



Eradicating Little Fire Ants from a suburban allotment

Overview

Baits (an attractive food matrix laced with a toxin) are regarded as best practice for control of ants. They work by exploiting the ants' social structure. Foraging ants find food and bring this back to the nest to share with their sisters, the larvae and the queen. By spreading these baits on the ground, the ants find the bait instead of the operator having to find the nest. Most commercial ant baits are manufactured in granular form and designed for easy distribution over the soil surface. These baits have usually been developed specifically for Red Imported Fire Ants as this is the largest market for chemical companies. They all take a similar form: comprised of pre-gel defatted corn grit mixed with ~20% (by weight), vegetable oil that has been pre-mixed with a toxin

Treatment programme

It is not possible to get 100% control from a single ant bait treatment. The chemicals listed above typically provide 70-85% control, leaving a small residual population. A total of 8-12 treatments over a year might be necessary for complete removal of the ant from a site.

Developing a treatment regime should take local climatic conditions into account. Treatment during a wet or monsoon season will not be very effective because the baits are affected by rain. If the climate is much the same all year round (like Kailua-Kona), then regular treatments need to be scheduled using weather forecasts to select dry days for bait application. The baits need to be applied to dry soil followed by 12-24 hours without rain.

Application methods

Granular baits can be spread by hand in a manner similar to feeding chickens. However, calibration using this method is difficult and normally results in too much product being used. Small inexpensive spreaders are available from a number of sources, and most pesticide suppliers will be able to supply them. These spreaders have a small hopper where the granules are stored and they work by turning a spinner handle. The units are calibrated by a variable opening in the hopper. Swath width is 3-4 yards. They can be modified to make them more effective. An info sheet showing how to do this is available at www.littlefireants.com and attached here for reference.

STANDARD OPERATING PROCEDURE: DISTRIBUTION OF ANT BAIT GRANULES

Purpose and scope

This standard operating procedure describes recommended methods for treating the ground within a designated outbreak of Little Fire Ant (*Wasmannia auropunctata*).

Background

Little Fire Ants are spreading rapidly through Hawaii. Eradication of these pests requires that ants are contained within infested areas and treated with products that will eradicate them.

Materials

1. Amdro™ fire ant bait or similar product
2. “Scott” brand bait spreader or similar

Method

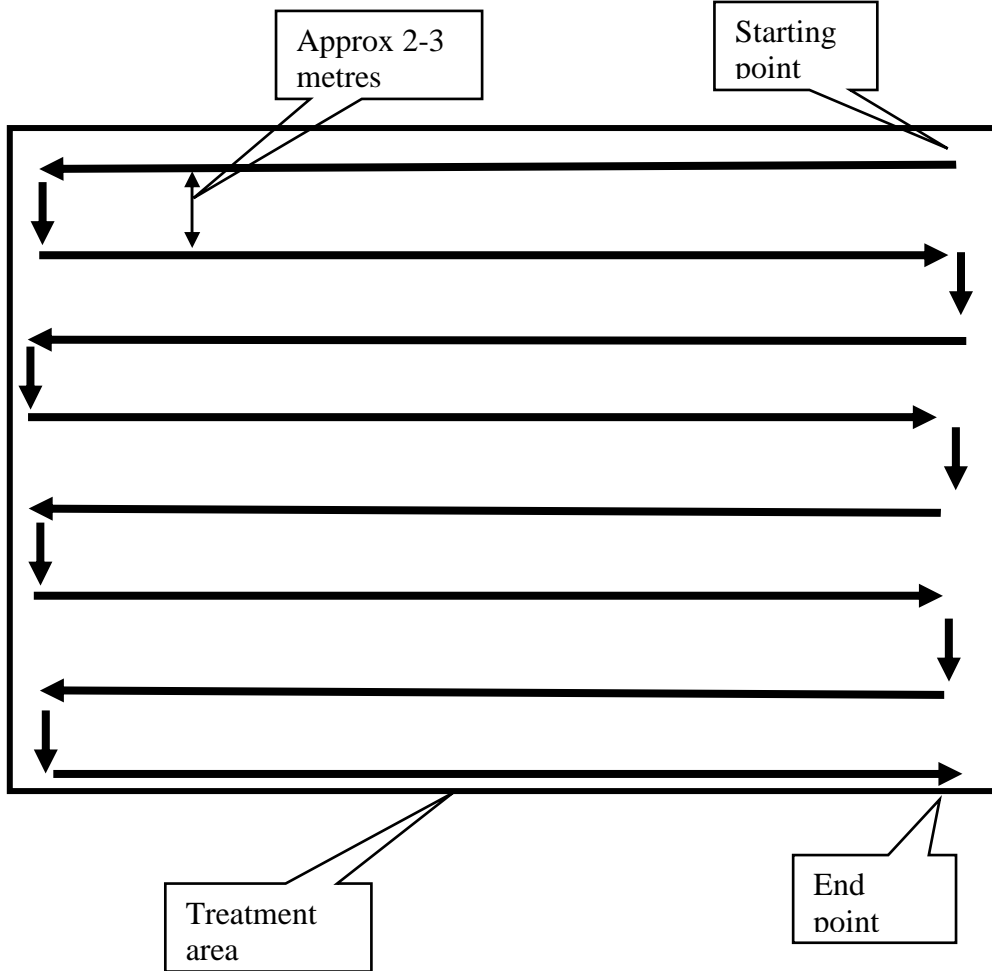
The intent of treatment with granular baits is to deliver an even distribution of the bait over the soil surface at an approximate rate of 1 pound product per acre. Amdro and similar products are easily distributed using a “Scott” brand bait spreader. The aperture is set at “1” and the operator winds the spreader handle at approximately 60 rpm while walking at 2 mph. The swath width thus created is approximately 3-4 yards. An overlapping series of parallel swaths is recommended. This is accomplished by starting on one boundary of an infested site and proceeding 1 metre inside the boundary. Once the operator reaches the end of the treatment area, he or she takes 2-3 paces towards the untreated area and returns parallel to the original path (see Figure below). Continuing this process, the designated area can be systematically covered. It is important that all ground is treated including spaces between buildings and corners of gardens. An additional sweep around buildings, garden edges and other structures is recommended.



Image of a “Scott” bait spreader showing the winding handle (a), the aperture adjustment (b) and correct grip. Set the aperture at “1”.



Walk at a steady 3km/h pace while winding spreader handle at approximately 60rpm.



recommended method for distribution of ant bait granules



LFA Fact Sheet 4

An improved spreader for ant baits: How to modify a cheap fertilizer spreader so it works more effectively

Often people tell me they spread ant baits like Amdro™, Esteem™, Maxforce™ and others by placing little clumps around where they see the ants. Little Fire Ants have very small nests but there might be thousands of them all around your house. By spreading the bait in just a few places, you might knock out the nests nearby but leave many nests untreated. It's always best to spread the bait as evenly as you can over your entire house-lot.

The easiest and cheapest way to do this is to buy a home fertilizer spreader. Home Depot normally carry the Scott™ brand for around \$15, but there are others on the market that are very similar. They all seem to have 2 major drawbacks:

- the bait “clumps” in the hopper and does not spread evenly. This happens because the agitator built into the hopper is designed for heavier granules like fertilizer and will not agitate the ant bait enough to keep it flowing.
- The spreaders have an adjustable opening that lets you set how much product comes out. This is held open by a spring-loader trigger which needs to be held down the whole time you are applying the bait. After a few minutes, my “trigger finger” begins to hurt from the strain.

Here are some ways you can modify these cheaper spreaders to make them easier to use. You don't need many tools, and it's fairly simple¹.

¹ Thanks to Jason Reberger who first showed me these tricks a few years ago.



Figure 1. A Scott™ “Handy Green” fertilizer spreader

Improving the agitator

The agitator is the orange plastic “T” shaped device in the bottom of the hopper. This can easily be pulled out. Wrap a small cable tie around the stem and tighten the tie as tightly as possible. Then cut it down so an inch or so is left sticking out. The cable tie should wrap around the stem in an anti-clockwise direction when viewed from above so when it is in the hopper, it is wrapped the way shown in the figures below.



Figure 2.
Cable tie ready to be placed onto the agitator stem.



Figure 2.
Cut the cable tie down to leave a one inch end. Cut the tie after placing it onto the stem so it will be easier to tighten

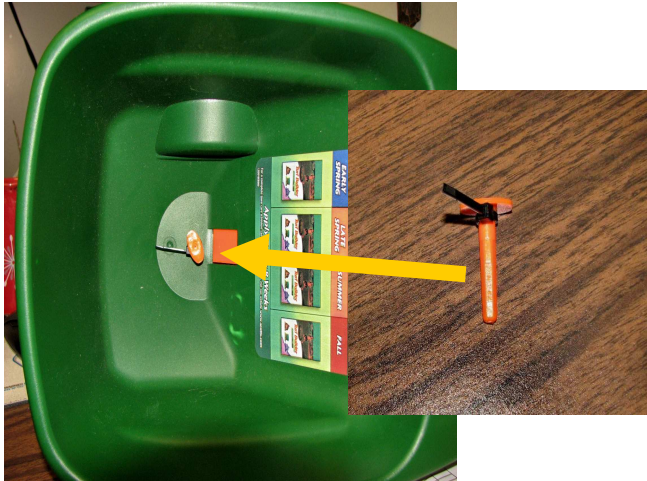


figure 3. modified agitator in place and ready for use

Locking the trigger

Hold the trigger open at your desired setting. Usually #1 is sufficient, but a better position is half way between #1 and #2². Then drill a small pilot hole and drive a self tapping screw through the assembly so the trigger remains open.



Figure 4.
Screw
holding the
trigger
permanently
open.

² set the trigger at 2 then manually hold the trigger so the opening on the hopper is bigger than #1 and smaller than #2 while drilling the pilot hole

Some cautions

1. With the opening in the hopper open all the time, be careful not to let bait dribble out of the spreader until you are ready to start
2. any modifications are probably going to void the manufacturer's warrantee
3. You do all this at your own risk. I'm not responsible for any damage you may cause to or by the spreader...
4. The spreader shown in this fact sheet is for demonstration purposes only and is not an endorsement or recommendation.

Now you are ready to go. Happy ant killing!