

Leaf/stem ratio and tillering of S. margaritifera

No. of tillers including main stem	Five plants 3 months after transplanting					Total	Average per plant
	1	2	3	4	5		
	7	12	18	25	34	96	
Leaf weight 137.5 tolas Stem weight 103.0 „	} Leaf/stem ratio						1.33
(Author's Experimental Data)							

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Importance of Periodic Renewal of Improved Cotton Seed

by

L. NEELAKANTAN, M. A., *

In order to raise a good crop of a standard specification, it is very essential to grow an improved variety of the crop. It is well known that improved strains of cotton secure better returns from an acre to the grower than unselected bulk. The Madras Agricultural Department has recommended the following superior breeds of cotton for cultivation in the districts named against each.

American (Cambodia)	{	MCU. 1	... Madurai, Ramanathapuram and Tirunelveli.
		MCU. 2	... Madurai, Ramanathapuram, Tirunelveli, Salem, South Arcot and North Arcot.
		P. 216-F	... Tanjore, and Tiruchirapalli.

* Formerly Cotton Specialist, Madras State. Now Deputy Director (Seeds), Govt. of India, New Delhi.

Desi (Karunganni)	}	K. 2	...	Ramanathapuram, Tirunelveli and part of Madurai.
		K. 5	...	Coimbatore, Tiruchirapalli, Salem and part of Madurai.

In the year 1957-'58, MCU 1 and K 5 were valued at Rs. 3/- and Rs. 8/- more respectively than local for a "Pothi" of 280 lb of Kapas.

There are special seed multiplication schemes functioning in different parts of the State with the object of swelling the seed quantity from a small initial stock of pure pedigree seed of the concerned strain and when the quantity has increased sufficiently, arrange for distributing the seed to cotton growers in the State, utilising the services of Co-operative Societies wherever they exist. Such schemes are necessary to meet the increasing demand for seed of improved strains and to order an equitable distribution of this commodity to the cotton growing community in the State. Pure foundation stock seed of the improved strain available from Government Stations and State Seed Farms may not be sufficient to raise more than a few hundred acres. Seed from these sources cannot be distributed straightway to growers as only a very small number of growers will be benefitted. It is therefore necessary to swell the seed quantity by progressive stages of multiplication so that no cotton grower is deprived of his right to secure good seed. It takes above 5 or 6 years for this foundation stock to get multiplied to this level of supply. In all these stages the crop is supervised closely by trained technical men of the Madras Agricultural Department both in the field and off the field during the various processing stages culminating in bagging of seed for next sowing.

A cotton grower who gets his seed from a store sponsored by the agencies described above derives satisfaction from the crop raised with this seed. With the initial supply he can keep stocks of his own seed for subsequent years. But there are some practical difficulties. Except in the case of an exceptional few, many may not find it convenient to keep by the required quantity of seed for next sowings. Even if they manage to keep this with all due precautions for storage, they often find it difficult to disoblige other farmer friends or tenants who approach them for seed at the last moment, they themselves being obliged to replenish their deficit by fresh acquisitions from departmental stores or from other sources.

In spite of his success in keeping his own stock of seed and a sternness in refusing the needs of others, it is not advisable for the farmer to pursue this policy of utilising his own seed of one harvest to next sowings continuously for years. He cannot be independent of fresh stocks by way of periodic renewal for the following reasons.

First, the initial crop he raises from the departmental seed may contain a few 'off type' plants-what are known as 'rogues'. The number may be negligible and will not affect the reputation of the cotton for quality. But if these are not timely removed they increase and in course of time swell to a number big enough to tell upon the quality of the cotton. Very often most of the farmers do not see that importance of 'roguing' and as a result of continued neglect, a situation will arise in later years when the same farmer is chagrined at being discounted off for quality by the cotton broker.

Secondly, granting that the farmer has time, patience, men and money enough to have the rogues removed systematically and timely, he has to face a fresh difficulty in getting his produce ginned for which normally he has to depend on a ginnery, as reliance on country wooden hand gins will not be feasible because of time and cost of labour. Even if his influence is great as to be assured of priority special treatment in machine ginning, he is helpless against inadvertant seed mixing, in the ginnery where different varieties of cotton are admitted for ginning.

It may be possible for the farmer to avoid danger of contamination, risk through natural crossing by timely roughing and it may even be possible to command adequate arrangements for securing seed from his own produce by special care in ginning, but he is powerless against a third insidious danger which comes from what are known as 'Mutations'. There are visible consequence of genic changes in the population propagated from an initial stock. In course of time certain types make their appearance which may not all have good attributes. A stage will be reached when the farmer will have to put up with carping comments on quality by a shrewd buyer and then it will be too late to throw up his hands in despair and grumble about poor quality of departmental seed.

All these defects can be got over by seeing that (1) at least once in three or four years, the farmer renews supply of initial seed and (2) raise the cotton utilising all the improved methods of cultivation recommended by the Department of Agriculture, of Madras. Cotton from such a farmer will always be assured of a preference in the market and its initial reputation for quality can be kept up for ever.

Therefore all cotton growers in the state are advised to renew their cotton seed from departmental stores or agencies approved by the Government like Co-operative Societies periodically say once in three or four years.