



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

February 29, 2000

Mr. John S. Thornton
Bayer Corporation
8400 Hawthorn Road
P.O. Box 4913
Kansas City, MO 64120-0013

Subject: Amend Registration to Add Hops to Label
Baythroid 2 Emulsifiable Pyrethroid Insecticide
EPA Reg. No. 3125-351
Your Inquiry of January 19, 2000

Dear Mr. Thornton:

The Agency accepts your application for amended registration to add hops to the subject label. Therefore, in accordance with FIFRA Section 3(c)(7)(b)(c), the conditional registration of the subject product is issued for a period not to exceed November 15, 2000 to be consistent with the terms and conditions of the registration on cotton and other crops (see our letters dated 15 May, 1995, 24 July, 1996, and 15 November, 1996).

We note you agree to the following conditions:

- a) You understand that this registration will expire on November 15, 2000. You also understand that it is EPA's intent to, by November 15, 2000 or sooner, complete its review of all relevant data and other information, and to make FIFRA 3(c)(5) or other appropriate regulatory decisions for cotton and other crop use of synthetic pyrethroids based on EPA's review of such data/information and the statutory and regulatory criteria for such decision.
- b) Bayer Corporation will submit production information (pounds or gallons produced) for this product for the fiscal year in which the use on hops is conditionally registered in accordance with FIFRA Section 29. The fiscal year begins on 1 October and ends 30 September. The information should be submitted to:

Registration Support Branch
Registration Division 7505C
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

In addition to the above, please add the following information to your label:

- 1) Please put the phrase "Restricted Use Pesticide" under your "Directions for Use" heading on both your primary and supplemental labels, per 40 CFR 156.10 (I) (2) (ii).

- 2) Please change your "Hazards to Humans and Domestic Animals" to read the following:

DANGER: Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield). Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. May be fatal if inhaled. Do not breathe vapors or spray mist. Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

- 3) Please revise the eye portion of your "Statement of Practical Treatment" to read the following:

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

- 4) Please expand your "to Physician" to read "Note to Physician" include the following information (in addition to what you already have):

- technical information on symptomatology
- Use of supportive treatments to maintain life functions
- Company telephone number to specific medical personnel who can provide specialized medical advice.

- 5) Per our June 9, 1995 correspondence, please add the following risk mitigation measures to your label:

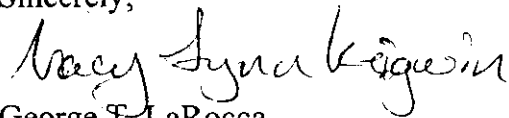
Do not apply if soil is saturated with water

Do not apply under conditions that favor runoff

Do not apply in the rain

A copy of the stamped accepted label is enclosed for your records. Please submit 3 copies of your final printed labeling for our records. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA § 6(e). Your release for shipment of the product bearing the amended labeling constitutes your acceptance of these conditions. If you have any questions regarding this action, please contact Tracy Keigwin of my team at (703) 305-6605.

Sincerely,



George T. LaRocca
Product Manager (13)
Insecticide Branch
Registration Division (7505C)

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RESTRICTED USE PESTICIDE

Due to Toxicity 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.

Baythroid® 2

Emulsifiable Pyrethroid Insecticide

For control of insect pests on cotton and other crops.

ACTIVE INGREDIENT:

Cyano(4-fluoro-3-phenoxyphenyl)methyl-
-3-(2,2-dichloroethenyl)-2,2-dimethyl-
-cyclopropanecarboxylate 25%

INERT INGREDIENTS: 75%
100%

Contains 2 lb Cyano(4-fluoro-3-phenoxyphenyl)methyl-
-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate
per gallon

(This product contains aromatic petroleum distillates.)

U. S. Patent No. 4,218,469

EPA Reg. No. 3125-351

Net Contents: ___ Gallons

STOP - Read the label before use.
Keep out of reach of children.

DANGER PELIGRO

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.)

STATEMENTS OF PRACTICAL TREATMENT

If eyes are contaminated: Flush with plenty of water. Get medical attention. If swallowed: Do not induce vomiting. Call a physician. Gastric lavage should be supervised by a physician or professional medical staff because of possible pulmonary damage via aspiration of the solvent. If on skin: Wash skin immediately with soap and warm water. If irritation occurs, get medical attention. If inhaled: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

In case of poisoning, call a physician immediately. Have patient lie down and keep quiet.

To Physician: No specific antidote is available. Treat symptomatically.

ACCEPTED
with COMMENTS
in EPA Letter Dated

FEB 29 2000

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

3125-351

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Causes eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin or on clothing. Do not breathe vapors, or spray mist. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

Do not contaminate feed or food. Keep out of reach of children.

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

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate 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.

Engineering controls statements: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the 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. 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area. Additional information may be obtained by consulting your Cooperative Extension Service.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

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

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

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or viton
- Shoes plus socks
- Protective eyewear

IMPORTANT: Read these entire Directions and Conditions of Sale before using BAYTHROID 2 Emulsifiable Pyrethroid Insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND

CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

BAYTHROID 2 Emulsifiable Pyrethroid Insecticide may be used for control of a broad spectrum of insect pests by contact action. Because of this contact activity, good spray coverage of the crop is needed for the highest level of control.

USE IN CHEMIGATION SYSTEMS

Types of Irrigation Systems: Apply BAYTHROID 2 only through sprinkler, including center pivot, lateral move, side roll, or overhead solid set irrigation systems. Do not apply BAYTHROID 2 through any other type of irrigation system.

GENERAL DIRECTIONS FOR ALL RECOMMENDED TYPES OF IRRIGATION SYSTEMS

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

The system must be calibrated to uniformly apply the rates specified for chemigation application for specific crops. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring: A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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

Required System Safety Devices: 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.

Using Water from Public Water Systems: DO NOT APPLY BAYTHROID 2 THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

BAYTHROID 2 may be applied through any of the recommended types of irrigation systems which may be supplied by a public water system only if the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements.

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 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 or in cases where there is no water pump, 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) 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.

Posting Requirements: Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the follow requirements: Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other

location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2-1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

Agitation: For application of BAYTHROID 2 alone, a chemical supply tank is not necessary for premixing since BAYTHROID 2 mixes well with water in the irrigation line. If a chemical supply tank is used for application of BAYTHROID 2, constant strong mechanical or hydraulic agitation must be maintained in the chemical supply tank during the entire period of application.

Chemical Supply Tank Dilution: If a chemical supply tank is used, you must determine the required amounts of BAYTHROID 2 and water to mix in the tank.

The amount of BAYTHROID 2 needed equals the number of fluid ounces of BAYTHROID 2 to be applied per acre multiplied by the number of acres to be chemigated.

The amount of emulsion needed equals the gallons of emulsion delivered per hour by the injection pump multiplied by the number of hours chemigation will take place.

The amount of water needed equals the amount of emulsion needed minus the amount of BAYTHROID 2 needed.

For example, if you want to apply 1.6 fluid ounces of BAYTHROID 2 per acre to 130 acres in 20 hours and your irrigation pump delivers 15 gallons per hour, you need: 1.6 fluid ounces of BAYTHROID 2 X 130 acres = 208 fluid ounces or 13 pints of BAYTHROID 2. And, you need: 15 gallons per hour X 20 hours = 300 gallons of emulsion, minus 1.625 gallons (13 pints) of BAYTHROID 2 = 298.375 gallons of water.

Cleaning the Chemical Injection System: In order to accurately apply pesticides, the chemical injection system must be kept clean; free from chemical or fertilizer residues and sediments. Refer to your owners manual or ask your equipment supplier for the cleaning procedure for your injection system.

Flushing the Irrigation System: At the end of the application period, allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

SPRINKLER IRRIGATION SYSTEMS: All directions and requirements listed under the GENERAL DIRECTIONS AND REQUIREMENTS FOR ALL RECOMMENDED TYPES OF IRRIGATIONS SYSTEMS section of this label must be followed for sprinkler irrigation systems.

In addition, the following directions apply to sprinkler irrigation systems.

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

It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, pumps and system safety devices be plugged to prevent chemical contamination of these areas.

Center-Pivot and Automatic-Move Linear Systems: Inject the specified dosage per acre continuously for one complete revolution or move of the system. **DO NOT USE END GUNS.** The system should be run at maximum speed.

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE	
		BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Cotton	Beet Armyworm (1st and 2nd instar only)	0.05	3.2
	Fall armyworm (1st and 2nd instar only)		
	Leafminers		
	Soybean looper		
	Whiteflies (Suppression)		
	Yellow-striped armyworm		
	Boll weevil	0.025	1.6
	Cotton bollworm	to	to
	Cabbage looper	0.04	2.6
	Cotton aphid		
	European corn borer		
	Flea beetles		
	Fleahoppers		
	Garden webworm		
	Lygus bugs		
	Pink bollworm		
	Saltmarsh caterpillar		
	Southern garden leathopper		
	Stinkbugs		
	Threecornered alfalfa hopper		
	Tobacco budworm (See Remarks)		
	Ovicidal Effect: Bollworm/Budworm		
	Cotton leaf-perforator	0.0125	0.8
	to		to
	Cutworms	0.025	1.6
	Leafworm		
	Thrips		
	Grasshoppers	0.031	2.0 to 2.8
	to		
		0.044	

Solid Set and Manually Controlled Linear Systems:

Injection should be during the last 30 to 60 minutes of a regular irrigation period or as a separate 30 to 60 minute application not associated with a regular irrigation. **DO NOT USE END GUNS.**

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE	
		BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Cotton	(continued)		
<p>Apply specified dosage per acre as needed in sufficient water, at least one gallon, for thorough coverage of foliage. Applications may also be made with ground or aircraft equipment adapted and calibrated for ULV application. BAYTHROID 2 may be mixed with once-refined vegetable oil and applied in a total volume of at least one quart per acre. For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p> <p>TOBACCO BUDWORM: Control of this insect may be affected by resistance to pyrethroid insecticides. See RESISTANCE statement elsewhere on this label.</p> <p>For all insects, timing of application should be based on careful scouting and local economic thresholds.</p> <p>A 3- to 5-day application schedule may be required to maintain control of heavy boll weevil infestations.</p> <p>Lower dosage rates are adequate for low to moderate insect pressure, but require careful scouting and may require more frequent applications. Ask your supplier for more detailed information for your area.</p> <p>For armyworm control, careful scouting and early detection are necessary. Subsequent applications are necessary to maintain control.</p> <p>For cotton aphid, thorough coverage under light infestation pressure is necessary to achieve control. Under heavy infestation pressure a systemic insecticide may be necessary.</p> <p>For maximum contact ovicidal effect on bollworm/budworm, time application to correspond to peak egg deposition.</p> <p>A total of 32 fluid ounces of BAYTHROID 2 per acre may be applied per crop season. Do not graze treated fields. Applications may be made up to day of harvest.</p> <p>Do not make more than a total of 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include AMBUSH® Insecticide, AMMO® Insecticide, ASANA® XL Insecticide, BAYTHROID® Emulsifiable Pyrethroid Insecticide, CAPTURE® Insecticide/Miticide, DANITOL® 2.4 EC Spray Emulsifiable Insecticide/Miticide, FURY® Insecticide, KARATE® Insecticide, MUSTANG® Insecticide, POUNCE® Insecticide, SCOUT® XTRA Insecticide, SynerGin® 2 Insecticide.</p>			
<p>RESISTANCE: Some insects are known to develop resistance to insecticides used repeatedly on cotton. 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 authorities for details. If resistance to this product develops in your area, this product alone will not continue to provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor/state extension agent for the best alternative method of control in your area. Consult your state extension agent/agricultural advisor for insect resistance management strategies and recommended insect control methods in your area.</p>			

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RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Alfalfa (Except alfalfa grown for seed)	Alfalfa looper	0.0125	0.8 to 1.6
	Cutworms (except Army Cutworm)	to 0.025	
	Green cloverworm		
	Meadow spittlebug		
	Potato leafhopper		
	Alfalfa plant bug	0.025	1.6 to 2.8
	Alfalfa weevil	to 0.044	
	Alfalfa webworm		
	Alfalfa caterpillar		
	Army Cutworm		
	Aster leafhopper		
	Beet armyworm (1st and 2nd instar only)		
	Blue aphid *		
	Corn earworm		
	Egyptian alfalfa weevil		
	Fall armyworm (1st and 2nd instar only)		
	Lygus		
	Pea aphid *		
	Tarnished plant bug		
	Blotch leafminer	0.031 to 0.044	2.0 to 2.8
	Grasshoppers		
	Western yellow-striped armyworm (1st and 2nd instar only)		

Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for thorough coverage of foliage. BAYTHROID 2 may also be applied by air with equipment adapted and calibrated for ULV application. BAYTHROID 2 may be applied with oil by ground equipment in a total volume of one quart per acre.

Applications should be based on local economic thresholds. Use the higher rates for moderate to heavy insect pressure. Lower rates are adequate for low to moderate insect pressure but require careful scouting and may require more frequent application.

* When treating heavy aphid infestations, adequate control may not be achieved.

A maximum of 2.8 fl oz per acre may be applied per cutting. A total of 11.2 fluid ounces per acre may be applied per season. Applications may be made up to seven days before harvest.

For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Hops	Aphids	0.05	3.2

Apply specified dosage per acre by air or ground equipment in sufficient water for complete coverage of foliage. A total of 5 applications may be made per crop season. Allow at least 14 days between applications.

Applications may be made up to 7 days of prior to harvest

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Potatoes	Cutworms	0.0125 to 0.025	0.8 to 1.6
	Potato leafhopper		
	Cabbage looper	0.025 to 0.044	1.6 to 2.8
	Colorado potato beetle		
	European corn borer		
	Flea beetles		
	Potato tuberworm		
	Potato psyllid		
	Tarnished plant bug		
	Aphids*		

Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) to allow for thorough coverage of foliage.

For application by sprinkler irrigation systems: apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.

The lower dosage rates are adequate for control of low to moderate insect infestations. Use higher rates for higher insect pressure.

Resistance of Colorado potato beetle to insecticides has occurred in some areas. See RESISTANCE statement elsewhere on this label.

Allow at least 5 days between applications. A total of 6 applications for a maximum of 16.8 fluid ounces may be applied per acre per crop season. Applications may be made up to and including day of harvest.

*Application may provide some suppression of this insect.

RESISTANCE: Some insects are known to develop resistance to insecticides used repeatedly. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. If resistance to this product develops in your area, this product alone will not continue to provide adequate control. Consult your state extension agent/agricultural advisor for insect resistance management strategies and recommended insect control methods for your area.

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RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Sorghum	Chinch bug	0.02	1.3 to 2.8
	Fall armyworm (1st and 2nd instar only)	to 0.044	
	False chinchbug		
	Headworm		
	Sorghum webworm		
	Stinkbugs		
	Sorghum midge	0.014 to 0.02	0.9 to 1.3
	Cutworms	0.015 to 0.02	1.0 to 1.3
	Grasshoppers	0.031 to 0.044	2.0 to 2.8
<p>Apply specified dosage per acre by air or ground in sufficient water for thorough coverage. Higher volumes of water will assure better coverage and may aid in control of pests such as chinch bug. For best control of chinch bug, applications should be directed at the basal portions of the plant.</p> <p>Applications should be timed as pest populations reach threshold levels. A maximum of 8.4 fl oz/acre may be applied per crop season. No more than 2.8 fl oz/acre may be applied in any 10 day period. Allow at least 14 days between the last application and harvest of grain or dry forage. If 5.6 fl oz/acre or less is applied, green forage may be fed or grazed on the day of treatment. If more than 5.6 fl oz per acre is applied, allow at least 14 days between last application and grazing.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p>			

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Sweet corn	Chinch bug	0.025	1.6 to 2.8
	Common stalk borer	to 0.044	
	Corn earworm		
	Corn rootworm (adult beetles)		
	European corn borer		
	Fall armyworm (1st and 2nd instar only)		
	Silk fly		
	Southwestern corn borer		
	True armyworm		
	Western bean cutworm		
	Black cutworm	0.0125	0.8 to 1.6
	Other cutworms including Granulate cutworm Sandhill cutworm	to 0.025	
	Grasshoppers	0.031 to 0.044	2.0 to 2.8
<p>Apply specified dosage per acre by air or ground equipment as needed in sufficient water, at least 2 gallons, for thorough coverage of foliage. BAYTHROID 2 may be mixed with sprayable vegetable oil and applied in a total volume of at least one quart per acre.</p> <p>For cutworms, apply as needed as a soil broadcast spray or as a band directed at the base of plants. BAYTHROID may be applied before, during, or after planting. Use the lower rate for Black cutworms under low or no trash conditions. Use the higher rate for other cutworms and high trash conditions, such as those existing under low or no till culture.</p> <p>For chinch bug control, direct the spray to the base of plants. Repeat after 7 days, if needed.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p> <p>Up to ten applications may be made per crop. A total of 28 fluid ounces may be applied per acre per crop season. Applications may be made up to and including day of harvest.</p>			

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Sunflower	Cutworm	0.0125	0.8 to 1.6
	Sunflower beetle	to 0.025	
	Sunflower stem weevil (adults)	0.025 to 0.0375	1.6 to 2.4
	Banded sunflower moth	0.031 to 0.044	2.0 to 2.8
	Grasshoppers		
	Sunflower budmoth		
	Sunflower headclipper weevil		
	Sunflower midge		
	Sunflower moth		
	Sunflower seed weevil		
<p>Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for thorough coverage of foliage and heads. Do not apply as an ultra low volume spray. For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p> <p>Timing of application should be based on careful scouting and local economic thresholds. Lower rates are adequate for low to moderate insect pressure. Use the higher rate for moderate to heavy pest pressure and longer residual control. Allow at least 7 days between applications. A total of 8.4 fl oz of BAYTHROID 2 per acre may be applied per crop season. Allow at least 30 days between last application and harvest. Do not graze or feed forage to livestock within 30 days after application.</p>			
Sugarcane	Sugarcane borer	0.033	2.1
	Rice borer	0.044	2.8
<p>Apply specified dosage per acre by air or ground equipment in sufficient water for thorough coverage of foliage (minimum of 2 gallons per acre by air and 20 gallons per acre by ground). BAYTHROID may also be applied by air with equipment adapted and calibrated for ULV application. BAYTHROID may be mixed with once-refined vegetable oil and applied in a total volume of one quart per acre.</p> <p>Timing of applications should be based on careful scouting and local economic thresholds. Ask your supplier for more detailed information for your area.</p> <p>Do not apply if soil is saturated with water. Do not apply under conditions that favor runoff. Do not apply in the rain.</p> <p>A total of 6 applications of BAYTHROID 2 may be made per crop season. Allow at least 7 days between applications and at least 15 days between last application and harvest.</p>			

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Carrots	Black cutworm	0.025	1.6
	Aster leafhopper	0.025 to 0.044	1.6 to 2.8
	Carrot weevil	0.044	2.8
<p>Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for good coverage. A total of five applications may be made per crop season. Allow at least 7 days between applications. Applications may be made up to and including day of harvest. Do not apply to crops grown for seed.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p>			
Peppers	Celery leaf tier	0.025	1.6 to 2.8
	Corn earworm	to 0.044	
	European corn borer		
	Garden webworm		
	Pepper weevil		
	Potato leafhopper		
	Beet armyworm (1st and 2nd instar only)	0.033 to 0.044	2.1 to 2.8
	Cabbage looper		
	Leafminers*		
	Thrips (except <i>Thrips palmi</i>)		
	Western yellow-striped armyworm		
<p>Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for complete coverage of foliage. Make applications as needed to maintain control, however, do not apply more than 16.8 fl oz of BAYTHROID 2 per acre per crop season. Allow 7 days between applications. Applications may be made up to 7 days before harvest. Do not apply to crops grown for seed.</p> <p>Use the low rate for 1st and 2nd instar control of Beet armyworm. Use higher rates for control of older larvae.</p> <p>*Applications may provide suppression of this insect.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p>			
Radishes	Flea beetle cutworms	0.025 to 0.044	1.6 to 2.8
<p>Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for complete coverage. A total of five applications may be made per crop season.</p> <p>Allow at least 7 days between applications.</p> <p>Applications may be made up to and including day of harvest. Do not apply to crops grown for seed.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p>			

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RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Tomatoes	Colorado potato beetle*	0.025	1.6 to 2.8
	Dipterous leafminers	to	
	European corn borer	0.044	
	Potato aphid		
	Stinkbugs		
	Tomato fruitworm		
	Tomato hornworm		
	Whitefly (suppression)		
	Beet armyworm (1st and 2nd instar only)	0.033 to 0.044	2.1 to 2.8
	Cabbage looper		
	Southern armyworm (1st and 2nd instar only)		
	Tomato pinworm		
	Variegated cutworm		
	Western flower thrips		
	Western yellow-striped (1st and 2nd instar only) armyworm		
	Flea beetle	0.044	2.8
<p>Apply specified dosage per acre by air or ground equipment in sufficient water (minimum 2 gallons for aerial application) for complete coverage of foliage. Repeat applications as needed to maintain control. A total of 16.8 fl oz of BAYTHROID 2 may be applied per acre per crop season. Allow 7 days between applications.</p> <p>Applications may be made up to and including day of harvest. Do not apply to crops grown for seed.</p> <p>*In some areas, this insect may have developed resistance to pyrethroid insecticides. BAYTHROID insecticide used alone may not provide satisfactory control in those areas. Consult your local agricultural advisor or Cooperative Extension Service for recommendations.</p> <p>For application by sprinkler irrigation systems: Apply specified dosage per acre. Follow all directions given under the CHEMIGATION section of this label.</p>			

RECOMMENDED APPLICATIONS			
CROP	PEST	DOSAGE BAYTHROID 2	
		lb AI/Acre	fl oz/Acre
Citrus CA and AZ ONLY	Citrus thrips	0.1	6.4
<p>Apply specified dosage per acre by ground equipment only, in sufficient water for complete coverage of foliage in dilute or concentrate sprays but not less than 25 gallons per acre for concentrate sprays. A single application may be made per crop season. Application soon after pollination is most effective in preventing thrips scarring. Use on trees 3 or more years old. Applications may be made up to the day of harvest.</p> <p>When spraying near aquatic areas, spray last three rows windward of aquatic areas using nozzles on one side only, with spray directed away from aquatic areas. Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on the side away from the grove / orchard when spraying the outside row. Shut off nozzles when turning at ends of row and passing tree gaps in the rows.</p> <p>Make applications when wind velocity favors on-target product deposition (approximately 3 to 8 mph). Do not apply within 110 feet upwind of aquatic areas (as described below). Do not apply when wind velocity exceeds 8 mph. Avoid applications when wind gusts approach 8 mph.</p>			

NOTE: All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds. Increase the buffer zone to 450 feet when ultralow volume (ULV) application is made.

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

Use the largest droplet size consistent with 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.

Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Make aerial or ground applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph.

Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Do not cultivate within 10 feet of the aquatic area as to allow growth of a vegetative filter strip.

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Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.

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.

RATE CONVERSION CHART			
Lb AI/A	Fl Oz/A	Acres Treated	
		/Gallon	/Pint
0.0125	0.8	160	20
0.025	1.6	80	10
0.028	1.8	71	9.0
0.033	2.1	61	7.6
0.044	2.8	46	5.7
0.05	3.2	40	5

CROP ROTATION STATEMENT

reated areas may be replanted with any crop as soon as practical after last application.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and away from open flame and extreme heat. Store in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking invert to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone No. is 800-414-0244 or contact Chemtrec at 800-424-9300.

Pesticide Disposal: Pesticide wastes are acutely hazardous. 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 at the nearest EPA Regional Office for guidance.

Container Disposal: Non-refillable Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable Refillable Sealed Container: Do not rinse container. Do not break seals. Replace the dust cover cap and return container intact to point of purchase.

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