

70506-227

04-08-2010

1/23



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

April 8, 2010

Rebecca Clemmer
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Amendment – Response per PR Notice 2007-4
Bifenture® 10DF Insecticide/Miticide
EPA Reg. No. 70506-227
Your submission dated February 22, 2010 and March 2, 2010

Dear Ms. Clemmer:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. Add a legend on the front page of the master label clearly identifying the bold, italicized text and bracketed information for the reader.

If you have any questions regarding this action, please contact BeWanda Alexander at Alexander.bewanda@epa.gov or (703) 305-7460.

Sincerely,

A handwritten signature in black ink that reads "BeWanda Alexander" with a stylized flourish at the end.

Richard Gebken
Product Manager
Insecticide Branch
Registration Division (7505P)

Enclosure

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 those uses covered by the certified applicator's certification.

GROUP	3	INSECTICIDE
-------	---	-------------

BIFENTURE® 10DF Insecticide/Miticide

(primary name)

BIFENTURE® 10WSB Insecticide/Miticide

(alternate name)

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

APR 8 2010

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.**

70506-227

ACTIVE INGREDIENT:

Bifenthrin* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate.....

10.0%

OTHER INGREDIENTS:

90.0%

TOTAL

100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum

KEEP OUT OF REACH OF CHILDREN

CAUTION

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.)

FIRST AID

If Swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes:	<ul style="list-style-type: none"> • 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.
If on Skin or Clothing:	<ul style="list-style-type: none"> • 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

Note to Physician: 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 so should be avoided.

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

United Phosphorus, Inc.
630 Freedom Business Center
King of Prussia, PA 19406
1-800-438-6071 • www.upi-usa.com

EPA Reg. No. 70506-227
EPA Est. No.
Net Contents

PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

Caution.. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. 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:

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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/PPE 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 wash waters.

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 bifenthrin 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.

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 through any type of irrigation system.

Resistance. Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect pest may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

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 intervals. 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; waterproof gloves; and shoes plus socks.

GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Avoid rough handling which may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.

Bifenture WSB/DF insecticide must be diluted with water before spray application. Do not use nozzle screens (e.g. strainers) greater than 50 mesh size. *Determine the number of water soluble bag(s) to make up necessary spray suspension.*

Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:

$$\frac{\text{Rate for Pest (Active/Acre)}}{0.05 \text{ (amt. ai in each bag)}} \times \text{Number of Acres to be Treated} = \text{Number of Bifenture Water Soluble Bags to use for acres to be treated}$$

Do not break bags. When the equation equals less than a whole number of bags, use the next higher whole number of bags.

Fill the spray tank 1/2 full with water. Add required amount of Bifenture 10 WSB. Open the outer wrapper of this product and immediately dump required number of water soluble bags into the spray tank. Allow the bag(s) to dissolve completely. Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

Tank-Mixture

Bifenture 10 WSB/DF Insecticide/Miticide 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. Test for compatibility of products before mixing using a standard jar test or other similar method.

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.csu.edu/v/technical/agronom/newconbuf.pdf>

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)

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

Additional Requirements for Ground Applications

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

Spray Drift Requirements

Wind Direction and Speed

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

Temperature Inversions

Do not make aerial or ground applications during 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.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

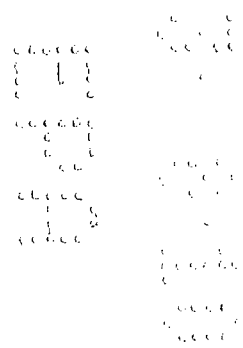
Additional Requirements for Aerial Applications

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the 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 cross-wind, 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.



Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

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.

Artichoke

Pest	Rate oz/A (lb ai/A)	Instructions
Artichoke Plume Moth Cribrate Weevil	16.0 (0.10)	<p>Apply when pest populations reach damaging thresholds and repeat as necessary to maintain control, but not more often than 15-day intervals.</p> <p>Do not apply more than 16 oz product (0.10 lb ai)/A between bud formation and harvest of an individual fruit.</p> <p>Ground Application: Apply in a minimum of 75 gallons per acre.</p> <p>Air Application: Apply in a minimum of 10 gallons per acre.</p> <p>Do not apply more than 80 oz product (0.5 lb ai) per acre per season.</p> <p>Preharvest interval: 5 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>

Brassicas

Broccoli, Chinese Broccoli, (gailon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy)

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 - 0.10)	Planting Time Use: For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.
Aphids Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Tobacco Budworm Saltmarsh Caterpillar Stink Bugs Thrips Wireworm (Adults)	5.3 to 16.0 (0.033 - 0.10)	<p>Foliar Use: Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.</p> <p>Thorough coverage is essential to achieve control.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per season, including at-plant applications.</p> <p>Do not make applications less than 7 days apart.</p> <p>Do not make more than 5 applications after bloom.</p> <p>Preharvest interval: 7 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
Banks Grass Mite	12.8 to 16.0	

Carmine Mite <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	(0.08 - 0.10)	
--	---------------	--

Bushberries

Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Blueberry Maggot Fruitworms Leafhoppers Lecanium Scale (crawlers) Obliquebanded Leafroller Plum Curculio Redbanded Leafroller Spanworm Variegated Leafroller	5.3 to 16.0 (0.033 to 0.10)	Apply in at least 2 gallons per acre by air or in at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 1 day. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmine Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	

Caneberries

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries

Pest	Rate oz/A (lb ai/A)	Instructions
Black Vine Weevil Leafrollers Orange Tortrix Root Weevils	8.0 to 16.0 (0.05 to 0.1)	Apply by air or ground equipment using sufficient water to obtain full coverage of the canopy. Use a minimum of 10 gallons per acre by air and 50 gallons per acre by ground. One application may be made pre-bloom and a second application may be made post bloom.
Carmine Mite Raspberry Crown Borer Twospotted Spider Mite	16.0 (0.1)	For Crown Borer: apply 16 oz product (0.1 lb ai) per acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/A) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 3 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Canola, Crambe, Rapeseed

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshopper Loopers Other Lepidopterous Larvae Plant Bug Stink Bugs Seedpod Weevil Thrips	5.3 to 6.4 (0.033 - 0.04)	Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 12.8 oz product (0.08 lb ai) per acre per season. Do not make applications less than 14 days apart. Preharvest interval: 35 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Citrus

Pest	Rate oz/A (lb ai/A)	Instructions
BlueGreen Citrus Root Weevil Brown Leaf Notcher Diaprepes Root Weevil Fuller Rose Beetle Green Citrus Root Weevil LittleLeaf Notcher Southern Blue- Green Citrus Weevil	40.0 to 80.0 (0.25 to 0.50)	<p>Apply Bifenture 10 WSB/DF by ground equipment to bare soil beneath citrus trees. Bifenture 10 WSB/DF must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume will insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.</p> <p>Bifenture 10 WSB/DF protects citrus tree roots from Diaprepes and other citrus root weevils feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As eggs hatch in new foliage, neonates fall to the soil surface BELOW the tree and come in contact with Bifenture 10 WSB/DF as they attempt to burrow into the root zone.</p> <p>Minimize disturbance of the soil beneath trees.</p> <p>Timing of Bifenture 10 WSB/DF applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Bifenture 10 WSB/DF application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Bifenture 10 WSB/DF soil barrier in place prior to drop of the neonates.</p>
Asian Cockroach Fire Ants	16.0 to 40.0 (0.1 to 0.25)	<p>Bifenture 10 WSB/DF is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Apply in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.</p> <p>Additional Instructions: Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.</p> <p>Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.</p> <p>If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, use 80 oz product (0.50 lb ai) to obtain the longest residual management of Diaprepes root weevil.</p> <p>If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 40 oz product (0.25 lb ai) can be applied early season and 0.25 pound active can be applied later in the season.</p> <p>Do not apply through irrigation systems.</p> <p>Do not allow any application of Bifenture 10 WSB/DF to contact fruit or foliage.</p> <p>Do not apply more than a total of 80 oz product (0.5 lb ai) per acre per year.</p> <p>Preharvest interval: 1 day.</p> <p>Apply in a minimum of 40 gallons of finished spray per acre.</p> <p>Ground application only. Do not apply by air.</p>

Cotton

Pest	Rate oz/A (lb ai/A)	Instructions
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	3.2 to 16.0 (0.02 to 0.10)	This product may be applied in water. Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by air.
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm	6.4 to 16.0 (0.04 to 0.10)	To control Boll Weevil: apply at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. To control Mites and Aphids: apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days. 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. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Beet Armyworm Carmine Spider Mite <i>Lygus</i> spp. Pink Bollworm Twospotted Spider Mite Whiteflies	9.6 to 16.0 (0.06 to 0.10)	

Cucurbits

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza); (*Luffa* spp.) (includes hechima, Chinese okra); (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.)

Pest	Rate oz/A (lb ai/A)	Instructions
Wireworms Maggots Grubs	8.0 to 16.0 (0.05 - 0.10)	Planting Time Use: For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.
Aphids Armyworms	8.0 to 16.0 (0.05 - 0.10)	Foliar Use: Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.

Lygus Spp. Pacific Spider Mite Two Spotted Spider Mite		
--	--	--

Fruiting Vegetables (continued)

Tomato, Tomatillo

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 12.8 (0.05 to 0.08)	Apply in-furrow with the seed or transplant.
Aphids Armyworms Including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm Bean Leaf Beetle Cabbageworm Carmine Mite Cloverworm Corn Earworm Corn Rootworm Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hopper Grasshopper Japanese Beetle (Adult) Leafhoppers Loopers <i>Lygus</i> Spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bug Rindworm Saltmarsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink Bug Spp. Tobacco Budworm Tarnished Plant Bug Thrips Tomato Hornworms Two Spotted Spider Mite Whiteflies	5.3 to 12.8 (0.033 to 0.08)	Apply as necessary for insect control using a minimum of 15 gallons per acre with ground. Thorough coverage is essential to achieve control. Do not make applications less than 10 days apart. A maximum of 4 applications may be applied per season. Preharvest interval: 1 day. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Grapes

Pest	Rate oz/A (lb ai/A)	Instructions
Cutworms Eastern Grape Leafhopper Grape Berry Moth Japanese Beetles Adults Variegated Leafhopper Western Grape Leafhopper	8.0 to 16.0 (0.05 - 0.10)	Apply in a minimum of 10 gallons by air or in a minimum of 25 gallons with ground equipment. Thorough coverage is essential to achieve control. When pest pressure is moderate to severe, use higher rate. Do not apply more than 16 oz product (0.10 lb ai) per acre per season. Preharvest interval: 30 days.
Black Vine Weevil Glasswinged Sharpshooter Twospotted Spider Mite	16.0 (0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Hops

Not for this use in California

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.10)	Do not apply more than 16 oz product (0.10 lb ai) per acre per application. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. A spray interval of 21 days between applications must be maintained.
Root Weevils	8.0 to 16.0 (0.05 to 0.10)	Preharvest interval: 14 days.
Twospotted Spider Mite	16.0 (0.10)	Ground Application: For best results, full coverage is essential. For early season applications use 100-150 gallons per acre. For late season applications use 200-250 gallons per acre. For Root Weevil control, make a directed spray to the base of the plant. Spray up the bine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant. Air Application (for late season control of Twospotted Spider Mites): Apply a minimum of 16 oz product (0.10 lb ai) per application in a minimum of 10 gallons per acre. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Leafy Petiole Vegetables

Celery, Cardoon, Chinese celery, Celtuce, Florence fennel, Rhubarb, Swiss chard

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids	5.3 to 16.0	Apply in at least 2 gallons per acre by air or at least 10 gallons per

15
23

Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whiteflies Wireworm (Adults)	(0.033 to 0.10)	acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 7 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmin Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	

Lettuce, Head

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bug Spp. Tobacco Budworm	5.3 to 16.0 (0.033 - 0.10)	Apply as necessary for insect control using a minimum of 20 gallons per acre with ground equipment and 5 gallons per acre by air. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 7 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Carmin Mite <i>Lygus</i> Spp. Two Spotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)	

Mayhaw

Pest	Rate oz/A (lb ai/A)	Instructions
Plum Curculio	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 28 gallons per acre. Do not apply more than once every 7 days. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 30 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Peanut

Pest	Rate oz/A (lb ai/A)	Instructions
Beet Armyworm Corn Earworm Cutworm Spp. Fall Armyworm Grasshoppers Green Cloverworm Leafhoppers Lesser Cornstalk Borer Loopers Redneck Peanut Worm Southern Armyworm Southern Corn Rootworm Stink Bugs Threecornered Alfalfa Hopper Velvetbean Caterpillar Yellowstriped Armyworm	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16.0 oz product (0.10 lb ai) per acre at a minimum of 14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Aphids Spider Mites Thrips Whiteflies	5.12 to 16.0 (0.08 to 0.10)	

Pears

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Codling Moth Cutworms Green Fruitworm	6.4 to 32.0 (0.04 to 0.2)	Ground Application: Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage. Air Application: Apply in a minimum of 10 gallons per acre by air. Do not apply more than 80 oz product (0.5 pound ai) per acre per

17
33

Leafhoppers Leafminers Leafrollers <i>Lygus</i> Spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs		season with no more than 0.45 pound ai per acre applied after petal fall. Apply as needed to maintain control using a minimum of 30-day spray interval. Preharvest interval: 14 days. Do not graze livestock in treated orchards or cut treated cover crops for feed. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Yellow Spider Mite	9.6 to 32.0 (0.06 to 0.2)	
European Red Mite Twospotted Spider Mite	12.8 to 32.0 (0.08 to 0.2)	

Root Crops (except sugarbeets)

Crops	Pest	Rate oz/A (lb ai/A)	Instructions
Burdock, edible Carrot Celeriac Chervil, turnip rooted Chicory Ginseng Horseradish Parsley, turnip rooted Parsnip Radish Radish, oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Aphids Beet Armyworm Celery Leaf-tier Corn Earworm Cross-striped Cabbageworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Fire Ants Green Cloverworm Hornworms Imported Cabbageworm Loopers Southern Armyworm Tobacco Budworm Velvetbean Caterpillar Yellowstriped Armyworm Spider Mites Whiteflies	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 21 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Garden Beet	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. Preharvest interval: 1 day.

Soybean

Pest	Rate oz/A (lb ai/A)	Instructions
Soybean Aphid	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16 oz product (0.10 lb ai) per acre at a minimum of 30 day intervals.
Spider Mites	12.8 to 16.0 (0.08 to 0.10)	Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Preharvest interval: 18 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Spinach

Pest	Rate oz/A (lb ai/A)	Instructions
Armyworms Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips Tomato Pinworm Tomato Hornworm	5.3 to 16.0 (0.033 to 0.10)	For control of fire ants apply Bifenture 10 WSB/DF to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications. Preharvest interval: 40 days. Apply in 5-50 gallons per acre by air or 10-50 gallons finished spray per acre by ground. Do not make applications less than 7 days apart. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. For control of Whiteflies apply foliar treatments of Bifenture 10 WSB/DF by ground or air at rates up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications.
Broad Mite Banks Grass Mite Carmine Mite Fire Ants <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 to 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Strawberries

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Flea beetles <i>Heliothis</i> Spp. Leafrollers <i>Lygus</i> Spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds. Repeat as necessary at 7-14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 0 days. Ground Application: Apply in a minimum of 50 gallons per acre. Air Application (prohibited in Florida): Apply in a minimum of 5 gallons per acre. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Black Vine Weevil Strawberry Root Weevil	8.0 to 32.0 (0.05 to 0.2)	
Spider Mites	16.0 to 32.0 (0.10 to 0.2)	

CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS: Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Bifenture 10WSB/DF greater than 0.10 lb ai/acre, harvesters must wear gloves for five (5) days following application.

Succulent Peas and Beans

Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea; Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean; Jackbean; Soybean (immature seed); Sword bean

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 - 0.10)	Planting Time Use: For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant. Foliar Use: Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.
Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	4.0 to 16.0 (0.025 - 0.10)	Thorough coverage is essential to achieve control. Do not apply more than 32 oz product (0.2 lb ai) per acre per season including at plant applications. Preharvest interval: 3 days.
Adult Sap Beetle Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Cloverworm	5.3 to 16.0 (0.033 - 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

Corn Earworm	
Corn Rootworm Adult	
Cucumber Beetles	
Cutworms	
European Corn Borer	
Fall Armyworm	
Japanese beetle	
Loopers	
Pea Leaf Weevil	
Pea Weevil	
Plant Bug	
Southern Armyworm	
Stink Bugs	
Tarnished Plant Bug	
Thrips	
Yellowstriped Armyworm	
Webworms	
Western Bean Cutworm	
Banks Grass Mite	12.8 to 16.0
Carmin Mite	(0.08 - 0.10)
<i>Lygus</i> Spp.	
Twospotted Spider Mite	
Whiteflies	

Tree Nut Crops

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

Pest	Rate oz/A (lb ai/A)	Instructions
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Obliquebanded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)	<p>Ground Application: Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.</p> <p>Air Application: Apply in a minimum of 10 gallons of finished spray per acre.</p> <p>Minimum Spray Intervals: Apply Bifenture 10WSB/DF as needed to maintain control, but do not apply at intervals sooner than 15 days.</p> <p>Observe a 21 day PHI for pecans and a 7-day PHI for all other registered tree nut crops.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per application; do not apply more than 80 oz product (0.50 lb ai) per acre per season.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
European Red Mite Pecan Weevil Spider Mites	12.8 to 32.0 (0.08 to 0.20)	
Fire Ants Walnut Husk Fly	16.0 to 32.0 (0.10 to 0.20)	

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.