

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

July 14, 2010

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

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Ms. Clemmer:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice PRN 2007-4 dated June 2, 2010 for the following product(s):

Bifenture EC Agricultural Insecticide EPA Reg. No. 70506-57

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and finds that the label change(s) requested falls within the scope of PRN-98-10. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on <u>nonrefillable</u> containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact Regina Foushee'-Smith at 703-605-0780.

Sincerely,

Richard J. Gebken
Product Manager

Insecticide Branch

Registration Division (7505P)

Please read instructions on rever	rse before completing form		F	orm Ap	proved, OME	3 No. 2070-00		expires 5-31-98
	Uni	ted States			Registra	ion	OPP Ide	ntifier Number
\$EPA	Environmental	Protection Ac	sencv		Amendm	ent		
~ ·		iton, DC 20460	, c.i.o,	X	Other			
	······································		esticide – Secti	onl				
1. Company/Product Numbe		Silcation for t	2. EPA Product N		 er	3. Propo	sed Classif	ication
70506-57			R. Gebken			`		
 Company/Product (Name) United Phosphorus, Inc/Bifen 		ticide	PM # 13			No.	one x	Restricted
5. Name and Address of App			6. Expedited Re					
United Phosphorus, Inc. 630 Freedom Business Cente	or Suite 402		(b)(i), my product to:				position and	labeling
King of Prussia, PA 19406	er, oune 402		EPA Reg No.	M	OTIFIC	AHON		
Check if this is a new a	ddress		Product Name		JUL 1	4 2010		
		Sect	ion - II					
Amendment – Explain t	pelow			ed labe	els in respo	nse to		
			Agency let	tter dat	ted			
Resubmission in respon	nse to Agency letter dated		"Me Too" A	Applica	ation			
X Notification – Explain be	elow		Other – Ex	xplain l	pelow			
Evalenation, Llos additional	7070(a) if 7700000 (5	Cartian Land Ca	-1: II \					
Explanation: Use additional Notification of label change p	er PR Notice 2007-4. This	or Section I and Se notification is con:	ction 11.) sistent with the quida	ance in	PRN 2007	-4 and the	requirement	ts of EPA's
regulations at 40CFR§§156.1	0, 156.140, 156.144, 156	.146, 156.156. No	other changes have	been r	nade to the	labeling or	the CSF fo	r this product.
I understand that it is a violat not consistent with the sectio	ion of 18 USC Sec. 1001 i	to willfully make an	y false statement to	EPA.	I further un	derstand th	at if the ame	ended label is
sections 12 and 14 of FIFRA.		y be in violation of		Subje	ct to emore	ement action	on and pena	indes diluci
		Sect	ion III					
Material This Product Will Child Besides Backgains		1 10/	stan Calubia Danisa			0.75.00	of Contain	
Child-Resistant Packaging Yes	Unit Packaging Yes	VV	ater Soluble Packagi Yes	ling			e of Contain letal	er
X No	1 1						lastic	
						_ =	lass	
*Certification must	If "Yes" Unit Packaging wgt.	1 1 1 1	Yes" ckage wgt		o. per ontainer		aper ther (Specif	w)
be submitted	Onit I ackaging wgt.	Container	ickage wgt	٦	Jittairiei	\Box	mer (opecir	y)
3. Location of Net Contents	Information	4. Size(s) Reta					bel direction	าร
x Label	Container	1 gal., 15 gal., 2	50 gal.			On Label		na product
6. Manner in Which Label is	Affixed to Product	Lithograph	1		Other: pri		accompanyir	ng product
		x Paper glue		لــــا	Othor: pin	nou bug		
		Stenciled						
4 O-4-1D	a		ion IV				hi	
 Contact Person (Complete Name 	e items directly below for i	<u>dentification of indi</u> Title	vidual to be contacte	ed, if n			nis application Include Area	
Rebecca A. Clemmer		Regulatory	Manager			191-2828		
		ertification				6	Date App	
I certify that the statements I is acknowledge that any knowi							Received	1
both under applicable law	ngiy taise of misicaumy su		ISHADIC DY HIE OF IM		ment of			
2. Signature		3. Title					`133	mped)
X.a.Clem	ner	Regulatory	Manager			د در د د ادر د	BECEIV	
4. Typed Name		5. Date				3 7 3	JUN 1 b	i 71110
Pohocos A Clammor		lune 2 20	10			نزرر		- 401U

June 2, 2010

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Rebecca A. Clemmer

Yellow - Applicant Copy White – EPA File Copy (Original)



United Phosphorus, Inc.

630 Freedom Business Center Suite 402 King of Prussia, PA 19406 (610) 491-2828 (phone) (610) 491-2810 (fax)

Rebecca A. Clemmer Regulatory Manager

June 2, 2010

Richard Gebken (PM 13)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (H7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, D.C., 20460

Re:

Bifenture EC Agricultural Insecticide (EPA Reg. No. 70506-57)

Notification of Container Disposal Wording addition

Dear Mr. Gebken:

United Phosphorus, Inc. is submitting the attached Notification under PR Notice 2007-4, to add wording appropriate for a refillable container. The 15 gallon size in which we package this product is refillable, and the wording will only appear on the container labeling for that size product.

Enclosed please find:

- master label which includes all possible container disposal wording
- EPA form 8570-1

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer

La Clemmer

rebecca.clemmer@uniphos.com

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.

BIFENTURETM EC AGRICULTURAL INSECTICIDE

Active Ingredient:	By Wt.	NOTIFICATION
Bifenthrin* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chlor 1-propenyl)-2,2-dimethylcyclopropanecarboxylate		
Inert Ingredients**:		JUL 1 4 2010
TOTAL	100.0%	

^{*}Cis isomers 97% minimum, trans isomers 3% maximum.

This product contains 2 pounds active ingredient per gallon.

WARNING AVISO

This label must be in the possession of the user at the time of application.

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	Call a poison control center or doctor immediately for treatment advice.
	Do not induce vomiting unless told to do so by the poison control center or doctor.
	Do not give any liquid to the person.
	Do not give anything by mouth to an unconscious person.
If in eyes	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 inhaled	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.
If on skin or	Take off contaminated clothing.
clothing	Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR EMERGENCY MEDICAL ASSISTANCE, CALL THE ROCKY MOUNTAIN POISON CONTROL CENTER 1-866-673-6671.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.



Manufactured for:
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406 1-800-438-6071 • www.upi-usa.com

EPA Reg. No. 70506-57 EPA Est. No. Net Contents:

^{**}Contain xylene range aromatic solvents

PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals Warning

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 absorbed through skin or inhaled. Avoid breathing spray mist. Avoid contact with skin. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

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, 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.

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 run-off 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 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.

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. Cn!y 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.

Resistance:

Any insect/mite population may contain individual insects that may develop resistance to a specific pesticide product used in consecutive generations to control these pests. Prediction of resistance development is uncertain. Follow appropriate resistance managements.

strategies. Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or Integrated Pest Management recommendations for the specific site and pest problems in your area.

If resistance to this product develops in your area, you may find reduced control from this product or other products with a similar mode of action. If poor performance cannot be related to improper application methods or extreme weather, it is possible that a resistant strain of insect may be present. If poor control occurs and resistance is a reasonable cause, immediately consult with your local UPI representative or agricultural advisor for the best alternative method of control for your area.

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 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 or nitrile rubber or neoprene rubber or Viton.
- Shoes plus socks.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store above 40°F.

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 Disposal: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate where with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Container Disposal: Nonrefillable container. Do not reuse or refill this container.

Clean container promptly after emptying.

[For containers smaller than 5 gallons] 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 ¾ 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.

[For containers larger than 5 gallons] Triple rinse or pressure rinse as follows:

Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after flow begins to drip.

Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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.

Use a minimum of 0.75 inch of water per acre for LEPA irrigation. Use 1 to 2 pints per acre of non-emulsified oils when used as the diluent.

The set up and calibration of chemigation equipment are important to achieve control of target insect pests. 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 advice on the suitability of the equipment set up for optimum control of the target insect pests.

A person knowledgeable of the chemigation system and responsible for its operations, 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 areas.

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.

Apply Bifenture EC Agricultural Insecticide continuously for the duration of the water application. Dilute Bifenture EC Agricultural Insecticide in sufficient volume to ensure accurate application over the area to be treated. Use a minimum of 0.5 inch per acre of irrigation water for application by chemigation. No agitation is required if a suitable diluent is used. Conduct a diluent test to check that phase separation will not occur during dilution and application. If uniform dilution is not achieved during the entire period of application, undesirable residues or less than desirable control may occur.

Rotation Crop Restrictions

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

Tank-Mixes

Apply Bifenture EC Agricultural Insecticide with other products registered for the same crops. Read and followall applicable directions, restrictions, and precautions on the EPA-registered labels for other tank mix partners.

Buffer Zones

Vegetative Buffer Strip

Construct and maintain a minimum 10-fout 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).

8/2

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 (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).

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 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 coarser 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 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.

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.

Instructions for Application

The following Directions for Use tables provide, in some cases, rate ranges. Use the lower application rates when insect pressure is light to moderate. Use the higher application rates when insect populations are high, when treating mites and when climate is arid.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

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 permanent streams that drain into coastal marshes.

INDEX TO CROPS LISTED ON THIS LABEL

Artichokes

Beans and Peas (Dry)

Beans and Peas (Succulent)

Beets, Garden (see Root Crops)

Brassica

Caneberries

Canola, Crambe, Rapeseed

Christmas Trees (WA and OR only)

Cilantro, Coriander

Citrus

Conifer Seed Orchards (AL, AR, FL, GA, LA, MS, OK, SC, TN, TX, VA only)

Cotton

Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (At Planting Use)

Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (PRE & PPI)

Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed (Foliar Use)

Sweet Corn, Sweet Corn Grown for Seed (At Planting Use)

Sweet Corn, Sweet Corn Grown for Seed (Foliar Use)

Cucurbits

Fruiting Vegetables

Grapes

Hops

Leafy Brassica Greens (Crop Subgroup 5-B)

Lettuce, Head

Mayhaw

Okra

Peanut

Pears

Root Crops (except Sugarbeets)

Soybean

Spinach

Tobacco

Tomatoes, Tomatillos (see under Fruiting Vegetable instructions)

Tuberous and Corm Vegetables (Crop Subgroup 1-C)

ARTICHOKES

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Artichoke Plume Moth Cribrate Weevil	0.10 lb. ai (6.4 fl. oz. product)	Begin applications when pest population reaches damaging levels and repeat as necessary to maintain control.	5
		Apply in water in a minimum of 75 gallons of spray/A by ground or in a minimum of 10 gallons/A by air. Do not make applications less than 15 days apart. Do not apply more than 0.5 lb. a.i. /A (one quart product) per season.	

SUCCULENT PEAS AND BEANS

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Pea (Pisum spp.)	Flea Beetle	0.025-0.10 lb. ai	Apply in a minimum of 10 gallons/A by ground	3
Dwarf pea	Aster Leafhopper	(1.6-6.4 fl. oz.	or in a minimum of 2 gallons/A by air. When	
Edible-pod pea	Leafhoppers	product)	applying by air, substitute 1-2 quarts of	
English pea			emulsified oil for 1-2 quarts water if desired.	
Garden pea	Aphids	0.033-0.10 lb. ai		
Green pea	Armyworms	(2.1-6.4 fl. oz.	For best control thorough coverage is necessary.	
Snow pea	Beet	product)	Do not apply more than 0.2 lb. a.i. (12.8 fl. oz.	
Sugar snap pea	Fall		product) per acre per season.	
Pigeon pea	Southern		ļ	
Bean (Phaseolus	Yellowstriped		·	
spp.):	Beetles			
Broadbean	Bean Leaf			
(succulent)	Cucumber			
Lima bean	Japanese (adult)		,	
(green)	Mexican Bean			
Runner bean	Sap		1	
Snap bean	Bugs			
Wax bean	Plant Bugs			
Bean (Vigna spp.):	Stink Bugs			
Asparagus bean	Tarnished Plant Bugs			
Blackeyed pea	Alfalfa Caterpillar			
Chinese longbean	Cloverworm			
Cowpeas	European Corn Borer			
Moth bean	Cutworms			
Southern pea	Western Bean Cutworm			
Yardlong bean	Corn Earworm			
Jackbean	Loopers			
Soybean	Corn Rootworm (Adult)			
(immature seed)	Thrips			
Sword bean	Webworms			
	Pea Weevil		[,,	در
	Pea Leaf Weevil		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,))
	Whitefly)))	5
	Imported Cabbageworm		, ,	
	Saltmarsh Caterpillar		, r	
	Tobacco Budworm		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,)))
	Leafminers	1	1111	ز ډ
	Banks Grass Mite	0.08-0.10 lb. ai	-	,
	Carmine Mite	(5.12-6.4 fl. oz.		, , 1 1
	Lygus Spp.	product)	`,!	, ,)
	Twospotted Spider Mite	producty	- 3	ا د د د

DRIED BEANS AND PEAS

Not for this use in California unless accompanied by supplemental labeling

	Not for this use in California unless accompanied by supplemental labeling					
CROP	PESTS CONTROLLED	RATE	APPLICATION INSTRUCTIONS	PHI		
		BIFENTURE		(days)		
		EC/ACRE				
Dried cultivars of:	Flea Beetle	0.025-0.10 lb	Apply in a minimum of 10 gallons/A by ground	14		
Bean (Lupinus)	Aster Leafhopper	ai	or a minimum of 2 gallons/A by air. When			
Bean (Phaseolus)	Leafhoppers	(1.6-6.4 fl. oz.	applying by air, substitute 1-2 quarts of	}		
Field Bean		product)	emulsified oil for 1-2 quarts water if desired.			
Kidney Bean			For best control thorough coverage is necessary.			
Lima Bean (dry)	Aphids	0.033-0.10 lb	Do not apply more than 0.2 lb. a.i. (12.8 fl. oz.			
Navy Bean	Armyworms	ai	product) per acre per season to peas. Do not			
Pinto Bean	Beet	(2.1-6.4 fl. oz.	apply more than 0.3 lb. a.i. (12.8 fl. oz. product)	ì		
Tepary Bean	Fall	product)	per acre per season to beans.			
Bean (Vigna)	Southern		Do not make applications less than 7 days apart.			
Adzuki Bean	Yellowstriped					
Blackeyed Pea	Beetles					
Catjang	Bean Leaf					
Cowpea	Cucumber					
Crowder Pea	Japanese (adult)					
Moth Bean	Mexican Bean					
Mung Bean	Sap			1		
Rice Bean	Bugs					
Southern Pea	Plant Bugs					
Urd Bean	Stink Bugs	Ì		<u> </u>		
Broad Bean (dry)	Tarnished Plant Bugs					
Chickpea	Alfalfa Caterpillar			1		
Guar	Cloverworm					
Lablab Bean	European Corn Borer					
Lentil	Cutworms					
Pea (Pisum)	Western Bean Cutworm					
Field Pea	Corn Earworm					
Pigeon Pea	Loopers					
_	Corn Rootworm (Adult)					
	Thrips					
	Webworms					
	Pea Weevil					
	Pea Leaf Weevil					
	Whitefly					
	Imported Cabbageworm					
	Saltmarsh Caterpillar					
	Tobacco Budworm					
	Leafminers					
	Grasshoppers					
	Banks Grass Mite	0.08-0.10 lb ai	1			
	Carmine Mite	(5.12-6.4 fl.				
	Lygus Spp.	oz. product)				
	Twospotted Spider Mite	1				

BRASSICA

CROP	PESTS	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
	CONTROLLED	EC/ACRE		(days)
Head and Stem	Aphids	0.033-0.10 lb. ai	Apply in water in a minimum of 10 gallons spray/A	7
Brassica	Armyworms	(2.1-6.4 fl. oz. product)	by ground or in a minimum of 2 gallons/A by air.	
Vegetables	Corn Earworm		Substitute 1-2 quarts of emulsified oil for 1-2	
including:	Crickets		quarts water if desired when applying by air.	
Broccoli	Cucumber Beetles		For best control thorough coverage is necessary.	
Brussels Sprouts	Cutworms			
Cabbage	Diamondback Moth		Do not apply more than 0.5 lb a.i. (1 quart product)	
Cauliflower	Flea Beetles		per acre per season.	
Cavalo Broccolo	Ground Beetles			
Chinese Broccoli	Imported		Do not make more than 5 applications after bloom.	
(gai lon, white	Cabbageworm			
flowering	Leafhoppers		Do not make applications less than 7 days apart.	
broccoli)	Loopers			
Chinese Cabbage	Saltmarsh Caterpillar			
(napa)	Stink Bugs			
Chinese Mustard	Thrips			
Cabbage (gai	Tobacco			
choy)	Budworm			
Kohlrabi	Whitefly			
	Wireworm			
	(Adults)			
	Banks Grass	0.08-0.10 lb. ai		1
	Mite	(5.12-6.4 fl. oz.	· ·	
	Carmine Mite	product)		
	Lygus spp.	,		
	Pacific Spider			
	Mite			
	Twospotted			
	Spider Mite			

CANEBERRIES

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

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Leafrollers Orange Tortrix Root Weevils	0.05-0.10 lb. ai (3.2-6.4 fl. oz. product)	Apply in water in a minimum of 50 gallons/A by ground or in a minimum of 10 gallons/A by air. For best control thorough coverage of foliage is necessary.	3
Raspberry Crown Borer Spider Mites	0.10 lb. ai (6.4 fl. oz. product)	Make one prebloom application and if necessary one postbloom application. For Crown Borer apply as a drench either post-harvest (fall) or pre-bloom (spring), using 0.1 lb ai/A in at least 200 gallons of water/A. Direct the spray at the crown of the plant. For best results, apply at higher water gallonages (up to 400 gal/A) or prior to a significant rainfall. Do not apply both pre-bloom foliar and pre-bloom drench applications.	
		Do not apply more than 0.2 lb. a.i. /A per season.	

CANOLA, CRAMBE, RAPESEED

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids	0.033-0.04 lb. ai	Apply in water in a minimum of 10 gallons/A by ground or in a	35
Armyworms	(2.1-2.6 fl. oz. product)	minimum of 2 gallons/A by air. Substitute 1-2 quarts of emulsified oil	
Cutworms		for 1-2 quarts water if desired when applying by air.	
Diamondback Moth		For best control thorough coverage is necessary.	
Flea Beetle			
Flea Hopper		Do not apply more than 0.08 lb. a.i. (5.12 fl. oz. product) per acre per	
Grasshopper		season.	
Loopers		Do not make applications less than 14 days apart.	
Other			
Lepidopterous			
Larvae			
Plant Bug			
Seedpod Weevil			
Stink Bugs			
Thrips			
Whitefly			

CHRISTMAS TREES

For use only in Washington and Oregon

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS
Root Weevil Spruce Spider Mite	0.06-0.1 lb ai (3.9-6.4 fl oz product)	Apply in water in a minimum of 20 gallons/A by ground, or in a minimum of 5 gallons/A by air. Do not apply more than 3 times in a crop year. Do not apply more than 0.1 lb ai (6.4 fl oz product)/A per treatment. Do not apply through any type of irrigation system. Do not make applications less than 21 days apart.
		Although this product is not expected to be phytotoxic to Christmas trees, it is recommended that application be made to a small representative group of plants to ensure that a particular variety is not unusually sensitive.

CILANTRO, CORIANDER

Not for this use in California unless accompanied by supplemental labeling.

PESTS	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
CONTROLLED	EC/ACRE		(days)
Aphids	0.033 - 0.10 lb. ai	For best control, thorough coverage is necessary. Apply as	3
Beet Armyworm	(2.1 - 6.4 fl. oz. product)	needed.	
Cabbage Looper			
Cutworms		Apply in water in a minimum of 10 gallons of spray/A by ground	
Flea Beetles		or in a minimum of 2 gallons/A by air.	
Grasshoppers		Do not make applications less than 7 days apart.	
Leafminers	İ	Do not apply more than 0.50 lb. a.i. /A per season.	
Saltmarsh			
Caterpillar	}		
Spotted Cucumber			
Beetle			
Thrips	1		
Whitefly			
Two Spotted	0.08 – 0.10 lb. ai		
Spider Mite	(5.12 – 6.4 fl. oz. product)		

CITRUS

Not for this use in California unless accompanied by supplemental labeling

		California unless accompanied by supplemental labeling			
PEST	RATE	APPLICATION INSTRUCTIONS	PHI		
	BIFENTURE		(days)		
71 0 0:	EC/ACRE				
Blue Green Citrus	0.25-0.50 lb ai	Apply by ground in a minimum of 40 gallons of dilute spray per acre. Make	1		
Root Weevil	(16-32 fl oz	uniform application to bare soil beneath the tree from the trunk to the drip			
(Pachnaeus opalus)	product)	line of the tree.	İ		
Brown Leaf Notcher		Use a higher spray volume to insure uniformity of coverage. Pre- and post-			
(Epicaerus mexicanus)		application irrigation may also aid in uniform coverage. Bifenture protects			
Diaprepes Root Weevil		tree roots from root weevils by forming a barrier of pesticide through which			
(Diaprepes		they must burrow when the neonates fall from the tree after hatching. After			
abbreviatus)		application minimize disturbance of the soil beneath the trees to maintain			
Little Leaf Notcher		this barrier.			
(Artipus floridanus)		It is important to time applications correctly. Peak emergence of adult			
Southern Blue Green		Diaprepes Weevil varies by citrus growing region and is also dramatically			
Citrus Roon Weevil		affected by environmental factors such as soil moisture. Typically, two			
(Pachnaeus Litus)		peaks are observed for Diaprepes, first in spring and then in late summer or			
Asian Cockroach	0.1-0.25 lb ai	early fall. For Southern Blue-Green ad Blue-Green Citrus Weevils and			
(Blattella asahinae)	(6.4-16 fl oz	Fuller Rose Beetle, a single emergence peak in the spring is typical. Brown			
Fireants	product)	and Little Leaf Notchers typically have three emergence peaks in spring,			
(Solenopsis spp.)		summer and fall.			
		Since emergence varies seasonally and by location, observation of adults is			
		the most accurate way to forecast timing of applications. Numbers of adults			
		can be estimated by trapping during spring and summer during the active	1		
		early morning and later afternoon periods. Egg laying occurs for 8-10			
		weeks following emergence from the soil, and larval invasion of the soil			
		begins 2-3 weeks following adult emergence. It is critical to have the			
		Bifenture EC soil barrier in place before the neonates drop.			
		Use Bifenture EC in conjunction with other tools in an integrated pest			
		management program for citrus Root Weevils. Good cultural practices,			
		biological control of larvae and foliar control of adults are all important.			
		Local university extension personnel can provide the most current	ł		
		information to protect citrus trees.			
		Additional information:			
		Apply to individual citrus resets, when not in solid planted rows, using a			
		hand-gun or shielded sprayer.			
		Note that although peak emergence of Diaprepes occurs in the spring,			
		weather conditions can cause a minor emergence of this pest in the fall.			
		Use the highest rate if the citrus grove to be treated is in an area where			
		weather conditions are conducive to primary emergence in the spring. This			
		will provide the longest residual management of Diaprepes Root Weevil.			
		Use the lower rate if the citrus grove is in an area where weather conditions	}		
		will promote more than one peak of pest emergence, and make a second			
		application later in the season.			
ļ		Do not apply through irrigation systems.			
		Do not allow Bifenture EC to contact fruit or foliage.			
		Do not apply more than a total of 32 fl oz product (0.5 lb ai)/A per year.			
		Do not apply by air.			

CONIFER SEED ORCHARDS

For use only in the states of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, and Virginia

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS
Cone Worms	0.1-0.2 lb ai	Apply in water in a minimum of 100-500 gallons/A by ground. Apply in water
Seed Bugs	(6.4-12.8 fl oz)	in a minimum of 10 gallons/A or in refined vegetable oil in a minimum of 0.5
Seed Worms		gallons/A by air.
		For best control thorough coverage is necessary.
		Begin application 7 days following peak pollen flight and repeat at 30 day
		intervals to a maximum of 0.6 lb ai/A per season.
		Do make more than six applications per season, or apply more than 38.4 fl oz
		product/A per season.

COTTON

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
European Corn Borer Soybean (Banded) Thrips	0.02-0.10 lb. ai (1.3-6.4 fl. oz.	Apply Bifenture EC in water or refined soybean/cottonseed oil.	14
Tobacco Thrips	product)	Apply in water in a minimum of 5 gallons/A by ground or a minimum of 1 gallon/A by air. Substitute 1 quart of emulsified	
Boll Weevil	0.04-0.10 lb. ai	oil for Iquart water if desired when applying by air.	
Bollworm	(2.6-6.4 fl. oz.	ULV Application: Apply in refined vegetable oil in a	
Cabbage Looper	product)	minimum of 1 quart/A with aircraft calibrated to give adequate	
Cotton Aphid		coverage.	
Cotton Fleahopper		·	
Cotton Leafperforator		Boll Weevil: Apply Bifenture EC every 3 to 4 days until	
Cutworms		control is acceptable.	
Fall Armyworm		Mites and Aphids: Apply when pests first appear.	
Plant Bugs		Repeat as necessary to maintain control.	
Saltmarsh Caterpillar		Use the higher rates once a damaging threshold is established.	
Southern Garden Leafhopper			
Stink Bugs		Apply no more than 0.5 lb. a.i/A per season in all states except	
Tobacco Budworm		California. In California, apply no more than 0.3 lb a.i. per acre	
Whitefly		per season.	
Yellow Striped Armyworm			
Beet Armyworm	0.06-0.10 lb. ai	No more than 10 synthetic pyrethroid applications (of one	
Carmine Spider Mite	(3.8-6.4 fl. oz.	product or combination of products, including Ambush®,	
Lygus spp.	product)	Ammo [®] , Asana [®] XL, Baythroid [®] , Capture [®] , Danitol [®] , Karate [®] ,	
Pink Bollworm		Mustang®, and Scout X-TRA®) may be made to a cotton crop in	
Twospotted Spider Mite		one growing season.	
		Do not graze livestock in treated areas or cut treated crops for feed.	

FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (AT PLANTING USE)

PESTS CONTROLLED	RATE BIFENTURE EC	APPLICATION INSTRUCTIONS	PHI (days)
Corn Rootworm	0.0046 lb ai	Apply as a 5 to 7 inch T-band at planting over the open seed furrow. Position	30
Larvae	(0.30 fl. oz.	the spray nozzle behind the planter shoe, in front of the press wheel centered	
Northern	product) per	over the row. The table below describes the amount of Bifenture EC needed	
Mexican	1,000 linear	per acre. Apply in water in a minimum of 3 gallons/A.	

Southern	feet of row		
Western		When using Bifenture EC with fertilizers, check to be sure all components are	
		compatible. For mixture with water or fertilizer, use the following procedure.	
Army Cutworm	0.0023 - 0.0046	Fill the spray tank approximately one-half full with water or liquid fertilizer;	
Cutworm Species	lb ai	add the proper amount of Bifenture EC; then add the rest of the water or	
Grubs	(0.15 - 0.30 fl.	fertilizer. Sufficient agitation during mixing and application is required to	
Seed Corn Beetle	oz. product) per	ensure a uniform mixture	
Seed Corn Maggot	1,000 linear		
True Armyworm or	feet of row	Only apply to soil when there is less than 30% cover of crop residue remaining.	
Armyworm			
Species		Do not graze livestock in treated area or cut treated crops for feed within 30	
Wireworm		days of treatment.	
		Do not apply more than 0.1 lb. ai/A per season at planting.	

Row spacings	40 in.	38 in.	36 in.	30 in.
Bifenture EC (lb. a.i. per acre)	0.060	0.064	0.069	0.080
Bifenture EC (formulated product, ounces per acre)	3.9	4.1	4.4	5.12

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

Pre-Plant Incorporated (PPI) and Pre-Emergence (PRE)

PESTS CONTROLLED	RATE BIFENTURE EC	APPLICATION INSTRUCTIONS
Armyworm spp. Black Cutworm Seedcorn Maggot Stalkborer White Grub Wireworm	0.047 to 0.062 lb. a.i./A (3-4 fl. oz/A product) Pre-Plant Incorporated (PPI)	Incorporate Bifenture EC close to the expected depth of the seed, but no deeper than 3 inches. PPI: Use the 3-4 oz./A rate only. Apply alone or with PPI herbicides as a tank mix. PRE: Use the 2.56 oz/A rate when tankmixing and applying with PRE.
Armyworm spp. Black Cutworm	0.040 lb. a.i./A (2.56 fl. oz./A product) Pre-	PRE: Use the 2.56 oz/A rate when tankmixing and applying with PRE herbicides.
Stalkborer	emergence (PRE)	

FIELD CORN (GRAIN AND SILAGE), POPCORN, FIELD CORN GROWN FOR SEED (FOLIAR USE)

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids	0.033-0.10 lb ai	Apply in water in a minimum of 10 gallons/A by ground or in a	30
Army Cutworm	(2.1-6.4 fl. oz.	minimum of 2-5 gallons/A by air. For heavy infestations, use 5	
Beet Armyworm	product)	gallons of finished spray per acre by aircraft. Substitute 1-2 quarts	
Cereal Leaf Beetle		of emulsified oil for 1-2 quarts water if desired.	Ì
Chinch Bug		For best control thorough coverage is necessary.	
Common Stalk Borer			
Corn Earworm		Ear-Attacking Pests: Apply Bifenture EC just before silking.	1
Corn Rootworm Adults			
Cucumber Beetle Adults		Southwestern Corn Borer, European Corn Borer: Apply at or	
Cutworm Species		shortly before egg hatch.	
European Corn Borer			}
Fall Armyworm		Other Insect Pests: Apply when insects first appear. Repeat as	
Flea Beetle		needed.	}
Grasshoppers			1
Greenbug		Banks Grass Mites: Apply when colonies first form before leaf	
Japanese Beetle Adults		damage or discoloration and prior to movement above the bottom	1
Leafhoppers		third of the plant.	

Sap Beetle		
Southern Armyworm		Twospotted Spider Mite and Carmine Mite: Apply when colonies
Southern Corn Leaf Beetle		first form before leaf damage or discoloration and before wide-
Southwestern Corn Borer		spread mite movement throughout the canopy. Use the higher rates if
Stinkbugs		heavier insect pressure is noted and corn is under heat or drought
Tarnished Plant Bug		stress. Tank mixtures with dimethoate at 0.5 lb. a.i. per acre are
Thrips		effective under these conditions.
True Armyworm or		
Armyworm Species		Mite Control in Texas, New Mexico, Oklahoma, and Arizona:
Webworms		Apply in water in a minimum of 10 gallons/A ground or in a
Western Bean Cutworm		minimum of 5 gallons/A by air.
Yellowstriped Armyworm		Repeat applications as necessary to maintain control, but do not
Banks Grass Mite	0.08-0.10 lb. ai	apply more than 0.3 lb. active ingredient per acre per season
Carmine Mite	(5.12-6.4 fl. oz.	including PRE & PPI, at plant plus foliar applications.
Twospotted Spider Mite	product)	
		Do not graze livestock in treated areas or cut treated crops for feed
		within 30 days of the last application.
{		Do not apply by ultra low volume (ULV) application on corn.
		If heavy rainfall is imminent, do not make aerial or ground
		applications to corn.
		Use of Bifenture EC Agricultural Insecticide on corn is prohibited in
		all coastal counties.

SWEET CORN SWEET CORN GROWN FOR SEED (AT PLANTING USE)

PESTS	RATE	APPLICATION INSTRUCTIONS	PHI
CONTROLLED	BIFENTURE		(days)
	EC		
Corn Rootworm Larvae	0.0046 lb; ai	Apply at planting over the open seed furrow. Position the spray nozzle	30
Northern	(0.30 fl.oz.	behind the planter shoe, in front of the press wheel centered over the row.	
Mexican	product) per	The table below describes the amount of Bifenture EC needed per acre.	
Southern	1,000 linear	Apply in a minimum of 3 gallons of finished spray per acre.	
Western	feet of row		
		When using Bifenthrin EC with fertilizers, check to be sure all components	
Army Cutworm	0.0023 -	are compatible. For mixture with water or fertilizer, use the following	
Cutworm Species	0.0046 lb. ai	procedure. Fill the spray tank approximately one-half full with water or	
Grubs	(0.15 - 0.30	liquid fertilizer; add the proper amount of Bifenture EC; then add the rest of	
Seed Corn Beetle	fl.oz. product)	the water or fertilizer. Sufficient agitation during mixing and application is	
Seed Corn Maggot	per 1,000	required to ensure a uniform mixture.	
True Armyworm or	linear feet of		
Armyworm Species	row	Only apply to soil where there is less than 30% cover of crop residue	
Wireworm		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. ai/A per season at planting.	

Row Spacings	40 in.	38 in.	36 in.	30 in.
Bifenture EC (lb. a.i. per acre)	0.060	0.064	0.069	0.080
Bifenture EC (formulated product, ounces per acre)	3.9	4.1	4.4	5.12

SWEET CORN SWEET CORN GROWN FOR SEED

(FO	т т	A D	TIC	1
1813		ДΚ		г.

PESTS CONTROLLED	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
	EC/ACRE		(days)
Aphids	0.033-0.10 lb. ai	Apply in water in a minimum of 10 gallons/A by ground or in a	
Army Cutworm	(2.1-6.4 fl. oz. product)	minimum of 2 gallons/A by air. For heavy infestations by	1
Aster Leafhopper		aircraft, use 5 gallons of finished spray per acre. Substitute 1-2	
Beet Armyworm		quarts of emulsified oil for 1-2 quarts water if desired.	
Cereal Leaf Beetle		For best control, thorough coverage is necessary.	
Chinch Bug		}	
Common Stalk Borer		Ear-Attacking Pests: Apply Bifenture EC just before silking.	
Corn Earworm		·	
Corn Rootworm Adults		Southwestern Corn Borer, European Corn Borer: Apply	
Corn Silkfly		twice, with the first application at or shortly before egg hatch.	
Cucumber Beetle Adults			
Cutworm Species		Other Insect Pests: Apply when insects first appear. Repeat	
European Corn Borer		as needed.	
Fall Armyworm			
Flea Beetle		Mite Control: Apply when colonies first form before leaf	
Grasshoppers		damage or discoloration and prior to widespread movement	
Greenbug		throughout the canopy. For Banks Grass Mite, apply prior to	
Japanese Beetle Adults		movement above the bottom third of the plant.	
Leafhoppers			
Sap Beetle		Use the higher rates if heavier insect pressure is noted and	
Southern Armyworm		corn is under heat or drought stress.	
Southern Corn Leaf Beetle			
Southwestern Corn Borer		Repeat applications as necessary, but do not apply more than	
Stinkbugs		0.2 lb. a.i. (12.8 fl. oz. product) per acre per season.	
Tarnished Plant Bug			
Thrips		Do not graze livestock in treated areas or cut treated crops for	
True Armyworm or		feed within 1 day of the last application.	
Armyworm Species			
Webworms		Do not apply by ultra low volume (ULV) on corn.	
Western Bean Cutworm		· 1	
Yellowstriped Armyworm		If heavy rainfall is imminent, do not make aerial or ground	
Banks Grass Mite	0.08-0.10 lb. ai	applications to corn.	
Carmine Mite	(5.12-6.4 fl. oz.		
Pacific Spider Mite	product)	Use of Bifenture EC on corn is prohibited in all coastal	
Twospotted Spider Mite	Ì	counties.	

CUCURBITS

		CUCURBITS		
CROP	PESTS	RATE BIFENTURE	APPLICATION	PHI
·	CONTROLLED	EC/ACRE	INSTRUCTIONS	(days)
Chayote (fruit)	Aphids	0.04-0.10 lb. ai	Apply in water in a	3
Chinese waxgourd	Armyworms	(2.6-6.4 fl. oz. product)	minimum of 20 gallons/A by	
(Chinese preserving	Cabbage Looper		ground or in a minimum of 5	
melon)	Corn Earworm	1	gallons/A by air. Substitute	
Citron melon	Cucumber Beetles		1-2 quarts of emulsified oil	
Cucumber	Cutworm		for 1-2 quarts water if	
Gherkin	Grasshopper	İ	desired.	
Gourd, edible	Leafhoppers		For best control thorough	
(includes hyloan,	Melonworm		coverage is necessary.	
cucuzza), (<i>Luffa</i>	Pickleworm			
spp.) (includes	Plant Bug		Do not apply more than 0.3	
hechima, Chinese	Rindworm		lb. a.i. (19.2 fl. oz. product)	
okra), (Momordica	Squash Bugs		per acre per season.	
spp.) (includes	Squash Vine Borer		1	
balsam apple,	Stink Bugs		Do not apply more than	
balsam pear, bitter	Tobacco Budworm		twice after bloom.	
melon, Chinese				
cucumber)	Banks Grass Mite	0.08-0.10 lb. ai	Do not make applications	
Muskmelon (hybrids	Carmine Mite	(5.12-6.4 fl. oz. product)	less than 7 days apart.	
and/or cultivars	Lygus spp			
of Cucumis melo)	Twospotted Spider			
(includes	Mite]		
true cantaloupe,	Whitefly			
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.)		1	1	
Squash, summer		1	ļ	
(includes crookneck				
squash, scallop				
squash, straightneck			1	
squash, vegetable				
marrow, zucchini)				
Squash, winter				
(includes butternut				
squash, calabaza,				
hubbard squash				
(C. mixte; C. pepo),				
includes acorn				
squash, spaghetti				
squash)				
Watermelon				
(includes hybrids and				
or varieties of Citrullis				
spp.)				
<i>δρ</i> γ.)			L	

FRUITING VEGETABLES

Eggplant, bell and non-bell pepper, pepino*, groundcherry*, tomato, tomatillo*

*Not for this use in California unless accompanied by supplemental labeling.

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS -	PHI (days)
Eggplant Pepper (bell and non- bell) Pepino Groundcherry	Armyworms (including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm) Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafhoppers Leafminers Loopers Pepper Weevil Plant Bug Stink Bug Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whitefly	0.033-0.10 lb. ai (2.1-6.4 fl. oz. product)	Apply in at least 2 gallons finished spray per acre by air or at least 10 gallons per acre by ground. When application is made by air, 1-2 qts. emulsified oil may replace 1-2 qts of water in the finished spray. For best control thorough coverage is necessary. Do not make applications less than 7 days apart. Do not apply more than 0.2 lb. a.i. (12.8 fl. oz. product) per acre per season.	7
	Banks Grass Mite Broad Mite Carmine Mite Lygus spp. Pacific Spider Mite Twospotted Spider Mite	0.08-0.10 lb. ai (5.12-6.4 fl. oz. product)		

Tomato	Aphids	0.033-0.08 lb. ai	Apply in at least 3 gallons finished	1
Tomatillo	Armyworms (including: Beet	(2.1-5.2 fl. oz.	spray/A by air or at least 15 gallons/A	
	Armyworm, Fall	product)	by ground. For best control thorough	
	Armyworm, Southern	• /	coverage is necessary.	į
	Yellowstriped Armyworm)		Do not make applications less than 7	
	Bean Leaf Beetle		days apart.	
	Cabbageworm			
	Carmine Mite		Do not make more than 4 applications	
	Cloverworm		per season.	
J	Corn Earworm		Personal	
	Corn Rootworm			
	Cucumber Beetle			
	Cutworms			
	Diamondback Moth			1
	European Corn Borer			
	Flea Beetle			1
	Fleahopper	,		
	Grasshopper			
	Japanese Beetle (adult)			
	Leafhoppers			
}	1			
	Loopers			
	Lygus spp.			
	Melonworm			
	Pea Weevil			
	Pea Leaf Weevil			
	Pickleworm			
]	Plant Bug			
	Rindworm			
	Salt Marsh Caterpillar			
	Sap Beetle	•		
	Seedpod Weevil			
	Squash Bugs			
	Stink Bug spp.			
	Tobacco Budworm			
1	Tarnished Plant Bug			
	Thrips			
	Whitefly		-	
-	Two Spotted Spider Mite	0.08-0.10 lb ai		
	1	(5.12-6.4 fl. oz		
		product)		<u></u>

GRAPES

Not for this use in California unless accompanied by supplemental labeling.

PESTS	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
CONTROLLED	ECACRE		(days)
Cutworms	0.05-0.10 lb. ai	Apply in a minimum of 25 gallons/A by ground or in a minimum of	30
Eastern Grape	(3.2 to 6.4 fl. oz.	10 gallons/A by air.	
Lady Beetle	product)		ļ
(Scymnus)		Substitute 1-2 quarts of emulsified oil for 1-2 quarts water if desired.	
Leafhopper		For best control thorough coverage is necessary.	
Grape Berry Moth			1
Japanese Beetle (adult)		Use the higher rate when insect pressure is moderate to severe.	<u> </u>
Variegated Leafhopper		Do not apply more than 0.10 lb. a.i. per acre per season.	
Western Grape			j
Leafhopper			1
Black Vine Weevil	0.10 lb. ai		
Glassywinged	(6.4 fl. oz. product)		
Sharpshooter			
Twospotted Spider	l		1 1
Mite	<u></u>		<u> </u>

HOPS

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Aphids Armyworms Cutworms Leafrollers Loopers	0.06-0.1 lb. ai (3.8-6.4 fl. oz. product)	Do not apply more than 0.1 lb. a.i. per acre per application. Do not apply more than 0.3 lb. a.i. per acre per season. Do not make applications less than 21 days apart. By ground: Full coverage is necessary for best results. For early season,	14
Root Weevils	0.05-0.1 lb. ai (3.2-6.4 fl. oz. product)	use 100-150 gallons of spray per acre. For late season, use 200-250 gallons of spray per acre. Root Weevil: direct the spray to the base of the plant. Spray 3 feet up the	
Twospotted Spider Mite	0.1 lb. ai (6.4 fl. oz. product)	vine and the soil surface 1.5 to 2 feet around the plant. Twospotted spider mites, for late season control: Apply at least 6.4 fl. oz. (0.1 lb. a.i.) per application in a minimum of 10 gallons per acre by air.	
		Do not apply by ultra low volume (ULV) application to hops.	

LEAFY BRASSICAS Crop Subgroup 5-B

Not for this use in California unless accompanied by supplemental labeling. **CROP** APPLICATION INSTRUCTIONS PHI **PESTS RATE** CONTROLLED **BIFENTURE** (days) **EC/ACRE** Broccoli raab Aphids 0.033-0.10 lb. ai Apply in water in a minimum of 10 gallons/A by Chinese cabbage Armyworms (2.1-6.4 fl. oz. ground or in a minimum of 2 gallons/A by air. (bok choy) Corn Earworm product) For best control thorough coverage of foliage is Collards Crickets necessary. Kale Cucumber Beetles When applied by air, 1 to 2 quarts of emulsified Mizuna Cutworms oil may be substituted for 1 to 2 quarts of water Mustard Greens Diamondback Moth in the finished spray. Mustard Spinach Flea Beetles Rape Greens Grasshoppers Do not make applications less than 7 days apart. Ground Beetles Do not apply more than 0.4 lb. a.i. /A per season. Imported Cabbageworm Japanese Beetles (adults) Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs **Thrips** Tobacco Budworm Whitefly Wireworm (adults) Banks Grass Mite 0.08 - 0.10 lb. ai Carmine Mite (5.12 - 6.4 fl. oz. Lygus spp. product) Pacific Spider Mite Twospotted Spider Mite

LETTUCE. HEAD

PESTS	RATE BIFENTURE	LETTUCE, HEAD	PHI
CONTROLLED	EC/ACRE	APPLICATION INSTRUCTIONS	(days)
Aphids	0.033-0.10 lb. ai	Apply in water in a minimum of 15 gallons/A by ground or in 5	7
Armyworms	(2.1-6.4 fl. oz. product)	gallons/A by air. For air application, substitute 1-2 quarts of	
Cabbage Maggot		emulsified oil for 1-2 quarts water if desired.	
Corn Earworm		For best control thorough coverage is necessary.	
Cucumber Beetles			
Cutworms		Do not make applications less than 7 days apart.	1
Diamondback Moth			1
Flea Beetles		Do not apply more than 0.5 lb. a.i. per acre per season.	
Grasshoppers			1
Imported			
Cabbageworm			
Leafhoppers			
Loopers			
Salt Marsh Caterpillar			
Stink Bug spp.			
Thrips			
Tobacco Budworm			
Whitefly			
Carmine Mite	0.08-0.10 lb. ai		1
Lygus, spp.	(5.12-6.4 fl. oz.		
Twospotted Spider	product)		
Mite			<u> </u>

MAYHAW

Not for this use in California unless accompanied by supplemental labeling.

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Plum Curculio	0.08 – 0.10 lb. ai (5.12 – 6.4 fl. oz. product)	Apply in at least 28 gallons per acre. Do not apply more than once every 7 days.	30
Ĺ		Do not apply more than 0.2 lb. ai/A per season.	Í

OKRA
Not for this use in California unless accompanied by supplemental labeling.

PESTS	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
CONTROLLED	EC/ACRE		(days)
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Japanese Beetles (adult) Leafminers Loopers Stink Bugs Thrips Whitefly	0.033 - 0.10 lb. ai (2.1 - 6.4 fl. oz. product)	For best control, thorough coverage is necessary. Apply as needed. Apply in water in a minimum of 10 gallons of spray/A by ground or in a minimum of 2 gallons/A by air. Do not make applications less than 7 days apart. Do not apply more than 0.20 lb. a.i. /A per season.	7

	Broad Mite	0.08 - 0.10 lb. ai
	Carmine Mite	(5.12 - 6.4 fl. oz.)
]	Lygus spp.	product)
1	Two Spotted Spider Mite	

PEANUT Not for this use in California unless accompanied by supplemental labeling.

PESTS	RATE BIFENTURE		PHI
CONTROLLED	EC/ACRE	APPLICATION INSTRUCTIONS	(days)
Beet Armyworm	0.033 - 0.10 lb. ai	Apply in at least 10 gallons of water. Do not apply more	14
Corn Earworm	(2.1 - 6.4 fl. oz.)	than once every 14 days.	
Cutworm spp.	product)		
Fall Armyworm		Do not feed green immature plants and peanut hay to	
Grasshoppers		livestock.	
Green Cloverworm			
Leafhoppers		Do not apply more than 0.5 lb. ai/A per season.	
Lesser Cornstalk Borer			
Loopers			
Rednecked Peanut Worm		<u> </u>	
Southern Armyworm	,	}	
Southern corn Rootworm			
Stink Bugs			
Threecornered Alfalfa Hopper			
Velvetbean Caterpillar		. [
Yellowstriped Armyworm			
Aphids	0.08 – 0.10 lb. ai		
Spider Mites	(5.12 – 6.4 fl. oz.		
Thrips	product)		
Whitefly			

PEARS

PESTS	RATE BIFENTURE	APPLICATION INSTRUCTIONS	PHI
CONTROLLED	EC/ACRE		(days)
Aphids	0.04-0.2 lb. ai	By ground: Apply as a dilute (minimum of 200 gallons of	14
Codling Moth	(2.6 to 12.8 fl. oz.	finished spray per acre) or concentrate (minimum of 50	
Cutworms	product)	gallons of finished spray per acre) spray. For best control	
Green Fruitworm		thorough coverage is necessary.	
Leafhoppers			
Leafminers		By air: Apply in a minimum of 10 gallons per acre.	
Leafrollers			
Lygus spp.		Do not apply more than 0.5 lb. active per acre per season with	
Plant Bugs		no more than 0.45 lb. active per acre applied after petal fall.	
Plum Curculio	1		
San Jose Scale (Crawlers)		Apply as necessary to maintain control and repeat	
Stink Bugs		applications at 30 day intervals.	
Tarnished Plant Bugs			
Twospotted Spider Mite	0.06-0.2 lb. ai	Do not graze livestock in treated orchards or cut treated cover	
Yellow Mite	(3.8 to 12.8 fl. oz.	crops for feed.	
	product)		
European Red Mite	0.08-0.2 lb. ai		
	(5.12 to 12.8 fl. oz.		
	product)		

ROOT CROPS (except Sugarbeets) Not for these uses in California unless accompanied by supplemental labeling.

CROP	PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Edible burdock, Carrot, Celeriac, Chervil, Chicory, Ginseng, Horseradish, Parsley, Parsnip, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Stirret, Turnip	Aphids Beet Armyworm Celery Leaf Tier Corn Earworm Cross-striped Cabbageworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Fire Ants Flea Beetles Green Cloverworm Hornworms Imported Cabbageworm Loopers Southern Armyworm Spider Mites Tobacco Budworm Velvetbean Caterpillar Whitefly Yellowstriped Armyworm	0.08 – 0.10 lb. ai (5.12 – 6.4 fl. oz. product)	Apply in at least 25 gallons per acre by ground. Do not apply more than once every 7 days. Do not apply more than 0.5 lb. ai/A per season.	21
Garden Beets	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	0.08-0.10 lb ai (5.12-6.4 fl. oz. product)	Make foliar applications in a minimum of 25 gal/A. Do not apply more than 0.4 lb ai/A per season. Do not apply more often than every 7 days.	1

SOYBEAN
Not for this use in California unless accompanied by supplemental labeling.

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Alfalfa Caterpillar	0.033 - 0.10 lb. ai	Make foliar applications in at least 10 gallons per acre. Do not	18
Aphids	(2.1 - 6.4 fl. oz.)	apply more than once every 30 days.	
Aster Leafhopper	product)	Do not apply more than 0.3 lb. ai/A per season.	ļ
Bean Leaf Beetle			
Beet Armyworm*			
Cloverworm			
Corn Earworm		*Because pyrethroid resistance is common for Beet Armyworm	
Corn Rootworm Adult		and Tobacco Budworm, consult your local or state agricultural	
Cucumber Beetles		authorities to find out if resistant pest populations are in the	
Cutworms		treatment area. If so, refer to the resistance information in the	
European Corn Borer		Directions for Use section of this label.	
Fall Armyworm			
Flea Beetle			
Grasshoppers			
Imported Cabbageworm			
Japanese Beetle Adult			
Pea Leaf Weevil			
Pea Weevil			
Plant Bug			
Saltmarsh Caterpillar			
Sap Beetle			
Southern Armyworm			

Stink Bugs		
Tarnished Plant Bug		
Thrips		
Tobacco Budworm*		
Webworms		
Western Bean Cutworm		
Whitefly		
Yellowstriped Armyworm		
Soybean Aphid		
Lygus spp.	0.08 - 0.10 lb. ai	
Whitefly	(5.12 – 6.4 fl. oz.	
Two-spotted Spider Mite	product)	

SPINACH

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI (days)
Armyworms Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Tomato Pinworm Thrips Whitefly	0.033 to 0.10 lb. ai (2.1-6.4 fl. oz. product)	Apply in water at 10-50 gallons/A by ground or 5-50 gallons /A by air. Whiteflies: make up to 4 foliar treatments of Bifenture EC by ground or air at rates of up to 0.4 pt. (0.1 lb. active) per acre Repeat applications at 7 day intervals. Fire ants: make up to 4 applications of Bifenture EC to the soil at planting or as a foliar treatment by ground or air at rates of up to 0.4 pt. (0.1 lb. active) per acre. Repeat application at 7 day intervals. Do not make applications less than 7 days apart. Do not apply more than 0.4 lb. a.i. per acre per season.	40
Broad Mite Banks Grass Mite Carmine Mite Fire Ants Lygus spp. Twospotted Spider Mite Pacific Spider Mite	0.08-0.10 lb. ai (5.12 to 6.4 fl. oz. product)		

TOBACCO

Not for use in California unless accompanied by supplemental labeling.

PESTS CONTROLLED	RATE BIFENTURE EC/ACRE	APPLICATION INSTRUCTIONS	PHI
Armyworm spp.	0.0625-0.10 lb ai	Pre-transplant soil application: Apply	Do not apply later
Cutworm spp	(4.0-6.4 fl. oz. product)	specified rate in a minimum of 10 gal/A. To	than layby.
Mole Crickets		control below-ground pests, use equipment	
Stalkborers		which will incorporate the application into the	Do not apply more
Tobacco Flea Beetle (larvae)		top 4" of soil.	than 0.2 lb ai/A per
White Grubs		At-transplant water treatment application:	season.
Wireworms		Apply specified rate in a water treatment volume	
		of 10-200 gal/A.	
Aphid spp.	0.04-0.10 lb ai	Foliar application: Apply specified rate in a	
Armyworm spp.	(2.56-6.4 fl. oz.	minimum of 10 gal/A up to and including layby.	
Chinch Bugs	product)	Do not make more than 2 foliar applications per	
Cucumber Beetles		season.	
Flea Beetle (Adults)		May be tank mixed with other herbicides	
Stink Bugs		registered for tobacco use.	
Japanese Beetles			
Grasshoppers		*See Resistance section on this label for more	
Cutworm spp.		information.	

Farnished Plant Bugs	
Green Bugs	
Saltmarsh Caterpillar	
Thrips	
Tobacco Budworm*	
Tobacco Hornworm	
Whiteflies	
Lygus spp.	0.1 lb ai
Spider Mites	(6.4 fl. oz. product)

	PESTS	RATE		PHI
CROP	CONTROLLED	BIFENTURE	APPLICATION INSTRUCTIONS	(days)
	:	EC/ACRE		
Potato	Banded Cucumber	At-Plant	Bifenture EC may be applied at planting time for the control of	21
Sweet Potato	Beetle	0.30 lb. ai	wireworms, rootworms and white grubs. Apply at the rate of	l
Arracacha	Black Flea Beetle	(19.2 fl. oz.	0.3 lb a.i./A as a soil incorporated broadcast, directed bed spray	
Arrowroot	Corn Wireworm	product)	or T-band spray into the planting furrow.	
Artichoke	Cucumber Beetle			
(Chinese and	Japanese Beetle	At Cultivation or	Bifenture EC may be applied as a cultivation or lay-by	
Jerusalem)	Grubs	Lay-By	treatment for the control of wireworms, rootworms, and white	ł
Edible Canna	June Beetle	0.05 - 0.15 lb. ai	grubs. Apply to the drill area and cover with soil utilizing	
Cassava (bitter	Rootworms	(3.2 - 9.6 fl. oz.)	cultivation equipment set to throw soil to the drill area. Apply	j
and sweet)	Southern Potato	product)	as a banded spray over the row at a rate of 0.05 to 0.15 lb a.i./A	
Chayote (root)	Wireworm		(3.2 to 9.5 fluid ounces product) in 10 gallons of spray per acre.	
Chufa	Sugarcane Beetle	Foliar		
Dasheen	Sweetpotato Flea	0.033 - 0.10 lb. ai	Bifenture EC may be applied as a foliar spray for the control of	
Ginger	Beetle	(2.1 – 6.4 fl. oz.	the adult life stages of flea beetles, click beetles (wireworms),	
Leren	Sweetpotato	product)	cucumber beetles (rootworms), white fringed beetles, and	
Tanier	Weevil		May/June beetles (white grubs). Apply at a rate of 0.033 to 0.1	
Turmeric	Tobacco		lb a.i./A (2.1 to 6.4 fluid ounces product) in 10 gallons of spray	
Yam Bean	Wireworm		by ground or 3 gallons of spray by air.	
True Yam	Whitefringed			
	Beetle		Do not make more than 2 foliar applications per season.	
	White Grub		Do not make applications less than 21 days apart.	
			Do not apply more than 0.5 lb. a.i. /A per season, including soil	
			application.	}

SOD FARMS

Not for use in California unless accompanied by supplemental labeling.

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.

PEST	RATE BIFENTURE EC/ACRE	RATE BIFENTURE EC FL OZ/1000 SQ FT.
Armyworms ¹ Cutworms ¹ Sod Webworm ¹	0.03-0.05 lb ai (2.2-3.5 fl oz product)	0.05-0.08 fl oz product
Annual Bluegrass Weevil (Hyperodes) (Adult) ² Banks Grass Mite ⁶ Billbugs (Adult) ³ Black Trufgrass Ataenius (Adult) ⁴ Crickets Earwigs Fleas (Adult) Grasshoppers	0.05-0.11 lb ai (3.5-7.0 fl oz product)	0.08-0.16 fl oz product

Mealybugs Mites ⁶		
Ants Chinch Bugs ⁵ Fleas (Larvae) ⁷ Imported Fire Ants ⁸ Japanese Beetle (Adult) Mole Cricket (Adult) ⁹ Mole Cricket (Nymph) ¹⁰ Ticks ¹¹	0.11-0.21 lb ai (7.0-14.0 fl oz product)	0.16-0.32 fl oz product

Footnotes

- 1 Armyworms, Cutworms, and Sod Webworms: for best control, delay watering (irrigation) or mowing for 24 hours after application. Higher application rates (up to 0.32 fl oz pr 1000 sq ft) may be required if grass is being maintained at a mowing height of greater than 1" in periods of high pest pressure.
- 2 Annual Bluegrass Weevil (Hyperodes) Adults: Time applications to control adult weevils as they leave their overwintering sites and move into grass. Generally, this movement begins when Forsythia is in full bloom and finishes when flowering dogwood is in full bloom. Your State Cooperative Extension Services can give more specific information regarding the timing of applications.
- 3 <u>Billbug Adults</u>: Apply when adult billbugs are first seen during April and May. Consult degree day models to optimize application timing, and consult your State Cooperative Extension Service for information specific to your region. In temperate regions, apply in spring to also provide control of over-wintered chinch bugs.
- 4 <u>Black Turfgrass Ataenius Adults</u>: Apply during May and July to control the first and second generations, respectively. Time the May application to coincide with the full bloom stage of Vanhoutte spiraea (Spiraea vanhoutei) and horse chestnut (Aesculus hippocastanum). Time the July application to coincide with the blooming of Rose of Sharon (Hibiscus syriacus).
- 5 Chinch Bugs: irrigate the grass area before treatment to optimize penetration of the product to the base of grass plants and the thatch layer, where chinch bugs are found. If the thatch layer is excessive or if a relatively long mowing height is being maintained, use higher volume applications. Chinch Bugs are difficult to control in grasses and the higher labeled application rates may be necessary to control populations containing both nymphs and adults during the middle of the summer.
- Mites: for best control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application timed five to seven days after the first may be necessary for acceptable control.
- 7 Flea Larvae: These pests develop in the soil of shaded areas accessible to pets and other animals. When treating these areas, use a higher application volume to ensure the insecticide penetrates into the soil. Note: if the lawn area is being treated with this product at 0.10 fl oz/1000 sq ft for adult flea control, then the larval application rate may be achieved by increasing the application volume two-to four-fold.
- 8 Imported Fire Ants: For best control, combine broadcast applications (to control foraging workers and newly mated fly-in queens) with mound drenches (to control existing colonies). If the soil is not moist, irrigate before application or use a high volume application. For broadcast treatments, use 0.32 fl oz/1000 sq ft. Treat mounds by diluting 0.05 fl oz Bifenture EC per gallon of water, and apply1 to 2 gallons of finished spray per mound. Treat the mounds with enough force to break the apex and allow the solution to flow into the ant tunnels. Also treat a four-foot diameter circle around the mound. For best results, apply in cool weather (65 80° F) or in early morning or late evening hours.
- 9 Mole Cricket Adults: Adult mole crickets are difficult to control because preferred grass areas are continuously invaded during the early spring. Apply as late in the day as possible, and water in with up to 0.5 inches of water immediately following treatment. If the soil is not moist, irrigate before application to bring the crickets closer to the soil surface and maximize exposure to the insecticide. In grass areas that receive pressure from adult mole crickets, treat at peak egg hatch to ensure control of subsequent nymph populations (see footnote 10).
- Mole Cricket Nymphs: In grass areas that receive intense pressure from adult mole crickets, treat immediately before peak egg hatch. Best control is achieved at that time because young nymphs are more susceptible to insecticides and they are located near the soil surface. To control larger, more damaging nymphs later in the year a higher application rate and more frequent applications may be necessary. Apply as late in the day as possible and water in with up to 0.5 inches of water immediately following treatment. If the soil is not moist, irrigate before application to bring the crickets closer to the soil surface and maximize exposure to the insecticide.
- 11 Ticks (including ticks that may transmit Lyme Disease and Rocky Mountain Spotted Fever): Do not make spot applications, but treat the entire area where exposure to ticks may occur. When treating areas with dense ground cover or heavy leaf litter, use higher spray volumes. Note that ticks may be reintroduced from surrounding areas or on host animals and retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Limit repeat application to no more than once per seven days, and only if there are signs of renewed activity. Deer Ticks (Ixodes sp.): This pest has a complex life-cycle that ranges over a two-year period and involves four life stages. Apply in the late fall and/or early spring to control adult ticks (usually located on brush or grass above the soil surface), and in mid to late sprig to control larvae and nymphs (found in the soil and leaf litter). American Dog Ticks: These ticks congregate along paths or roadways where humans are likely to be encountered. Apply as necessary from mid-spring to early fall to control larvae, nymphs, and adults.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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.

Ammo, Capture, Mustang – trademarks of FMC Corporation Ambush, Karate – trademarks of a Syngenta Group Company. Asana – trademark of E.I. duPont de Nemours & Company Baythroid – trademark of Bayer Danitol – trademark of Sumitomo Chemical Company, Ltd. Scout Xtra – trademark of Hoechst Schering Agrevo S.A.

Rev. 6/1/10 Last EPA Appr. 11/17/09