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QFF Grower Treatment Program Naturature use

Alan Roberts



DEPARTMENT OF
PRIMARY INDUSTRIES

biosecurity

Grower Treatment Program for QFF

Baiting with Naturalure™ Fruit Fly Bait Concentrate (Naturalure) is a vital component of the program

Mixing and using Naturalure is unlike any other chemical use

There are six (6) critical factors in using Naturalure

Using Naturalure as a dilute spot bait

It is absolutely critical that growers read and understand the Naturalure label before using the product



READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Naturalure™



Fruit Fly Bait Concentrate

ACTIVE CONSTITUENT: 0.24 g/L SPINOSAD

GROUP 5A INSECTICIDE

For the control of Fruit flies, including Queensland fruit fly and Medfly, infesting various tree, fruit, nut, vine and vegetable crops and ornamentals and on fly resting sites, including non-crop vegetation.

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Contents: 1000 Litres



DIRECTIONS FOR USE: All States

Situation	Pest	Use rate	Critical Comments
Tree, fruit, nut, vine and vegetable crops and ornamentals	Fruit flies, including: Queensland fruit fly (<i>Bactrocera tryoni</i>) & Mediterranean fruit fly (<i>Ceratitis capitata</i>)	1 L/ha	Mix 1 part of Naturalure Fruit Fly Bait Concentrate with 6.5 parts of water. Spray solution can be applied as a band or spot spray (see Application section)
Non-crop vegetation and other fruit fly resting sites (for use in area-wide fruit fly eradication or control programs)			Dilute as above or use as a concentrate spray by mixing 1 part of Naturalure Fruit Fly Bait Concentrate with 1.5 parts of water and apply as a spot spray (see Application section).

AVOID spraying the fruit as phytotoxicity may occur. Mangoes and pears are particularly susceptible to blemishes, discolouration or severe spotting (superficial on the skin only) from protein-based baits. The risk of phytotoxicity is increased during hot, dry conditions and re-application of spray to the same location on the plants. If using a weekly spray program, alternate tree or crop rows to which the product is applied. Re-apply if rain washes bait off the foliage.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIOD: All crops
Not required when used as directed

GENERAL INSTRUCTIONS

Naturalure Fruit Fly Bait Concentrate is a protein and sugar based bait containing the active ingredient spinosad. Once applied, fruit flies can detect the bait from several metres away. Naturalure Fruit Fly Bait Concentrate can be diluted with water (see MIXING section below) to produce either a concentrated or a dilute solution. Use the concentrated solution if application equipment will allow, as this will maximise bait longevity and improve rainfastness. If necessary, remove filters and strainers from spraying equipment to avoid blockages. Note: Baiting for fruit fly control should be supplemented by good orchard management practices such as removal of fallen and/or rotting fruit.

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management Naturalure Fruit Fly Bait Concentrate is a Group 5A insecticide. Some naturally occurring insect biotypes resistant to Naturalure Fruit Fly Bait Concentrate and other Group 5A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Naturalure Fruit Fly Bait Concentrate or other Group 5A insecticides are used repeatedly. The effectiveness of Naturalure Fruit Fly Bait Concentrate on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of Naturalure Fruit Fly Bait Concentrate to control resistant insects.

GROUP 5A INSECTICIDE

MIXING:

Once mixed, constant agitation of the spray solution is recommended to ensure uniformity of spray mixture. Allow agitation system to operate for at least 5 minutes before applying. Once diluted, the solution should be used within 24 hours.

Concentrated Solution: Mix 1 part of Naturalure Fruit Fly Bait Concentrate with 1.5 parts of water.

First add water (equivalent to one-half of the volume of Naturalure Concentrate to be mixed) to the spray tank and start the agitation system. Then add the full amount of Naturalure Concentrate followed by an equal amount of water.

Dilute Solution: Mix 1 part of Naturalure Fruit Fly Bait Concentrate with 6.5 parts of water.

First add water (equivalent to the volume of Naturalure Concentrate to be mixed) to the spray tank or premixing tank and start the agitation system. Then add the full amount of Naturalure Concentrate followed by the remaining amount of water.

APPLICATION:

Begin applications as soon as monitoring traps indicate flies are present and fruit is at a susceptible stage. Repeat applications every 7 days, re-applying sooner if rain washes off the deposit. A large spray droplet size of 4000 to 6000 µ (4-6 mm) is recommended to optimise duration of bait's attractiveness to flies. Apply as either a band or spot spray to the lower canopy of fruiting plants as follows:

Band sprays (concentrated or dilute solution):
Apply as a coarse spray in a 1m wide band to the skirt of trees. Apply to one side of every row or every second row of trees.

Spot sprays of the concentrated solution:
Apply to trees and foliage as coarse spots of 20 mL per spot of 1m². Apply 125 spots per hectare.

Spot sprays of the dilute solution:
Apply to trees and foliage as coarse spots of 50 mL per spot of 1m². Apply 150 spots per hectare.

Spots should be distributed evenly throughout an orchard to optimise effectiveness. Adjust the application of the spots to suit the number of trees per hectare, but do not exceed the application rate above.

CLEANING SPRAY EQUIPMENT

After using Naturalure Fruit Fly Bait Concentrate empty the tank and completely drain the system. Rinse the tank, pumps, lines, hoses, filters and nozzles by circulating clean water through the system. Drain and repeat the rinsing procedure twice.

PROTECTION OF LIVESTOCK

Dangerous to bees. Avoid direct application or drift of the spray mix onto beehives. **DO NOT** spray on plants in flower if bees are active. Once the spray deposit has dried, foraging bees will not be affected.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT allow the product or used containers to enter dams, ponds, waterways or drains. **DO NOT** apply in strong winds or any other conditions that may result in drift onto adjacent pastures, crops or water supplies.

PROTECTION OF NON-TARGET INSECTS

Beneficial insects contribute to control of pest outbreaks. Applications of Naturalure Fruit Fly Bait Concentrate are unlikely to affect lacewings (*Chrysopa* spp.), predatory bugs (*Geocoris*, *Orius* and *Nabis* spp.), spiders and most species of ladybird beetles (*Coccinella*, *Diomus* and *Harmonia* spp.). However some species of beneficial insects may be sensitive to Naturalure Fruit Fly Bait Concentrate and its use may temporarily reduce populations of parasitoid wasps (especially *Trichogramma* spp.), ants, some beetles and tachinid flies. This may lead to some disruption of IPM systems based on these species, but generally populations will recover.

STORAGE AND DISPOSAL

• Keep out of reach of children.
• Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.
Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SMALL SPILL MANAGEMENT

Sweep up material and contain in a refuse vessel for disposal in the same manner as for containers (see STORAGE and DISPOSAL section).

SAFETY DIRECTIONS

- May irritate the eyes. Avoid contact with eyes.
- If product is in eyes, wash it out immediately with water.
- After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Naturalure Fruit Fly Bait Concentrate contains proteins from a plant extract to which some people may be allergic. If you are concerned about a potential allergic response, it is advisable to wear gloves and/or some face protection such as a dust mask when mixing or using the product. Take care to avoid contact of the product or spray solution with skin and eyes.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone: Australia 13 11 26.

SAFETY DATA SHEET

Additional information is listed on the Safety Data Sheet for NATURALURE FRUIT FLY BAIT CONCENTRATE which is available from Dow AgroSciences on request. Call Customer Service Toll Free on 1-800 700 096 or visit www.dowagrosciences.com.au

NOTICE

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. No warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of the product contrary to label instructions, or under off-label permits not endorsed by Dow AgroSciences or under abnormal conditions.

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The six (6) critical factors

- 1. Correct timing** application of Naturalure should begin as soon as monitoring indicates flies are present and fruit is at a susceptible stage.
Apply Naturalure at seven day intervals.

Because this is a calendar spray program you can mark the spray dates on your calendar in advance so you don't commit to anything else on a spray day. Maintaining the applications at seven day intervals is vital, even over busy periods. The only exception would be if weather conditions (i.e. rain or strong winds) prevent spraying so it could be deferred until the following day.

The six (6) critical factors

2. Correct dilution - Naturalure is to be applied as 1 part Naturalure product to 6.5 parts water. This is equivalent to 5 litres of Naturalure in 32½ litres of water or 10 litres Naturalure in 65 litres of water.

Make sure you use the label dilution, and not some other dilution that someone else may have told you.

The six (6) critical factors

3. Correct rate - The use rate of Naturalure is 1 litre/ha. This means that 1 litre of the Naturalure product must be applied to each hectare of host plants.

There is only one application rate and it is 1 L/ha, and this is proven to provide the best QFF control outcome.

The six (6) critical factors

4. Correct spot volume - if applying the Naturalure as spots of dilute solution, **the correct spot volume is 50 mL/spot**, and each spot should cover about 1 square metre of foliage.

The spots need to be at the correct volume and size to provide the best opportunity for a successful control program.

The six (6) critical factors

5. Correct number of trees treated - if applying Naturalure as spots of dilute solution, **the correct number of trees to be treated is 150 trees/hectare.**

Treating less than the correct number of trees lessens the probability of a successful control program, so getting this right is a vital part of the process. It is important to apply the required 150 spots evenly throughout a block (rather than just treat an entire row occasionally) to provide the greatest opportunity of attracting QFF to the bait.

GTP support

DPI is committed to supporting the QFF Grower Treatment Program

For information and assistance with any issue related to chemical use, including helping you with your calculations contact Jo Robinson on **0439 206 561** (during business hours only)