

70907-4

02-17-2004

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



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

FEB 17 2004

Mr. Edward Lignowski
Gharda USA, Inc.
c/o IPM Resources LLC
660 Newton-Yardley Road, Suite 105
Newton, PA 18940

Dear Mr. Lignowski:

Subject: Resubmission; Labeling Submitted in Response to the Chlorpyrifos IRED
Pilot 4E
EPA Reg. No. 70907-4
Pilot 15G
EPA Reg. No. 70907-5
Your Submission Dated December 2, 2003

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following change before you release the product for shipment bearing the amended labeling:

Move the prohibition, "Do not contaminate water, food or feed by storage or disposal" so that it appears **directly below** the heading Storage and Disposal.

Submit two copies of your final printed labeling before you release the product for shipment. A stamped copy is enclosed for your records. If you have any questions, please contact me at (703) 308-6249 or hebert.john@epa.gov.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John Hebert".

John Hebert
Insecticide/Rodenticide Branch
Registration Division (7505C)

c: Jane Mitchell, SRRD
Tom Myers, SRRD

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RESTRICTED USE PESTICIDE

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.



PILOT™ 4E

**Chlorpyrifos Agricultural Insecticide
Low Odor Formula**

For control of various insects infesting certain field, fruit, nut, and vegetable crops and wheat.

Active Ingredient:

Chlorpyrifos: O,O-diethyl	
O-(3,5,6-trichloro-2-pyridinyl)	
phosphorothioate.....	45.0%
inert Ingredients:	55.0%
Total	100.0%

Contains petroleum distillate
Contains 4 pounds of Chlorpyrifos per gallon.

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

FEB. 17 2004
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.

70907-4

[graphics]

See side panel for additional precautionary statements

EPA Registration No.:	70907-4
EPA Establishment No.:	44616-MO-1
Net Contents:	2.5 gallons
(9.46 liters)	

Pilot is a registered trademark of Gharda USA, Inc.

Gharda USA, Inc.
Newtown, PA 18940

PRECAUTIONARY STATEMENTS

KEEP OUT OF REACH OF CHILDREN

WARNING

AVISO

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

FIRST AID (Organophosphate Insecticide)	
If inhaled:	<ul style="list-style-type: none"> Remove person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advise.
If in eyes:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advise.
If swallowed:	<ul style="list-style-type: none"> Call poison control center or doctor immediately for treatment advise. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER (Organophosphate Insecticide)	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information call: 1-(866)-359-5660	
NOTE TO PHYSICIAN	
Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration. Note: Contains Petroleum Distillate - vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING. May Be Fatal If Swallowed. Harmful if Absorbed Through The Skin. Causes Moderate Eye And Skin Irritation. Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals.

Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are Barrier Laminate and Viton. If you want more options, follow the instructions for category G on an EPA chemical resistance category selections chart.

All mixers, loaders, other applicators and other handlers must wear:

- coveralls over long-sleeved shirt and long pants;
- chemical-resistant gloves;
- chemical-resistant apron when mixing or loading or exposed to the concentrate;
- chemical resistant footwear plus socks;
- chemical-resistant headgear for overhead exposures;
- a NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P or HE filter.

User Safety Recommendations

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

When applicators use closed equipment 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

Users should:

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

Environmental Hazards

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Cover or incorporate spills. Do not contaminate water when disposing of equipment wash water or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Physical or Chemical Hazards

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer at the end of this label.

Do not use or store near heat or open flame. Do not cut or weld container.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Directions for Use

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

Read all Directions for Use carefully before applying.

This product cannot be reformulated or repackaged into other end-use products.

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 required restricted entry interval (REI). The required REI's are:

- For all crops: 24 hours, unless specifically otherwise noted below
- Fruit trees: 4 days
 - Citrus trees: 5 days
 - Cauliflower: 3 days

Also see specific Use Directions under Approved Crops Section of this label

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 over short-sleeved shirt and short pants;
- chemical-resistant gloves made out of water proof material;
- chemical-resistant footwear plus socks;
- chemical-resistant headgear for overhead exposure.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

Storage and Disposal

Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. Storage below 20°F may result in formation of crystals. If product crystallizes, store at 50°F to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

Pesticide Disposal: Open dumping is prohibited. 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 for Refillable Containers: Replace the dry disconnect caps, if applicable, and seal all openings which have been opened during use.

Container Disposal for Non-Refillable Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

or

Triple rinse (or equivalent). Then puncture and dispose in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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

Spill Cleanup

In Case of Spill: In case of large-scale spillage regarding this product call:

CHEMTREC: 1-800-424-9300

Clean-up Procedures:

Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Keep the spill out of all sewers and open bodies of water.

General Information

Pilot 4E insecticide forms an emulsion when diluted with water and is suitable for use in all conventional spray equipment. Consult your State Experiment Station or State Extension Service for proper timing of applications.

Mixing Directions

To prepare the spray, add a portion of the required amount of water to the spray tank and with the spray tank agitator operating add the Pilot 4E. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

Pilot 4E may also be used in tank mixtures with certain herbicides and/or with non-pressure fertilizer solutions as recommended under specific crop use directions. Prepare tank mixtures in the same manner as recommended above for use of Pilot 4E alone. When tank mixtures of Pilot 4E and herbicides are involved, add wettable powders first, flowables second, and emulsifiable concentrates last. Where a fertilizer solution is involved, it is strongly recommended that a fertilizer pesticide compatibility agent such as Unite or Compex be used. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture. Do not allow spray mixtures to stand overnight.

Note: Test compatibility of the intended tank mixture before adding Pilot 4E to the spray or mix tank. Add proportionate amounts of each ingredient to a pint or quart jar, cap, shake, and let set 15

minutes. Formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used.

Sprinkler Irrigation

Pilot 4E may be applied by sprinkler irrigation for the following crop uses: alfalfa, citrus, almond and walnut orchard floors, field corn, mint, sweet corn, cotton, cranberries, sorghum, and soybeans. Do not apply this product through any type of irrigation system for crops not listed above.

Special Use Directions

The following use directions are to be followed when Pilot 4E is applied through sprinkler irrigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injector with soap and water. Determine the amount of insecticide needed to cover the desired acreage. Pump the required Pilot 4E into a steel tank, start mechanical or hydraulic agitation, and add in order the non-emulsifiable oil and/or water. Continually agitate the mixture containing Pilot 4E. Set the sprinkler system to deliver the desired inches of water per acre. Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injector system according to Step 14 in the "Special Use Precautions" Section of this label. The mixture containing Pilot 4E must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

Special Use Precautions

The following use precautions will result in a safe and successful application of mixtures containing Pilot 4E. See the use sections for the individual crops for further application information.

1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, and tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.
5. 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.
6. 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 back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. 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.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. 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.

11. 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. The metering pump must provide a greater pressure than that of the irrigation system at the point of injection. The pump must meet Section 675 for Electrically Driven or Controlled Irrigation Machines NEC 70 and must contain Viton or Teflon seals.

12. To insure uniform mixing of the insecticide into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. It is suggested that the injection point be higher than the insecticide tank to prevent siphoning.

13. The steel tank holding the insecticide mixture should be large enough to allow the system to complete a revolution with 1 filling. It should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injector pump.

14. In order to calibrate the irrigation system and injector to apply the mixture containing Pilot 4E, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes to cover the treatment area. This value equals the gallons per minute to milliliters or ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the injector pump be calibrated at least twice before operation, and the system should be monitored during operation.

15. Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application, if they irrigate non-target areas.

16. Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells, or adjoining crops.

17. Follow all Worker protection standards (WPS) and re-entry restriction on this label.

18. Do not apply through sprinkler systems which deliver a low coefficient of uniformity such as certain water drive units.

19. Do not apply within 25 feet of rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries or commercial fish ponds.

20. Applications of Pilot 4E to labeled crops growing under environmental conditions that combine high elevation, high heat, or bright sunlight may have greater potential for injury. Application techniques that may reduce possible harmful effects include: spraying later in the day when air temperatures are cooling, using higher amounts of water with the application, avoiding tank mix combinations which require the use of additional adjuvant or surfactants, and using the lower end of the rate range for a particular insect.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks, and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For ground boom applications, do not apply within 25 feet of rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries or commercial fish ponds. Apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use fine or courser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

For orchard/vineyard airblast applications, do not apply within 50 feet of rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries or commercial fish ponds. Direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3-10mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

For aerial applications, do not apply within 150 feet of rivers, natural ponds lakes, streams, reservoirs, marshes, estuaries or commercial fish ponds. The boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3-10 mph as measured by an anemometer. Use fine or courser spray according to ASAE572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

For overhead chemigation, do not apply within 25 feet of rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries or commercial fish ponds. Apply only when wind speed is 10 mph or less.

The applicator also must use all other measures necessary to control drift.

Application Precautions and Restrictions

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.

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Approved Crops

Alfalfa

Foliar Applications:

Use Pilot 4E to control the following pests at the dosages indicated by application as a broadcast, foliar spray:

Pests	Pilot 4E
corn rootworm adults (spotted cucumber beetle) grasshoppers leafhoppers	1/2 - 1 pt/acre
alfalfa blotch leafminer alfalfa caterpillar alfalfa weevil larvae and adults armyworms blue alfalfa aphid cutworms Egyptian alfalfa weevil larvae and adults pea aphid plant bugs spittlebugs spotted alfalfa aphid (suppression) (not registered for use in California)	1 - 2 pt/acre

Additional Geographical Rate Instructions: Use higher rates to control spotted alfalfa aphid in Nevada. Stubble spray may be applied to control leafhopper in the Northeast.

Mix the required dosage with enough water to ensure thorough coverage of crop foliage and apply using aerial (fixed-wing or helicopter) or power operated ground spray equipment.

Control may be reduced at low spray volumes under high temperature and wind conditions. Treat when field counts or crop injury indicates that damaging pest populations are developing or present; however, do not apply more than once per crop cutting. Some reduction in insect control may be evident under excessively cool conditions. For Egyptian alfalfa weevil control in California, apply the specified dosage in a minimum of 5 gallons of water per acre when larvae are actively feeding and populations reach 15 to 20 larvae per 180° sweep with a 15-inch diameter net.

Pilot 4E should not be tank mixed with pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination non-injurious under your current conditions of use. Some phytotoxic symptoms may be observed on young, tender, rapidly growing alfalfa when treated with Pilot 4E. Alfalfa will outgrow the symptoms and no yield loss should be expected.

Aerial Applications: For aerial application use 2 to 5 gallons of water per acre. For best coverage when using ground application, a minimum of 20 gallons of water per acre with hollow cone nozzles is recommended.

Sprinkler Irrigation: Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed foliar pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" for further information.

Note: This product is highly toxic to bees exposed to direct treatment on alfalfa. Do not apply if nearby bees are clustered outside of hives and bees are foraging. Protective information may be obtained from your Agricultural Extension Service.

Restrictions: Do not cut or graze treated alfalfa within 7 days after application of 1/2 pint of Pilot 4E per acre, within 14 days after application of 1 pint per acre, or within 21 days after application of rates above 1 pint per acre. Do not make more than 4 applications per year or apply more than once per crop cutting.

Asparagus

Use Pilot 4E to control cutworms, asparagus aphids, and asparagus beetles by application at the rate of 2 pints per acre. Mix the specified dosage in sufficient water to ensure thorough coverage of treated plants and apply as a broadcast, foliar spray. For cutworms, it is preferable to apply Pilot 4E when the soil is moist and worms are active on or near the soil surface. Applications may be made during the fern stage for control of asparagus beetles and asparagus aphids when field counts or crop injury indicates that damaging pest populations are developing or present.

Restrictions: Do not make more than 1 preharvest application per season or apply within 1 day of harvest. Do not make more than 2 postharvest applications during the fern stage. Based on available residue data, the use of Pilot 4E on asparagus is limited to the Midwest and Pacific Northwest.

Christmas Trees (Nurseries and Plantations)

Use Pilot 4E at the rate indicated to control the following insects on the tree varieties listed.

Do not allow livestock to graze in treated areas.

Nurseries and Plantation Crops

Tree Variety	Insects Controlled	Dosage Pilot 4E	Remarks
balsam fir blue spruce concolor fir Douglas fir eastern white pine Fraser fir grand fir noble fir Scotch pine white spruce	ants aphids adelgids (cooley, (Eastern spruce gal) European pine sawfly European pine shoot moth grasshoppers gypsy moth mites ¹ (European red spider, two spotted spider) [except in WA or OR] pales weevil (adult) pine needle midge Douglas fir needle midge pine spittlebug plant bugs spittlebugs spruce budworm spruce needle-miner scale ² (pine needle) (pine tortoise) (spruce bud) (black Pine) (striped pine)	1 qt/acre	Do not treat plants under extreme heat and drought stress. Apply to foliage in sufficient water to ensure adequate coverage. ¹ For effective control of adult spider mites if large numbers of eggs are present, apply a second spray 7 to 10 days after initial treatment to control newly hatched nymphs. ² For scale control apply when scale crawlers are active.
	pales weevil (Beetle)	3 qt/100 gal	Apply as a cut stump drench.

Citrus Fruits

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days unless Personal Protective Equipment (PPE) required for early entry is worn.

Use Pilot 4E at the rates indicated according to the designated geographic area and pest. Use the lower rates for light infestations and increase the dosage for heavier infestations.

Petroleum spray oil recommended for use on citrus trees may be added to dilute spray mixtures only at a rate of up to 1.8 gallons per 100 gallons of water to improve control of aphids, mealybugs, scale insects, and thrips. Treat when insects become a problem or in accordance with the local spray schedule recommended by your State Extension Service Specialist.

Approved Applications for Citrus by Geographical Area

Geographic Location	Pest	Dosage of Pilot 4E (pt/acre)	Spray Volume (gal/acre)
California Arizona (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	aphids katydid Lepidopterous larvae Avocado leafroller cutworms Fruit tree leafroller Orange tortrix Western tussock moth	2 - 8	ground: 100-750 aerial: Min. of 15
California Arizona (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	thrips (suppression) mealybugs	6 - 8	100-750
California Arizona (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	Scale insects black scale brown scale	4 - 8	100-2400
California* (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	Scale California red scale	8 - 12	100-2400

Remarks: Do not use a spray concentration of Pilot 4E of less than 1/2 pt/100 gal of total volume.

Additional Precautions for California and Arizona:

* Maximum of 8 pints per acre except in Fresno, Tulare, Kern, Kings and Madera Counties, in California, where it may be applied at 12 pints per acre for control of red scale by ground application. Pilot 4E should not be used in combination with spray oil when temperatures are expected to exceed 95°F the day of application or for several consecutive days thereafter. Do not apply during the months of December, January or February.

Florida (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	aphids brown citrus aphid grasshoppers* orange dogs mealybugs scale insects snow scale Florida red scale purple scale long scale chaff scale black scale brown soft scale	2 - 8	ground: 100-1400 aerial: Min. of 20
Remarks: Do not use a spray concentration of Pilot 4E of less than 1/2 pt/100 gal of water per acre.			
	citrus rust mites	4 - 8	100-700
Remarks: Do not use a spray concentration of Pilot 4E of less than 1 pt/100 gal of water per acre.			
* Lubber grasshoppers must be controlled when they are small (less than 1 inch in length) by direct contact spray.			
Texas (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	aphids brown citrus aphid cutworms katydids mealybugs scale insects brown soft scale California red scale chaff scale	4 - 8	200-700
Texas (Grapefruit, Lemons, Oranges and Other Citrus Fruit)	citrus rust mites (suppression)	4 - 8	200-700
Remarks: Do not use less than 1/2 pt of Pilot 4E per 100 gallons of water in dilute applications.			
Crop: Small Transplanted Grapefruit, Orange and Other Citrus Trees			
Texas (Small Transplanted Grapefruit, Orange and Other Citrus Trees)	aphids brown citrus aphid cutworms katydids mealybugs scale insects brown soft scale California red scale chaff scale	Max. of 8	
Remarks: Apply Pilot 4E at a rate of 1 fl oz/1 gal of water with a backpack sprayer. Apply to runoff.			

Pilot 4E may be tank mixed with ethion, dicofol, Agri-Mex, or Vendex. See "Mixing Directions" under the General Information Section. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for the other products used in combination with Pilot 4E.

Precautions: Observe local use directions for tank mix combinations especially in regard to applications of Pilot 4E plus spray oil. Consult with a County Farm Advisor, County Agent, Extension Service Personnel, Agricultural Commissioner, or Pest Control Advisor for such information regarding a given locality.

Do not apply when trees are stressed by drought or high temperatures.

Pilot 4E should not be tank mixed with Difolatan 80, as crop injury may occur.

Restrictions: Do not apply more than 2 applications or more than 16 pints of Pilot 4E per acre per year (see additional application rate recommendations for specific California Counties). Do not make second foliar application within 30 days of the first application. Do not treat within 21 days of harvest for applications of up to 8 pints of Pilot 4E per acre or within 35 days for application of rates above 8 pints per acre. Do not do any work involving contact with trees within 4 days after treatment. Do not allow livestock to graze in treated areas.

Citrus Orchard Floors

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days unless Personal Protective Equipment (PPE) required for early entry is worn.

Imported Fire Ants and other Ant Species

Use Pilot 4E to control red imported fire ants and other ant species by applying the specified dose in 25 or more gallons of water with ground application equipment that will uniformly apply the spray to the orchard floor. To control foraging ants and suppress mounds, apply Pilot 4E to the orchard floor at the rate of 3/4 to 1 quart per acre. Re-treat as needed. For best insect control, uniform coverage of the orchard floor is necessary. Do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor. Do not apply in tank mixtures with Evik herbicide. Foliar applications of Pilot 4E may be made in addition to the orchard floor treatments.

Pilot 4E may also be applied to citrus orchard floors through sprinkler irrigation systems only if the system uniformly covers the soil surface at the base of the tree. For best results, use the recommended amount of Pilot 4E per acre. See "Sprinkler Irrigation" under the General Information Section for further information.

Application With Dry Bulk Fertilizer: For impregnating Pilot 4E on dry fertilizers, use a closed rotary drum mixer equipped with suitable spraying equipment. The spray nozzle should be positioned inside the mixer to provide uniform spray coverage of the tumbling fertilizer. Apply Pilot 4E at the rate of 1 1/2 to 2 pints per acre to control ants in citrus orchard floors. The maximum concentration of Pilot 4E to be added is 2 pints per 200 pounds of fertilizer. At the higher concentration of Pilot 4E, the fertilizer may not readily absorb all of the liquid. For a suitable free-floating mixture, an absorptive powder such as Micro-Cel E should be added separately and uniformly to the fertilizer blend following addition of Pilot 4E. Bulk fertilizers impregnated with Pilot 4E should be applied immediately, not stored.

All bulk containers should be tightly covered while the products are being transported and applied to reduce the chance of loss of Pilot 4E via volatilization. Foliar applications of Pilot 4E may be made in addition to the orchard floor treatments.

Compliance with any and all federal and state laws and regulations relating to the Pilot 4E and fertilizer mixture is the responsibility of the person offering such mixture for sale or distribution.

Restrictions: Do not apply more than 10 quarts of Pilot 4E per acre per season. Do not apply last treatment within 21 days before harvest for seasonal rates of more than 3 quarts per acre of Pilot 4E or 14 days before harvest for seasonal rates of 3 quarts per acre or less of Pilot 4E. Do not allow livestock to graze in treated areas. In Florida, do not apply more than 3 quarts per season.

Cranberries

Use Pilot 4E by application as a broadcast, foliar spray to control brown spanworm, cranberry fruitworm, cranberry weevil, cutworms, fireworms, and Sparganothis fruitworms at the rate of 3 pints per acre. Mix the specified dosage in enough water to ensure thorough coverage and apply no less than 5 gallons of spray per acre when using ground equipment. For weevil control, apply once at flower bud development (late May, early June) and, if weevils are present, once after 100% bloom (early to mid July). For other insects, treat when field counts indicate damaging insect populations are developing or present. Apply only after the winter flood has been removed. To avoid pesticide contamination of floodwaters, make no applications while bogs are flooded.

Pilot 4E may also be applied through sprinkler irrigation systems to control the above listed pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" under the General Information Section for further information.

Restrictions: Do not make more than 2 applications per year or apply within 60 days before harvest.

Field Corn, Sweet Corn (Including Corn Grown For Seed)

For use to control cutworms, armyworms, corn earworm, corn rootworm adults, chinch bugs, grasshoppers, wireworms, flea beetle larvae and adults, aphids, billbugs, grubs, western bean cutworm, corn borers, symphylans, common stalk borer, and lesser cornstalk borer.

Preplant Incorporation Treatment

Use Pilot 4E at the following rates by application in sufficient water to the soil surface and incorporate into the soil:

Pests	Pilot 4E
cutworms symphylans	2 pt/acre

Use recommended rate in not less than 10 gallons of water per acre and apply as a broadcast spray to the soil surface using suitable power operated ground spray equipment. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of soil using a disc, field cultivator, or equivalent equipment.

Pilot 4E may also be applied in tank mixtures with non-pressure fertilizer solutions and/or with Bladex®, Eradicane®, Sutan, Lasso®, Dual®, and atrazine herbicides. See "Mixing Directions" under the General Information Section. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for the other products used in combination with Pilot 4E.

Preplant, At-Plant, or Preemergence Treatment in Conservation Tillage

Use Pilot 4E at the following rate by application in sufficient water to surface trash and exposed soil:

Pests	Pilot 4E
cutworms armyworms	1 - 2 pt/acre

Use recommended rate in not less than 20 gallons of water per acre and apply as a broadcast spray using suitable power operated ground spray equipment. Use higher rates for residual control.

Pilot 4E may also be applied in tank mixtures with non-pressure fertilizer solutions and/or with paraquat and Roundup herbicide. See "Mixing Directions" under the General Information Section. Read and carefully follow all applicable directions, restrictions, and precautions, on labeling for the other products used in combination with Pilot 4E.

T-Band At Plant Treatment

Pilot 4E insecticide may be applied as a liquid T-Band in fields with no more than 30 percent cover of crop residue remaining on the soil surface. Apply Pilot 4E as a liquid T-Band over an open seed furrow and incorporate into the top one-inch of soil using tines, chains or other suitable equipment. Position a flat fan nozzle behind the planter shoe, in front of the press wheel adjusted to provide a 5 to 6 inch bandwidth centered over the row. Apply Pilot 4E at a rate of 2.4 fluid ounces per 1,000 linear feet of row (2 pints per acre with 40 inch row spacing) in a minimum spray volume of 5 gallons per acre.

If row spacing is less than 40 inches, the rate of Pilot 4E must be adjusted so that no more than 2 pints per acre is applied. For example, for 30-inch rows, apply Pilot 4E at a rate of 1.8 fluid ounces per 1000 linear feet of row (2 pints per acre).

Cultivation Time Treatment

Use Pilot 4E at the rate of 2 pints per acre to control corn rootworm larvae. Apply Pilot 4E as a water emulsion on both sides of the row at the base of the plants just ahead of the cultivator shovels. Cover the insecticide with soil around the brace roots. The best time to apply a basal treatment of a soil insecticide with cultivation is near the beginning of egg hatch. A cultivation application of Pilot 4E may be made in addition to an at planting application of Pilot 15G insecticide.

Postemergence Treatment

Use Pilot 4E at the following rate by application in sufficient water to ensure thorough coverage of treated plants:

Pests	Pilot 4E
grasshoppers	1/2 - 1 pt/acre
armyworms chinch bugs aphids corn rootworm adults cutworms southern corn leaf beetle webworms western bean cutworm European corn borer (see note)	1 - 2 pt/acre
southwestern corn borer corn earworm	1 1/2 - 2 pt/acre
billbugs lesser cornstalk borer flea beetle adults common stalk borer	2 pt/acre

Note: The recommended dosage will control silk clipping by corn rootworm adults. For European corn borer control, use 1 1/2 to 2 pints per acre when application is made with power-operated ground and aerial equipment and 1 to 2 pints per acre when application is made through a sprinkler irrigation system. See text below for generation specific treatment information.

Treat when field counts indicate that pests are or may become a problem. For best billbug, chinch bug, and flea beetle control, apply with sufficient water to ensure a minimum spray volume of 20 to 40 gallons per acre and 40 psi using ground spray equipment. On corn less than 6 inches tall, apply the insecticide spray in a 9 to 12 inch wide band over the row. On corn greater than 6 inches tall, apply the insecticide spray using drop nozzles directed to the base of the plant. Do not reduce the dosage for banded or directed applications. Concentrate the full labeled dosage rate in the treated zone. When

chinch bugs continue to immigrate to corn over a prolonged period or under extreme pressure, a second application of Pilot 4E may be needed.

For cutworm, webworm, western bean cutworm, armyworm, aphid, European and southwestern corn borer, grasshopper, lesser cornstalk borer, corn rootworm adult, corn earworm, and common stalk borer control, apply as a broadcast spray using either aerial (fixed-wing or helicopter) or power operated ground spray equipment. For aerial application use 2 to 5 gallons of spray per acre. Control may be reduced at low spray volumes under high temperature and wind conditions. For cutworms, it is preferable to apply Pilot 4E when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy, or crusty at time of treatment, worms may be protected from the spray and effectiveness will be reduced. If such conditions exist, shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment may improve control. Apply as needed to maintain control. Use higher rates for larger worms or when heavy cutworm infestations are expected or present. Fields should be monitored for cutworm presence or damage. A second application may be required if damage of density levels exceed economic thresholds established for your area. Consult your Agricultural Experiment Station or Extension Service Specialist for additional information concerning control practices in your area. For webworm control, shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment is necessary. For first-generation European corn borer control, treat when 25% to 50% of the corn plants show pinhole feeding or leaf-feeding scars. For maximum control potential, ground applications of Pilot 4E should be directed into the corn leaf whorls. Scout fields within 5 days after application to determine if a second application is needed. University research indicates that achieving greater than 50% control of first-generation European borer with a single liquid insecticide treatment is highly dependent on timing, insecticide placement, and weather conditions. Treatment for control of second-generation European corn borer should be applied when field counts of egg masses indicate an infestation is present or about to develop. For southwestern corn borer control, treat when field counts of egg masses indicate pests are or may become a problem. A second application may be applied 10 to 14 days later, if needed due to reinfestation. For common stalk borer control, treat approximately 11 days after application of Roundup herbicide or after complete burn down with paraquat herbicide (3 to 5 days). Do not use Pilot 4E in combination with the burn down herbicide for control of common stalk borer.

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed foliar insects. For best results, use the recommended rate of Pilot 4E in a tank mix with 2 pints per acre of non-emulsifiable oil. Maintain vigorous tank agitation to assure uniformity of the Pilot 4E plus oil mixture throughout the injection period. Pilot 4E may also be applied through sprinkler irrigation systems at the rate of 2 pints per acre to control corn rootworm larvae. Time application to coincide with the appearance of the second instar larvae. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. Apply with enough water to wet the root zone to the depth control is needed. Under saturated soil conditions, allow enough soil drying to occur so that an application using a minimum water rate will not produce runoff. Consult university extension personnel or other experienced consultants to determine the need to treat and to aid in application timing. See "Sprinkler Irrigation" under the General Information Section for further information.

Restrictions: Do not apply within 35 days before harvest of grain. Do not apply more than 3 applications or a total of 6 pints of Pilot 4E per acre per season. Do not allow livestock to graze in treated areas nor harvest treated corn silage as feed for meat or dairy animals within 14 days after last treatment. Do not feed treated corn fodder to meat or dairy animals within 35 days after last treatment.

Sweet Corn Grown Only in Florida and Georgia

Use Pilot 4E to control infestations of beet armyworm, fall armyworm, and corn earworm by application as a broadcast, foliar spray at the rate of 1 to 2 pints per acre. Mix the specified dosage in enough water to ensure thorough coverage and apply using suitable aerial or ground spray equipment. For aerial application, use at least 2 gallons of spray per acre. Treat when field counts indicate damaging pest populations are developing or present. Re-treat as necessary to maintain control but do not apply more than 3 applications per season.

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed foliar insects. For best results, use the recommended rate of Pilot 4E in a tank mix with 2 pints per acre of non-emulsifiable oil. Maintain vigorous tank agitation to assure uniformity of the Pilot 4E plus oil mixture throughout the injection period. See "Sprinkler Irrigation" under the General Information Section for further information.

Restrictions: Do not apply more than 3 applications or a total of 6 pints of Pilot 4E per acre per season. Do not harvest corn ears, allow livestock to graze in treated areas, or feed treated silage, fodder, or grain to meat or dairy animals within 21 days after treatment. Do not use in conjunction with post-plant broadcast, foliar applications of Pilot 4E.

Cotton

Use Pilot 4E for control of the following pests in all states except Arizona and California at the dosages indicated:

Pests	Pilot 4E
cotton fleahopper plant bugs (<i>Lygus</i> , <i>Mirids</i>)	3/8 - 1 pt/acre
fall armyworm grasshoppers thrips yellowstriped armyworm	1/2 - 1 pt/acre
cotton aphid	1/2 - 2 pt/acre
spider mites	1 pt/acre
beet armyworm cotton bollworm tobacco budworm cutworms pink bollworm salt marsh caterpillar	1 1/2 - 2 pt/acre

Note: The recommended dosage rate of 3/8 pint per acre will not achieve the high degree of control of the higher label rate, but will minimize the damage done by plant bugs and cotton fleahopper and allow the beneficial insects to survive, build up, and be available to aid in the control of bollworms infesting cotton. Use a higher dosage within the indicated rate range.

Use Pilot 4E for control cotton pests in Arizona and California at the dosages indicated:

Cotton (California and Arizona)

Pests	Pilot 4E
armyworms cotton aphid cotton fleahopper <i>Lygus</i> salt marsh caterpillar silverleaf whitefly ¹ thrips	1 - 2 pt/acre

cotton bollworm cotton leaf perforator (suppression) tobacco budworm boll weevil cutworms pink bollworm spider mites (suppression)	2 pt/acre
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¹ For control of silverleaf whitefly, apply in tank mix combination with the recommended rate of a pyrethroid insecticide labeled for control or suppression of whitefly. Do not apply more than 3 applications per season.

Mix the required dosage with sufficient water to ensure thorough coverage of plants and apply using aerial or power operated ground spray equipment. For aerial application, use at least 1 gallon of spray per acre. Treat when field counts indicate damaging insect populations are developing or present. Re-treat as necessary to maintain control but do not apply more than 3 applications per season.

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed foliar pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" under the General Information Section for further information.

For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days after initial treatment to control newly hatched nymphs.

For best results on bollworms and budworms, it is suggested that fields be scouted twice per week and treatments made when worms are 1/4 inch or less in length. The following table illustrates the size of worms in relation to age and stage of development (instar) as a guide to timing of treatments for best control.

From the table it can be seen that a scouting schedule of only once per week will not be satisfactory since the worms may be too big to control effectively by the seventh or eighth day.

Timing for the Best Worm Control

	Age (Days)	Average Size	Instar
Get the worms at this stage	Hatch	1/16"	Hatch
	3	3/32"	I
	5	9/32"	II
	6	7/16"	III
	8	11/16"	IV

1/16" = --
 3/32" = --- [actual size pictures to be inserted]
 9/32" = ----
 7/16" = -----
 11/16" = ----- (approximately the size of a dime)

Proper application techniques help to ensure thorough spray coverage and correct dosage and are thus important in obtaining good control of pests. Consider these suggestions when applying Pilot 4E on cotton.

Aerial Application

Shorten boom length to avoid spray entering the vortices at the wing tips. Swath width should be reduced when wind direction is the same as direction of spraying.

The proper nozzle arrangement and swath width to avoid skips and vortices effect can be checked out by flying over a paper tape (adding machine paper) using water with or without soluble dye. (The dye gives a permanent record.)

Flying at a height of 5 to 15 feet above the target results in the best coverage.

Nozzle orientation of the boom is important. More break-up occurs when nozzles are pointed straight down versus the straight back position. Desired droplet size (100 to 200 microns) can be obtained by angling the nozzles somewhere in this range.

Marking of swath by flagging or permanent markers is essential.

Ground Application

Orient the boom and nozzles so that uniform coverage is obtained. The swath width should not be wider than the boom; drift spray is wasted spray so do not depend on it. Use flat fan or disc-core hollow cone nozzles with maximum spacing of 20 inches and a spray pressure of 40 to 60 psi with a droplet size of 100 to 200 microns.

Gin trash Treatment (Mississippi only)

Apply Pilot 4E at a rate of 2 pints per 20 tons of gin trash.

Restrictions

Do not apply within 14 days before harvest or make more than 3 applications per season. Do not allow livestock to graze in treated areas. Do not feed gin trash or treated forage to livestock.

Figs

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days unless Personal Protective Equipment (PPE) required for early entry is worn.

Use Pilot 4E at the rate of 2 quarts per acre for control of dried fruit beetle by application in sufficient water to the soil surface followed by incorporation into the top 3 inches of soil. Apply to fig orchard soil as a dormant application in late winter prior to beetle emergence and prior to leaf formation.

Restrictions: Make only 1 application per year. Do not apply within 7 months of harvest. Based on available residue data, use of Pilot 4E on figs is restricted to California.

Grapes

Use Pilot 4E for control of grape root borer by application just before the pest emerges from the soil. Mix 4 1/2 pints (2.25 lb a.i./A) of Pilot 4E with 100 gallons of water and apply 2 quarts of the diluted spray mixture to the soil surface on a 15-square foot area around the base of each vine. Do not allow spray to contact fruit or foliage.

Restrictions: Do not make more than 1 application per season or apply within 35 days before harvest. Based upon available residue data, the use of Pilot 4E in grapes is restricted to states east of the Rocky Mountains.

Mint (Peppermint)

Use Pilot 4E by application as a broadcast, foliar spray to control cutworms at the rate of 2 to 4 pints per acre and mint root borer at the rate of 4 pints per acre. Mix the specified dosage in water to give no less than 10 gallons of spray per acre and apply using ground spray equipment. For cutworm control, treat during May and June when field counts indicate damaging insect populations are developing or present. When larvae are less than 3/4 inch in length, use the 2 pint rate. When larvae are 3/4 inch or more in length, use the higher rate. **Make only 1 application during the growing season. Do not apply within 90 days before harvest.** For mint root borer control, apply postharvest when field counts indicate damaging insect populations are developing or present. Follow treatment with approximately 1 acre-inch of sprinkler irrigation immediately after application to incorporate the insecticide into the soil. **Make only 1 postharvest application per season.**

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed pests. For best results, use the recommended rate of Pilot 4E per

acre. Maintain vigorous tank agitation to ensure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" under the **General Information** Section for further information.

Restrictions: Make only 1 application per year.

Onions (Dry Bulb)

Use Pilot 4E to control onion maggot by application as an in-furrow drench. Apply Pilot 4E at the rate of 1.1 fluid ounce (0.035 lb a.i./A) per 1,000 linear feet of row at 18-inch row spacing. Use a minimum of 40 gallons of total drench per acre. Incorporate to a depth of 1 to 2 inches.

Restrictions: Do not make more than 1 application per year.

Peanuts

For suppression of wireworms, apply Pilot 4E at a rate of 4 pints per acre as a preplant broadcast spray to the soil surface followed by immediate soil incorporation to a depth of 3 to 4 inches. Use a minimum of 10 gallons of total spray per acre.

Restrictions: The combined total of preplant and post-plant applications of Pilot 4E and Pilot 15G must not exceed 4 pounds active ingredient per acre per season. Do not make more than 1 application per season. Do not harvest within 21 days after treatment. Do not feed treated peanut forage or hay to meat or dairy animals. Do not apply aerially.

Sorghum - Grain Sorghum (Milo)

Use Pilot 4E insecticide for control of the following pests at the dosages indicated:

Pests	Pilot 4E	Specific Directions
sorghum midge	1/2 pt/acre	Apply when 30% to 50% of the seed heads are in bloom. Repeat at 3-day intervals if necessary.
grasshoppers yellow sugar cane aphid and other aphids	1/2 - 1 pt/acre	
greenbug	1/2 - 2 pt/acre	For infestations of greenbug that are difficult to control, use a higher dose within the indicated dose range.

chinch bugs lesser cornstalk borer	1 - 2 pt/acre	Apply as a directed spray toward the base of the plant using power-operated ground spray equipment with sufficient water to ensure coverage of an 8-12 inch band centered in the row. On plants less than 6 inches high, apply a 8-12 inch band over the row. Do not reduce the dosage for banded or directed applications. Concentrate the full-labeled dosage rate in the treated zone.
webworms	1 pt/acre	
armyworms cutworms	1 - 2 pt/acre	
European and southwestern corn borer	1 1/2 - 2 pt/acre	
corn earworm	2 pt/acre	

Mix the specified dosage in enough water to ensure thorough coverage and apply using suitable aerial or ground spray equipment.

To minimize chemical injury, do not apply Pilot 4E to drought stressed grain sorghum within 3 days following irrigation or rain except where the product is applied in irrigation water.

Pilot 4E may also be applied through sprinkler irrigation systems as a post emergence broadcast application to control the above listed foliar pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" under the **General Information** Section of this label.

Precaution: Be aware that sorghum lines used in seed production fields may be more sensitive to chemical injury. Susceptible inbred lines or hybrids are likely to be at greater risk of yield-reducing chemical injury when sprayed at the higher rates of application. Do not apply more than 1 pint per acre of Pilot 4E to seed sorghum if the additional risk of crop injury is unacceptable.

Restrictions: The treated crop is not to be used for grain, forage, fodder, hay or silage within 30 days after application of 1 pint of Pilot 4E per acre or within 60 days after application of rates greater than 1 pint per acre. Do not treat sweet varieties of sorghum. Do not apply more than 3 applications or a total of 3 pints of Pilot 4E per acre per season.

Soybeans

For use to control armyworms, bean leaf beetle, corn earworm, cutworms, European corn borer, grasshoppers, green cloverworm, lesser cornstalk borer, Mexican bean beetle, saltmarsh caterpillar and other woollybears, southern green stink bug, spider mites, and velvetbean caterpillar.

Soil Treatment

Use Pilot 4E at the rate of 1 to 2 pints per acre to control cutworms and lesser cornstalk borer. Mix the specified dosage in a minimum of 10 gallons of spray per acre and apply to the soil surface using suitable ground spray equipment. Equivalent rates of insecticide

spray required per 100 feet of row for various row spacing are given in the accompanying table. For at-plant treatments apply the insecticide over the row in a 4 to 6 inch band in front of the planter shoe or press wheel or after the press wheel followed by a drag chain for light incorporation. Do not apply as an in-furrow treatment. For postemergence rescue treatments, apply as a directed spray in a 9 to 12 inch band at the base of the plant. To plants less than 6 inches high apply over the top in a 6 to 12 inch band. Treat when field counts or conditions indicate that pests are or may become a problem.

Volume of Spray per Acre	Fluid Ounces of Spray Required Per 100 Feet of Row for various Row Spacings			
	36"	32"	28"	24"
10 gallons	8.8	7.9	6.9	5.9
15 gallons	13.2	11.8	10.3	8.8
20 gallons	17.6	15.7	13.7	11.8

Foliar Treatment

Use Pilot 4E at the following rate by application in sufficient water to ensure thorough coverage of treated plants:

Pests	Pilot 4E
European corn borer southern green stink bug	2 pt/acre
bean leaf beetle cutworms corn earworm saltmarsh caterpillar and other woolly bears	1 - 2 pt/acre
Mexican bean beetle armyworms	1 - 1 1/2 pt/acre
velvetbean caterpillar grasshoppers green cloverworm spider mites	1/2 - 1 pt/acre

Apply as a broadcast spray using either aerial or ground equipment when field counts indicate damaging insect populations are developing or present; re-treat as necessary to maintain control. For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days after initial treatment to control newly hatched nymphs. **On determinate soybeans do not apply more than 1 application after pod set.**

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the above listed foliar pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assure uniformity of the application throughout the injection period. See "Sprinkler Irrigation" on page (to be assigned) for further information.

Restrictions: Do not apply more than 6 pints of Pilot 4E per acre or 3 pounds of chlorpyrifos (active ingredient) per acre per season, or make more than 3 applications per season. Do not apply last treatment within 28 days before harvest nor apply last 2 treatments closer than 14 days apart. Do not allow livestock to graze in treated areas or otherwise feed treated soybean forage, hay, and straw to meat or dairy animals.

Strawberries

Use Pilot 4E by application as a broadcast foliar spray to control strawberry bud weevil at the rate of 1 quart per acre. Apply in a minimum of 40 gallons of spray per acre when buds first appear and

10 to 14 days later. Do not apply after berries start to form or when berries are present. Pilot 4E should not be tank mixed with pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination non-injurious under your current conditions of use. Phytotoxicity may occur when Pilot 4E is applied to strawberries experiencing high temperature and drought stress.

Restrictions: For pre-bloom use only. Do not make more than 2 applications per season or apply within 21 days before harvest.

Sugar Beets

Soil Treatment (At Planting or Preplant Incorporated)

To reduce feeding damage from early season insects such as cutworms, use Pilot 4E at planting or as a preplant treatment and incorporate to a depth of 1 to 2 inches. Do not apply as an in-furrow treatment. Apply 1 pint of Pilot 4E per planted acre to a 10-inch wide band centered on the row for furrows 30 inches apart. (For rows 30 inches apart, this is equivalent to 9.2 fluid ounces of Pilot 4E per 10,000 feet of row). For other row widths, adjust the spray volume per planted acre in proportion to the area actually treated.

Postemergence Treatment

Apply Pilot 4E as a broadcast or banded foliar spray. Treat when field counts indicate that damaging insect populations are developing or present. Do not make more than 3 applications per season.

Broadcast Application: Apply the specified dosage in water using 2 to 5 gallons of finished spray per acre when using aerial spray equipment or 10 to 30 gallons per acre when using ground spray equipment.

Broadcast Application Through Sprinkler Irrigation Systems

Pilot 4E may also be applied through sprinkler irrigation systems as a postemergence broadcast application to control the foliar pests. For best results, use the recommended rate of Pilot 4E per acre. Maintain vigorous tank agitation to assume uniformity of the application through the injection period. See "Sprinkler Irrigation" under the General Information Section for further information.

Band Application: Apply the specified dosage within the band using a minimum of 6 1/2 gallons of finished spray per acre. Apply the spray in a 5 to 7 inch wide band over the row. Do not reduce the dosage for band applications. Concentrate the full-labeled dosage rate in the treated zone. For best results, band-applied treatments should be lightly incorporated either mechanically or with irrigation.

Use Pilot 4E at the rates indicated to control the listed pests.

cutworms flea beetle adults	2 pt/acre	1 1/3 pt/acre	
sugar beet maggots adult ¹	1/2 - 1 pt/acre	-	To target adults present at the time of application based on local field trap monitoring, apply anytime from 7 days before until 3 days after peak adult emergence.
sugar beet root maggot larvae ¹	2 pt/acre	2/3 - 1 1/3 pt/acre	Use as supplemental treatment following an at-plant insecticide treatment for control of root maggot. Application timing should be based on local field trap monitoring. Apply anytime from 7 days before until 3 days after peak adult emergence.
sugar beet root maggot larvae ¹	-	1 1/3 - 2 pt/acre	Use as primary treatment to control root maggot. Application timing should be based on local field trap monitoring. Apply anytime from 7 days before until 3 days after peak adult emergence.

¹ To prevent potential development of insecticide resistance in sugar beet root maggot, producers are encouraged to take the following steps: 1) avoid applying more than 2 applications of Pilot 4E per season when adults are active; 2) if an organophosphate insecticide was applied at planting, make no more than 1 postemergence application of Pilot 4E when adults are active.

Restrictions: Do not apply within 30 days of harvest of beet roots and tops. Do not apply more than a total of 6 pints per acre of Pilot 4E on a broadcast basis per season, or make more than 3 applications per season. Do not allow livestock to graze in treated areas or harvest treated beet tops as feed for meat or dairy animals within 30 days of last treatment.

Sunflowers

For use to control cutworms, sunflower beetle larvae and adults, stem weevil, sunflower moth, woolly bears, seed weevil, and grasshoppers.

Pests	Pilot 4E		Timing/Special Directions
	Broadcast	Band	
grasshoppers	1/2 - 1 pt/acre	-	Low rate will control small nymphs (1st through 3rd instar)
spider mites	1 pt/acre	2/3 pt/acre	
fall armyworm yellowstriped armyworm webworms	1 - 2 pt/acre	2/3 - 1 1/3 pt/acre	
beet armyworm	1 1/2 - 2 pt/acre	1 - 1 1/3 pt/acre	

Preplant Incorporation Treatment

Use Pilot 4E at the following rates by application in sufficient water to the soil surface and incorporate into the soil:

Pests	Pilot 4E
cutworms	2 - 4 pt/acre

Use recommended rate in not less than 10 gallons of water per acre and apply as a broadcast spray to the soil surface using suitable power operated ground spray equipment. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of soil using a disc, field cultivator, or equivalent equipment.

Restrictions: Do not apply more than one application per season. Do not harvest within 42 days of application. Grazing of meat or dairy animals in treated orchards is prohibited.

Postemergence Treatment

Use Pilot 4E for control of the following pests at the dosage indicated by application in sufficient water to ensure thorough coverage of treated plants:

Pests	Pilot 4E
cutworms	1 1/2 pt/acre
sunflower beetle larvae and adults	
stem weevil	
sunflower moth	
banded sunflower moth	
woolly bears	
seed weevil	1 pt/acre
grasshoppers	
Tarnished plant (Liquis) bugs	1 - 1 1/2 pt/acre

Apply as a broadcast spray using either aerial (fixed-wing or helicopter) or power-operated ground spray equipment when field counts indicate that pests are or may become a problem. For cutworm control, a second treatment may be made 7 to 10 days later, if needed. For stem weevil control, optimal treatment time is within 5 to 7 days after adult weevils begin to appear. For sunflower moth control, make first application during early 1% to 5% bloom stage. A second treatment may be made 7 days later, if needed. For seed weevil control, treat when field counts indicate there are 10 to 12 adults per plant for oil crops and 1 to 3 adults per plant on confectionery crops. Additional treatments should be made at successive 7 to 10 day intervals if field counts indicate need to re-treat. For sunflower beetle larvae or adult control, treat when field counts indicate there are 10 larvae or 1 to 2 adults per seedling. Additional treatments may be made at successive 7-to-10-day intervals if field counts indicate need to re-treat.

Restrictions: Do not apply more than 3 applications or a total of 6 pints of Pilot 4E per acre per season. Do not apply within 42 days before harvest. Do not allow livestock to graze in treated areas.

Sweet Potatoes

Use Pilot 4E to reduce the feeding damage caused by populations of *Conderus* wireworm, *Systema* flea beetle, and the sweet potato flea beetle. Apply at the rate of 4 pints per acre as a broadcast (overall) spray to the soil surface followed by incorporation. Mix the specified dosage with enough water to obtain uniform coverage and apply as a coarse spray using suitable ground spray equipment. Incorporate the insecticide to a depth of 4 to 6 inches as soon as possible after application by using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant the crop in the usual manner no later than 14 days after treatment (any delay in planting will reduce the length of time that Pilot 4E will protect against feeding damage). Pilot

4E will not control false wireworms or white fringe beetle or other grubs that attack sweet potatoes.

Restrictions: Do not make more than 1 application per season. Do not harvest within 125 days of treatment.

Tobacco

Use Pilot 4E as a preplant treatment to control larvae of cutworms, flea beetles, mole crickets, root maggots, and wireworms. Apply 2 quarts of Pilot 4E per acre in not less than 10 gallons of water as a broadcast (overall) spray to the soil surface 24 to 48 hours before bedding and transplanting. Immediately following application, incorporate the insecticide into the soil to a depth of 2 to 4 inches using suitable equipment. The application of Pilot 4E will also suppress the movement of imported fire ants into treated fields.

To control the above insects and low to moderate populations of rootknot nematodes in North Carolina, South Carolina, and Virginia, use Pilot 4E at the rate of 5 quarts per acre. To control the above insects and moderate populations of rootknot nematodes in all tobacco growing regions, use Pilot 4E in a tank mix with Nematicur 3 at the rate of 4 pints of Pilot 4E plus 8 pints of Nematicur 3 nematicide per acre. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for Nematicur 3 used in combination with Pilot 4E. Apply the specified dosage in not less than 10 gallons of water as a broadcast (overall) spray to the soil surface 24 to 48 hours before bedding and transplanting. Immediately following application, incorporate into the soil to a depth of at least 4 inches using suitable equipment. Where the nematode species *Meloidogyne arenaria* or *M.javanica* are present or high populations of *M.incognita*, apply Telone II soil fumigant at the recommended label rate.

Before broadcast application of Pilot 4E on to existing beds, knock down beds to final shape for transplanting. Use of PTO-driven implements that will incorporate Pilot 4E to a depth of 4 inches is recommended.

Restrictions: Do not make more than 1 application per season.

Tree Fruits

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days unless Personal Protective Equipment (PPE) required for early entry is worn.

Apples, pears, plums, prunes: Use Pilot 4E as a dormant or delayed dormant spray at the rates indicated to control the following insects on the crops listed. While Pilot 4E may be used without oil, oil is recommended to control additional pests such as European red mite.

For dilute sprays, tank mix the specified dosage with 1 to 2 gallons of a petroleum spray oil recommended for dormant use in 100 gallons of water and spray the entire tree by application to runoff using suitable ground spray equipment. (See "Additional Precautions Specific to California" (below) for use in California).

For low volume (concentrate) sprays, less than 200 gallons of spray mixture per acre use the same amount of Pilot 4E as for a dilute spray and apply in a manner that will ensure thorough coverage of the trees. Use the higher dosage of Pilot 4E for severe infestations. Use oil as recommended by your State Agricultural Experiment Station or Extension Service Specialist.

Precautions

Because cold or dry conditions may cause Pilot 4E plus oil sprays to infuse trees resulting in bud damage or drop, do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated. Do not use more than 4 pints of Pilot 4E per acre.

Additional Precautions Specific to California: Use a minimum of 250 gallons of total spray volume per acre. Do not use more than 4 gallons of spray oil per acre on almonds, peaches, or nectarines. Do not use any adjuvants or surfactants in addition to or as a substitute for petroleum spray oil in a tank mix with Pilot 4E. Do not apply on almonds in the following counties in California: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo, and Yuba.

Restrictions: Post-bloom applications to apple trees are prohibited. Make only 1 application during the dormant season. Do not allow meat or dairy animals to graze in treated orchards.

Cherries: Use Pilot 4E for the control of lesser peach tree borer, and American plum borer by application as a trunk spray. Mix 1 1/2 to 3 quarts of Pilot 4E with 100 gallons of water and apply as a course, low pressure spray to give uniform coverage of tree trunks and lower limbs. Make a second application 2 weeks after the first one and a third application after harvest. Avoid contact with foliage in sweet cherries as premature leaf drop may result. Consult your State Agricultural Experiment Station or Extension Service Specialist for proper time to treat in your area.

In addition, 1 of the 3 allowable applications per year may be applied as a dormant spray of San Jose scale, peach twig borer, and climbing cutworms. For control of these pests, tank mix 1/2 to 1 pint of Pilot 4E with 1 to 2 gallons of a petroleum oil recommended for dormant use in 100 gallons of water and spray the entire tree by application to runoff using ground spray equipment. For low volume (concentrate) sprays (40 to 100 gallons of spray mixture per acre) use the same amounts of Pilot 4E and spray oil per acre required for application as a dilute spray and apply in a manner that will ensure thorough coverage of the trees. Use the higher dosage of Pilot 4E for severe infestations. Use oil as recommended by your State Agricultural Experiment Station or Extension Service Specialist.

Restrictions: Make only 3 applications per year. Do not apply within 6 days before harvest. Do not allow meat or dairy animals to graze in treated orchards.

Nectarines, Peaches: Use Pilot 4E for the control of peach tree borers by application as a trunk spray before newly hatched borers enter the trees. Mix 3 quarts of Pilot 4E with 100 gallons of water and apply as a course, low-pressure spray to give uniform coverage of tree trunks. Thoroughly wet all bark areas from ground level to scaffold limbs. Do not allow spray to contact fruit. Consult your State Agricultural Experiment Station's or Extension Service Specialist's written recommendations for proper time to treat in your area.

Pilot 4E may also be used as a preplant dip application for non-bearing peach trees at the equivalent application rate of 3 quarts per 100 gallons of water for control of peach tree borer. Dip trees several inches above the grafting bud scar and plant immediately or allow drying before returning to storage. Do not allow peach trees to remain in contact with the dip solution.

Restrictions: Make only 1 application per season. Do not apply within 14 days before harvest. Do not allow meat or dairy animals to graze in treated orchards.

Use Pilot 4E at the rates indicated to control the listed pests.

Crop/Pest	Pilot 4E per 100 Gallons of Spray ¹	Application Restrictions
Apples rosy apple aphid San Jose scale <i>Lygus</i> pandemis leafroller climbing cutworms oblique banded leafroller	1 pt/100 gal (200-600 gal finished spray/A,)to 1 to 3 lb a.i./A	Spray application Dormant/Delayed dormant. Ground Equipment. Do not apply more than 1 application per season. Application may be made alone or as a tank mix with petroleum spray oil. Grazing of meat or dairy animals in treated orchards is prohibited.
Cherries (sweet) Lesser peach borer American plum borer San Jose scale peach twig borer climbing cutworms	3 qt./100 gal	Trunk spray (bark) application. Foliar and postharvest and/or dormant/delayed dormant. Ground Equipment. Do not apply more than 3 applications (9 lb a.i./A) per season. One of the three applications per season may be applied as a dormant spray tank mixed with petroleum spray oil at 0.5 lb ai/100 gal. Do not harvest within 6 days of application. Grazing of livestock in treated orchards is prohibited.
Pears San Jose scale climbing cutworms pear psylla adults	1 pt/100 gal (200-600 gal finished spray/A) 1 to 3 lb a.i./A	Spray application Dormant/Delayed dormant. Ground Equipment. Do not apply more than 1 application per season. Application may be made alone or as a tank mix with petroleum spray oil. Grazing of meat or dairy animals in treated orchards is prohibited.
Nectarines Peaches Plum/Prunes San Jose scale mealy plum aphid climbing cutworms peach twig borer	1 pt/100 gal (200-600 gal finished spray/A) 1 to 3 lb a.i./A	Spray application Dormant/Delayed dormant. Ground Equipment. Do not apply more than 1 application per season. Application may be made alone or as a tank mix with petroleum spray oil. Grazing of meat or dairy animals in treated orchards is prohibited.

¹ Based on 200 to 600 gallons per acre as a dilute spray.

Tree Nut Crops

Use Pilot 4E at the dosages indicated by application as a foliar spray to control pests listed in the following table. Mix the required dosage in sufficient water to ensure thorough and complete coverage of the foliage and crop and apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays applied to tree nut crops, mix the required dosage in sufficient water to allow for spray to runoff. For concentrate sprays, apply an equivalent amount of Pilot 4E per acre. Treat when pests appear or in accordance with local conditions. Insect control by aerial application may be less than control by ground application because of

less coverage. Consult your State Agricultural Experiment Station, certified Pest Control Advisor, or Extension Service Specialist for specific use information in your area.

Almonds, Filberts, Walnuts

Use Pilot 4E at the rates indicated to control the listed pests.

Crop	Insects Controlled	Dosage Pilot 4E
almonds	navel orangeworm peach twig borer San Jose scale	4 pt/acre
filberts	eye-spotted bud moth filbert aphid filbert leafroller filbert worm oblique-banded leafroller omniverous leaf-tier winter moth	3 - 4 pt/acre
walnuts	codling moth walnut husk fly walnut scale	4 pt/acre

Restrictions: Do not apply more than 2 foliar applications or a total of 8 pints of Pilot 4E per acre per season on almonds, filberts, and walnuts. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated orchards.

yellow pecan aphid black margined aphid	1 - 4 pints of Pilot 4E plus: 5.33 fl. oz. of Pydrin 2.4E, or 1.70 fl. oz. of Asana 1.9EC, or 3.00 fl. oz. of Ammo 2.5EC, or 2.56 fl. oz. of Cymbush 3E	
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Restrictions: Do not apply more than 5 applications or a total of 8 pints of Pilot 4E per acre per season on pecans. Do not apply within 28 days of harvest. Do not allow livestock to graze in treated orchards. Make no applications of tank mixtures closer to harvest than the longest preharvest interval shown for any of the products in the tank mixture. For dilute applications with ground equipment use at least the minimum rate of Pilot 4E listed for the pest. Apply in 100 to 600 gallons of water per acre. For aerial applications use 5 to 15 gallons of water per acre. Note: With aerial application, control may be reduced due to poor coverage. Up to 10 pints of Pilot 4E may be applied per acre per year.

Almond and Walnut Orchard Floors

Use Pilot 4E to control Southern fire ant and pavement ant by applying the specified dose with ground application equipment that will uniformly apply the spray to the orchard floor. Use when ant activity becomes evident within the orchard. Since worker ants cease most of their foraging activity at temperatures above 90°F, best results will be achieved with applications made at temperatures below 90°F at the time of application. Pilot 4E may also be applied to almond and walnut orchard floors through sprinkler irrigation systems only if the system uniformly covers the soil surface. Dosage of Pilot 4E and spray volume may vary depending on the irrigation method employed in the orchard as follows:

Ant Control in Sprinkler or Drip Irrigated Orchards

Apply Pilot 4E as a broadcast spray to the entire orchard floor using ground spray equipment at 4 to 8 pints per acre in 25 or more gallons of water. Use the high rate for heavy infestations and the low rate for light infestations. In orchards where ant activity is concentrated around the irrigation emitters, apply the high rate to a 6 to 8 foot band along the drip irrigation line and the low rate to the rest of the orchard.

Ant Control in Flood Irrigated Orchards

Apply Pilot 4E at 4 to 8 pints per acre in 25 or more gallons of water to the entire orchard floor using ground spray equipment. Apply the high rate to heavily infested areas and the low rate to lightly infested areas. Where ant colonies are abundant only in the berm areas, apply Pilot 4E at 8 pints per treated acre in 50 or more gallons of water to a 6 to 10 foot band along the tree line (berm).

Do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor. Mow or chemically control weeds before the application of Pilot 4E. Foliar applications of Pilot 4E may be made in addition to the orchard floor treatment.

Restrictions: Do not apply more than 2 applications or a total of 8 pints of Pilot 4E per acre per season to the orchard floor. Do not apply the last treatment within 14 days of harvest. Do not allow livestock to graze in treated orchards.

Pecans

Use Pilot 4E at the rates indicated to control the listed pests.

Insects Controlled	Dosage of Pilot 4E (Dilute or Concentrate)	Remarks
spittlebugs	1 - 4 pt/acre	Use a dosage of 2 to 4 pints per acre for concentrate sprays.
pecan nut casebearer fall webworm	1 1/2 - 4 pt/acre	
<i>Phylloxera</i> spp. ¹ black pecan aphid hickory shuckworm ² pecan leaf scorch mite (suppression) ³ fire ants and other ant species ⁴	2 - 4 pt/acre	¹ For best <i>Phylloxera</i> spp. control, make 2 applications at a 7 to 10 day interval using a minimum of 1.0 pint of Pilot 4E per acre starting at bud swell. ² For best results make 2 applications 10 to 14 days apart. ³ To suppress pecan leaf scorch mite, use a preventative program. ⁴ For ant control, apply as an orchard floor spray. Do not apply where weed growth or other obstructions prevent uniform coverage of the orchard floor

Vegetables

Worker Restricted Entry Interval: Do not enter or allow worker entry into cauliflower-treated areas during the restricted entry interval (REI) of 3 days unless Personal Protective Equipment (PPE) required for early entry is worn.

Use Pilot 4E at the dosages indicated to control the pests listed in the following table. To avoid phytotoxicity in vegetables, except Brussels sprouts, do not mix with other pesticide products or treat plants that are under extreme heat and drought stress.

Vegetable Rate Chart

Crop	Insects Controlled	Dosage Pilot 4E	Use Directions
broccoli cauliflower cabbage Chinese cabbage (bok-choy, napa)	root maggot root aphid	1.2 fl oz/ 1,000 linear ft of row	Soil band treatment at planting or Transplanting -or- Directed spray application Post-transplant. Ground Spray Equipment. For direct seeded crops apply the specified dosage in a water-based spray as a 4-inch wide band over the row at planting time. Shallow incorporation is necessary. Placement behind the planter shoe and in front of the press wheel is recommended. For transplanted crops, apply Pilot 4E as a water-based spray directed to the base of the plants immediately after setting. Use a minimum of 40 gallons of total spray per acre. Do not add any additional adjuvant, surfactants or spreader stickers. Do not apply as a foliage application.
Restrictions: Do not apply more than 2.25 lb a.i./A (72 fl oz/A) per season. Do not make more than 1 application per season. Preharvest interval (PHI) established for this use is 30 days.			
broccoli cabbage	root maggot root aphid	1.3 fl oz/ 1,000 linear ft	Soil injected side dress application.

		of row	Apply Pilot 4E in a water emulsion or with liquid fertilizer injected as a side dress on each side of the row after plants are established. Avoid mechanical damage to crop roots. Use a minimum of 15 gallons of total spray volume per acre.
Restrictions: Do not make more than 1 application per season. Preharvest interval (PHI) established for this use is 30 days.			
brussels sprouts collards kale kohlrabi turnips	root maggot root aphid	1.4 fl oz/ 1,000 linear ft of row	Soil band treatment at planting or Transplanting -or- Directed spray application Post-transplant. Ground Spray Equipment. For direct seeded crops apply the specified dosage in a water-based spray as a 4-inch wide band over the row at planting time. Shallow incorporation is necessary. Placement behind the planter shoe and in front of the press wheel is recommended. For transplanted crops, apply Pilot 4E as a water-based spray directed to the base of the plants immediately after setting. Use a minimum of 40 gallons of total spray per acre. Do not add any additional adjuvant, surfactants or spreader stickers. Do not apply as a foliage application.
Restrictions: Do not apply more than 2.25 lb a.i./A (72 fl oz/A) per season. Do not make more than 1 application per season. Preharvest interval (PHI) established for this use is 30 days.			

aphid
Cutworms
Imported
Cabbage-
worm
Striped flea
Beetle
(adult)

Ground or Aerial
Equipment.
Apply in 20 to
150 gallons of
water per acre.
Apply when insects
appear on foliage
and at 7 to 14 day
intervals thereafter
as needed.
Consult your State
Agricultural
Experiment Station,
Extension Service
Specialist or
Integrated Pest
Control Advisor for
proper time to treat
your area.

Minnesota, Montana, Nebraska, New Mexico, Nevada, North
Dakota,
Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and
Wyoming)

For use to control aphids (including Russian wheat aphid), wheat
midge,
brown wheat mite, grasshoppers, army cutworms and to provide
suppression of other cutworm species.

Restrictions: Do not apply more than 3 lb a.i./A (96 fl oz/A) (max. 3
applications) per season. Preharvest interval (PHI) established for
this use is 21 days.

radishes	root maggot	0.5 fl oz/1,000 linear ft of row	Apply the specified dosage as a water- based drench in the seed furrows, with the seed at planting time. Use a minimum of 40 gallons of total drench per acre.
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Restrictions: Do not apply more than 2.75 lb a.i./A (96 fl oz/A) of
Pilot 4E per acre or make more than 1 application per season.

rutabagas	root maggot	1.6 fl oz/ 1,000 linear ft of row	Apply the specified dosage in a water- based spray as a 4- inch wide band over the row at planting time, behind the planter shoe and in front of the press wheel to achieve shallow incorporation. Use a minimum of 40 gallons of total spray volume per acre.
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Restrictions: Do not apply more than 2.25 lb a.i./A (72 fl oz/A) of
Pilot 4E per acre or make more than 1 application per season. The
use of rutabaga tops for food/feed purposes is prohibited.

Pests	Pilot 4E	Timing/Special Directions
aphids (including Russian wheat aphid) brown wheat mite grasshoppers	1/2 pt/acre	From emergence to flowering, treat when 15-20% of tillers are infested. From flowering to early milk stage, treat when 20% or more of tillers are infested.
wheat midge (orange wheat blossom midge)	1/2 pt/acre	Treatment is recommended when 75% of the wheat heads have emerged from the boot and when midge adults are found in the crop (1 midge per 4-5 heads). Application timing is critical to ensure good control. If possible, apply in the late afternoon or early evening when temperatures exceed 50°F and wind speed is less than 7 mph.
army cutworms other cutworm species (suppression only)	1/2 pt/acre	Control may be reduced under high temperature conditions (greater than 80°F), under dry soil conditions, or if larvae are more than 1/2 inch long. Treat when field counts or crop injury indicates that damaging pest populations are developing or present. A second application of 1 pint/acre may be made for additional control.

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cereal leaf beetle	1/2 pt/acre	Target application when eggs are near hatching and larvae emerging as monitored by plant inspection.
Restrictions: Do not apply more than 2 applications (1 lb a.i./A) per season. A 14 day Preharvest Interval (PHI) for forage and hay, and a 28 day PHI for grain and straw.		

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Gharda USA, Inc. or the seller. All such risks shall be assumed by buyer.

Notice of Warranty and Disclaimer

Seller warrants that at the time of delivery the product in this container conforms to its chemical description contained hereon and is reasonably fit for its intended purpose under normal conditions of use. This is the only warranty made on this product. Seller expressly disclaims any implied warranties of merchantability or fitness for any particular purpose and, except as set forth above, any other express or implied warranties. Any damages arising from breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid for this product by Buyer, and shall not include incidental or consequential damages such as, but not limited to, loss of profits or values. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the Seller. In no case shall Seller be liable for the consequential, special or indirect damages resulting from the use or handling of this product. The Buyer shall assume all such risks. Buyer acknowledges the use of its own independent skill and expertise in the selection and use of the product and does not rely on any oral or written statements or representations.

Revised: November, 2003

Mix the required dosage with water and apply in a minimum of 2 gallons per acre finished spray volume. Apply using aerial (fixed wing or helicopter) or power-operated ground spray equipment. For effective coverage of wheat heads using ground application, apply in a minimum of 10 gallons per acre of spray through appropriate nozzles. Higher spray volumes have increased crop protection at the recommended dosage. Pilot 4E may also be applied through sprinkler-irrigation systems at recommended broadcast application rates to control listed foliar pests (see directions above).

Restrictions

- Do not make more than 2 applications per crop.
- Do not apply within 28 days of harvest.
- Do not allow livestock to graze or otherwise feed on treated forage within 14 days of application.
- Do not feed straw from treated wheat within 28 days of application.
- Do not apply directly to bodies of water.
- Do not apply product where runoff is likely to occur to aquatic habitats (including lakes, public reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries or other natural waters).
- Do not apply when weather conditions favor drift or runoff from treated areas.

Ground Application

- For ground applications, the distance from treated areas to aquatic habitats (including lakes, public reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries or other natural waters) must be 30 feet or more.
- Do not make ground applications if wind speed is greater than 15 mph.
- Do not apply at spray boom pressures greater than 45 psi.

Aerial Application

- Do not apply by air within 300 feet of aquatic habitats (including lakes, public reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries or other natural waters).
- Do not make aerial applications of Pilot 4E when wind speeds exceed 10 mph or when an atmospheric temperature inversion exists.
- Boom length should not exceed 75% of the wing span and release height for aerial applications should be no greater than 10 feet above the crop canopy.