

## **MEDIA RELEASE**

### **SAMPLING KEY TO COTTON INSECT MANAGEMENT**

Recent surveys in cotton growing areas have found a wide variety of aphids present, but varying in their numbers and likely impact.

Dr Lewis Wilson, Senior Principal Research Scientist, and Ms Tanya Smith, a Technical Assistant with CSIRO Plant Industry and the Cotton Catchment Communities CRC, report the presence of green pea, turnip, corn leaf, sow thistle and brown sow thistle aphids, and low numbers of cotton, cow pea and green peach aphids.

Commenting on the weekly CSD Web on Wednesday video program, Tanya Smith said that pea aphid was particularly abundant, coming off legumes such as the medics, as were the two aphids that use sow thistle as a host.

She said growers should scout crops to assess if aphid populations are breeding and producing offspring, which would indicate that they are likely to be a species that attacks cotton, such as cotton aphid, cowpea aphid or green peach aphid.

Many aphids that do not attack cotton will settle on cotton temporarily to test feed, but will find it unsuitable and move on she said.

She noted that fields most vulnerable to aphid infestation include those that have not been kept clean, where the weeds have been let go, and particularly fields with cotton that's come through from previous seasons.

"This allow the aphids to over winter and then they can go straight from the weeds on to the cotton crop which is coming through," she said.

Tanya Smith said there are large numbers of aphid predators and parasites around, due to the aphid populations on the abundant weeds. These include hoverfly larvae, ladybeetles, parasitic wasps and predatory bugs, and they will often control aphids on cotton.

She warned growers to be selective in their use of chemicals on aphids to ensure survival of the major control agents - beneficial insects – and to guard against the development of resistance.

She said Industry Development Officers have test kits available for assessing organophosphate resistance in aphid samples, which can help in deciding which control option to use if control is required.

"You also don't want to stick with the same chemical group when controlling aphids. Growers should vary the chemical groups they use, to avoid selecting for resistance to one particular group. Also, if you have used a particular seed treatment, then you don't want to use that same group when you are spraying to control aphids later on. A great source of information is the Cotton Pest Management Guide," she said.

Lewis Wilson, commenting on thrips prospects, said rain through winter and a reasonable amount of vegetation have provided a fertile ground for thrips development.

"Vegetation like the many weeds and wheat crops will be producing thrips at around the same time as the cotton is coming out of the ground. So I expect this season should be reasonable in terms of thrips numbers.

"For growers, what that means is they are weighing up the risk of thrips causing yield loss, versus the benefit they provide in terms of helping to control mites as a pest.

“For growers in the cooler regions, the risk of yield loss is a bit higher; it is about 1 year in 2. In a year like this they might consider actually taking some protection against thrips, whether it is a seed treatment or an in-furrow insecticide option.

“In the warmer regions the risk is probably lower, it’s about 1 year in 10, and even though this year has potentially high numbers, growers will need to weigh that up. Particularly with Bollgard II® where they might be sowing a little bit later they may avoid some of the thrips. Bollgard II® also has such good potential to recover from thrips damage because it is not going to lose fruit to heliothis later on.

“In terms of options, the seed treatments and the in-furrow insecticides are much more selective than spraying the crop with broad-spectrum insecticides to control the thrips and are probably the first option if you want to manage thrips.

“Coming in later on with a foliar spray is another option but it is potentially riskier, because the sort of products that you will be using such as omethoate or dimethoate will dramatically reduce beneficial numbers and thereby increase the risk of inducing an aphid, mite or whitefly problem.”

Dr Wilson also nominated spider mites as a potential problem this season, given the variety of hosts such as adjacent faba bean crops, turnip weed, marshmallow, and many other weeds and thistles.

“Mites use a wide variety of hosts, and given the abundance of winter weeds in many areas I think we have more potential this year for a mite problem than we have had in the last few years.

“Growers should be sampling early in the season to establish the level of mite population they have, as this information helps plan the pest management approach they take.

“For instance, if you have lots of mites, you’re definitely got aim to use more selective products if controlling other pests. You may even need to control those mites.

“ If you have low numbers of mites, you might be prepared to wait and see if the beneficials take control, re-sampling at least weekly so you have good ongoing information. So really it is a case of sampling, assessing your risk for the situation, keeping on monitoring it, and taking appropriate action if necessary.”

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