

Germinating ideas

By Craig McDonald, CSD Extension and Development Agronomist

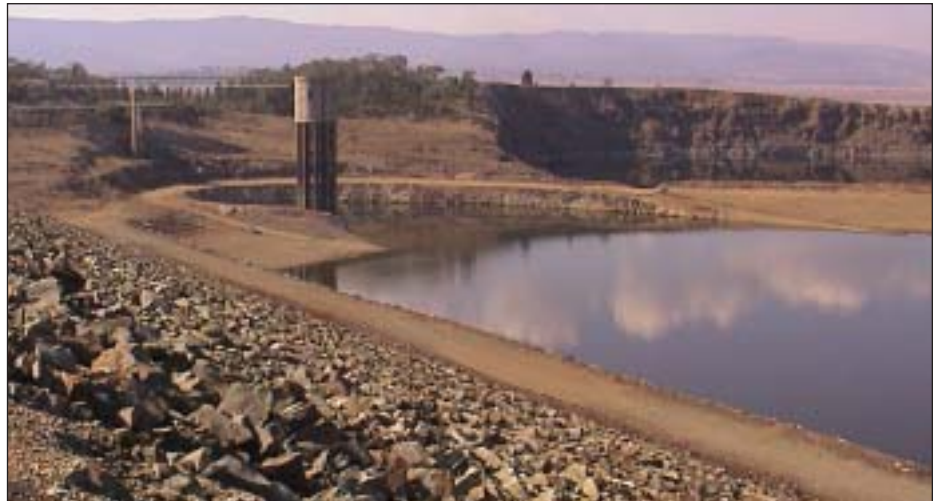
This issue of Germinating Ideas will look at the water situation in the central and southern valleys of NSW and what can be done if allocations are received to plant cotton. For those growers returning to cotton growing it will cover some of the key issues to be aware of before making those planting decisions.

The water situation

The Macquarie Valley is currently experiencing an unprecedented dry period with Burrendong Dam at nine per cent (May 2004). The Lachlan Valley is in a very similar situation with Wyangala Dam below 10 per cent. These areas are in what could be described as a 'winter dominant' rainfall zone, so the probability of receiving rain in the catchment areas is reasonably good.

The following information is from an April 2004 NSW State Water Macquarie Valley Newsletter and it gives the probabilities of receiving various allocations in the Macquarie Valley.

1. Drought conditions, zero per cent allocation.
2. Under dry conditions; the 2004–05 allocation is likely to increase to about two per cent by October 2004 and reach about 16 per cent by January 2005. This is the minimum to be expected in at least 70 per cent of years.
3. Under median conditions, the



Burrendong Dam at 10 per cent full (early May 2004).

2004–05 allocation is likely to increase to about 22 per cent by October 2004 and to reach about 45 per cent by January 2005. This is likely in 50 per cent of years.

4. Under wet conditions, the 2004–05 allocation is likely to increase to about 65 per cent by about October 2004 and about 90 per cent by January 2005. This is likely in 30 per cent of years.

Planting cotton in long fallow situations

Many cotton areas have experienced a prolonged dry spell. With summer rain producing river and on-farm flows there will be cotton planted in fields that have

been in long fallow — some of them have had two or more years with nothing growing in them.

It will be important to fully assess the nutritional needs of cotton planted in these areas to help reduce the potential impact of 'long fallow syndrome'. Long fallow syndrome or long fallow disorder is associated with poor VAM (vesicular arbuscular mycorrhizae) colonisation where long periods of bare, weed free fallows or crops with no mycorrhizal activity reduce the amount of VAM in the soil.

This can have serious implications for dryland cotton, where fallows generally



Industry field days are an important information source.



Variety trial performance is a useful guide to variety selection.

store more moisture. Inoculation with VAM is generally not successful. Crop rotations with short fallows are the best way of keeping VAM active in the soil.

VAM are soil fungi that form a symbiotic relationship with cotton plants' roots. The fungi improves the flow of nutrients to the plant which then supplied carbohydrate to the fungi. The uptake of P and Zn is delayed in crops poorly infected by VAM (source Nutripak — Cotton CRC).

RETURNING TO COTTON GROWING

For some cotton growers the 2004–05 season will see a return to full or nearly full production. As a consequence, there are a number of key issues that growers and consultants will need to consider in their overall cotton program. There have been many changes in the industry in the past season with many more to come in future years.

Perhaps the biggest single issue has been the phasing out of Ingard cotton and the introduction of Bollgard II cotton. This changeover in technology has meant that varietal choice has changed and Bollgard II cotton has meant some changes to the way cotton can now be grown.

Labour/machinery/finance requirements

Ensure labour, machinery, capital and farm infrastructure are matched to the expected area to be planted. Getting experienced staff in some areas could be difficult.

Field selection

Choose those fields which have a good track record for cotton production. Determine nutritional requirements and consider possible long fallow problems.

Varietal selection

Use long term yield and fibre quality results from cotton variety trials. As many Bollgard II varieties may only have two years of data, base selections on the performance of varietal families in each area.

Compare Fusarium Resistance Ranks and look at the number of trials used to get that F rank. Also compare Verticillium ranks and the number of trials used to gain those rankings. Attending the seed company's information tour meetings and using the trial results are good ways to get the latest information.

VARIETY TRIAL PERFORMANCE IS A USEFUL GUIDE TO VARIETY SELECTION

Seed treatment selection

Choose the the right seed treatment for

your particular situation. There are a number of new treatments available so assess trial results and determine what will give the best results in establishing a viable plant stand.

Refuge requirements

Depending on farm percentage of Bollgard II, the refuge requirements vary as determined in the Insect Resistance Management Strategy.

Water budgets

Work out accurate water budgets based

on available water to determine areas to be planted. Remember to include any refuge areas if required under the IRMS.

Neighbour notification

Notify all neighbours of your intention to plant cotton and in what fields. It is in everyone's interest to keep all neighbours on side.

There are many other issues that will need to be managed to assist with a successful return to cotton production. 