

## New Liberty Link technology

New technology that allows cotton growers to use Liberty herbicide for over-the-top control of hard-to-kill perennial and annual weeds will be available commercially to Australian cotton growers this season.

Liberty Link cotton is being developed in collaboration between CSD, CSIRO and Bayer CropScience.

Two Liberty varieties will be available in 2007 — Sicot 80L for warmer northern and western areas of the cotton belt, and Sicot 43L a variety suited to eastern and cooler areas.

CSD is also developing stacks of Liberty Link Bollgard II varieties which will be available to growers in subsequent seasons.

“What you generally see within about five days of application is yellowing on the weeds,” says Sarah Wilson from Bayer CropScience. Plant death is probably (depending on climatic conditions) within 15–20 days afterwards.

“Weeds affected include annual polymeria, bell vine, bladder ketmia, caltrop, conventional cotton and Roundup Ready cotton (including Bollgard varieties), dwarf amaranth, European bind weed, paddy melon, peach vine, red pig weed, rhyncosia, sesbania, sow thistle, yellow vine. We also have suppression claims for Chinese lantern and noogoora burr.

“This product is stronger on broadleaf weeds as opposed to grass weeds. While it does control some grass weeds in some instances, we currently have no label claims for that.

“Because the cotton is completely tolerant to the herbicide, the only application limitation is weed size (2–6 leaf stage) and withholding period (70 days prior to picking).”

She said growers, technology service providers and auditors would have to participate in a short one-day accreditation program which Bayer will run over the next few months.

Michael Brosnan from B&W Rural in Mungindi has had a couple of years experience with some of his clients using Liberty Link technology.

“I found the Liberty Link technology very good on all broadleaf weeds. Last season particularly at ‘Cleveland’ (Mungindi) on some brand new country it let the cotton

crop out-compete some bad take-all (*polymeria longifolia*).

“We put Stomp down pre-plant because we were concerned that it isn’t a great product on grass, but they did some

**Bayer CropScience’s Sarah Wilson with Pat North, ‘Cleveland’, Mungindi in a crop of Sicot 80L.**

trials where they left the Stomp out and found it quite good on the grasses as well, so in future years we might go back to a band of Stomp at a lower rate.

“Some years I think you would still need to put a lay-by down. Other years (like last year) you could get away without a lay-by.

“The key factor is coverage. We put 200 litres of water to the hectare out to get really good coverage and I think that is the key. Growers are used to putting out 50-100 litres of water to the hectare, but I think that is the key to this product: water volume.

“One of the real benefits of this product will be as a rotation tool to combat the Roundup Ready volunteers which are a real issue, especially for the growers that water-up but also for the pre-waters it still becomes a problem there as well.

“So that’s where I see this as a really valuable tool. You have one season of Roundup Ready and then follow it with a season of Liberty Link. Obviously the technology is only in Sicot 80 conventional in this area at the moment, but we need it in the Sicot 71 line both (Bollgard and conventional) eventually,” Mike Brosnan said.

### PROMISING DEBUT FOR SICOT 80L

CSD’s first commercial variety with the Liberty Link gene from Bayer CropScience has survived its first commercial test with encouraging results.

Pat North, Manager for ‘Cleveland Agriculture’, Mungindi has grown Sicot 80L for the past two seasons — under a trial permit in 2005–06 and commercially in 2006–07.

“We’re happy with the variety. It went about 4.5 bales per acre in 2005–06 and this year looks like it will average a shade under 5.0 bales per acre. There’s some variability due to hail damage.

“This year we had some area without planting herbicides, some without layby application, and a small area with neither. The only herbicide for the season was one Liberty application over the whole field in late October, plus two cultivations. The way it worked out, the Liberty application kept the field clean in all instances.

“How we use the Liberty Link technology in the future will be a year-to-year decision. I’m confident we could get away without planting herbicide, and we could assess our need for a lay-by in early November. The big advantage I see is Liberty Herbicide superior control on vine and volunteer cotton.”

CSIRO Plant Breeder Peter Reid comments that for people who have grown Sicot 80 and Sicot 81, Sicot 80L will be similar in appearance and management requirements.

CSD will have two commercial Liberty Link varieties for the 2007–08 season: Sicot 80L and Sicot 43L.

