

# Breeding Improved Cotton Varieties

## SUMMARY:

This project aimed to continue the steady improvements in developing improved cotton varieties adapted to Australian growing conditions and markets.

The project has been very successful. Over the term of this project there have been major releases of new varieties:

- CS 6S was replaced by CS 7S, which was replaced by CS 8S in 1994. This early maturing variety now occupies 4% of seed sales. Although the area is not large, this variety is very important for short season areas and for late sowings.
- CS 50 was introduced in 1992 as a high yielding mainstream variety. It has been very successful, with up to 20% of seed sales each year.
- CS 189+ was released in 1993. It has been very successful in the Macintyre and Queensland. In 1995 it occupies 16% of seed sales. A higher yielding replacement is due in 1996.
- Siokra L23 was introduced in 1992. It has slightly higher yield, higher fibre strength and better fibre length uniformity. It has been an important variety for full season irrigated situations where verticillium wilt is not present. Siokra L22 and L23 occupy 12% of seed sales in 1995.
- Sicala V-2 replaced Sicala V-1 in 1994 having demonstrated 7% greater yield in large scale trials. Sicala V-2 has excellent verticillium tolerance and premature senescence tolerance and wider than expected general adaptation has seen it become the largest selling variety with 40% of seed sales in 1995.
- Siokra V-15 was released in 1994 as our first okra leaf variety with verticillium tolerance. Its impact has been dramatic, with 12% seed sales in 1995.

The breeding program contains many new lines with improved yield, adaptation and fibre quality. These lines are being evaluated for possible release.

The introduction of transgenic cotton has progressed rapidly in the past three years. Backcrossing of CSIRO lines with the Coker variety containing the Bt gene was undertaken in this project. In 1995, there was an 8 ha seed increase block of Bt cotton in Kununurra. This will provide the first commercial seed for 1996 or 1997.