

Day Degree accumulation to the 07 Dec 09

District		09/10	08/09	Average	Hot days (>36°C)	Cold shock
Emerald	From 22/09/09	1030	1004	1012	27	5
Emerald	From 2/11/09	553	547	526	21	0
Theodore	From 22/09/09	984	934	901	24	11
Theodore	From 2/11/09	537	517	472	21	0

Crop Stages versus Day Degree Accumulation.

Emerg.	5th leaf	1st Sq	1st Flow	Peak Flow	Cracked Boll	60% open
80	330	505	777	1302	1527	2050

Hot days are classed as days in which the maximum air temperature is equal to or above 36°C.

- Theodore 22/09/09 to 7/12/09 has had 24 hot days. 6 years out of 53 have had at least 17 hot days (approx 90th percentile)
- Emerald 22/09/09 to 7/12/09 has had 27 hot days. 11 years out of 53 have had at least 27 hot days (approx 80th percentile)

The 2009/10 Cotton Pest Management Guide is now available on the Cotton CRC website:

http://web.cotton.crc.org.au/content/Industry/CRC_home.aspx

Plant Tissue Analyses

Petioles are ideal for monitoring nitrate-N and potassium concentrations up to flowering. Petiole nitrate-N level declines with time and by flowering, petiole nitrate-N levels are usually declining and it is easy to distinguish between crops having sufficient or insufficient N. Beyond flowering leaf tissue tests are a better method of monitoring crop nutrition.

For nitrate monitoring, three samplings, approximately 10 days apart, give a good indication of the rate of change in nitrate-N in the petioles. Sampling is best done at approximately 600, 750 and 900 day degrees from sowing. When collecting petioles, leaf blades must be removed immediately in the field to prevent the transfer of nutrient from the petiole to the leaf blade. For interpretation of petiole analyses refer to NutriLOGIC.

The leaf blade can be used to monitor all nutrients including micronutrients. Sampling twice (at flowering and cut out) produces the most useful information. Leaf tissue tests can be used to identify nutrient imbalances, deficiencies and toxicities and can do so more precisely than soil testing and assist in optimising fertiliser

Weather can be an important factor in petiole and leaf tissue testing. Waterlogging, cold weather, low radiation through cloudy conditions all affect nutrient

levels. Petioles should be collected up to mid morning; water stress can influence the results. Petiole nitrate is dynamic and the optimum amount will vary according to the plants stage of development. Therefore consult NutriLOGIC which incorporates day degree information to determine where nutrient concentrations are above or below the sufficiency range.

To avoid contamination of samples during collection it is recommended that hands be thoroughly washed with soap and dried or gloves are worn. Common contaminants include salt from sweat and zinc contained in many sunscreen products. Ensure that collection and transport containers have not been contaminated.

Collect approximately 50 petioles (more if they are thin and short) or 50 leaf blades from the 5th topmost leaf. Individual laboratory services may specify the number of petioles/leaf blades they want collected. Petiole and leaf blade samples should be stored in an absorbent bag and kept cool.

Samples need to arrive at the laboratory ASAP and in good condition. Samples not likely to reach the laboratory the day after they were collected should be dried prior to transport. This is best done at low temperature (less than 70°C) in a convection oven or quickly air dried. Microwave ovens are not suitable.

Trap Crop Planting Window

- **The separate 1% trap crop must be planted between November 20 and December 20.**
- As pupae destruction is not an effective option in CQ, a late summer pigeon pea trap crop is required.
- The RMP states: *A pigeon pea trap crop is to be planted so that it is attractive (flowering) to Helicoverpa spp. after the cotton crop has cut out, and as any survivors from the Bollgard II crop emerge. Planting pigeon pea too early (before mid-November) or too late (e.g. January) is not adequate for cotton crops planted during September through to October.*
- The RMP sets out minimum area, planting rates etc for trap crops.

Mealybugs

Mealybugs have been reported in a couple of Central Highland fields recently. Female adults are around 3 mm long. Female adults and nymphs are oval-shaped and covered by a white waxy coating giving them a mealy appearance. They form colonies on shoots, stems, and leaves developing into white masses. Males are small aphid-like winged insects. Other hosts include volunteer or rationing cotton, peanuts & leucaena.