35-7	0	1	3	22	9	0	2	5.3	0-25

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Table 6. (Contd,.)

Entry	ICRISAT	Kudumi-amalai	Ludhiana	Kovil-patti	Pune	Durga-pura	Bhavani-sagar	Mean[a]	Range[b]
Collection-45	0	4	5	19	4	17	5	7.8	0-25
P-105	2	5	8	25	4	0	6	7.1	0-26
D-212-P1	0	5	4	25	4	0	6	6.2	0-27
P-139	1	2	10	26	1	13	0	7.5	0-27
D-72	1	6	9	22	11	13	3	9.5	0-27
MLC-SN-6-1-2	1	8	7	22	19	5	18	11.5	0-28
P-107	0	2	5	24	2	0	6	5.6	0-29
P-29	2	3	3	22	1	5	6	6.0	0-30
P-1578	3	0	2	27	1	0	0	4.7	0-31
D-130	4	11	7	25	4	9	5	9.2	1-31
P-1566	0	19	17	30	10	10	3	12.7	0-32
MLC-SN-92-1-1	6	5	7	24	18	5	25	12.8	0-32
P-1449	0	3	3	24	9	0	7	6.5	0-35
P-542	1	2	2	30	1	11	2	6.9	0-36
Collection-63	1	4	8	25	13	29	6	12.3	1-36
IP-1662-L	4	8	6	35	21	19	5	14.1	4-36
P-555	1	4	19	36	5	3	5	10.3	0-38
700481-34-8	2	4	9	21	20	24	3	11.9	2-40
P-543	3	0	1	35	3	0	2	6.1	0-42
P-130	3	1	18	30	1	4	0	8.1	0-42
Collection-41	0	3	6	41	12	4	1	9.5	0-42
P-545	2	1	7	28	0	10	2	7.1	0-43
700481-27-5	0	2	6	20	3	29	5	9.3	0-50
Collection-29	0	3	9	33	10	3	6	9.1	0-51
P-104	3	2	14	43	2	0	3	9.6	0-55
Location mean for entries	1.2	3.8	7.3	23.3	6.2	6.3	4.4		
Local susceptibles mean[c]	12.8	12.9	17.3	21.3	25.2	36.7	53.0		

a Means calculated before values were rounded off.
b Based on individual replication.
c Means of 10 replications.

Mean downy mildew incidence (%) in 1981 IPMRN entries at Durgapura, Kovilpatti and ICRISAT Center

Entry	Durgapura	Kovilpatti	ICRISAT
700481-7-5	0	0	4
700[illegible]	0	0	2
700[illegible]	0	0	3
700481-23-[illegible]	0	0	5
700481-23-14	0	0	3
700481-27-5	0	0	1
700481-33-1	0	0	6
700481-34-8	0	0	11
700481-55-[illegible]	0	8	1
700481-35-[illegible]	0	0	2
700557-10-1	0	0	0
Souna Mala	0	3	2
MLC-SN 6-1-[illegible]	0	0	0
MLC-SN 92-1-1	0	0	1
Collection-29	0	0	3
Collection-41	0	24	12
Collection-45	1	0	2
Collection-63	0	0	12
Collection-75	0	3	2
Collection-91	1	28	4
Collection-95	0	3	3
IP-537-B	0	0	3
IP-1662-L	0	0	10
IP-2084-1	0	0	0
D-72	5	3	8
D-130	0	0	0
D-212-P1	0	0	0
P-15	0	0	0
P-24	0	0	0
P-29	0	5	1
P-104	0	0	3
P-105	0	0	6
P-107	0	0	1
P-130	0	0	2
P-139	1	3	2

..2

Table 7 (Contd)

Entry	Durgapura	Kovilpatti	ICRISAT
P-542	0	0	0
P-543	0	0	0
P [illegible]	0	0	1
P [illegible]	0	0	0
P [illegible]5	0	0	0
P 1449	0	0	2
P-1564	0	6	0
P-1566	0	0	1
P-1578	0	0	5
P-1581	0	15	1
Local susceptibles[a]	0	0	86

[a] Mean of [illegible] plots in each replication.

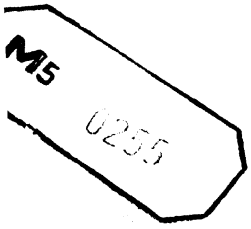
Mean Ergot incidence (%) in 1981 IPMRN entries at Kovilpatti, Kudumiamalai and Pune

Entry	Kovilpatti	Kudumiamalai	Pune
700481-7-5	10	4	15
700481-21-8	3	4	5
700481-22-8	3	6	10
700481-23-2	8	5	13
700481-23-11	18	5	28
700481-27-5	5	6	28
700481-33-1	5	4	20
700481-34-8	8	4	13
700481-35-5	6	9	23
700481-35-7	8	15	43
700557-10-1	5	9	21
Souna Mali	8	10	28
MLC-SN-6-1-2	5	31	28
MLC-SN-92-1-1	5	18	23
Collection-29	10	20	28
Collection-41	5	18	35
Collection-45	14	9	35
Collection-63	18	46	43
Collection-75	9	9	35
Collection-91	13	35	50
Collection-95	8	18	20
IP-537-B	8	5	23
IP-1662-L	5	9	28
IP-2084-1	11	10	15
D-72	3	5	13
D-130	10	18	28
D-212-P1	10	20	35
P-15	8	13	28
P-24	8	18	28
P-29	8	9	28
P-104	13	5	30
P-105	15	10	23
P-107	15	9	20
P-130	10	15	28
P-139	13	9	20

Table 8 (Contd..)

Entry	Kovilpatti	Kudumiamalai	Pune
P-542	5	18	35
P-543	8	10	20
P-544	5	7	28
P-545	8	5	-
P-555	8	5	35
P-1449	6	10	43
P-1564	9	20	21
P-1566	10	15	20
P-1578	5	10	0
P-1581	3	1	18
Local susceptibles[a]	8	13	32

[a] Mean of five plots in each replication.



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