

Table 2. Characteristics and relative proportion of different classes in the seed lot of the 'Lebanese Local' cultivar (landrace) and their field performance in Shawbak "off-season" nursery.

Class	Appearance of seed	100-seed weight (g)	Weight (g) in whole lot	Number in whole lot	Performance in Shawbak		Number of plants with			
					No. planted	Germinated No. percent	pink flower	white intermediate flower		
A	Normal kabuli type	34.50	1864.3	5400	10	4	40	0	4	0
B	Small, roundish, white	13.70	4.1	30	20	9	45	0	9	0
C	Large, intermediate, roundish, rough surface	33.30	3.3	10	7	4	57	0	2	2
D	Desi type, but whitish brown	22.70	23.6	104	40	32	80	7	31	0
E	Desi type, brown	24.00	6.0	25	16	14	87	8	12	1
F	Desi type, brown with blackish spots on the testa	26.75	3.7	14	10	9	90	10	9	0
G	Immature seeds	14.44	1.3	9	-	-	-	-	-	-
H	Foreign material	-	19.8	-	-	-	-	-	-	-

field evaluation of different classes of seeds in the future.

- M.C. Saxena (ICARDA).

Response to Plant Population Density

We have often observed that the plant populations in farmers' fields are generally lower than the recommended population. Where the growth duration is long, deficiency in plant population can be partly overcome by better growth in the remaining plants. However, such a response may be of a low magnitude in locations where growth duration is short. The ability to partially compensate for the reduction in yield at lower plant population is termed "plasticity". Plasticity is the comparative ability of a cultivar to produce more or less stable yields over a range of population densities. Breeding for plasticity may be of use in stabilizing yields at the farmer level.

We have found cultivar differences in plasticity under conditions of short (ICRISAT Center, Hyderabad) and long (Hissar, North India) growth duration. The cultivar differences in plasticity can be screened by growing the cultivars in replications, at two populations, one recommended for that region and the other much lower. For example, we have used low population densities of 8 and 4 plants/m² at ICRISAT Center and at Hissar, respectively, for comparison with the recommended population of 33 plants/m². The ratio of yields at the two densities will give a measure of plasticity. In highly plastic cultivars, this ratio tends to reach unity. This field technique, for screening for plasticity, is simple and easy.

- N.P. Saxena (ICRISAT).

Pathology

International Chickpea Disease Nurseries

The International Chickpea Root Rots/Wilt Nursery (ICRRWN) - 1979-80 has been sent to 31 locations in 19 countries. The Nursery consists of 56 entries that have been contributed by ICRISAT and Punjab Agricultural University, Gurdaspur Station, India.

The Chickpea International Ascochyta Blight Nursery (CIABN) is now being composed jointly by ICARDA (Syria) and ICRISAT. For 1979-80 the nursery has been sent from ICARDA to 26 locations in 16 countries.

Cooperators are requested to contribute 2 kg seed of the entries which they have

found promising against the above mentioned diseases at their locations. The seed may be sent to:

ICRRWN - Dr. Y.L. Nene
Principal Plant Pathologist
(Pulses)
ICRISAT Center
ICRISAT Patancheru
Andhra Pradesh 502 324, India

CIABN - Dr. K.B. Singh
Chickpea Breeder
ICARDA
P.O. Box 5466
Aleppo, Syria

Physiologic Races of the Chickpea Wilt Pathogen

Preliminary studies conducted in 1977 (ICRISAT Annual Report, 1977-78) with isolates collected from Hyderabad, Jabalpur, Kanpur, Hissar, and Gurdaspur in India, indicated the existence of races in *Fusarium oxysporum* f.sp. *ciceri*. To confirm these findings, wilted plants were collected in December 1978 at Hissar and Kanpur. The fungus was isolated from these plants and single spored. The cultures were then used in repeating the study. The reactions obtained by inoculating 10 chickpea cultivars confirmed the earlier findings.

The results shown in Table 1 indicate that C-104 was resistant to the Gurdaspur isolate but susceptible to all other iso-

Table 1. Reaction of chickpea cultivars to five isolates of *Fusarium oxysporum* f.sp. *ciceri*^a.

S. No.	Cultivar	Reaction to isolate ^b																			
		Hyderabad				Hissar				Jabalpur				Kanpur				Gurdaspur			
		1	2	3	4 ^c	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

^a Readings were taken 40 days after inoculation

^b 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 to 25 in different tests.

^c The test was carried out four times.