

MI 81-1, A NEW 65-DAY
BLACK GRAM VARIETY.

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This Paper is published as a NOTE on a New Potential variety of Blackgram and not as a recommended variety. As there is no Island wide testing programme for Blackgram at the moment, recommending this variety through such a programme is in doubt.

This publication is done to put the character of this variety on record to avoid it being forwarded back to research as a completely new variety as this variety is already out in the field issued as samples.

- D.D.R. /M.I.

Black gram (*Vigna munge* L. Wilczek) improvement in Sri Lanka is towards exploring possible technology which could help in maximising production in the country. During the last 15 years Black gram cultivation has shown a tremendous improvement with an increased area - from 1220 acres in 1971/72 to 24,825 acres in 1981/82 (Table 1). It is clear that farmers have taken certain interests and a keenness in Blackgram production, even with many constraints they undergo in the process of cultivation.

TABLE I.

Blackgram planted area and production
in Sri Lanka.

<u>Year.</u>	<u>Area (Acres)</u>	<u>Production (Cwt).</u>
1971/72	1220	7430
1974/75	5026	20480
1977/78	34743	171508
1980/81	24834	144609
1981/82	24825	176980
1983/84	> 45000	

(Source: Ministry of Agricultural Development
and Research)

One of the major constraints is non-availability of short aged varieties to fit into a minor rainy season. The present recommended Blackgram varieties, MI-1 and Type-9, are of longer duration (90 days) restricting their suitability for cultivation only to Maha season. Since majority of farmers depend on rain water, a shorter duration variety is a necessity with the present rainfall pattern prevailing in the country. In addition, identification of such varieties will help in changing the spatial and temporal distribution of Blackgram in different cropping systems so that they are no longer competing with economically more dominant crops. A short age pulse crop like Blackgram can be grown soon after rice, taking the full advantage of moisture remaining in the soil. However, this needs more studies, because sowing time can be very critical for taking an off season pulse crop due to many factors such as, pests, diseases, temperature etc. Further, this will obviously open up scope for bringing more area under cultivation and hold great potential for increasing production.

To overcome this problem a new Blackgram variety has been tested and has shown satisfactory results at the Agricultural Research Station, Maha Illuppallama.

This variety, MI 81-1, gives a yield of about 1200 Kg/ha in a period of about 60-65 days. It has early vigour facilitating good seed establishment, better competition with weeds and prevention of soil moisture evaporation. It is a bush type, determinate plant, grows to a height of about 25 cm. with green, medium and hairy leaves. Flowering starts in about 30 days. Pods are green at immature stage and becomes black at maturity. They do not shatter. Seeds are dull, small and short cylindrical in shape.

The agronomic practices are same as for other two recommended blackgram varieties. However, due to its shorter duration, optimum time of sowing and irrigation could be worked out as for greengram. Since the plant structure is small and bushy, plant

density can be increased, thus increasing the yield potential (further studies on this aspect needed). Improved management practices such as inoculation, fertilization, weeding and plant protection measures can increase the productivity as in many other crops.

The salient features of this variety and MI-1 are given below, (The yields shown are of 83 Yala and 83/84 Maha. The rainfall pattern of both these seasons were unusual with a severe drought in 83 Yala and heavy rains in 83/84 Maha. However, the results show that this variety performs comparatively well even under unusual weather conditions).

<u>Character.</u>	<u>MI 81-1</u>	<u>MI-1 (Check)</u>
1. Growth habit	Bush	Erect
2. Growth pattern	Determinate	Determinate
3. Colour of hypocotyl	Purple	Purple
4. Colour of Epicotyl	Purple	Purple
5. Leaf colour at flowering.	Green	Green
6. Flower colour	Yellow	Yellow
7. Initial Flowering	30 days	35 days
8. Days to 50% flowering.	38 days	43 days
9. Stem pubescence	Present	Present
10. No of nodes on main stem	5.8	6.6.
11. No of branches	4.2	2.4
12. Plant height	20-25 cm	40-50 cm
13. Pod colour (Immature stage)	Green	Green.
14. Pod colour (at maturity)	Black	Black
15. Pod surface Pubescence	Present	Present.
16. No. of Pods/ Plant.	12	13.

17. Seed colour	Black	Black
18. Hilum colour	Pale white	Pale white
19. Seed shape	Short cylindrical	Short elliptic
20. Lustre	Dull	Dull
21. No of seeds/pod	8-10	6-8
22. 1000 seed weight	30.25 g	47.25 g
23. Days to maturity	60-65 days	80-90 days
24. Yield:- 1983 Yala	1283 Kg/ha	1163 Kg/ha
1983/84 Maha	617 Kg/ha	358 Kg/ha
25. Seed rate	10-12 Kg/ha	13-15 Kg/ha
26. Diseases and Pests:		
Tolerance to -		
Bean fly	Moderate	Moderate
Pod borer	Moderate	Moderate
Rust	Moderate	Moderate
Leaf spot	Moderate	Moderate

Note: Samples of seeds of this variety have already been issued to D.D.(Ed.& Tr) and ADA Puttalam and also to some farmers in N.C.P.
