

This information is for promotional purposes only. Space considerations may require information to be omitted. Always refer to the actual package for complete label verbiage. This product may not yet be available or approved for sale or use in your area.

# RESTRICTED USE PESTICIDE

Toxic to Fish and Aquatic Organisms

For retail sale to and use only by certified applicators or persons under their direct supervision and only for the uses covered by the certified applicator's certification.

BIFENTHRIN GROUP 3A INSECTICIDE



# Batallion<sup>TM</sup>

## 2 EC



Contains bifenthrin, the active ingredient used in Brigade<sup>®</sup> 2EC.

### Insecticide/Miticide

For use to control listed insects and mites on artichokes, brassicas, caneberries, canola, christmas trees\*, cilantro, citrus, coriander, corn, cotton, crambe, cucurbits, dried beans and peas, fruiting vegetables, grapes, head lettuce, hops, leafy brassicas, mayhaw, okra, peanuts, pears, rapeseed, root crops, sod farms\*, soybeans, spinach, succulent peas and beans, tobacco, and tuberous and corm vegetables.

**\*NOT FOR USE IN CALIFORNIA**

**DO NOT APPLY THIS PRODUCT ON SOD FARMS IN NASSAU OR SUFFOLK COUNTY, NEW YORK**

|   |               |
|---|---------------|
| <b>ACTIVE INGREDIENT:</b>   | (% by weight) |
| Bifenthrin: (2 methyl[1,1-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate* | 25.0%         |
| <b>OTHER INGREDIENTS**:</b>   | 75.0%         |
| <b>TOTAL:</b>   | 100.0%        |

\* Cis isomers 97% minimum, trans isomers 3% maximum. \*\* Contains xylene range aromatic solvents. This product contains 2 pounds active ingredient per gallon.

EPA Reg. No.: 91234-104

## KEEP OUT OF REACH OF CHILDREN WARNING-AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

| FIRST AID   |
|---|
| <p><b>IF SWALLOWED:</b> ▪ Immediately call a poison control center or doctor. ▪ Do not induce vomiting unless told to do so by a poison control center or doctor. ▪ Do not give any liquid to the person. ▪ Do not give anything by mouth to an unconscious person. <b>IF IN EYES:</b> ▪ Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. ▪ Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. ▪ Call a poison control center or doctor for treatment advice. <b>IF ON SKIN OR CLOTHING:</b> ▪ Take off contaminated clothing. ▪ Rinse skin immediately with plenty of water for 15 - 20 minutes. ▪ Call a poison control center or doctor for treatment advice. <b>IF INHALED:</b> ▪ Move person to fresh air. ▪ If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. ▪ Call a poison control center or doctor for further treatment advice.</p> |
| <p><b>NOTE TO PHYSICIAN:</b> This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and should be avoided. This product contains a petroleum distillate. Vomiting may cause aspiration pneumonia.</p>  |
| HOT LINE NUMBER   |
| <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.</p>  |

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Batallion<sup>TM</sup> 2 EC is not manufactured, or distributed by FMC Corporation, seller of Brigade<sup>®</sup> 2EC.



Manufactured for:  
**Atticus, LLC**  
5000 CentreGreen Way, Suite 100  
Cary, NC 27513

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if inhaled or absorbed through skin. Avoid breathing vapor or spray mist. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart.

**Handlers who may be exposed to the dilute through application or other tasks must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, or viton
- Shoes plus socks

**Handlers who may be exposed to the concentrate through mixing, loading, application, or other tasks must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, or viton
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## USER SAFETY RECOMMENDATIONS

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of **Batallion 2 EC** is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

## PHYSICAL/CHEMICAL HAZARDS

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, or viton
- Shoes plus socks

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protections Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Do not allow people or pets on treated areas until the spray has dried.

## RESISTANCE MANAGEMENT

**Batallion 2 EC** contains a Group 3 Insecticide. With repeated use of Group 3 insecticide as the primary method of control in the same field or in successive years, insect/mite populations can develop resistant biotypes. If this occurs, insect/mite biotypes with acquired resistance to Group 3 insecticides may eventually dominate the insect/mite population. This may result in partial or total loss of control of those species by **Batallion 2 EC** or other Group 3 insecticides.

To delay development of insecticide resistance, the following practices are suggested:

- Base insecticide applications on comprehensive IPM programs. This program should include an insect management program that includes cultural and biological control where possible.

- Use good resistance management strategies established for the use area. This may include the use of insecticide rotations or tank mixes with other groups of insecticide and miticides in an IPM program.
- Always apply **Batallion 2 EC** at the labeled rates and according to label directions. Do not use less than label rates alone or in tank mixtures unless directed otherwise in supplemental labeling supplied by Atticus, LLC.
- Monitor treated populations in the field for loss of control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain may be present. Immediately consult your local Atticus, LLC representative or agricultural advisor for the best alternative method of control for your area.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Consult your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM guidance for the specific site and resistant pest problems.

## APPLICATIONS INSTRUCTIONS

The rate of **Batallion 2 EC** applied will vary according to pest pressure and timing of application. Use lower rates under light to moderate infestations and higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates. Unless otherwise specified for a specific crop, apply when pest population reaches economic (damaging) threshold and repeat as necessary to maintain control. Thorough coverage is essential to achieve control.

In the **APPLICATION INSTRUCTIONS** section of the label for each crop, the application rate when applied by ground and/or air is listed as an amount of spray per acre. In all cases, this refers to finished spray per acre.

## CHEMIGATION USE DIRECTIONS

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers, or other experts for consultation on the suitability of the equipment setup to obtain effective control of the target insect pests.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent area.

The system must contain a functional check valve, vacuum-relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

For sprinkler irrigation, meter **Batallion 2 EC** at a continuous uniform rate during the entire irrigation period. To ensure accurate application over the treated area, apply in sufficient volume of water or other diluent. If non-emulsified oil is used as the diluent, use 1 to 2 pints per acre. Maintain continuous agitation of the pesticide supply tank for the duration of the application period. When chemigation systems are used, 0.5 inch per acre of irrigation water is suggested except that for Low Energy Precision Application (LEPA) irrigation, a minimum of 0.75 inch of water per acre is suggested.

## BUFFER ZONES

### Vegetative Buffer Strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:

- *Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. <http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf>.*

### Buffer Zone for Ground Application (ground boom, overhead chemigation, or airblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds.)

### Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

### Buffer Zone for Non-ULV Aerial Application

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

## SPRAY DRIFT REQUIREMENTS

### Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when wind velocity exceeds 15 mph.

### Temperature Inversions

Do not make aerial or ground applications into temperature inversions.

Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

## Droplet Size

Use only Medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

## Additional Requirements for Ground Application

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward-pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

## Additional Requirements for Aerial Application

The spray boom should be mounted on the aircraft as to minimize drift caused by wing-tip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

In New York State, this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

## ROTATIONAL CROPS

If applying to crops for which Bifenthrin tolerances exist, the crops may be rotated at any time. All other crops may be rotated 30 days following the final application of **Battalion 2 EC**.

## MIXING INSTRUCTIONS

The spray tank must be clean, thoroughly rinsed, and decontaminated before adding either **Battalion 2 EC** alone or with tank mix combinations (see **Battalion 2 EC in Tank Mixtures** section below). If water is used as the carrier, use clean water.

For aerial applications made on brassicas (see **FOOD CROPS USE INSTRUCTIONS** section of the label below for full list of approved brassicas), canola, crambe, rapeseed, foliar applications on corn, cucurbits (see **FOOD CROPS USE INSTRUCTIONS** section of the label below for full list of approved cucurbits), eggplant, grapes, head lettuce, and succulent peas and beans (see **FOOD CROPS USE INSTRUCTIONS** section of the label below for full list of approved succulent peas and beans), 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. For aerial applications made on cotton, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray. Thorough coverage is essential to achieve control.

**Battalion 2 EC Used Alone:** When **Battalion 2 EC** is used alone, add the labeled amount to the spray tank when the tank is half filled with water or other carrier; then add the rest of the water or other carrier (as permitted on this label). Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

**Battalion 2 EC with Fertilizer:** Fill the spray tank approximately one-half full with water and/or liquid fertilizer, add the proper amount of **Battalion 2 EC**, and then add the rest of the water and/or fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform spray mixture.

Perform a jar compatibility test with the appropriate ratio of **Battalion 2 EC** and fertilizer to ensure the mixture will stay in solution. Maintain constant agitation during mixing and application.

**Battalion 2 EC in Tank Mixtures:** If a tank mixture is used, perform a compatibility test before actual tank mixing. Test all untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture. Once compatibility is confirmed for the tank mix, fill the tank half full with water or other carrier. Start and continue agitation throughout mixing following conventional mixing order practices.

**Battalion 2 EC** may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products.

## FOOD CROPS USE INSTRUCTIONS

### ARTICHOKE

| PEST                                    | DOSAGE |         | APPLICATION INSTRUCTIONS  |
|---|--------|---------|---|
|   | LB A/A | FL OZ/A |   |
| Artichoke Plume Moth<br>Cribrate Weevil | 0.10   | 6.4     | Repeat as necessary to maintain control, but not apply more often than 15 day intervals.<br><b>Ground Application:</b> Apply in water in a minimum of 75 gallons per acre as a full cover spray.<br><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre. |

#### RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- Do not apply within 5 days of harvest (PHI).

## BRASSICAS

| CROP  | PEST  | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|---|---|--------------|------------|---|
|   |   | LB A/A       | FL OZ/A    |   |
| Head and Stem<br>Brassica Vegetables<br>including:<br>Broccoli<br>Brussels Sprouts<br>Cabbage<br>Cauliflower<br>Cavalo Broccolo<br>Chinese Broccoli<br>(Gai Lon, White<br>Flowering Broccoli)<br>Chinese Cabbage<br>(Napa)<br>Chinese Mustard<br>Cabbage (Gai Choy)<br>Kohlrabi | Aphids<br>Armyworms<br>Corn Earworm<br>Crickets<br>Cucumber Beetle<br>Cutworms<br>Diamondback Moth<br>Flea Beetle<br>Ground Beetles<br>Imported Cabbageworm<br>Leafhoppers<br>Loopers<br>Saltmarsh Caterpillar<br>Stink Bugs<br>Thrips<br>Tobacco Budworm<br>Whitefly<br>Wireworm (Adult) | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water.<br>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.<br>Repeat applications if needed to maintain control, but do not make applications less than 7 days apart. |
|   | Banks Grass Mite<br>Carmine Mite<br><i>Lygus</i> spp.<br>Pacific Spider Mite<br>Twospotted Spider Mite  | 0.08 - 0.10  | 5.12 - 6.4 |   |

### RESTRICTIONS:

- Do not apply more than 0.5 lb active ingredient (32 ounces formulated) per acre per season.
- Do not make more than 5 applications after bloom.
- Do not apply within 7 days of harvest (PHI).

## CANEBSERRIES

| CROP   | PEST  | DOSAGE      |           | APPLICATION INSTRUCTIONS   |
|--|---|-------------|-----------|--|
|  |   | LB A/A      | FL OZ/A   |  |
| Caneberries<br>including:<br>Bingleberries<br>Blackberries<br>Dewberries<br>Loganberries<br>Lowberries<br>Marionberries<br>Olallieberries<br>Raspberries<br>Youngberries | Leafrollers<br>Orange Tortrix<br>Root Weevils | 0.05 - 0.10 | 3.2 - 6.4 | Apply by air or ground equipment using sufficient water to obtain full coverage of foliage (minimum of 10 gallons per acre by air and 50 gallons per acre by ground).<br><b>Ground Application:</b> Apply in water in a minimum of 50 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre.<br>A total of two applications may be made.<br>One application may be made pre-bloom and a second application may be made post bloom. |
|  | Spider Mites                                  | 0.10        | 6.4       |  |

### RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply within 3 days of harvest (PHI).

## CANOLA, CRAMBE, RAPESEED

| PEST             |                     | DOSAGE       |           | APPLICATION INSTRUCTIONS   |
|------------------|---------------------|--------------|-----------|--|
|                  |                     | LB A/A       | FL OZ/A   |  |
| Aphids           | Lygus Bugs          | 0.033 - 0.04 | 2.1 - 2.6 | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water.<br>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.<br>Repeat applications if needed to maintain control, but do not make applications less than 14 days apart. |
| Armyworms        | Other Lepidopterous |              |           |  |
| Cutworms         | Larvae              |              |           |  |
| Diamondback Moth | Plant Bugs          |              |           |  |
| Flea Beetles     | Seedpod Weevil      |              |           |  |
| Flea Hoppers     | Stink Bugs          |              |           |  |
| Grasshoppers     | Thrips              |              |           |  |
| Loopers          | Whitefly            |              |           |  |

**RESTRICTIONS:**

- Do not apply more than 0.08 lb. active ingredient (5.12 ounces formulated) per acre per season.
- Do not apply within 35 days of harvest (PHI).

## CHRISTMAS TREES

(For Use Only in Washington and Oregon)

| PEST        |                    | DOSAGE      |           | APPLICATION INSTRUCTIONS   |
|-------------|--------------------|-------------|-----------|--|
|             |                    | LB A/A      | FL OZ/A   |  |
| Root Weevil | Spruce Spider Mite | 0.06 - 0.10 | 3.9 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 20 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 5 gallons per acre.<br><b>Battalion 2 EC</b> is usually not phytotoxic to Christmas trees. However, make applications to a small representative group of plants to ensure that a particular variety grown under current conditions is not unusually sensitive to <b>Battalion 2 EC</b> .<br>Maintain a minimum of 21 days between applications. |

**RESTRICTIONS:**

- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per season.
- Do not make more than 3 applications in a crop year.
- Do not make applications through irrigation systems.

## CILANTRO, CORIANDER

| PEST                   |                       | DOSAGE       |            | APPLICATION INSTRUCTIONS   |
|------------------------|-----------------------|--------------|------------|--|
|                        |                       | LB A/A       | FL OZ/A    |  |
| Aphids                 | Leafminer             | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Apply in sufficient water to obtain thorough coverage. |
| Beet Armyworm          | Saltmarsh Caterpillar |              |            |  |
| Cabbage Looper         | Spotted Cucumber      |              |            |  |
| Cutworm                | Beetle                |              |            |  |
| Flea Beetle            | Thrips                |              |            |  |
| Grasshoppers           | Whitefly              |              |            |  |
| Twospotted Spider Mite |                       | 0.08 - 0.10  | 5.12 - 6.4 |  |

**RESTRICTIONS:**

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- Do not make applications less than 7 days apart.
- Do not apply within 3 days of harvest (PHI).



## CITRUS

(Except Florida)\*

| PEST  | DOSAGE      |         | APPLICATION INSTRUCTIONS  |
|---|-------------|---------|---|
|   | LB AI/A     | FL OZ/A |   |
| Asian Cockroach<br>Diaprepes Root Weevil<br>( <i>Diaprepes abbreviatus</i> )<br>Fire Ants | 0.25 - 0.50 | 16 - 32 | <p><b>Ground Application:</b> Apply in water in a minimum of 30 gallons per acre.</p> <p>Use a handgun or shielded sprayer to apply to individual citrus trees if they are not planted in solid rows.</p> <p>Diaprepes root weevil emergence generally occurs in the spring, but weather conditions can prompt a second emergence in the fall. In areas where only a spring emergence is expected, use 32 ounces of <b>Batallion 2 EC</b>. In areas where a second emergence is expected, use 16 ounces of <b>Batallion 2 EC</b> in the early season and 16 ounces of <b>Batallion 2 EC</b> later in the season.</p> <p>If the length of control of <b>Batallion 2 EC</b> is not sufficient to cover the emergence of the root weevil, use other pest control measures from State Agricultural Extension Specialists or other local experts.</p> <p>* Use in California not permitted unless accompanied by a supplemental label.</p> |

**RESTRICTIONS:**

- Do not apply through irrigation systems.
- Do not allow any application of **Batallion 2 EC** to contact fruit or foliage.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not apply by air.
- Do not apply within 1 day of harvest (PHI).

## CITRUS

(Florida only)

| PEST  | DOSAGE      |          | APPLICATION INSTRUCTIONS  |
|---|-------------|----------|---|
|   | LB AI/A     | FL OZ/A  |   |
| Blue Green Citrus<br>Root Weevil<br>( <i>Pachnaeus opalus</i> )<br>Brown Leaf Notcher<br>( <i>Epicaerus mexicanus</i> )<br>Diaprepes Root Weevil<br>( <i>Diaprepes abbreviatus</i> )<br>Little Leaf Notcher<br>( <i>Artipus floridanus</i> )<br>Southern Blue Green<br>Citrus Root Weevil<br>( <i>Pachnaeus litus</i> ) | 0.25 - 0.50 | 16 - 32  | <p><b>Ground Application:</b> Apply in water in a minimum of 40 gallons per acre.</p> <p>Greater spray volumes increase uniformity of coverage. Also coverage uniformity may be aided by using a pre- and post-irrigation application.</p> <p>Use a handgun or shielded sprayer to apply to individual citrus trees if they are not planted in solid rows.</p> <p>All citrus root weevils have a similar life cycle. They have three immature stages: egg, larva, and pupa. Adult weevils emerge from the soil and lay eggs on host plants above ground, the larvae enter the soil to feed on roots, and the pupae and teneral adult stages are spent below ground. Adults emerge beneath citrus trees throughout the year; it is at this time that <b>Batallion 2 EC</b> applications should be timed. Peak adult emergence varies within and among species and by region. Peak emergence for the blue-green root weevil is normally April and May. Diaprepes adult emergence from the soil appears to be triggered by the onset of regular rainfall events and can have two emergence peaks, in mid-May to mid-July and/or late-August to mid-October. The second peak is variable and may relate to host plant availability. Little leaf notcher has three generations per year. Although there is considerable overlap of generations, adults appear most abundant in April/May, July/August, and October/November.</p> |
| Asian Cockroach<br>Fire Ants  | 0.1 - 0.25  | 6.4 - 16 | <p>For best control of emerging root weevils, apply <b>Batallion 2 EC</b> to the soil beneath the citrus trees from the trunk to the drip line of the tree.</p> <p><b>Batallion 2 EC</b> protects citrus tree roots from citrus root weevils by forming a barrier which provides contact activity on neonate larvae when they fall to the ground shortly after hatching from eggs which were oviposited in the citrus tree foliage. Once application is made, be careful not to disturb the treated soil.</p> <p>In areas where only a spring emergence is expected, use 32 ounces of <b>Batallion 2 EC</b>. In areas where a second emergence is expected, use 16 ounces of <b>Batallion 2 EC</b> in the early season and 16 ounces of <b>Batallion 2 EC</b> later in the season.</p> <p>If the length of control of <b>Batallion 2 EC</b> is not sufficient to cover the emergence of the root weevil, use other pest control measures from State Agricultural Extension Specialists or other local experts.</p>  |

(continued)

## CITRUS (continued)

### RESTRICTIONS:

- Do not apply through irrigation systems.
- Do not allow any application of **Batallion 2 EC** to contact fruit or foliage.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per year.
- Do not apply by air.
- Do not apply within 1 day of harvest (PHI).

## CONIFER SEED ORCHARDS

**(For Use Only in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia)**

| PEST                                  | DOSAGE    |            | APPLICATION INSTRUCTIONS   |
|---------------------------------------|-----------|------------|--|
|                                       | LB AI/A   | FL OZ/A    |  |
| Cone Worms<br>Seed Bugs<br>Seed Worms | 0.1 - 0.2 | 6.4 - 12.8 | <p><b>Ground Application:</b> Apply in water in a minimum of 100 - 500 gallons per acre.</p> <p><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre or 0.5 gallon refined vegetable oil per acre.</p> <p>Apply in sufficient water to obtain thorough coverage.</p> <p>Begin applications 7 days after peak pollen flight and continue on 30-day intervals up to a maximum of 0.6 lb. active per acre per season.</p> |

### RESTRICTIONS:

- Do not make more than six applications per season or apply more than 0.6 lb. active ingredient (38.4 ounces formulated) per acre per season.

## CORN: FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED

(AT PLANTING)

| PEST  | DOSAGE  |   | APPLICATION INSTRUCTIONS  |
|---|---|---|---|
| Corn Rootworm Larvae<br>Northern<br>Southern<br>Western   | 0.0046<br>pound active per<br>1000 linear feet<br>of row          | 0.30<br>fluid ounces per<br>1000 linear feet<br>of row        | <p><b>Ground Application:</b> Apply in water in a minimum of 3 gallons per acre.</p> <p>For use on corn at planting, apply a 5- inch to 7-inch T-band over the open seed furrow.</p> <p>Center the spray nozzle over the row behind the planter shoe in front of the press wheel.</p> <p>In-furrow pop-up fertilizers may be used alone or in tank mixtures with <b>Batallion 2 EC</b>. See the section entitled <b>MIXING INSTRUCTIONS, Batallion 2 EC with Fertilizer</b> for additional instructions and precautions when mixing with fertilizers.</p> |
| Army Cutworm<br>Cutworm Species<br>Grubs<br>Seedcorn Beetle<br>Seedcorn Maggot<br>True Armyworm or<br>Armyworm Species<br>Wireworms | 0.0023 - 0.0046<br>pound active per<br>1000 linear feet<br>of row | 0.15 - 0.30<br>fluid ounces per<br>1000 linear feet<br>of row |   |

### RESTRICTIONS:

- Do not apply to soil where there is greater than 30% cover of crop residue remaining.
- Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.
- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per season as an at plant application.
- Do not apply within 30 days of harvest (PHI).

| Row Spacings (inches) <sup>1</sup>                 | 40    | 38    | 36    | 30    |
|--|-------|-------|-------|-------|
| <b>Batallion 2 EC</b> (pounds ai per acre)         | 0.060 | 0.064 | 0.069 | 0.080 |
| <b>Batallion 2 EC</b> (formulated ounces per acre) | 3.9   | 4.1   | 4.4   | 5.12  |

<sup>1</sup>Use this table to determine the **Batallion 2 EC** needs per acre.



**CORN: FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED**

**(PRE & PPI)**

| PEST  | DOSAGE  |  | APPLICATION INSTRUCTIONS  |
|---|---|--|---|
|   | LB AI/A   | FL OZ/A  |   |
| Armyworm spp.<br>Black Cutworm<br>Seedcorn Maggot<br>Stalkborer<br>White Grub<br>Wireworm | 0.047 - 0.062<br>Pre-plant<br>Incorporated<br>(PPI) | 3 - 4<br>Pre-plant<br>Incorporated<br>(PPI)        | <p><b>Ground Application:</b> Apply in water in a minimum of 3 gallons per acre.</p> <p>Use the labeled dosage as a preplant incorporated treatment either alone or in tank mix combination with registered preplant incorporated herbicides.</p> <p>Incorporate <b>Batallion 2 EC</b> to the intended planting depth, but no deeper than 3 inches.</p> <p>The 3 to 4 oz. rate must be applied as PPI and can be tank mixed and applied with PPI herbicides.</p> <p>The 2.56 oz. rate may be applied PRE and can be tank mixed and applied with PRE herbicides.</p> |
| Armyworm spp.<br>Black Cutworm<br>Stalkborer  | 0.040 lb/ai<br>per acre<br>Pre-emergence<br>(PRE)   | 2.56 fl. oz.<br>per acre<br>Pre-emergence<br>(PRE) |   |

**CORN: FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED**

**(FOLIAR)**

| PEST  | DOSAGE       |            | APPLICATION INSTRUCTIONS   |
|---|--------------|------------|--|
|   | LB AI/A      | FL OZ/A    |  |
| Aphids<br>Army Cutworm<br>Beet Armyworm<br>Cereal Leaf Beetle<br>Chinch Bug<br>Common Stalk Borer<br>Corn Earworm<br>Corn Rootworm (Adult)<br>Cucumber Beetle (Adult)<br>Cutworm Species<br>European Corn Borer<br>Fall Armyworm<br>Flea Beetle<br>Grasshoppers<br>Green Bug<br>Japanese Beetle (Adult)<br>Sap Beetle<br>Southern Armyworm<br>Southern Corn Leaf Beetle<br>Southwestern Corn Borer<br>Stink Bugs<br>Tarnished Plant Bug<br>True Armyworm or<br>Armyworm Species<br>Webworms<br>Western Bean Cutworm<br>Yellowstriped Armyworm | 0.033 - 0.10 | 2.1 - 6.4  | <p><b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre except see specific comment below for TX, NM, OK, and AZ mite control.</p> <p><b>Air Application:</b> Apply in water in a minimum of 2 to 5 gallons per acre except see specific comment below for TX, NM, OK, and AZ mite control.</p> <p>In all states, insect control will be improved by increasing the finished spray per acre to 5 gallons.</p> <p>In Texas, New Mexico, Oklahoma, and Arizona, use a minimum of 10 gallons of water per acre by ground and 5 gallons of water per acre by air when making applications to control mites.</p> <p>Emulsified oil may be substituted for water. See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.</p> <p>Make applications of <b>Batallion 2 EC</b> as necessary to maintain control being careful not to exceed reapplication intervals or maximum dosage rates specified in this section.</p> <p>For pests which attack the ear, apply just before silking.</p> <p>For corn borer control, make application just before or at egg hatch.</p> <p>For mite control, apply when colonies first form prior to leaf damage and before they disperse into the canopy (for Banks Grass Mite-before dispersal into the upper 2/3 of the plant).</p> <p>Use higher rates of <b>Batallion 2 EC</b> when pest pressure is severe or crop is under stress from drought and/or heat. When these conditions exist, tank mixtures with dimethoate have shown good control.</p> <p>Apply for <b>Banks Grass Mite</b> control when colonies first form prior to leaf damage or discoloration and before dispersal above the bottom third of the plant.</p> <p>For <b>Twospotted Spider Mite</b> and <b>Carmine Mite</b> control, apply when colonies first form prior to leaf damage or discoloration and before widespread mite dispersal throughout the canopy. Higher rates will be necessary for heavier initial populations and corn under heat or drought stress. Field experience with dimethoate at 0.5 lb. active per acre in tank mixture has demonstrated good control under these conditions.</p> <p><b>For Mite Control In Texas, New Mexico, Oklahoma, and Arizona:</b> Apply in a minimum of 5 gallons of finished spray per acre by aircraft or in a minimum of 10 gallons per acre with ground equipment.</p> |
| Banks Grass Mite<br>Carmine Mite<br>Twospotted Spider Mite  | 0.08 - 0.10  | 5.12 - 6.4 |  |

(continued)

**CORN: FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (continued)**

**RESTRICTIONS:**

- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per season including PRE and PPI, at planting, plus foliar applications.
- Do not graze livestock in treated areas or cut treated crops for feed within 30 days of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not apply within 30 days of harvest (PHI).

**CORN: SWEET CORN, SWEET CORN GROWN FOR SEED**

**(AT PLANTING)**

| PEST  | DOSAGE  |   | APPLICATION INSTRUCTIONS  |
|---|---|---|---|
| Corn Rootworm Larvae<br>Northern<br>Southern<br>Western   | 0.0046<br>pound active per<br>1000 linear feet<br>of row          | 0.30<br>fluid ounces per<br>1000 linear feet<br>of row        | <p><b>Ground Application:</b> Apply in water in a minimum of 3 gallons per acre.</p> <p>For use on corn at planting, apply in a 5- inch to 7-inch T-band over the open seed furrow. Center the spray nozzle over the row behind the planter shoe in front of the press wheel.</p> <p>In-furrow pop-up fertilizers may be used alone or in tank mixtures with <b>Batallion 2 EC</b>. See the section entitled <b>MIXING INSTRUCTIONS, Batallion 2 EC with Fertilizer</b> for additional instructions and precautions when mixing with fertilizers.</p> |
| Army Cutworm<br>Cutworm Species<br>Grubs<br>Seedcorn Beetle<br>Seedcorn Maggot<br>True Armyworm or<br>Armyworm Species<br>Wireworms | 0.0023 - 0.0046<br>pound active per<br>1000 linear feet<br>of row | 0.15 - 0.30<br>fluid ounces per<br>1000 linear feet<br>of row |   |

**RESTRICTIONS:**

- Do not apply to soil where there is greater than 30% cover of crop residue remaining.
- Do not graze livestock in treated area or cut treated crops for feed within 30 days of treatment.
- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per season as an at plant application.
- Do not apply within 30 days of harvest (PHI).

| Row Spacings (inches) <sup>1</sup>                 | 40    | 38    | 36    | 30    |
|--|-------|-------|-------|-------|
| <b>Batallion 2 EC</b> (pounds ai per acre)         | 0.060 | 0.064 | 0.069 | 0.080 |
| <b>Batallion 2 EC</b> (formulated ounces per acre) | 3.9   | 4.1   | 4.4   | 5.12  |

<sup>1</sup> Use this table to determine the **Batallion 2 EC** needs per acre.

## CORN: SWEET CORN, SWEET CORN GROWN FOR SEED (FOLIAR)

| PEST                    |                           | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|-------------------------|---------------------------|--------------|------------|---|
|                         |                           | LB AI/A      | FL OZ/A    |   |
| Aphids                  | Green Bugs                | 0.033 - 0.10 | 2.1 - 6.4  | <p><b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.</p> <p><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water.</p> <p>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water. Make applications of <b>Batallion 2 EC</b> as necessary to maintain control being careful not to exceed reapplication intervals or maximum dosage rates specified in this section.</p> <p>For pests which attack the ear, apply just before silking.</p> <p>For corn borer control, make application just before or at egg hatch.</p> <p>For mite control, apply when colonies first form prior to leaf damage and before they disperse into the canopy (for Banks Grass Mite - before dispersal into the upper 2/3 of the plant). Use higher rates of <b>Batallion 2 EC</b> when pest pressure is severe or crop is under stress from drought and/or heat. When these conditions exist, tank mixtures with dimethoate have shown acceptable control.</p> |
| Army Cutworm            | Japanese Beetle (Adult)   |              |            |   |
| Beet Armyworm           | Sap Beetle                |              |            |   |
| Cereal Leaf Beetle      | Southern Armyworm         |              |            |   |
| Chinch Bug              | Southern Corn Leaf Beetle |              |            |   |
| Common Stalk Borer      | Southwestern Corn Borer   |              |            |   |
| Corn Earworm            | Stink Bugs                |              |            |   |
| Corn Rootworm (Adult)   | Tarnished Plant Bug       |              |            |   |
| Cucumber Beetle (Adult) | True Armyworm or          |              |            |   |
| Cutworm Species         | Armyworm Species          |              |            |   |
| European Corn Borer     | Webworms                  |              |            |   |
| Fall Armyworm           | Western Bean Cutworm      |              |            |   |
| Flea Beetle             | Yellowstriped Armyworm    |              |            |   |
| Grasshoppers            |                           |              |            |   |
| Banks Grass Mite        | Twospotted Spider Mite    | 0.08 - 0.10  | 5.12 - 6.4 |   |
| Carmine Mite            |                           |              |            |   |

### RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not graze livestock in treated areas or cut treated crops for feed within 1 day of the last application.
- Use of ultra low volume (ULV) application on corn is prohibited.
- Do not make aerial or ground applications to corn if heavy rainfall is imminent.
- Do not apply within 1 day of harvest (PHI).

## COTTON

| PEST                    |                        | DOSAGE      |           | APPLICATION INSTRUCTIONS  |
|-------------------------|------------------------|-------------|-----------|---|
|                         |                        | LB AI/A     | FL OZ/A   |   |
| European Corn Borer     | Tobacco Thrips         | 0.02 - 0.10 | 1.3 - 6.4 | <p><b>Ground Application:</b> Apply in water in a minimum of 5 gallons per acre.</p> <p><b>Air Application:</b> Apply in water in a minimum of 1 gallon per acre. Emulsified oil may be substituted for water.</p> <p>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.</p> <p><b>ULV Application:</b> Apply in a minimum of 1 quart per acre using refined vegetable oil with aircraft calibrated to give adequate coverage.</p> <p>Make applications of <b>Batallion 2 EC</b> as necessary to maintain control being careful not to exceed reapplication intervals or maximum dosage rates specified in this section.</p> <p><b>To Control Boll Weevil:</b> Apply <b>Batallion 2 EC</b> at 3- to 4-day intervals until pest populations are reduced below economic threshold levels.</p> <p><b>To Control Mites and Aphids:</b> Apply when pests first appear. Repeat as necessary to maintain control without exceeding maximum application rates and reapplication intervals. Use higher rates when an economic threshold has been established.</p> |
| Soybean (Banded) Thrips |                        |             |           |   |
| Boll Weevil             | Plant Bugs             | 0.04 - 0.10 | 2.6 - 6.4 |   |
| Bollworm                | Saltmarsh Caterpillar  |             |           |   |
| Cabbage Looper          | Southern Garden        |             |           |   |
| Cotton Aphid            | Leafhopper             |             |           |   |
| Cotton Fleahopper       | Stink Bugs             |             |           |   |
| Cotton Leafperforator   | Tobacco Budworm        |             |           |   |
| Cutworms                | Whitefly               |             |           |   |
| Fall Armyworm           | Yellowstriped Armyworm |             |           |   |
| Beet Armyworm           | Pink Bollworm          | 0.06 - 0.10 | 3.8 - 6.4 |   |
| Carmine Spider Mite     | Twospotted Spider Mite |             |           |   |
| <i>Lygus</i> spp.       |                        |             |           |   |

(continued)

## COTTON (continued)

### RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- Do not graze livestock in treated areas or cut treated crops for feed.
- Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush<sup>®</sup>, Ammo<sup>®</sup>, Asana<sup>®</sup> XL, Baythroid<sup>®</sup>, Capture<sup>®</sup>, Danitol<sup>®</sup>, Karate<sup>®</sup>, Mustang<sup>®</sup>, and Scout X-TRA<sup>®</sup>.
- Do not apply within 14 days of harvest (PHI).

## CUCURBITS

| CROP   | PEST  | DOSAGE      |            | APPLICATION INSTRUCTIONS  |
|--|---|-------------|------------|---|
|  |   | LB AI/A     | FL OZ/A    |   |
| Chayote (fruit)<br>Chinese waxgourd<br>(Chinese preserving melon)<br>Citron Melon<br>Cucumber<br>Gherkin<br>Edible Gourd,<br>(includes hyotan, cucuzza), <i>Luffa</i> spp. (includes hechima,<br>Chinese okra), <i>Momordica</i> spp. (includes balsam apple,<br>balsam pear, bitter melon, Chinese cucumber)<br>Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i> )<br>(includes cantaloupe, casaba, crenshaw melon, golden<br>pershaw melon, honey balls, honeydew melon, mango melon,<br>Persian melon, pineapple melon, Santa Claus melon, snake<br>melon, and true cantaloupe)<br>Pumpkin ( <i>Cucurbita</i> spp.)<br>Squash, summer (includes crookneck squash, scallop squash,<br>straightneck squash, vegetable marrow, zucchini)<br>Squash, winter (includes butternut squash, calabaza,<br>hubbard squash ( <i>C. mixta</i> ; <i>C. pepo</i> ) includes acorn squash,<br>spaghetti squash)<br>Watermelon (includes hybrids and/or varieties of <i>Citrullus</i> spp.) | Aphids<br>Armyworms<br>Cabbage Looper<br>Corn Earworm<br>Cucumber Beetles<br>Cutworms<br>Grasshoppers<br>Leafhoppers<br>Melonworms<br>Pickleworms<br>Rindworms<br>Squash Bugs<br>Squash Vine Borer<br>Stink Bugs<br>Tobacco Budworm | 0.04 - 0.10 | 2.6 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 20 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 5 gallons per acre.<br>Emulsified oil may be substituted for water.<br>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water. |
|  | Banks Grass Mite<br>Carmine Mite<br><i>Lygus</i> spp.<br>Twospotted Spider Mite<br>Whitefly   | 0.08 - 0.10 | 5.12 - 6.4 |   |

### RESTRICTIONS:

- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per season.
- Do not make more than two applications after bloom.
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.
- Do not apply within 3 days of harvest (PHI).

## DRIED BEANS AND PEAS

| CROP   | PEST  | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|--|---|--------------|------------|---|
|  |   | LB A/A       | FL OZ/A    |   |
| <b>Dried cultivars of Bean</b><br>( <i>Lupinus</i> spp.)<br>Grain Lupin    White Lupin<br>Sweet Lupin    White Sweet Lupin   | Banks Grass Mite <i>Lygus</i> spp.<br>Carmine Mite        Twospotted Spider Mite  | 0.08 - 0.10  | 5.12 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Emulsified oil may be substituted for water. See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water. Thorough coverage is essential to achieve control. |
|  | Aster Leafhopper    Grasshoppers<br>Flea Beetle          Leafhoppers  | 0.025 - 0.10 | 1.6 - 6.4  |   |
| <b>Bean</b> ( <i>Phaseolus</i> spp.)<br>Field Bean        Navy Bean<br>Kidney Bean      Pinto Bean<br>Lima Bean (dry)   Tepary Bean  | Alfalfa Caterpillar    Pea Leaf Weevil<br>Aphids                Pea Weevil<br>Bean Leaf Beetle      Plant Bug<br>Beet Armyworm        Sap Beetle<br>Cloverworm            Saltmarsh Caterpillar<br>Corn Earworm          Southern Armyworm<br>Corn Rootworm (Adult) Stink Bugs<br>Cucumber Beetles    Tarnished Plant Bug<br>Cutworms              Thrips<br>European Corn Borer   Tobacco Budworm<br>Fall Armyworm         Webworms<br>Imported Cabbageworm Western Bean Cutworm<br>Japanese Beetle (Adult) Whitefly<br>Leafminer              Yellowstriped<br>Loopers                 Armyworm | 0.033 - 0.10 | 2.1 - 6.4  |   |
| <b>Bean</b> ( <i>Vigna</i> spp.)<br>Adzuki Bean        Moth Bean<br>Blackeyed Pea      Mung Bean<br>Catjang             Rice Bean<br>Cowpea              Southern Pea<br>Crowder Pea        Urd Bean |   |              |            |   |
| <b>Broad bean</b> (dry)<br>Chickpeas<br>Guar<br>Lablab Bean<br>Lentils   |   |              |            |   |
| <b>Pea</b> ( <i>Pisum</i> spp.)<br>Field Pea          Pigeon Pea   |   |              |            |   |

**RESTRICTIONS:**

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) to peas.
- Do not make applications less than 7 days apart.
- Do not apply within 14 days of harvest (PHI).

## FRUITING VEGETABLES

| CROP  | PEST   | DOSAGE       |            | APPLICATION INSTRUCTIONS   |
|---|--|--------------|------------|--|
|   |  | LB A/A       | FL OZ/A    |  |
| Eggplant<br>Groundcherry<br>Pepino<br>Pepper<br>(Bell & Non-bell) | Armyworms (including Leafminers<br>Beet Armyworm,        Loopers<br>Fall Armyworm,        Pepper Weevil<br>Southern Yellowstriped Plant Bugs<br>Armyworm)              Stink Bugs<br>Cabbage Loopers        Thrips<br>Colorado Potato Beetle Tomato Hornworm<br>Corn Earworm            Tomato Pinworm<br>Cucumber Beetles      Vegetable Leafminer<br>European Corn Borer    Whitefly<br>Flea Beetles | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Emulsified oil may be substituted for water, See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water. |
|   | Banks Grass Mite <i>Lygus</i> spp.<br>Broad Mite                Pacific Spider Mite<br>Carmine Mite              Twospotted Spider Mite  | 0.08 - 0.10  | 5.12 - 6.4 |  |

**RESTRICTIONS:**

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply within 7 days of harvest (PHI).

(continued)

## FRUITING VEGETABLES (continued)

| CROP                   | PEST  |  | DOSAGE       |           | APPLICATION INSTRUCTIONS   |            |  |
|------------------------|---|--|--------------|-----------|--|------------|--|
|                        |   |  | LB AI/A      | FL OZ/A   |  |            |  |
| Tomatillo<br>Tomatoes  | Aphids  | Japanese Beetle (Adult)  | 0.033 - 0.08 | 2.1 - 5.2 | <b>Ground Application:</b> Apply in water in a minimum of 15 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 3 gallons per acre. |            |  |
|                        | Armyworms (including Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) | Leafhoppers<br>Loopers<br><i>Lygus</i> spp.<br>Melonworms<br>Pea Leaf Weevil |              |           |  |            |  |
| Bean Leaf Beetle       | Pea Weevil  |  |              |           |  |            |  |
| Cabbageworms           | Pickleworms   |  |              |           |  |            |  |
| Carmine Mite           | Plant Bugs  |  |              |           |  |            |  |
| Cloverworm             | Rindworms   |  |              |           |  |            |  |
| Corn Earworm           | Salt Marsh Caterpillar  |  |              |           |  |            |  |
| Corn Rootworm          | Sap Beetle  |  |              |           |  |            |  |
| Cucumber Beetle        | Seedpod Weevil  |  |              |           |  |            |  |
| Cutworms               | Squash Bugs   |  |              |           |  |            |  |
| Diamondback Moth       | Stink Bug spp.  |  |              |           |  |            |  |
| European Corn Borer    | Tarnished Plant Bug   |  |              |           |  |            |  |
| Flea Beetles           | Thrips  |  |              |           |  |            |  |
| Flea Hoppers           | Tobacco Budworm   |  |              |           |  |            |  |
| Grasshoppers           | Whitefly  |  |              |           |  |            |  |
| Twospotted Spider Mite |   | 0.08 - 0.10  |              |           |  | 5.12 - 6.4 |  |

**RESTRICTIONS:**

- To maintain a proper spray interval, do not make applications less than 10 days apart.
- Do not make more than 4 applications per season.
- Do not apply within 1 day of harvest (PHI).

## GRAPES

| PEST  | DOSAGE      |           | APPLICATION INSTRUCTIONS  |
|---|-------------|-----------|---|
|   | LB AI/A     | FL OZ/A   |   |
| Eastern Grape Leafhopper<br>Variegated Leafhopper<br>Western Grape Leafhopper | 0.05 - 0.10 | 3.2 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 25 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre.<br>Emulsified oil may be substituted for water. |
| Black Vine Weevil<br>Glasswinged Sharpshooter<br>Twospotted Spider Mite       | 0.10        | 6.4       | See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.<br>When pest pressure is moderate to severe, use the higher rate.                 |

**RESTRICTIONS:**

- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per season.
- Do not apply within 30 days of harvest (PHI).



## HOPS

| PEST  | DOSAGE      |           | APPLICATION INSTRUCTIONS   |
|---|-------------|-----------|--|
|   | LB A/A      | FL OZ/A   |  |
| Aphids<br>Armyworms<br>Cutworms<br>Leafrollers<br>Loopers | 0.06 - 0.10 | 3.8 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 100 - 150 gallons per acre in early season; 200 - 250 gallons per acre late season.<br><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre.<br>Make a directed spray up the vine 3 feet and the soil surface 1.5 - 2 feet on either side of the plant to control root weevil. |
| Root Weevils  | 0.05 - 0.10 | 3.2 - 6.4 |  |
| Twospotted Spider Mite                                    | 0.10        | 6.4       |  |
|   |             |           |  |

**RESTRICTIONS:**

- Do not apply more than 0.1 lb. active ingredient (6.4 ounces formulated) per acre per application.
- Do not apply more than 0.3 lb. active ingredient (19.2 ounces formulated) per acre per season.
- To maintain a proper spray interval, do not make applications less than 21 days apart.
- Use of ultra low volume (ULV) application on hops is prohibited.
- Do not apply within 14 days of harvest (PHI).

## LEAFY BRASSICAS AND TURNIP GREENS

| CROP  | PEST   | DOSAGE       |            | APPLICATION INSTRUCTIONS   |
|---|--|--------------|------------|--|
|   |  | LB A/A       | FL OZ/A    |  |
| Bok Choy<br>Broccoli Raab<br>Kale<br>Mizuna<br>Mustard Greens<br>Mustard Spinach<br>Rape Greens<br>Turnip Greens* | Aphids Imported Cabbageworm<br>Armyworms Japanese Beetle (Adult)<br>Corn Earworm Leafhoppers<br>Crickets Loopers<br>Cucumber Beetles Saltmarsh Caterpillar<br>Cutworms Stink Bugs<br>Diamondback Moth Thrips<br>Flea Beetles Tobacco Budworm<br>Grasshoppers Whitefly<br>Ground Beetles Wireworm (Adult) | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water.<br>See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water.<br>Thorough coverage is essential to achieve control.<br>* Not for use in California. |
|   | Banks Grass Mite Pacific Spider Mite<br>Carmine Mite Twospotted Spider Mite<br><i>Lygus spp.</i>   | 0.08 - 0.10  | 5.12 - 6.4 |  |

**RESTRICTIONS:**

- Do not apply more than 0.4 lb. active ingredient (25.6 ounces formulated) per acre per season.
- Repeat applications if needed to maintain control, but do not make applications less than 7 days apart.
- Do not apply within 7 days of harvest (PHI).

## LETTUCE, HEAD

| PEST                              |                        | DOSAGE       |            | APPLICATION INSTRUCTIONS   |
|-----------------------------------|------------------------|--------------|------------|--|
|                                   |                        | LB AI/A      | FL OZ/A    |  |
| Aphids                            | Imported Cabbageworm   | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 15 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 5 gallons per acre.<br>Emulsified oil may be substituted for water. See section entitled <b>MIXING INSTRUCTIONS</b> for details on the amount of oil to use in the spray tank in lieu of water. |
| Armyworms                         | Leafhoppers            |              |            |  |
| Corn Earworm                      | Loopers                |              |            |  |
| Cucumber Beetles                  | Salt Marsh Caterpillar |              |            |  |
| Cutworms                          | Stink Bug spp.         |              |            |  |
| Diamondback Moth                  | Tobacco Budworm        |              |            |  |
| Flea Beetle                       | Whitefly               |              |            |  |
| Carmine Mite<br><i>Lygus</i> spp. | Twospotted Spider Mite | 0.08 - 0.10  | 5.12 - 6.4 |  |

### RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- Do not apply within 7 days of harvest (PHI).

## MAYHAW\*

| PEST          | DOSAGE      |            | APPLICATION INSTRUCTIONS  |
|---------------|-------------|------------|---|
|               | LB AI/A     | FL OZ/A    |   |
| Plum Curculio | 0.08 - 0.10 | 5.12 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 28 gallons of finished spray per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Apply in sufficient water to obtain uniform coverage as needed. |

### RESTRICTIONS:

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 30 days of harvest (PHI).

\* Not registered for use in California unless accompanied by a supplemental label.

## OKRA

| PEST                |                         | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|---------------------|-------------------------|--------------|------------|---|
|                     |                         | LB AI/A      | FL OZ/A    |   |
| Aphids              | Japanese Beetle (Adult) | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons of finished spray per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Apply in sufficient water to obtain uniform coverage as needed. |
| Armyworms           | Leafminers              |              |            |   |
| Corn Earworm        | Loopers                 |              |            |   |
| Cucumber Beetles    | Stink Bugs              |              |            |   |
| Cutworms            | Thrips                  |              |            |   |
| European Corn Borer | Whitefly                |              |            |   |
| Flea Beetle         |                         |              |            |   |
| Broad Mite          | <i>Lygus</i> spp.       | 0.08 - 0.10  | 5.12 - 6.4 |   |
| Carmine Mite        | Twospotted Spider Mite  |              |            |   |

### RESTRICTIONS:

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply within 7 days of harvest (PHI).

## PEANUT\*

| PEST                   |                        | DOSAGE       |           | APPLICATION INSTRUCTIONS  |
|------------------------|------------------------|--------------|-----------|---|
|                        |                        | LB AI/A      | FL OZ/A   |   |
| Beet Armyworm          | Rednecked Peanut Worm  | 0.033 - 0.10 | 2.1 - 6.4 | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons of finished spray per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.<br>Apply in sufficient water to obtain uniform coverage as needed. |
| Corn Earworm           | Southern Armyworm      |              |           |   |
| Cutworm Species        | Southern Corn Rootworm |              |           |   |
| Fall Armyworm          | Stink Bugs             |              |           |   |
| Grasshoppers           | Threecornered Alfalfa  |              |           |   |
| Green Cloverworm       | Hopper                 |              |           |   |
| Leafhoppers            | Velvetbean Caterpillar |              |           |   |
| Lesser Cornstalk Borer | Yellowstriped Armyworm |              |           |   |
| Loopers                |                        |              |           |   |
| Aphids                 | Thrips                 | 0.06 - 0.10  | 3.8 - 6.4 |   |
| Spider Mites           | Whitefly               |              |           |   |

### RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- To maintain a proper spray interval, do not make applications less than 14 days apart.
- Do not feed immature plants and peanut hay to livestock.
- Do not apply within 14 days of harvest (PHI).

\* Not For Use in California.

## PEARS

| PEST                   |                           | DOSAGE     |             | APPLICATION INSTRUCTIONS   |
|------------------------|---------------------------|------------|-------------|--|
|                        |                           | LB AI/A    | FL OZ/A     |  |
| Aphids                 | <i>Lygus</i> spp.         | 0.04 - 0.2 | 2.6 - 12.8  | <b>Ground Application:</b> Apply in water in a minimum of 200 gallons per acre (dilute) and 50 gallons per acre (concentrate).<br><b>Air Application:</b> Apply in water in a minimum of 10 gallons per acre by air. |
| Codling Moth           | Plant Bugs                |            |             |  |
| Cutworms               | Plum Curculio             |            |             |  |
| Green Fruitworm        | San Jose Scale (Crawlers) |            |             |  |
| Leafhoppers            | Stink Bugs                |            |             |  |
| Leafminers             | Tarnished Plant Bugs      |            |             |  |
| Leafrollers            |                           |            |             |  |
| Twospotted Spider Mite | Yellow Mite               | 0.06 - 0.2 | 3.8 - 12.8  |  |
| European Red Mite      |                           | 0.08 - 0.2 | 5.12 - 12.8 |  |

### RESTRICTIONS:

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season with no more than 0.45 (28.8 ounces formulated) pound active per acre applied after petal fall.
- To maintain a proper spray interval, do not make applications less than 30 days apart.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.
- Do not apply within 14 days of harvest (PHI).

## ROOT CROPS

(except Sugar Beets)

| CROP  | PEST   | DOSAGE  |  | APPLICATION INSTRUCTIONS  |  |
|---|--|---|--|---------------------------|--|
|   |  | LB AI/A   | FL OZ/A  |                           |  |
| Burdock, Edible<br>Carrot<br>Celeriac<br>Chervil, Turnip Rooted<br>Chicory<br>Ginseng<br>Horseradish<br>Parsley, Turnip Rooted<br>Parsnip | Radish<br>Radish, Oriental<br>Rutabaga<br>Salsify<br>Salsify, Black<br>Salsify, Spanish<br>Skirret<br>Turnip | Aphids<br>Beet Armyworm<br>Celery Leaf-tier<br>Corn Earworm<br>Cross-striped<br>Cabbageworm<br>Cutworm species<br>Diamondback Moth<br>European Corn Borer<br>Fall Armyworm<br>Fire Ants | Flea Beetles<br>Green Cloverworm<br>Hornworms<br>Imported Cabbageworm<br>Loopers<br>Southern Armyworm<br>Spider Mites<br>Tobacco Budworm<br>Velvetbean Caterpillar<br>Whitefly<br>Yellowstriped Armyworm | 0.08 - 0.10<br>5.12 - 6.4 | <p><b>Ground Application:</b> Apply in water in a minimum of 25 gallons of finished spray per acre.</p> <p><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.</p> <p>Apply in sufficient water to obtain uniform coverage as needed.</p> |

**RESTRICTIONS:**

- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 21 days of harvest (PHI).

| CROP        | PEST  | DOSAGE      |            | APPLICATION INSTRUCTIONS   |
|-------------|---|-------------|------------|--|
|             |   | LB AI/A     | FL OZ/A    |  |
| Garden Beet | Aphids<br>Fire Ants<br>Flea Beetles<br>Lepidopterous Larvae<br>Spider Mites<br>Whitefly | 0.08 - 0.10 | 5.12 - 6.4 | <p><b>Ground Application:</b> Apply in water in a minimum of 25 gallons of finished spray per acre.</p> <p><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre.</p> <p>Apply in sufficient water to obtain uniform coverage as needed.</p> |

**RESTRICTIONS:**

- Do not apply more than 0.4 lb. active ingredient (25.6 ounces formulated) per acre per season.
- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply within 1 day of harvest (PHI).

## SOYBEANS

| PEST                    |                             | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|-------------------------|-----------------------------|--------------|------------|---|
|                         |                             | LB AI/A      | FL OZ/A    |   |
| Alfalfa Caterpillar     | Loopers                     | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 2 gallon per acre.<br>* Pyrethroid resistance is common for Beet Armyworm and Tobacco Budworm. Consult your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM guidance for the specific site and resistant pest problems. |
| Aphids                  | Mexican Bean Beetle (Adult) |              |            |   |
| Aster Leafhopper        | Pea Leaf Weevil             |              |            |   |
| Bean Leaf Beetle        | Pea Weevil                  |              |            |   |
| Beet Armyworm*          | Plant Bug                   |              |            |   |
| Cloverworm              | Saltmarsh Caterpillar       |              |            |   |
| Corn Earworm            | Sap Beetle                  |              |            |   |
| Corn Rootworm (Adult)   | Southern Armyworm           |              |            |   |
| Cucumber Beetles        | Soybean Aphid               |              |            |   |
| Cutworms                | Stink Bugs                  |              |            |   |
| European Corn Borer     | Tarnished Plant Bug         |              |            |   |
| Fall Armyworm           | Thrips                      |              |            |   |
| Flea Beetle             | Tobacco Budworm*            |              |            |   |
| Grasshoppers            | Webworms                    |              |            |   |
| Imported Cabbageworm    | Western Bean Cutworm        |              |            |   |
| Japanese Beetle (Adult) | Whitefly                    |              |            |   |
| Leafhoppers             | Yellowstriped Armyworm      |              |            |   |
| Leafminers              |                             |              |            |   |
| <i>Lygus</i> spp.       | Twospotted Spider Mite      | 0.08 - 0.10  | 5.12 - 6.4 |   |
| Whitefly                |                             |              |            |   |

**RESTRICTIONS:**

- To maintain a proper spray interval, do not make applications less than 30 days apart.
- Do not apply more than 0.3 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply within 18 days of harvest (PHI).

## SPINACH

| PEST                   |                        | DOSAGE       |            | APPLICATION INSTRUCTIONS  |
|------------------------|------------------------|--------------|------------|---|
|                        |                        | LB AI/A      | FL OZ/A    |   |
| Armyworms              | Leafminers             | 0.033 - 0.10 | 2.1 - 6.4  | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><b>Air Application:</b> Apply in water in a minimum of 5 gallons per acre.<br>For whitefly and fire ant control either at planting or as a foliar treatment, apply up to 6.4 oz. (0.1 lb. active) per acre being careful not to exceed reapplication intervals or maximum dosage rates specified in this section. |
| Colorado Potato Beetle | Loopers                |              |            |   |
| Corn Earworm           | Pepper Weevil          |              |            |   |
| Cucumber Beetles       | Thrips                 |              |            |   |
| Cutworms               | Tomato Hornworm        |              |            |   |
| European Corn Borer    | Tomato Pinworm         |              |            |   |
| Flea Beetles           | Whitefly               |              |            |   |
| Banks Grass Mite       | <i>Lygus</i> spp.      |              |            |   |
| Broad Mite             | Pacific Spider Mite    | 0.08 - 0.10  | 5.12 - 6.4 |   |
| Carmine Mite           | Twospotted Spider Mite |              |            |   |
| Fire Ants              |                        |              |            |   |

**RESTRICTIONS:**

- To maintain a proper spray interval, do not make applications less than 7 days apart.
- Do not apply more than 0.4 lb. active ingredient (25.6 ounces formulated) per acre per season.
- Do not apply within 40 days of harvest (PHI).

## SUCCULENT PEAS AND BEANS

| CROP   |   | PEST   |  | DOSAGE                |                     | APPLICATION INSTRUCTIONS  |              |           |
|--|---|--|--|-----------------------|---------------------|---|--------------|-----------|
|  |   |  |  | LB AI/A               | FL OZ/A             |   |              |           |
| <b>Pea</b> ( <i>Pisum</i> spp.)<br>Dwarf Pea<br>Edible-pod Pea<br>English Pea<br>Garden Pea<br>Green Pea<br>Pigeon Pea<br>Snow Pea<br>Sugar Snap Pea | <b>Bean</b> ( <i>Vigna</i> spp.)<br>Asparagus Bean<br>Blackeyed Pea<br>Chinese Longbean<br>Cowpea<br>Moth Bean<br>Southern Pea<br>Yardlong Bean<br>Jackbean | Aster Leafhopper   | Grasshoppers                             | 0.025 - 0.10          | 1.6 - 6.4           | <b>Ground Application:</b> Apply in water in a minimum of 10 gallons per acre.<br><br><b>Air Application:</b> Apply in water in a minimum of 2 gallons per acre. Emulsified oil may be substituted for water.<br><br>See section entitled <b>MIXING INSTRUCTIONS</b> for details on amount of oil to use in the spray tank. |              |           |
|  |   | Flea Beetle  | Leafhoppers                              |                       |                     |   |              |           |
|  |   | <b>Bean</b> ( <i>Phaseolus</i> spp.)<br>Broadbean (Succulent)<br>Lima Bean (Green)<br>Runner Bean<br>Snap Bean<br>Wax Bean | Soybean<br>(Immature Seed)<br>Sword Bean | Alfalfa Caterpillar   | Pea Leaf Weevil     |   | 0.033 - 0.10 | 2.1 - 6.4 |
|  |   |  |  | Aphids                | Pea Weevil          |   |              |           |
|  |   |  |  | Bean Leaf Beetle      | Plant Bugs          |   |              |           |
|  |   |  |  | Beet Armyworm         | Sap Beetle          |   |              |           |
|  |   |  |  | Cloverworm            | Southern Armyworm   |   |              |           |
|  |   |  |  | Corn Earworm          | Stink Bugs          |   |              |           |
|  |   |  |  | Corn Rootworm (Adult) | Tarnished Plant Bug |   |              |           |
|  |   |  |  | Cucumber Beetle       | Thrips              |   |              |           |
| Cutworms   | Webworms  |  |  |                       |                     |   |              |           |
| European Corn Borer  | Western Bean Cutworm  | 0.08 - 0.10  | 5.12 - 6.4                               |                       |                     |   |              |           |
| Fall Armyworm  | Whitefly  |  |  |                       |                     |   |              |           |
| Japanese Beetle (Adult)  | Yellowstriped Armyworm  |  |  |                       |                     |   |              |           |
| Loopers  |   |  |  |                       |                     |   |              |           |
| Banks Grass Mite   | <i>Lygus</i> spp.   | 0.08 - 0.10  | 5.12 - 6.4                               |                       |                     |   |              |           |
| Carmin Mite  | Twospotted Spider Mite  |  |  |                       |                     |   |              |           |

**RESTRICTIONS:**

- Do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated product) per acre per season.
- Do not apply within 3 days of harvest (PHI).

## TOBACCO

| PEST                |                      | DOSAGE        |            | APPLICATION INSTRUCTIONS  |
|---------------------|----------------------|---------------|------------|---|
|                     |                      | LB AI/A       | FL OZ/A    |   |
| Armyworm spp.       | Tobacco Flea Beetle  | 0.0625 - 0.10 | 4.0 - 6.4  | <b>Pre-transplant Soil Applications:</b> Apply 0.0625 - 0.1 lb. active ingredient per acre in a minimum of 10 gallons per acre to control soil pests. Use of suitable equipment to incorporate into top 4" of the soil is required to control below-ground pests.<br><br><b>Transplant Water Treatment Application:</b> Apply 0.0625 - 0.1 lb. active ingredient per acre in a water treatment application volume of 10 - 200 gallons per acre. |
| Cutworm spp.        | (Larvae)             |               |            |   |
| Mole Crickets       | White Grubs          |               |            |   |
| Stalkborers         | Wireworms            |               |            |   |
| Aphid spp.          | Green Bugs           | 0.04 - 0.10   | 2.56 - 6.4 | <b>Foliar Applications:</b> Apply 0.04 - 0.1 lb. active ingredient per acre foliar application up to and including layby in a minimum of 10 gallons per acre.   |
| Armyworm spp.       | Japanese Beetles     |               |            |   |
| Chinch Bugs         | Stink Bugs           |               |            |   |
| Cutworm spp.        | Tarnished Plant Bugs |               |            |   |
| Flea Beetle (Adult) | Thrips               |               |            |   |
| Grasshoppers        | Whitefly             |               |            |   |
| Spider Mites        | <i>Lygus</i> spp.    | 0.10          | 6.4        |   |

**RESTRICTIONS:**

- For foliar applications, do not make more than 2 applications per season.
- May be tank mixed with Command®, Spartan®, and other herbicides approved for tobacco use.
- For all applications do not apply more than 0.2 lb. active ingredient (12.8 ounces formulated) per acre per season.
- Do not apply later than layby.



## TREE NUT CROPS

**Tree Nut Crops including: Almond, Beech nut, Brazil nut, Bitternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, and Walnut (Black & English)**

| PEST  | DOSAGE  |              | APPLICATION INSTRUCTIONS |
|---|---|--------------|--------------------------|
|   | LB AI/A   | FL OZ/A      |                          |
| Black Pecan Aphid<br>Codling Moth<br>Filbertworm<br>Hickory Shuckworm<br>Leaffooted Bugs<br>Navel Orangeworm<br>Oblique Banded Leafroller<br>Peach Twig Borer | Pecan Leaf Casebearer<br>Pecan Nut Casebearer<br>Pecan Phylloxera<br>Plant Bugs<br>Stink Bugs<br>Walnut Aphid<br>Yellow Pecan Aphid | 0.052 - 0.20 | 3.2 - 12.8               |
| European Red Mite   | Spider Mites  | 0.08 - 0.20  | 5.1 - 12.8               |
| Fire Ants   | Walnut Husk Fly   | 0.1 - 0.2    | 6.4 - 12.8               |

### RESTRICTIONS:

- Minimum spray intervals: Apply **Batallion 2 EC** as needed to maintain control, but not apply at intervals sooner than 15 days.
- Observe a 21-day Pre-harvest Interval (PHI) for Pecans and a 7-day Pre-harvest Interval (PHI) for all other registered tree nut crops.
- Do not exceed 0.2 lb. active ingredient per acre per application; do not exceed 0.50 lb. active ingredient per acre per season.
- Do not graze livestock in treated orchards or cut treated cover crops for feed.
- Do not apply within 21 days of harvest (PHI) for Pecans.
- Do not apply within 7 days of harvest (PHI) for all other nut crops.

## TUBEROUS AND CORM VEGETABLES

| CROP   | PEST   | DOSAGE   |   | APPLICATION INSTRUCTIONS |
|--|--|--|---|--------------------------|
|  |  | LB AI/A  | FL OZ/A   |                          |
| Arracacha<br>Arrowroot<br>Cassava (Bitter & Sweet)<br>Chayote (Root) Chinese<br>Artichoke Chufa<br>Dasheen (Taro)<br>Edible Canna Jerusalem<br>Artichoke Ginger<br>Leren<br>Potato<br>Sweet Potato<br>Tanier<br>True yam<br>Turmeric<br>Yam bean | Corn Wireworm<br>Tobacco Wireworm<br>Japanese Beetle Grubs<br>June Beetle<br>Southern Potato Wireworm<br>Banded Cucumber Beetle<br>Black Flea Beetle<br>Cucumber Beetle<br>Rootworms<br>Sugarcane Beetle<br>Sweetpotato Flea Beetle<br>Sweetpotato Weevil<br>White Grub<br>Whitefringed Beetle | 0.30<br>(At Plant)<br>0.05 - 0.15<br>(Layby)<br>0.033 - 0.10<br>(Foliar) | 19.2<br>(At Plant)<br>3.2 - 9.6<br>(Layby)<br>2.1 - 6.4<br>(Foliar) |                          |

### RESTRICTIONS:

- For foliar applications, do not make more than 2 foliar applications per season and do not make application less than 21 days apart.
- Do not apply more than 0.5 lb. active ingredient (32 ounces formulated) per acre per season, including soil applications.
- Do not apply within 21 days of harvest (PHI).

## ORNAMENTALS\*

\* NOT FOR USE IN CALIFORNIA TO CONTROL LISTED INSECT PESTS ON TREES (INCLUDING CHRISTMAS TREES AND SOD FARMS).

### For Use on Christmas Trees and Sod Farms

#### USE INSTRUCTIONS

**Batallion 2 EC** mixes with water and other aqueous carriers to control a broad assortment of insects and mites on trees and sod farms.

**Batallion 2 EC** may be tank-mixed with other products, including insect growth regulators. When tank mixing **Batallion 2 EC** with other products observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of **Batallion 2 EC** may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions:

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| 1. Add wettable powders to tank water | 4. Agitate                       |
| 2. Agitate                            | 5. Add emulsifiable concentrates |
| 3. Add fluids and flowables           | 6. Agitate                       |

If a mixture is found to be incompatible following the order of addition, try reversing the order of addition, or increase the volume of water. **Note:** If the tank mixture is found to be compatible after increasing the amount of water then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight. When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation to keep the mixture in solution.

#### APPLICATION INSTRUCTIONS

#### TRUNK SPRAYS TO TREES (Christmas Trees) For Control of Bark Beetles and Boring Beetles

Refer to the table below. Application rates and timing differ according to the target pest and other factors specific to each local situation. Consult your local State Extension specialist or other qualified expert for recommendations. **Note:** Do not apply more than 12.8 fl. oz. (0.2 lb. ai) per acre of this product to trees. Repeat application may be necessary if reinfestation is likely.

| PEST   | DOSAGE   | SPRAY VOLUME                                    | REMARKS AND RESTRICTIONS  |
|--|--|---|---|
| <b>Dendroctonus Bark Beetles</b><br>such as mountain pine beetle, southern pine beetle, western pine beetle, and black turpentine beetle.  | 16 - 32 fl. oz. per 100 gallons<br>(0.25 - 0.5 lb. ai per 100 gallons)   | Use 1 - 4 gallons of finished spray per tree.   | Make applications to the trunk of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestation.<br><br>Apply spray directly to the main trunk from the base of the tree to at least half-way into the live crown. Spray until the bark is thoroughly wet. |
| <b>Engraver beetle</b> ( <i>Ips</i> spp.)  | 16 - 32 fl. oz. per 100 gallons<br>(0.25 - 0.5 lb. ai per 100 gallons)   | Use 10 - 14 gallons of finished spray per tree. | Apply spray directly to the main trunk from the base of the tree to at least half-way into the live crown. Spray until the bark is thoroughly wet.  |
| <b>Other Bark Beetles</b><br>such as ambrosia beetles, elm bark beetles, and metallic wood borers such as emerald ash borer.   | 16 - 32 fl. oz. per 100 gallons<br>(0.25 - 0.5 lb. ai per 100 gallons)   | Use 2 - 5 gallons of finished spray per tree.   | Make applications of a spray mixture to the trunk, scaffolding and limbs of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestations. Spray until the bark is thoroughly wet.  |
| <b>Clearwing Moth Borers</b><br>such as ash borer, banded ash clearwing, dogwood borer, lesser peachtree borer, lilac borer, oak borer, peachtree borer, rhododendron borer.<br><br><b>Coleoptera Borers</b><br>such as bronze birch borer, flatheaded apple tree borer. | 6.4 - 12.8 fl. oz. per 100 gallons<br>(0.1 - 0.2 lb. ai per 100 gallons) | Use 1 - 4 gallons of finished spray per tree.   | Apply to the branches and trunks prior to adult emergence. Spray until the bark is thoroughly wet. For maximum residual control, use highest recommended rate.  |

## Treatment of Infested Trees to Control Emerging Brood

Make applications of a spray mixture containing 2.0 pints of **Batallion 2 EC** per 100 gallons of water to trees that still have beetles in the bark. Apply spray directly to the main trunk from the base of the tree to at least half-way into the live crown. Spray until the bark is thoroughly wet (usually 1 - 4 gallons of spray per tree). Do not apply more than 0.2 lb. ai (12.8 fl. oz.) of this product to trees per acre.

Trees on which all needles have turned brown generally have been vacated and should not be sprayed unless infestation is confirmed. To confirm an infestation, scrape off the outer bark to determine if trees are still infested. If live infestations remain in the trunks, fell the trees and cut into sections. Spray the trunk and large limbs and turn sections so that all of the surface area can be treated. Do not apply more than 0.2 lb. ai (12.8 fl. oz.) of this product to trees per acre.

## FOLIAR SPRAYS TO TREES (Christmas Trees)

For applications to conifers (field grown), Christmas Trees and pine seed orchards apply 0.04 - 0.32 fl. oz. **Batallion 2 EC** per 1000 sq. ft. or 1.8 to 14.4 fl. oz. per 100 gallons. **Batallion 2 EC** may be diluted and applied in various volumes of water providing that the maximum label rate (0.32 fl. oz. per 1000 sq. ft. or 14.4 fl. oz. per 100 gallons) is not exceeded. **Batallion 2 EC** may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (0.32 fl. oz. per 1000 sq. ft. or 14.4 fl. oz. per 100 gallons) is not exceeded.

## Calculating Dilution Rates Using the Application Rates Table and the Batallion 2 EC Dilution Chart

Use the following steps to determine the appropriate dilution of this product required to control the specific pests:

1. Find the least susceptible target pest (the pest that requires the highest application rate for control).
2. Select an application rate in terms of fluid ounces of this product.
3. Find your application volume and how much spray you want to prepare.
4. Use the **Dilution Chart** to determine the appropriate volume of this product that must be mixed in your desired volume of water.

For example, to control black vine weevil adults on rhododendron, the **Application Rates** table shows that 0.08 - 0.16 fl. oz. of this product should be applied per 1000 sq. ft. You select an application rate of 0.16 fl. oz. per 1000 sq. ft. because maximum residual control is desired. Your application volume is approximately 300 gallons per acre which is equivalent to 6.9 gallons per 1000 sq. ft. Consulting the **Dilution Chart** shows that you should dilute 0.24 fl. oz. of this product in 10 gallons of water.

## Batallion 2 EC Dilution Chart

| APPLICATION RATE | FLUID OUNCES (mL) OF BATALLION 2 EC DILUTED TO THE VOLUMES OF FINISHED SPRAY |     |           |      |            |      |             |
|------------------|--|-----|-----------|------|------------|------|-------------|
|                  | 1 GALLON   |     | 5 GALLONS |      | 10 GALLONS |      | 100 GALLONS |
| FL OZ/1000 SQ FT | FL OZ  | mL  | FL OZ     | mL   | FL OZ      | mL   | FL OZ       |
| 0.04             | 0.018  | 0.5 | 0.09      | 2.6  | 0.18       | 5.3  | 1.8         |
| 0.08             | 0.036  | 1.1 | 0.18      | 5.3  | 0.36       | 10.6 | 3.6         |
| 0.16             | 0.072  | 2.1 | 0.36      | 10.6 | 0.72       | 21.3 | 7.2         |
| 0.32             | 0.144  | 4.3 | 0.72      | 21.3 | 1.44       | 42.6 | 14.4        |

$$\frac{(7.9)(\text{fl. oz. of Batallion 2 EC Added to Tank})}{(\text{Gallons of Finished Spray Mix})(128)} = \text{Percent Active Ingredient of Spray Mix}$$

## Tree Foliar Application Rates

The application rates listed in the following table will provide excellent control of the noted pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 0.32 fl. oz. per 1000 sq. ft. (14.4 fl. oz. per 100 gallons) to control each of the pest listed in this table. The higher application rates should be used when maximum residual control is desired.

| PEST   |  | DOSAGE   | REMARKS AND RESTRICTIONS  |
|--|--|--|---|
| Bagworms <sup>1</sup><br>Cutworms<br>Elm Leaf Beetles<br>Fall Webworms<br>Gypsy Moth Caterpillars  | Lace Bugs<br>Leaf Feeding Caterpillars<br>Tent Caterpillars<br>Tussock Moth  | 0.04 - 0.08 fl. oz.<br>per 1000 sq. ft.<br>(1.8 - 3.8 fl. oz.<br>per 100 gallons)  | <sup>1</sup> Bagworms: For best results, apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.<br><sup>2</sup> Beetles, Scale Crawlers, Twig Borers, and Weevils: May treat trunks, stems and twigs in addition to plant foliage.  |
| Adelgids<br>Ants<br>Aphids<br>Bees<br>Beet Armyworm<br>Beetles <sup>2</sup><br>Black Vine Weevil (Adult)<br>Broad Mites<br>Budworms<br>Cicadas<br>Citrus Thrips<br>Clover Mites<br>Crickets<br>Earwigs<br>European Red Mite<br>Flea Beetles<br>Fungus Gnats (Adult)<br>Glassywinged Sharpshooter<br>Grasshoppers<br>Japanese Beetle (Adult)<br>Leafhoppers<br>Leafrollers<br>Mealybugs<br>Mites<br>Mosquitoes<br>Nantucket Pine Tip Moth | Pillbugs<br>Pine Sawflies<br>Plant Bugs (including <i>Lygus</i> spp.)<br>Psyllids<br>Scales, such as<br>Brown Soft Scales<br>California Red Scale (Crawlers) <sup>2</sup><br>Elongated Hemlock Scale<br>Pine Needle Scales (Crawlers) <sup>2</sup><br>San Jose Scales (Crawlers) <sup>2</sup><br>Scorpions<br>Spider Mites <sup>3</sup><br>Spiders<br>Spittlebugs<br>Thrips<br>Tip Moths<br>Treehoppers<br>Twig Borers <sup>2</sup><br>Wasps<br>Weevils <sup>2</sup> , such as<br>Diaprepes (Adult)<br>Orchid Weevil<br>Pales Weevil<br>White Pine Weevil<br>White Flies<br>Zimmerman Pine Moths | 0.08 - 0.16 fl. oz.<br>per 1000 sq. ft.<br>(3.6 - 7.2 fl. oz.<br>per 100 gallons)  | <sup>3</sup> Spider Mites: <b>Batallion 2 EC</b> provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid- to late-summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, <b>Batallion 2 EC</b> applications may be rotated with those of other products that have different modes of action in control programs that <i>are</i> designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region. |
| Imported Fire Ants**<br>Leafminers<br>Pecan Leaf Scorch Mite   | Pine Shoot Beetle (Adult)<br>Spider Mites <sup>3</sup>   | 0.16 - 0.32 fl. oz.<br>per 1000 sq. ft.<br>(7.2 - 14.4 fl. oz.<br>per 100 gallons) | ** For foraging ants  |

## BROADCAST SPRAYS (Sod Farms)

Apply **Battalion 2 EC** as a broadcast treatment. Use higher volumes up to 10 gallons of carrier per 1000 square feet to get uniform coverage when treating dense grass foliage.

For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone-based surfactant (0.25% v/v) is recommended. Irrigation to treated area within a few hours following application can improve efficacy to sub-surface pests such as, but not limited to, mole crickets.

### Restrictions:

- In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).
- In New York State, do make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

### Application Rates

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, **Battalion 2 EC** may be applied at up to 0.32 fl. oz. per 1000 square feet to control each of the pests listed in this table. The higher application rates should be used when maximum residual control is desired or heavy pest populations occur.

| PEST   |   |                                    | DOSAGE                               |
|--|---|------------------------------------|--------------------------------------|
| Armyworms <sup>1</sup>   | Cutworms <sup>1</sup>                                     | Sod Webworm <sup>1</sup>           | 0.05 - 0.08 fl. oz. per 1000 sq. ft. |
| Annual Bluegrass Weevil<br>( <i>Hyperodes</i> ) (Adult) <sup>2</sup> | Black Turfgrass Ataenius (Adult) <sup>4</sup><br>Crickets | Grasshoppers<br>Mealybugs          | 0.08 - 0.16 fl. oz. per 1000 sq. ft. |
| Banks Grass Mite <sup>6</sup>  | Earwigs   | Mites <sup>6</sup>                 |                                      |
| Billbugs (Adult) <sup>3</sup>  | Fleas (Adult)   |                                    |                                      |
| Ants   | Imported Fire Ants <sup>8</sup>                           | Mole Cricket (Nymph) <sup>10</sup> | 0.16 - 0.32 fl. oz. per 1000 sq. ft. |
| Chinch Bugs <sup>5</sup>   | Japanese Beetle (Adult)                                   | Ticks <sup>11</sup>                |                                      |
| Fleas (Larvae) <sup>7</sup>  | Mole Cricket (Adult) <sup>9</sup>                         |                                    |                                      |

<sup>1</sup> **Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (up to 0.32 fl. oz. per 1000 square feet) may be required during periods of high pest pressure.

<sup>2</sup> **Annual Bluegrass Weevil (*Hyperodes*) Adults:** Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when Forsythia is in full bloom and concludes when flowering dogwood (*Cornus florida*) is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

<sup>3</sup> **Billbug Adults:** Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

<sup>4</sup> **Black Turfgrass Ataenius Adults:** Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with this blooming of Rose of Sharon (*Hibiscus syriacus*).

<sup>5</sup> **Chinch Bugs:** Chinch Bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch bugs can be one of the most difficult pests to control in grasses and the higher application rates (up to 0.32 fl. oz. per 1000 square feet) may be required to control populations that contain both nymphs and adults during the middle of the summer.

<sup>6</sup> **Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first, may be necessary to achieve acceptable control.

<sup>7</sup> **Flea Larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: if the lawn area is being treated with this product at 0.08 fluid oz., per 1000 square feet for adult flea control, then the larval application rate may be achieved by increasing the application volume two- to four-fold.

<sup>8</sup> **Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments should apply 0.32 fl. oz. per 1000 square feet. Mounds should be treated by diluting 0.05 fl. oz. of **Battalion 2 EC** per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four-foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

(continued)

## Application Rates (continued)

<sup>9</sup> **Mole Cricket Adults:** Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

<sup>10</sup> **Mole Cricket Nymphs:** Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

<sup>11</sup> **Ticks (including Ticks that may Transmit Lyme Disease and Rocky Mountain Spotted Fever):** Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf liner. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity. Repeat application must be limited to no more than once per seven days.

**Deer Ticks (*Ixodes* spp.)** have a complicated life cycle that ranges over a two-year period and involves four life stages. Applications should be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

**American Dog Ticks** may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

## Battalion 2 EC Dilution Chart

| APPLICATION VOLUME     | APPLICATION RATE     | FLUID OUNCES (mL) OF BATTALION 2 EC DILUTED TO THE VOLUMES OF FINISHED SPRAY |      |           |       |            |      |             |
|------------------------|----------------------|--|------|-----------|-------|------------|------|-------------|
|                        |                      | 1 GALLON   |      | 5 GALLONS |       | 10 GALLONS |      | 100 GALLONS |
| GALLONS/<br>1000 SQ FT | FL OZ/<br>1000 SQ FT | FL OZ  | mL   | FL OZ     | mL    | FL OZ      | mL   | FL OZ       |
| 1                      | 0.05                 | 0.05   | 1.48 | 0.25      | 7.39  | 0.50       | 14.8 | 5.00        |
| 1                      | 0.08                 | 0.08   | 2.37 | 0.40      | 11.83 | 0.80       | 23.7 | 8.00        |
| 1                      | 0.16                 | 0.16   | 4.73 | 0.80      | 23.66 | 1.60       | 47.3 | 16.00       |
| 1                      | 0.32                 | 0.32   | 9.46 | 1.60      | 47.32 | 3.20       | 94.6 | 32.00       |
| 2                      | 0.50                 | 0.025  | 0.74 | 0.13      | 3.70  | 0.25       | 7.4  | 2.50        |
| 2                      | 0.08                 | 0.040  | 1.18 | 0.20      | 5.91  | 0.40       | 11.8 | 4.00        |
| 2                      | 0.16                 | 0.080  | 2.37 | 0.40      | 11.83 | 0.80       | 23.7 | 8.00        |
| 2                      | 0.32                 | 0.160  | 4.73 | 0.80      | 23.66 | 1.60       | 47.3 | 16.00       |
| 3                      | 0.05                 | 0.017  | 0.49 | 0.08      | 2.46  | 0.17       | 4.9  | 1.67        |
| 3                      | 0.08                 | 0.027  | 0.79 | 0.13      | 3.94  | 0.27       | 7.9  | 2.67        |
| 3                      | 0.16                 | 0.053  | 1.58 | 0.27      | 7.89  | 0.53       | 15.8 | 5.33        |
| 3                      | 0.32                 | 0.107  | 3.15 | 0.53      | 15.77 | 1.07       | 31.5 | 10.67       |
| 4                      | 0.05                 | 0.013  | 0.37 | 0.06      | 1.85  | 0.13       | 3.7  | 1.25        |
| 4                      | 0.08                 | 0.020  | 0.59 | 0.10      | 2.96  | 0.20       | 5.9  | 2.00        |
| 4                      | 0.16                 | 0.040  | 1.18 | 0.20      | 5.91  | 0.40       | 11.8 | 4.00        |
| 4                      | 0.32                 | 0.080  | 2.37 | 0.40      | 11.83 | 0.80       | 23.7 | 8.00        |
| 5                      | 0.05                 | 0.010  | 0.30 | 0.05      | 1.48  | 0.10       | 3.0  | 1.00        |
| 5                      | 0.08                 | 0.016  | 0.47 | 0.08      | 2.37  | 0.16       | 4.7  | 1.60        |
| 5                      | 0.16                 | 0.032  | 0.95 | 0.16      | 4.73  | 0.32       | 9.5  | 3.20        |
| 5                      | 0.32                 | 0.064  | 1.89 | 0.32      | 9.46  | 0.64       | 18.9 | 6.40        |
| 10                     | 0.05                 | 0.005  | 0.15 | 0.03      | 0.74  | 0.05       | 1.5  | 0.50        |
| 10                     | 0.08                 | 0.008  | 0.24 | 0.04      | 1.18  | 0.08       | 2.4  | 0.80        |
| 10                     | 0.16                 | 0.016  | 0.47 | 0.08      | 2.37  | 0.16       | 4.7  | 1.60        |
| 10                     | 0.32                 | 0.032  | 0.95 | 0.16      | 4.73  | 0.32       | 9.5  | 3.20        |



## Attention

- Do not apply to pets, crops, or sources of electricity.
- Firewood is not to be treated.
- Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.
- Do not apply this pesticide in livestock buildings (barns).
- Keep children and pets *off* treated areas following application until the spray has dried.
- Do not apply by air.
- Do not use in greenhouses.
- Do not apply this product through any type of irrigation system. Do not apply when a temperature inversion exists.
- Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).
- For turf treatment, apply with nozzles not more than 2 feet above the grass.
- Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not apply when grass areas are water logged or the soil is saturated with water (i.e., will not accept irrigation).
- Vinyl and Aluminum Siding: Do not spray directly onto vinyl or aluminum siding. If **Batallion 2 EC** inadvertently contacts vinyl and aluminum siding (particularly lightly colored, aged, weathered or otherwise damaged), it may result in staining, bleaching or discoloration. Wash off thoroughly with detergent and water. Factors such as extreme heat and direct sunlight can promote damage when using emulsifiable concentrates. Avoid application to vinyl or aluminum siding while exposed to direct sunlight or during the heat of the day.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Keep out of reach of children and animals. Store in original containers only, in a cool, dry place and avoid excess heat. Do not freeze. Do not store below 40°F. Carefully open containers. If crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

#### For plastic containers ≤ 5 gallons: Nonrefillable Container:

Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

#### For plastic containers > 5 gallons: Nonrefillable Container:

Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

## LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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