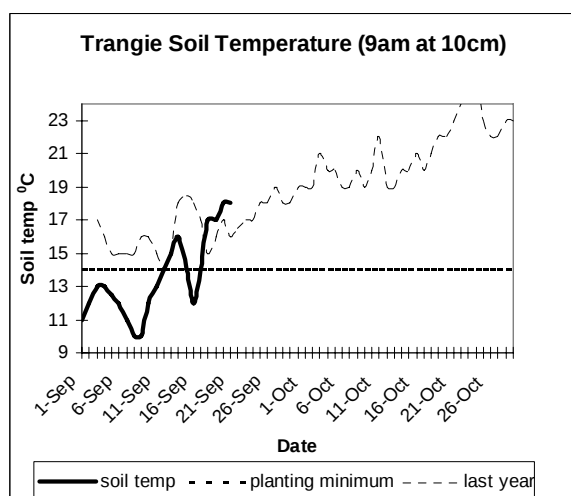


Planning to Plant

Cotton planting time is here again but unfortunately the Macquarie Valley is starting another cotton season with 0% general water allocation. Around 4500ha is planned for the Macquarie under groundwater and carryover allocations. In the Bourke district, good river flows over summer have ensured enough water left over to plant around 2000ha of cotton. This Cotton Tales will look at some of the key management decisions required at planting time.

Soil Temperatures



It is recommended that cotton sowing does not occur until minimum soil temperatures at 10cm exceed 14°C at 9am for 3 consecutive days. *Note: 14°C at 10cm depth will equate to approximately 16-17°C at seed sowing depth.* Historic trends in the Macquarie indicate these ideal soil temperatures requirements are generally met in late September to early October however recent warm weather has caused soil temps to rise dramatically over the weekend. Planting conditions in Bourke may be favourable from mid September onwards.

Disease Management

Sowing below ideal soil temperatures and cool weather conditions can increase the incidence of seedling disease, Black Root Rot and *Fusarium* spp. by slowing germination and emergence. The use of seed treatments are an important part of disease management. Other practices that may help reduce disease incidence include:

- Plant into high, firm beds to reduce the risk of water logging
- Plant into warm weather conditions and soil temps
- Consider planting into moisture, rather than watering up

Sowing rates

In a number of different plant population experiments, cotton has had little response to plant population, except where establishment has been poor or lower plant population has led to excessive vegetative growth

delaying maturity. The ideal plant population for cotton is generally considered to be 8-12 plants/m in 1m rows, and there is some indication from long term trials by CSD that there is a positive yield trend in Bollgard II® varieties with a higher population of 11-12 plants/m. Trials conducted by CSD and Buddah Pty Ltd in 2004/05 in the Macquarie showed no significant yield difference between plant populations of 10 - 15 plants/m in Bollgard II® cotton. Seeding rates that ensure good, even establishment, without being too low (< 6-4 plants/m) are recommended. Where factors like soil type may restrict plant size, the optimum plant density should be at the higher of the range e.g.12.

Seedling establishment will be affected by factors such as seedling vigour, disease incidence, soil tilth, soil surface conditions, moisture and weather conditions.

Acknowledgements: Rose Roche, Cotton Seed Distributors

Nutrition

It is important to know what nutrient levels are in the soil so that nutrient budgets can be calculated prior to planting. This information is best obtained by conducting soil tests during the winter period and combining this information with paddock history.

For N requirements, soils with at least moderate levels of N pre planting may not require any upfront N. This may be particularly useful in low water situations. Plant tissue testing can then be used to determine in crop N requirements. Crop demand for N increases from early squaring onwards and peaks between mid flowering and mid boll-fill.

Ensure phosphorus and zinc levels are adequate at planting as these nutrients are the most critical for seedling emergence and growth.

Acknowledgements: Ian Rochester, CSIRO.

Soil Insects

Wireworms are the key insect pest at cotton planting/seedling emergence. Spring populations are generally higher in fields with large amounts of previous crop stubble, weeds or following a summer crop so preventative measures may be warranted in fields with these conditions. Wireworms are difficult to sample but are generally found at the top of the intersection of wet and dry soil. Cutworms can also cause damage to young seedlings post emergence and are more likely to be found in fields that have weeds present, especially in lower lying areas where soil remains damp.

Neighbour Communication

Looking for an excuse to have a beer with your neighbour? Take a moment to catch up and share what you are planning on planting for 08/09. In particular, mark on maps where Roundup Flex®, Roundup Ready® and other cotton crops are planned. While not as visible as 2,4-D drift, glyphosate drift can also be very damaging! In previous years, Pesticide Application Management Plans were a great way of establishing communication with neighbours and a similar system may be very useful for herbicide applications as well.