

Control of White Snails in Pasture

The Grain Research and Development Corporation, (GRDC), and the Department of Agriculture (WA) have published a number of useful guides regarding the control of white snails in Australia. Farmers with significant white snail problems should consult the articles available on the internet. This article is designed to be read in conjunction with these articles and focuses on the baits in more detail. Baits should only be regarded as *part* of the control strategy. In most cases the use of "Burning and Bashing" may also be part of the strategy.

There are four white pest snails in Australia:

1. *Cerņuella virgata*
2. *Cochlicella acuta*
3. *Theba pisana*
4. *Cochlicella barbara*.

The first two feed mainly on dead material whereas the second two mainly prefer living material. Dr Geoff Baker and coworkers have investigated if the snails of the first three species are attracted to particular foods but it appears that there is, in general, no particular food that attracts any species. They concluded that there was little advantage in incorporating any particular food as an attractant. The active ingredients commonly available in snail baits in Australia are metaldehyde, methiocarb and iron EDTA complex. These active ingredients work by different mechanisms. The size of the pellets also differ considerably between products as does the water fastness, efficacy, concentration of active ingredient and cost.

Metaldehyde baits have been available for several decades in Australia. Most products have 15 g/kg of metaldehyde. At least two products imported from Europe have a higher concentration and whilst it appears that these products are more effective their cost (over \$8000 per tonne) means they have little potential for the white snail problem in broad acre agriculture. Metaldehyde is highly toxic to non target baits such as mammals and birds. This has led to the development of products with a higher concentration of metaldehyde, with much lower application rates and very small pellets.

Methiocarb baits are a much newer addition to the snail control arsenal. Methiocarb is more toxic than metaldehyde and Australian versions of methiocarb bait (Baysol and Mesurol) are generally more effective than the common Australian metaldehyde baits.

Iron EDTA complex baits are an Australian invention which are both effective and relatively cheap. The first product was released in 1996. Ferric EDTA is degraded in UV light and whilst there no evidence that it could accumulate in the environment at present usage. Fe EDTA is widely used to treat iron deficiencies in both plants and animals. It is also used in a wide range of industrial and domestic products. Less than 1% of world production is used in snail pellets. Eradicate, is based on a 6% Ferric EDTA complex and is effective against all known Australian pest terrestrial mollusks including juvenile white snails. It gives the farmer with land infested with white snails an important addition to their arsenal.

Active Ingredient	Mode of Action
15-50 g/kg Metaldehyde	Irritant which causes excess mucus secretion and desiccation; nerve poison at high concentrations.
20 g/kg Methiocarb	Inhibits nervous system.
60 g/kg Fe-EDTA	Stomach poison, which is believed to reduce the oxygen carrying capacity of the mollusk "blood".

Useful resources:

ERADICATE should be used at between 5 kg/ha (for light infestations) up to 15 kg/ha for severe infestations. Directions for use, including timing, for specific crops and further details are given on the **ERADICATE** company website.

www.eradicatesnails.com.au

Bash 'Em, Burn 'Em Bait 'Em –integrated snail management in crops and pastures

www.grdc.com.au/Media-Centre/Bookshop/

Snail Back Pocket Guide

www.grdc.com.au/Media-Centre/Bookshop/

GRDC Pestlinks

www.grdc.com.au

Bulletin 4713

Identification and control of pests, slugs and snails for broadacre crops in Western Australia

www.agric.wa.gov.au

Ground Cover TV: Snails

www.grdc.com.au/GCTV



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