

SECTION 4
AREA ROUNDUP

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NEW SOUTH WALES



Macquarie Valley

By Sally Ceeney

About 4900 hectares of cotton were planted in the Macquarie Valley in 2008–09 with approximately 4300 hectares harvested. The reduced harvest area was due to crops being damaged by hail and herbicide. The season was once again characterised by low water allocation and reasonably mild growing conditions. The valley average yield was nine bales per hectare, compared to 9.4 bales per hectare in 2007–08. The range of yields was wide, from eight to 13 bales per hectare.

The most dominant variety grown was Sicot 71 BGII RRF, followed by 71 BGII RR and 71RRF. 79 per cent of the valley grew Bollgard II, while 100 per cent of the valley used either Roundup Ready or Ready Flex technology.

Growing conditions

The 2008–09 season was average in terms of overall day degrees and rainfall. The total cumulative day degrees from September 1 to April 30 were 2630 which is quite close to the long term average. Cold shock and hot days were also very close to the long term average. The majority of cold shocks occurred in October and April. The number of hot days was on par with the average – but 17 of these occurred consecutively from the January 24 which is illustrated by the spike in the daily day degrees graph below.

Rainfall for the season was close to average, with a total of 405 mm being recorded compared to average of 342 mm for the period September 1 to April 30. The most significant fall recorded at Trangie was 74 mm during November 10–12.

While the cumulative day degrees show the sea-

Macquarie Valley cotton area

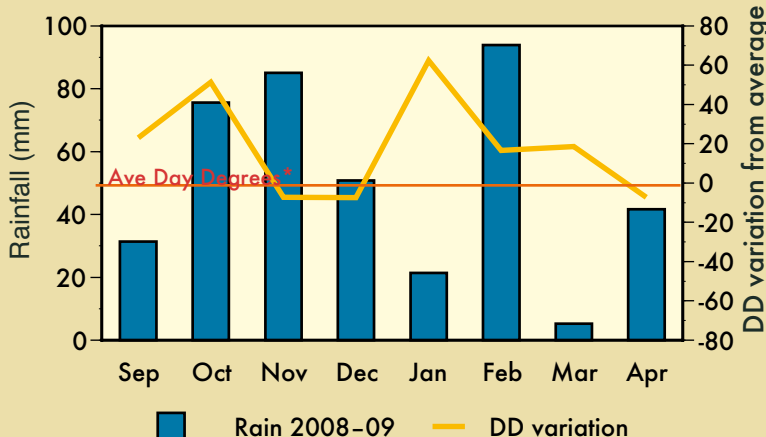


son to be fairly close to average, the daily day degrees better reflect the seasonal conditions which was one of significant ups and downs. The season started off fairly mild, or close to average, with a cool period in late November/early December contributing to slow early season development. Growing conditions during late December to mid January were then ideal with warm days and cool nights. These conditions, combined with low insect pressure, allowed crops to compensate for the slow start. Crops were carrying high fruit numbers and were generally all above 90 per cent retention by late December.

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Warren 2008–09 seasonal climate

Total Day Degrees: 2630 (+150); Total rain: 405 mm (+63)



Days	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Cold shock	22	13	2	0	0	0	4	8	49 (-14)
Hot shock	0	2	1	2	17	10	0	0	32 (+2)

*Average day degrees from 1957 to 2009.
Source: CSIRO Plant Industry.

PLEASE NOTE...

This section contains a seasonal climate graph for each production area which compares day degrees, rainfall, hot days and cold shocks with the long term calculated average. It is important to note that the long term average figures used here relate to the 1957 to 2009 period, and will differ from the Bureau of Meteorology's long term average information which generally goes back further (particularly for rainfall).

The information used for these graphs was generated using data provided through the SILO project, a business unit of the Bureau of Meteorology, and made available through funding from CRDC.

Further information regarding these organisations can be found at:

- CSIRO Plant Industry at www.pi.csiro.au;
- Cotton Catchment Communities CRC at www.cotton.crc.org.au;
- The SILO project at www.bom.gov.au/silo; and,
- The Cotton Research and Development Corporation at www.crdc.com.au.

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This was followed by a period of above average temperatures throughout late January and early February, with a two week period of consecutive hot days. Most crops shed a significant number of small bolls during this period. But most growers were able to keep water up to the crops and the night temperatures remained mild (around 25°C) so apart from shedding small bolls (which was hard to avoid given the high numbers that crops were carrying), crops handled this hot period without showing the effects of significant heat stress.

This period of hot days was immediately followed by below average temperatures in mid to late February. Temperatures were as low as a maximum of 19°C and minimum of 12°C. These extremes in temperature, from well above average to well below average, coincided with the crop's peak boll filling period, the critical period for fibre development. The development of bolls during this period would have been limited by the cool temperatures, resulting in smaller bolls and lowering the yield potential of crops.

The finish to the season was warm, with above average temperatures in March. This allowed any later maturing crops, including conventional crops, to set late fruit and helped these crops compensate for the yield potential lost from the cool temperatures.

Defoliation conditions were good, but rainfall at Easter coincided with crops being ready to harvest. The quality of cotton from the Macquarie this season was excellent. Some crops picked following the rain suffered colour and leaf discounts – but the majority of crops picked had very good quality.

Insect pressure

Insect pressure from Helicoverpa was fairly low throughout the season, with conventional crops receiving six to seven insecticides. Late Helicoverpa pressure was virtually non-existent, with crops not receiving any sprays after early February. Bollgard

II crops generally did not require spraying for Helicoverpa.

Mirid pressure was low but fairly constant throughout the entire season with most crops receiving just one mirid spray.

Mites and aphids did not cause any significant problems, while some fields suffered heavy thrip damage at the seedling stage.

Silver leaf whitefly was seen in a number of crops throughout the valley in low numbers at the end of the season. Control was not required in any fields, but this may be a pest to monitor in the future.

The cotton stainer bug which emerged as a pest in 2007–08 was only seen in low numbers this season and control was not warranted.

Disease incidence

The cool, wet early season conditions were ideal for seedling disease in the Macquarie. Black root rot and seedling disease (Rhizoctonia and Pythium) were commonly found. No new outbreaks of Fusarium were identified.

An isolated incident of sudden wilt was noted in the valley.

Other management issues

Herbicide damage from phenoxy products continues to be a significant issue in the Macquarie, with some crops totally destroyed this season.

Irrigation

The majority of crops were again grown on groundwater allocations. General water allocation was zero per cent at the start of the season, with one per cent allocation announced on November 3, 2008. This was gradually increased to the final 10 per cent allocation announced mid March. This allocation meant that any 'punted' crops were able to be taken through to harvest. Many growers took advantage of the November rainfall and late season allocation by planting late summer crops, particularly soybeans.

Next season prospects

Burrundong Dam is currently at 18 per cent and there is zero per cent general allocation for the Macquarie Valley. Storage levels will need to increase significantly before we see any major irrigation prospects for the valley in 2009–10.

Macquarie Valley: Area and production

