

Pre-Harvest Bait Treatments

Standard Pre-Harvest Bait Treatment Protocol

(In warmer months harvest can begin after a minimum of four treatments within a minimum of thirty days)

- I. Obtain Project required paperwork
 - A. QC Master Permit 1321 Compliance Agreement
 - B. Regulatory Treatment Agreement
 - C. SLN (only if using Aquamul Malathion 8)
- II. Look at Pre-Harvest Treatment Schedule to determine when to begin Pre-Harvest bait treatments
- III. When using Aquamul Malathion 8 with Nu-Lure Insect Bait
 - A. Treat every 6 to 14 days until harvest is complete
 1. Every 6-10 days requires a minimum of 4 treatments for a thirty day treatment period
 2. Every 11-14 days requires a minimum of 4 treatments which results in a 33-36 day treatment period
 3. May alternate treatment intervals to decrease or increase the number of required treatments
 - a. **Never** less than 4 treatments
 - b. **Never** less than a 30 day treatment period
 - B. May use GF-120 Naturalyte for last Aquamul Malathion 8 treatment to shorten pre-harvest interval
 - C. When required number of treatments are completed
 1. Obtain Project issued Certificate of Quarantine Compliance
 2. Must continue treatments if harvest is not completed by the end date listed on the Certificate of Quarantine Compliance
- IV. When using GF-120 Naturalyte (Spinosad)
 - A. Treat every 7 to 10 days until harvest is complete
 1. Every 7-10 days requires a minimum of 4 treatments
 2. May alternate treatment intervals to decrease or increase the number of required treatments
 - a. **Never** less than 4 treatments
 - b. **Never** less than a 30 day treatment period
 - B. When required number of treatments are completed
 1. Obtain Project issued Certificate of Quarantine Compliance
 2. Must continue treatments if harvest is not completed by the end date listed on Certificate of Quarantine Compliance
- V. Maintain your treatment schedule
 - A. The Project **will** extend a treatment interval due to inclement weather
 - B. The Project **will not** extend a treatment interval due to grower negligence or equipment failure
 1. For Aquamul Malathion 8, **all** previous treatments **are voided** if the grower exceeds the 14 day interval period between treatments
 2. For GF-120 Naturalyte, **all** previous treatments **are voided** if the grower exceeds the 10 day interval period between treatments

Pesticide Rates, Re-entry and Pre-harvest Interval Table

Pesticides	Commodities	Re-entry Interval (REI)	Pre-harvest Interval (PHI)	Remarks
Malathion 8 Aquamul EPA # 34704-474 Add Protein Bait Water should be buffered to near 7.0 pH when mixing with Malathion pesticides Do Not use on Apples, Pears, Persimmons, Plums or Pomegranates! Ground or Aerial application	Blackberries, Blueberries, Boysenberries, Currants, Dewberries, Gooseberries, Loganberries, Mangos, Melons, other than Watermelons, Papayas, Pumpkins, Raspberries, Squash, winter, Tomatoes, Watermelons	12 hours	1 day	Per Label/SLN
	Guavas	12 hours	2 days	Per Label/SLN
	Cherries, Eggplant, Passion Fruit, Peppers, Strawberries	12 hours	3 days	Per Label/SLN
	Figs	12 hours	5 days	Per Label/SLN
	Apricots	12 hours	6 days	Per Label/SLN
	Grapefruit, Lemons, Limes, Oranges, Tangerines, Tangelos	12 hours	7 days	Per Label/SLN
	Cucumbers, Squash, summer	24 hours	1 day	Per Label/SLN
	Grapes	24 hours (72 hours for girdling and tying)	3 days	Per Label/SLN
	Nectarines, Peaches, Walnuts	24 hours	7 days	Per Label/SLN
	Avocados, Kumquats	48 hours	7 days	Per Label/SLN
GF 120 NF, Naturalyte (organic Spinosad) EPA #62719-498 Bait pre-mixed Ground or Aerial application	All Commerical Fruit per Section 3 – including commodities such as Apples, Pears, Plums, Persimmons, and Pomegranates not listed on the Malathion label or SLN	4 hours	4 hours	Per Label (no SLN required)
<ol style="list-style-type: none"> Application interval for Malathion is between 6 to 14 days. Spinosad application interval is between 7-10 days. If treatment is interrupted by breakdowns or other factors, the entire zone may be treated within 24 hours to preserve the scheduled interval. Do not treat when there is 50% or more chance of receiving significant rainfall. 0.5 inches of rain within 24 hours of a treatment nullifies the treatment. SLN must be in possession of applicator and supervisory personnel responsible for conducting treatment at the treatment site. Spinosad may be substituted for last Malathion treatment to achieve 24 hour PHI and commence harvesting without the longer PHI for Malathion. <p>Pesticide Rates: Malathion 8 Aquamul formulation: Use 2.8 ounces per acre <u>plus</u> Nu-Lure Insect Bait (Miller Co.) CA Reg. No. 72-50012-AA: Use 9.6 ounces per acre. Note: The Malathion 8 Aquamul rate is the minimum effective dose, which is much less than the label rate – determined by a research committee during previous exotic fruit fly quarantines in California.</p> <p>Spinosad formulation: Aerial – use 20 oz. of product mixed with 30 oz of water per acre. (1:1.5 ratio) Ground – use 20 oz of product mixed with 20, 40, 60, or 80 oz of water per acre. (1:1, 1:2, 1:3, or 1:4 ratio)</p>				

Bait treatment with Malathion or Spinosad for Regulatory Pre-Harvest Treatment

For a 100 trees/acre grove @ 20' x 20' spacing approximately 60 trees will be sprayed:

X	X	X	X	X	X	X	X	X	X
X				X				X	X
X		X				X			X
X	X			X				X	X
X		X				X			X
X				X				X	X
X		X				X			X
X	X			X				X	X
X		X				X			X
X	X	X	X	X	X	X	X	X	X

All Perimeter trees sprayed.

Inside the grove, every other tree of every other row needs to be sprayed.

NOTE:

A large spray droplet size of 4000 to 6000 μ (4-6 mm) is recommended to optimize length of bait attractance. Fruit flies can detect the bait from several yards away. On ground applications spot or strip, spray several areas on the inner canopy of fruiting plants. Avoid weather conditions that could result in drift to nontarget areas. Direct spray application to bottoms of leaves inside the foliage canopy to reduce direct exposure to sun and rain.

**1 ACRE (100 TREES @ 20' x 20' SPACING)
58 TREES SPRAYED**

[illegible]

**All
Perimeter
Trees
Sprayed**

**Every Other Tree,
Every Other Row
Sprayed (approx)
Interior of Grove**

63 TREES SPRAYED @ 120 TREES PER ACRE

[illegible]

74 TREES SPRAYED @ 150 TREES PER ACRE

[illegible]