Table 1. Reaction of some extra early maturing pigeonpea genotypes against wilt disease, 1985–1994, Gulbarga, India.

Genotype	No. of years tested	Average percent wilt (range)
AF 98	4	82 (69-92)
AF 100	1	94
AF 105	1	87
AL 1	4	73 (53-91)
AL 13	4	96 (87-100)
AL 15	5	80 (65-94)
AL 31	4	95 (89-100)
AL 101	3	84 (74-89)
AL 133	2	95 (91-100)
H 76-11	2	70 (53-87)
H 76-44	3	79 (64-92)
H 76-51	2	79 (65-93)
H 76-65	2	71 (62-80)
H 81-1	2	87 (77-97)
H 81-22	1	98
H 81-95	1	94
H 82-1	5	86 (66-91)
H 82-12	2	83 (76-90)
H 87-2	1	75
H 87-7	1	80
HY 10	2	81 (63-99)
ICPL 151	2	93 (93-94)
ICPL 317	2	81 (69-92)
ICPL 8306	6	76 (43-96)
ICPL 83015	3	94 (85-98)
ICPL 84023	4	75 (60-92)
ICPL 85010	3	91 (82-100)
ICPL 8795	1	92
ICPL 88001	1	95
Kanpur local	2	48 (35-62)
MTH 16	1	84
MUA 2	2	66 (56-76)
P 601	2	90 (89-90)
P 604	4	80 (72-89)
P 605	4	84 (62-100)
P 858	2	86 (77-94)
Pusa 85	2	80 (62-98)
Pusa 85-1	3	80 (66-92)
Pusa 60-1	1	71
Pusa Sweta	2	93
T 15-15	1	85
TAT 10	7	83 (65-100)
TAT 11	1	52
TAT 14	5	83 (51-100)
TPT 11	1	93
UAS 120	5	81 (64-94)
GS 1 (Check)	9	66 (48-83)
ICP 2376 (Check)	10	87 (60-100)
ICP 8863 (Check)	10	4 (1.02-16.34)

Singh, B.K., Mahendrapal, Grewal, J.S., and **Anilkumar, T.B.** 1993. Multilocation evaluation of pigeonpea for broad based resistance to Fusarium wilt in India. Indian Journal of Plant Protection 21(1):28–30.

Wilt and Sterility Mosaic Disease Resistant Pigeonpea Genotype ICPL 87119 Benefits Farmers in Medak District of Andhra Pradesh, India

M V Reddy, K C Jain, Y S Chauhan, and **Laxman Singh** (ICRISAT Asia Center)

Wilt and sterility mosaic are the two most economically important diseases of pigeonpea in the northern Telangana region of Andhra Pradesh, especially in Vertisol soils. The area under pigeonpea in villages around ICRISAT Asia Center (IAC) has been declining due to heavy and recurring losses caused by these diseases. We distributed one kg of ICPL 87119 seed, a medium-duration cultivar released as 'Asha' with resistance to wilt and sterility mosaic, to each of 12 farmers in four villages surrounding IAC (Pati, Ghanpur, Yelimella, and Tellapur). Farmers were advised to grow the crop in their existing cropping system.

Data were collected from eight farmers' fields where ICPL 87119 was grown (Table 1). ICPL 87119 was grown as a sole crop in 2 of the 8 plots. The local variety was mixed or intercropped with sorghum in all the eight plots. Sorghum yields during 1994 were good, reaching up to 2.5 t ha^{-1}. The number of insecticide sprays in pigeonpea for *Helicoverpa armigera* ranged from 0 to 3. The area of the plots in which ICPL 87119 was grown ranged from 0.2 to 0.4 ha.

Wilt incidence in the local cultivar in all the plots was very high (57%), but was negligible in plots (1.6%). ICPL 87119 outyielded the local cultivar in all 8 trials, with an average yield 783 kg ha^{-1} compared to 93 kg ha^{-1} for the local. Yield levels of ICPL 87119 were very high when it was taken as a sole crop (1242 to 2131 kg ha^{-1}). Variation in yield across the trials was mainly due to variation in pigeonpea plant population and level of *H. armigera* management. Area covered by pigeonpea in some plots at the end of season was as low as 25%. No insecticide spray was used in 50% of the trials. ICPL 87119 was able to take advantage of late rains as it did not die from wilt; consequently, it produced a good second flush when *H. armigera* activity was low.

Table 1. Results of pigeonpea on-farm adaptive research trials in Patancheru and Ramchandrapuram mandals of Medak district, Andhra Pradesh, India, 1994–95.

Village	Farmer's Name	Percent wilt		Yield (kg ha^{-1})		Cropping system
		ICPL 87119	Local	ICPL 87119	Local	
Patancheru Mandal						
1. Ghanpur	Narsa Reddy	3	37	1242	105	Sole PP
2. Pati	Kurma Shankaraiah	0	40	654	281	Mixed with S
3. Pati	Naguru Laxmaiah	0	NR	449	NR	Mixed with S
Ramachandrapuram Mandal						
4. Tellapur	R Penta Reddy	0	40	254	NR	PP + S
5. Tellapur	Chandriah	7	41	2131	0	87119 sole, local 1 row PP : 8 rows S
6. Yelimella	M Buchaiah	1	94	370	78	1 row PP : 8 rows S
7. Yelimella	Akbar Pasha	2	88	749	0	1 row PP : 8 rows S
8. Yelimella	Yesha Ram Reddy	0	NR	414	NR	Intercrop with S
Average		1.6	56.7	783	93	

PP = Pigeonpea, S = Sorghum, NR = Not recorded.

Preliminary results are:

1. The introduction of a wilt resistant pigeonpea cultivar can boost yields in wilt endemic areas.
2. Wilt resistant cultivars can take advantage of late rains and produce pods and grain from any of the subsequent flushes whenever the activity of *H. armigera* is low.
3. Similar benefits are possible for pigeonpea farmers in the Vertisol belt of central India if they adopt ICPL 87119.

We plan to continue these activities in 1995 with the addition of an extra-short duration pigeonpea cultivar (ICPL 85010) followed with postrainy season sorghum, and ICPL 86012, a *H. armigera* tolerant short-duration cultivar (ICPL 87 group). An increase in pigeonpea plant population in inter- or mixed cropping and need-based use of pesticide for *H. armigera* management will also be followed.

Entomology

Insect Pests of Pigeonpea in Kumaon Hills of Uttar Pradesh, India

C S Prasad (G B Pant University of Agriculture and Technology Research Station, Majhera, Garampani 263 135, Nainital, Uttar Pradesh, India)

Pigeonpea is an important rainy season pulse crop in the hills of Uttar Pradesh (U P) in India. Although not the main pulse crop of the Kumaon region, pigeonpea has great potential on marginal lands as a rainfed crop. If grown successfully, it can provide grain, fuelwood, fodder, and also the raw material to make baskets.

Incidence of insect pests on pigeonpea was recorded weekly. The crop (variety VL 23) was raised during mid-May to early Nov, 1990–93 at the Majhera Research Station of G B Pant University of Agriculture and Technology, located near the border that separates the hill districts of Nainital and Almora in U P, and at an elevation of 900 masl. The plant and row spacings were 20 and 50 cm, respectively normal agronomical practices were followed.