



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Antimicrobials Division (7510C)  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

EPA Reg. Number:  
**53883-135**

Date of Issuance:  
**09/17/04**

NOTICE OF PESTICIDE:  
  x   Registration  
      Reregistration

Term of Issuance:  
**Conditional**

Name of Pesticide Product:  
**Enfenvalerate AG**

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**Control Solutions, Inc.  
5903 Genoa-Red Bluff  
Pasadena, TX 77507-1041**

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

**This product is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:**

- 1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.**
- 2. Make the following labeling changes:**
  - a. Revise the EPA Registration Number to read: "EPA Registration Number 53883-135".**

Signature of Approving Official:

*George T. LaRocca*  
George T. LaRocca,  
Product Manager (RM 13)  
Insecticide Branch/Registration Division (7505C)

Date:

September 17, 2004

- b. Under "Limitation of Warranty and Liability" statement (7<sup>th</sup> paragraph, 1<sup>st</sup> statement):  
Delete the "shall" on the 1<sup>st</sup> line to change the sentence from "To the extent permitted by law shall Control Solutions, Inc. or seller shall not be liable .... of this product." to "***To the extent permitted by law, Control Solutions, Inc. or seller shall not be liable .... of this product.***"
3. Submit two (2) copies of the final printed label bearing the aforementioned revisions prior to releasing this product for sale.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Enclosure

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**RESTRICTED USE PESTICIDE**  
**DUE TO TOXICITY TO FISH AND AQUATIC ORGANISMS**  
For retail sale to and use only by Certified Applicator or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

**Esfenvalerate AG**

<b>Active Ingredient:</b>	<b>By Wt.</b>
Esfenvalerate	
(S)-cyano (3-phenoxyphenyl) methyl (S)-4-chloro-alpha-(1-methylethyl)	
Benzeneacetate .....	8.4%
<b>Inert Ingredients*</b> .....	<b>91.6%</b>
Total.....	<b>100.0%</b>

**ACCEPTED**  
with COMMENTS  
in EPA Letter Dated

**SEP 17 2004**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the registered under EPA # 53883-135

\*Contains xylene range aromatic solvent  
This product contains 0.66 lbs. Active Ingredient per gallon.

**NET CONTENTS** \_\_\_\_\_

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING / AVISO**

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

<b>FIRST AID</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Poison Control Center 800-222-1222 for emergency medical treatment.	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continuing rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Poison Control Center 800-222-1222.	
<b>Note to Physician</b> – Contains xylene range aromatic solvent – vomiting may cause aspiration pneumonia. If on skin, after drying apply vitamin E cream or oil if available. If not available, apply vegetable oil liberally over painful areas. The oil or cream may be used repeatedly until relief is achieved.	

**HAZARD TO HUMANS (AND DOMESTIC ANIMALS)**

**WARNING!** May be fatal if swallowed. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

**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 E 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 Neoprene Rubber or Nitrile Rubber or Viton.

Shoes plus socks.

Protective eyewear.

Discard clothing or 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 thoroughly with soap and water after handling and 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.

**ENGINEERING CONTROL 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 [40CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or 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 cleaning equipment or when disposing of equipment wash-waters.

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

**WILDLIFE PROTECTION IS EVERYONE'S RESPONSIBILITY**

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with the 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 the 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 on 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 Protections 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 Neoprene Rubber or Nitrile Rubber or Viton.

Shoes plus socks.

Protective eyewear.

**GENERAL INFORMATION**

ESFENVALERATE AG insecticide 0.66 Emulsible Concentrate contains 0.66 pounds of active ingredient per gallon. For the applications given below, mix the required amount of ESFENVALERATE AG in sufficient diluent to provide uniform coverage (Refer to Use Tables). ESFENVALERATE AG may be applied by ground or aerial application equipment.

**RESISTANCE**

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

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

**INTEGRATED PEST MANAGEMENT**

Control Solutions, Inc. recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program, which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices and including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

**SPRAY PREPARATION**

Spray equipment must clean and free of previous pesticide deposits before applying ESFENVALERATE AG.

**SPRAY TANK CLEANOUT**

Immediately following application of ESFENVALERATE AG, thoroughly clean all mixing and spray equipment. Flush the tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Take all necessary precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose waste rinse water in accordance with local regulations.

**TANK MIXING**

Do not tank mix ESFENVALERATE AG with fungicides containing fentin hydroxide (triphenyltin hydroxide) such as "Super Tin" as crop injury may result.

ESFENVALERATE AG may be tank mixed with the DuPont herbicide products when insect populations require control concurrent with the need for weed control. Follow all herbicide and ESFENVALERATE AG label directions regarding proper usage. A "jar test" for physical compatibility should be conducted before field mixtures are made and applications initiated. For best results, use of spray equipment having continuous agitation is recommended.

ESFENVALERATE AG may be used in combination with 2, 4-D herbicides providing that the following mixing directions are follows: (1) Do not apply the combination in a volume of water less than 2 gallons per acre total spray. (2) Always mix the ESFENVALERATE AG thoroughly in the total volume of spray water first, followed by the addition of the 2,4-D herbicide. Because of the availability of a great variety of 2,4-D herbicide products, a jar test for physical compatibility should be conducted before field mixtures of a particular combination are made.

**CHEMIGATION**

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) row, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. ESFENVALERATE AG may be premixed in a supply tank with water, oil, fertilizer, or other appropriate tank mixed agricultural chemicals. A pretest of physical compatibility for untried tank mixes is advised. Agitation may be necessary. Application should be in sufficient water and of sufficient duration to apply the recommended rate evenly to the entire treated area. No run-off can be permitted during chemigation. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Do not apply when wind speed favors drift beyond the area intended for treatment.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. 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.

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

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.

**CROP ROTATION**

ALL ROTATION CROPS MAY BE PLANTED IMMEDIATELY FOLLOWING LAST APPLICATION.

***SPRAY RECOMMENDATIONS AND PRECAUTIONS***

- 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 wing span or rotor diameter.
- Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orientating nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.
- Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when winds gusts approach 15 mph.
- Risk of exposure to 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 so as to allow growth of a vegetative filter strip.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased 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.

**SPECIFIC USES-COTTON**

Crop	Insect	Application rate		Acres treated per Gal of ESFENVALERATE AG	Last Application (days to harvest)
		lb i/acre	fl oz/acre		
Cotton	Cotton Bollworm Tobacco Budworm Boll Weevil Beet Armyworm* Cabbage Looper Saltmarsh Caterpillar Cotton Leafworm Cutworms Lygus Bugs Plant Bugs Thrips (on seedling cotton) Leafhoppers Fleahoppers Grasshoppers Whitefly** Cotton Aphid Pink Bollworm	0.03-0.05	5.8-9.6	22 - 13	21
	Note: For light infestation of The above insects	0.02	3.9	33	
	Cotton Leaf Perforator	0.03	5.8	22	
	<p>To control Boll Weevil infestations, a 3 to 5 day interval between applications may be necessary.            May be applied in water or nonvolatile vegetable oils.            When applying ESFENVALERATE AG in an oil carrier, apply a total spray volume of at least 1 qt per acre.            When applying ESFENVALERATE AG in water carrier, apply at least 1 gal per acre by air (at least 3 gal per acre in Arizona and 5 gal per acre in California) or 4 gal per acre by ground.            Do not apply more than 0.5 lb ai per acre per season.            Do not graze livestock on treated fields or feed treated trash.            ESFENVALERATE AG can provide contact ovicidal effect on Heliothis spp, eggs when applied according to label directions for control of tobacco budworm; application should be timed to correspond with peak egg deposition to achieve maximum ovicidal effect. Use on this pest stage (egg) is not registered in California.</p>				*Aids in control. **Aids in suppression.
	<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. ESFENVALERATE AG insecticide, "Baythroid" emulsifiable pyrethroid insecticide, "Capture" insecticide/miticide, "Danitol 2.4 EC" Spray insecticide/miticide, "Decis" insecticide, "Fury" insecticide, "Karate" Insecticide, "Mustang" insecticide, "Pounce" insecticide and "Scout Xtra" insecticide.</p>				



**SPECIFIC USES-FIELD CROPS**

Crop	Insect	Application Rate		Acres treated per gal of ESFENVALERATE AG	Last Application (days to harvest)
		lb ai/acre	fl oz/acre		
Corn (field)†	<b>Cutworm</b> <b>Grasshopper</b> <b>Corn Earworm</b> <b>Stalk Borer</b> <b>Flea Beetle</b> <b>Corn Rootworm (adult control)</b> <b>Chinch Bug</b> <b>Southwestern Corn Borer</b> <b>Armyworm (True Armyworm)</b> <b>Corn Leaf Aphid</b> <b>Oat Bird-Cherry Aphid</b>	0.03 - 0.05	5.8 - 9.6	22 -13	21
<p><b>Cutworm, Grasshopper</b> – Applications for cutworm control may be applied before, during, or after planting as required to protect emerging or emerged corn seedlings. Physical compatibility with herbicides and/or fertilizers should be determined prior to tank mixing ESFENVALERATE AG with these products. Follow all herbicide/fertilizer recommendations and directions regarding proper usage.</p> <p><b>Corn Earworm</b> – First application should be at or before silking. Subsequent applications should be made at 3 – 5 day intervals until silking is completed.</p> <p><b>Stalk Borer, Flea Beetle</b> – Application must be made early in migration from grassy areas to corn, before borers enter the plant.</p> <p><b>Adult Corn Rootworm</b> – Apply at the first sign of silk feeding. Reinfestation may occur. Should reinfestation occur, repeat application.</p>					

<p>ESFENVALERATE AG may be tank-mixed with Parathion (Methyl) and applied on field corn (and seed corn) where supplemental control of Adult Corn Rootworm is desired in conjunction with insects controlled by ESFENVALERATE AG when used alone. Refer to the ESFENVALERATE AG and Parathion (Methyl) labels for appropriate rates of the individual products for controlling the respective insects.</p> <p><b>Chinch Bugs</b> – Over the top sprays, as used for control of ear and stalk infesting corn pests, are not adequate for chinch bug control. It is very important that the spray be directed at the base of the plant through the use of drop nozzles or some other mechanism.</p> <p><b>Southwestern Corn Borer</b> – Two or more applications may be required. For moderate to heavy infestations, higher rates (0.036-0.05 lb ai per acre) are recommended.</p> <p><b>Corn leaf Aphid, Oat Bird-Cherry Aphid</b> – For optimum results, direct the spray at the aphid population so as to achieve maximum coverage of the exposed insects. Aphids not contacted by the spray, such as in whorls and leaf axils, may not be adequately controlled.</p>			
<b>European Corn Borer</b>	0.04 - 0.05	7.8 – 9.6	16 - 13
<p><b>First brood:</b> Spray while eggs are the blackhead stage or before the larvae enter the whorl. Application by ground equipment is suggested. Good coverage of both upper and lower leaf surfaces is essential. This can be accomplished with drop nozzles over the row and on each side of the corn plant. Multiple applications may be required when egg laying is prolonged or where moderate to heavy populations are present. A higher rate is recommended for moderate to heavy populations. Proper coverage by ground equipment usually requires 20 – 30 gallons of carrier. Once larvae enter the whorl, foliar sprays will not provide adequate control.</p> <p><b>Second brood:</b> Make applications when sufficient egg masses are found. Spray when eggs are in the blackhead stage or starting to hatch. When egg laying is prolonged or a third generation is present, additional sprays may be required. A higher rate is recommended for moderate to heavy populations. Good coverage above, below, and in the ear zone is essential. This usually requires 2 – 3 gallons of carrier by air. If ground equipment is used, drop nozzles on each side of the plant will provide best coverage.</p> <p>ESFENVALERATE AG may be tank-mixed with Parathion (methyl) and applied on field corn (and seed corn) where supplemental control of European Corn Borer is desired in conjunction with insects controlled by ESFENVALERATE AG when used alone.</p> <p>Refer to the ESFENVALERATE AG and Parathion (methyl) labels for appropriate rates of the individual products for controlling the respective insects.</p>			
<b>Western Bean Cutworm</b>	0.015 – 0.03	2.9 – 5.8	44 - 22
<p>Apply before larvae enter the ear.</p> <p>†Do not apply more that 0.25 lb ai per acre per season.</p>			
<b>Corn (seed)</b>	<p>For specific insect control recommendations refer to Field Corn (above). Follow directions carefully.</p>		
<p>Multiple applications and/or shortened intervals between sprays must be used to insure proper insect control. Do not apply more that 0.25 lb a.i. per acre per season.</p>			

<b>Corn (pop)</b>	For specific insect control recommendations refer to Field Corn (above). Follow directions carefully.				1
	Multiple applications and/or shortened intervals between sprays must be used to insure proper insect control. Do not apply more than 0.5 lb a.i. per acre per season				
<b>Peanuts</b>	<b>Corn Earworm</b> <b>Red-necked Peanut Worm</b> <b>Potato Leafhopper</b> <b>Velvetbean Caterpillar</b>	0.015-0.03	2.9 - 5.8	44 - 22	21
	<b>Beet Armyworm*</b> <b>Granulate Cutworm</b> <b>Grasshoppers</b> <b>Cutworms</b>	0.03-0.05	5.8 - 9.6	22 - 13	
	<b>Lesser Cornstalk Borer*</b> <b>Fall Armyworm**</b>	0.05	9.6	13	
	Do not feed or graze livestock on treated vines. Do not apply more than 0.15 lb a.i per acre per season. *Aids in control. **Aids in control. For heavy infestations use of DuPont™ LANNATE insecticide is recommended. Please refer to the LANNATE label for use instructions.				
<b>Sorghum (Grain)</b> West of Mississippi River and east of Rocky Mountains and in the state of MS	<b>Sorghum Midge</b>	0.015 - 0.03	2.9 - 5.8	44 - 22	21
	<b>Corn Earworm (headworm)</b> <b>Cutworms</b> <b>Chinch Bugs</b>	0.03 - 0.05	5.8 - 9.6	22 - 13	
	Do not apply more than 0.15 lb a.i. per acre per season. When applying in nonvolatile vegetable oils use a total spray volume of 1 or more qts per acre. Chinch Bug Control: For optimum results, spray should be directed at base of plants.				
<b>Soybean</b>	<b>Mexican Bean Beetle</b> <b>Green Cloverworm</b> <b>Velvetbean Caterpillar</b> <b>Potato Leafhopper</b> <b>Saltmarsh Caterpillar</b> <b>Woollybear Caterpillar</b>	0.015 - 0.03	2.9 - 5.8	44 - 22	21
	<b>Cabbage Looper</b> <b>Corn Earworm</b> <b>Southern Green Stinkbug</b> <b>Bean Leaf Beetle</b> <b>Cutworms</b> <b>Three-cornered Alfalfa Hopper</b> <b>Beet Armyworm*</b> <b>Grasshoppers</b> <b>Japanese Beetle (adult)</b>	0.03 - 0.05	5.8 - 9.6	22 - 13	

	<p>When applying in nonvolatile vegetable oils, use a total spray volume of at least 1 qt.          Do not feed or graze livestock on treated fields.          Do not apply more than 0.2 lb ai per acre per season.          *Aids in control.</p>				
<b>Sugar Beets</b>	<b>Grasshoppers</b> <b>Beet Armyworms*</b> <b>Leafhoppers</b> <b>Cutworms (seedling spray)</b> <b>Saltmarsh Caterpillar</b> <b>Cabbage Looper</b> <b>Beet Webworm</b> <b>Flea Beetle (except CA)</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	21
	<p>Do not apply more than 0.15 lb ai/acre per season.          Apply with ground or air equipment using sufficient water to provide uniform coverage (minimum of 2 gal of water per acre).          *Aids in control.</p>				
<b>Sugarcane</b>	<b>Sugarcane Borer</b>	0.03 – 0.05	5.8 – 9.6	22 – 13	21
	<p>Do not apply more than 0.2 lb a.i/cre per season.</p>				
<b>Sunflower</b>	<b>Sunflower Beetle (except CA)</b>	0.0075 – 0.03	1.45 – 5.8	88 - 22	28
	<b>Grasshoppers</b> <b>Cutworms</b> <b>Heliothis (complex)</b> <b>Sunflower Moth</b> <b>Sunflower Seed Weevil</b> <b>Banded Sunflower Moth</b> <b>Beet Armyworm*</b> <b>Sunflower Maggott</b> <b>Leafhoppers</b> <b>Sunflower Stem Weevil</b>	0.03 – 0.05	5.8 – 9.6	22 – 13	
	<p>Do not apply more than 0.2 lb. ai/acre per season          *Aids in control.</p>				

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**SPECIFIC USES – FRUITS AND NUTS**

**DILUTE SPRAY:** Apply specified dosage per 100 gallons of water in a uniform spray applied to the point of drip with conventional ground equipment. Do not exceed maximum number of gallons per acre indicated.  
**NOTE:** In order to apply the correct amount of ESFENVALERATE AG insecticide to your orchard you must know the number of gallons of water needed to spray one acre of your trees to the point of drip. If you do not already know this gallonage, you should conduct a test to determine it. If you do not know how to conduct such a test with your equipment, you should ask for assistance from your equipment dealer or State Extension specialist.  
**CONCENTRATE SPRAY:** APPLY SPECIFIED DOSAGE PER ACRE IN NO LESS THAN 30 GALS. OF WATER PER ACRE BY GROUND. WHEN APPLYING ESFENVALERATE AG BY AIR, CONSULT YOUR COOPERATIVE EXTENSION SERVE FOR APPLICATION GUIDELINES.

Crop	Insect	Application Rate			Acres treated per gal of ESFENVALERATE AG	Last Application (days to harvest)
		Concentrate Spray		Dilute Spray		
		lb ai/acre	fl oz/acre	fl oz/100 gal.		
APPLES	Oblique Banded Leafroller Codling Moth Variegated Leafroller White Apple Leafhopper Tentiform Leaf Miner San Jose Scale (fruit infestations only) Apple Aphid Tufted Apple Bud Moth Plum Curculio Oriental Fruit Moth Apple Maggot Red-Banded Leafroller Lesser Appleworm Green Fruitworm Rosy Apple Aphid Plant Bugs (Tarnished Plant Bug, Stink Bugs)	0.025-0.075	4.8 - 14.5	2.0-5.8	26-9	21
	Apple Ermine Moth (ID, OR & WA only)			3.0		
	Tufted Apple Bud Moth	0.04-0.075	8.0-14.5		16.9	

	<p><b>(overwintering)</b> <b>(MD, NC, NJ, PA, VA, WV only)</b></p>					
<p>Do not feed or graze livestock on treated orchard floors. Do not apply more than 0.525 lbs. a.i. per acre per season. For dilute spray apply 200 – 600 gals per acre, but do not apply more than 14.5 fl. oz. of ESFENVALERATE AG per acre per treatment. <b>Plant Bug, Rosy Apple Aphid Control</b>—Time of application is critical in achieving control. Use prebloom and post bloom spray timings recommended by State Extension Services. <b>Apple Ermine Moth</b>—Apply with 2 to 4 gallons of superior spray oil in 100 gallons of water in a spray-to-wet application to insure thorough coverage of all stems and branches where Apple Ermine Moth hibernacula are found. When using on apple nursery stock, do not treat bundled plants since it is difficult to achieve a full coverage application which could result in less than complete control. Make first application in the fall after 90% of leaf fall has occurred-usually after October 15. Make a second application 7 to 14 days later. Note: Overwintering larvae do not die until approximately 30 days after application. <b>Tufted Apple Bud Moth (overwintering)</b>—For use on apple for the control of overwintering larvae of the tufted apple bud moth with directed ground application to the apple orchard floor. Make one application of ESFENVALERATE AG at either pink stage of apple or a petal fall stage of apple. Use the lower rate on small larvae (pink stage of apple) and/or on lower populations. Use the higher rate on larger larvae (petal fall stage of apple) and/or on moderate to high populations. Apply specified dosage per acre to the orchard floor in no less than 30 gals of water per acre by ground to obtain uniform coverage. Apply treatment in a band from trunk to drip line to allow coverage of areas where overwintering tufted apple bud moth are found. <b>PRECAUTIONARY STATEMENT—BENEFICIAL INSECTS:</b> Application of ESFENVALERATE AG to the groundcover at the pink stage of apple development may be toxic to overwintering <i>Stethorus punctum</i>. <i>S. punctum</i> is a coccinellid insect and the major predator of spider mites in the MD, NC, NJ, PA, VA and WV fruit growing areas. This predator overwinters in the same areas of the orchard groundcover as the tufted apple bud moth and moves into apple trees from mid-April through mid-May when maximum daily temperatures exceed 68° F. Emergence from the groundcover is 20-70% complete by the pink stage and 90-100% complete by petal fall on the apple cultivar Yorking.</p>						
<p><b>BLUEBERRY</b> <b>(except CA)</b></p>	<p><b>Aphids (NJ only)</b> <b>Blueberry Spanworm</b> <b>Cherry Fruitworm*</b> <b>Cranberry Fruitworm</b> <b>Cranberry Weevil*</b> <b>Grasshoppers</b> <b>Leafhoppers</b> <b>Red Striped Fireworm*</b></p>	<p>0.025-0.05</p>	<p>4.8-9.6</p>		<p>26-13</p>	<p>14</p>
<p><b>Blueberry Maggot</b></p>		<p>0.05</p>	<p>9.6</p>		<p>13</p>	
<p><b>Black Vine Weevil (adult control)</b></p>		<p>0.05</p>	<p>9.6</p>		<p>13</p>	
<p><b>Strawberry Root Weevil (adult control)</b> <b>(OR, WA only)</b></p>						
<p>Do not apply more than 0.2 lb ai/acre per season (38.4 fluid ounces of product per acre per season). Use of ground application is recommended; for ground application use a minimum of 50 gals water per acre.</p>						

	<p>Do not apply this product through any type of irrigation system.  <b>Note:</b> ESFENVALERATE AG can act as a bee repellent, do not apply within 7 days of pollination. Apply as a pre-bloom or post-bloom spray only.          *Aids in control.  <u><b>Black vine weevil &amp; strawberry root weevil (adult control) (OR, WA, only);</b></u> Look for leaf notching beginning in late May to early June as the first sign of weevil feeding. Also check for adults on or just below the soil surface around the base of plants. Apply ESFENVALERATE AG within two to three weeks of first sign of infestation. Do not apply by air; apply by ground using a minimum of 50 gallons of water per acre. Direct spray to provide full coverage of foliage and soil area around base of plants. Best results are from applications made after dark when temperatures are warm and weevils are actively feeding. Root weevils emerge over a several week period, make additional applications when signs of new feeding appear.</p>					
<b>CANEBERRIES</b> (blackberries, raspberries, boysenberries, dewberries, logan berries, youngberries, and a varieties, of these) (OR & WA only)	<b>Oblique Banded Leafroller</b> <b>Orange Tortrix</b> <b>Aphids</b>	0.025-0.05	4.8-9.6		26-13	7
	<b>Adult Root Weevils*</b>	0.05	9.6		13	
	<p>*Aids in control.          Do not apply by air.          Do not apply more than 0.15 lb ai per acre per season.          Do not apply this product through any type of irrigation system.  <u><b>Oblique Banded Leafroller Orange Tortrix and Aphids;</b></u> Apply as a full coverage spray in a minimum of 50 gallons of water with ground equipment only. Apply no earlier than 12 days before harvest and no later than 7 days before harvest.  <u><b>Adult Root Weevils;</b></u> Look for leaf notching beginning in late May to early June as the first sign of weevil feeding. Also check for adults on or just below the soil surface around the base of plants. Apply ESFENVALERATE AG within two to three weeks of infestation. Apply by ground using a minimum of 50 gallons of water per acre. Direct spray to provide thorough coverage of all plant foliage and the soil area around the base of the plant. Best results are from applications made after dark when temperatures are warm and weevils are actively feeding. Root weevils emerge over a period of several weeks; make subsequent applications when signs of new feeding appear.  <b>NOTE:</b> ESFENVALERATE AG can act as a bee repellent, do not apply within 7 days of pollination. Apply as a pre-bloom or post-bloom spray only. Remove bees prior to application. For maximum safety to bees, apply ESFENVALERATE AG in the evening after sunset.</p>					
<b>PEAR</b>	<b>Pear Psylla</b> <b>Codling Moth</b> <b>Green Fruitworm</b> <b>Plum Curculio</b> <b>Leafrollers</b> <b>Pear Slug</b> <b>Periodical Cicada</b>	0.025-0.075	4.8-14.5	2.0-5.8	26-9	28
Do Not apply more than 0.375 lbs. a.i. per acre per season.						

	Do not apply more than 0.225 lb. a.i. per acre between bloom and harvest. Do not feed or graze livestock on treated orchard floors. For dilute spray apply 200 – 600 gals per acre, but do not apply more than 14.5 fl. oz. of ESFENVALERATE AG per acre per treatment.					
<b>PEAR (dormant)</b>	<b>Pear Psylla</b>	0.05-0.1	9.6-19.2	7.3-12.8	13.2-6.6	
	Apply during dormant to prebloom (whitd bud) stage only. Do not apply more than 0.2 lb. a.i. per acre per season. Do not graze orchard floor. For dilute spray apply 150 – 250 gals per acre, but do not apply more than 19.2 fl. oz. of ESFENVALERATE AG per acre per treatment					
<b>STONE FRUITS (including apricots, cherries, nectarines, peaches, plums, prune plums)</b>	<b>Peach Twig Borer</b>	0.025-	4.8-14.5	2.0-5.8	26-9	14
	<b>Oriental Fruit Moth</b>	0.075				
	<b>Peach tree Borer Plum Curculio Lesser Peach Tree Borer Periodical Cicada Cherry Fruit Fly Western Cherry Fruit Fly American Plum Borer Black Cherry Aphid Leafrollers Leafhoppers Green Fruitworm Plant Bugs (Tarnished Plant Bug, Stink Bugs)</b>					
	<b>Peach Twig Borer (Dormant) (CA only)</b>	0.04- 0.075	8-14.5	3.1-5.8	16-9	
	<b>Tufted Apple Bud Moth (overwintering) (Peach only) (MD, NC, NJ, PA, CA and only)</b>	0.04- 0.075	8.0-14.5			16-9



	<p>Do not apply more than 0.375 lbs. a.i. per acre per season with no more than 0.3 lbs. a.i. per acre per season between bloom and harvest. For dilute spray apply 200 – 400 gals per acre, but do not apply more than 14.5 fl. oz of ESFENVALERATE AG per acre per treatment. Do not graze livestock on treated orchard floors.</p> <p><u>Peach Tree Borer, American Plum Borer, Lesser Peach Tree Borer Control</u> Apply as directed trunk and scaffold limb spray. Thorough coverage of trunk and scaffold limbs is required.</p> <p><u>Peach Twig Borer, Plum Curculio, Oriental Fruit Moth, Cherry Fruit Fly, Western Cherry Fruit Fly, Leafrollers, Black Cherry Aphid, Periodical Cicada Control</u> – Apply by ground sprayer to achieve thorough coverage of all aerial portions of the tree.</p> <p><u>Plant Bug Control</u> – Time of application is critical in achieving control. Use prebloom and postbloom spray timings recommended by State Extension Services.</p> <p><u>Peach Twig Borer (Dormant)</u>—Make application with an EPA registered dormant oil; for specific recommendations on use of oil consult manufacturer’s label. For best performance, ground application equipment is recommended.</p> <p><u>Tufted Apple Bud Moth (overwintering)</u> – For use on peach for the control of overwintering larvae of the tufted apple bud moth with directed ground application to the peach orchard floor. Make one application of ESFENVALERATE AG at either popcorn stage of peach or at shucksplit stage of peach.</p> <p>Use the lower rate on small larvae (popcorn stage of peach) and/or on lower populations. Use the higher rate on larger larvae (shucksplit stage of peach) and/or on moderate to high populations.</p> <p>Apply specific dosage per acre to the orchard floor in no less than 30 gals of water per acre by ground to obtain uniform coverage. Apply treatment in a band from trunk to drip line to allow coverage of areas where overwintering tufted apple bud moth are found. PRECAUTIONARY STATEMENT – BENEFICIAL INSECTS: Application of ESFENVALERATE AG to the groundcover at the popcorn stage of peach development may be toxic to overwintering <i>Stethorus punctum</i>. <i>S. punctum</i> is a coccinellid insect and the major predator of spider mites in the MD, NC, NJ, PA, VA and WV fruit growing areas. This predator overwinters in the same areas of the orchard groundcover as the tufted apple bud moth and moves into peach trees from mid-April through Mid-May when maximum daily temperatures exceed 68° F. Emergence from the ground cover is 90-100% complete by shucksplit. Shucksplit is the preferred timing to minimize predator toxicity.</p>					
<p><b>Almonds</b></p>	<p><b>Navel Orangeworm</b> <b>Peach Twig Borer</b> <b>Peach Twig Borer (Dormant) (CA only)</b></p>	<p>0.05-0.1</p>	<p>9.6-19.2</p>	<p>7.3-12.8</p>	<p>13.2-6.6</p>	<p>21</p>
	<p>Do not apply more than 0.2 lb. a.i. per acre per season. Do not graze livestock on treated orchard floors.</p> <p><u>Peach Twig Borer (Dormant)</u>—Make application with an EPA registered dormant oil; for specific recommendations on use of oil consult manufacturer’s label. For best performance, ground application equipment is recommended.</p>					
<p><b>Filberts</b></p>	<p><b>Filbert Worm</b> <b>Oblique Banded</b></p>	<p>0.05-0.1</p>	<p>9.6-19.2</p>	<p>7.3-12.8</p>	<p>13.2-6.6</p>	<p>21</p>

	<b>Leafroller</b>					
	<p>Make first application after emergence of filbert worm moths in early summer. Do not apply a second treatment earlier than three weeks after the first. Do not apply more than 0.2 lb. a.i. per acre per season. For dilute spray, apply 200 – 400 gals. Per acre, but do not apply more than 19.2 fl oz of ESFENVALERATE AG per acre per treatment. Do not graze livestock on treated orchard floors.</p>					
<b>Pecans</b>	<b>Pecan Weevil</b> <b>Hickory Shuckworm</b> <b>Pecan Nut Casebearer</b> <b>Pecan Aphids</b> <b>Pecan Spittlebug</b> <b>Pecan Stem Phylloxera</b> <b>Pecan Leaf Phylloxera</b>	0.025-0.075	4.8-14.5	2.0-5.8	26-9	21
	<p>Do not feed or graze livestock on treated orchard floors.            Do not apply more than .03 lbs. a.i. per acre per season. For dilute spray apply 200 – 600 gals per acre, but do not apply more than 14.5 fl. oz. of ESFENVALERATE AG per acre per treatment.            Phylloxera – Correct timing of spray applications is critical in achieving optimum control of leaf and stem phylloxera. Consult local spray recommendations for correct times of application</p>					
<b>Walnuts</b>	<b>Walnut Aphid</b> <b>Walnut Husk Fly</b> <b>Codling Moth</b> <b>Navel Orangeworm</b>	0.05-0.1	9.6-19.2	4.0	13-6	21
	<p>Do not apply more than 0.2 lb a.i. per acre per season.            For dilute sprays, apply 200 – 400 gals per acre. Do not feed or graze livestock on treated crop floors.            NOTE: Use of baits in Walnut Husk fly sprays is recommended where endorsed by local Agricultural Extension Service.            CONCENTRATE SPRAY: Apply specified dosage per acre in no less than 30 gals. Of water per acre by ground or 5 gals. of water per acre by air.</p>					

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## SPECIFIC USES – VEGETABLE CROPS

Crop	Insect	Application Rate		Acres treated per gal of ESFENVALERATE AG	Last Application (days to harvest)
		lb ai/acre	fl oz/acre		
Artichoke	Artichoke Plume Moth	0.03-0.05	5.8-9.6	22 - 13	1
	Do not apply more often than each 14 days. Apply no more than 0.15 lb. ai/acre between bud formation and harvest of an individual fruit. Apply in a minimum of 10 gallons per acre by air and 50 – 200 gallons per acre by ground (use sufficient water to obtain coverage without excessive runoff).				
Beans, Dry Peas, Dry Lentils	Mexican Bean Beetle Saltmarsh Caterpillar	0.015 – 0.03	2.9 – 5.8	44 - 22	21
	Corn Earworm Potato Leafhopper Pea Aphid Grasshoppers Leafhoppers Cowpea Curculio Cutworms Cabbage Looper Western Bean Cutworm Velvetbean Caterpillar Beet Armyworm* Cucumber Beetle Corn Rootworm (Adults) Painted Lady Butterfly (larvae) Green Cloverworm	0.03 – 0.05	5.8 – 9.6	22 - 13	
	Pea Weevil (ID, OR & WA only) Pea Leaf Weevil (ID, OR & WA only)	0-.025 – 0.05	4.8 – 9.6	26 - 13	
	Leafhoppers (except CA)	0.015 – 0.05	2.9 – 9.6	44 - 13	

	<p>Do not apply more than 0.2 lb a.i per acre per season.          Do not feed or graze livestock on treated vines.          *Aids in control.  <u>Pea Weevil &amp; Pea Leaf Weevil (ID, OR &amp; WA)</u> – Time of applicaton is critical in achieving control of pea weevil. For optimum results, apply a bloom prior to detecting adult pea weevils. Once adult pea weevil populations reach a level of 2 or more adults per 25 sweeps, control may be reduced.  <u>Leafhoppers (except CA)</u> – ESFENVALERATE AG may be tank mixed with DuPont™ BENLATE Fungicide. Follow as ESFENVALERATE AG and BENLATE label directions regarding proper usage. A “jar test” for physical compatibility should be conducted before field mixtures are made and applications initiated. Order of addition of tank mix components may affect compatibility. For best results, use of spray equipment having continuous agitation is recommended.</p>				
Beans, Snap	<p><b>Mexican Bean Beetle</b>  <b>Saltmarsh Caterpillar</b></p>	0.015 – 0.03	2.9 – 5.8	44 - 22	3
	<p><b>Potato Leafhopper</b>  <b>European Corn Borer</b>  <b>Corn Earworm</b>  <b>Cucumber Beetle (adults)</b>  <b>Flea Beetle</b>  <b>Green Cloverworm</b>  <b>Cutworm (seedling spray)</b>  <b>Grasshoppers</b>  <b>Pea Aphid</b>  <b>Leahopper</b>  <b>Cabbage Looper</b>  <b>Western Bean Cutworm</b>  <b>Velvet Bean Caterpillar</b>  <b>Beet Armyworm*</b>  <b>Cucumber Beetle</b>  <b>Corn Rootworm (adults)</b>  <b>Leafminer (Guam only)</b></p>	0.03 – 0.05	5.8 – 9.6	22 - 13	
	<p>Do not apply more than 0.2 lb ai per acre per season.          Do not allow livestock to graze treated bean fields. Do not harvest treated bean vines for livestock forage, fodder, or hay.          *Aids in control.</p>				
Broccoli, (including Chinese Broccoli) Cabbage, Cauliflower, Chinese	<b>Imported Cabbageworm</b>	0.015 – 0.03	2.9 – 5.8	44 - 22	3
	<p><b>Cabbage Looper</b>  <b>Beet Armyworm*</b>  <b>Alfalfa Looper</b>  <b>Flea Beetle</b>  <b>Grasshoppers</b>  <b>Cutworm</b></p>	0.03 – 0.05	5.8 – 9.6	22 - 13	

<b>Cabbage (Tight headed varieties only)</b>	Do not apply more than 0.4 lbs. a.i. per acre per season. *Aids in control.				
<b>Carrots</b>	<b>Aster Leafhopper Cutworms Leafhoppers</b>	0.03 – 0.05	5.8 – 9.6	22 – 13	7
	<b>Carrot Weevil*</b>	0.05	9.6	13	
	Do not apply more than 0.5 ai/acre per season. For aerial application apply in a minimum of 5 gals water per acre. *Carrot Weevil – Begin treatment when weevils become active. Thorough spray coverage of crown area is essential. Use of ground application is recommended.				
<b>Collards</b>	<b>Imported Cabbageworm Cabbage Looper Beet Armyworm* Alfalfa Looper Flea Beetle Grasshopper Cutworm</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	7
	Do not feed livestock on treated plant parts. Do not apply more than 0.2 lbs. a.i. per acre per season. For aerial application apply in a minimum of 5 gals water per acre. *Aids in control.				
<b>CUCUMBER, MELONS (Cantaloupe, Honeydew Melons, Watermelon, Muskmelon), PUMPKIN, SQUASH (Summer, Winter)</b>	<b>Pickleworm Rindworms Leafhoppers Corn Earworm Cabbage Looper Squash Bug Cutworms (seedling spray) Cucumber Beetle (adults) Grasshoppers Plant Bugs (Lygus Bugs, Stink Bugs) Squash Vine Borer</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	3
	Do not apply more than 0.25 lbs. a.i. per acre per season.				
<b>Eggplant</b>	<b>Colorado Potato Beetle Flea Beetles Corn Earworm Loopers European Corn Borer</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	7
	Apply when insects are observed or when insect damage is observed. Repeat applications at 7 to 10 day intervals to achieve control. Do not apply more than 0.35 lbs. a.i. per acre per season				
<b>Kohlrabi (TX)</b>	<b>Cabbage Looper</b>	0.03 – 0.05	5.8 - 9.6	22 - 13	3

only)	Do not apply more than 0.4 lbs. a.i. per acre per season				
Lentils	See "Beans, Dry"				
Lettuce, Head AZ, CA, CO, FL, NM & TX ONLY	Cabbage Looper Alfalfa Looper Heliothis spp. Beet Armyworm*	0.025 – 0.05	4.8 – 9.6	26 - 13	7
	Do not apply more than 0.35 lbs. a.i. per acre per season. *Aids in Control				
Mustard Greens	Cabbage Looper Imported Cabbageworm	0.05	9.6	13	7
	Do not apply more than 0.2 lbs/a.i. per acre per season.				
Peas, Dry	See "Beans, Dry"				
Peas, Green	Pea Aphid Green Cloverworm	0.015 – 0.03	2.9 – 5.8	44 - 22	3
	Cabbage Looper Celery Looper Alfalfa Looper Cutworms Armyworm Corn Earworm Imported Cabbageworm Alfalfa Caterpillar	0.03 – 0.05	5.8 – 9.6	22 - 13	
	Pea Weevil (ID, OR & WA only) Pea Leaf Weevil (ID, OR & WA only)	0.025 – 0.05	4.8 – 9.6	26 - 13	
	Do not apply more than 0.1 lb ai/acre per season. Do not feed treated pea vines to livestock. <u>Pea Weevil &amp; Pea Leaf Weevil (ID, OR &amp; WA only)</u> – Time of application is critical in achieving control of pea weevil. For optimum results, apply a bloom prior to detecting adult pea weevils. Once adult pea weevil populations reach a level of 2 or more adults per 25 sweeps, control may be reduced.				

<b>Pepper</b>	<b>European Corn Borer Beet Armyworm* Flea Beetles Corn Earworm Loopers' Colorado Potato Beetle Pepper Weevil* Cucumber Beetle (adults) Southern Armyworm</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	7
	Apply when insects are observed or when insect damage is observed. Repeat applications at 7 to 10 day intervals to achieve control. Do not apply more than 0.35 lbs. a.i. per acre per season. *Aids in control.				
<b>Potato</b>	<b>Potato Psllid Potato Tuberworm</b>	0.015 – 0.03	2.9 – 5.8	44 - 22	7
	<b>Fleabeetles Tranished Plant Bug Cabbage Looper Potato Aphid Potato Leafhopper Cucumber Beetle (adult control) Grasshoppers EuropeanCorn Borer Beet Armyworm* Western Yellow-Striped Armyworm Buckthorn Aphid Cutworms Colorado Potato Beetle</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	
	<b>Colorado Potato Beetle (Long Island, NY only)</b>	0.05	9.6	13	
	Do not apply more than 0.35 lb. a.i. per acre per season. *Aids in control.				
<b>Radishes</b>	<b>Armyworms Beetles</b>	0.03 – 0.05	5.8 – 9.6	22 – 13	7
	Do not apply more than 0.1 lb. ai/acre per season				
<b>Sweet Corn†</b>	<b>Corn Earworm Southwestern Corn Borer European Corn Borer Beet Armyworm* Flea Beetles Sap Beetles (adults) Banded Cucumber Beetle Tarnished Plant Bug</b>	0.03 – 0.05	5.8 – 9.6	22 - 13	1

	Begin applications either before or at time of silking and continue as necessary to maintain control. For protection against corn borers other than at silking time, treat when necessary to maintain control. For additional information consult directions for use under field corn. *Aids in control.				
	Stalk Borer Cutworms Corn Rootworms (adults) Grasshoppers Chinch Bugs Armyworm	0.03 – 0.05	5.8 – 9.6	22 - 13	
	Western Bean Cutworm	0.015 – 0.03	2.9 – 5.8	44 - 22	
	For additional information consult directions for use under field corn.				
	Corn Leaf Aphid Oat Bird-Cherry Aphid	0.03 – 0.05	5.8 – 9.6	22 - 13	
	For optimum results, direct the spray at the aphid population so as to achieve maximum coverage of the exposed insects. Aphids not contacted by the spray, such as in whorls and leaf axils, may not be adequately controlled.				
	†Do not apply more than 0.5 lb a.i. per acre per season				
Tomato	Tomato Hornworm Tobacco Hornworm	0.015 – 0.03	2.9 – 5.8	44 - 22	1
	Tomato Pinworm Flea Beetle Tomato Fruitworm Colorado Potato Beetle Cutworms Cabbage Looper Southern Armyworm Beet Armyworm* Western Yellow-Striped Armyworm Grasshoppers Whitefly Potato Aphid	0.03 – 0.05	5.8 – 9.6	22 - 13	
	Vegetable Leafminer**	0.05	9.6	13	
	Do not apply more than 0.5 lbs a.i. per acre per season. *Aids in control. **ESFENVALERATE AG is not recommended for use on the Vegetable Leafminer in Florida.				
Turnips (TX only)	Imported cabbageworm Armyworm Fleabeetle	0.03 – 0.05	5.8 – 9.6	22 - 13	7
	Do not apply more than 0.4 lbs a.i. per acre per season.				



## SPECIALTY USES

Crop	Insect	Application Rate		Acres treated per gal of ESFENVALERATE AG
		lb ai/acre	fl oz/acre	
NON-CROPLAND (excluding public land such as forests, parks, or recreational)	Grasshoppers Saltmarsh Caterpillar	0.015 – 0.03	2.9 – 5.8	44 - 22
	Armyworms Army Cutworms Chinch Bugs	0.03 – 0.05	5.8 – 9.6	22 - 13
	Spray non-cropland adjacent to tilled areas to control migrating insects (Grasshoppers, Armyworms) which are a threat to crops. Do not apply more than 0.5 lbs. active ingredient per acre per year. Do not feed treated crop to livestock. Refer to Spray Recommendations and Precautions when applying to areas adjacent to water.			

Crop	Insect	Application Rate		
		High Volume Spray		Low Volume Sprays (Mistblower) lb ai/acre
		lb ai/100 gal	fl oz/100 gal	
CHRISTMAS TREE PLANTINGS, CONIFER SEED ORCHARDS, FOREST TREE NURSERIES, CONIFER PLANTATIONS	Nantucket Pine Tip Moth and other Pine Tip Moths (except CA) Spittlebugs Pineleaf Chermid Redheaded Pine Sawfly Balsam Woolly Adelgid Pine Chafer Red Pine Sawfly Pine Conelet Bug European Pine Sawfly Cranberry Girdler (adult Control) Pine Needle Midge Balsam Twig Aphid Spruce budworm	0.03 – 0.05	5.8 – 9.6	0.03 – 0.05
	Spray in sufficient gallonage to obtain good coverage of entire tree			
	Pales Weevil Northern Pine Weevil	0.03 – 0.05	5.8 – 9.6	
Dilute formulation in kerosene (rather than in water), and spray tree stumps to control developing larvae. Use sufficient spray volume to cover stump thoroughly.				
	Coneworm	Application Rate		

	<b>Seedbug Seed Chalcid</b>	<b>9.6 fl oz/100 gals water for high volume sprayers. 52 fl oz/100 gals water for low volume sprayers. 0.19 lb. ai/acre application in not less than 10 gals of water for aerial applications.</b>	
<p>Apply first application within 1 week of female flower closure or peak pollen flight for Webbing Coneworm control. For other Coneworms and Seedbugs, apply first application within 30 days following female flower closure. Repeat application at intervals of 4 weeks but do not apply more than 1.6 lbs. ai per acre per year. For Seed Chalcid control, apply when all cones are pendant, and repeat at 1 – 2 week intervals for 2 or more sprays, or as needed.</p> <p>Apply approximately 5 – 10 gals of the 9.6 fl oz/100 gal dilution per tree with high volume sprayers. With low volume sprayers apply 100 gals of the 52 fl oz/100 gal dilution per acre.</p> <p>Do not graze or harvest cover crop. Refer to Spray Recommendation and Precautions when applying to areas adjacent to water.</p>			

#### STORAGE AND DISPOSAL

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

**STORAGE:** Store in a secure, dry and temperate area. Store in original container. Keep container closed when not in use. Do not store near food or feed. Do not use or store around the home. Avoid contact with water. In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations.

**PRODUCT 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 at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent), then offer for recycling or reconditioning if container reuse is permitted. If container reuse is prohibited, puncture metal containers and dispose of in a sanitary landfill, or by other approved State and local procedures. Dispose of plastic containers in a sanitary landfill, or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

“Super Tin” is a registered trademark of Griffin L.L.C.

“Ambush”, “Karate” are registered trademarks of Zeneca Ag Products

“Ammo”, “Capture”, “Fury”, “Mustang”, “Pounce” are registered trademarks of FMC Corp.

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#### LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read This 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.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control

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of Control Solutions, Inc. These risks can cause: Ineffectiveness of the product; crop injury, or; injury to no-target crops or plants.

Control Solutions, Inc. does not agree to be an insurer of these risks. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

Control Solutions, Inc. warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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Control Solutions, Inc. or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made, Buyer and all users shall promptly notify Control Solutions, Inc. or a Control Solutions, Inc. Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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