

BREAKTHROUGH IN SNAIL CONTROL

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An integrated research program led by SARDI and part funded by SAGIT over the past six years to develop control of white and conical snails in cereals, pulses and canola has led to some important advances.

SAGIT's investment has been in the areas of field research on baiting and biological control, the results of which have been incorporated into the Bash'Em, Burn'Em, Bait'Em program available in a 40 page colour manual and on DVD, and extended widely to grain growers.

BAITING

The results show that the juvenile snail recruits from that particular season cause major problems.

Prior to and early in the project, the best time for baiting was thought to be late winter and early spring in order to minimise the number before harvest.

The latest research shows otherwise.

Baiting in early April controls the snails before their reproductive cycle so it largely prevents the development of the number of young snails that is produced each year.

Research by scientists and farmers over several years has shown that baits should be applied in the second week in April.

Baits last about a month at this time of the year and if there is a delay because of dry conditions they will still be effective when rain or heavy dews occur. This ensures numbers are low at seeding.

To maintain effective control right through to the end of the season, the threat from fence lines and adjacent paddocks needs to be assessed and baits applied as necessary.

The results also showed that all available formulations of snails baits containing metaldehyde, methiocarb and iron EDTA are effective against snails, but there is a difference in kill of different species, with mortality of conical snails being less than white snails.

But in the end, it is the timing that counts.

To prove the point, consider some of the paddock results from farmer control

NO BAITING

Crop Canola: Cabling reduced numbers from high to 10/sqm. With no baiting spring numbers were up to 321 /sqm and at pre - harvest 354/sqm. This reinforces the importance of control prior to mating and their incredible capacity to reproduce and produce huge numbers of juveniles.

BAITING

Crop Wheat: No effective stubble management original numbers 45/sqm. Baiting reduced this to 5 and a post seeding count of 2.5/sqm. Late spring baiting reduced numbers from 15 to 6. Unfortunately by the pre - harvest count it had risen to 106/sqm as a result of invasion from fence lines. This example underlines the importance of vigilance in the control of snails, especially from fence lines and neighbouring paddocks.

Baiting of course should be used in conjunction with other control measures such as stubble management (slashing, rolling, cabling or burning) where these fit the overall farm system.

BIOLOGICAL CONTROL

SAGIT helped to establish the snail parasite in SA over a five-year period. Over 1100 parasitic flies have been released on Yorke Peninsula targeting the pointed snail, and in the last year of the project, 1000 flies were released to control the small pointed snail in the South East.

Surveys have shown that whilst establishment of the flies has occurred, it is low and the parasite is yet to exert any major impact on snail numbers. However as the implementation phase of biological control programs are often long term, it is possible that the impact will increase over time. Only surveys in 3 – 4 years time will give the true assessment of the success of release of parasites.

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