Cotton Catchment Communities CRC

COTTON *TALES*

Darling Downs

Queensland Government Department of Primary Industries and Fisheries

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Kate is moving on

It is with some regret that I notify you that this will be my final Cotton Tales as I will be leaving the position as Regional Cotton Extension Officer in Dalby.

I will transfer to the position of Development Extension Officer with Entomology with DPI&F in Toowoomba, starting on 12 May. This is the position previously held by Austin McLennan.

Although I am moving into a different role, I have made a commitment to finalise the Darling Downs trial booklet and this is currently in the final stages of editing. I would like to thank you all for the cooperation and help you have extended to me while I have been in this role.

I look forward to continuing my work with many of you albeit more in grains and pulses although a small cotton component remains part of this position.

Residue management to minimise cotton diseases

Residue management is important to plant disease because it can affect the survival and reproduction of plant pathogens.

Seedling diseases caused by *Rhizoctonia*, multiply on crop residues particularly legumes. Early incorporation of residues from cotton and legumes reduces carryover of *Rhizoctonia*.

Alternaria leafspot survives on cotton residues and the incidence of this disease can be reduced by incorporating cotton residues after harvest. Incorporation of crop residues is also recommended for Verticillium wilt which survives in infested cotton trash.

While incorporating cotton trash is recommended to minimise most cotton diseases, there is **one exception**. Research has shown that the impact of *Fusarium* is reduced if crop residues are retained on the soil surface for at least 6-8 weeks before incorporation. This practice reduces the survival of *Fusarium* spores which are a source of inoculum for subsequent crops.

It is important to stress that no single strategy will control the spread and development of cotton diseases. However some small steps such as appropriate residue management and minimising movement of pathogens through good farm hygiene are simple management actions to reduce disease on your farm.

Cotton bunchy top

During a recent disease survey on the Darling Downs, it was noted that many of the cotton volunteers growing alongside cotton fields showed symptoms of Cotton Bunchy Top (CBT). Lewis Wilson of CSIRO in Narrabri also reported finding CBT symptoms in cotton fields, not just in volunteer cotton.

CBT is spread by cotton aphids when they feed. Symptoms of CBT include reduced plant height, leaf surface area, petiole length and internode length. Pale, angular patterns on the leaf margins are often observed with the remainder of the leaf blade usually dark green in colour. These darker leaves have a leathery and sometimes glossy texture when compared to healthy plants. Typically, the pale angular patches in field-grown cotton turn red as leaves age. Boll development is also affected, with bolls often less than half the size of healthy bolls.

Both cotton aphids and the CBT disease need a host plant for survival through winter. It is likely that CBT uses a range of weeds as hosts, but this needs further research. However, cotton is a good host and volunteer or ratoon cotton plants can often be found on farms all year round. Volunteers can carry the disease and aphids through winter. Aphids can then move to cotton crops in the following spring and infect plants with the disease.

To reduce the risk of CBT on your farm it is very important to control volunteer or ratoon cotton and other potential weed hosts in fallows. It is equally important to practice good farm hygiene in non-cropping areas such as along head ditches and channels.

In terms of other cotton diseases on the Downs – the main disease observed was Fusarium wilt. No exotic diseases were evident in any of the fields inspected.

Biodiversity field day

A field day titled “Integrated Production with Conservation” will be held in the Dalby region on 20 June. Further details about the field day will be published in the local media.