

CURRENT VARIETAL PERFORMANCE AND NEW COMMERCIAL LINES

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COTTON SEED DISTRIBUTORS, WEE WAA

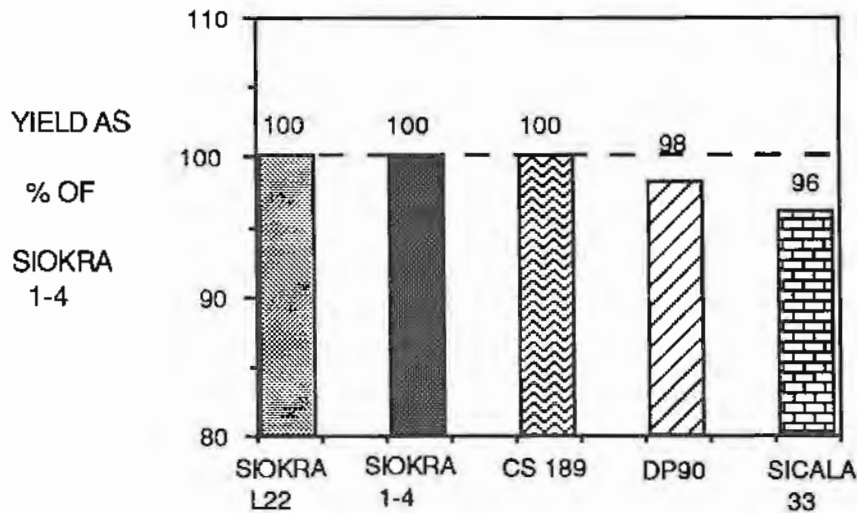
The most outstanding features of recent seasons have been the relatively dry conditions experienced in most areas during growth and boll setting followed by unprecedentedly wet harvests. The variety scene has also seen major changes. Very little blight has occurred in DP90 as a result of the relatively dry conditions experienced allied to the successful lowering of seed-borne infection by the CSD clean seed program together with growers doing their best to avoid the disease by growing this blight-susceptible variety on clean fallow ground. Meanwhile there has been rapid changeover in the CSIRO varieties with the original Siokra 1-1 being replaced over the last two years by firstly Siokra 1-2 and then this year by the bigger-bolled, high yielding Siokra 1-4. In the same period Sicala 3-1 was replaced by Sicala 3-2. Now, for the coming season, the original big-bolled Sicala type has been replaced by the new small-bolled Sicala 33. In addition to Siokra 1-4 and Sicala 33 there is the okra leafed Siokra L22 for hotter growing conditions and the normal leaf CS189 which has performed well in bad *Verticillium* conditions in the Namoi Valley. Both these two varieties also show potential for dryland growing conditions.

PERFORMANCE

Yields

Overall means for the combined CSD and ACCT trials for the last three seasons for the "hot" outlying districts (Bourke, St George, Theodore, Biloela and Emerald) show that on average there wasn't much difference between the five varieties except for a small but significant fall off with Sicala 33. (Fig 1).

Figure 1. Long season areas (Bourke, St George, Theodore, Biloela, Emerald) combined ACCT and CSD results over the last three seasons. (Results for 1989/90 not all to hand at time of writing).



However, varietal differences for the mainstream growing area from the Macquarie to the McIntyre were more pronounced with the two Siokras being highest yielding, while CS189 and Sicala 33 were some 4% lower in front of a surprisingly low overall yield for DP90. (Fig 2). However with DP90 the results were influenced by its very poor yields in 1987/88 when in general the growing conditions did not favour it and bacterial blight was still prevalent in some cases. (Fig 3). By contrast DP90's yield this last hot and dry growing season when blight was almost completely absent was much higher.

Figure 2. Main (Macquarie to McIntyre) cotton area combined ACCT and CSD results over the last three seasons. (Results for 1989/90 not all to hand at time of writing).

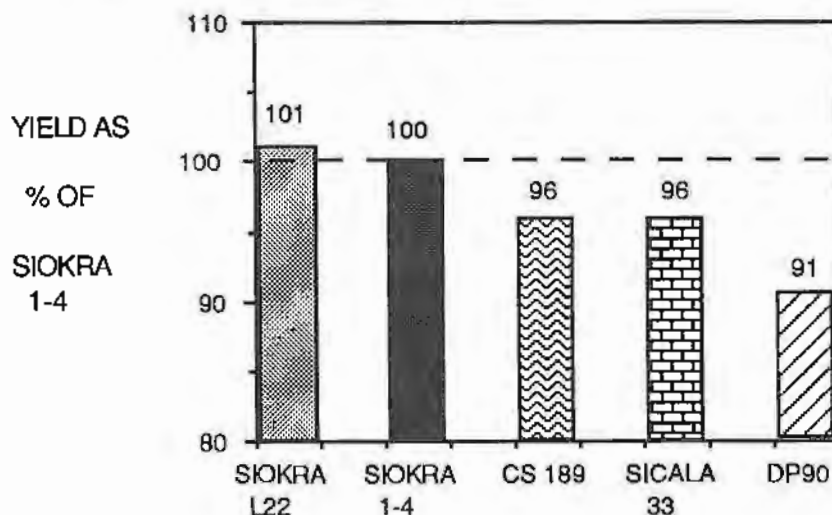
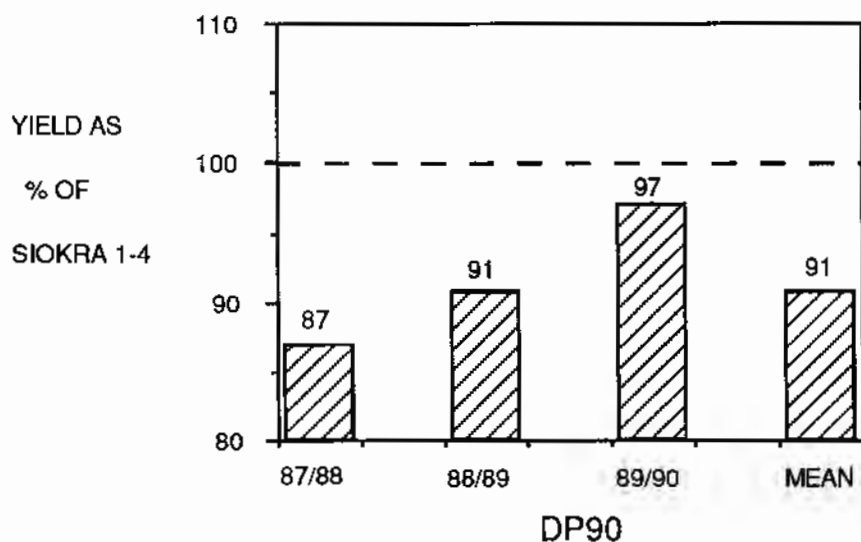


Figure 3. Main (Macquarie to McIntyre) cotton area combined ACCT and CSD results for the last three seasons.
(Results for 1989/90 not all to hand at time of writing).



For the short season areas two new varieties Siokra S324 and the normal leaf CS6S are also available although unfortunately seed supplies are very limited. The combined results from the Boggabri to Breeza and the Cecil Plains area show that these new varieties and Sicala 33 performed very well in 1987/88 and 1988/89 though they were not as outstanding in 1989/90 (Figs 4 and 5).

Figure 4. Short season areas combined ACCT and CSD results for the last three seasons.
(Results for 1989/90 not all to hand at time of writing).

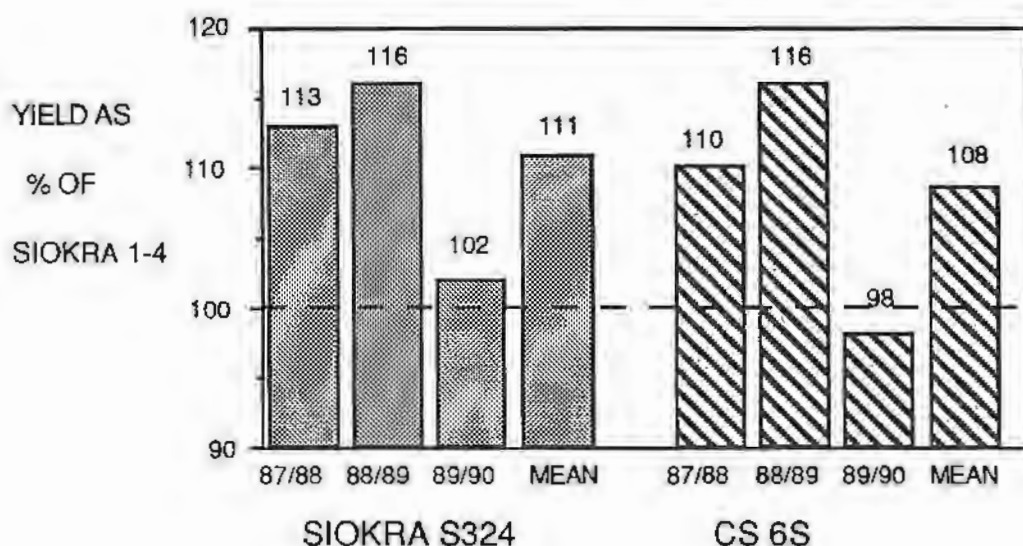
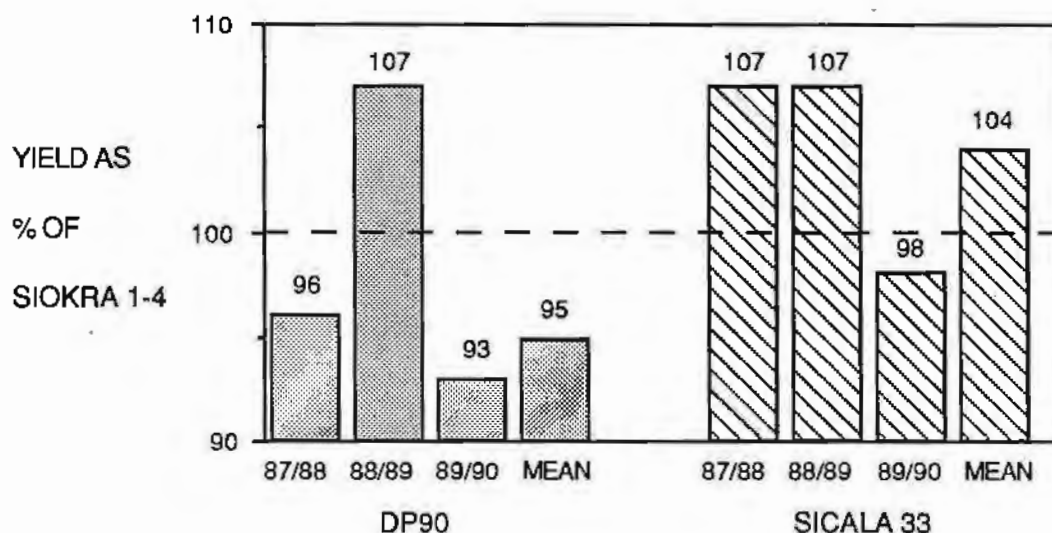


Figure 5. Short season areas combined ACCT and CSD results for the last three seasons. (Results for 1989/90 not all to hand at time of writing).



Quality

The varieties differ in various aspects of quality. Compared to 1-4 both short season varieties (Siokra S324 and CS6S) are shorter and have a higher micronaire value (Table 1). CS189 is fairly similar to Siokra 1-4 in quality while Siokra L22 is longer, stronger and has a lower micronaire. Sicala 33 is long, strong and fairly fine. While grade differences are usually not pronounced in our large scale commercial trials DP90 usually has the best grade following wet conditions.

DISCUSSION

Growers now have a number of varieties to choose from. They all have various strengths and weaknesses. Thus Siokra 1-4 has demonstrated very high yielding ability on average but, while resistant to Bacterial Blight, under wet conditions at boll split can sometimes suffer more from boll rot (probably because of its long fruiting branches and tendency to lodge). DP90 seems to stand wet harvest conditions better but is very susceptible to Bacterial Blight and in common with all normal leaf varieties is very susceptible to insect pests, especially mites. Special features of CS189 and Sicala 33 include respectively tolerance to Verticillium wilt and high quality - Sicala 33 is attracting as high as \$20 per bale for quality. Again the short season varieties Siokra S324 and CS6S are better adapted to cooler areas and Siokra L22 to hot or dryland areas. Obviously growers need to take such factors into account in their variety selection. Of course it is also wise to remember that we don't know what the next season is likely to be like so many growers split their risk by growing a number of varieties.

Table 1. Fibre quality of current and new commercial lines averaged over three seasons.

	Length (ins)	Strength (g/tex)	Mike
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Siokra 1-4	1.18	27.3	3.88
Siokra S324	1.14	26.4	4.00
CS 6S	1.12	27.5	4.20
CS 189	1.17	27.6	3.81
Siokra L22	1.21	28.2	3.68
DP 90	1.15	28.3	4.09
Sicala 33	1.22	29.0	3.89

