

Reg # 55947-81

PM-18

19-21



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

MAY 17 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Frederick F. Piskiewicz
SANDOZ AGRO INC.
1300 EAST TOUHY AVE
DES PLAINES IL 60018

Subject: Label Amendment Submission of 11/30/93 in Response to PR Notice 93-7
EPA Reg. No. 55947-81
JAVELIN WP BIOLOGICAL INSECTICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.

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Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

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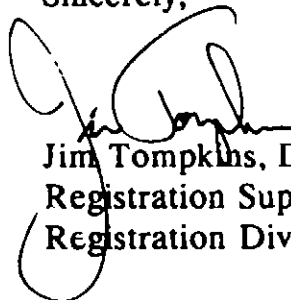
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

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VAULT® WP BIOLOGICAL INSECTICIDE

ACTIVE INGREDIENT:

Bacillus thuringiensis subspecies kurstaki,
 potency of 16,000 International Units
 per milligram* 3.2

INERT INGREDIENTS:..... 96.8

100.0%

*Equivalent to 7.2 billion International Units per lb.
 (8.0 billion Spodoptera units per lb.)

VAULT® is a trademark of Sandoz Ltd.

CAUTION

KEEP OUT OF REACH OF CHILDREN

See Side Panel For Additional Precautionary Statements

STORAGE AND DISPOSAL

STORAGE: Store in a cool place. Activity may be impaired by storage at temperatures above 90° F. Do not contaminate water, food, or feed by storage or disposal.

DISPOSAL:

Pesticide - Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

Container - Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning.

SANDOZ AGRO, INC.
 Des Plaines, Illinois 60018

EPA Reg. No. 55947-81
 EPA Est. No. 55947-CA-2

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Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 55947-81

ACCEPTED
 with COMMENTS
 In EPA Letter Dated
 MAY 17 1994

VAULT WP BIOLOGICAL INSECTICIDE

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS CAUTION

May cause skin and eye irritation and skin sensitization reactions in certain individuals. Avoid contact with skin, eyes, or clothing. ~~Wear protective clothing (overalls and gloves) while using or handling this product. Remove contaminated clothing and wash before reuse.~~ Discontinue use if reaction occurs.

STATEMENT OF PRACTICAL TREATMENT

If on skin: Wash with plenty of water. Get medical attention if irritation persists.

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation persists.

Personal Protective Equipment:

Applicators and other handlers must wear:

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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering controls statements:

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

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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

Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

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

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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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 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.

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

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

Unless specifically stated, do not apply this product through any type of irrigation system.

VAULT® WP is a biological insecticide specific for the control of lepidopterous larvae (see Recommended Application Rates section). VAULT® WP attacks the larval gut and must be ingested by the insect to be effective.

Since the active ingredient, Bacillus thuringiensis, is exempt from tolerance requirements, VAULT® WP may be applied up to and on the day of harvest.

GENERAL USE INSTRUCTIONS

For most consistent control, apply at first sign of newly hatched worms (first and second instar larvae). Instructions for specific crops are located in the Additional Information Section in the Use Directions.

Reapply as necessary under a pest management program that includes close scouting.

If rapid knockdown of heavy worm or non-lepidopterous populations is necessary, include an effective contact insecticide in combination with VAULT® WP.

For heavy worm infestations use the higher VAULT® WP rate. During situations of dense foliage and/or rapid growth, increasing water carrier volumes will provide better crop coverage and improve VAULT® WP performance.

Mixing:

Fill spray or mixing tank $\frac{3}{4}$ full. Turn on agitation and pour VAULT® WP into water while maintaining continuous agitation. Add other spray material (if any) and add balance of water. Agitate as necessary to maintain suspension. Do not allow diluted sprays to remain in the tank for more than 48 hours. VAULT® WP is formulated to provide desirable coverage and adherence to leaf surfaces. Additional adjuvants, spreaders or stickers may be added to improve product performance, especially under heavy dew or rainy conditions. Combinations with commonly used insecticides, fungicides or other spray tank adjuvants are generally not deleterious to VAULT® WP if the mix is used promptly. Before mixing in the spray tank, it is advisable to test physical compatibility by mixing all components in a small container in proportionate quantities.

GROUND APPLICATION

Unless otherwise stated, use recommended amount of VAULT® WP in a minimum of 20 gallons of water per acre depending on type of crop and requirements of state regulations.

AERIAL APPLICATION

Use recommended amount of VAULT® WP in at least 3 gallons of water per acre. Applications at higher water volumes have demonstrated improved control of targeted pests. Apply early morning or evening when air is calm.

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RECOMMENDED APPLICATION RATES

VEGETABLE CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---|---------------------------|-------------------|--|
| Artichokes | Artichoke Plume Moth | 1-2½ | Apply in a minimum of 100 gallons of water per acre with a spray interval of 10 days or less. Apply 1 lb./acre in combination with ASANA XL, AMBUSH or SUPRACIDE aerially to aid in resistance management of the artichoke plume moth. Use and follow all label directions of the tank mix partner regarding application timing, gallonage and schedules. |
| Artichokes | | | |
| Asparagus | Armyworm* | 1-3 | Repeat as necessary to maintain control |
| Beans (Green, Lima, Mung) | | | |
| Broccoli | Diamondback Moth | 1-2½ | *Use to suppress light populations of small (first to second instar) armyworms. |
| Brussel Sprouts | Green Cloverworm | ½-1 | |
| Cabbage | Hornworm | ½-1 | |
| Cardoon | | | |
| Carrots | Imported Cabbageworm | ½-1 | |
| Cauliflower | Looper | ½-2½ | |
| Celeriac | | | |
| Celery | | | |
| Chick Peas | | | |
| Chinese Broccoli | | | |
| Chinese Cabbage | Salt Marsh Caterpillar | 1-2 | |
| Collards | | | |
| Cucumbers | | | |
| Dry Bulb Onions | | | |
| Eggplants | European Corn Borer | 2-3 | Also see Biogation |
| Garlic | | | |
| Green Onions | | | |
| Greens (Dandelion, Turnip, Mustard, Beet, China) | Tomato pinworm | 1½-2½ | |
| Herbs (Basil, Cilantro, Dill, Oregano, Thyme, etc.) | | | |
| Horseradish | | | |
| Kale | | | |
| Kohl Rabi | | | |
| Leeks | | | |
| Lettuce (Endive, Romaine, Head Lettuce, Escarole Butter Crunch, Leaf, etc.) | | | |

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RECOMMENDED APPLICATION RATES

VEGETABLE CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---|--------|-------------------|----------------------------|
| Melons (Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon, etc.) | | | |
| Okra | | | |
| Onions | | | |
| Parsley | | | |
| Parsnips | | | |
| Peas | | | |
| Peppers | | | |
| Potatoes | | | |
| Pumpkins | | | |
| Radishes | | | |
| Rappini | | | |
| Rutabaga | | | |
| Salsify | | | |
| Spinach | | | |
| Squash (Summer and Winter) | | | |
| Sweet Corn | | | |
| Sweet Potatoes | | | |
| Swiss Chard | | | |
| Table Beets | | | |
| Tomatoes | | | |
| Turnip Root | | | |
| Watercress | | | |
| Yams | | | |

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RECOMMENDED APPLICATION RATES

FRUIT, NUT, & VINE CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|------------------|-----------------------|-------------------|---|
| Apples and Pears | Fruittree | 1-2 | Apply when newly hatched larvae appear and before leaves are rolled. Continue applying as a part of the normal cover spray program until pest is adequately controlled. |
| | Leafroller | 1-2 | |
| | Gypsy Moth | 1-2 | |
| | Redbanded Leafroller | 1-2 | |
| | Tufted Apple Budmoth | 1-2 | |
| | Variegated Leafroller | 1-2 | |
| | Omnivorous Leafroller | 1-2½ | |
| | Tent Caterpillar | 1-2 | |
| | Pandemis Leafroller | 1-2 | |
| | Peach Twigborer | 2-6 | |
| | Oriental Fruitmoth | 2-6 | |
| | Navel Orangeworm | 2-6 | |
| | Codling Moth | 2-8 | |
| Avocados | Looper | 2-2½ | Apply as necessary to maintain control. |
| | Orange Tortrix | 1-2 | |
| | Omnivorous Leafroller | 1-2 | |
| | Amorbia | 2 | |
| Bananas | Banana Skipper | 1-2 | Hawaii only. Use calibrated ground equipment with adequate water to apply to point of runoff. |
| | | | |
| Citrus | Citrus Cutworm | 1-3 | Use 50-600 gallons of water per acre when using ground equipment and 10 gallons of water minimum per acre by air. |
| | Fruittree Leafroller | 1-2 | |
| | Orangedog | ¼-1 | |
| | Amorbia | 2-3 | |
| Blueberries | Blueberry Leafroller | 1-2 | Apply by ground equipment only. Begin treatment as soon as possible after hatching. For leafrollers, apply before larvae are protected by leaf folds. |
| Caneberries | Cherry Fruitworm | ¼-1 | |
| Currants | Fruittree Leafroller | 1-2 | |
| Kiwi | Gypsy Moth | 1-2 | |
| | Green Fruitworm | ¼-1 | |
| | Looper | 1-2 | |
| | Orange Tortrix | 1-2 | |
| | Omnivorous Leafroller | 1-2 | |
| | Blueberry Spanworm | 1-2 | |

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RECOMMENDED APPLICATION RATES

FRUIT, NUT, & VINE CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---------------------------------|------------------------|-------------------|--|
| Grapes | Grape Leafroller | 1-2½ | Apply by ground equipment in up to 200 gallons total spray per acre to obtain thorough coverage of leaf surfaces. Start treating as soon as possible after hatching and before larvae are protected by leaf folds. |
| | Grapeleaf Skeletonizer | 1-2½ | |
| | Omnivorous Leafroller | 1-2½ | |
| | Orange Tortrix | 1-2½ | |
| | Saltmarsh Caterpillar | 1-2½ | |
| | | | |
| Almonds | Fall Webworm | 1-2 | For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (Second to fourth instar). For single applications, in pecans, for pecan nut casebearer, use a minimum of 1.5 lb/acre. A split application of 1.0 lb./acre may provide better flexibility and improved targeting of egg hatches. Make first application when majority of eggs are in white or pink stage. Make the second application within 7-10 days. |
| Apricots | Filbert Webworm | 1-2 | |
| Cherries | Omnivorous Leafroller | 1-2 | |
| Filberts | | | |
| Nectarines | Citrus Cutworm | 1-2½ | |
| Peaches | Redhumped Caterpillar | 1-2 | |
| Pecans | | | |
| Persimmons | Tent Caterpillar | 1-2 | |
| Plums | Roughskinned Cutworm | ½-1 | |
| Pomegranate | | | |
| Prunes | Pecan Nut Casebearer | 1-2½ | |
| Walnuts | Peach Twigborer | 2-6 | |
| | Oriental Fruitmoth | 2-6 | |
| | Navel Orangeworm | 2-6 | |
| | Codling Moth | 2-8 | |
| Melons (Also see Vegetables) | Rindworm Complex | 1-1½ | Apply at first sign of hatch before larvae enter fruit. Repeat as necessary to maintain control. |

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RECOMMENDED APPLICATION RATES

FRUIT, NUT, & VINE CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|--------------|-------------------------|-------------------|--|
| Strawberries | Armyworm* | 1-3 | Apply as necessary to maintain control. Use 20 gallons of water minimum per acre when using ground equipment and 5 gallons water minimum per acre by aircraft. In a tankmix with contact insecticides, rates as low as 1 lb. of VAULT® WP may be used for the control of armyworm. *Use to suppress light populations of small (first to second instar) armyworms. |
| | Gypsy Moth | 1-2 | |
| | Looper | ½-1 | |
| | Roughskinned Cutworm | 1-2 | |

RECOMMENDED APPLICATION RATES

FIELD CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---------------------------|------------------------------|-------------------|--|
| Alfalfa (Hay and Seed) | Alfalfa Caterpillar | ½-1 | <p>Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 worms or greater per 180° sweep) use the highest rate. Against heterogenous worm populations, where 4th and 5th instars are present, and continuous egg laying, applications may provide variable control. Under these conditions, the addition of a contact insecticide in combination with VAULT® WP is recommended.</p> <p>The addition of a spreader sticker to VAULT® WP may provide improved performance</p> <p>*Use to suppress light populations of small (1st to 2nd instar) armyworms.</p> |
| Sudan Grass | Armyworm* | 1-3 | |
| Hay Crops | Looper | ½-2 | |
| & Other Forage Crops | | | |
| Small Grains | Armyworm* | 2-3 | <p>Apply as necessary to maintain control.</p> <p>*Use to suppress light populations of small (first to second instar) armyworms.</p> |
| Hops | Looper | ½-2 | <p>Apply as necessary to maintain control.</p> <p>Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.</p> |
| | Omnivorous | 1-2 | |
| | Leaftier | | |
| | Spotted Cutworm | 1-2 | |
| | Oblique Banded Leafroller | 1-2 | |

RECOMMENDED APPLICATION RATES

FIELD CROPS

| CROP | INSECT | RATE LBS. /ACRE | ADDITIONAL INSTRUCTIONS |
|-------------------------------------|--|--------------------|---|
| Candla Evening Primrose | Armyworm* | 1-3 | Apply as necessary to maintain control. *Use to suppress light populations of small (first to second instar) armyworms. |
| | Diamondback Moth | 1-2½ | |
| | Imported Cabbageworm | ½-1 | |
| | Looper | ½-2 | |
| | Hornworms | ½-½ | |
| Field Corn Pop Corn Seed Corn | Armyworm* | 1-3 | Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to early instars prior to entering the ear or plant. Aids in control. |
| | Southwestern Corn Borer | 2-3 | |
| | European Corn Borer | 2-3 | |
| | | | *Use to suppress light populations of small (first to second instar) armyworms. |
| Jojoba | Looper (<u>Anacamptodes</u> spp.) | 1-2 | Apply in a minimum of 50 gallons of water per acre by ground equipment or a minimum of 10 gallons of water by aerial equipment. Thorough coverage of foliage is essential and dictates the minimum spray volumes necessary. |

RECOMMENDED APPLICATION RATES

FIELD CROPS

| CROP | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|-------------|---|-------------------|--|
| Dry Beans | Armyworm* | 1-3 | Apply as necessary to maintain control. |
| Peas | Green | 1-2 | |
| Lentils | Cloverworm | | |
| Mint | | | |
| Peanuts | Looper | 1-2 | |
| Rice | Salt Marsh | 1-2 | |
| Safflower | Caterpillar | | |
| Soybeans | Velvetbean | 1-2 | |
| Sugar Beets | Caterpillar | | |
| Sunflower | <u>Helicoverpa</u> spp. (<u>Heliothis</u> spp.) | 2-2½ | |
| Sorghum | Cutworm | 1-3 | *Use to suppress light populations of small (first to second instar) armyworms. |
| Tobacco | Looper | 1-2 | Apply as necessary to maintain control. |
| | Tobacco Hornworm | ¼-1 | |
| | Tobacco Budworm | 1-2½ | |

RECOMMENDED APPLICATION RATES

COTTON - Except Arizona and California

| TIMING | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---------|---------------------|-------------------|--|
| Early | Bollworm Tobacco | 1/4-2 1/4 | For early season management of bollworm and budworm |
| Budworm | species. | | <p>Initiate applications when 50% of plants are at pinhead square cotton stage, independent of bollworm and budworm egg and larval counts, or at first egg lay, whichever occurs earlier. Continue applications on 5 day spray interval up to synthetic pyrethroid spray window.</p> <p>For added worm control, tankmixing of VAULT® WP with a labeled ovicide, such as, methomyl (0.125 lb. a.i./acre), profenofos (0.25 lb. a.i./acre), or thiodicarb (0.125-0.25 lb. a.i./acre) is recommended. Read and follow all precautions and restrictions on tankmix product labels.</p> |

RECOMMENDED APPLICATION RATES

COTTON (CALIFORNIA/ARIZONA)

| TIMING | INSECT | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|-------------------------|------------------------|-------------------|--|
| Early and Mid-Season | Armyworm* | 1-3 | Repeat as necessary throughout season to maintain control. If egg laying frequency indicates future moderate to heavy worm populations, time application spray to coincide with the second instar larvae. During periods of high temperatures, worms will progress to the third instar very rapidly and early application timing is necessary for control. To be effective, VAULT® WP spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower 2/3 portion of the plant, aerial application of VAULT® WP may not provide adequate control. *Use to suppress light populations of small (first to second instar) armyworms. |
| | Cotton Leaf Perforator | 1-2 | |
| | Cotton Leafworm | 1-2 | |
| | Looper | 1-2½ | |
| | Saltmarsh Caterpillar | 1-2 | |
| | | | |
| | Bollworm | 1-3 | For the suppression of light to moderate infestations, apply at first sign of egg laying or newly hatched worms (first instar larvae). |
| | Tobacco Budworm | 1-3 | |
| | | | |

RECOMMENDED APPLICATION RATES

SHADE TREES, ORNAMENTALS (Including Roses)

| PESTS | RATE LBS./ACRE | ADDITIONAL INSTRUCTIONS |
|---|-------------------|---|
| Spring and Fall Cankerworm | ½-1 | Apply when leaf expansion reaches 40% to 50% as infestation warrants. If eggs hatch over a long period of time, or if reinfestation occurs, spray about 14 days after first applications. |
| Elm Spanworm | ½-1 | |
| Tent Caterpillar | ½-1 | |
| Gypsy Moth | ½-1 | |
| Spruce Budworm | ½-1 | Apply when most larvae are 3rd-4th instar. Also consider the opening of the bud cap to ensure foliage exposure. |
| Jackpine Budworm | ½-1 | Apply after eggs have hatched and early instar larvae are feeding on exposed foliage. |
| Douglas Fir Tussock Moth | ½-1 | |
| Bagworm | ½-1 | |
| California Oak Moth | ½-1 | |
| Western Tussock Moth | ½-1 | |
| Fruittree Leafroller | ½-1 | |
| Mimosa Webworm | ½-1 | |
| Redhumped Caterpillar | ½-1 | |
| Fall Webworm | ½-½ | |
| Armyworm* | 2-2½ | |
| Omnivorous Leafroller | 1-2 | |
| *Use to suppress light populations of small (first to second instar) armyworms. | | |

TURF AND GRASS SEED PRODUCTION

| | | |
|---|---|--|
| Tropical Sodwebworm | 2 | Repeat as necessary throughout season to maintain control. |
| Armyworm* | 2 | |
| Sodwebworm | 2 | |
| *Use to suppress light populations of small (first to second instar) armyworms. | | |

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BIOGATION - Center Pivot Irrigation Application for European and Southwestern Corn Borer in Field Corn (Not For Use in California)

APPLICATION INSTRUCTIONS

Rate - For control of European Corn Borer and suppression of Southwestern Corn Borer using center-pivot irrigation equipment, apply a mixture of 2 to 3 lbs. of VAULT® WP per acre plus a registered sticker.

Sticker and VAULT® WP Mixture - VAULT® WP should be added to the tank first, then the recommended sticker. (See instructions below).

For best performance, make application in 0.5 inch/acre or less.

Filter size should allow for smooth flow of VAULT® WP from the tank to injector pump (18-20 mesh).

ATTENTION

INSTRUCTIONS FOR DILUTED APPLICATION WITH STICKER

1. Pre-clean and flush nurse tank, lines, screen canister and pump with insectigation oil until they are water-free.
2. Use a 20 mesh screen or larger. A finer mesh screen may prevent the smooth flow of VAULT® WP from the nurse tank into the pump.
3. Calibrate with insectigation oil.
4. Begin agitation.
5. Pour VAULT® WP into tank and then the oil.
6. Maintain agitation during application.
 - If you stop injecting the VAULT® WP-oil mix due to rain, mechanical failure or etc., be sure to mix well and re-agitate uniformly before continuing application.
7. When you rinse the VAULT® WP container, do so with insectigation oil. Avoid water contamination for oil-diluted applications.
8. Fine-tune calibration.
9. When application is complete, thoroughly flush the injection system and sprinkler system with insectigation oil.

Check label for Federal Chemigation requirements. Follow State and Local requirements for chemigation.

APPLICATION EQUIPMENT CAUTIONS

The active ingredient in VAULT® WP will settle in the tank and injections lines; adequate agitation must be provided before and during the injection period. Use only in systems that apply uniformly and have appropriate check valves. Do not apply when windspeed favors drift. When application is complete, thoroughly flush the injection system and sprinkler lines.

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.

The pesticide injection pipeline should contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline should contain either a functional, normally closed solenoid-operated valve connected to the system interlock or a functional vacuum relief valve to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system should contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point when pesticide distribution is adversely affected.

STORED SOYBEANS, GRAINS

(Indian Meal Moth, Almond Moth)

To control and prevent Indian Meal Moth and Almond Moth infestations of stored soybeans and grains, prepare a spray mixture which includes 1 gallon of water for every 3 oz. by weight of VAULT® WP. The spray mixture may be applied either by treating the top 4 inches of grain as it is being augered into storage (applying 0.6 pint of mixture per bushel in the grain stream), or by treating the surface of grain after it is in the bin. The Table below can be used as a guide in determining the total amount of VAULT® WP needed according to the bin diameter or the number of bushels to be treated.

| Bin Diameter (ft) | Surface Area (sq. ft.) | Bushels (to 4 in. depth) | VAULT® WP Rate (by weight) | |
|----------------------|---------------------------|-----------------------------|-------------------------------|-------|
| | | | Grams | oz. |
| 8 | 50 | 13 | 42 | 1.50 |
| 12 | 113 | 30 | 100 | 3.50 |
| 16 | 201 | 53 | 170 | 6.00 |
| 20 | 314 | 84 | 240 | 8.50 |
| 24 | 452 | 120 | 370 | 13.00 |
| 28 | 615 | 163 | 510 | 18.00 |
| 32 | 804 | 214 | 652 | 23.00 |

To insure thorough coverage when making applications to the grain surface after it is in the bin, apply spray mixture in three (3) applications. Mix the grain with a scoop or rake to a depth of four (4) inches after each application.

Stored grain may be treated anytime, but for best results, treat grain at the time it is placed into storage or shortly thereafter, or in the early spring prior to egg-laying. Full season control is normally experienced. Re-treat only if reinfestation occurs.

For the protection of bagged grain, apply spray mixture to entire grain mass, and mix thoroughly prior to bagging. VAULT® WP at 12 oz. by weight per 10 gallons of water will treat approximately 100 bushels.

Treated grain may be used at any time after treatment.

FLOWERS AND ORNAMENTALS

VAULT® WP may also be used on flowers and ornamentals outdoors and in the greenhouse at a rate of 1/4-3 lb. per 100 gallons of water for control of listed insects on this label.

GUIDE FOR SMALL SPRAY VOLUME MIXING

| Rate Lbs./A | Conversion Rate* Teaspoons/Gallon |
|----------------|--------------------------------------|
| 1/2 | 1 |
| 1 | 2 |
| 2 | 4 |

*Assumes Application to spray runoff.