

# CRICKETS – BIOLOGY AND CONTROL

T-Tape<sup>®</sup> has been used in Australian crops for more than 19 years and is the market leader in drip tape. Drip irrigation in Australia is not new, and nor is cricket damage. Control options are very limited, and because of this some drip manufacturers have incorrectly focussed on tape type as a solution to the problem, rather than addressing the problem specifically. Although increasing wall thickness of tape will reduce damage, it is generally a costly short term solution which does not address the real problem. Irrespective of the type or brand of tape used, if cricket numbers are high damage will occur.

- There is no data that indicates that one brand of tape is less prone to damage than others.
- CONTROL is the most cost, and time effective way of managing crickets.
- High cricket numbers need to be controlled **between crops not at planting**.
- A well managed control strategy can have long term benefits.

## The Problem

Field & Mole crickets (*Teleogryllus* spp and *Gryllotalpa* spp) can cause damage to all drip irrigation tapes including T-Tape. Generally the thicker the tape wall the less damage that is caused. However, when populations are high even thick walled tape can be damaged.

Crickets are chewing pests that normally attack plant roots and underground tubers. As numbers increase crickets will attack drip tape and emerging and newly established seedlings. Crickets prefer moist heavier clay soils so the environment around drip irrigation tape is ideal for their incidence. The use of plastic mulch enhances the environment for cricket incidence; cricket damage may be more severe under plastic mulch.



## About The Pest

Field crickets are most common throughout Australia. However, both Field and Mole crickets can cause damage to tape.

In northern areas of Australia, 2 to 3 generations may occur between spring and autumn whilst in southern areas there is only one generation per year. Over-wintering occurs as eggs in South Australia and as eggs and late-stage nymphs of the autumn generation in northern areas.

Adults live for two to three months and are usually most numerous in late spring and in early summer to late autumn. Eggs are laid singly in the soil at a depth of 1-4 cm and each female may lay several hundred to more than 1,000 eggs. Reproduction is usually stimulated by rainfall during warm weather in spring, summer and autumn.

Eggs laid in spring, summer and early autumn hatch in one to three weeks. Populations may increase quickly when a mild winter and spring are followed by a warm dry summer. The mild conditions allow good survival of over-wintering eggs and nymphs, enabling cricket numbers to build up during spring.

# The Solution

Generally crickets do not simply migrate to a field and become a problem.

Cricket populations often occur only in specific fields or parts of fields and numbers tend to build up over a number of seasons.



**Example of how crickets numbers can increase in a field over time.**

Treating the symptom by using a thicker walled tape will reduce damage. However using this strategy means that the problem will continue to occur. **Control is the best option.**

At present the options for control of crickets are limited to chlorpyrifos baits. There are no products registered for the broadacre control of crickets.

Chlorpyrifos baits will control crickets effectively however:

**TIMING OF BAIT APPLICATIONS IS EXTREMELY IMPORTANT ESPECIALLY WHEN POPULATIONS ARE HIGH.**

Apply baits before crop establishment. The mixture for making grain baits comprises of 4 litres chlorpyrifos 500 EC + 5 litres sunflower oil + 100 kg cracked wheat. The recommended rate is to spread 2.5 kg of the bait mix per hectare. Check with your local agronomist, and **ALWAYS READ PRODUCT LABELS BEFORE USE.**

This should be done well in advance of a crop being planted, when there is an alternative food source baiting will have little or no effect on pest problems. This can be done in a program leading up to the crop planting as well as at the time when plastic mulch and T-Tape is laid prior to crop planting.

As part of this program it is also very important to use weed control, crop rotations and stubble management as insect numbers can decline naturally due to lack of food sources.

With a successful baiting campaign crickets numbers can be dramatically reduced in one season.

# The Future

Fipronil is a relatively new insecticide that is being developed by for the control of crickets. This product is very active on both species of crickets. Registration is currently being sought for fipronil as a bait.

## **FOR MORE DETAILED INFORMATION:**

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