

NEW CSIRO VARIETIES

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In recent years Cotton Seed Distributors (CSD) have made available a range of CSIRO varieties with different attributes, thus enabling farmers to choose varieties best suited to their particular situation. For 1994 plantings CSD have available three new CSIRO varieties: Sicala V-2, Siokra V-15 and CS 8S. All were developed for particular situations but are showing broader adaptation than expected.

Sicala V-2

This normal leaf variety is a replacement for the very successful Sicala V-1 which was the first Australian variety with a very high level of Verticillium wilt tolerance. V-2 is very similar in appearance to V-1, having dark green foliage, compact growth, semi-cluster fruiting habit and large bolls. Like V-1, it tends to lodge under heavy boll loads and this appears to be worst in northern growing areas. It is certainly recommended that high plant populations be avoided since they lead to thinner, weaker stems.

The fibre quality of Sicala V-2 is very similar to V-1 with high fibre strength being the most outstanding feature. The key reason for the introduction of V-2 is its consistent yield advantage over V-1: 7% in 42 trials over four seasons. Part of the yield advantage comes from an increase of about 1% in lint percentage. The performance of V-2 in the 1993/94 CSD large scale variety trials was outstanding, being the top yielder in 9 of the 18 irrigated trials, many of which were not

significantly affected by Verticillium wilt. It is performing very well in the Macquarie and Namoi valleys and on the Darling Downs, although lodging seems to be more of a problem in the latter region. The Verticillium wilt tolerance of Sicala V-2 is extremely good as illustrated by counts of infected plants from the 1993/94 CSD trial at Narrabri (Table 1).

Table 1. Percentage of plants infected with Verticillium wilt in the 1993/94 CSD trial at Narrabri. (Data courtesy Auscott Ltd).

Siokra 1-4	36
Deltapine 90	31
CS 50	28
Siokra L23	26
CS 8S	11
CS 189+	11
Siokra V-15	10
Sicala V-2	8

Siokra V-15

This new variety is a major advance, being the first okra leaf type we have developed which also has good Verticillium wilt tolerance (Table 1). Okra leaf is well recognised as providing very good mite tolerance and some Heliothis tolerance. Thus the introduction of V-15 is particularly important for areas such as the Macquarie and Namoi valleys where Verticillium and mites can both be present.

Siokra V-15 has dark green foliage, a compact growth habit and large bolls. In 37 trials in all production areas V-15 has outyielded the widely adapted Siokra 1-4 by 3%, while in the primary target environments of the Macquarie, Namoi and Darling

Downs the advantage has been 11%, due in part to V-15's Verticillium tolerance. Although testing under raingrown conditions has been limited V-15 has produced promising results. Siokra V-15 has excellent fibre quality, being long, strong and fine with this fineness being reflected in a lower micronaire (Table 2). Since V-15 is a medium to late maturing variety, late sowings should be avoided and care needs to be taken to ensure that it is allowed to fully mature its fibre to avoid low micronaire penalties, particularly in cooler environments.

Table 2. Fibre quality comparisons of Siokra V-15 with Siokra 1-4.

	Length (ins)	Strength (g/tex)	Micronaire
Siokra 1-4	1.20	27.4	3.8
Siokra V-15	1.20	29.7	3.7

CS 8S

This is a new normal leaf short season variety which will replace CS 7S. The plant type of 8S is different from 7S, being taller and more erect with smaller bolls. CS 8S is more broadly adapted than CS 7S as illustrated by the fact that 8S has shown 11% greater yield than 7S over 37 trials in all growing areas. In shorter season environments the advantage has been 5%. Part of the yield advantage is produced by 8S possessing a 1.5% greater lint percentage. The broader adaptation of 8S suggests it may be an option to enable the production of an earlier crop in longer season areas.

The fibre of CS 8S is not as strong as 7S and has a lower micronaire (Table 3). However its mike is still higher than most varieties and should still maintain a

satisfactory value under most conditions. Like most earlier maturing types its staple length is somewhat shorter and care should be taken to avoid water stress which could result in length penalties. An important attribute of 8S is very good Verticillium tolerance (Table 1) and since it has a more erect plant habit than Sicala V-2 it supplies a valuable option for bad disease situations where lodging problems are experienced.

Table 3. Fibre quality comparisons of CS 8S with CS 7S.

	Length (ins)	Strength (g/tex)	Micronaire
CS 7S	1.12	29.3	4.3
CS 8S	1.13	27.7	4.0

Conclusions

These three new varieties demonstrate our continued success in producing varieties for special situations such as those with mites, Verticillium wilt and/or where earliness is an advantage. The Verticillium tolerant okra leaf Siokra V-15 fills a real need in our varietal range and along with the new higher yielding replacement varieties Sicala V-2 and CS 8S should significantly improve the productivity of a large number of farmers.

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