

Insecticides for use against pale cotton stainer bug

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Infestations of cotton stainer bug (CSB) have recently been reported in a number of different valleys and growers are spraying various chemicals to control them. In Australia, little is known about the chemical control options for this bug. A trial was conducted using some common chemicals to evaluate their efficacy against cotton stainer bug.

The trial

The trial was conducted in dryland cotton at Warra, 40 km west of Dalby. The treatments details are given in Table 1. The treatments were replicated three times and each plot measured 15 by 36 metres. The chemicals were applied with a ground rig (140 litres per hectare) using a 36 metre John Deere 4920 spray machine, fitted with 002 DG nozzles, six per row (four from the top and two from the sides) with two bar pressure.

Pre-treatment counts, zero days after treatment (0 DAT), were made the day before the treatments were applied. Post-treatment counts were made at three and seven DAT. Insects and spiders were sam-

pled using the beat cloth method on three one metre row sections per plot.

Pre-treatment insect number

Pre-treatment cotton stainer bug numbers were moderate, ranging from one to nine per metre and all of them were adults. The most abundant beneficials were spiders (59 per cent), followed by brown smudge bug (BSB) (37 per cent).

Effect on cotton stainer

The effects of the treatments on the bug are presented in Figure 1. Decis full rate, 400 and 400 mL plus salt reduced the population of CSB at three DAT by over 95 per cent and the efficacy of full rate and salt mixture increased up to 100 per cent at seven DAT.

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TABLE 1: Treatments and rates used in the trial

Treatment	Formulation (g/L)	Rate (mLitres per hectare)
Control	Untreated	
Decis	Deltamethrin 27.5 EC	700
Decis	Deltamethrin 27.5 EC	400
Decis + salt	Deltamethrin 27.5 EC + table salt	400 + 10 g/L of water
Steward	Indoxacarb 150 EC	850
Steward	Indoxacarb 150 EC	400
Steward + salt	Indoxacarb 150 EC + table salt	400 + 10 g/L of water
Regent	Fipronil 200 SC	125
Regent	Fipronil 200 SC	60
Regent + salt	Fipronil 200 SC + table salt	60 + 10 g/L of water

PALE COTTON STAINER BUG

(Photos Dr Lewis Wilson CSIRO Narrabri)



Adult (15 mm).

1st instar nymph (2–3 mm).



3rd instar nymph (6–8 mm).

4th instar nymph (9–11 mm).

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Steward 400 mL plus salt reduced the CSB population by 71 and 98 per cent at three and seven DAT, respectively. Efficacy of Steward 400 mL was poor both at three and seven DAT. Full rate of Steward gave 64 per cent kill at seven DAT.

Regent full rate, 60 and 60 mL plus salt gave 71, 63 and 73 per cent kill at three DAT and 74, 80 and 92 per cent kill at seven DAT, respectively.

Impact on the beneficials

The major beneficials present were brown smudge bug (BSB) nymphs and spiders. The population of BSB and spiders increased for all treatments except for Decis full rate and Decis 400 mL plus salt at three DAT where the spider population reduced by eight and 20 per cent, respectively.

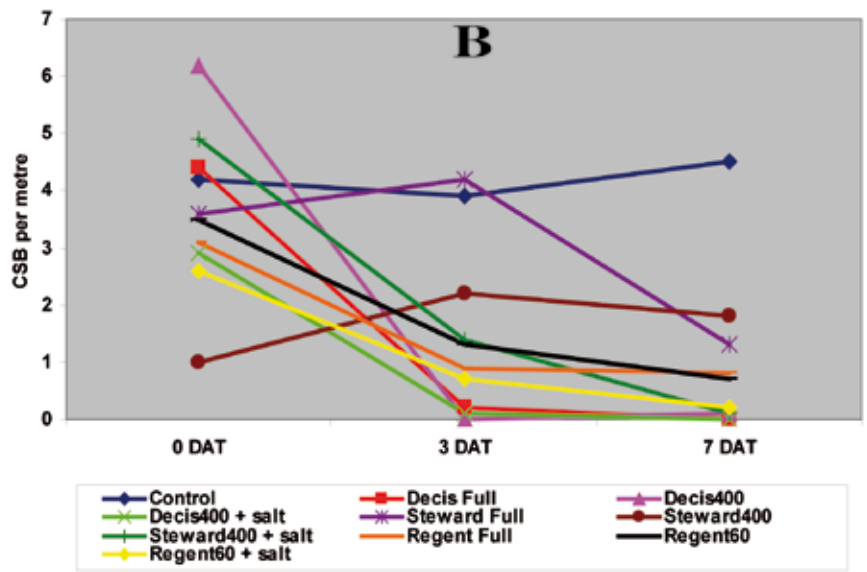
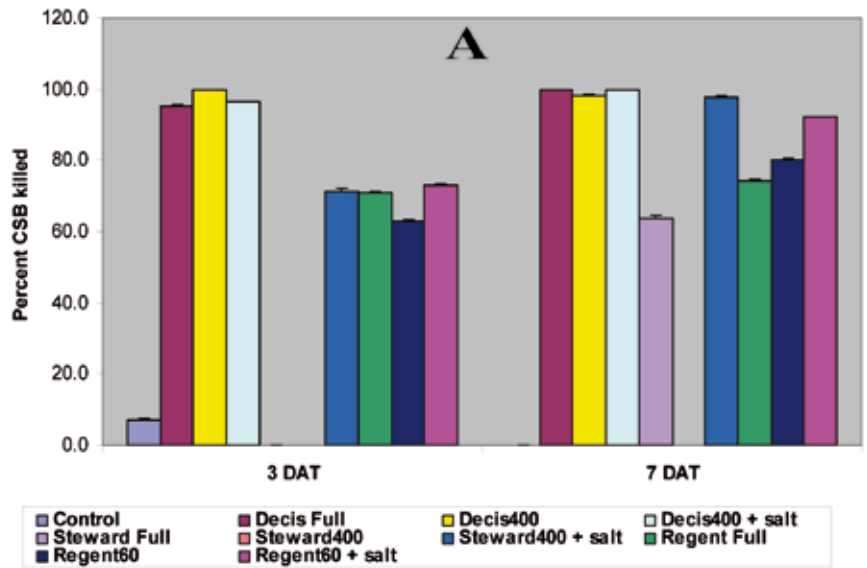
CONCLUSION

This is a preliminary study and the result should be considered as a guideline and not a recommendation. In this trial only two groups of beneficials were present, so the impact of the treatments to other beneficials is not known. Any use of broad spectrum chemical such as SPs may increase the risk of flaring whitefly and other secondary pests. These risks should be considered when making control decisions.

We would like to thank Wade Bidstrup of Warra for allowing us to conduct the trial and helping with the spray application and Michael Caldwell of Total Ag (Dalby) for his help with the sampling. Dr Lewis Wilson of CSIRO, Narrabri supplied photos. CRDC provided funding.



FIGURE 1: Effect of different chemicals on cotton stainer bug showing percent kill (A) and kill over time (B)



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