CDFA Approved Treatments for Japanese Beetle

All pesticide products must be labeled in the state where treatments are applied, and must be used in strict accordance with product labeling instructions and worker protection standards. Nothing in this document is intended to augment or contradict EPA-approved label instructions. Phytosanitary officials and nursery industry members should verify registration/labeling status prior to use of a particular product.

Environmental factors, varietal differences, and stage of growth may have significant effects on phytotoxic expression. When using any pesticide, it is recommended that a small group of plants be treated at the recommended rate under the anticipated growing conditions and observed for phytotoxic symptoms for at least seven days before large numbers of plants are treated.

All treatments will be performed under direct supervision of a phytosanitary official or under compliance agreement. Treatments and procedures under a compliance agreement will be monitored closely throughout the season. Unless the shipper is operating under a compliance agreement, a state phytosanitary certificate listing and verifying the treatment used must be forwarded to the receiving state via fax or electronic mail, as well as accompanying the shipment. The phytosanitary certificate shall bear the following additional declaration: "The rooted plants were treated to control Popillia japonica according to the criteria for shipment to category 1 states as provided in the U.S. Domestic Japanese Beetle Harmonization Plan." This same wording will be used in the form of a sticker or stamp and will accompany shipments when a shipper is operating under a compliance agreement

On an interim basis, additional treatments may be accepted if the proposed product is appropriately labeled, effectively controls Japanese beetle, and is mutually agreeable to the states involved.

1. Dip Treatment - B&B and Container Plants

Chlorpyrifos (Dursban TNP). Apply at a rate of two (2.0) pounds active ingredient (64 ounces) per 100 gallons of water. Only balled and burlapped, potted and containerized nursery stock with rootballs twelve (12) inches in diameter or smaller and consisting of non-clay soil are eligible. The potted or balled and burlapped stock will be dipped so as to submerge the entire root ball and all growing media of the container or the root retaining materials into the solution. The submersion time should be a minimum of two (2.0) minutes and until complete saturation occurs. Upon removal from the solution the plants are drained in an environmentally safe way.

Treatment is to be applied against Japanese beetle larval stages. Treatment must be applied between September 15 and April 15 in southern states and between September 1 and May 1 in the northern states as determined by the appropriate phytosanitary official. Growing media must be at least 50^{o} F at the time of treatment. Medium should be of moderate moisture content (not too wet or not too dry) so that pesticide will adequately penetrate the medium. Plants should not be shipped before they are well drained and can be easily handled. Treated material must be shipped prior to beetle flight, or be protected from re-infestation. During the adult flight period all treated plants must be protected from re-infestation if they are held for more than two weeks before shipment.

2. Drench Treatments - Container Plants Only

Potting media used must be sterile and soilless, containers must be clean. Field potted plants are not eligible for certification using this protocol. This is a prophylactic treatment protocol targeting eggs and early first instar larvae. If the containers are exposed to a second flight season they must be retreated.

Imidacloprid (Imidia EPro 60 WSP or Benefit 60 WP). Apply one-half (0.5) gram of active ingredient per gallon as a prophylactic treatment just prior to Japanese beetle adult flight season (June 1, or as otherwise determined by the phytosanitary official). Apply tank mix as a drench to wet the entire surface of the potting media. A twenty-four (24) gallon tank mix should be enough to treat 120-140 one-gallon containers. Avoid over drenching so as not to waste active ingredient through leaching. During the adult flight season, plants must be retreated after sixteen (16) weeks if not shipped to assure adequate protection.

Bifenthrin (Talstar Nursery Flowable 7.9%). Mix at the rate of twenty (20) ounces per 100 gallons of water. Apply, as a drench, approximately eight (8) ounces of tank mix per six (6) inches of container diameter.

3. Media (Granule) Incorporation - Container Plants Only

All pesticides used for media incorporation must be mixed prior to potting and plants potted a minimum of thirty (30) days prior to shipment. Potting media used must be sterile and soilless, containers must be clean and plants for potting will be free of Japanese beetle. The granules must be incorporated into the media prior to potting. Field potted plants are not eligible for treatment. This treatment protocol targets eggs and early first instar larvae and allows for certification of plants that have been exposed to only one flight season after application. If the containers are to be exposed to a second flight season they must be repotted with a granule incorporated mix or retreated using one of the approved drench treatments. Pesticides approved for media incorporation are:

Bifenthrin (Talstar T&O Granular (0.2 G)). Mix at the rate of 25 ppm or one-third (0.33) of a pound per cubic yard based on a potting media bulk density of 200. (bulk density = dry weight in pounds of one cubic yard of potting media)).

4. Methyl Bromide Fumigation

Nursery stock: methyl bromide fumigation at NAP, chamber or tarpaulin. See pages 4 and 5 for authorized schedules.

Many plant cultivars may be severely injured by methyl bromide fumigation. To minimize injury, plants should be free of surface moisture. However, pans of water should be placed around the chamber floor to lower the risk of plant damage. The fumigant should be injected into the chamber as a high-temperature (210º F vapor) and not as a liquid. Foliage should not touch the inner sides of the chamber or enclosure, and should be kept out of the direct air blast from the circulating and exhaust fans. For best results, the nursery stock should be at the temperature of the selected schedule prior to treatment.

Material treated from October through April must be shipped prior to beetle flight or be protected from re-infestation. During the adult flight period all treated plants must be protected from re-infestation if they are held before shipment.

5. Freezing Tissue Treatment

The following method of freezing plant material and associated soil that could harbor live Japanese beetle life stages has been approved by California Department of Food and Agriculture as an authorized treatment to meet the requirements of CCR 3280. A certificate of treatment issued by an official of the origin department of agriculture must accompany shipments of this material.

Plant material and associated soil must be frozen at −80oC for one hour prior to shipping

6. Heat Treatment (Approved 11.5.2012)

The following method of heating soil that could harbor live Japanese beetle life stages has been approved by California Department of Food and Agriculture as an authorized treatment to meet the requirements of CCR 3280

Soil should be heated to 150°F for thirty minutes. Time begins when interior core temperature of the soil has reached 150°F.

Popillia japonica Japanese Beetle COLEOPTERA

NURSERY STOCK

1-(QT). Methyl Bromide Fumigation, Chamber at NAP, or Tarp

Many plant cultivars are severely injured by methyl bromide fumigation. To avoid unnecessary injury, plants should be free of surface moisture prior to treatment. Foliage should not touch the inner sides of the chamber or enclosure, and should be kept out of the direct air blast from the circulating and exhaust fans. For best results, the nursery stock should be at the temperature of the selected schedule prior to treatment.

The pesticide products listed in Appendix 'A' under the Special Local Need registration CA890037 are authorized for this use.

Fumigation schedules:

LONG TERM EXPOSURE

24 g/m^3 (1-1/2 lb/1000 ft^3) for 2-1/2 hours at 23.8°C (75°F) or above

(18 g (oz) minimum gas concentration at 1/2 hour)
(12 g (oz) minimum gas concentration at 2-1/2 hours)

32 g/m^3 (2 lb/1000 ft^3) for 2-1/2 hours at 21°-23.3°C (70°-74°F)

(24 g (oz) minimum gas concentration at 1/2 hour)
(16 g (oz) minimum gas concentration at 2-1/2 hours)

40 g/m^3 (2-1/2 lb/1000 ft^3) for 3 hours at 15.5°-20.5°C (60°-69°F)

(30 g (oz) minimum gas concentration at 1/2 hour)
(20 g (oz) minimum gas concentration at 3 hours)

48 g/m^3 (3 lb/1000 ft^3) for 4 hours at 10°-15°C (50°-59°F)

(36 g (oz) minimum gas concentration at 1/2 hour)
(24 g (oz) minimum gas concentration at 4 hours)

56 g/m^3 (3-1/2 lb/1000 ft^3) for 4-1/2 hours at 4.4°-9.4°C (40°-49°F)

(42 g (oz) minimum gas concentration at 1/2 hour)
(28 g (oz) minimum gas concentration at 4-1/2 hours)

(Rev. March 1, 1991)

SHORT TERM EXPOSURE

48 g/m^3 (3 lb/1000 ft^3) for 2-1/2 hours at 15.5°-20.5°C (60°-69°F)

(36 g (oz) minimum gas concentration at 1/2 hour)
(24 g (oz) minimum gas concentration at 2-1/2 hours)

64 g/m^3 (4 lb/1000 ft^3) for 2-1/2 hours at 10°-15°C (50°-59°F)

(48 g (oz) minimum gas concentration at 1/2 hour)
(32 g (oz) minimum gas concentration at 2-1/2 hours)

80 g/m^3 (5 lb/1000 ft^3) for 2-1/2 hours at 4.4°-9.4°C (40°-49°F)

(60 g (oz) minimum gas concentration at 1/2 hour)
(40 g (oz) minimum gas concentration at 2-1/2 hours)

2. Diazinon Granular Treatment

This treatment can only be conducted within California under authority of the California Department of Food and Agriculture. When an established infestation has been discovered, warranting eradicative action, this treatment offers a means for the movement of regulated commodities from restricted to nonrestricted areas.

The pesticide products listed in Appendix 'A' under the Special Local Need registration CA830056 are authorized for this use.

Dosage and procedure:

Sprinkle granules, at the rate of 0.9 pound product/1000 square feet at the base of the plants in containers or flats. Water thoroughly. Repeat applications every 10 to 14 days for a total of three treatments.

(Est. January 1, 1989)