Cotton Catchment Communities CRC

NSW DEPARTMENT OF PRIMARY INDUSTRIES

COTTON *TALES*

Macquarie Valley and Bourke

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2007/08
No.9
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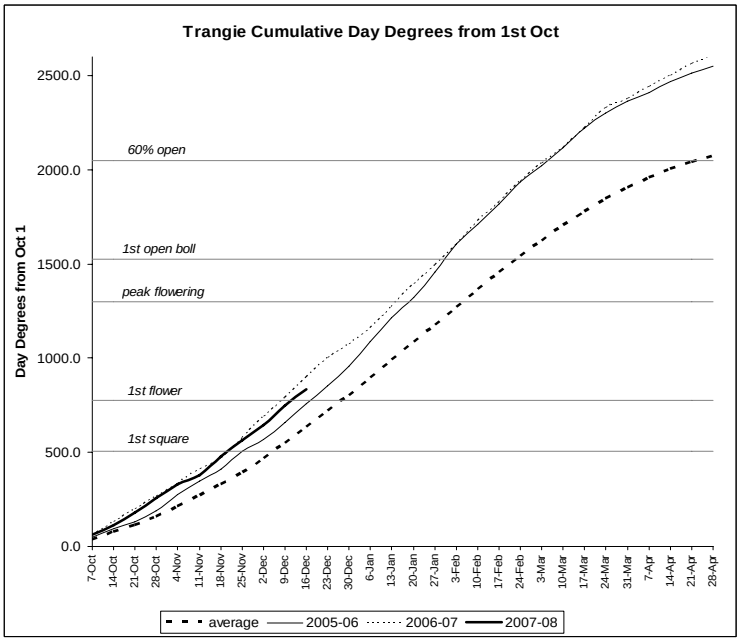

Benchmarking Water Use in the Cotton Industry – *call for expressions of interest*

As part of the process to benchmark water management in the cotton industry the Cotton CRC Water Team are using the WATERtrack RAPID program to assess the performance of the 2006/07 crop.

To be involved you need to have grown cotton in the 2006/07 season and be able to provide some basic irrigation data such as number of irrigations and in crop rainfall. Growers who participate will receive reports detailing their on farm water use and be able to benchmark their farms data against the rest of the region and industry.

If you are interested in helping to establish water use benchmarks for the cotton industry and looking at this new water use benchmarking tool or to gain more information please contact me.

Evaluating In Crop Nutrient Status

Both petiole and leaf tissue tests can be used to evaluate crop nutrient status. Petioles are ideal for monitoring nitrate-N and potassium concentrations until mid-flowering. Beyond flowering, leaf tests are a better method of monitoring crop nutrition.

Leaf samples can be used to monitor all nutrients including micronutrients. In fact micronutrients are most accurately assessed with leaf blade samples. Sampling twice (at flowering and boll opening) produces the most useful information although leaves can be sampled at any time. Leaf tissue tests can identify nutrient imbalances, deficiencies and toxicities more precisely than soil testing and assist in optimising fertiliser programs.

Leaf Analysis Interpretation

The table below is from NutriLOGIC and outlines ideal, high and low leaf tissue levels of each major nutrient at two stages during the season. The concentrations of most nutrients change as the crop matures. For example, leaf N and K decline while leaf S, Ca and Mg increase with time.

	Days after sowing	Ideal	High	Low
Macronutrients (%)				
N %	70	4.49	4.99	3.99
	120	4.01	4.51	3.51
P %	70	0.34	0.39	0.29
	120	0.31	0.36	0.26
K %	70	1.66	1.69	1.64
	120	1.35	1.37	1.32
S %	70	0.88	0.91	0.85
	120	1.10	1.113	1.07
Ca %	70	3.16	3.08	3.24
	120	3.70	3.78	3.78
Mg %	70	0.7	0.71	0.68
	120	0.81	0.82	0.79
Micronutrients (ppm or mg/kg)				
Na	70	<1050	1900	
	120	<1200	2100	
Cu	70	7.39	8.39	6.39
	120	6.43	7.43	5.43
Zn	70	28	34	22
	120	23.3	29.3	17.3
Fe	70	225	305	145
	120	155	235	75
Mn	70	104	134	74
	120	111	141	81
B	70	69	89	49
	120	88	108	68

Any action taken based on leaf test results is really dependent on the nutrient in question, how limiting it may be and the stage of crop development.

Late season options for alleviating any deficiencies are limited, particularly for macronutrients. After cut out, crops should be able to fill bolls with the nutrients already taken up. Applying more nutrients may encourage vegetative growth rather than enhance yield. Late season micronutrient deficiencies could be alleviated through foliar applications.

Thanks to Julie O'Halloran, Regional Cotton Extension Officer, NSW DPI and the Cotton CRC for collating this information with input from Dr Ian Rochester, CSIRO and the Cotton CRC.

2007/08 Cotton Pest Management Guide

The 2007/08 Cotton Pest Management Guide is now available. It has been directly mailed out to most growers and consultants. If you did not receive a copy but would like one please contact me. There is a lot of new information in this issue including the new IRMS requirements for pupae busting, an outline of the key biosecurity threats for the Australian cotton industry and information on the new Roundup Ready Flex® and Liberty Link® technologies.

I'd like to wish everyone a very merry Christmas and all the best for 2008!