

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

NATURAL RESOURCES DEFENSE COUNCIL,  
INC.; CENTER FOR BIOLOGICAL DIVERSITY;  
FRIENDS OF MINNESOTA SCIENTIFIC AND  
NATURAL AREAS,

*Plaintiffs,*

v.

UNITED STATES FISH AND WILDLIFE  
SERVICE, MARTHA WILLIAMS, in her official  
capacity as Principal Deputy Director of the  
U.S. Fish and Wildlife Service; UNITED STATES  
DEPARTMENT OF THE INTERIOR,

*Federal Defendants.*

Civ. No. 1:21-cv-00770-ABJ

**DECLARATION OF LUCAS RHOADS**

I, Lucas Rhoads, declare as follows:

1. I am counsel of record for Plaintiff Natural Resources Defense Council (NRDC) in the above-captioned matter.
2. Attached as Exhibit A is a true and correct copy of the pesticide product label for Gaucho 600 Flowable (which contains the neonicotinoid imidacloprid), as approved by the U.S. Environmental Protection Agency (EPA), dated February 27, 2019. The label can be found online at [https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8\\_PUID,P8\\_RINUM:37417,264-968](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8_PUID,P8_RINUM:37417,264-968), by clicking on the Accepted Date, “February 27, 2019 (PDF).”
3. Attached as Exhibit B is a true and correct copy of an excerpt of the pesticide product label for Merit 75 WSP (which contains the neonicotinoid imidacloprid), as approved by EPA, dated October 25, 2016. The label can be found online at

[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8\\_PUID,P8\\_RINUM:29288,432-1318](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8_PUID,P8_RINUM:29288,432-1318),

by clicking on the Accepted Date, “October 25, 2016 (PDF).”

4. Attached as Exhibit C is a true and correct copy of an excerpt of the pesticide product label for Aloft LC G (which contains the neonicotinoid clothianidin), as approved by EPA, dated December 28, 2015. The label can be found online at

[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8\\_PUID,P8\\_RINUM:486611,59639-215](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8_PUID,P8_RINUM:486611,59639-215), by clicking on the Accepted Date, “December 28, 2015 (PDF).”

5. Attached as Exhibit D is a true and correct copy of the pesticide product label for Assail 70WP (which contains the neonicotinoid acetamiprid), as approved by EPA, dated June 11, 2021. The label can be found online at

[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8\\_PUID,P8\\_RINUM:37665,8033-23](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8_PUID,P8_RINUM:37665,8033-23), by clicking on the Accepted Date, “June 11, 2021 (PDF).”

6. Attached as Exhibit E is a true and correct copy of the pesticide product label for Swagger (which contains the neonicotinoid imidacloprid), as approved by EPA, dated February 13, 2018. The label can be found online at

[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:6730429811503::NO::P8\\_PUID,P8\\_RINUM:498949,34704-1045](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:6730429811503::NO::P8_PUID,P8_RINUM:498949,34704-1045), by clicking on the Accepted Date, “February 13, 2018 (PDF).”

7. Attached as Exhibit F is a true and correct copy of the pesticide product label for Alpine WSG (which contains the neonicotinoid dinotefuran), as approved by EPA, dated May 1, 2019. The label can be found online at

[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8\\_PUID,P8\\_RINUM:507274,499-561](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8_PUID,P8_RINUM:507274,499-561), by clicking on the Accepted Date, “May 01, 2019 (PDF).”

8. Attached as Exhibit G is a true and correct copy of the pesticide product label for Cruiser 5FS Alfalfa (which contains the neonicotinoid thiamethoxam), as approved by EPA, dated June 18, 2012. The label can be found online at [https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:17279465909540::NO::P8\\_PUID,P8\\_RINUM:37108,100-941](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:17279465909540::NO::P8_PUID,P8_RINUM:37108,100-941), by clicking on the Accepted Date, “June 18, 2012 (PDF).”

9. Attached as Exhibit H is a true and correct copy of the pesticide product label for Dyna-Shield Imidacloprid 5 (which contains the neonicotinoid imidacloprid), as approved by EPA, dated Mar. 18, 2015. The label can be found online at [https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:5562047905764::NO::P8\\_PUID,P8\\_RINUM:481690,34704-940](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:5562047905764::NO::P8_PUID,P8_RINUM:481690,34704-940), by clicking on the Accepted Date, “March 18, 2015 (PDF).”

10. Attached as Exhibit I is a true and correct copy of a January 11, 2022 memorandum from the Office of Pesticide Programs of the EPA subject: Endangered Species Act Section 7(d) Consistency Determination with Respect to a Request to Amend the Enlist Duo Registration. This memorandum can be found online at <https://www.regulations.gov/document/EPA-HQ-OPP-2021-0957-0012>.

11. Attached as Exhibit J are true and correct copies of three searches I conducted on April 15, 2022, on an Illinois Department of Agriculture website titled “Pesticide Product Results,” <https://www2.illinois.gov/sites/agr/Pesticides/Pages/Pesticide-Product-Results.aspx>. I performed these searches by typing the following information in the search field: “Gaucho 600,” “Assail 70WP,” “Swagger.”

12. Attached as Exhibit K are true and correct copies of seven searches I conducted on April 15, 2022, on a Minnesota Department of Agriculture website, titled “Minnesota

Pesticide Data Searches,” <http://www.kellysolutions.com/MN/pesticideindex.htm>. I performed these searches by typing the following information in the “Search for Product Name” search field: “Aloft LC G,” “Alpine WSG,” “Assail 70WP,” “Cruiser 5FS Alfalfa,” “Gaucho 600,” “Merit 75 WSP,” “Swagger.”

13. Attached as Exhibit L are true and correct copies of six searches I conducted on April 15, 2022, on a Wisconsin Department of Agriculture, Trade and Consumer Protection website, titled “Pesticide Database Searches,” <http://www.kellysolutions.com/WI/pesticideindex.asp>. I performed these searches by typing the following information in the “Search by Product Name” search field: “Aloft LC G,” “Alpine WSG,” “Assail 70WP,” “Gaucho 600,” “Merit 75 WSP,” “Swagger.”

14. Attached as Exhibit M are true and correct copies of three searches I conducted on April 15, 2022, and April 18, 2022, on an Iowa Department of Agriculture and Land Stewardship website, <http://www.kellysolutions.com/IA/pesticideindex.asp>. I performed these searches by typing the following information in the “Search by Product Name” search field: “Assail 70 WP,” “Swagger,” “Dyna-Shield Imidacloprid 5.”

15. Attached as Exhibit N is a true and correct copy of a U.S. Environmental Protection Agency website titled, “Schedule for Review of Neonicotinoid Insecticides,” <https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides> (last visited Apr. 15, 2022).

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed on this 22nd day of April, 2022, in Washington, District of Columbia.



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*Counsel for Plaintiff Natural Resources  
Defense Council*

## **Exhibit A**

Pesticide Product Label for Gaucho 600 Flowable,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8  
::::P8\\_PUID,P8\\_RINUM:37417,264-968\\_](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8::::P8_PUID,P8_RINUM:37417,264-968_) (Feb. 27, 2019)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

February 27, 2019

Lisa M. Bowers  
Senior Registrations Manager  
Bayer CropScience LP  
800 N. Lindbergh Blvd.  
St. Louis, MO 63167

Subject: Notification per PRN 98-10 – Adding an Alternate Brand Name and Updating the  
Company Address  
Product Name: GAUCHO 600 FLOWABLE  
EPA Registration Number: 264-968  
Application Date: January 18, 2019  
Decision Number: 547933

Dear Ms. Bowers:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records. The alternate brand name Acceleron IX-409 Insecticide Seed Treatment has been added to the product record.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact please contact Jasmin Jackson at 703-347-0732 or by email at [jackson.jasmin@epa.gov](mailto:jackson.jasmin@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "VE", followed by a horizontal line.

Venus Eagle, Product Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)

264-968

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

02/27/2019

# GAUCHO<sup>®</sup> 600 FLOWABLE

## ABN: GAUCHO<sup>®</sup> Grande; Acceleron<sup>®</sup> IX-409 Insecticide Seed Treatment

Contains 5 lbs. active per gallon (600 grams per liter) @ 20°C

**ACTIVE INGREDIENT:**

Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....48.7%

**OTHER INGREDIENTS:** .....51.3%

**TOTAL:** .....100.0%

EPA Reg. No. 264-968

EPA Est.

# KEEP OUT OF REACH OF CHILDREN CAUTION

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577  
For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

[FOR ADDITIONAL PRECAUTIONARY STATEMENTS: See Inside Booklet]

Please refer to [back panel] [booklet] for additional precautionary statements and directions for use. [Note to reviewer: Location of additional precautionary statements and directions for use will vary between those listed, depending on container type/size.]

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.**



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, socks and shoes and chemical-resistant gloves (such as nitrile, butyl, neoprene, barrier laminate, polyvinyl chloride or Viton). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS

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

#### ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to bees, birds and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spilled treated seeds.

Ensure that planting equipment is functioning properly in accordance with manufacturing specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.

## DIRECTIONS FOR USE

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

For use in commercial seed treaters only, with the exception of application to canola, cotton (delinted seed), field corn, sorghum, millet, wheat and barley, which may be made either by commercial seed treatment or as an end-use seed treatment on agricultural establishments at, or immediately before, planting. This product is to be used in liquid or slurry treaters.

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.

Mix thoroughly before use or use entire container at one time. Pre-test all tank mixes to determine physical compatibility between formulations. Observe all cautions and limitations on labeling of all products used in mixtures.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: If the seed is treated with the product and the treated seed is soil-injected (drilled) 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, chemical resistant gloves, shoes plus socks, protective eyewear.

**SEED BAG LABEL REQUIREMENTS**

The Federal Seed Act requires that bags containing treated seeds shall be labeled with the following statements:

- This seed has been treated with an imidacloprid insecticide.
- Do not use for feed, food or oil purposes.

User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with Gaucho 600 Flowable:

- Store away from food and feedstuffs.
- Wear long-sleeved shirt, long pants and chemical-resistant gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading.
- Dispose of all excess treated seed. Leftover treated seed may be buried away from water sources in accordance with local requirements.
- Do not contaminate water bodies when disposing of planting equipment wash waters.
- Do not allow children, pets, or livestock to have access to treated seed.
- Treated seed must be adequately covered with soil at planting.
- Treated areas may be replanted with any crop specified on imidacloprid label, or any crop for which a tolerance exists for imidacloprid, as soon as practical following the last application. Areas planted with treated seed may be replanted immediately with artichoke, barley, Brassica (cole) leafy vegetables, borage, bulb vegetables, canola, cilantro, corn (field), corn (pop), corn (sweet), cotton, cranberry, crambe, cucurbits, eggplant, flax, ground cherry, leaf petiole vegetables, leafy vegetables, legume vegetables (succulent or dried, including soybean), millet, mustard seed, oats, okra, pepinos, pepper, potato, rapeseed, rye, safflower, sorghum, soybean, strawberry, sugarbeet, sunflower, tomatillo, tomato, triticale, root and tuber vegetables, watercress, wheat. These areas may also be replanted after 30 days with cereals, including buckwheat, rice. Do not plant any other crop in the treated area for at least one year after treated seeds are planted.

**ROTATIONAL CROPS:**

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. The following plant-back intervals are required for listed crops:

ROTATIONAL PLANT-BACK INTERVALS*				
IMMEDIATE PLANT-BACK				30-DAY PLANT-BACK
Artichoke	Crambe	Oats	Soybean	Cereals, including: buckwheat rice
Barley	Cucurbits	Okra	Strawberry	
Brassica (cole) leafy veg.	Eggplant	Pepinos	Sugarbeet	
Borage	Flax	Pepper	Sunflower	
Bulb Veg	Ground cherry	Popcorn	Tomatillo	
Canola	Leaf petiole veg.(Subgroup 4B)	Potato	Tomato	
Cilantro	Leafy Greens (Subgroup 4A)	Rapeseed	Triticale	
Corn, Field	Legume veg. (succulent	Rye	Veg. Root and Tuber	
Corn, Sweet	or dried, including soybean)	Safflower	Watercress	
Cotton	Millet	Sorghum	Wheat	
Cranberry	Mustard Seed			

\* Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.  
 \* For all other crops not listed on an Imidacloprid label, or for crops for which no tolerance for the active ingredient has been established, a 12-month plant-back interval is required.

NOTIFICATION of the crop rotational restriction must be conveyed to the grower by appropriate seed tag labeling or bag printing on all seed units.

**NOTE:** The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21CFR, Part 2.25. Any dye or colorant added to treated seed must be cleared for use under 40CFR, Part 180.1001. Federal regulations have established official tolerances for certain pesticide residues. In order that residues on food and forage crops will not exceed established tolerances, use only at specified rates.

Treated seed must not be used for or mixed with food or animal feed or processed for oil. Seed commercially treated with GAUCHO 600 Flowable must be labeled in accordance with all applicable requirements of the Federal Seed Act.

Labels for commercially treated seed must include the following addition to the Environmental Hazards statements:

Exposed treated seed may be hazardous to birds. Dispose of all excess treated seed and seed packaging by burial away from bodies of water. Cover or incorporate spilled treated seeds.

### **USE RESTRICTION:**

Rape greens grown and harvested from GAUCHO 600 treated seed must not be used for human and feed consumption. Rapeseed grown and harvested from GAUCHO 600 treated seed is only for industrial uses and can not be used for edible oil or any other human / feed consumption.

Wheat, Barley, Oats, Rye, Triticale, Sorghum, and Millet: Do not graze or feed livestock on treated areas for 45 days after planting.

Cotton (delinted seed only): Regardless of the type of application (seed treatment, soil or foliar) do not apply more than a total of 0.5 lb. of imidacloprid per acre per cropping cycle.

### **Stored Seed Protection:**

Applied at labeled rates equal to or above 0.8 fl. oz. per hundredweight, GAUCHO® 600 Flowable will provide protection to seed against injury from the following insects: Indian Meal Moth (*Plodia interpunctella*), Rice Weevil (*Sitophilus oryzae*), Red Flour Beetle (*Tribolium castaneum*), and Lesser Grain Borer (*Rhizopertha dominica*). It is recommended that seed with existing populations of stored grain pests be fumigated prior to treating and bagging seed.

### **For Early Season Protection Against Certain Sucking Insects:**

GAUCHO 600 Flowable will aid in the protection of seeds and seedlings against injury by certain early season insects.

#### **Canola, rapeseed, mustard seed:**

To provide early season protection of seedlings against injury by aphids, flea beetles and wireworms apply as a commercial seed treatment at 10.24 to 25.6 fl. oz. per hundredweight of seed. In areas where flea beetles and foliar insects are in high numbers, the higher application rate is recommended. Please consult your local agricultural office for pest patterns, history, and forecasts to assist in determining the appropriate rate for your region.

For suppression of Lygus bugs, including *Lygus spp.*, in their second generation and cabbage Seedpod Weevil larvae, including *Ceutorhynchus assimilis*, apply 15.36 to 25.6 fl. oz. per hundredweight of seed.

#### **Flax, crambe, and borage:**

To provide early season protection of seedlings against wireworms, seed corn maggots and flea beetles apply as a commercial seed treatment at 25.6 fl. oz. per hundredweight of seed.

#### **Safflower:**

To provide early season protection of seedlings against wireworms, apply as a commercial seed treatment at 0.25 – 0.50 mg a.i./seed. (One fl. oz. of GAUCHO 600 contains 17.7g imidacloprid.)

#### **Sunflower:**

To provide early season protection of seedlings against wireworms, seed corn maggots and flea beetles apply as a commercial seed treatment at 0.25 – 0.50 mg a.i./seed. (One fl. oz. of GAUCHO 600 contains 17.7 g imidacloprid.)

### **For End-Use Application At Agricultural Establishments:**

#### **Canola, rapeseed, mustard seed:**

Apply using an HCBT or a Batch Treater. Shake GAUCHO 600 Flowable thoroughly before use. Apply 5.1 to 12.8 fl. oz. of GAUCHO 600 Flowable per 50 pound bag. GAUCHO 600 Flowable may be diluted with an approved Bayer CropScience fungicide mixture for extended disease protection. Treat one-half of seed with one-half of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered.

#### **Safflower:**

To provide early season protection of seedlings against wireworms, apply using HCBT or a batch treater at 12.8 fl. oz. per hundredweight of seed.

#### **Flax, sunflower, crambe, and borage:**

To provide early season protection of seedlings against wireworms, seed corn maggots and flea beetles apply using an HCBT or a batch treater at 12.8 fl. oz. per hundredweight of seed.

**Field Corn:**

For the protection of corn plants from the corn insect pests listed below. Apply as a seed treatment at the specified rates listed.

PEST	GAUCHO 600	
	MG.AI / KERNEL	FL.OZ. / 80,000 SEED UNIT
Corn root worm (including Northern, Western, Southern and Mexican) <sup>1</sup> Flea beetle Chinch bug Southern green stinkbug White grub Seed corn maggot Thrips Wireworm Corn leaf aphid Imported fire ant Southern corn leaf beetle Billbug <sup>2</sup> Grape colaspis <sup>2</sup> Black cutworm <sup>3</sup>	1.34	6.0
PEST	GAUCHO 600	
	MG.AI / KERNEL	FL.OZ. / 80,000 SEED UNIT
Flea beetle Chinch bug Seed corn maggot Thrips Wireworm Corn leaf aphid Imported fire ant Grape colaspis <sup>2</sup> White grub	0.60	2.70
PEST	GAUCHO 600	
	MG.AI / KERNEL	FL.OZ. / 80,000 SEED UNIT
Seed corn maggot (seed protection only) Wireworm (seed protection only) Flea beetle (through 1 leaf stage) Imported fire ant White grub <sup>4</sup>	0.16	0.72

<sup>1</sup> In areas of heavy to severe corn rootworm populations, protection will not be adequate. Use only in areas of light to moderate corn rootworm populations. Consult your State Agricultural Extension Service on levels of corn rootworm populations.

<sup>2</sup> Reduces early season feeding damage.

<sup>3</sup> Will reduce feeding damage caused by leaf feeding black cutworms that are 1/2 inch or less in length.

<sup>4</sup> Reduces feeding damage during emergence and seedling stages.

**Field Corn: For End-Use Application At Agricultural Establishments:**

Apply using an HCBT or an Eight-Bag Batch Treater. Shake GAUCHO 600 Flowable thoroughly before use. Dilute GAUCHO 600 Flowable with water and/or an approved Bayer CropScience fungicide mixture. The final slurry rate should be adjusted to apply a rate of 8 - 10 fl. oz. of diluted slurry per 50-pound bag of seed. Treat one-half of seed with one-half of slurry mix. Add balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered. Apply 0.75 oz. of dry TALC per 50-pound bag of seed following the GAUCHO 600 Flowable application and allow it to distribute evenly on the seed.

**Wheat, Barley, Oats, Rye, Triticale:**

To provide early season protection of seedlings against injury by aphids (including Bird cherry-oat, English grain, Greenbug, and Russian wheat aphid), Hessian fly, apply 0.8 to 2.4 fluid ounces per hundredweight of seed prior to planting as a slurry treatment. Low use rate for "wireworm-only" protection: GAUCHO 600 applied at the 0.13 - 0.26 fl. oz. per hundredweight of seed offers suppression of wireworm activity on seed and young seedlings. To provide early season protection from grasshopper damage, GAUCHO 600 should be applied to seed at 1.2 to 2.4 fluid ounces per hundredweight. To reduce early season damage caused by grasshopper, GAUCHO treated seed may be planted as a 50 to 60 foot border around the edges of the field. Consult your local university extension entomologist for details regarding grasshopper control in your area. For maximum effectiveness, seed must be treated uniformly. Use the higher rate to provide increased length of protection and from heavy insect pressure and from wireworms, and to reduce potential spread of Barley yellow dwarf virus due to aphid vectors. Do not graze or feed livestock on treated areas for 45 days after planting.

**Wheat, Barley, Oats, Rye, Triticale: For End-Use Application At Agricultural Establishments:**

Apply using a Total Slurry Treater (TST), Farmer Applied Seed Treater (F.A.S.T.), Bayer CropScience Air Pressure System (BCSAP) or other on-farm seed treating equipment to deliver accurate rates of GAUCHO 600 Flowable to achieve optimum product performance. Apply 0.8 – 2.4 fl. oz. per hundredweight of seed. GAUCHO 600 Flowable should be combined with a Bayer CropScience fungicide product for seed and seedling protection against fungal pathogens, as well as insect pests. Dilution with water may be necessary depending on fungicide formulation used. GAUCHO 600 Flowable may also be applied on-farm as an over-treatment to seed pretreated with a fungicide. In this case, dilution is necessary. Do not graze or feed livestock on treated areas for 45 days after planting.

**Sorghum, Millet:**

To provide early season protection of seedlings against injury by Aphids (including Corn leaf, English grain, Greenbug, and Yellow sugar cane aphid), Chinch bugs, Fire ants and Wireworms, apply 6.4 fluid ounces per hundredweight of seed prior to planting as a slurry treatment. Ensure thorough coverage. Do not graze or feed livestock on treated areas for 45 days after planting.

**Sorghum, Millet: For End-Use Application At Agricultural Establishments:**

Apply using an HCBT or an Eight-Bag Batch Treater. Shake GAUCHO 600 Flowable thoroughly before use. Dilute 3.2 fluid ounces of GAUCHO 600 Flowable with water. The final slurry rate must be adjusted to apply a rate of 8 - 10 fluid ounces of diluted slurry per 50-pound bag of seed. Treat one-half of seed with one-half of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered. Apply 0.75 oz. of dry TALC per 50-pound bag of seed following the GAUCHO 600 Flowable application and allow it to distribute evenly on the seed. Do not graze or feed livestock on treated areas for 45 days after planting.

**Cotton (Delinted Seed Only):**

To provide protection of seedlings against injury by early season thrips and aphids, and where the specific application rate is desired on an individual seed basis apply at 0.375mg. ai. per seed (do not apply more than 12.8 fluid ounces per hundredweight of seed) prior to planting as a slurry treatment so as to ensure thorough coverage. Otherwise, apply at 12.8 fluid ounces per hundredweight of seed. Regardless of the type of application (seed treatment, soil or foliar) do not apply more than a total of 0.5 lb. of imidacloprid per acre per cropping cycle.

**Cotton (Delinted Seed Only): For End-Use Application At Agricultural Establishments:**

Apply using an HCBT or an Eight-Bag Batch Treater. Shake GAUCHO 600 Flowable thoroughly before use. Dilute 6.4 fluid ounces of GAUCHO 600 Flowable with water or a ready to use fungicide mixture, such as RTU<sup>®</sup>-VITAVAX<sup>®</sup>-Thiram or ALLEGIANCE<sup>®</sup>-FL, for each 50-pound bag of cottonseed to be treated. The final slurry rate must be adjusted to apply a rate of 8 to 10 fluid ounces of diluted slurry per 50-pound bag of seed. Treat one-half of seed with one-half of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered.

**Sugar Beets:**

To provide early season protection of seedlings against injury by Whitefly, Aphids, Leafhoppers (including to reduce potential for spread of Curly top and Yellow mosaic virus due to aphid and leafhopper vectors), Root aphid, Thrips and Wireworms, apply as a commercial seed treatment at 2.4 to 5.0 fluid ounces of GAUCHO 600 Flowable in or on a unit of pelleted sugar beet seed with a weight ratio of 2:1 pelleting mixture to raw seed (seed count 100,000 seed - approximately 1 kilogram by weight). Apply in a film coat directly to raw seed (100,000 seed or approximately 1 kilogram by weight) at a rate of 2.4 fluid ounces per unit of seed. If rates exceed 2.4 fluid ounces per unit, seed must be pelleted.

**Sweet Corn:**

For the protection of sweet corn plants from the insect pests listed below. Apply as a seed treatment at the recommended rates listed.

PEST	GAUCHO 600 FL. OZ. / CWT. OF SEED
Flea beetle Early season corn leaf aphid Seed corn maggot Wireworm	6.4
Imported fire ant Early season corn leaf aphid Seed corn maggot Wireworm	3.2 - 6.4
Imported fire ant Seed corn maggot (seed protection) Wireworm (seed protection)	1.6 – 3.2
Wireworm (seed protection)	0.8 – 1.6

The final slurry rate must be adjusted to apply a rate of 16 - 20 fl. oz. of dilute solution per hundredweight of seed with commercial application equipment.

**Popcorn:**

To provide early season protection of seedlings against injury by flea beetles, apply as a commercial seed treatment at 6.4 fl. oz. per hundredweight of seed.

**Soybean:**

For protection of planted seeds from damage caused by seed corn maggot, to reduce feeding damage caused by soybean aphids and over-wintering bean leaf beetles, and to help suppress the spread of certain viruses, apply as a seed treatment at the recommended rates listed. Do not apply more than 3.2 fluid ounces per hundredweight of seed. Use higher rates to provide increased length of protection and for heavy insect pressure. GAUCHO 600 Flowable can be used as an over-treatment.

Application Method	Gaicho 600
By weight: hundred weight of seed (100 lbs of seed)	1.6 – 3.2 fl oz/ 100 lbs of seed
Per seed*	0.0747 – 0.2336 mg ai/seed
Per 140,000 seed unit*	0.59 – 1.84 fl oz / 140,000 seed

Do not graze or feed livestock on soybean forage or hay.

\*Do not apply by seed treatment more than 0.067 (soybean) pounds of active ingredient imidacloprid per acre per season based on 3000 soybean seed per pound and a planting rate of 160.000 seed per acre.

**Adzuki Bean, Asparagus Bean, Broad Bean (Succulent Or Dry), Catjang Bean, Chinese Longbean, Field Bean, Guar Bean, Jackbean, Kidney Bean, Lablab Bean, Lima Bean (Succulent Or Dry), Moth Bean (Succulent Or Dry), Mung Bean, Navy Bean, Pinto Bean, Rice Bean, Runner Bean, Snap Bean, Sword Bean, Tepary Bean, Urd Bean, Wax Bean, Yardlong Bean, Blackeyed Pea (Succulent Or Dry), Chickpea, Cowpea (Succulent Or Dry), Crowder Pea, Dwarf Pea, Edible-Pod Pea, English Pea, Field Pea, Garden Pea, Green Pea, Pigeon Pea (Succulent Or Dry), Snow Pea, Southern Pea (Succulent Or Dry), Sugar Snap Pea, Grain Lupin, Sweet Lupin, White Lupin, White Sweet Lupin, Lentil:\***

To provide early season protection of seedlings against injury by wireworm, bean leaf beetle, imported fire ant, and aphid, apply as a commercial seed treatment at 1.6 – 3.2 fl. oz. per hundredweight of seed prior to planting.

**\* Seed-and-pod vegetable seed treated in California must be destined for planting in states other than California and is not to be planted in California.**

**Carrot:**

To provide early season protection of seedlings against injury by seed corn maggot and wireworm, apply as a commercial seed treatment at 6.4 fl. oz. per hundredweight of seed.

## **STORAGE AND DISPOSAL**

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

### **PESTICIDE STORAGE**

Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures.

### **PESTICIDE DISPOSAL**

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

### **CONTAINER HANDLING**

#### **[Dilutable Seed Treatment Products in Non-Refillable Plastic Containers]**

Rigid Non-refillable containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs) Non-refillable container. Do not reuse or refill this container. After emptying product from container, either return container to Bayer CropScience per instructions from Bayer CropScience Customer Service Center (1-800-527-4781), or rinse and either recycle or dispose of the container as follows:

#### **Bottom Discharge IBC (e.g. – Schuetz Caged IBC or Snyder Square Stackable)**

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

#### **Top Discharge IBC, Drums, Kegs (e.g.– Snyder 120 Next Gen, Bonar B120, Drums, and Kegs)**

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

#### **[Dilutable Seed Treatment Products in Non-Refillable Metal Containers]**

Nonrefillable container. Do not reuse or refill this container. After emptying product from container, either return container to Bayer CropScience per instructions from Bayer CropScience Customer Service Center (1-800-527-4781), or rinse and either recycle or dispose of the container as follows:

#### **Liquid dilutables in containers small enough to shake (5 gallons or less)**

Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### **Solid dilutables in containers small enough to shake (5 gallons or 50 pounds or less)**

Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### **Any dilutable pesticides in containers too large to shake (larger than 5 gallons or 50 pounds)**

Triple Rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

**[Non-Dilutable Seed-Treatment Products in Non-Refillable Containers]**

**Seed-Treatment Products in Non-Refillable Fiber Drums with Liners**

Non-refillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment, then offer for recycling if available or dispose of in a sanitary landfill or by incineration. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

**Seed-Treatment Products in Non-rigid, Non-Refillable Containers**

Nonrefillable container. Do not reuse or refill this container. Completely empty container into application equipment. Then offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

**[Seed Treatment Products in Refillable Containers]**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. After emptying product from container, either return container to Bayer CropScience per instructions from Bayer CropScience Customer Service Center (1-800-527-4781) or rinse and either recycle or dispose of the container as follows:

**Bottom Discharge IBC (e.g. – Schuetz Caged IBC or Snyder Square Stackable)**

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

**Top Discharge IBC, Drums, Kegs (e.g. – Snyder 120 Next Gen, Bonar B120, Drums, and Kegs)**

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To triple rinse the containers before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration.

End users are authorized to remove tamper evident cables as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned. If this is the case, end users are not authorized to remove tamper evident cables, one way valves or clean container.



## IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, disclaimer of Warranties and Limitations of Liability.

Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Bayer CropScience, no claims are made to guarantee germination of carry-over seed.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

**LIMITATIONS OF LIABILITY:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE'S ELECTION, THE REPLACEMENT OF PRODUCT.

## NET CONTENTS:

GAUCHO, RTU, and ALLEGIANCE are registered trademarks of Bayer  
VITAVAX is a registered trademark of Chemtura Corporation

## PRODUCED FOR



**Bayer CropScience LP**  
**800 N. Lindbergh Blvd.**  
**St. Louis, MO 63167**  
**1-866-99BAYER (1-866-992-2937)**

GAUCHO 600 Flowable (PENDING) 01/03/2019, 02/26/2019

## **Exhibit B**

Excerpt of Pesticide Product Label for Merit 75 WSP,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8\\_PUID,P8\\_RINUM:29288,432-1318](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8_PUID,P8_RINUM:29288,432-1318), (Oct. 25, 2016)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 25, 2016

Kristian Paul  
Regulatory Affairs Manager  
Bayer CropScience  
Environmental Science Division  
2 T.W. Alexander Dr.  
RTP, NC 27709

Subject: Notification per PRN 98-10 – Add container referral statement and artwork images of label pests  
Product Name: Merit 75 WSP Insecticide  
EPA Registration Number: 432-1318  
Application Date: 26-Sept-2016  
Decision Number: 521907

Dear Mr. Paul:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact Dee Colby at 703-347-8657 or via email at colby.deanna@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "D. Colby for".

Venus Eagle, Product Manager 01  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

**NOTIFICATION**  
432-1318  
The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated: 10/25/2016

<b>GROUP</b>	<b>4A</b>	<b>INSECTICIDE</b>
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# Merit<sup>®</sup> 75 WSP Insecticide

[ABN: Lesco Bandit 75 WSP Insecticide; Prokoz Zenith 75 WSP Insecticide; Submerge 75 WSP Insecticide; Hunter 75 WSP Insecticide; Criterion 75 WSP Insecticide; and Touchstone 75 WSP Insecticide]

For foliar and systemic insect control of listed pests in turfgrass (including sod farms), landscape ornamentals, fruit and nut trees, and interior plantscapes

[Marketing Claims for Product Packed in Mini Drum

Merit Mega Mini-Drum  
Treats up to 27.5 acres  
25% More Merit, Free]

[Coleoptera: Scarabaeidae Image] [Agrilus planipennis Fairmaire Image] [Adelges tsugae Annand Image] [Myzus persicae Sulzer Image] [Bemisia tabaci Gennadius Image]

[Coleoptera: Scarabaeidae Image] [Myzus persicae Sulzer Image] [Bemisia tabaci Gennadius Image] [Hemiptera: Tingidae Image] [Thysanoptera: thrips Image] [Scapteriscus spp. Image]

Editorial Note – [Bracketed text] is optional language

**ACTIVE INGREDIENT:**

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine ..... 75%

**OTHER INGREDIENTS:** ..... 25%

**TOTAL:** ..... 100%

Keep water-soluble packets in this container and store in a cool dry place but not below freezing (32° F).

Do Not Remove Packets From Container Except For Immediate Use.

EPA Reg. No. 432-1318

EPA Est. No. \_\_\_\_

**STOP - READ THE LABEL BEFORE USE  
KEEP OUT OF REACH OF CHILDREN**

## CAUTION

PARA EL USUARIO: Si usted no lee o entiende inglés, no use este producto hasta que le hayan explicado completamente las instrucciones que figuran en la etiqueta.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

See [Back] [Side] Panel for First Aid Instructions and [Leaflet] [Booklet] for Complete Precautionary Statements and Directions for Use. (Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.)

For **MEDICAL** and **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577  
For **PRODUCT USE** Information Call 1-800-331-2867

### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<p>In case of emergency call toll free the Bayer Environmental Science Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p><b>NOTE TO PHYSICIAN:</b> No specific antidote is available. Treat the patient symptomatically.</p>	

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets off treated area until spray is dry.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**WPS USES:** Applicators and Other Handlers who handle this product for any use covered by the Worker Protection Standard (40 CFR Part 170) – in general, agricultural plant uses e.g., use in sod farms, must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.
- Shoes plus socks

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

**NON-WPS USES:** Applicators and other handlers who handle this product for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) – in general, only agricultural plant uses are covered by the WPS, must wear:

- Shirt and pants
- Gloves
- Shoes plus socks

#### Engineering controls statements:

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

### USER SAFETY RECOMMENDATIONS

#### User should:

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

### ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging the treatment area. This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**SEE INDIVIDUAL SITES FOR SPECIFIC POLLINATOR PROTECTION APPLICATION RESTRICTIONS. IF NONE EXIST UNDER THE SPECIFIC SITE, FOR OUTDOOR FOLIAR APPLICATIONS, FOLLOW THESE APPLICATION DIRECTIONS.**



### NON-AGRICULTURAL USES

**Do not apply Merit 75 WSP Insecticide while bees are foraging. Do not apply Merit 75 WSP Insecticide to plants that are flowering. Only apply after all flower petals have fallen off.**

Use Merit® 75 WSP Insecticide as directed for sod farm production and on turfgrass and ornamentals on: residential home lawns, business and office complexes, shopping complexes, multi-family residential complexes, golf courses, airports, cemeteries, parks, playgrounds, and athletic fields.

Merit 75 WSP Insecticide can be used by soil application as directed on trees, shrubs, flowers and groundcovers in sites: in and around the perimeter of industrial and commercial buildings; residential areas; interior plantscapes; municipal, city, state and national forested areas, and private wooded areas.

**RESTRICTION:** Not for use in commercial greenhouses, nurseries, or on grasses grown for seed, or on commercial fruit and nut trees.

### RESISTANCE MANAGEMENT RECOMMENDATIONS

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

Merit 75 WSP Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

### AGRICULTURAL USE REQUIREMENTS

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

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

**Exception:** If the product is applied by drenching, 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
- Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton.
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses, and sod farm production.

Keep children and pets off treated area until dry.

## **Exhibit C**

Excerpt of Pesticide Product Label for Aloft LC G,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8\\_PUID,P8\\_RINUM:486611,59639-215](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8_PUID,P8_RINUM:486611,59639-215), (Dec. 28, 2015)



59639-215

12/28/2015

1/15



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 28, 2015

Ms. Linda Obrestad  
Regulatory Analyst  
Valent U.S. A. Corporation  
P.O. Box 8025  
Walnut Creek, CA 94596-8025

Subject: Notification per PRN 98-10 – Update Warranty/Disclaimer Statement  
EPA Registration Number and Minor Edits for Consistency/Add  
Oregon Restriction Statement  
Product Name: Aloft LC G Insecticide  
EPA Registration Number: 59639-215  
Application Date: November 5, 2015  
Decision Number: 511108

Dear Ms. Obrestad:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, you may contact Melody Banks at 703 305 5413 or via email at [Banks.Melody@epa.gov](mailto:Banks.Melody@epa.gov).

Sincerely,

Venus Eagle, Product Manager 01  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

2/15



GROUP	4A	INSECTICIDE
GROUP	3	INSECTICIDE

**NOTIFICATION**

**DEC 28 2015**

**NOTIFICATION – REDLINE COPY**

**Aloft® LC G  
INSECTICIDE**

**FOR CONTACT AND SYSTEMIC INSECT PEST CONTROL IN LAWNS AND LANDSCAPE ORNAMENTALS AROUND RESIDENTIAL, INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL BUILDINGS, PARKS, RECREATIONAL AREAS AND ATHLETIC FIELDS. NOT FOR USE ON SOD FARMS OR GOLF COURSES.**

**INGREDIENTS**

	By wt
Active Ingredients	
Clothianidin* .....	0.250%
Bifenthrin** .....	0.125%
Other Ingredients .....	<u>99.625%</u>
Total	100.000%

\**(E)*-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine  
 \*\**(2-methyl[1,1'-biphenyl]-3-yl)methyl (1*RS*,3*RS*)-3-[(*Z*)-2-chloro-3,3,3-trifluoroprop-1-propenyl]-2,2-dimethyl-cyclopropanecarboxylate (cis isomers 97% minimum, trans isomers 3% maximum)*

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**SEE INSIDE BOOKLET-NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

EPA Reg. No. 59639-215  
 EPA Est.

**Net Contents:  
 NET WEIGHT: 30 POUNDS**

## **Exhibit D**

Pesticide Product Label for Assail 70WP,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8\\_PUID,P8\\_RINUM:376  
65,8033-23\\_](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8_PUID,P8_RINUM:37665,8033-23_) (Jun. 11, 2021)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

June 11, 2021

Kristen B. Knox  
Regulatory Affairs Manager  
Nippon Soda Co., Ltd.  
c/o Nisso America Inc.  
379 Thornall Street, 5th Floor  
Edison, NJ 08837

Subject: Label Amendment – Adding “Not approved for this use in California” to watercress and revising the “COTTONSEED (Crop Subgroup 20C)” heading to read “COTTON (within Crop Subgroup 20C)”  
Product Name: ASSAIL® 70 WP Insecticide  
EPA Registration Number: 8033-23  
Application Date: March 4, 2021  
Decision Number: 576356

Dear Kristen B. Knox:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

Page 2 of 2  
EPA Reg. No. 8033-23  
Decision No.576356

with FIFRA section 6(e). If you have any questions, please contact Ralph Narain by phone at 703-347-8750, or via email at [Narain.Ralph@epa.gov](mailto:Narain.Ralph@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Venus Eagle', followed by a horizontal line extending to the right.

Venus Eagle, Product Manager 01  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure: Stamped label

Acetamiprid	GROUP	4A	INSECTICIDE
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# ASSAIL® 70 WP Insecticide

[Alternate brand name: Assail® 70 WSP Insecticide]\*

For Agricultural Use Only

ACTIVE INGREDIENT: Acetamiprid, (E)- N <sup>1</sup> -[(6-chloro-3-pyridyl)methyl]-N <sup>2</sup> -cyano-N <sup>1</sup> -methyl acetamidine.....	70% by wt.
OTHER INGREDIENTS: .....	30% by wt.
TOTAL: .....	100% by wt.

EPA Reg. No. 8033-23

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**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.)**

### EMERGENCY TELEPHONE NUMBERS:

CHEMTREC: (800) 424-9300  
MEDICAL: (866) 673-6671 Rocky Mountain Poison Control Center

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor for treatment advice.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 – 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

**Have the product container or label with you when calling a poison control center or doctor or going for treatment.**

**NOTE TO PHYSICIAN:** There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

Net Contents: \_\_\_\_\_ Batch No. \_\_\_\_\_

**Nippon Soda Co., Ltd.**  
c/o Nisso America Inc.  
379 Thornall Street, 5<sup>th</sup> Floor.  
Edison, NJ 08837

<p><b>ACCEPTED</b></p> <p><b>06/11/2021</b></p> <p>Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8033-23</p>
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\*Note to Reviewer: When the product is used in a water soluble package, only the language pertaining to water soluble packaging will appear as per the bracketed "[OR where on WSP]"

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS and DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Harmful if inhaled. Avoid breathing vapors or spray mist. Keep out of reach of children and domestic animals.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear long-sleeved shirts, long pants, shoes plus socks, chemical resistant gloves made of the following waterproof material: nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, barrier laminate, polyvinyl chloride (PVC)  $\geq 14$  mils, or viton  $\geq 14$  mils and chemical resistant headgear for overhead exposure.

In addition to the above, for aerial applications, mixers and loaders must wear a filtering face piece, half piece or full-face NIOSH approved particulate respirator (TC-84A) with any R or P filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

[OR where on WSP: Assail 70 WSP Insecticide]

### [ENGINEERING CONTROLS STATEMENT

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard [40 CFR 170.607(d)]. Mixers and loaders handling this product while it is enclosed in intact water-soluble packets may elect to wear reduced PPE of long-sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves. When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.]

### 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 product is toxic to birds and aquatic invertebrates. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are foraging in the treatment area. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not contaminate water used for irrigation or domestic purposes.

### GROUND WATER ADVISORY

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

### SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. Avoid accidental or intentional application of this product to ditches, swales, drainage ways or impervious surfaces such as driveways. Runoff of this product to surface water will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

## DIRECTIONS FOR USE

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

**Read entire label before using this product.**

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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves (nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, barrier laminate, polyvinyl chloride (PVC)  $\geq 14$  mils, or viton  $\geq 14$  mils) and shoes plus socks.

### STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE

Store unused product in a cool, ventilated, dry, locked area. Do not allow prolonged storage in areas where temperatures frequently exceed 115° F (46° C). NEVER TRANSFER THIS PRODUCT TO ANOTHER CONTAINER FOR STORAGE.

#### PESTICIDE DISPOSAL

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

#### CONTAINER HANDLING

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available

#### COMPATIBILITY / TANK MIXING

ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide], when diluted with an equal volume of water, is physically compatible with a wide range of commonly used spray products, but the full range of compatibilities under local conditions is not known. Therefore, it is essential that before using ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] in any tank mixture the compatibility of the mixture be established. Add a small amount of this product to an equal volume of water in a small container and then add the other pesticide or spray product and mix thoroughly. DO NOT USE MIXTURES THAT CURDLE, PRECIPITATE, OR GREASE. FOR BEST RESULTS, USE SPRAY MIXTURES IMMEDIATELY AFTER MIXING WITH ADEQUATE AGITATION. It is the pesticide user's responsibility to ensure that all products in a tank mix are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products of the mixture (for example, first aid from one product, spray drift management from another).

#### Special Instructions for Tank Mixing ASSAIL 70 WP Insecticide

When tank mixing ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] with other products, introduce the products into the tank in the following order: (1) water soluble packets (2) wettable powders (such as ASSAIL 70 WP Insecticide) (3) water dispersible granules (4) flowable liquids (5) emulsifiable concentrates and (6) adjuvants and/or oils (do not use stickers). Always allow each product to fully disperse before adding the next product.

#### Mixing and Application Instructions for ASSAIL 70 WP Insecticide

ASSAIL 70 WP Insecticide is a dry powder formulation that readily disperses in water to form a spray, which may be applied by ground or air.

1. Plan ahead. Prepare only enough spray mixture as can be applied on the day of mixing.
2. Fill tank ¼ - ½ full with the required amount of total spray volume of water.
3. Begin agitation and add product. The jug should be given a good hard shake to fluff the product before measuring. When pouring into the measuring cone, do not tamp down. The cone is calibrated for the fluffed product.
4. Continue to fill tank while directing a stream of water onto any floating product.
5. Allow mixing in tank for 2 minutes after filling or until thoroughly mixed before applying.
6. Maintain continuous agitation during mixing and application to assure uniform suspension. If mixture sits without agitation for extended periods, agitate the mixture for at least 10 minutes before use.
7. Equip spray system with a 50-mesh inline filter, which will protect nozzles that are typically used. Nozzles may also be equipped with 50-mesh nozzle filters or 25 to 50 mesh (equivalent) slotted nozzle filters.
8. ASSAIL 70 WP Insecticide is unstable in water pH below 4 and above 9. If necessary, buffer water to obtain optimum pH range.

[OR where on WSP: Assail 70 WSP Insecticide]

**Special Instructions for Tank Mixing ASSAIL WSP Insecticide.** When tank mixing ASSAIL WSP Insecticide with other products, introduce the products into the tank in the following order: (1) water soluble packets (such as ASSAIL WSP Insecticide), (2) wettable powders, (3) water dispersible granules, (4) flowable liquids, (5) emulsifiable concentrates, and (6) adjuvants and/or oils. Always allow each product to fully disperse before adding the next product. Products containing boron will interfere with film solubility of the water-soluble packets. If boron products are added to the spray tank, add the ASSAIL WSP Insecticide soluble packets first, making sure they are completely dissolved before adding any boron products.

#### Instructions for Using Water Soluble Packages Directly into Spray tanks:

Water Soluble Packages (WSPs) are designed to dissolve in water. Agitation may be used, if necessary, to help dissolve the WSP. Failure to follow handling and mixing instructions can increase your exposure to the pesticide products in WSPs. WSPs, when used properly, qualify as a closed mixing/loading system under the Agricultural Worker Protection Standard [40 CFR 170.607(d)].

#### Handling Instructions

Follow these steps when handling pesticide products in WSPs.

1. Mix in spray tank only.
2. Handle WSP(s) in a manner that protects package from breakage and/or unintended release of contents. If package is broken, put on PPE required for clean-up and then continue with mixing instructions.
3. Keep the WSP(s) in outer packaging until just before use.
4. Keep the WSP dry prior to adding to the spray tank.
5. Handle with dry gloves and according to the label instructions for PPE.
6. Keep WSP intact. Do not cut or puncture WSP.
7. Reseal the WSP outer packaging to protect any unused WSP(s).

#### Mixing Instructions

Follow the steps below when mixing this product, including if tank mixed with other pesticide products. If being tank mixed, the mixing directions 1 through 9 below take precedence over the mixing directions of the other tank mix products. WSPs may, in some cases, be mixed with other pesticide products so long as the directions for use of all mixed products do not conflict. Do not tank mix this product with products that prohibit tank mixing or have conflicting mixing directions.

1. If a basket or strainer is present in the tank hatch, remove prior to adding the WSP to the tank.
2. Fill tank with water to approximately one-third to one-half of the desired final volume of spray.
3. Stop adding water and stop any agitation.



4. Place intact/unopened WSP(s) into the tank.
5. Do not spray water from a hose or fill pipe to break or dissolve the WSP(s).
6. Start mechanical and recirculation agitation from the bottom of tank without using any overhead recirculation, if possible. If overhead recirculation cannot be turned off, close the hatch before starting agitation.
7. Dissolving the WSP(s) may take up to 5 minutes or longer, depending on water temperature, water hardness and intensity of agitation.
8. Stop agitation before tank lid is opened.
9. Open the lid to the tank, exercising caution to avoid contact with dusts or spray mix, to verify that the WSPs have fully dissolved and the contents have been thoroughly mixed into the solution.
10. Do not add other allowed products or complete filling the tank until the bags have fully dissolved and pesticide is thoroughly mixed.
11. Once the WSP have fully dissolved and any other products have been added to the tank, resume filling the tank with water to the desired level, close the tank lid, and resume agitation.
12. Use the spray solution when mixing is complete.
13. Maintain agitation of the diluted pesticide mix during transport and application.
14. It is unlawful to use any registered pesticide, including WSPs, in a manner inconsistent with its label.

**NOTE:**

- Plan ahead. Prepare only enough spray mixture as can be applied on the day of mixing
- Add buffering agent if required
- Equip spray system with a 50-mesh inline filter, which will protect nozzles that are typically used. Nozzles may also be equipped with 50-mesh nozzle filters or 25 to 50 mesh (equivalent) slotted nozzle filters.
- ASSAIL 70 WSP Insecticide is unstable in water pH below 4 and above 9. If necessary, buffer water to obtain optimum pH range.

**DIRECTIONS FOR CHEMIGATION****Instructions**

**For chemigation use only on cranberries and on potatoes after foliage has emerged and only through overhead sprinkler irrigation systems.**

Apply this product only through overhead sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set, or hand move irrigation systems after potato foliage has emerged. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The overhead sprinkler chemigation 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. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed for materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) of the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**Application Instructions**

Observe the requirements in the System Requirements section above. Apply ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off. Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. Application of more than recommended quantities of irrigation water per acre may result in decreased product performance. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area. Use of end guns which deliver uneven distribution of water is not recommended. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable insect control may result. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

**Spray Preparation**

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a solution of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] in a mix tank. Fill the tank with ½ or ¾ the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] and then the remaining volume of water.

**Sprinkler Irrigation**

Observe all System Requirements and Application Instructions above. Set sprinkler system to deliver a maximum of 0.2 inch of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the solution of ASSAIL 70 WP Insecticide into the irrigation water line so as to deliver the desired rate per acre. The solution of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. Retention of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] on foliage is necessary for optimum activity. Do not apply when wind speed favors drift beyond the area intended for treatment. Where sprinkler distributed patterns do not overlap sufficiently, unacceptable insect control may result.

**DIRECTIONS FOR AERIAL OR GROUND SPRAY APPLICATION****APPLICATION TIMING**

Begin application when insect populations reach recognized economic threshold levels. Consult the Cooperative Extension Service, Professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

**INFORMATION**

ASSAIL 70 WP Insecticide is a 70% wettable powder for the control of many sucking and chewing insects on the crops listed in this label. [OR where on WSP: Assail 70 WSP Insecticide is a 70% wettable powder for the control of many sucking and chewing insects on the crops listed in this label.] The active ingredient in ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] is acetamiprid, a neonicotinoid insecticide that controls target insects through contact and ingestion. ASSAIL 70WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] is rapidly absorbed by the plant tissue and quickly moves via systemic translaminar activity to protect the entire leaf. However, thorough spray coverage is essential for optimal performance. ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] is rain-fast once the spray solution has dried.

**APPLICATION INSTRUCTIONS****ROW CROPS**

Apply a minimum finished spray volume of 5 gallons per acre by air or 15 gallons per acre by ground unless otherwise directed under crop specific directions. For best results, it is important to obtain thorough and uniform spray coverage of the plant. For aerial application, select nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASABE Standard S-572. The use of spray adjuvants, such as high quality non-ionic or silicone surfactants or methylated seed oils is recommended to enhance coverage and plant uptake and may improve pest control in certain crops. Please see specific crop use directions. The addition of an adjuvant is recommended for all applications made to vegetables (except legumes) and to cotton when controlling whiteflies. The use of stickers is not recommended. Some adjuvants can cause adverse effects, such as spotting or burn to fruit or foliage. Select an adjuvant that will be safe for the target crop. Follow adjuvant use directions. Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information. Use higher dosage rates for heavy infestations or dense foliage. The specific length of residual control depends on environmental factors, plant growth, dosage rate, and degree of insect infestation. For foliar banded applications, determine the amount of chemical to use per acre by dividing the band width by the row width and multiplying by the appropriate broadcast rate.

To clean the sprayer after use, drain and flush with water. Use rinsate on crop according to label instructions or dispose of in an approved manner (See STORAGE AND DISPOSAL).

**ORCHARD CROPS**

To achieve optimum pest control, it is important to obtain thorough and uniform spray coverage. Choose a finished spray volume appropriate for the size of tree or vine and amount of foliage which will provide thorough coverage throughout the canopy. For certain pests, also follow recommendations listed under crop specific directions. For aerial application, select nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. Aerial applications may not provide as thorough coverage as ground applications.

The use of spray adjuvants, such as high quality non-ionic surfactants, methylated seed or horticultural oils is recommended to enhance coverage and plant uptake and may improve pest control. The addition of an adjuvant is recommended for all applications to pome fruit when controlling codling moth, oriental fruit moth, and San Jose scale. The use of stickers is not recommended. Some adjuvants can cause adverse effects, such as spotting or burn to fruit or foliage. Select an adjuvant that will be safe to the target crop. Follow adjuvant use directions. Consult your local Extension Service, Crop Advisor or Nippon Soda representative for additional information.

Use higher dosage rates within the listed rate range for heavy infestations or dense foliage. The specific length of residual control depends on environmental factors, plant growth, dosage rate, and degree of insect infestation.

To clean the sprayer after use, drain and flush with water. Use rinsate on crop according to label instructions or dispose of in an approved manner (See STORAGE AND DISPOSAL).

**INTEGRATED PEST MANAGEMENT (IPM) USE OF THIS PRODUCT**

ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] has ovicidal, larvicidal, or adulticidal activity against many pests which can be effectively utilized in IPM programs. Control of important pests coupled with retention of beneficial insects and spiders can offer significant benefits to those producers utilizing integrated pest management programs.

**RESISTANCE MANAGEMENT**

Acetamiprid is the active ingredient in ASSAIL 70WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide]. It is a member of a class of chemicals known as neonicotinoids and within the mode of action Group 4A. Rotating ASSAIL 70WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] with insecticides with a different mode of action (other than Group 4A insecticides) may delay or prevent development of resistance and cross-resistance to ASSAIL and other Group 4A insecticides. Avoid making more than two (2) consecutive applications of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] before rotating to an alternative mode of action insecticide. Foliar applications of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] should be avoided on crops treated with a Group 4A seed treatment or soil-applied insecticide until a foliar application of a non-Group 4A insecticide (insecticide with a different mode of action) has been applied between these applications. The use of ASSAIL 70WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] should conform to the resistance management guidelines established in your area. Consult your agricultural advisor, PCA, university or extension personnel for recommended pest and resistance management practices for your area. Use recommended IPM practices in your pest management system. Use of rates below the minimum rate listed for each particular insect pest may enhance the development of resistance and should be avoided.

To prevent development of insect resistance, do not apply ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] to crops listed on this label when grown in a greenhouse.

#### SPRAY DRIFT

Avoid spray drift. Do not apply when weather conditions may cause drift. Do not allow this product to drift on to non-target areas. To avoid spray drift, DO NOT apply aurally when wind speed is greater than 10 mph or during periods of temperature inversions. For aerial application, select nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. Do not cultivate or plant crops within 10 feet of aquatic areas as to allow growth of a vegetative filter strip

The interaction of many equipment and weather related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations. 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor. 2. Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the airstream as much as possible, and by avoiding excessive spray boom pressure.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory below:

#### AERIAL DRIFT REDUCTION ADVISORY

[This section is advisory in nature and does not supersede the mandatory label requirements].

#### INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply **MEDIUM** droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control.

Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

#### CONTROLLING DROPLET SIZE

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation - Small droplets are more prone to spray drift and can be minimized by several factors including orienting nozzles away from the airstream. Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

**RATE CONVERSION CHART FOR ALL OF THE FOLLOWING CROP USE DIRECTIONS**

POUNDS AI PER ACRE	OUNCES ASSAIL 70 WP INSECTICIDE PER ACRE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	POUNDS ASSAIL 70 WP INSECTICIDE PER ACRE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	TREATED ACRES PER POUND ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]
0.025	0.6	0.04	28
0.038	0.9	0.05	18.4
0.05	1.1	0.07	14
0.075	1.7	0.11	9.3
0.1	2.3	0.14	7
0.125	2.9	0.18	5.6
0.15	3.4	0.21	4.7
0.2	4.6	0.29	3.5
0.25	5.7	0.36	2.8

**TROPICAL AND SUBTROPICAL MEDIUM TO LARGE FRUIT, SMOOTH, INEDIBLE PEEL (subgroup 24B)**

**Spray Volume for Tropical and subtropical medium to large fruit, smooth, inedible peel (subgroup 24B)**

Apply in a minimum finished spray volume of at least 10 gallons per acre by air or 50 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	

<p><b>Tropical and subtropical medium to large fruit, smooth, inedible peel (subgroup 24B):</b>                  abiu; akee apple; avocado; avocado, Guatemalan; avocado, Mexican; avocado, West Indian; bacury; banana; banana, dwarf; binjai; canistel; cupuacú; etambe; jatobá; kei apple; langsung; lanjut; lucuma; mabolo; mango; mango, horse; mango, Saipan; mangosteen; paho; papaya; pawpaw, common; pelipisan; pequi; pequia; persimmon, American; plantain; pomegranate; poshte; quandong; sapote, black; sapote, green; sapote, white; sataw; screw-pine; star apple; tamarind-of-the-Indies; wild loquat; cultivars, varieties, and hybrids of these commodities.</p>	<p>Mealybug</p>	<p>0.15</p>	<p>3.4</p>	<p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p> <p>Complete sprays (every row) are recommended.</p> <p>The use of spray adjuvants, such as horticultural oil or high quality non-ionic surfactants, enhances coverage and may improve pest control.</p> <p>Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information.</p>
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**RESTRICTIONS: Tropical and subtropical medium to large fruit, smooth, inedible peel (within subgroup 24B)**

- Do not make more than 2 applications per calendar year.
- Do not apply more than once every 14 days.
- Do not apply less than 1 day before harvest (PHI = 1 day).
- Do not exceed a total of 0.30 lb. active ingredient (6.8 oz. product) per acre per calendar year.

**COTTON (within Crop Subgroup 20C)**

**SPRAY VOLUME FOR COTTON**

Apply ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] in a minimum finished spray volume of 5 gallons per acre by aircraft or by ground equipment (15 gallons per acre by ground for whitefly control). Under extreme pest populations or dense foliage, use a minimum spray volume of 10 gallons per acre by ground (15 gallons per acre by ground for whitefly control). **NOT** for seed treatment use.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	

<b>COTTON</b> <b>(within Crop Subgroup 20C);</b> cultivars, varieties and/or hybrids of these  <b>[FOR USE IN</b> <b>[Arizona]</b> <b>California</b> <b>Florida</b> <b>Georgia</b> <b>North Carolina</b> <b>South Carolina</b> <b>and Virginia</b> <b>ONLY]*</b>  *Items in brackets [ ] are optional label language.	Aphids	0.025 – 0.05	0.6 – 1.1	<p>Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range.</p> <p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p>
	Whitefly Sweet Potato Silver Leaf	0.075 - 0.1	1.7 - 2.3	<p>Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. For whitefly control, ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] should be applied in a minimum finished spray volume of 5 gallons per acre by aircraft and 15 gallons per acre by ground equipment.</p> <p>Use the high rates within the listed rate range under heavy pressure.</p> <p>Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.</p> <p>After cutout, foliar absorption of Assail may be affected, reducing aphid and whitefly control. After cutout, it is recommended to increase the use of penetrating adjuvants (including oils) to enhance contact and absorption, and/or consider tank mixes with knockdown insecticides such as Bifenture™, Acephate, etc.</p>
	Plantbugs (Lygus spp.)	0.05 – 0.1	1.1 – 2.3	<p>Begin applications when treatment thresholds have been reached.</p> <p>Some species of plantbugs may be less susceptible and may only be suppressed by applications of this product. Two applications at 7 to 10 day intervals may be required to achieve control.</p> <p>Thorough coverage is important to obtain optimum control.</p>
	Fleahopper	0.025 - 0.05	0.6 - 1.1	<p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p>
	Thrips	0.05 – 0.075	1.1 – 1.7	<p>Begin applications when thrips damage is first observed or anticipated.</p> <p>Thorough coverage is important. Use of a spray surfactant may improve coverage and control.</p>
<b>FOR USE AS AN</b> <b>OVICIDE ON</b> <b>COTTON</b>	Budworm Bollworm	0.025 - 0.05	0.6 - 1.1	<p>Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. Optimal ovicidal activity when applied within 24 hours of egg lay.</p>
	Whitefly	0.075 - 0.1	1.7 - 2.3	<p>Applications made for ovicidal control will not provide sustained control of migrating adults.</p>

**RESTRICTIONS: Cotton (within Crop Subgroup 20C) – [For Use in CA, [AZ,] FL, GA, NC, SC, and VA Only]\* (\*Note to PM: items in brackets [ ] are optional)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 28 days before harvest (PHI = 28 days).
- Do not exceed a total of 0.4 lbs. active ingredient (9.2 oz. product) per acre per calendar year.
- There are no rotational crop plantback restrictions for this product.

**LEAFY GREENS (within Crop Group 4-16A)**

**SPRAY VOLUME FOR LEAFY GREENS (within Crop Group 4-16A):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>LEAFY GREENS (within Crop Group 4-16A)</b> Amaranth (Chinese, leafy), Aster (Indian), Blackjack, Cats whiskers, Cham-chwi, Cham-na-mul, Chervil (fresh leaves), Chipilin, Chrysanthemum (garland), Cilantro (fresh leaves), CornSalad, Cosmos, Dandelion (leaves), Dang-gwi (leaves), Dillweed, Dock, Dol-nam-mul, Ebolo, Endive, Escarole, Fameflower, Feather cockscomb, , Good King Henry, Huauzontle, Jute leaves, Lettuce (bitter, head, leaf), Orach, Parsley fresh leaves), Plantain (buckhorn), Primrose (English), Purslane (garden, winter), Radicchio, , Spinach (leaf, Malabar, New Zealand, tanier), Swiss Chard, Violet (Chinese leaves), ; cultivars, varieties, and hybrids of these commodities	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species such as lettuce aphid, red aphid, foxglove aphid, etc., use the maximum rate within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For field use only)	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Diamondback Moth (suppression)	0.075	1.7	Begin applications as soon as oths begin laying eggs and continue as needed. Use in a program as resistance management tool.
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thrips will seek sheltered parts of the plant so using nozzles that produce a fine spray with sufficient water for thorough coverage is essential for good control. Applications during the “cupping” stage of cabbage may be especially helpful in preventing injury. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Swede Midge	0.075	1.7	Apply as a preventative spray to control the first generation if swede midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season

**RESTRICTIONS: Leafy Greens (within Crop Group 4-16A)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 oz. of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb. ai/A).
- There are no rotational crop plantback restrictions for this product.

**BRASSICA LEAFY GREENS (within Crop Group 4-16B)**

**SPRAY VOLUME FOR BRASSICA LEAFY GREENS (within Crop Group 4-16B):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>BRASSICA LEAFY GREENS (within Crop Group 4-16B)</b> Arugula, Broccoli (Chinese), Broccoli raab, Cabbage (abyssinian), Cabbage (Chinese, bok choy), Cabbage (seakale, Collards, Cress (garden, upland), Hanover salad, Kale, Maca leaves, Mizuna, Mustard greens, Radish leaves, Rape greens, Rocket (wild), Shepherd's purse, Turnip greens, Watercress (Not approved for use in California); cultivars, varieties, and hybrids of these commodities	Aphids	0.035 – 0.1	0.8 – 2.3	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species such as lettuce aphid, red aphid, foxglove aphid, etc., use the maximum rate within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For field use only)	0.05 - 0.1	1.1 – 2.3	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Diamondback Moth (suppression) Flea beetle	0.075 – 0.1	1.7 – 2.3	Begin applications as soon as moths begin laying eggs and continue as needed.  Use in a program as a resistance management tool.
	Thrips	0.075 – 0.1	1.7 – 2.3	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thrips will seek sheltered parts of the plant so using nozzles that produce a fine spray with sufficient water for thorough coverage is essential for good control. Applications during the "cupping" stage of cabbage may be especially helpful in preventing injury. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Harlequin Bug	0.075 - 0.1	1.7 – 2.3	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Swede Midge	0.075 – 0.1	1.7 - 2.3	Apply as a preventative spray to control the first generation if swede midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season.

**RESTRICTIONS: Leafy Vegetables (within Crop Group 4-16)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.



- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 3 days before harvest (PHI = 3 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 oz. of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb. ai/A).
- There are no rotational crop plantback restrictions for this product.
- Do not harvest turnip root for food/feed purposes
- For applications made to watercress, production fields must be drained of water at least 24 hours prior to application and water must not be reapplied to the field for a minimum of 24 hours following the application.

### LEAF PETIOLE VEGETABLES (within crop subgroup 22B)

**SPRAY VOLUME FOR LEAF PETIOLE VEGETABLES (within crop subgroup 22B):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>LEAF PETIOLE VEGETABLES within crop subgroup 22B</b> Cardoon, celery, Chinese celery, fuki, rhubarb, udo, zuiki; cultivars, varieties and hybrids of these commodities	Aphids	0.038 – 0.075	0.9 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species such as lettuce aphid, red aphid, foxglove aphid, etc., use the maximum rate within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For Field Use Only)	0.05 - 0.075	1.1 – 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.

#### RESTRICTIONS: Leaf Petiole Vegetables (within crop subgroup 22B)

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 ozs of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A)
- There are no rotational crop plantback restrictions for this product.

### BRASSICA HEAD and STEM VEGETABLES (within Crop Group 5-16)

**SPRAY VOLUME FOR BRASSICA HEAD and STEM VEGETABLES (within Crop Group 5-16):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE	USE DIRECTIONS
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		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>BRASSICA HEAD and STEM VEGETABLES (within Crop Subgroup 5-16)</b> Broccoli, Brussels sprouts, Cabbage, Chinese cabbage (napa), Cauliflower, and cultivars, varieties and hybrids of these commodities	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For field use only)	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Diamondback Moth (suppression)	0.075	1.7	Begin applications as soon as moths begin laying eggs and continue as needed.  Use in a program as a resistance management tool.
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thrips will seek sheltered parts of the plant so using nozzles that produce a fine spray with sufficient water for thorough coverage is essential for good control. Applications during the “cupping” stage of cabbage may be especially helpful in preventing injury. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Swede Midge	0.075	1.7	Apply as a preventative spray to control the first generation if swede midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season.

**RESTRICTIONS: Brassica Head and Stem Vegetables (within Crop Group 5-16)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 ozs of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A).
- There are no rotational crop plantback restrictions for this product.

**KOHLRABI**

**SPRAY VOLUME FOR KOHLRABI:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
KOHLRABI	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For field use only)	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Diamondback Moth (suppression)	0.075	1.7	Begin applications as soon as moths begin laying eggs and continue as needed.  Use in a program as a resistance management tool.
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thrips will seek sheltered parts of the plant so using nozzles that produce a fine spray with sufficient water for thorough coverage is essential for good control. Applications during the "cupping" stage of cabbage may be especially helpful in preventing injury. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Swede Midge	0.075	1.7	Apply as a preventative spray to control the first generation if swede midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season.

**RESTRICTIONS: Kohlrabi**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 ozs of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A).
- There are no rotational crop plantback restrictions for this product.

**CELTUCE, FLORENCE FENNEL**

**SPRAY VOLUME FOR CELTUCE AND FLORENCE FENNEL:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
Celtuce, Florence Fennel	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species such as lettuce aphid, red aphid, foxglove aphid, etc., use the maximum rate within the listed rate range. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For field use only)	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.

**RESTRICTIONS: Celtuce, Florence fennel**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. acetamiprid active ingredient (8.5 oz. of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb. ai/A).
- There are no rotational crop plantback restrictions for this product.

**FRUITING VEGETABLES (within Crop Group 8-10)**

**SPRAY VOLUME FOR FRUITING VEGETABLES (within Crop Group 8-10):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
FRUITING VEGETABLES (within Crop Group 8-10)	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are

Eggplant (including african, pea, scarlet), Cocona, Garden huckleberry, Goji berry, Groundcherry, Martynia, Naranjilla, Okra, Pepino, Pepper (bell, nonbell), Roselle, Sunberry, Tomato (including bush, currant, tree), Tomatillo & Cultivars, varieties and/or hybrids of these	Colorado Potato Beetle	0.025 - 0.05	0.6 - 1.1	difficult to control species present, use the maximum rate within the listed rate range. Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf Greenhouse (For Field Use Only)	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Use of an adjuvant is recommended to improve coverage and control. Use the high rates within the listed rate range under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Pepper Weevil	0.05 - 0.075	1.1 - 1.7	Begin applications when pepper weevil adults first appear and flower buds and/or fruit are present. Apply on a 7 to 14-day interval. Use a 7-day interval under heavy insect pressure.
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thorough coverage of the plant is important to obtain optimum control. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Leafhopper	0.05 - 0.075	1.1 - 1.7	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.

**RESTRICTIONS: Fruiting Vegetables (within Crop Group 8-10)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lbs. acetamiprid active ingredient (6.8 ozs of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A).
- There are no rotational crop plantback restrictions for this product.

**CITRUS (within Crop Group 10-10)**

**SPRAY VOLUME FOR CITRUS (within Crop Group 10-10)** For mature trees, apply in a minimum finished spray volume of 100 gallons per acre by ground or a minimum of 20 gallons per acre by air. Ground applications are recommended for optimal control.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>CITRUS (within Crop Group 10-10)</b> Calamondin, Citron, Citrus Hybrids, Grapefruit, Japanese summer grapefruit,	Aphids	0.05 - 0.1	1.1 - 2.3	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range.

Kumquat, Lemon, Lime (including Australian desert, Australian finger, Australian round, Brown River finger, Mount White, Russell River, sweet, Tahiti, New Guinea Wild), Mandarin (Mediterranean, Satsuma), Orange (sweet, sour, tachibana, trifoliolate) Pummelo, Tangelo, Tangor, Uniq fruit & Cultivars, varieties and/or hybrids of these	Citrus Thrips	0.075 - 0.125	1.7 – 2.9	Use higher rates within the listed rate range under heavy insect pressure.
	Citrus Leafminer			Begin applications when treatment thresholds have been reached.
	Citrus Mealybug			Thorough coverage is important to obtain optimum control.
	Caribbean Black Scale			
	Glassywinged sharpshooter			
	Citricola Scale Red Scale	0.15 - 0.25	3.4 - 5.7	Begin applications when treatment thresholds have been reached. Treat for citricola scale when crawlers are present in the spring and fall. Use of approved horticultural oil will enhance control.  Adjust gallonage to tree size to insure coverage of scale on wood and foliage. Optimum gallonage for Red Scale control is 750 - 1500 GPA.
	Katydid	0.11 – 0.19	2.5 – 4.3	Apply at petal fall or when katydids are first observed. Repeat in 2 to 3 weeks.  Thorough coverage is important to obtain optimum control.
	Asian Citrus Psyllid (suppression)	0.13 – 0.25	3.0 – 5.7	Begin applications as pest populations begin to appear. Thorough coverage is necessary for optimum control. The addition of a spray adjuvant such as silicone-based surfactants or horticultural oil may enhance coverage and improve pest control. Scout groves regularly and retreat if needed. Use higher rates under heavy insect pressure.

**RESTRICTIONS: Citrus (within Crop Group 10-10)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.55 lbs. active ingredient (12.5 ozs product) per acre per calendar year.

**POME FRUIT (within Crop Group 11-10)**

**SPRAY VOLUME FOR POME FRUIT (within Crop Group 11-10):** Apply in a minimum finished spray volume of at least 50 gallons per acre by ground or a minimum of 10 gallons per acre by air. Ground applications are recommended for optimal control.

SITE	PEST	DOSAGE PER ACRE		PEST-SPECIFIC DIRECTIONS	USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]		

<b>POME FRUIT (within Crop Group 11-10)</b> Apple, Azarole, Crabapple, Loquat, Mayhaw, Hook, Medlar, Pear (including Asian), Quince (including Chinese, Japanese), Tejocote & Cultivars, varieties and/or hybrids of these	Aphids	0.05 – 0.075	1.1 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range. Woolly apple aphid may require use of higher rates within the listed rate range and repeat applications.	<p>Begin applications before insect populations reach damaging levels.</p> <p>Degree day models are good indicators that can be used to determine application timing and interval for leafminer, codling moth, and certain other insect pests.</p>
	Tentiform Leafminer	0.05	1.1	Application(s) for leafminer control must be made before larvae reach the tissue feeding stage.	Thorough spray coverage is important to obtain optimum and extended control.
	Leafhoppers	0.05 - 0.075	1.1 - 1.7		Residual control of labeled pests varies by rate. Use the higher rates for optimal and extended control.
	Codling Moth	0.075 - 0.15	1.7 - 3.4	The use of horticultural oil in combination with ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] has been shown to enhance control of codling moth.	The use of spray adjuvants, such as high quality non-ionic surfactants, enhances coverage and may improve pest control.
	Oriental Fruit Moth Lesser Apple Worm	0.1 – 0.15	2.3 – 3.4		
	Mealybug Psylla Mullein Plant Bug (Campylomma)	0.075 – 0.15	1.7 – 3.4	<p>Summer applications may not effectively control Psylla.</p> <p>Application to prevent fruit damage from Mullein Plant Bug should be made at pink bud through bloom, prior to petal fall. Do not apply this product when bees are foraging in the area to be treated.</p>	<p>Complete sprays (every row) are recommended.</p> <p>Use of a horticultural oil with ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] may aid in managing mites, particularly when conditions for mite buildup are favorable. Also, consider the mite population history and the use of other products in the orchard that may predispose a mite population increase.</p>
	European Apple Sawfly Japanese Beetle	0.1 – 0.15	2.3 – 3.4	For Japanese Beetle: adult beetles will stop feeding after application and mortality will occur within a few days.	

	Apple Maggot Plum Curculio San Jose Scale (suppression)	0.15	3.4	For Apple Maggot, use of baited spheres is a good indicator that can be used to determine spray timing.  For optimum control of Plum Curculio, an early petal fall application is necessary followed by one or two cover sprays during the egg-laying period.  For best results against San Jose Scale time applications for the crawler stage.  The addition of a horticultural oil is recommended for improved performance against San Jose Scale	Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information.
	Dogwood Borer	0.15	3.4	Apply spray to tree trunks. Time first application, after moth emergence, to coincide with egg laying period. Make second application 14 to 21 days later.	

**RESTRICTIONS: Pome Fruit (within Crop Group 11-10)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 12 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.60 lbs. active ingredient (13.5 ozs product) per acre per calendar year.

**GRAPES and other Climbing Vine Small Fruits (except Fuzzy Kiwifruit) (within Crop Sub-Group 13-07F)**

**SPRAY VOLUME FOR GRAPES and OTHER CLIMBING VINE SMALL FRUITS (EXCEPT FUZZY KIWIFRUIT) (within Crop Sub-Group 13-07F):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground. Ground applications are recommended for optimal control.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	



<p><b>GRAPES and other climbing vine small fruits (except fuzzy kiwifruit) (within Crop Sub-Group 13-07F)</b>                  Amur river grape; gooseberry, hardy kiwifruit, Maypop, schisandra berry, and cultivars, varieties, and/or hybrids of these.</p>	<p>Leafhoppers                  Including grape leafhopper and variegated leafhopper                  Grape cane girdler                  Grape berry moth                  Glassywinged sharpshooter                  Aphids                  Mealybug (Grape, Obscure, Vine) Western                  Grapeleaf Skeletonizer                  Thrips</p> <p>Phylloxera* (aerial form only)                  Banded Grape Bug*                  Rose Chafer*                  Japanese Beetle*</p>	<p>0.05 – 0.10</p>	<p>1.1- 2.3</p>	<p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p> <p>For Mealybug control, apply ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] as crawlers/nymphs become active.</p> <p>For Western grapeleaf skeletonizer, apply ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] as larvae are observed feeding on leaves. Apply sufficient water to provide thorough coverage of all surfaces.</p> <p>For Japanese Beetle: Adult beetles will stop feeding after application and mortality will occur within a few days.</p> <p>The use of spray adjuvants, such as high quality non-ionic surfactants, methylated seed or horticultural oils, may enhance coverage and plant uptake and may improve pest control. The use of stickers is not recommended. Some adjuvants can cause adverse effects, such as spotting or burn to fruit or foliage. Select an adjuvant that will be safe for the target crop. Follow adjuvant use directions. Consult your local Extension Service, Crop Advisor or Nippon Soda representative for additional information.</p> <p>*Not for use on these pests in CA, OR, and WA.</p>
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**RESTRICTIONS: Grapes and other climbing vine small fruits (except fuzzy kiwifruit) (within Crop Sub-Group 13-07F)**

- Do not make more than 2 applications per calendar year.
- Do not apply more than once every 14 days.
- Do not apply less than 3 days before harvest (PHI = 3 days).
- Do not exceed a total of 0.2 lb. active ingredient (4.6 ozs product) per acre per calendar year

**TUBEROUS AND CORM VEGETABLES (within Crop Sub-Group 1C)**

**SPRAY VOLUME FOR TUBEROUS AND CORM VEGETABLES (within Crop Sub-Group 1C):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>TUBEROUS AND CORM VEGETABLES (within Crop Sub-Group 1C)</b> Potato, Sweet Potato, Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Edible	Aphids*	0.044 – 0.075	1.0 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate within the listed rate range.
	Leafhoppers*	0.025 - 0.075	0.6 - 1.7	
	Colorado Potato Beetle* Cucumber Beetle			

Canna, Cassava (Bitter and Sweet), Chayote (Root), Chufa, Dasheen, Ginger, Leren, Tanier, Turmeric, Yam Bean, True Yam	Flea Beetle	0.025 – 0.05	0.6 – 1.1	Thorough coverage is important to obtain optimum control.  *For application via overhead sprinkler chemigation to emerged potato foliage, use a 1.7 ounce / Acre rate to control aphids and leafhoppers and a 1.0 – 1.7 ounce / Acre rate to control Colorado potato beetles. See the Directions for Chemigation section of the label for application details.
<b>FOR USE AS AN OVICIDE</b>	European Corn Borer	0.05 – 0.075	1.1 – 1.7	

**RESTRICTIONS: Tuberous and Corm Vegetables (within Crop Sub-Group 1C)**

- Do not make a foliar ASSAIL 70WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] application following a seed treatment application of acetamiprid in the same crop.
- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lb. active ingredient (7 ozs product) per acre per calendar year.
- There are no rotational crop plantback restrictions for this product.

**TOBACCO**

**SPRAY VOLUME FOR TOBACCO:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
TOBACCO	Flea beetles Hornworms	0.05 – 0.075	1.1 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range.  Begin applications when treatment thresholds have been reached.
	Aphids	0.025 – 0.075	0.6 – 1.7	
<b>FOR USE AS AN OVICIDE</b>	Budworm	0.05 – 0.075	1.1 – 1.7	Use the higher rates within the listed rate range under conditions of heavy pest pressure.  Thorough coverage is important to obtain optimum control.

**RESTRICTIONS: Tobacco**

- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lb. active ingredient (6.8 ozs product) per acre per calendar year.

**STONE FRUIT (within Crop Group 12-12)**

**SPRAY VOLUME FOR STONE FRUIT (within Crop Group 12-12):** Apply in a minimum finished spray volume of at least 10 gallons per acre by air or 50 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		PEST-SPECIFIC DIRECTIONS	GENERAL USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]		
<b>STONE FRUIT (within Crop Group 12-12)</b> Apricot, Apricot (Japanese), Capulin, Cherry (black, Nanking, sweet, tart), Jujube (Chinese) Nectarine, Peach, Plum (American, beach, Canadian, cherry, Chickasaw, Damson, Japanese, Klamath, prune), Plumcot, Prune (fresh and dried), Sloe; and cultivars, varieties and/or hybrids of these	Aphids	0.05 – 0.10	1.1 – 2.3	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range.	Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.  Complete sprays (every row) are recommended.  Residual control of labeled pests varies by rate. Use higher rates within the listed rate range for optimal and extended control.  The use of spray adjuvants, such as silicone-based surfactants or horticultural oils, may also enhance coverage and improve pest control.  Use of pheromone traps in conjunction with degree days are good indicators that can be used to determine spray timings.  Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information.
	Leafhoppers				
	Glassywinged sharpshooter	0.075 - 0.15	1.7 – 3.4		
	Oriental Fruit Moth	0.10 – 0.15	2.3 – 3.4	For control of Oriental Fruit Moth and Peach Twig Borer, make a delayed dormant application with oil prior to bud break, and at moth flights using appropriate degree day models.	
	Peach Twig Borer			For optimum control of Plum Curculio, an early petal fall application is necessary followed by one or two cover sprays during the egg-laying period. Follow local recommendations for subsequent generations.	
Plum Curculio			The addition of horticultural oil is recommended for improved performance.		
	Cat-facing insects (such as tarnished plant bug and stinkbug) (suppression)				
	Cherry Fruit Fly	0.10 - 0.15	2.3 - 3.4	Begin applications for cherry fruit fly, black cherry fruit fly and western cherry fruit fly at adult emergence and continue on a 10-day spray interval through egg hatch. Proper application timing is critical for optimum control of fruit flies.	
	Black Cherry Fruit Fly				
	Western Cherry Fruit Fly				

	San Jose Scale  Japanese Beetle  Rose Chafer	0.1 – 0.15	2.3 – 3.4	For San Jose Scale, apply with horticultural oil as a dormant/delayed dormant application and time in-season applications for the crawler stage.  The addition of horticultural oil for crawler stage applications may improve performance against San Jose Scale. Consult local recommendations regarding the use of oil.  For Japanese Beetle: adult beetles will stop feeding after application and mortality will occur within a few days.	
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**RESTRICTIONS: Stone Fruit (within Crop Group 12-12)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 10 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.6 lb. active ingredient (13.6 ozs product) per acre per calendar year.

**CUCURBITS (within Crop Group 9)**

**SPRAY VOLUME FOR CUCURBITS (within Crop Group 9):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
CUCURBITS (within Crop Group 9) Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Gourd (edible), <i>Mormordica</i> spp., Muskmelon (hybrid and/or cultivars of <i>Cucumis melo</i> including true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls,	Cucumber Beetle Spotted Striped Western Striped Melonworm Pickleworm	0.05 – 0.10	1.1 – 2.3	For Cucumber Beetles: adult beetles will stop feeding after application and mortality will occur within a few days.  For Melonworm: Begin applications at first sign of foliar feeding and/or when larvae are present in the field.  For Pickleworm: Begin applications at first bloom and continue as needed.  The use of spray adjuvants, such as silicone-based surfactants or crop oils, may enhance coverage and improve pest control.
	Squash Bug Squash Vine Borer	0.10	2.3	Applications for Squash Bug are most effective against newly laid eggs and nymphs.
	Aphids Leafhoppers	0.05 - 0.075	1.1 – 1.7	Aphid and Leafhopper species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range.

mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin, Squash (summer and winter), Watermelon	Whitefly Sweet Potato Silver Leaf	0.05 – 0.10	1.1 – 2.3	Begin applications when whitefly adults appear, prior to development of nymphs. Do not wait until heavy populations have become established. Use the high rates within the listed rate range under heavy pest pressure.  Whiteflies have shown a tendency to develop insecticide resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
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**RESTRICTIONS: Cucurbits (within Crop Group 9)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 5 days.
- Do not apply less than 0 days before harvest (PHI = 0 days).
- Do not exceed a total of 0.5 lb. acetamiprid active ingredient (11.5 ozs of ASSAIL70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A).

**TREE NUTS (within Crop Group 14-12)**

**SPRAY VOLUME FOR TREE NUTS (within Crop Group 14-12) :** Apply in a minimum finished spray volume of 10 gallons per acre by air or 50 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		PEST-SPECIFIC DIRECTIONS	USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL™ 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]		
<b>TREE NUTS CROP GROUP (within Crop Group 14-12) :</b> African nut-tree, Almond, Beech nut, Brazil nut, Brazilian pine, Bunya, Bur oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana chestnut, Hazelnut (filbert), Heartnut, Hickory nut,	Aphids Leafhoppers	0.05 – 0.18	1.1 – 4.1	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rates within the listed rate range. Use the higher rates within the listed rate range for Black Pecan Aphid.  On large mature trees use of the higher rate within the listed rate range may be necessary for adequate control at the top of the trees. Use of an appropriate adjuvant will improve coverage and control.	Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.  Complete sprays (every row) are recommended.  Use of pheromone traps in conjunction with degree days are good indicators that can be used to determine spray timings.  Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information.
	Glassywinged sharpshooter  Pecan Nut Casebearer	0.075 - 0.125	1.7 – 2.9		

Japanese horse-chestnut, Macadamia (bush nut), Mongongo nut, Monkey-pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi, Pili nut, Pine nut, Pistachio, Sapucaia nut, Tropical almond, Walnut (black and English), Yellowhorn, and cultivars, varieties and/or hybrids of these	Codling Moth	0.10 - 0.18	2.3 – 4.1	Residual control varies by rate. Use the higher rates within the listed rate range for extended control and on tall, mature trees with dense foliage.	
	Oriental Fruit Moth			For control of Oriental Fruit Moth (OFM) and Peach Twig Borer (PTB), make a delayed dormant application with oil prior to bud break. For Codling Moth, OFM, and PTB, make in-season applications at moth flights using appropriate degree day models.	
	Peach Twig Borer San Jose Scale			The addition of horticultural oil is recommended for improved performance. Consult local recommendations regarding the use of oil.  For best results against San Jose Scale, apply as a dormant/delayed dormant application with oil, and time in-season applications for the crawler stage.  For best results against Pecan Weevil use the highest rate within the listed rate range.	
	Hickory Shuckworm				
	Pecan Weevil				
	Red Humped Caterpillar				
	Filbertworm				
	Navel Orangeworm				
	Walnut Husk Fly	0.12 – 0.15	2.7 – 3.4	Apply once gravid (egg producing) adult females are observed. Add a recommended rate of husk fly bait. If needed repeat application in 3 to 4 weeks.	
	Gill's Mealybug	0.15	3.4	Apply as crawlers emerge, typically in early to mid-June. Apply with sufficient water to provide thorough coverage of all surfaces. Inclusion of a horticultural oil or penetrating adjuvant (no stickers) may enhance control.	

**RESTRICTIONS: Tree Nuts (within Crop Group 14-12)**

- For any of the pests listed above, use the high rate within the listed rate range under heavy pest pressure.
- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 14 days.
- Do not apply less than 14 days before harvest (PHI = 14 days).
- Do not exceed a total of 0.72 lb. active ingredient (16.4 ozs product) per acre per calendar year.

**EDIBLE PODDED LEGUME VEGETABLES (within Crop Sub-Group 6A)  
and SUCCULENT SHELLED PEAS AND BEANS (within Crop Sub-Group 6B)**

**SPRAY VOLUME FOR EDIBLE PODDED LEGUME VEGETABLES (within Crop Sub-Group 6A) AND SUCCULENT SHELLED PEAS AND BEANS (within Crop Sub-Group 6B):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE	USE DIRECTIONS
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		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>EDIBLE PODDED LEGUME VEGETABLES (within Crop Sub-Group 6A) and SUCCULENT SHELLED PEAS AND BEANS (within Crop Sub-Group 6B)</b> Bean ( <i>Phaseolus</i> spp.) (includes runner bean, snap bean, wax bean, lima bean(green)); Bean ( <i>Vigna</i> spp.) (includes asparagus bean, Chinese longbean, moth bean, yardlong bean, blackeyed pea, cowpea, southern pea); Jackbean; Broad Bean (succulent); Pea ( <i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, snow pea, sugar snap pea, English pea, garden pea, green pea); Soybean (immature seed); Sword Bean; and Pigeon Pea.	Aphids Leafhoppers Cucumber Beetles Bean Leaf Beetle Mexican Bean Beetle	0.044 – 0.1	1.0 – 2.3	Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.  Aphid and Thrips species may differ in susceptibility to this product. If you are unsure of the aphid or thrips species present and its susceptibility, use the higher rates within the listed rate range.
	Whitefly	0.075 – 0.1	1.7 – 2.3	
	Thrips	0.085 – 0.1	1.9 – 2.3	

**RESTRICTIONS: Edible podded legume vegetables (within Crop Sub-Group 6A) and succulent shelled peas and beans (within Crop Sub-Group 6B)**

- Do not make more than 3 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lb. active ingredient (6.9 ozs product) per acre per calendar year.

**STRAWBERRIES AND OTHER LOW GROWING BERRIES (within Crop Sub-Group 13-07G)**

**SPRAY VOLUME FOR STRAWBERRIES AND OTHER LOW GROWING BERRIES (within Crop Sub-Group 13-07G):** Apply in a minimum finished spray volume of 10 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	

<b>STRAWBERRIES AND OTHER LOW GROWING BERRIES (within Crop Sub-Group 13-07G);</b> Bearberry; Bilberry; Lowbush Blueberry; Cloudberry; Cranberry; Lingonberry; Muntries; Partridgeberry; and cultivars, varieties, and/or hybrids of these.	Blueberry Maggot Spanworm Cherry Fruitworm Cranberry Fruitworm Flea Beetle Japanese Beetle Oblique Banded Leaf Roller Plantbugs ( <i>Lygus</i> spp.) Sap Beetles Thrips Whiteflies Fireworm (suppression) Gypsy Moth Sparganothis Fruitworm Cranberry Tipworm	0.075 – 0.13	1.7 – 3.0	Aphid and thrips species may differ in susceptibility to this product. If you are unsure of the species present and its susceptibility, use the higher rates within the listed rate range.  Begin applications when treatment thresholds have been reached.  Use the higher rates within the listed rate range under conditions of heavy pest pressure.  Thorough coverage is important to obtain optimum control.
	Aphids Leafhoppers Spittlebug	0.035 – 0.075	0.8 – 1.7	

**RESTRICTIONS: STRAWBERRIES AND OTHER LOW GROWING BERRIES (within Crop Sub-Group 13-07G)**

- Do not exceed a total of 6.0 oz. of ASSAIL 70 WP Insecticide [OR where on WSP: Assail 70 WSP Insecticide] (0.26 lb ai) per acre per calendar year.
- Do not make more than 2 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 1 day before harvest (PHI = 1 day).
- Do not flood cranberry bogs within 60 days following an application of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide].
- Do not grow more than one crop of cranberries per calendar year.

**BLUEBERRIES AND OTHER BUSH AND CANE BERRIES (within Crop Sub-Groups 13-07 A and B)**

**SPRAY VOLUME FOR BLUEBERRIES AND OTHER BUSH AND CANE BERRIES (within Crop Sub-Groups 13-07 A and B):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<b>BLUEBERRIES AND OTHER BUSH BERRIES (within Crop Sub-Group 13-</b>	Aphids Leafhoppers	0.044 – 0.1	1.0 - 2.3	Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.
	Whitefly	0.075 – 0.1	1.7 – 2.3	



<p><b>07B)</b> Aronia berry; blueberry, highbush and lowbush; buffalo currant; Chilean guava; currant, red and black; elderberry; European barberry; gooseberry; cranberry, highbush; edible honeysuckle; huckleberry; jostaberry; Juneberry; lingonberry; native currant; salal; sea buckthorn; and cultivars, varieties, and/or hybrids of these.</p> <p><b>CANE BERRIES (within Crop Sub-Group 13-07A)</b> Blackberry, Loganberry, Raspberry (black and red), wild raspberry, and cultivars, varieties, and/or hybrids of these.</p>	<p>Japanese Beetle Blueberry Maggot Sap Beetles Tarnished Plant Bug Strawberry Rootworm Cranberry Fruitworm Cherry Fruitworm Flea Beetle Spanworm Thrips Blueberry Gall Midge Western Raspberry Fruit Worm (adult)</p>	<p>0.085 – 0.1</p>	<p>1.9 – 2.3</p>	<p>Aphid and Thrips species may differ in susceptibility to this product. If you are unsure of the aphid or thrips species present and its susceptibility, use the higher rates within the listed rate range.</p>
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**RESTRICTIONS: Blueberries and Other Bush and Cane Berries (within Crop Sub-Groups 13-07 A and B)**

- Do not make more than 5 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 1 day before harvest (PHI = 1 day).
- Do not exceed a total of 0.5 lb. active ingredient (11.4 ozs product) per acre per calendar year.

**ONIONS AND OTHER BULB VEGETABLES (within Crop Group 3-07)**

**SPRAY VOLUME FOR ONIONS AND OTHER BULB VEGETABLES (within Crop Group 3-07):** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
<p><b>ONIONS AND OTHER BULB VEGETABLES (within Crop Group 3-07)</b> Chives, fresh leaves; Chinese chives, fresh leaves; daylily bulbs, Elegans hosta, Fritillaria leaves and bulbs; bulb garlic; great headed bulb garlic, serpent bulb garlic; kurrat; lady's leek; leek; wild leek; lily bulb; Beltsville bunching onion; bulb onion; Chinese bulb onion; fresh onion; green onion; macrostem onion; pearl onion; potato bulb onion; treetops onion; Welsh onion tops; shallot bulb and fresh leaves; and cultivars, varieties, and/or hybrids of these.</p>	<p>Thrips</p>	<p>0.094 – 0.15</p>	<p>2.1 - 3.4</p>	<p>Begin applications when treatment thresholds have been reached.</p> <p>Thorough coverage is important to obtain optimum control.</p> <p>Thrips species may differ in susceptibility to this product. If you are unsure of the thrips species present and its susceptibility, use the higher rates within the listed rate range.</p> <p>The use of spray adjuvants, such as silicone-based surfactants or horticultural oils, may also enhance coverage and improve pest control.</p>

**RESTRICTIONS: Onions and other Bulb Vegetables (within Crop Group 3-07)**

- Do not make more than 4 applications per calendar year.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.6 lb. acetamiprid active ingredient (13.7 ozs of ASSAIL 70 WP [OR where on WSP: Assail 70 WSP Insecticide] product) per acre per calendar year including any pre-transplant applications of acetamiprid (maximum pre-transplant application rate of acetamiprid is 0.15 lb ai/A).

**CLOVER (for use in ID, OR, and WA only)**

**SPRAY VOLUME FOR CLOVER:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
CLOVER	Aphids including clover and pea aphid	0.05-0.075	1.1 – 1.7	Begin applications when treatment thresholds have been reached.  Thorough coverage is important to obtain optimum control.

**RESTRICTIONS: CLOVER (for use in ID, OR, and WA only)**

- Do not make more than one application per calendar year.
- Do not exceed a total of 0.075 lb. acetamiprid active ingredient (1.7 ozs of ASSAIL 70 WP product) [OR where on WSP: Assail 70 WSP] per acre per calendar year.
- Do not apply less than 30 days before harvest (PHI = 30 days).

**ASPARAGUS**

**SPRAY VOLUME FOR ASPARAGUS:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		USE DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
ASPARAGUS	Asparagus thrips	0.1	2.3	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Japanese beetle Tarnished plant bug			Apply to foliage after the cutting season. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control
	Asparagus miner (suppression)			Apply to adults before egg laying. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control
	Leaf hopper			0.05 – 0.075

	Asparagus aphids	0.05 – 0.1	1.1 – 2.3	Apply to new plantings and when plants are young. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Asparagus beetle Spotted asparagus beetle	0.05 – 0.1	1.1 – 2.3	Begin sampling early in the season and throughout the growing season. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.

**RESTRICTIONS: Asparagus**

- Do not make more than two (2) applications per calendar year.
- Do not apply more than once every 10 days.
- Do not apply less than 1 day before harvest (PHI = 1 day).
- Do not exceed a total of 0.2 lb. active ingredient (4.6 ozs product) per acre per calendar year.

**SWEET CORN**

**SPRAY VOLUME FOR SWEET CORN:** Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

Begin applications when treatment thresholds have been reached.

Thorough coverage is important to obtain optimum control.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70 WP INSECTICIDE [OR WHERE ON WSP: ASSAIL 70 WSP INSECTICIDE]	
Sweet Corn	Corn flea beetle	0.075 – 0.1	1.7 – 2.3	Apply up to 2 applications on a 14-day interval. Begin scouting from emergence to corn up to 12 inches tall. Do not apply at this rate less than 7 days before harvest (PHI = 7 days)
	Northern, Western, and Southern Rootworm Beetles (adults)	0.075 – 0.1	1.7 – 2.3	Apply up to 2 applications on a 14-day spray interval during corn silking. Do not apply at this rate less than 7 days before harvest (PHI = 7 days)
	Aphids, Corn leaf aphid Vegetable aphid	0.04 – 0.054	0.9 – 1.2	Apply up to 4 applications on a 7-day spray interval (if applied in a rotation or tank mixture with another insecticide). Do not apply at this rate less than 1 day before harvest (PHI = 1 day)
	Japanese beetle	0.1	2.3	Begin scouting when beetles are first observed. Corn silking is when plants are most vulnerable to feeding. Do not make more than 2 applications on a 14-day spray interval. Do not apply at this rate less than 7 days before harvest (PHI = 7 days)
	Corn (Dusky) Sap Beetle	0.075 – 0.1	1.7 – 2.3	Apply up to 2 applications on a 14-day spray interval during corn tasseling and silking. Do not apply at this rate less than 7 days before harvest (PHI = 7 days)
	Stink bugs (suppression), Corn silk fly (suppression)	0.1	2.3	Apply up to 2 applications on a 14-day spray interval. Do not apply at this rate less than 7 days before harvest (PHI = 7 days)

**RESTRICTIONS: SWEET CORN**

- Do not exceed a total of 0.21 lb. active ingredient (4.8 ozs product) per acre per calendar year.
- Do not make more than two (2) applications at the 2.3 ozs product rate per calendar year or more than four (4) applications at the 1.2 ozs product rate per calendar year.

**Conditions of Sale and Limitation of Warranty and Liability**

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials, resistant strains or other influencing factors in the use of the product, which are beyond the control of Nippon Soda Co., Ltd. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Nippon Soda Co., Ltd. and Seller harmless for any claims relating to such factors.

To the extent allowed by applicable laws, Nippon Soda Co., Ltd. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Nippon Soda Co., Ltd., and Buyer and User assume the risk of any such use. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW, NIPPON SODA CO., LTD. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent allowed by applicable laws, in no event shall Nippon Soda Co., Ltd. or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT ALLOWABLE BY APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF NIPPON SODA CO., LTD. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF NIPPON SODA CO., LTD. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Nippon Soda Co., Ltd. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of Nippon Soda Co., Ltd.

ASSAIL is a Registered Trademark of Nippon Soda Co., Ltd.

## **Exhibit E**

Pesticide Product Label for Swagger,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:6730429811503::NO::P8\\_PUID,P8\\_RINUM:498949,34704-1045](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:6730429811503::NO::P8_PUID,P8_RINUM:498949,34704-1045), (Feb. 13, 2018)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION**

February 13, 2018

Solito Sumulong  
Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632

**Subject:** Label Amendment – Updated Crop Rotation Information, Container Handling,  
and Other Minor Revisions  
**Product Name:** SWAGGER  
**EPA Registration Number:** 34704-1045  
**Application Date:** October 20, 2017  
**Decision Number:** 535485

Dear Mr. Sumulong:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

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

Page 2 of 2  
EPA Reg. No. 34704-1045  
Decision No. 535485

with FIFRA section 6. If you have any questions, please contact Maggie Rudick by phone at 703-347-0257, or via email at [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'KBD', enclosed within a hand-drawn oval.

Kable Bo Davis, Product Manager 3  
Invertebrate and Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

**RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicators certification.



**GROUP 3 | 4A INSECTICIDES**

# SWAGGER®

<b>ACTIVE INGREDIENTS:</b>	<b>By WT</b>
bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate*	5.70%
imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	5.70%
<b>OTHER INGREDIENTS:</b>	<b>88.60%</b>
	<b>TOTAL 100.00%</b>

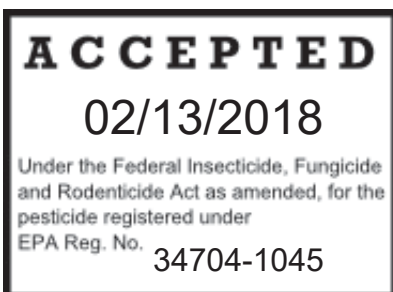
\*CIS isomers 97% minimum, trans isomers 3% maximum.  
 This product contains 0.5 pound each of bifenthrin and imidacloprid active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN  
 DANGER—PELIGRO**

This label must be in the possession of the user at the time of application. Si usted no entiende la etiqueta, busque a alguien para que se a explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See other panels for additional precautionary information.

<b>FIRST AID</b>	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give any liquids to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  <b>For a medical emergency involving this product call: 1-866-944-8565.</b>  <b>Note to physician:</b> This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.</p>	



**EPA REG. NO. 34704-1045**  
**EPA EST. NO. 34704-MS-002**  
**NET CONTENTS 1.0 GAL (3.78 L)**

EXP 0817



**SWAGGER®**  
**EPA REG. NO. 34704-1045**  
**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**DANGER**

Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin or swallowed. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE):**

Some materials that are chemical-resistant to this product are listed below.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Protective eyewear,
- Chemical-resistant gloves, including barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride (PVC)  $\geq 14$  mils or Viton  $\geq 14$  mils, and
- Shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Remove clothing/PPE 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.

**AGRICULTURAL USE REQUIREMENTS**

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

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

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

- Coveralls,
- Chemical resistant gloves, including barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride (PVC)  $\geq 14$  mils or Viton  $\geq 14$  mils, and
- Shoes plus socks.

**ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

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

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county, contact the local extension service for procedures and precautions to use to protect endangered species.

The chemical imidacloprid demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**SWAGGER®**  
**EPA REG. NO. 34704-1045**

**PROTECTION OF POLLINATORS**



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

**DIRECTIONS FOR USE**

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

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed, crops and commercially grown ornamentals that are attractive to pollinators:



**FOR CROPS UNDER CONTRACTED POLLINATION SERVICES**

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



**FOR FOOD/FEED CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS**

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

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- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55 °F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

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.

**RESISTANCE MANAGEMENT**

Some insects are known to develop resistance to products with the same chemical class used repeatedly for control. Swagger® contains Group 3 and Group 4A insecticides. Although pest resistance can not be predicted, a general rule to reduce the onset of resistance in pest species to Swagger is not to consecutively and repeatedly apply Group 3 and/or Group 4A insecticides during a growing season for control of a particular pest target. Consult your local or state agricultural authorities or your Loveland Products, Inc. representative for more specific details on insect resistance management strategies.

The Group 4A active ingredient in Swagger is a member of the neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of Swagger and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Loveland Products, Inc. strongly encourages the rotation to a block of applications with effective products of different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with IPM practices, is considered an effective use strategy for preventing or delaying an insect's ability to develop resistance to this class of chemistry.

Foliar applications of Swagger or other Group 4A products from the neonicotinoid chemical class must not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

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

**Application Instructions:**

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestations; higher listed rates under heavy insect pressures. Arid climates generally require higher rates.

Use adequate spray volumes, properly calibrated application equipment and Vader® spray adjuvant to obtain thorough coverage. To optimize deposition, penetration, and translocation, use 0.25% v/v of Vader. Other adjuvants must be used at 0.25 to 0.50% v/v.

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

In New York State, this product may not be applied within 100 feet (using ground equipment) or 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

**California Special Equipment and Restrictions:** Swagger must be used in a closed system that meets the criteria for closed systems as established by the California Department of Food and Agriculture. The criteria and a list of the closed systems meeting the criteria are available through the California Department of Food and Agriculture.

**ROTATIONAL CROPS**

Plant back restrictions are determined by the crop. Crops that have tolerances for both bifenthrin and imidacloprid may be rotated at any time. Crops with tolerances for bifenthrin and not imidacloprid can be rotated 12 months following the final application of Swagger. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of Swagger.

**Plant back restrictions:**

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**Immediate plant back:** Crops on this label, including artichoke, caneberries, cilantro and coriander, citrus, corn (all), eggplant, grapes, hops, legume vegetables (edible podded), lettuce (head), okra, pears, peppers (bell and non-bell), soybeans, spinach, strawberries, tobacco, tomatoes, and tuberous root and corm vegetables (except sugar beet).

**30 Day plant back:** Cereals, cucurbits, safflower

**10 Month plant back:** Onion and bulb vegetables

**12 Month plant back:** All other crops

**MAXIMUM ALLOWABLE USE PER YEAR/CROP SEASON**

Refer to the individual crop sections for maximum allowable Swagger usage per acre per year per crop season. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 month period. The 12-month period is to begin upon the initial application to the acreage.

**Tank Mixture**

Swagger may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

**BUFFER ZONES**

**Vegetative Buffer Zones**

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds).

Only apply product containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services*. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs143\\_023819.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_023819.pdf).

**Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for ULV Aerial Application**

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for Non-ULV Aerial Application**

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**SPRAY DRIFT REQUIREMENTS**

**Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

**Temperature Inversion**

Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

**Droplet Size**

Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

**For ground boom applications,** apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

**For airblast applications,** turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray

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loss over the top in orchard applications, spray must be directed into the canopy.

**Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft so as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

**CHEMIGATION USE DIRECTIONS**

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

For LEPA irrigation, a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluent, 1.0 to 2.0 pints per acre is recommended.

Results from utilizing chemigation have been variable and depend upon the set up and calibration of equipment. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect pests.

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. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. Swagger should be applied continuously for the duration of the water application. Swagger should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

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**ARTICHOKE (Globe) (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Artichoke plume moth Cribrate weevil Leafhopper spp.	12.8 to 25.6	0.1 to 0.2

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 15 Days

Maximum amount of Swagger allowed per year: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre)

Maximum amount of imidacloprid allowed per year: 0.5 pound active ingredient per acre.

Maximum amount of bifenthrin allowed per year: 0.5 pound active ingredient per acre.

**REMARKS:** Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not more often than 15-day intervals.

**Application by ground:** Apply a full cover spray in a minimum of 10.0 gallons of finished spray per acre.

**Application by air:** Apply specified dosage in a minimum of 2.0 gallons per acre.

**BRASSICA (Head and Stem) (PHI 7 DAYS)**

Broccoli, Broccoli (Cavalo), Broccoli (Chinese), Brussels sprouts, Cabbage, Cabbage (Chinese Mustard), Cabbage (Chinese napa), Cauliflower, Cavalo Broccolo, Kohlrabi

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Armyworm spp. Budworm Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth Ground beetles Grasshoppers Imported cabbageworm Leafhopper spp. Loopers Lygus spp. Saltmarsh caterpillar Stink bug spp. Thrips Tobacco budworm Whitefly Wireworm (adults)	8.48 to 12.2	0.066 to 0.095

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed per crop season: 61.44 ounces (0.24 pound bifenthrin and 0.24 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per crop season: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

Apply Swagger up to 5 applications after bloom.

**REMARKS:** Apply in a minimum of 2.0 gallons of finished spray per acre by air or in a minimum of 10.0 gallons per acre with ground equipment. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

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**BRASSICA (Leafy Greens) (PHI 7 DAYS)**

Broccoli Raab, Cabbage (Chinese bok choy), Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp.	8.48 to 12.2	0.066 to 0.095
Armyworm spp.		
Budworm		
Corn earworm		
Crickets		
Cucumber beetle		
Cutworm spp.		
Diamondback moth		
Ground beetles		
Grasshoppers		
Imported cabbageworm		
Leafhopper spp.		
Loopers		
Lygus spp.		
Saltmarsh caterpillar		
Stink bug spp.		
Thrips		
Tobacco budworm		
Whitefly		
Wireworm (adults)		

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed per crop season: 61.44 ounces (0.24 pound bifenthrin and 0.24 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per crop season: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

Apply Swagger up to 5 applications after bloom.

**REMARKS:** Apply in a minimum of 2.0 gallons of finished spray per acre by air or in a minimum of 10.0 gallons per acre with ground equipment. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.**CILANTRO and CORIANDER (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp.	8.48 to 11.0	0.066 to 0.086
Beet armyworm		
Cabbage looper		
Cutworm spp.		
Flea beetle		
Grasshopper		
Leafhopper spp.		
Leafminer		
Saltmarsh caterpillar		
Spotted cucumber beetle		
Thrips		
Whitefly		

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 33.28 ounces (0.13 pound bifenthrin and 0.13 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.13 pound active ingredient per acre.

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**CITRUS (PHI 1 DAY)\*:** Calamondin, Citron citrus, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Satsuma mandarin, and other cultivars and/or hybrids of these

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphids	32.0 to 64.0	0.25 to 0.50
Asian citrus psyllid		
Black fly		
Blue green citrus root weevil ( <i>Pachnaeus opalus</i> )		
Brown leaf notcher ( <i>Epicacrus mexicanus</i> )		
Diaprepes root weevil ( <i>Diaprepes abbreviatus</i> )		
Leafhoppers/Sharpshooters		
Leafminers		
Little leaf notcher ( <i>Artipus floridanus</i> )		
Mealy bugs		
Scales		
Southern blue green citrus root weevil ( <i>Pachnaeus litus</i> )		
Whiteflies		

**Restrictions:****\*Not for use in California**

Do not apply by air or through irrigation systems.

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Do not allow any application of the product to contact fruit or foliage.

Preharvest Interval (PHI): 1 day.

Minimum interval between applications: 10 days.

Maximum amount of Swagger allowed per year: 64.0 ounces (0.25 pound bifenthrin and 0.25 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per year: 0.25 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.25 pound active ingredient per acre.

**REMARKS: Citrus**

Apply the specified dosage in a minimum of 40.0 gallons of finished spray per acre.

Scales – time application to the crawler stage. Treat each generation.

Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to that applied in the diluted application. The 64.0 fluid ounces per acre rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.

The use of this product protects citrus tree roots from Diaprepes and other Citrus root weevil feeding by creating a barrier. As Citrus root weevil eggs hatch, the newly hatched larvae (neonates) fall to the soil surface beneath the tree and come into contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath the tree should be minimized.

Timing of application is very important. Peak emergence of Diaprepes adults varies by citrus growing region, and environmental factors such as soil moisture can affect citrus root emergence.

Usually, two peaks occur for Diaprepes, first in the spring then late summer or early fall. Southern blue green and Blue green citrus weevils and Fuller rose beetle usually have a single emergence peak in the spring. Brown and Little leaf notchers usually have three emergence peaks, spring, summer and fall. Since emergence varies by region and season, the best way to time application is observe the adults. By trapping adults when they are most active (in the morning or and late afternoon) during the spring and summer emergence periods, an estimation of numbers can be obtained. Eggs are laid 8 to 10 weeks following the adult emergence from the soil; larvae invasion into the soil will begin 2 to 3 weeks following adult emergence. This product must be applied prior to the dropping of the neonates. Consult local university extension personnel for current information to protect citrus trees from Citrus root weevils and other pests.

Apply this product by ground equipment to bare soil beneath citrus trees. This product must be uniformly applied from the trunk to the drip line of the tree, apply in a minimum of 40.0 gallons of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage.

A pre and post-application irrigation may aid in the uniformity of coverage as well.

Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer.

Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 32.0 fluid ounces formulated product should be used to obtain the longest residual management of Diaprepes root weevil.



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**CITRUS CONT'D**

If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 16.0 fluid ounces formulated product can be applied early season and 16.0 fluid ounces formulated product can be applied later in the season. If emergence extends beyond the residual protection of this product, grower is advised to use additional management strategies (i.e. foliar adult control or soil larvae control such as nematodes). Contact your state agricultural Extension Specialist as to the recommendation suited for local conditions.

**COTTON (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Bandedwinged whitefly Boll weevil Cotton aphid Cotton fleahopper Lygus spp. Plant bugs (excludes <i>Lygus hesperus</i> ) Southern garden leafhopper Stink bug spp.	7.6 to 15.4	0.06 to 0.12
Beet armyworm Bollworm Cabbage looper Cotton leaf perforator Cutworm spp. European corn borer Fall armyworm Kudzu bug Pink bollworm Saltmarsh caterpillar Tobacco budworm Thrips spp. Whitefly Yellow striped armyworm	10.2 to 15.4	0.08 to 0.12

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per year: 79.36 ounces (0.31 pound bifenthrin and 0.31 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per year: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.31 pound active ingredient per acre.

Do not graze livestock in treated areas or cut treated crops for feed.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

**REMARKS: Cotton**

**Application in Water:** Apply in a minimum of 5.0 gallons per acre with ground equipment or 1.0 gallon per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray.

**ULV Application:** Apply the recommended rate of Swagger in refined vegetable oil in a minimum of 1.0 quart of finished spray per acre with aircraft calibrated to give adequate coverage.

**To Control Boll weevil:** Apply this product at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.

**To Control Aphids:** Apply when pest first appears. Repeat as necessary to maintain control. Higher listed rates will be required once a damaging threshold is established.

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**DRIED BEANS AND PEAS (PHI 14 DAYS for dried shelled peas or beans)**

Include: Dried cultivars of bean (*Lupinus* spp.) (*Phaseolus* spp.); and any one (includes grain lupin, sweet lupin, dried cultivar of pea (*Pisum* white lupin and white sweet lupin); (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean(dry), navy bean, pinto bean, tepary bean; bean (*Vigna* spp.) (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean; lentil; pea (*Pisum* spp.) (includes field pea); pigeon pea.

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips (adult) (foliage feeding)	7.6 to 11.2	0.06 to 0.0875
Alfalfa caterpillar Armyworm spp.* Bean leaf beetle Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Flee beetle spp. Japanese beetle (adult) June beetle (adult) Kudzu bug Looper spp. Mexican bean beetle Pea leaf weevil Pea weevil Sap beetle (adult) Saltmarsh caterpillar Silverspotted skipper Southern armyworm Threecornered alfalfa hopper Webworm Whitefly	11.2	0.0875

**Restrictions:** Preharvest Interval (PHI): 14 Days

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed per crop season: 33.6 ounces (0.13 pound bifenthrin and 0.13 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per crop season: 0.13 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.13 pound active ingredient per acre.

**REMARKS:** Apply in a minimum of 2.0 gallons of finished spray per acre by air or in a minimum of 10.0 gallons per acre with ground equipment. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

\*Including all armyworm pests except Beet armyworm.

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**FRUITING VEGETABLES: Crops of Crop Group 8 including -  
EGGPLANT, GROUNDCHERRY, PEPPERS (BELL & NON-BELL), PEPINO (PHI 7 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Aphid spp. Leafhopper spp. Lygus spp. Thrips	7.6 to 19.7	0.06 to 0.15
Armyworm spp. Artichoke plume moth Cabbage looper Colorado potato beetle Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle Leafminer Loopers Pepper weevil Stink bug Tomato hornworm Tomato pinworm Whitefly	10.2 to 19.7	0.08 to 0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.20 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

**REMARKS:** Apply in a minimum of 2.0 gallons of finished spray per acre by air or in a minimum of 10.0 gallons per acre with ground equipment. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**GRAPES (PHI 30 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Eastern grape leafhopper Glassywinged sharpshooter Variegated leafhopper Western grape leafhopper	7.6 to 12.8	0.06 to 0.10
Black vine weevil Cutworm spp. Grape berry moth Grapeleaf skeletonizer Japanese beetles (adult) Mealybug	10.2 to 12.8	0.08 to 0.10

**Restrictions:** Preharvest Interval (PHI): 30 days.

Minimum interval between applications: 14 days.

Maximum amount of Swagger allowed per year: 12.8 ounces (0.05 pound bifenthrin and 0.05 pound imidacloprid per acre).

Maximum amount of imidacloprid allowed per year: 0.10 pound active ingredient per acre.

Maximum amount of bifenthrin allowed per year: 0.10 pound active ingredient per acre.

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**HOPS (PHI 28 days)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Leafhopper spp.	7.6 to 25.6	0.06 to 0.2
Armyworm spp.* Cutworm spp. Leafrollers Looper spp. Root weevil Two spotted spider mite	25.6	0.2

**Restrictions:** Preharvest Interval (PHI): 28 Days

Minimum interval between applications: 21 Days

Maximum amount of Swagger allowed per year: 76.8 ounces (0.30 pound bifenthrin and 0.30 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per year: 0.30 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.30 pound active ingredient per acre.

**REMARKS:** For Root weevil control: Make a direct spray to the base of the plant. Spray up to 3.0 feet on the vine and 1.5 to 2.0 feet on sides of the plant. Thorough coverage is essential to achieve control.

\*Including all armyworm pests except Beet armyworm.

**LETTUCE (HEAD) (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp. Thrips	7.6 to 12.2	0.06 to 0.095
Armyworm Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	10.2 to 12.2	0.08 to 0.095

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 61.44 ounces (0.24 pound bifenthrin and 0.24 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

**REMARKS:** Apply in water as necessary for insect control using a minimum of 10.0 gallons of finished spray per acre with ground equipment and 2.0 gallons per acre by air. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

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**OKRA (PHI 7 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6 to 19.6	0.06 to 0.15
Armyworm Corn earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle (adult) Whitefly	10.2 to 19.6	0.08 to 0.15

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre).

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

Maximum amount of bifenthrin allowed per crop season: 0.20 pound active ingredient per acre.

**REMARKS:** Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply in a minimum of 2.0 gallons of finished spray per acre by air or in a minimum of 10.0 gallons per acre with ground equipment.

**PEANUT <sup>1</sup> (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid Beet armyworm Corn earworm Cutworm spp. Fall armyworm Grasshoppers Green cloverworm Kudzu bug Leafhoppers Lesser cornstalk borer Loopers Rednecked peanut worm Southern armyworm Southern corn rootworm Spider mites Stink bugs Threecornered alfalfa hopper Thrips Velvetbean caterpillar Whiteflies Yellowstriped armyworm	7.6 to 11.2	0.06 to 0.0875

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 14 days.

Maximum amount of Swagger allowed per year: 33.3 ounces (0.13 pound bifenthrin and 0.13 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per year: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.13 pound active ingredient per acre.

**REMARKS:**

**<sup>1</sup> Use not permitted in California.**

Apply foliar treatments in at least 10.0 gallons per acre with ground equipment at the rate of 11.2 fluid ounces (0.08 pound active ingredient) pre acre at a minimum of 14 day intervals. Do not feed green immature plants and peanut hay to livestock.

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**PEARS (PHI 14 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp.	7.6 to 25.6	0.06 to 0.2
Codling moth Cutworm spp. Green fruitworm Leafminer Leafroller Plum curculio	10.2 to 25.6	0.08 to 0.2

**Restrictions:** Preharvest Interval (PHI): 14 days.

Do not graze livestock in treated orchards or cut treated cover crops for feed.

Minimum interval between applications: 30 days.

Maximum amount of Swagger allowed per year: 128.0 ounces (0.50 pound bifenthrin and 0.50 pound imidacloprid per acre) as a foliar application; 115.0 ounces (0.9 pound active ingredient per acre) applied after petal fall.

Maximum amount of bifenthrin allowed per year: 0.5 pound active ingredient per acre as a foliar application; 0.45 pound active ingredient per acre applied after petal fall.

Maximum amount of imidacloprid allowed per year: 0.5 pound active ingredient per acre as a foliar application; 0.45 pound active ingredient per acre applied after petal fall.

Do not apply pre-bloom or during bloom or when bees are foraging.

**REMARKS: Application by ground.** Apply as a dilute (minimum of 10.0 gallons of finished spray per acre).

**Application by air.** Apply the specified dosage in a minimum of 2.0 gallons of finished spray per acre by air.

**POTATO (At-plant)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Aphid spp. Colorado potato beetle Flea beetle spp. (adult, larvae) Japanese beetle (larvae) Leafhopper spp. Potato psyllid Rootworm spp. White grub Wireworm	<b>At-Plant Application</b> 32.0 to 51.2	0.25 to 0.4

**Restrictions:** Preharvest Interval (PHI): 21 Days

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed per year: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per year: 0.20 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.20 pound active ingredient per acre.

A maximum of one at-plant application is permitted per year.

**REMARKS**

**At-plant Application: In-furrow applications:** Apply Swagger as an in-furrow spray onto the seed pieces or seed potatoes.

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**POTATO (PHI 21 days) (Foliar uses)**

	Use Rates	
	Fl Oz/A	Lb AI/A
Pest	Foliar Application	
Aphid spp. Leafhopper spp.	7.6 to 12.28	0.06 to 0.1
Banded cucumber beetle Colorado potato beetle Cucumber beetle European corn borer Flea beetle spp. Grasshopper spp. June beetle Looper spp. Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Tuberworm Whitefringed beetle Whitefly	9.6 to 12.28	0.075 to 0.1

**Restrictions:** Preharvest Interval (PHI): 21 Days

Minimum interval between applications: 7 Days

Maximum amount of Swagger allowed per year: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per year: 0.20 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.20 pound active ingredient per acre.

**Maximum amount of Swagger/Foliar Application:**

12.28 fluid ounces per acre (0.05 pound active ingredient per acre of bifenthrin and 0.05 pound active ingredient per acre of imidacloprid)

**Maximum amount of Swagger/Year:**

51.2 fluid ounces per acre (0.20 pound active ingredient per acre of bifenthrin and 0.20 pound active ingredient per acre of imidacloprid).

Two applications are permitted per year. It is permitted to make one at-plant application followed by a foliar application later in the same growing season.

**REMARKS: Foliar Application:** Apply in a minimum of 5.0 gallons per acre with ground equipment or 1.0 gallon per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray. Thorough coverage is essential to achieve control.

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**SOYBEANS (PHI 21 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Alfalfa caterpillar	7.6 to 12.2	0.06 to 0.095
Aphids		
Aster leafhopper		
Bean leaf beetle		
Beet armyworm*		
Cloverworm		
Corn earworm		
Corn rootworm adult		
Cucumber beetles		
Cutworms		
European corn borer		
Fall armyworm		
Flea beetle		
Grasshoppers		
Imported cabbageworm		
Japanese beetle adult		
Kudzu bug		
Leafhoppers		
Leafminer		
Loopers		
Lygus spp.		
Mexican bean beetle (adult)		
Pea leaf weevil		
Pea weevil		
Plant bug		
Saltmarsh caterpillar		
Sap beetle		
Southern armyworm		
Stink bugs		
Tarnished plant bug		
Thrips		
Tobacco budworm*		
Twospotted spider mite		
Webworms		
Western bean cutworm		
Whitefly		
Yellowstriped armyworm		

**Restrictions:** Preharvest Interval (PHI): 21 days.

**\*Use not permitted in California.**

Apply a maximum of 2 applications per year.

Minimum interval between applications: 30 days.

Maximum amount of Swagger allowed per year: 24.4 ounces (0.095 pound bifenthrin and 0.095 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per year: 0.14 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.3 pound active ingredient per acre.



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**SPINACH (PHI 40 DAYS)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp. Thrips	7.6 to 12.2	0.06 to 0.095
Armyworm Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	10.2 to 12.2	0.08 to 0.095

**Restrictions:** Preharvest Interval (PHI): 40 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 61.44 ounces (0.24 pound bifenthrin and 0.24 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.40 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

**REMARKS:** Apply in water as necessary for insect control using a minimum of 10.0 gallons of finished spray per acre with ground equipment and 2.0 gallons per acre by air. When applying by air, 1.0 to 2.0 quarts of emulsified oil may be substituted for 1.0 to 2.0 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**STRAWBERRY (PHI 7 days)**

<b>Pest</b>	<b>Use Rates</b>	
	<b>Fl Oz/A</b>	<b>Lb AI/A</b>
Aphid spp. Armyworm spp.* Corn earworm Flea beetle spp. Leafhopper spp. Lygus spp. Spittlebug Whitefly	10.2 to 12.28	0.08 to 0.096

**Restrictions:** Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 5 Days

Maximum amount of Swagger allowed per crop season: 35.84 ounces (0.14 pound bifenthrin and 0.14 pound imidacloprid per acre)

Maximum amount of bifenthrin allowed per crop season: 0.14 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.14 pound active ingredient per acre.

Do not apply during or within 10 days after bloom or when bees are foraging.

**REMARKS:** Apply in a minimum of 5.0 gallons of finished spray per acre by air or in a minimum of 50.0 gallons per acre with ground equipment. Aerial applications in Florida are prohibited. Thorough coverage is essential to achieve control.

\*Including all armyworm pests except Beet armyworm.

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**SUCCULENT BEANS AND PEAS (PHI 7 DAYS):** Crops in the Succulent Pea and Bean group, Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea, Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean, Jackbean, Soybean (immature seed), Sword bean

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips	7.6 to 11.0	0.06 to 0.086
Alfalfa caterpillar Bean leaf beetle Beet armyworm Cloverworm Corn earworm Corn rootworm (adult) Cucumber beetle Cutworm spp. European corn borer Fall armyworm Flea beetle Japanese beetle (adult) Kudzu bug Looper spp. Pea leaf weevil Pea weevil Sap beetle (adult) Southern armyworm Webworm Whitefly Yellowstriped armyworm	10.2 to 11.0	0.08 to 0.086

**Restrictions:** Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 33.2 ounces (0.13 pound bifenthrin and 0.13 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.20 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.13 pound active ingredient per acre.

**REMARKS:** Application in Water: Apply in a minimum of 5.0 gallons per acre with ground equipment or 1.0 gallon per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray.

**TOBACCO (PHI 14 DAYS)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6 to 12.8	0.06 to 0.10
Armyworm spp. Chinch bugs Cutworm spp. Flea beetle (Adults) Grasshoppers Japanese beetles Stalkborers Whiteflies	10.2 to 12.8	0.08 to 0.10

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**TOBACCO CONT'D**

**Restrictions:** Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per year: 51.2 ounces (0.20 pound bifenthrin and 0.20 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per year: 0.30 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per year: 0.28 pound active ingredient per acre.

Apply a maximum of 2 applications per year.

Do not apply later than layby.

**REMARKS: Application in Water:** Apply in a minimum of 10.0 gallons per acre with ground equipment or 5.0 gallons per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray.

**TOMATO (PHI 1 DAY)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Flea hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips	7.6 to 19.7	0.06 to 0.15
Armyworm spp. Bean leaf beetle Cabbageworm Cloverworm Colorado potato beetle Corn earworm Corn rootworm Cucumber beetle Cutworms Diamondback moth European corn borer Flea beetle Grasshopper Japanese beetle (adult) Loopers Melonworm Pea leaf weevil Pea weevil Pepper weevil Pickleworm Rindworm Saltmarsh caterpillar Sap beetle Seedpod weevil	10.2 to 19.7	0.08 to 0.15

**Restrictions:** Preharvest Interval (PHI): 1 day.

Minimum interval between applications: 10 days.

Maximum amount of Swagger allowed per crop season: 61.44 ounces (0.24 pound bifenthrin and 0.24 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.40 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.24 pound active ingredient per acre.

**REMARKS:**

**Application in Water:** Apply in a minimum of 10.0 gallons per acre with ground equipment or 2.0 gallons per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray.

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**TREE NUTS EXCEPT ALMONDS - PHI 7 DAYS (Pecan PHI 21 days)**

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphids (Except Black pecan aphid) Leafhoppers/Sharpshooters Phylloxera spp. (leaf infestations) Spittlebugs Thrips	11.2 to 22.4	0.0875 to 0.175
Black pecan aphid Mealybugs San Jose scale	12.8	0.10

**Restrictions:** Preharvest Interval (PHI): 7 days.

Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Minimum interval between applications: 15 days.

Maximum amount of Swagger allowed per year: 92.6 ounces (0.36 pound bifenthrin and 0.36 pound imidacloprid per acre).

Maximum amount of imidacloprid allowed per year: 0.36 pound active ingredient per acre.

Maximum amount of bifenthrin allowed per year: 0.50 pound active ingredient per acre.

**REMARKS:** Minimum application volume (water): 50.0 gallons per acre – ground application, 10.0 gallons per acre – aerial application.

Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation.

**TUBEROUS AND CORM VEGETABLES (PHI 21 DAYS):** Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); Ginger; Leren; Tanier; Turmeric; Bean, Yam, True yam.

Pest	Use Rates	
	Fl Oz/A	Lb AI/A
Aphid spp. Leafhopper spp.	7.6 to 15.4	0.06 to 0.12
Banded cucumber beetle Black flea beetle Colorado potato beetle Cucumber beetle Flea beetles June beetle Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Whitefringed beetle	10.2 to 15.4	0.08 to 0.12

**Restrictions:** Preharvest Interval (PHI): 21 days.

Minimum interval between applications: 7 days.

Maximum amount of Swagger allowed per crop season: 33.28 ounces (0.13 pound bifenthrin and 0.13 pound imidacloprid per acre).

Maximum amount of bifenthrin allowed per crop season: 0.5 pound active ingredient per acre.

Maximum amount of imidacloprid allowed per crop season: 0.13 pound active ingredient per acre.

Apply a maximum of 2 applications per crop season.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a potato crop in one growing season.

**REMARKS: Application in Water:** Apply in a minimum of 10.0 gallons per acre with ground equipment or 2.0 gallons per acre by aircraft. When applying by air, 1.0 quart of emulsified oil may be substituted for 1.0 quart of water in the finished spray.

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**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

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

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way. Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

**SWAGGER®**  
**EPA REG. NO. 34704-1045**

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

Swagger and Vader are registered trademarks of Loveland Products, Inc.

**FORMULATED FOR**  
**LOVELAND PRODUCTS, INC.**  
**P.O. BOX 1286, GREELEY, COLORADO 80632-1286**

## **Exhibit F**

Pesticide Product Label for Alpine WSG,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8\\_PUID,P8\\_RINUM:507  
274,499-561](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:::::P8_PUID,P8_RINUM:507274,499-561), (May 1, 2019)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION**

May 1, 2019

Meshea J. Brodie  
Product Registration Manager  
Regulatory Affairs  
BASF Corporation  
26 Davis Drive, PO Box 13528  
Research Triangle Park, NC 27709-3528

Subject: Notification per PRN 98-10 – Addition of single-use package size and other  
minor changes  
Product Name: TC-315  
EPA Registration Number: 499-561  
Application Date: 03/12/2019  
Decision Number: 550213

Dear Ms. Brodie:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.



Page 2 of 2  
EPA Reg. No. 499-561  
Decision No. 550213

If you have any questions, you may contact please contact Paul Di Salvo at 703-347-0322 or by email at [disalvo.paul@epa.gov](mailto:disalvo.paul@epa.gov).

Sincerely,

A handwritten signature in black ink that reads "Paul Di Salvo" followed by a small flourish.

Gene Benbow, Product Manager 07  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

{Note to PM: Italicized text enclosed in “{ }” is information for the reviewer and not part of the label.  
 [Bracketed information is optional text.] Text within brackets and separated by “/” denotes and/or options.}

**NOTIFICATION**

499-561

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

05/01/2019

# TC-315

**Alternate Brand Names:**

Prescription Treatment® brand Alpine® WSG {accepted on original SAL 6/27/2012}

Alpine® WSG (with descriptor: Water Soluble Granule Insecticide) {added via Notification 7/5/12; accepted 10/24/2012}

**{Single-use Packets: 0.35 ounce (10 grams)}** [Not registered for use in California.]

**[SMART SOLUTIONS FACTS]**

**[Key attributes of this product include:]**

- [• Food-handling and commercial environments]
- [• Non-repellent active ingredient]
- [• May be used in conjunction with non-repellent insecticides such as those containing dinotefuran (e.g., **Alpine® Cockroach Gel Bait Rotation 1 Reservoir** and **Alpine® Cockroach Gel Bait Rotation 2 Reservoir**) or similar products. Always follow label use directions and applicable laws.]
- [• Ant control product]
- [• Rotational partner for bed bug control]
- [• For use on Stored Product Pests]
- [• For questions or comments, call 1-800-777-8570]

**KILLS:** Ants (including Argentine, Carpenter, Harvester, Odorous House, Red Imported, and Southern Fire; excluding Pharaoh), Asian Lady Beetles, Bean Plataspid (Kudzu Bug), Bed Bugs, Beetles (including Confused Flour Beetle, Granary Weevil, Lesser Grain Borer, and Warehouse Beetle), Brown Marmorated Stink Bugs, Centipedes, Cockroaches (including American, German and Turkestan), Collembola, Crickets, Earwigs, Fleas, House Flies, Millipedes, Mosquitoes (*Anopheles*), Paper Wasps, Pillbugs, Sowbugs, Spiders (excluding Brown Recluse), Stored Product Pests (Confused Flour Beetle, Granary Weevil, Lesser Grain Borer, and Warehouse Beetle) and Yellowjackets

**FOR USE IN AND AROUND:** [Animal Housing (including Calf Hutches, Calving Pens and Parlors, Chicken Houses, Dairy Areas, Dog Kennels, Hog Barns, Horse Barns, Milk Rooms and Rabbit Hutches)]; Apartments; Campgrounds; Cemeteries; Clinics; Food Handling Establishments; Garbage or Refuse Bins and Receptacles; Grain Mills; Granaries; Green Belts; Homes; Hospitals; Hotels; Mausoleums; Mobile Homes; Motels; Food Processing Plants; Nursing Homes; Resorts; Schools; Storage Buildings; Trailers; Transportation Equipment (including Autos, Buses, Boats, Ships, Trains, Trucks, Planes - cargo areas only); Utilities; Warehouses; Commercial, Industrial, and Residential Buildings; Theme Parks; Parks and Recreational Areas and Zoos

**Active Ingredient:**

Dinotefuran: N-methyl-N-[(tetrahydro-3-furanyl)methyl]guanidine . . . . . 40.0%

**Other Ingredients:** . . . . . 60.0%

**Total:** . . . . . 100.0%

EPA Reg. No. 499-561

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN  
 CAUTION/PRECAUCION**

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.)

See back/inside/attached [booklet/label] for **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific pest and/or use site restrictions.

**In case of an emergency endangering life or property involving this product,  
 call day or night 1-800-832-HELP (4357).**

**Net Weight:**

**[Produced For:]**

BASF Corporation  
 26 Davis Drive  
 Research Triangle Park, NC 27709



{Note to PM: Italicized text enclosed in "{ }" is information for the reviewer and not part of the label.

[Bracketed information is optional text.] Text within brackets and separated by "/" denotes and/or options.}

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).	

## Precautionary Statements

### Hazards to Humans and Domestic Animals

**CAUTION.** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves (made out of any waterproof material, such as Natural Rubber, selection Category A).

### USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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 aquatic invertebrates. **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. **DO NOT** dispose equipment washwaters or rinsate into a natural drain or water body.

This product is toxic to honey bees. The persistence of residues and potential residual toxicity of dinotefuran in nectar and pollen suggests the possibility of chronic toxic risk to honey bee larvae and the eventual instability of the hive.

- This product is toxic to bees exposed to residues for more than 38 hours following treatment.
- **DO NOT** apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

[See attached booklet for full **Environmental Hazards** and **Groundwater Advisory**].


### Groundwater Advisory

Dinotefuran and its degradate, MNG, have the properties and characteristics associated with chemicals detected in groundwater. The high water solubility of dinotefuran and its degradate, MNG, coupled with its very high mobility and resistance to biodegradation indicates that this compound has a strong potential to leach to the subsurface under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

### PROTECTION OF POLLINATORS



**APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.**

Look for the bee hazard icon  in the **Directions For Use** for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this product take steps to:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product onto beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site pollinator attractive habitat can result in bee kills.

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## PROTECTION OF POLLINATORS *(continued)*

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: [www.aapco.org/officials.html](http://www.aapco.org/officials.html). Pesticide incidents should also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## Physical and Chemical Hazards

**DO NOT** apply water-based sprays of this product to conduits, motor housing, junction and switch boxes or other electrical equipment because of possible shock hazard.

**DO NOT** spray where electrical short circuits might result, such as wall outlets, conduits, etc.

## Directions For Use

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



**DO NOT** apply this product while bees are foraging. **DO NOT** apply this product to plants that are flowering. Only apply after all flower petals have fallen off.

## Use Restrictions

- **DO NOT** apply within aircraft cabins.
- **DO NOT** use in outdoor residential misting systems.
- **DO NOT** apply to humans or their clothing or to mattresses. **DO NOT** allow children or pets to contact treated surfaces until spray has dried.
- **DO NOT** apply to household pets. Cover fish tanks prior to application near tanks.
- **DO NOT** apply this product in patient rooms while occupied.
- **DO NOT** apply to classrooms when in use.
- When applying in residential or commercial structures, **DO NOT** contaminate food, feed stuffs or water supply. **DO NOT** contaminate food preparation surfaces, kitchen utensils, dishes or food/feed storage containers. Cover any food/feed contact surfaces and cooking utensils in the treatment area before treatment or thoroughly clean after treatment and before using.
- Apply to the point just prior to runoff. **DO NOT** allow applications of product to drip or run from surfaces.

- When applying to structural areas in and around live-stock housing, remove animals or treat in areas where animals are not present. **DO NOT** apply to animals. **DO NOT** allow insecticide to drift onto animals. **DO NOT** contaminate milk, food or drinking water.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal.

### Pesticide Storage

Store in a cool, dry area away from heat or open flame.

### Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

**Container Handling {Either the single-use packet, 250 gram, or resealable plastic bottle disposal instructions will be used depending on the corresponding container packaging}**

**{Single-use Packets}**

**[Nonrefillable container. DO NOT reuse or refill this container.** Offer empty packet for recycling, if available, or dispose of in the trash or by incineration.]

**250 Gram Resealable Pouch**

**Nonrefillable container. DO NOT reuse or refill this container. If empty:** Place in trash or offer for recycling, if available. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**[Resealable Plastic Bottle]**

**[Nonrefillable container. DO NOT reuse or refill this container.** Triple rinse container promptly after emptying; then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Triple rinse container as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.]

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## **In Case of Emergency**

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

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## Product Information

This product is a water-soluble granule containing the non-repellent active ingredient dinotefuran. Apply indoors and/or outdoors via crack and crevice, spot or surface application for the listed pests and use sites.

**Mixing Instructions {Either the single-use packet, 250 gram, or resealable plastic bottle disposal instructions will be used depending on the corresponding container packaging}**

**Thoroughly clean spray equipment before mixing and application of this product.**

**Single-use Packets: 0.35 ounce (10 grams) Packet/1.76 ounces (50 grams) Packet/8.82 ounces (250 grams) Packet (for use in a power spray rig or large spray tank)**

Add approximately 1/2 of the water to the spray tank. Tear open the packet and add contents to water, then complete the filling of the spray tank. Agitate the tank until the product is completely dissolved. Reagitate finished dilution if application is interrupted for an extended period of time.

**[Resealable Pouch: 8.82 ounces (250 grams)]/[Resealable Bottle (dispenses 10 grams at a time): 1.06 ounces (30 grams)/1.76 ounces (50 grams)/2.12 ounces (60 grams)/4.41 ounces (125 grams)/5.29 ounces (150 grams)/6.17 ounces (175 grams)/7.05 ounces (200 grams)/8.82 ounces (250 grams)/10.6 ounces (300 grams)]/[Resealable Plastic Bottle: 1 pound, 1.64 ounces (500 grams)/2 pounds, 3.27 ounces (1 kilogram)]**

[Add approximately 1/2 of the water to the spray tank. Add 10 to 30 grams of product to water per 1,000 square foot area being treated (1 Tablespoon = 10 grams), then complete the filling of the spray tank. Agitate the tank until the product is completely dissolved. Reagitate finished dilution if application is interrupted for an extended period of time.]

### SPRAY DILUTION CHART

Desired Finished Dilution Concentration	Grams of product to make 1 gallon of finished dilution to treat up to 1,000 square feet	Grams of product to make 5 gallons of finished dilution to treat up to 5,000 square feet	Grams of product to make 25 gallons of finished dilution to treat up to 25,000 square feet	Grams of product to make 50 gallons of finished dilution to treat up to 50,000 square feet
0.1%	10	50	250	500
0.2%	20	100	500	1,000
0.3%	30	150	750	1,500

Refer to specific pest categories below for the proper use rate. **One gallon of finished dilution treats 1,000 square feet.** Depending on the surface, more or less water may be used to properly treat areas with a different application apparatus, but the proper amount of active ingredient should be used per square footage.

### Tank Mixing

This product may be tank mixed with other water based insecticides including, but not limited to, insect growth regulators (IGR), quick knockdown products and residuals. Before mixing, test to see if products are compatible. When tank mixing, follow the more restrictive label use directions of the mixed products.

### Void/Crack & Crevice® Application

Apply into cracks, crevices and voids with equipment designed for such applications. Follow the manufacturer's recommendations for proper equipment set-up and operating pressures. Place the tip of the applicator at or into the crack, crevice or void to be treated. Apply product in short bursts while keeping tip in position. Allow the air stream to push the finished dilution into voids and/or cracks and crevices. Apply in such a manner to avoid dripping and runoff.

### Indoor Applications

Dilute to the proper concentration according to targeted pest infestation. Follow the mixing directions found in the **SPRAY DILUTION CHART**. Use one gallon of finished dilution per 1,000 square feet. Refer to **INDOOR APPLICATIONS** table for use rates and pests.

{Note to PM: Italicized text enclosed in “{ }” is information for the reviewer and not part of the label.

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<b>INDOOR APPLICATIONS</b>		
<b>Pests</b>	<b>Finished Dilution (grams per gallon)*</b>	<b>Application Instructions</b>
Ants (excluding Pharaoh)	10	Make spot, <b>Crack &amp; Crevice</b> ® and/or void applications where ants may be foraging and/or nesting, such as, around doors, window frames, under sinks, around pipes and in pipe voids, attic venting and other areas where ants may find access or nest.
Bed Bugs	10 to 30	Make spot, <b>Crack &amp; Crevice</b> and/or void applications where evidence of bed bug infestation occurs or bed bugs are suspected, or likely to occur, such as bed frames; box springs; inside empty dressers, clothes closets and luggage; carpets; draperies; furniture; headboards; high and low wall moldings and wallpaper edges. <b>DO NOT</b> apply to mattresses.
Crawling Insects/Pests including: Pillbugs, Spiders (excluding: Brown Recluse), and Turkestan Cockroaches	30	Make spot and/or <b>Crack &amp; Crevice</b> applications into hiding places and entry points such as cracks and crevices, void areas, moist areas, openings around pipes and sinks, under refrigerators or vending machines, interiorscapes, across lower doorway frames and window openings.
Crickets, Cockroaches (American and German), and Millipedes	10 to 30	
Fleas	10	Apply to infested areas or potentially infested areas, such as rugs, floors, carpets, upholstered furniture, pet beds and pet resting areas. When applying to upholstered furniture, treat under cushions and areas where flea development can occur. <b>DO NOT</b> treat pets with this product.
House Flies	10 to 20	Make spot applications on surfaces where flies frequently roost such as door and window frames, screens, trash cans, plants, interiorscapes, ceilings and upper wall surfaces.
When a rate range is indicated, use the lower rate for maintenance applications and the higher rates for heavy infestations. *Refer to <b>SPRAY DILUTION CHART</b> for concentration of active ingredient in finished product.		

### **Food/Feed Handling Establishments**

Food/Feed handling establishments are places other than private residences in which food is held, processed, prepared or served, including those operating under the Federal meat, poultry, shell egg grading and egg products inspection programs. **APPLICATIONS OF THIS PRODUCT IN FOOD/FEE AREAS OF FOOD/FEE HANDLING ESTABLISHMENTS MAY BE MADE AS A CRACK & CREVICE, VOID, SPOT OR GENERAL TREATMENT.** General surface application may be used only when the facility is not in operation provided exposed food/feed has been covered or removed from the area prior to application.

Food/Feed areas include areas for receiving, serving, storing (dry, cold, frozen, raw), packing (canning, bottling, wrapping, boxing), preparing (cleaning, slicing, cooking, grinding), edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups).

Non-food/feed areas include areas such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets and storage areas (after packaging, canning or bottling).

Avoid contamination of food/feed or food/feed contact surfaces. Remove or cover food/feed, dishes, utensils, food processing equipment and food preparation surfaces in the treatment area or wash them before use. Apply as a **Crack & Crevice**, void, spot or general treatment to surfaces such as baseboards, under elements of construction, stainless steel equipment, shelving, machinery, storage areas, pallets, tables, chairs and other areas where listed pests may be harboring, traveling, breeding or entering the structure. Maximum use rate is 0.05 grams of active ingredient per linear foot. Reapplications may be made at 3 day intervals when applying as a **Crack & Crevice**, void or spot treatment, or at 6 day intervals when applying as a general surface treatment. This product can also be used as a preventative treatment for areas likely to have future infestations.

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[Bracketed information is optional text.] Text within brackets and separated by “/” denotes and/or options.}

### Indoor and Outdoor Applications

Dilute to the proper concentration according to targeted pest infestation. Follow the mixing directions found in the **SPRAY DILUTION CHART**. Use one gallon of finished dilution per 1,000 square feet. Refer to **INDOOR/OUTDOOR APPLICATIONS** table for use rates and pests.

In the state of New York, **DO NOT** apply outdoors except for **Crack & Crevice**<sup>®</sup> or spot treatments to structural components, stumps, utility poles, and fences.

<b>INDOOR/OUTDOOR APPLICATIONS</b>		
<b>Pests</b>	<b>Finished Dilution (grams per gallon)*</b>	<b>Application Instructions</b>
Asian Lady Beetles and Centipedes	10 to 30	Make spot, <b>Crack &amp; Crevice</b> and/or void applications where these pests may harbor or hibernate, such as cracks and crevices, in weep holes, wall voids, around window and door frames, attics and behind siding. Apply to exterior wall surfaces around entry points and resting areas where insects congregate.
Bean Plataspid (Kudzu Bug), Brown Marmorated Stink Bugs	30	
Carpenter Ants	10 to 20	Make spot, <b>Crack &amp; Crevice</b> and/or void applications to any trails, inside or outside, around doors and windows and other places where ants may enter premises (such as atriums, attic venting, crawl spaces, ceilings, fences, exterior building surfaces, landscape timbers, garages, hollow doors, soffits, wall voids, weep holes and other void areas). Where possible, directly apply to ant nests or infested wood or trees.
Paper Wasps and Yellowjackets	30	To treat a yellowjacket or wasp nest, apply liberally to the nest and the surrounding area. For nests inside wall voids, inject an amount sufficient to treat the entire nest. Most applications should require about 0.5 gallon of diluted material. Pay attention to surfaces or items that the product may contact (i.e. electrical wiring). <b>DO NOT</b> use where there is an electrical shock hazard. <b>THIS PRODUCT DOES NOT PROVIDE INSTANT KNOCKDOWN.</b>
Stored Product Pests (Confused Flour Beetle, Granary Weevil, Lesser Grain Borer, and Warehouse Beetle)	10	Before storing products, treat warehouses, production facilities, storage areas, rail cars, truck beds, and other areas where products are stored. Apply as a spot and/or <b>Crack &amp; Crevice</b> treatment to cracks, crevices, and surfaces where pests have been seen or may have harborage. This product may be used to treat empty grain storage facilities and other listed areas for stored product pest control. Cleaning areas prior to use of this product will increase levels of control. Any foodstuffs infested with pests should be removed and destroyed.
When a rate range is indicated, use the lower rate for maintenance applications and the higher rates for heavy infestations. *Refer to <b>SPRAY DILUTION CHART</b> for concentration of active ingredient in finished product.		

**PREVENTATIVE PROGRAMS:** This product may be used as part of a preventative program or in anticipation of a pest problem associated with a structure or an event.



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## Outdoor Applications

Dilute to the proper concentration according to targeted pest infestation. Follow the mixing directions found in the **SPRAY DILUTION CHART**. Use one gallon of finished dilution per 1,000 square feet. Refer to **OUTDOOR APPLICATIONS** table for use rates and pests.

{Note to Reviewer: One of the following statements will appear on the marketplace label.}

**DO NOT** apply this product, by any application method, to linden, basswood or other *Tilia* species {may also include alternate text for inclusion of additional crops as needed} in the State(s) of Oregon {may also include alternate text for inclusion of additional states as needed}. **DO NOT** apply this product, by any application method, to linden, basswood or other *Tilia* species {may also include alternate text for inclusion of additional crops as needed}.

In the state of New York, **DO NOT** apply outdoors except for **Crack & Crevice**<sup>®</sup> or spot treatments to structural components, stumps, utility poles, and fences.

<b>OUTDOOR APPLICATIONS</b>		
<b>Pests</b>	<b>Finished Dilution (grams per gallon)*</b>	<b>Application Instructions</b>
Ants (excluding Pharaoh)	10	Make spot and/or <b>Crack &amp; Crevice</b> applications to any foraging trails, nests or mounds where ants are present. Make spot and/or <b>Crack &amp; Crevice</b> applications to exterior areas where ants may enter a structure. Where possible, directly apply to ant nests or infested wood or trees. Curative broadcast applications can be made to yards, lawns, fields, parks, cemeteries, landscaping and structures. To help prevent infestations, make exterior structural and surrounding area applications according to this label.
Exterior Structural and Surrounding Area Applications for Collembola (Springtails), Crickets and Millipedes	10 to 30	Directly contacting pests, apply where pests rest, trail and harbor, such as structural and other voids (including voids associated with and around doors, windows, utility entry points, behind siding, weep holes and tree hollows), eaves of structures, around lights or other insect attractant areas, foliage, bushes, landscape materials, garbage receptacles, under trees and other shaded areas.
Exterior Structural and Surrounding Area Applications for Crawling Insects/Pests including: Earwigs, Pillbugs, Sowbugs, Spiders (excluding Brown Recluse), and Turkestan Cockroaches	30	
Fleas	10	Apply to yards, porches, patios or other areas of habitation for fleas, especially areas that pets frequent, directly contacting fleas. Pay particular attention to shaded areas with low protective covering such as under bushes, under decks, lawn furniture, lawn ornaments and other landscape materials. Apply to pet entry areas such as steps and stoops and other areas where pets rest or sit for extended periods of time, directly contacting fleas. <b>DO NOT</b> treat pets with this product.
House Flies	10 to 20	Apply to outside surfaces of screens, doors, window frames, porches, in garages, on foliage or wherever flies enter or congregate around or on the building, directly contacting flies. Application sites include inside and outside surfaces of dumpsters, other trash holding containers and surrounding surfaces, directly contacting flies.

(continued)

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<b>OUTDOOR APPLICATIONS</b> <i>(continued)</i>		
<b>Pests</b>	<b>Finished Dilution</b> (grams per gallon)*	<b>Application Instructions</b>
Mosquitoes ( <i>Anopheles</i> )	20	Apply using handheld, back-pack or truck mounted sprayers only. Not for use with truck mounted or handheld cold aerosol ULV sprayers, or thermal fogging devices. Use up to 50 gallons of diluted spray per 50,000 square feet. Apply to shrubbery, vegetation and other areas where mosquitoes may rest. Shrubby and vegetation around stagnant pools, marshy areas, ponds and shorelines may be treated if applied as a wet spray. Direct application of this product to any body of water is prohibited. <b>DO NOT</b> apply by aircraft. <b>Not approved for use on mosquitoes in the state of New York.</b>
When a rate range is indicated, use the lower rate for maintenance applications and the higher rates for heavy infestations. *Refer to <b>SPRAY DILUTION CHART</b> for concentration of active ingredient in finished product.		

### **USE IN AND AROUND LIVESTOCK HOUSING**

For structural use indoors and outdoors of animal housing. Remove animals or treat in areas where animals are not present. **DO NOT** apply to animals. **DO NOT** allow insecticide to drift onto animals. **DO NOT** contaminate milk, food or drinking water.

To kill house flies on outdoor surfaces and in animal housing including calf hutches, calving pens and parlors, chicken houses, dairy areas, dog kennels, hog barns, horse barns, milk rooms and rabbit hutches: Treat normal fly resting areas such as ceilings, screens, upper corners of the area, around windows and doors, light fixtures and other surfaces known to attract flies. Apply as a coarse, wet spray. Using a mixture of 10 to 20 grams of product per gallon of water, apply at a rate of 1 gallon diluted product per 1,000 square feet of surface. For best results, initiate treatments at the beginning of the fly season and repeat during periods of heavy fly activity.

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### Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as environmental conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer. BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW: (A) BASF MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY, (B) BUYER'S EXCLUSIVE REMEDY AND BASF'S AND SELLER'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT, AND (C) BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** BASF and the Seller offer this product, and the Buyer and User accept it, subject to these **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

PCS915

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000499-00561.20190313d.**NVA 2019-04-477-0037**  
Supersedes: NVA 2017-04-477-0224

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709



We create chemistry

## **Exhibit G**

Pesticide Product Label for Cruiser 5FS Alfalfa,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:17279465909540  
::NO::P8\\_PUID,P8\\_RINUM:37108,100-941](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:17279465909540::NO::P8_PUID,P8_RINUM:37108,100-941), (Jun. 18, 2012)



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

JUN 18 2012

Mr. Patrick McCain  
Syngenta Crop Protection. LLC  
P.O. Box 18300  
Greensboro, NC 27419-8300

Subject: Addition of an Alternate Brand Name

Dear Mr. McCain:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated May 23, 2012 for:

**EPA Registration 100-941**

**Cruiser® Insecticide (Alternate Name: Cruiser 5FS Alfalfa)**

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

If you have any questions, call me at 703 305-5409 or electronically at [daniel.dani@epa.gov](mailto:daniel.dani@epa.gov).


Sincerely,

A handwritten signature in cursive script that reads "Dani Daniel".

Dani Daniel  
Registration Division (7504P)  
Insecticide/Rodenticide Branch

Please read instructions on reverse before completing form.

**NOTIFICATION**

	United States <b>Environmental Protection Agency</b> Washington, DC 20460	Registration Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <b>NOTIF</b>
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**Application for Pesticide - Section I**

1. Company/Product Number 100-941	2. EPA Product Manager Venus Eagle	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Cruiser® Insecticide	PM# 01 IRB	
5. Name and Address of Applicant (Include ZIP Code) Syngenta Crop Protection, LLC P. O. Box 18300 Greensboro, NC 27419  <input type="checkbox"/> Check if this is a new address		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____  Product Name _____

**Section - II**


<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed supplemental labeling in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)  
 Notification of label change per PR Notice 2007-4. This Notification is consistent with the guidance of PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.  
 Syngenta Crop Protection LLC is submitting a Notification for Cruiser Insecticide (EPA Reg. No. 100-941) to propose the alternate brand name "Cruiser 5FS Alfalfa". This alternate brand name will be used to create a sub-set label to market the approved directions for use for alfalfa only, as allowed by 40 CFR 152.130 (b). A copy of the alternate brand name "Cruiser 5FS Alfalfa" sub-set final printed labeling will be submitted to the EPA before releasing the product for shipment.

**Section - III**

<b>1. Material This Product Will Be Packaged In:</b>				<b>2. Type of Container</b>	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
*Certification must be submitted		If "Yes" Unit Packaging wgt.    No. per Container	If "Yes" Unit Packaging wgt.    No. per container		
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 gal - bulk		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other _____ <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled					

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Patrick McCain	Title Senior Regulatory Product Manager Syngenta Crop Protection, LLC	Telephone No. (Include Area Code) 336.632-7317
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature  	3. Title Senior Regulatory Product Manager Syngenta Crop Protection, LLC	
4. Typed Name Patrick McCain	5. Date May 23, 2012	







<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call <b>1-800-888-8372</b>	

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**PRECAUTIONARY STATEMENTS**


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**Hazards to Humans and Domestic Animals****CAUTION**

Harmful if inhaled, swallowed, or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

## Personal Protective Equipment (PPE)

### Applicators, Other Handlers and Re-entry Workers Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material - Category A (e.g., natural rubber  $\geq$  14 mils)
- Shoes plus socks

**Multiple Task Workers must wear:** (Multiple task workers perform multiple tasks in one day such as mixing, bagging/filling seed containers, product application, bag sewing, and clean up)

- Chemical resistant gloves
- Chemical-resistant coveralls over long sleeved shirt and long pants
- Shoes plus socks

### User Safety Requirements

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

### Engineering Control Statements

When handlers use closed systems 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 thoroughly with soap and water after handling.
- 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 product is toxic to wildlife and highly toxic to aquatic invertebrates. Thiamethoxam is highly toxic to bees exposed to direct treatment, and effects may be possible as a result of exposure to translocated residues in blooming crops. Do not contaminate water when disposing of equipment wash water.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

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

Cruiser 5FS Alfalfa may be applied by closed or open system seed treatment application processes. **DO NOT** apply more than 215 gallons of Cruiser 5FS Alfalfa per 8-hour day for seed treatments utilizing a closed system. **DO NOT** apply more than 38 gallons of Cruiser 5FS Alfalfa per 8-hour day for seed treatments utilizing an open system.

### AGRICULTURAL USE REQUIREMENTS

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

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the seed is treated with the product and the treated seed 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
- Chemical-resistant gloves made of any waterproof material - Category A (e.g., natural rubber  $\geq$  14 mils)
- Shoes plus socks

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR INSECT AND/OR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.**

Treatment of highly mechanically scarred or damaged seed, or seed known to be of low vigor and poor quality, except for the purpose of curative control of existing disease pests, may result in reduced germination and/or reduction of seed and seedling vigor.

Treat a small quantity of seed using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of seed before committing the total seed lot to a selected seed treatment. Due to seed quality, crop or variety sensitivity, and seed storage conditions beyond the control of Syngenta, no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

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## **USE INFORMATION**

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Cruiser 5FS Alfalfa is a systemic seed treatment insecticide belonging to the neonicotinoid class of chemistry. Cruiser 5FS Alfalfa controls certain chewing and sucking insects through contact and ingestion. The plant rapidly takes up the active ingredient in Cruiser 5FS Alfalfa as it starts to emerge and establish. The use of Cruiser 5FS Alfalfa is compatible with integrated pest management programs. The length of control of the major insect pests will vary depending on the product use rate, insect pressure, crop growth and maturity, and soil and environmental conditions. When rate ranges are given, use the higher rate when insect pressure is expected to be high.

### **Resistance Management**

Some insect pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. Syngenta encourages responsible product stewardship to ensure effective long-term control of the insects on this label.

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

Cruiser 5FS Alfalfa contains a Group 4A insecticide (thiamethoxam, belonging to the neonicotinoid class of chemistry). Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by Cruiser 5FS Alfalfa or other Group 4A insecticides.

### **In order to maintain susceptibility to this class of chemistry:**

- Avoid using Group 4A insecticides exclusively for season long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply Cruiser 5FS Alfalfa or other Group 4A insecticides using a "treatment window" approach. A treatment window is a period of time as defined by the stage of crop development

and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, foliar, unless otherwise stated) of the Group 4A insecticides. Do not exceed the maximum Cruiser 5FS Alfalfa allowed per growing season.

- Following a treatment window of Group 4A insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 4A insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest's ability to develop resistance to this class of chemistry.
- If resistance is suspected, do not reapply Cruiser 5FS Alfalfa or any other Group 4A insecticides.

**Other Insect Resistance Management (IRM) practices include:**

- Incorporating IPM techniques into your insect control program.
- Monitoring treated insect populations for loss of field efficacy.
- Using tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and effective rates are applied.

**For additional information on Insect Resistance Management:**

- Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at: <http://www.irac-online.org/>.

**Use Restrictions**

Cruiser 5FS Alfalfa may be applied by closed or open system seed treatment application processes. **DO NOT** apply more than 215 gallons of Cruiser 5FS Alfalfa per 8-hour day for seed treatments utilizing a closed system. **DO NOT** apply more than 38 gallons of Cruiser 5FS Alfalfa per 8-hour day for seed treatments utilizing an open system.

Commercial treatment of sorghum seed requires the use of a closed system.

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**MIXING PROCEDURES**

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**Important:** Thoroughly shake the container of Cruiser 5FS Alfalfa prior to use.

Apply Cruiser 5FS Alfalfa as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect or disease control. Thoroughly mix the specified amount of Cruiser 5FS Alfalfa into the required amount of water for the slurry treater and dilution rate to be used. The typical density of Cruiser 5FS Alfalfa is

10.5 pounds per gallon. Consult the manufacturer of the application equipment you plan to use for suitability for this application and for instructions on operation and calibration of the equipment.

- Use an EPA-approved dye or colorant that imparts an unnatural color to the seed as stated in 40 CFR 153.155 (c).
- Allow seed to dry before bagging.
- Store away from feed and foodstuffs.

Cruiser 5FS Alfalfa has been found to be compatible with some liquid inoculant products. Cruiser 5FS Alfalfa may be mixed or applied sequentially with approved liquid inoculants. Consult the maker of the liquid inoculants and a Syngenta Crop Protection representative for directions before applying Cruiser 5FS Alfalfa with inoculants.

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### **SEED BAG LABEL REQUIREMENTS**

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The Federal Seed Act requires that bags containing treated seeds shall be labeled with the following statements:

- This seed has been treated with thiamethoxam insecticide.
- Do not use for feed, food or oil purposes.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used for agronomic practice.
- User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with Cruiser 5FS Alfalfa (thiamethoxam):

- Ground Water Advisory: This product has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into the ground water if used in areas where soils are permeable, particularly where the water table is shallow.
- Pollinator Precautions: Thiamethoxam is highly toxic to bees, and effects are possible as a result of exposure to translocated residues in blooming crops. To mitigate this potential exposure, the first cutting of alfalfa should occur before bloom.
- Store away from food and feedstuffs.
- Wear long-sleeved shirt, long pants and chemical-resistant gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading.
- Dispose of seed packaging in accordance with local requirements.
- In the event of crop failure or harvest of a crop grown from Cruiser 5FS Alfalfa treated seed, the field may be replanted immediately to alfalfa, *Brassica* (cole) leafy vegetables, cereal grains (including barley, buckwheat, corn, pearl millet,

proso millet, oats, popcorn, rice (dry-seeded), rye, sorghum, teosinte, triticale, wheat and wild rice), canola, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, peanuts, rapeseed seed, and safflower seed), root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables. For any other crop, the minimum plant back interval is 120 days from the date the Cruiser 5FS Alfalfa treated seed was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.

- Do not allow children, pets, or livestock to have access to treated seed.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Dispose of all excess treated seed. Leftover treated seed may be doublesown around the headland or buried away from water sources in accordance with local requirements. Do not contaminate water bodies when disposing of planting equipment washwaters.
- With the exception of cotton and soybeans, do not make any soil or foliar application of products containing thiamethoxam to crops grown from seed treated with Cruiser 5FS Alfalfa (thiamethoxam). For cotton and soybeans, do not apply a neonicotinoid insecticide within 45 days of planting seed treated with Cruiser 5FS Alfalfa.
- For alfalfa: Do not use at a rate that will result in more than 0.022 lb. thiamethoxam per acre (10.0 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For barley: Do not use at a rate that will result in more than 0.052 lb. thiamethoxam per acre (23.6 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For buckwheat, pearl millet, proso millet, oats, rye, teosinte, triticale, and wild rice: Do not use at a rate that will result in more than 0.04 lb. thiamethoxam per acre (18.4 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For corn: Do not use at a rate that will result in more than 0.165 lb. thiamethoxam per acre (74.8 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For cotton: Do not use at a rate that will result in more than 0.075 lb. thiamethoxam per acre (34.0 grams ai/A) as a seed treatment application. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For cucurbit vegetables (based on pickling cucumbers seeding rate): Do not use at a rate that will result in more than 0.164 lb. thiamethoxam per acre (74.4 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For legume vegetables (other than soybeans): Do not use at a rate that will result in more than 0.075 lb. thiamethoxam per acre (34.0 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.



- For oil seed crops (based on safflower seeding rate): Do not use at a rate that will result in more than 0.14 lb. thiamethoxam per acre (63.5 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For peanuts: do not use at a rate that will result in more than 0.08 lb. thiamethoxam per acre (35.0 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For potatoes: Do not use at a rate that will result in more than 0.125 lb. thiamethoxam per acre (56.7 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For rice (dry seeded): Do not use at a rate that will result in more than 0.17 lb. thiamethoxam per acre (75.6 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed. Not for use in water seeded rice production. Do not plant or sow Cruiser 5FS Alfalfa treated rice seed by aerial application equipment. Do not use treated fields for the aquaculture of edible fish and crustacean.
- For sorghum: Do not use at a rate that will result in more than 0.03 lb. thiamethoxam per acre (13.5 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For soybeans: Do not use at a rate that will result in more than 0.083 lb. thiamethoxam per acre (37.8 grams ai/A) as a seed treatment application. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For sugarbeets: Do not use at a rate that will result in more than 0.206 lb. thiamethoxam per acre (93.4 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For sunflower: Do not use at a rate that will result in more than 0.14 lb. thiamethoxam per acre (63.5 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.
- For wheat: Do not use at a rate that will result in more than 0.08 lb. thiamethoxam per acre (36.3 grams ai/A) per season. This seed has been treated with thiamethoxam at \_\_\_x\_\_\_ mg ai/seed.

**Sunflower Seed Bags Only:**

- To protect the Preble's Meadow Jumping Mouse, sunflower seed treated with Cruiser 5FS Alfalfa may not be planted in Elbert or Weld Counties in Colorado. Treated sunflower seed must be planted at a minimum depth of one inch.

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## **CROP USE DIRECTIONS**

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### **ALFALFA**

Cruiser 5FS Alfalfa seed treatment will protect young alfalfa seedlings from damage caused by aphids and leaf hoppers for the first cut crop only. Apply Cruiser 5FS Alfalfa at 0.001 milligrams thiamethoxam per seed\* (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams of thiamethoxam).

\*Based on an average of 210,000 alfalfa seeds per pound.

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides proven to provide seed and seedlings against diseases. These fungicides must show safety on treated seed, alone or in combination with Cruiser 5FS Alfalfa.

#### **Restrictions:**

Do not use a Cruiser 5FS Alfalfa rate that will result in more than 0.022 lb thiamethoxam per acre (10 grams ai/A) per season.

Apply Cruiser 5FS Alfalfa to alfalfa seed in commercial seed treatment facilities only. Do not use in hopper box, slurry box, or other farmer-applied applications.

**CEREALS GRAINS** (barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice (dry-seeded), rye, sorghum, teosinte, triticale, wheat and wild rice)

### **Barley**

To provide early season protection of seedlings against injury by bird cherry-oat aphids, English grain aphid, greenbug, Hessian fly, Russian wheat aphid, and wireworm, and to reduce potential spread of barley yellow dwarf virus due to aphid vectors, apply Cruiser 5FS Alfalfa at 0.75-1.33 fluid ounces per 100 pounds of seed. At the high rate, Cruiser 5FS Alfalfa will reduce grasshopper damage in barley during the early season. For early season wireworm protection, apply Cruiser 5FS Alfalfa at 0.19 to 0.50 fluid ounces per 100 pounds of seed.

To provide protection of barley seed against damage from stored grain pests, rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian moth, apply Cruiser 5FS Alfalfa at 0.025–1.33 fluid ounces per 100 pounds of seed.

### **Corn (Field, Pop, Seed and Sweet Corn)**

**Note:** If corn seed to be treated with Cruiser 5FS Alfalfa has existing infestations of stored grain pests, fumigate the seed with a registered product approved for such use, prior to treating with Cruiser 5FS Alfalfa and bagging.

**Note:** When treated according to the following directions for post-planting protection against listed pests, Cruiser 5FS Alfalfa will also provide protection during post treatment storage of the seed against damage from the following insects: Indian Meal Moth (*Plodia interpunctella*), Lesser Grain Borer (*Rhyzopertha dominica*), Red Flour Beetle (*Tribolium castaneum*), and Rice Weevil (*Sitophilus oryza*).

Consult your Syngenta Seed Treatment representative for specifics on slurry additives to use during application of Cruiser 5FS Alfalfa.

Follow planter manufacturer instructions for use of talc, graphite, or other hopper box additives at planting.

It is highly recommended to use registered seed treatment fungicides such as Apron XL®, Dynasty® and Maxim® XL as the broad spectrum seed treatment fungicide with Cruiser 5FS Alfalfa applications on corn.

To provide early season protection of seedlings against injury by wireworm, seedcorn maggot, southern corn leaf beetle, chinch bug, corn flea beetle, grape colaspis, white grub (including Japanese beetle larvae, European Chafer larvae, true white grub, annual white grub, May/June beetle larvae), black cutworm, thrips, southern green stinkbug, seedcorn beetle, sugarcane beetle, and corn leaf aphid, apply Cruiser 5FS Alfalfa at a rate to achieve between 0.125 and 0.80 milligrams thiamethoxam per kernel (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

To provide corn rootworm (including Mexican, Northern, Southern, and Western corn rootworm) and billbug protection, apply Cruiser 5FS Alfalfa at a rate to achieve 1.25 milligrams thiamethoxam per kernel (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

**Restrictions:**

For field, pop, seed and sweet corn, do not use a Cruiser 5FS Alfalfa rate that will result in more than 0.21 lb thiamethoxam per acre (93.75 grams ai/A) based on a maximum seeding rate for sweet corn of 75,000 seeds/acre.

DO NOT apply more than 215 gallons per 8-hour day for seed treatments utilizing a closed system. DO NOT apply more than 38 gallons of Cruiser 5FS Alfalfa per 8-hour day for seed treatments utilizing an open system. If it is necessary to apply more than 38 gallons of Cruiser 5FS Alfalfa per 8-hour day, a closed system must be used.

**Rice (dry-seeded use only)**

To provide early season protection of seedlings against injury by grape colaspis rice water weevil, chinchbugs, and thrips, apply Cruiser 5FS Alfalfa at a rate to achieve 0.03 milligrams thiamethoxam per seed\* (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

Cruiser 5FS Alfalfa is not labeled for use in water seeded rice production.

Do not plant or sow Cruiser 5FS Alfalfa treated rice seed by aerial application equipment.

Do not use treated fields for the aquaculture of edible fish and crustacean.

\*Not to exceed 120 lb. seed/Acre Seeding Rate.

**Buckwheat, Pearl Millet, Proso Millet, Oats, Rye, Teosinte, Triticale, and Wild Rice**

To provide early season protection of seedlings against injury by bird cherry-oat aphids, English grain aphid, greenbug, Hessian fly, Russian wheat aphid, and wireworm, and to reduce potential spread of barley yellow dwarf virus due to aphid vectors, apply Cruiser 5FS Alfalfa at 0.75-1.33 fluid ounces per 100 pounds of seed. At the high rate, Cruiser 5FS Alfalfa will reduce grasshopper damage during the early season. For early season wireworm protection, apply Cruiser 5FS Alfalfa at 0.19 to 0.50 fluid ounces per 100 pounds of seed.

**Sorghum**

To provide early season protection of seedlings against injury by chinch bug, corn leaf aphid, fire ants, greenbug, seed corn maggot, stored grain insects, wireworm, and yellow sugarcane aphid, apply Cruiser 5FS Alfalfa at 5.1 to 7.6 fluid ounces per 100 pounds of seed, or 0.062 to 0.093 milligrams thiamethoxam per seed\* (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams of thiamethoxam).

\*Based on an average of 14,500 sorghum seeds per pound.

Follow planter manufacturer instructions for use of talc or other hopper box additives at planting.

A closed system must be used for commercial treatment of sorghum seed.

**Wheat**

To provide early season protection of seedlings against injury by bird cherry-oat aphids, English grain aphid, greenbug, Hessian fly, and Russian wheat aphid, and to reduce potential spread of barley yellow dwarf virus due to aphid vectors, apply Cruiser 5FS Alfalfa at 0.75-1.33 fluid ounces per 100 pounds of seed. At the high rate, Cruiser 5FS Alfalfa will reduce grasshopper damage in wheat during the early season. For early season wireworm protection, apply Cruiser 5FS Alfalfa at 0.19 to 0.50 fluid ounces per 100 pounds of seed.

To provide protection of wheat seed, against damage from stored grain pests, rusty grain beetle, saw-toothed grain beetle, red flour beetle, rice weevil, lesser grain borer, European corn borer and Indian moth, apply Cruiser 5FS Alfalfa at 0.025–1.33 fluid ounces per 100 pounds of seed.

**COTTON (Delinted Only)**

To provide early season protection of seedlings against injury by cotton aphid, tobacco thrips, western flower thrips, wireworm, and the suppression of cotton fleahopper and plant bugs, apply Cruiser 5FS Alfalfa at a rate to achieve between 0.300 and 0.375 milligrams thiamethoxam per seed (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

Plant Cruiser 5FS Alfalfa-treated cotton seed based on specified planting dates and soil temperatures made by your state agricultural extension agent. In areas that have a history of high thrips pressure or when cotton is grown in North Carolina or Virginia, use Cruiser 5FS Alfalfa seed treatment followed by a foliar insecticide spray when cotton is between the 1<sup>st</sup> and 3<sup>rd</sup> leaf stage.

Do not apply a neonicotinoid insecticide within 45 days of planting seed treated with Cruiser 5FS Alfalfa.

## **CUCURBIT VEGETABLE GROUP**

**Chayote**

**Chinese Waxgourd**

**Citron Melon**

**Cucumber**

**Gherkin**

**Edible Gourd** (includes hyotan, cucuzza, Chinese Okra, and hechima)

***Momordica* spp.** (includes balsam apple, balsam pear, bitter melon, Chinese cucumber)

**Muskmelon** (includes true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon)

**Pumpkin**

**Summer Squash** (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, and zucchini)

**Winter squash** (includes butternut squash, calabaza, hubbard squash, acorn squash and spaghetti squash)

**Watermelon**

To provide early season protection of seedlings against injury by aphids, cucumber beetle, flea beetle, leafminers, seedcorn maggots, white fly and wireworms, apply Cruiser 5FS Alfalfa at a rate to achieve between 0.25 to 0.75 milligrams thiamethoxam per seed\* (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams of thiamethoxam).

\*Based on an average range of 4,000 to 27,000 cucurbit seeds per pound.



**LEGUME VEGETABLE GROUP**

**Bean (*Lupinus species*)** (includes grain, sweet, white, white sweet lupin).

**Bean (*Phaseolus species*)** (includes field bean, kidney bean, lima bean, navy bean, runner bean, snap bean, tepary bean, wax bean)

**Bean (*Vigna species*)** (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean)

**Broad bean (fava bean)**

**Chickpea (garbanzo bean)**

**Guar**

**Jackbean**

**Lablab bean (hyacinth bean)**

**Lentil**

**Pea (*Pisum species*)** (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

**Pigeon pea**

**Sword bean**

To provide early season protection of seedlings against injury by aphids, bean leaf beetle, leafhoppers, leaf miner, Mexican bean beetle, pea leaf weevil, plant leaf hopper, seed corn maggot, thrips, white grub and wireworm, apply Cruiser 5FS Alfalfa at 1.28 fluid ounces per 100 pounds of seed.

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides proven to control seed and seedling diseases. These fungicides must show safety on treated seed, alone and in combination with Cruiser 5FS Alfalfa.

**Soybeans (including soybeans, vegetable)**

To provide early season protection of seedlings against injury by aphids, bean leaf beetle, grape colaspis, leafhoppers, seedcorn maggot, threecornered alfalfa hopper, thrips, white grubs, and wireworm, apply Cruiser 5FS Alfalfa at 1.28 fluid ounces per 100 pounds of seed. Alternatively, for those who wish to treat on a milligram per seed basis, apply 0.0756 to 0.1512 mg. a.i. per seed.

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides, like Apron XL and Maxim or ApronMAXX® brand formulations, proven to control seed and seedling diseases. These fungicides must show safety on treated seed, alone and in combination with Cruiser 5FS Alfalfa.

Do not apply a neonicotinoid insecticide within 45 days of planting seed treated with Cruiser 5FS Alfalfa.

**OIL SEED CROPS** (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, rapeseed seed, and safflower seed)

To provide early season protection of seedlings against injury by crucifer flea beetles and wireworms, apply Cruiser 5FS Alfalfa at 10.24 fluid ounces per 100 pounds of seed.

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides proven to control seed and seedling diseases. These fungicides must show safety on treated seed, alone and in combination with Cruiser 5FS Alfalfa.

## **PEANUTS**

To provide early season protection of seedlings against injury by thrips, aphids, wireworm, white grubs, and the suppression of threecornered alfalfa hopper and plant bugs, apply Cruiser 5FS Alfalfa at 0.20 to 0.29 mg thiamethoxam per seed (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides, like Dynasty® PD, proven to control seed and seedling diseases. These fungicides must show safety on treated seed, alone and in combination with Cruiser 5FS Alfalfa.

Plant Cruiser 5FS Alfalfa-treated peanuts based on specified planting dates and soil temperatures made by your state agricultural extension agent.

### **Restrictions:**

Do not use a Cruiser 5FS Alfalfa rate that will result in more than 0.08 lbs thiamethoxam per acre (35.0 grams ai/A) per season, based on a maximum seeding rate of 120,700 seeds/acre.

Do not use in hopper box, planter box, slurry box, or other farmer-applied applications. Apply Cruiser 5FS Alfalfa in commercial seed treatment facilities only.

## POTATOES

**Note:** Do not use this product on potatoes in Nassau or Suffolk County, New York.

Cruiser 5FS Alfalfa potato seed treatment is to be used as an integral part of a potato pest management strategy. This strategy includes the use of certified seed, proper crop rotation, insect population thresholds, appropriate control measures, optimal harvest time for tubers and proper handling of tubers without bruising. Consult your local agricultural extension agent for more detailed information on insect management practices.

### Application Procedure

Apply Cruiser 5FS Alfalfa using only Syngenta approved equipment that is designed to apply liquid seed treatment products to potatoes. Follow the equipment instructions for set-up and calibration. Cruiser 5FS Alfalfa may require dilution prior to atomization and application to potatoes (see equipment use instructions). Ensure that spray nozzles are properly hooded and shielded to prevent any spray from moving off target. Apply Cruiser 5FS Alfalfa only in well-ventilated areas. Syngenta Crop Protection will not warranty the field performance of Cruiser 5FS Alfalfa if the application is made through non-Syngenta approved equipment. The mixture is applied as a fine spray over the cut or whole seed tubers. The quantity of water and Cruiser 5FS Alfalfa volume is adjusted based on the amount of seed moved under the hood. It is mandatory that the equipment be calibrated to deliver a maximum of 4 fluid ounces of the mixture per 100 pounds of seed consistently. Applying excess moisture may predispose the seed to rotting, resulting in poor emergence and stand. Generally, liquid based fungicides (such as Maxim 4FS), can be applied with Cruiser 5FS Alfalfa, however check compatibility of the fungicides with Cruiser 5FS Alfalfa before use. If inert dust (fir bark, talc, etc.) or a dust-based fungicide is used, apply the Cruiser 5FS Alfalfa seed treatment before applying the dust.

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides proven to control seed and seedling diseases. These fungicides must show safety on treated seed.

Use Cruiser 5FS Alfalfa seed treatment to provide protection against injury from Colorado potato beetles, flea beetles, green peach aphids, leafhoppers, leafminers, potato aphids, psyllids, and whiteflies. Cruiser 5FS Alfalfa will also control wireworms that feed on the seed piece.

The expected length of protection is dependent upon the rate used, soil and environmental conditions and insect pressure. Select the appropriate Cruiser 5FS Alfalfa rate based upon the history of pest pressure in the region and the length of the growing season. In general, use the high rate of Cruiser 5FS Alfalfa in the following table for areas where high insect pressure is expected. Consult your Syngenta representative for information specific to your area or region.

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Choose the appropriate Cruiser 5FS Alfalfa rate from the following chart, based upon your seeding rate:

Potato Seeding Rate: 100 lbs. per Acre	Fluid Ounces of Cruiser 5FS Alfalfa per 100 lbs. of Potato Seed Tubers
16-19	0.11-0.16
20-21	0.11-0.15
22-24	0.11-0.13
25-26	0.11-0.12
27-29	0.11

For seeding rates not covered by the above table, do not use a Cruiser 5FS Alfalfa rate that will result in more than 0.125 pounds thiamethoxam per acre.

#### Treated Seed Storage

If the treated seed needs to be stored or held for a few days, make sure that there is adequate cool air (60°F) movement through the pile of cut seed potatoes at relative humidity of 85-90%. Do not pile cut and treated seeds above 6 feet in height. Best results are obtained if potatoes are planted immediately after Cruiser 5FS Alfalfa seed treatment. When transporting cut and Cruiser 5FS Alfalfa treated seed, make sure the seed is covered.

## SUGARBEETS

Cruiser 5FS Alfalfa is a seed treatment insecticide that provides early season protection against injury from sugarbeet root maggot, leaf miners, wireworms, root aphids, white grubs, spring tails, and beet leaf hopper. Cruiser 5FS Alfalfa protects sugarbeets from beet leaf hoppers which may spread curly top virus. Thorough seed coverage will offer the best protection of the seed from insect damage.

Apply Cruiser 5FS Alfalfa at 3.39 to 3.95 fl. oz. (equivalent to 60 to 70 grams a.i. of thiamethoxam respectively) per unit of sugarbeet seed. A unit of sugarbeet seed is 100,000 seeds.

For protection against *Pythium* damping-off or *Rhizoctonia species* seed and seedling diseases in sugarbeets, Cruiser 5FS Alfalfa may be applied with Apron XL®, Maxim 4 FS and Dynasty fungicide seed treatments.

Cruiser 5FS Alfalfa may be applied in conjunction with polymers, pelleting materials and seed coating materials that are approved as food-use inert ingredients by EPA and listed in 40 CFR 180.910-960. These materials must show safety on treated seed. The end product that combines Cruiser 5FS Alfalfa with labeled fungicides must be tested for seed safety without any detrimental effects on seed germination or plant stand establishment. Pre-test the germination of a small sample of seed lot with Cruiser 5FS Alfalfa prior to large scale commercial application.

## **SUNFLOWER**

To provide early season protection of sunflower seedlings against injury by flea beetle, stored grain insects, sunflower beetle, and wireworm, apply Cruiser 5FS Alfalfa at 0.25 milligrams thiamethoxam per seed (each fluid ounce of Cruiser 5FS Alfalfa contains 17.7 grams thiamethoxam).

It is highly recommended to use Cruiser 5FS Alfalfa with compatible and registered seed treatment fungicides such as Apron XL, Dynasty and Maxim 4FS which are proven to control seed and seedling diseases.

Follow planter manufacturer instructions for use of talc or other hopper box additives at planting.



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**STORAGE AND DISPOSAL**

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

**Pesticide Storage**

Store in a cool, dry place. Do not store above 90°F for extended periods.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

**Pesticide Disposal**

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be used 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 in proper disposal methods.

**Container Handling (≤5 gallons)**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. *Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal.* Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Container Handling (> 5 gallons)**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other side and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Container Handling** *[refillable container]*

**Refillable container.** Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or by other procedures allowed by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!**

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For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

SCP 941B-M (Notif Cruiser 5FS Alfalfa)

CRU 941B-M(Notif Cruiser 5FS Alfalfa)clean-Ig-5-23-12  
**000100-00941.20120523.NOTIFCruiser5FSAlfalfa.pdf**

(Non-detachable container Label - 1 gal., through 15 gal.)

**Cruiser® 5FS Alfalfa**

**Insecticide**

A seed treatment product for protection against damage from, or control of, listed insects on alfalfa, cereal grains (including barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice (dry-seeded), rye, sorghum, teosinte, triticale, wheat and wild rice), cotton, cucurbit vegetables, legume vegetables (including soybean), oilseed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, rapeseed seed, and safflower seed), peanuts, potatoes, sugarbeets, and sunflower

**Active Ingredient:**

Thiamethoxam <sup>1</sup> .....	47.6%
Other Ingredients:	52.4%
<b>Total:</b>	<b>100.0%</b>

<sup>1</sup>CAS No. 153719-23-4

Cruiser 5FS Alfalfa is a flowable seed treatment containing 5 pounds thiamethoxam per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use in booklet.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-941  
EPA Est. XXXX  
SCP 941B-M (Notif Cruiser 5FS Alfalfa)

Net Contents

<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call <b>1-800-888-8372</b>	

**PRECAUTIONARY STATEMENTS****Hazards to Humans and Domestic Animals****CAUTION**

Harmful if inhaled, swallowed, or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

**Environmental Hazards**

This product is toxic to wildlife and highly toxic to aquatic invertebrates.

Thiamethoxam is highly toxic to bees exposed to direct treatment, and effects may be possible as a result of exposure to translocated residues in blooming crops. Do not contaminate water when disposing of equipment wash water.

## **STORAGE AND DISPOSAL**

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

### **Pesticide Storage**

Store in a cool, dry place. Do not store above 90°F for extended periods.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

### **Pesticide Disposal**

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be used 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 in proper disposal methods.

### **Container Handling (≤5 gallons)**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

### **Container Handling (> 5 gallons)**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other side and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Container Handling** *[refillable container]*

**Refillable container.** Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or by other procedures allowed by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER**

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Manufactured for:

Syngenta Crop Protection, LLC

P.O. Box 18300

Greensboro, North Carolina 27419-8300

SCP 941B-M (Notif Cruiser 5FS Alfalfa)

CRU941B-M(Notif Cruiser 5FS Alfalfa)clean-lg-5-23-12

**000100-00941.20120523.NOTIFCruiser5FSAlfalfa.pdf**

(Container label – bulk and mini-bulk)

**Cruiser® 5FS Alfalfa**

**Insecticide**

A seed treatment product for protection against damage from, or control of, listed insects on alfalfa, cereal grains (including barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice (dry-seeded), rye, sorghum, teosinte, triticale, wheat and wild rice), cotton, cucurbit vegetables, legume vegetables (including soybean), oilseed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, rapeseed seed, and safflower seed), peanuts, potatoes, sugarbeets, and sunflower

**Active Ingredient:**

Thiamethoxam <sup>1</sup> .....	47.6%
Other Ingredients:	52.4%
<b>Total:</b>	<b>100.0%</b>

<sup>1</sup>CAS No. 153719-23-4

Cruiser 5FS Alfalfa is a flowable seed treatment containing 5 pounds thiamethoxam per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use in booklet.

<p><b>AGRICULTURAL USE REQUIREMENTS</b></p> <p>Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under “Agricultural Use Requirements” in the Directions for Use section for information about this standard.</p>
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EPA Reg. No. 100-941  
EPA Est. XXXX

SCP 941B-M (Notif Cruiser 5FS Alfalfa)

Net Contents

<b>FIRST AID</b>	
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
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<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call <b>1-800-888-8372</b>	

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if inhaled, swallowed, or absorbed through the skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

### Environmental Hazards

This product is toxic to wildlife and highly toxic to aquatic invertebrates. Thiamethoxam is highly toxic to bees exposed to direct treatment, and effects may be possible as a result of exposure to translocated residues in blooming crops. Do not contaminate water when disposing of equipment wash water.



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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

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

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### STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

Store in a cool, dry place. Do not store above 90°F for extended periods.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

#### **Pesticide Disposal**

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be used 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 in proper disposal methods.

#### **Container Handling**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other side and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Container Handling** *[refillable container]*

**Refillable container.** Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or by other procedures allowed by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER**

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Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

SCP 941B-M (Notif Cruiser 5FS Alfalfa)

CRU941B-M(Notif Cruiser 5FS Alfalfa)clean-Ig-5-23-12  
**000100-00941.20120523.NOTIFCruiser5FSAlfalfa.pdf**

## **Exhibit H**

Pesticide Product Label for Dyna-Shield Imidacloprid 5,  
[https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:5562047905764::NO::P8\\_PUI  
D,P8\\_RINUM:481690,34704-940](https://ordspub.epa.gov/ords/pesticides/f?p=PPLS:8:5562047905764::NO::P8_PUI<br/>D,P8_RINUM:481690,34704-940), (Mar. 18, 2015)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 18, 2015

Lisa Nichols  
Registration Specialist  
Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632

Subject: Label Amendment – Clarification of Oil Seed Crops  
Product Name: Dyna-Shield Imidacloprid 5  
EPA Registration Number: 34704-940  
Application Date: 11/3/2014  
Decision Number: 497843

Dear Ms. Nichols:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

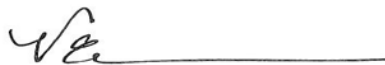
Page 2 of 2

EPA Reg. No. 34704-940

Decision No. 497843

with FIFRA section 6. If you have any questions, please contact Jacquelyn Marchese by phone at 703-347-0559, or via email at [marchese.jacquelyn@epa.gov](mailto:marchese.jacquelyn@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'VE', followed by a horizontal line extending to the right.

Venus Eagle, Product Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure



FOR USE AS A SEED TREATMENT TO PROTECT THE SEED OF LISTED CROPS AGAINST LISTED PESTS

Contains 5.0 pounds active ingredient per gallon  
(600 grams per liter) @ 20 °C

<b>ACTIVE INGREDIENT:</b>		
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine .....		48.7%
<b>OTHER INGREDIENTS</b> .....		51.3%
	<b>TOTAL</b>	<b>100.0%</b>

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
Have a product container or label with you when calling a poison control center. <b>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.</b>	

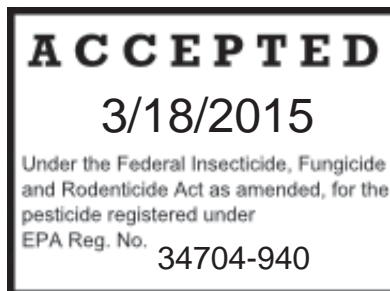
See inside label booklet for additional Precautionary Statements and Directions For Use.

EPA REG NO. 34704-940

EPA EST. NO. 34704-MS-001

NET CONTENTS 1.0 GAL (3.78 L)

EXP 10/14



DYNA-SHIELD® IMIDACLOPRID 5  
EPA REG. NO. 34704-940

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Socks and shoes,
- Chemical-resistant gloves (such as nitrile, butyl, neoprene, barrier laminate, polyvinyl chloride or viton).

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

**USER SAFETY RECOMMENDATIONS**

**Users should:**

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

**ENVIRONMENTAL HAZARDS**

This pesticide is highly toxic to birds and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. Cover or incorporate spilled treated seeds.

Imidacloprid is highly toxic to bees. Ensure that planting equipment is functioning properly in accordance with manufacturer specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.

**DIRECTIONS FOR USE**

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

For use in commercial seed treatment facilities. Use is also permitted as an end-use seed treatment on agricultural establishments at planting or immediately before planting, as specified in the Specific Crop Use Directions. This product is to be used in liquid or slurry treaters only.

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.

Mix thoroughly before use or use entire container at one time. All tank mixes should be pre-tested to determine physical compatibility between formulations. Follow the most restrictive precautions and limitations on the labeling of all products used in mixtures.

One fluid ounce of this product contains 17.7 grams imidacloprid.



**DYNA-SHIELD® IMIDACLOPRID 5**  
EPA REG. NO. 34704-940

**AGRICULTURAL USE REQUIREMENTS**

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

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

**Exception:** If the seed is treated with the product and the treated seed 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,
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton,
- Shoes plus socks,
- Protective eyewear.

**ROTATIONAL CROPS**

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. The following plant-back intervals must be observed for listed crops:

**ROTATIONAL PLANT-BACK INTERVALS\***

**IMMEDIATE PLANT-BACK**

Artichoke	Corn, sweet	Leafy greens	Pepper	Sugar beet
Barley	Cotton	Legume vegetables	Popcorn	Sunflower
Borage	Cranberry	(succulent or dried,	Potato	Tomatillo
Brassica (cole) leafy	Crambe	including soybean)	Rapeseed	Tomato
vegetables	Cucurbits	Millet	Rye	Triticale
Bulb vegetables	Eggplant	Mustard seed	Safflower	Root and Tuber
Canola	Flax	Oats	Sorghum	vegetables
Cilantro	Ground cherry	Okra	Soybean	Watercress
Corn, field	Leafy petiole vegetables	Pepinos	Strawberry	Wheat

**30-DAY PLANT-BACK**

Cereals, including  
Buckwheat  
Rice

\*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

\*For all other crops not listed on an imidacloprid label, or for crops for which no tolerance for the active ingredient has been established, a 12-month plant-back interval must be observed.

NOTIFICATION of the crop rotational restriction must be conveyed to the grower by appropriate seed tag labeling or bag printing on all seed units.

**NOTE:** The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21 CFR, Part 2.25. Any dye or colorant added to treated seed must be cleared for use under 40 CFR, Part 180.1001. Federal regulations have established official tolerances for certain pesticide residues. In order that residues on food and forage crops will not exceed established tolerances, use only at specified rates.

Treated seed must not be used for or mixed with food or animal feed or processed for oil. Seed commercially treated with Dyna-Shield® Imidacloprid 5 must be labeled in accordance with all applicable requirements of the Federal Seed Act.

**DYNA-SHIELD® IMIDACLOPRID 5**  
**EPA REG. NO. 34704-940**

**USE RESTRICTIONS**

- **DO NOT** use as a planter (hopper) box treatment.
- **DO NOT** use treated seed for feed, food, or oil purposes.
- Store treated seed away from feeds and foodstuffs.
- **DO NOT** allow children, pets, or livestock to have access to treated seed.  
The maximum application rate for imidacloprid (including seed treatments, foliar applications, soil applications) is 0.5 pound per acre per calendar year. **DO NOT** apply more than 0.5 pound active ingredient imidacloprid per acre per calendar year.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Exposed treated seed may be hazardous to birds. Cover or incorporate spilled treated seed. Excess or leftover seed may be double-sown around the headland or buried away from bodies of water in accordance with local requirements.

**SEED BAG LABELING REQUIREMENTS**

Seed commercially treated with this product must be labeled in accordance with all applicable requirements of the Federal Seed Act. The user of this product is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

THE FEDERAL SEED ACT REQUIRES THAT BAGS CONTAINING TREATED SEEDS BE LABELED WITH THE FOLLOWING STATEMENTS:

- This seed has been treated with Dyna-Shield Imidacloprid 5.
- **DO NOT** use for feed, food, or oil purpose.

THE US ENVIRONMENTAL PROTECTION AGENCY REQUIRES THE FOLLOWING STATEMENTS ON BAGS CONTAINING SEEDS TREATED WITH DYNA-SHIELD IMIDACLOPRID 5.

- Pollinator Precautions: Imidacloprid is highly toxic to bees. Ensure that planting equipment is functioning properly in accordance with manufacturer specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.
- Store away from feeds and foodstuffs.
- Wear long-sleeved shirt, long pants and chemical resistant gloves when handling treated seed.
- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Exposed treated seed may be hazardous to birds. Cover or incorporate spilled treated seeds. Excess or leftover seed may be double-sown around the headland or buried away from bodies of water in accordance with local requirements.
- Dispose of seed packaging in accordance with local requirements.
- **DO NOT** contaminate water bodies when disposing of planting equipment wash water.
- **DO NOT** allow children, pets, or livestock to have access to treated seed.
- In the event of a crop failure or harvest of a crop grown from Dyna-Shield Imidacloprid 5 treated seed, the field may be replanted immediately to artichoke, barley, borage, Brassica (cole) leafy vegetables, bulb vegetables, canola, cilantro, corn (field or sweet), cotton, cranberry, crambe, cucurbits, eggplant, flax, groundcherry, leafy petiole vegetables, leafy greens, legume vegetables (succulent or dried including soybean), millet, mustard seed, oats, okra, pepinos, pepper, popcorn, potato, rapeseed, rye, safflower, sorghum, soybean, strawberry, sugarbeets, sunflower, tomatillo, tomato, triticale, root and tuber vegetables, watercress, and wheat. For cereals including buckwheat and rice, the minimum plant-back interval is 30 days from the date Dyna-Shield Imidacloprid 5 treated seed was planted. Cover crops for soil building or erosion control may be planted at any time, but do not graze or harvest for food or feed. For all other crops not listed on an imidacloprid label, or for crops for which no imidacloprid tolerance for the active ingredient has been established, a 12-month plant-back interval must be observed.
- The maximum application rate (including seed treatment, foliar application, and soil application) per acre per year for imidacloprid is 0.5 pound.
- This seed has been treated with   X   pounds imidacloprid per    pounds of seed [ or   X   milligrams imidacloprid per seed].
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticides remain in the ethanol by-products that are used in agronomic practice.

**DYNA-SHIELD® IMIDACLOPRID 5**  
EPA REG. NO. 34704-940

**SPECIFIC CROP USE DIRECTIONS**

**CARROT**

To provide early season protection of seedlings against injury by listed pests, apply as a commercial seed treatment.

**For Use in Commercial Seed Treatment Facilities**

Target Pest	Fl Oz Product/100 Lb Seed
Seed corn maggot	6.4
Wireworm	

**CORN**

For the protection of corn plants from the corn insect pests listed below, apply as a seed treatment at the specified rates.

**Field Corn**

**For Use in Commercial Seed Treatment Facilities**

Target Pest	Fl Oz Product/			MG AI /Seed
	100 Lb Seed*	1000 Seeds	80,000 Seed Count	
Billbug <sup>2</sup>	13.5	0.076	6.05	1.34
Black cutworm <sup>3</sup>				
Chinch bug				
Corn leaf aphid				
Corn rootworm (including Northern, Western, Southern and Mexican <sup>1</sup> )				
Flea beetle				
Grape colaspis <sup>2</sup>				
Imported fire ant				
Seed corn maggot				
Southern green stinkbug				
Southern corn leaf beetle				
Thrips				
White grub				
Wireworm				
Chinch bug	6.0	0.034	2.69	0.60
Corn leaf aphid				
Flea beetle				
Grape colaspis <sup>2</sup>				
Imported fire ant				
Seed corn maggot				
Thrips				
White grub				
Wireworm				
Flea beetle (through 1-leaf stage)	1.6	0.009	0.72	0.16
Imported fire ant				
Seed corn maggot (seed protection only)				
White grub <sup>4</sup>				
Wireworm (seed protection only)				

This product contains 17,700 milligrams imidacloprid (active ingredient) per fluid ounce.

\*based on a standard number of 1786 seeds per pound (100,000 seeds per 56-pound bushel)

<sup>1</sup> In areas of heavy to severe Corn rootworm populations, protection will not be adequate. Use only in areas of light to moderate Corn rootworm populations. Consult your State Agricultural Extension Service on levels of Corn rootworm populations.

<sup>2</sup> Reduces early season feeding damage.

<sup>3</sup> Will reduce feeding damage caused by leaf feeding Black cutworms that are 1/2 inch or less in length.

<sup>4</sup> Reduces feeding damage during emergence and seedling stages.

**NOTE:** To maintain milligrams active ingredient per seed, adjust fluid ounces per 100 pounds in proportion to the actual seeds per pound compared to the standard number of seeds per pound for that crop; fluid ounces per number of seeds (i.e., 1000, 80,000, 140,000) does not need to be adjusted. For example, if there are 2800 corn seeds per pound and the targeted rate is 0.0946 milligram active ingredient per seed at a non-adjusted rate of 1.6 fluid ounces per 100 pounds of seed, use:  $(2800 \div 3000) \times 1.6 = 1.49$  fluid ounces per 100 pounds of seed.

**For End Use Application At Agricultural Establishments**

Apply using an HCBT or an 8-Bag Batch Treater. Shake this product thoroughly before use. Dilute this product with water and/or an approved Loveland Products, Inc. fungicide mixture. Adjust the final slurry rate to apply a rate of 8.0 to 10.0 fluid ounces of diluted slurry per 50-pound bag of seed. Treat 1/2 of slurry mix. Allow mixing until seed is thoroughly covered. Apply 0.75 ounce of dry TALC per 50-pound bag of seed following the product application and allow it to distribute evenly on the seed.

**DYNA-SHIELD® IMIDACLOPRID 5**  
EPA REG. NO. 34704-940

**Corn cont'd.:****Sweet Corn****For Use In Commercial Seed Treatment Facilities**

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Early season corn leaf aphid	6.4
Flea beetle	
Seed corn maggot	
Wireworm	
Early season corn leaf aphid	3.2 to 6.4
Imported fire ant	
Seed corn maggot	
Wireworm	
Imported fire ant	1.6 to 3.2
Seed corn maggot (seed protection)	
Wireworm (seed protection)	
Wireworm (seed protection)	0.8 to 1.6

Adjust the final slurry rate to apply 16.0 to 20.0 fluid ounces of diluted solution per 100 pounds of seed with commercial equipment.

**Popcorn****For Use in Commercial Seed Treatment Facilities**

<b>Target Pest</b>	<b>Fl Oz Product/100 Lb Seed</b>
Flea beetles	6.4

**COTTON (Delinted Seed Only)**

To provide protection of seedlings against injury by listed pests, apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>	<b>MG AI/Seed</b>
Aphids	12.8	0.375
Thrips		

**For End Use Application at Agricultural Establishments**

Apply using an HCBT or an 8-Bag Batch Treater. Shake this product thoroughly before use. This product may be diluted with water or an approved Loveland Products, Inc. fungicide mixture, such as Dyna-Shield Metalaxyl Fungicide, for extended disease protection. Adjust the final slurry rate to apply a rate of 8.0 to 10.0 fluid ounces of diluted slurry per 50-pound bag of seed. Treat 1/2 of seed with 1/2 of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered.

<b>Target Pests</b>	<b>Fl Oz Product/50-Lb Bag</b>
Aphids	6.4
Thrips	

**USE RESTRICTIONS:**

Regardless of the type of application (seed treatment, soil or foliar): **DO NOT** apply more than a total of 0.5 pound of imidacloprid per acre per year.

**OIL SEED CROPS (including):**

Borage, Canola, Crambe, Flax, Mustard seed, Rapeseed, Safflower and Sunflower

To provide early season protection of seedlings against injury by listed pests apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

<b>Canola, Mustard seed, Rapeseed</b>	
<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Aphids	10.24 to 25.6
Flea beetles	
Wireworms	

In areas where Flea beetles and foliar insects are in high numbers, use the higher application rate within the specified range. Consult your local agricultural office for pest patterns, history, and forecasts to assist in determining the appropriate rate for your region.

**For suppression of:**

2nd generation Lygus bugs, including <i>Lygus</i> spp.	15.36 to 25.6
Seedpod weevil larvae including <i>Ceutorhynchus assimilis</i>	

**Borage\* Crambe\* and Flax\***

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Flea beetles	25.6
Seed corn maggots	
Wireworms	

Cont'd. next page

**DYNA-SHIELD® IMIDACLOPRID 5**  
EPA REG. NO. 34704-940

**Oil Seed Crops cont'd.:****Safflower\***

Target Pests:	MG AI/Seed
Wireworms	0.25 to 0.50 (14,200 mg imidacloprid/fl oz product)

**Sunflower\***

Target Pests	MG AI/Seed
Flea beetles	0.25 to 0.50 (14,200 mg imidacloprid/fl oz product)
Seed corn maggots	
Wireworms	

**For End Use Application at Agricultural Establishments**

Apply using an HCBT or a 8-Bag Batch Treater. Shake this product thoroughly before use. This product may be diluted with an approved Loveland Products, Inc. fungicide mixture for extended disease protection. Treat 1/2 of seed with 1/2 of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered.

**Canola, Mustard seed, Rapeseed**

Target Pests	Fl Oz Product/50-Lb Bag
Aphids	5.1 to 12.8
Flea beetles	
Wireworms	

**Borage\*, Crambe\*, Flax\* and Sunflower\***

Target Pests	Fl Oz Product/100 Lb Seed
Flea beetles	12.8
Seed corn maggots	
Wireworms	

**Safflower\***

Target Pest	Fl Oz Product/100 Lb Seed
Wireworms	12.8

**USE RESTRICTIONS:**

Rape greens grown and harvested from this product's treated seed must not be used for human and feed consumption. Rapeseed grown and harvested from this product's treated seed is only for industrial uses and cannot be used for edible oil or any other human/feed consumption.

\*Seed treated in California must be destined for planting in states other than California and is not to be planted in California.

**SEED AND POD VEGETABLES (including):**

Adzuki bean, Asparagus bean, Broad bean (Succulent or Dry), Catjang bean, Chinese longbean, Field bean, Guar bean, Jackbean, Kidney bean, Lablab bean, Lima bean (Succulent or Dry), Moth bean (Succulent or Dry), Mung bean, Navy bean, Pinto bean, Rice bean, Runner bean, Snap bean, Sword bean, Tepary bean, Urd bean, Wax bean, Yardlong bean, Blackeyed pea (Succulent or Dry), Chickpea, Cowpea (Succulent or Dry), Crowder pea, Dwarf pea, Edible-pod pea, English pea, Field pea, Garden pea, Green pea, Pigeon pea (Succulent or Dry), Snow pea, Southern pea (Succulent or Dry), Sugar snap pea, Grain lupin, Sweet lupin, White lupin, White sweet lupin, Lentil

To provide early season protection of seedlings against injury by listed pests apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

Target Pests	Fl Oz Product/100 Lb Seed
Aphids	1.6 to 3.2
Bean leaf beetle	
Fire ant	
Wireworm	

**USE RESTRICTIONS:**

Seed and pod vegetable seed treated in California must be destined for planting in states other than California and is not to be planted in California.

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**SORGHUM**

To provide early season protection of seedlings against injury by listed pests apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Aphids (including Corn leaf, English grain, Greenbug, and Yellow sugar cane)	6.4
Chinch bugs	
Fire ants	
Wireworms	

**For End Use Application at Agricultural Establishments**

Apply using an HCBT or an 8-Bag Batch Treater. Shake this product thoroughly before use. Dilute this product with water. Adjust the final slurry rate to apply a rate of 8.0 to 10.0 fluid ounces of diluted slurry per 50-pound bag of seed. Treat 1/2 of seed with 1/2 of slurry mix. Add the balance of the seed and apply balance of slurry. Allow mixing until seed is thoroughly covered. Apply 0.75 ounce of dry TALC per 50-pound bag of seed following the product application and allow it to distribute evenly on the seed.

<b>Target Pests</b>	<b>Fl Oz Product/50 Lb Seed</b>
Aphids (including Corn leaf, English grain, Greenbug, and Yellow sugar cane)	3.2
Chinch bugs	
Fire ants	
Wireworms	

**USE RESTRICTIONS:**

**DO NOT** graze or feed livestock on treated areas for 45 days after planting.

**SOYBEAN**

To provide early season protection against injury by listed pests and to suppress the spread of certain viruses caused by insect vectors, apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

Use higher rates within the specified range to provide increased length of protection and for heavy insect pressure. This product can be used as an over-treatment.

<b>Target Pests</b>	<b>Fl Oz Product /</b>			<b>MG AI/Seed</b>
	<b>100 Lb Seed*</b>	<b>1000 Seeds</b>	<b>140,000 Seed Count</b>	
Seed corn maggot	1.6 to 3.2	0.0053 to	0.75 to 1.50	0.095 to 0.190
Soybean aphids		0.0107		
Bean leaf beetles (overwintering)				

This product contains 17,700 milligrams imidacloprid per fluid ounce.

\*based on a standard number of 3000 seeds per pound

**NOTE:** To maintain milligrams active ingredient per seed, adjust fluid ounces per 100 pounds of seed in proportion to the actual seed count per pound compared to the base number of seeds per pound for that crop; fluid ounces per number of seeds (i.e., 1000, 80,000, 140,000) does not need to be adjusted. For example, if there are 2800 soybean seeds per pound and the targeted rate is 0.095 milligrams active ingredient per seed at a non-adjusted rate per 1.6 fluid ounces per 100 pounds of seed, use:  $(2800 \div 3000) \times 1.6 = 1.4$  fluid ounces per 100 pounds of seed.

**USE RESTRICTIONS:**

**DO NOT** graze or feed livestock on soybean forage or hay.

**SUGAR BEETS**

To provide early season protection of seedlings against injury by listed pests apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

<b>Target Pests</b>	<b>Use Rate</b>
Aphids / Leafhoppers (including vectors that may spread Curly top and Yellow mosaic virus)	2.4 to 5.0 oz of this product in or on a unit of pelleted sugar beet seed with a weight ratio of 2:1 pelleting mixture to raw seed (seed count 100,000 seed - approximately 1.0 kg by weight). Apply in a film coat directly to raw seed (100,000 seed or approximately 1.0 kg by weight) at a rate of 2.4 fl oz/unit of seed. If rates exceed 2.4 fl oz/unit, seed must be pelleted.
Root aphids	
Thrips	
Whitefly	
Wireworms	

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**BARLEY, OATS, RYE, TRITICALE, WHEAT**

To provide early season protection of seedlings against injury by listed pests apply as a seed treatment at the specified rates.

**For Use in Commercial Seed Treatment Facilities**

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Aphids (including Bird cherry-oat, English grain, Greenburg, and Russian wheat aphid)	0.8 to 2.4
Hessian fly	
<b>For Suppression of:</b>	
Wireworm	0.13 to 0.26
Grasshopper	1.2 to 2.4

Use the higher rate within the specified range to provide increased length of protection and to reduce potential spread of Barley yellow dwarf virus due to aphid vectors.

To reduce early season damage caused by Grasshopper, this product's treated seed may be planted as a 50- to 60-foot border around the edges of the field. Consult your local university extension entomologist for details regarding Grasshopper control in your area. For maximum effectiveness, seed should be treated uniformly.

**For End Use Application at Agricultural Establishments**

Apply using a Total Slurry Treater (TST), Farmer Applied Seed Treater (FAST), Farmer Air Pressure System (FAP) or other on-farm liquid or slurry seed treating equipment to deliver accurate rates of this product to achieve optimum product performance. Combine this product with an approved Loveland Products, Inc. fungicide product for seed and seedling protection against fungal pathogens. Dilution with water may be necessary depending on fungicide formulation used. This product may also be applied on-farm as an over-treatment to seed pretreated with a fungicide. In this case, dilution is necessary.

<b>Target Pests</b>	<b>Fl Oz Product/100 Lb Seed</b>
Aphids (including Bird cherry-oat, English grain, Greenburg, and Russian wheat aphid)	0.8 to 2.4
Hessian fly	
<b>For Suppression of:</b>	
Wireworm	0.13 to 0.26
Grasshopper	1.2 to 2.4

**USE RESTRICTIONS:**

**DO NOT** graze or feed livestock on treated areas for 45 days after planting.

**ADDITIONAL USES**

**Stored Seed Protection:** When applied according to use directions and at labeled rates equal to or above 1.0 fluid ounce per 100 pounds of seed, this product will provide protection to seed against injury from the following insects: Indian meal moth (*Plodia interpunctella*), Rice weevil (*Sitophilus oryzae*), Red flour beetle (*Tribolium castaneum*), and Lesser grain borer (*Rhizopertha dominica*). It is recommended that seed with existing populations of stored grain pests be fumigated prior to treating and bagging seed.

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**STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment. Do not reuse empty container. Open dumping is prohibited.

**PESTICIDE STORAGE:** Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org).

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN



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NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

Dyna-Shield is a registered trademark of Loveland Products, Inc.

**FORMULATED FOR**  
**LOVELAND PRODUCTS, INC.**  
**P.O.BOX 1286 GREELEY, COLORADO 80632-1286**

# Exhibit I

U.S. Environmental Protection Agency, Office of Pesticide Programs  
Memorandum: Endangered Species Act Section 7(d) Consistency Determination  
with Respect to a Request to Amend the Enlist Duo Registration, available at  
<https://www.regulations.gov/document/EPA-HQ-OPP-2021-0957-0012>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

**MEMORANDUM**

**SUBJECT:** Endangered Species Act Section 7(d) Consistency Determination with Respect to a Request to Amend the Enlist Duo Registration

**FROM:** Ed Messina, Director  
Office of Pesticide Programs

**TO:** Jacket File for EPA Reg No. 62719-649

The purpose of this memorandum is to document the U.S. Environmental Protection Agency's (EPA) Endangered Species Act (ESA) section 7(d) consistency determination associated with the following action: granting Corteva Agriscience LLC's<sup>1</sup> April 5, 2021 application to amend its current Enlist Duo registration<sup>2</sup> to extend the expiration date from January 12, 2022 to January 11, 2029 with additional restrictions and requirements on the product labeling and this registration under FIFRA section 3(c)(5).<sup>3</sup> EPA began informal consultation under the ESA with the U.S. Fish and Wildlife Service (FWS) on October 13, 2021. On January 10, 2022, EPA initiated formal consultation with FWS. EPA discussed with FWS during informal consultation the potential need for mitigation measures. EPA determined that mitigation measures to avoid and minimize effects to listed species were necessary as part of this action. EPA and Corteva agreed to the necessary mitigation, which appears on the Enlist Duo labeling. Consistent with the counterpart regulations governing FIFRA-ESA consultations, EPA determined that these mitigation measures are sufficient for the Agency to determine that this action is not likely to jeopardize listed species or adversely modify any designated critical habitats. These mitigations also serve to minimize take of listed species. In granting the amendment, EPA is not making any irreversible or irretrievable commitment of resources with the effect of foreclosing any reasonable and prudent alternatives to avoid jeopardizing federally listed species or adversely modifying designated critical habitats. Further, EPA does not anticipate any interim effects of concern prior to completion of consultation. This determination

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<sup>1</sup> Corteva Agriscience LLC is the applicant for this action. The action is the amendment request to extend the expiration of the registration.

<sup>2</sup> EPA and Corteva met regularly to discuss their application and changes to the original submission to address issues of concern. Enlist Duo contains 2,4-D choline salt (referred to in this memo as "2,4-D") and glyphosate dimethylammonium salt (referred to in this memo as "glyphosate").

<sup>3</sup> EPA has initiated consultation with only FWS as there are no National Marine Fisheries Service (NMFS) species or designated critical habitats that may be affected by this action.

is supported by robust scientific analyses. These supporting documents are discussed below and available in docket ID #EPA-HQ-OPP-2021-0957.

## **Background**

On April 5, 2021, Corteva submitted a request to amend its Enlist Duo registration<sup>4</sup> to extend its expiration date beyond January 12, 2022 – replacing the expiring registration. FIFRA section 3(c)(5) provides that EPA shall issue a registration or an amendment to registration if the standard is met. When reviewing an action like this one, the FIFRA standard requires EPA to consider the following factors when assessing an application for a pesticide product:

- (A) its composition is such as to warrant the proposed claims for it;
- (B) its labeling and other material required to be submitted comply with the requirements of [FIFRA];
- (C) it will perform its intended function without unreasonable adverse effects on the environment; and
- (D) when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment. *See also* 40 C.F.R. § 152.112.<sup>5</sup>

ESA section 7(a)(2) provides that “[e]ach Federal agency shall, in consultation with [FWS] insure that any action authorized, funded, or carried out by such agency. . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species . . . .” ESA section 7(d) provides that “[a]fter initiation of consultation required under [ESA section 7(a)(2)], the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitments of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of reasonable and prudent alternative measures which would not violate [ESA section 7(a)(2)].”<sup>6</sup>

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<sup>4</sup> Enlist Duo is labeled for use in 34 states for the control of emerged annual and perennial broadleaf weeds as preplant, preemergence, and postemergence (over-the-top) uses on genetically-engineered (GE), herbicide-tolerant corn, cotton, and soybean containing the Enlist trait; preplant, preemergence, and postharvest uses on conventional/non-Enlist corn; preplant use on conventional/non-Enlist soybean; and preplant and preemergence uses in fallow systems to be planted with Enlist and non-Enlist corn, cotton, or soybean.

<sup>5</sup> This action is supported by a decision document as well as other supporting material. These documents will be placed in docket EPA-HQ-OPP-2021-0957 on regulations.gov.

<sup>6</sup> Additionally, 50 C.F.R. § 402.09 restates the statutory obligation and adds that the “prohibition is in force during the consultation process and continues until the requirements of [ESA] section 7(a)(2) are satisfied.”

Corteva submitted a draft label for the Enlist Duo product in May 2021 (May 2021 label). EPA conducted an ecological risk assessment and listed species effects determination based on that draft label. EPA concluded that the May 2021 Enlist Duo label did not include the necessary measures to address concerns for listed species. EPA determined measures were necessary to reduce exposures to non-target animals and plants and Corteva agreed to revise the May 2021 label to include these measures. The revised January 2022 Enlist Duo label includes these mitigations that are intended to reduce exposures to listed species.

As noted in the ESA section 7 consultation handbook<sup>7</sup>, Federal Agencies may informally consult with the Services when determining if an action may impact listed species. Informal consultation may also be used to identify modifications to a given action that could avoid adverse effects. EPA informally consulted with FWS to get feedback on the approach used to assess adverse effects to listed species and the Agency's approach for proactively mitigating adverse effects. EPA later determined that the Agency needed to initiate formal consultation. The chronology below summarizes EPA's engagement with FWS as part of the consideration of this amendment request for Enlist Duo:

- **September 24, 2021.** EPA and FWS met to discuss approaches for reducing herbicide concentrations in runoff and approaches to evaluate effectiveness of runoff mitigation measures. Although Enlist Duo was not specifically discussed at this meeting, many of the concepts that were discussed informed EPA's consideration of the Enlist Duo expiration extension request.
- **October 13, 2021.** EPA and FWS entered into informal consultation on the amendment request. The two agencies discussed the preliminary findings of EPA's ESA assessment for Enlist Duo. The agencies also discussed EPA's approach for avoiding or minimizing adverse effects to listed species to avoid jeopardy and adverse modification of designated critical habitat.
- **November 5, 2021.** EPA and FWS senior staff and management met to follow up on the October 13 meeting and to discuss the consultation process.
- **November 12, 2021.** EPA initiated formal consultation with both Services on glyphosate for all registered uses<sup>8</sup>. EPA will address any needs for changes to glyphosate-containing products during and after the consultation process with the Services.<sup>9</sup>

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<sup>7</sup> See FWS & NMFS, Endangered Species Consultation Handbook (1998), [https://www.fws.gov/ENDANGERED/esa-library/pdf/esa\\_section7\\_handbook.pdf](https://www.fws.gov/ENDANGERED/esa-library/pdf/esa_section7_handbook.pdf).

<sup>8</sup> This consultation is ongoing. See [Final National Level Listed Species Biological Evaluation for Glyphosate | US EPA](#). Glyphosate is one of the most widely used herbicides in North America. It is used on a wide variety of agricultural food and feed crops, non-food/feed crops, for plantation/silviculture uses, and for nursery/greenhouse use. Important non-agricultural uses include applications for noxious and invasive weed control in aquatic systems, pastures/rangelands, public lands, forestry, and rights-of-way applications. Glyphosate is also used for general weed control or for lawn replacement/renovation in commercial, industrial, and residential areas (by homeowners, landscaping operators, etc.). The evaluation included an assessment of all currently registered uses.

<sup>9</sup> The Enlist product consultations may inform the ongoing glyphosate consultation, and vice versa.

- **November 23, 2021.** EPA and FWS further discussed approaches for reducing herbicide concentrations in runoff (follow up to September 24, 2021 meeting) and processes to evaluate effectiveness of runoff mitigation measures. EPA described practices that were identified in existing biological opinions, government publications, and public literature that described measures for reducing herbicide runoff. The impact of these mitigation practices on herbicide runoff (i.e., decreases in exposure) can be evaluated using available literature and modeling. Although Enlist Duo was not specifically discussed at this meeting, many of the concepts that were discussed informed EPA's consideration of the Enlist Duo expiration extension request.
- **January 10, 2022** – EPA initiated formal consultation with FWS.

### **Section 7(d) Consistency**

#### **No Irretrievable or Irreversible Commitment of Resources**

EPA has complied with ESA sections 7(a)(2) and 7(d) by initiating formal consultation with the FWS and making this determination that the action to extend the expiration date of the Enlist Duo registration from January 12, 2022 to January 11, 2029, and for the reasons described below will not make any irreversible or irretrievable commitment of resources that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures determined necessary during the consultation process.

EPA considered the elements and factors presented FWS draft and final biological opinions<sup>10</sup> to guide the Agency's assessment of effects to listed species and their designated critical habitat from the use of this product. EPA's effects determination is consistent with how the Service has made such findings for other biological opinions. Therefore, if FWS agrees with EPA's findings, the Service may adopt them when concluding the formal consultation.<sup>11</sup> Further, the January 2022 revised label incorporates county-level prohibitions (for species that use corn, cotton, and soybean fields) and mitigations that reduce runoff exposure. If different mitigations are needed as a result of formal consultation, EPA included, and the applicant has agreed to, the following term in the registration to ensure the amended registration does not foreclose any alternatives, and expeditious implementation of those alternatives, and ensure compliance with section 7(a)(2):

If, after formal consultation with FWS, additional modifications are identified in the Service's Biological Opinion, EPA will notify Corteva in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Corteva must submit an amendment application incorporating any required changes, including amended labels. Alternatively, Corteva may respond by submitting a request for voluntary cancellation of this product. If Corteva fails to comply with this term,

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<sup>10</sup> See [FWS Malathion Draft Biological Opinion for example](#)

<sup>11</sup> See 50 C.F.R. § 402.46(c)(1)(i).

Corteva has agreed in prior written acceptance of the terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

This term efficiently addresses the possibility that FWS could (a) determine further mitigation measures are necessary to reach a no jeopardy biological opinion or (b) issue a jeopardy biological opinion that contains Reasonable and Prudent Alternatives (RPAs) that EPA determines the applicant will need to address as described above in the registration term.

Potential Effects Identified from EPA’s review of Enlist Duo May 2021 label

To evaluate the uses of the Enlist Duo product on corn, cotton, and soybean, EPA evaluated the risk of 2,4-D separately from glyphosate. In its ESA assessment of the May 2021 Enlist Duo label, EPA made preliminary “may affect, likely to adversely affect” determinations for 13 federally-listed animal species that are believed to occur on corn, cotton and/or soybean fields (referred to as “on-field”) and one designated critical habitat (overlapping with corn, cotton, or soybean fields) based on 2,4-D and glyphosate exposure from the use of Enlist Duo<sup>12</sup> (USEPA 2022a<sup>13</sup>). As a result of potential effects from exposure to runoff of 2,4-D and glyphosate, EPA made preliminary “may affect, likely to adversely affect” determinations for 49 additional listed plants, 65 listed animal species (5 with obligate relationships to specific species of non-listed plants and 60 that generally depend upon plants for habitat and/or diet that are likely to be exposed), and 38 designated critical habitats (3 for listed plants, 35 for listed animals that generally depend upon plants for habitat and/or diet that are likely to be exposed) (USEPA, 2022a). These preliminary determinations indicated that an individual of a listed species may be affected by the use of Enlist Duo (either through direct toxicity to listed plants or indirect effects to animals that need plants for habitat and/or diet).

EPA’s obligation when making effects determinations is to consider potential impacts to one individual of a listed species.<sup>14</sup> When considering potential for jeopardy of a species or adverse modification of a designated critical habitat, the analysis considers whether the impacts of the pesticide rise to the level of impacting the population. EPA’s analyses focused on potential impacts to a population of a listed species and Physical and Biological Features (formerly known as Primary Constituent Elements) of designated critical habitats within the action area. For the species with preliminary “may affect likely to adversely affect” determinations, EPA determined that without further mitigation, 88 species would potentially be jeopardized by the use of Enlist Duo. In addition, without further mitigation, EPA determined that 34 designated critical habitats

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<sup>12</sup> EPA also made effects determinations for a related product, Enlist One, that contains only 2,4-D. Since glyphosate has additional effects (compared to 2,4-D) to birds, terrestrial-phase amphibians and reptiles, EPA made preliminary “may affect” determinations for Enlist Duo for an additional eight animal species that may use corn, cotton, or soybean fields.

<sup>13</sup> USEPA. 2022a. 2,4-D Choline Salt and Glyphosate Dimethylammonium Salt:2022 Ecological Risk and Endangered Species Assessment for Use on Genetically-Modified Herbicide-Tolerant Corn, Soybean, and Cotton in Support of Registration Renewal Decision for Enlist One and Enlist Duo Products. Environmental Fate and Effects Division. Office of Pesticide Programs. U. S. Environmental Protection Agency (DP Barcodes 462084, 462086).

<sup>14</sup> See FWS & NMFS, Endangered Species Consultation Handbook, at E-21 (1998), [https://www.fws.gov/ENDANGERED/esa-library/pdf/esa\\_section7\\_handbook.pdf](https://www.fws.gov/ENDANGERED/esa-library/pdf/esa_section7_handbook.pdf).

would be potentially adversely modified by Enlist Duo (USEPA, 2022a). Therefore, EPA worked to identify mitigations that are included in the final action to address the potential for jeopardy or adverse modification. These mitigations are discussed below.

#### Mitigations Included on the Revised January 2022 Enlist Duo Product Label

As described in more detail below, measures were added to the Enlist Duo product label submitted by the applicant as well as agreement to terms on the registration that provides the basis for EPA to conclude that this action is not likely to jeopardize listed species or adversely modify any designated critical habitats. EPA also believes these measures will minimize the potential for take.<sup>16</sup> This analysis will help to inform the consultation with FWS. The Service makes the final determinations as to jeopardy, adverse modification, and take.

EPA does not anticipate impacts of concern pending completion of consultation, given the applicant's commitments to interim mitigation; however, this does not foreclose development and implementation of reasonable and prudent alternative measures.<sup>17</sup> Specifics about the mitigation measures included on the revised January 2022 Enlist Duo label are described more fully below.

As noted previously, the mitigations captured on the revised Enlist Duo product label serve to avoid or minimize exposures of listed species and designated critical habitats to 2,4-D and glyphosate. When exposures are avoided by off-labeling (see discussion below describing mitigations to address on-field effects), no effects are expected on-field for individuals of listed species from this action. For runoff and spray drift related exposures, the mitigations captured on the revised label serve to minimize exposures. As noted in the effects determination that was based on the May 2021 label, runoff exposure was identified as a potential concern for causing effects to plants. This resulted in likely jeopardy and adverse modification for listed plants from direct effects and indirect effects to listed animals that depend upon those plants. Therefore, EPA evaluated the impacts of runoff mitigations on the revised label by comparing decreases in runoff exposure relative to available toxicity data for plants.

To estimate the reduction of runoff concentrations needed to avoid likely jeopardy and adverse modification, EPA did an analysis that considered the range of estimated concentrations in terrestrial and wetland habitats relative to the available plant toxicity data. When considering population level consequences to listed plants (direct effects) and animals (indirect effects because of impacts on plants), EPA considered available survival, growth, and reproduction

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<sup>15</sup> Under 50 C.F.R. § 402.40(b)(1), EPA may include in its effects determination conclusions as to whether the "FIFRA action is likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat and a description of any [RPAs] that may be available."

<sup>16</sup> Under 50 C.F.R. § 402.40(b)(2), EPA may include in its effects determination a description of any anticipated incidental taking of any listed species from the action, any reasonable and prudent measures to minimize the impact, and any terms and conditions that may be necessary to implement the measures.

<sup>17</sup> EPA and the applicant agreed to additional county-level prohibitions for the Enlist Duo product because it contains glyphosate in addition to 2,4-D.



toxicity data for plants. EPA determined that mitigations were needed to achieve an order of magnitude decrease in runoff concentrations to avoid jeopardy and adverse modification as well as minimize take. The basis for an order of magnitude reduction in exposure is conservative in nature because of several factors related to exposure and effects data.

In the addendum<sup>18</sup>, EPA concluded that the decreases in runoff were sufficient to reach levels where the majority of plants would not be affected from the reduced 2,4-D and glyphosate exposures. As a result, any effects that could occur would not be expected to impact populations of listed species through direct or indirect effects. Additionally, effects are not expected result in changes to the physical or biological features of designated critical habitats. If EPA did not approve an extension of this registration and it expired, it is likely that other pesticide products that do not contain protective measures as restrictive as Enlist Duo could be used in these same areas. This could result in more effects to the environment, including to listed species. Because, with these restrictions, many estimated exposures are also estimated to decrease below toxicity endpoints for the most sensitive individual test species, take is also minimized.

*Summary of Mitigation Measures to Address On-Field Effects to Listed Species from the Use of Enlist Duo on Corn, Cotton or Soybean Fields*

The May 2021 Enlist Duo draft label included county-level prohibitions intended to avoid exposures to the on-field listed species identified in previous ESA assessments and voluntary agreements by the registrant (relevant to the Sonoran pronghorn, Audubon's crested caracara, Spring Creek bladderpod, and American burying beetle) as it relates to 2,4-D concerns for effects. These prohibitions and registration terms will continue to be part of the labeling for any amendment extending the expiration date for this registration.

Despite the existing prohibitions on the May 2021 label, potential effects were identified for 13 other listed species potentially using Enlist treated corn, cotton, or soybean fields. The revised January 2022 Enlist Duo label includes prohibitions of use in all counties where 2,4-D or glyphosate on-field effects were identified from the use of Enlist Duo. Therefore, with these prohibitions, exposure and effects are avoided to listed species on field.

*Summary of Mitigation Measures to Address Pesticide Runoff*

As noted above, the EPA assessment of the May 2021 Enlist Duo label identified concerns for effects to terrestrial and wetland plants in areas that receive runoff from Enlist Duo treated corn, cotton, and soybean fields. Potential effects to plants in terrestrial and wetland habitats can also lead to indirect effects to animals that rely upon these plants (e.g., for food and shelter). Therefore, the revised January 2022 Enlist Duo label includes restrictions that EPA and the

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<sup>18</sup> USEPA. 2022b. 2,4-D Choline Salt and Glyphosate Dimethylammonium Salt: Evaluation of Mitigations on Enlist One and Enlist Duo Labels to Address Listed Species Risks Identified in the 2022 Ecological Risk and Endangered Species Assessment for Use on Genetically-Modified Herbicide-Tolerant Corn, Soybean, and Cotton in Support of Registration Renewal Decision for Enlist One and Enlist Duo Products. Environmental Fate and Effects Division. Office of Pesticide Programs. U. S. Environmental Protection Agency (DP Barcodes: 464071, 464072).

applicant have agreed are necessary to address runoff issues associated with 2,4-D<sup>19</sup> and glyphosate. These runoff restrictions for 2,4-D and glyphosate are necessary to avoid the likelihood of jeopardy or adverse modifications. To avoid adverse effects from runoff to listed plants or listed animals that rely on plants for diet and/or habitat (both obligate and generalists), the following prohibitions were included on the revised January 2022 Enlist Duo product label:

- Prohibition of applications if storm events likely to produce runoff are forecasted within 48 hours of application.
- Prohibition of applications to soils that are saturated or at field capacity.
- Prohibition of irrigation for 48 hours following application.
- To minimize runoff to terrestrial and wetland areas inhabited by listed species, a subset of the runoff mitigation practices included in a “pick-list” must be implemented. From this “pick-list”, applicators must select practices that combine to a minimum number of “credits” (4 or 6 depending on soil type), which will result in a significant reduction in runoff transport of 2,4-D and glyphosate to terrestrial and wetland habitats. These mitigation practices reduce 2,4-D and glyphosate concentrations reaching non-target habitats through
  - Reduced chemical loading (e.g., reduced number of applications)
  - Reduced runoff (e.g., residue and tillage management) and
  - Captured or reduced pesticide concentrations in runoff (e.g., vegetative filter strips).

Although EPA made “may affect, likely to adversely affect” determinations for this action, EPA identified additional mitigation measures that have been incorporated into the January 2022 registration and label. While consultation has yet to be concluded, with these extra measures, granting the extension pending completion of the consultation would not pose interim impacts that would be likely to jeopardize a listed species or adversely modify any designated critical habitat from 2,4-D and glyphosate in the Enlist Duo product<sup>20</sup>.

#### *Summary of Mitigation Measures to Address Spray Drift*

The Enlist Duo label associated with the expiring registration as well as the labels associated with this new amendment action include mitigations intended to reduce off-target movement of Enlist Duo due to spray drift. EPA evaluated these mitigations and determined that they reduce off-site spray drift transport of Enlist Duo such that it does not result in adverse effects to non-target species, including those that are listed. These mitigations include the following:

- Prohibition of aerial application
- Prohibition of using any nozzle or pressure combination not specifically allowed by a listing on [enlist.com/tankmix](https://enlist.com/tankmix) after appropriate testing
- Prohibition of applications greater than 24 inches above the crop canopy
- Prohibition of applications at greater wind speeds than 15 miles per hour

<sup>19</sup> In addition to the restrictions captured on the label, there is a robust training requirement for users that includes a component addressing these prohibitions.

<sup>20</sup> See section 4 of USEPA 2022b for further details on the runoff analysis.

- Prohibition of applications during temperature inversions
- Inclusion of a 30-foot downwind in-field buffer. Wind direction must be measured prior to the start of any swath that is within 30 feet of a sensitive area. No application swath may be initiated in, or into an area that is within 30 feet of a sensitive area if the wind direction is towards the sensitive area. Sensitive areas are defined as any area except:
  - Roads, paved or gravel surfaces.
  - Planted agricultural fields. (Except those containing susceptible plants)
  - Agricultural fields that have been prepared for planting.
  - Areas covered by the footprint of a building, shade house, silo, feed crib, or other man-made structure with walls and/or a roof.
- Use of only those tank mix partners that have been tested in accordance with EPA criteria and shown to not increase spray drift distance may be used. Approved tank mix partners are listed on [enlist.com/tankmix](https://enlist.com/tankmix)

### **Conclusions**

This memorandum documents EPA's ESA section 7(d) consistency determination associated with the following action: granting Corteva Agriscience LLC's April 5, 2021 application (as modified during the registration process) to amend its current Enlist Duo registration for corn, cotton, and soybean to extend the registration's expiration to January 11, 2029. EPA determined that mitigation measures to avoid and minimize effects to listed species were necessary as part of this action. Mitigation measures on the Enlist Duo label avoid exposures to listed species that use corn, cotton, or soybean fields. Mitigation measures also minimize off-site transport via runoff and spray drift. EPA determined that these mitigation measures are sufficient to avoid jeopardy and adverse modification to listed species and their designated critical habitats, and also to minimize take of listed species. EPA began informal consultation under the ESA with the FWS on October 13, 2021 and initiated formal consultation on January 10, 2022. On November 12<sup>th</sup>, 2021, EPA initiated formal consultation with both Services on glyphosate for all registered uses. EPA will work with the FWS in consultation to complete this process as expeditiously as possible. Acknowledging that the final determination on jeopardy and adverse modification is made by FWS and that the Service may not fully adopt EPA's determination that this action will avoid jeopardy and adverse modification, the registration includes a term to allow EPA to address any further mitigation determined to be necessary following consultation. With this registration term, EPA is not making any irreversible or irretrievable commitment of resources with the effect of foreclosing any reasonable and prudent alternatives to avoid jeopardizing federally listed species or adversely modifying designated critical habitats. Further, EPA does not anticipate any interim effects of concern prior to completion of consultation.

## Exhibit J

Illinois Pesticide Registry Searches for “Gaucho 600,” “Assail 70WP,” “Swagger,”  
<https://www2.illinois.gov/sites/agr/Pesticides/Pages/Pesticide-Product-Results.aspx>  
(accessed Apr. 15, 2022)

Anyone, 5 years of age and older, is eligible to receive the COVID-19 vaccine. Find your nearest vaccination location at [vaccines.gov](https://www.vaccines.gov).  
(<https://www.vaccines.gov/>)

AGR (/sites/agr/Pages/default.aspx) ▶ Pesticides (/sites/agr/Pesticides/Pages/default.aspx)

## Pesticide Product Results

assail 70wp

### Company Name

UPL NA INC.

### Restrictions

General Use

### **ASSAIL 70WP** (<https://www2.illinois.gov/sites/agr/pesticides/Pages/Produ>

*EPA Reg. No:* 8033-23-70506

*Restrictions:* General Use

*Expires:* 12/31/2022

*Active Ingredients:* ACETAMIPRID

*Company Name:* UPL NA INC.

[www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=167462](https://www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=167462)

1 result

### Contact Information

Illinois Department of Agriculture

State Fairgrounds

801 E. Sangamon Ave

Springfield, IL 62702-1813

Agency Directory (<https://cmsapps.illinois.gov/TeleDirectory>).

Anyone, 5 years of age and older, is eligible to receive the COVID-19 vaccine. Find your nearest vaccination location at [vaccines.gov](https://www.vaccines.gov).  
(<https://www.vaccines.gov/>)

AGR (/sites/agr/Pages/default.aspx) ▶ Pesticides (/sites/agr/Pesticides/Pages/default.aspx)

# Pesticide Product Results

gaucho 600

## Company Name

BAYER CROPSCIENCE

## Restrictions

General Use

## **GAUCHO 600 FLOWABLE** (<https://www2.illinois.gov/sites/agr/pesticides/Pa>

*EPA Reg. No:* 264-968

*Restrictions:* General Use

*Expires:* 12/31/2022

*Active Ingredients:* IMIDACLOPRID

*Company Name:* BAYER CROPSCIENCE

[www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=161730](http://www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=161730)

1 result

## Contact Information

Illinois Department of Agriculture

State Fairgrounds

801 E. Sangamon Ave

Springfield, IL 62702-1813

Agency Directory (<https://cmsapps.illinois.gov/TeleDirectory>).

Anyone, 5 years of age and older, is eligible to receive the COVID-19 vaccine. Find your nearest vaccination location at [vaccines.gov](https://www.vaccines.gov).  
(<https://www.vaccines.gov/>)

AGR (/sites/agr/Pages/default.aspx) ▶ Pesticides (/sites/agr/Pesticides/Pages/default.aspx)

# Pesticide Product Results

swagger

## Company Name

LOVELAND PRODUCTS, INC.

## Restrictions

Restricted Use Pesticide

Did you mean **stagger**?

**SWAGGER** (<https://www2.illinois.gov/sites/agr/pesticides/Pages/Product.aspx?BrandKey=173271>)

EPA Reg. No: 34704-1045

Restrictions: Restricted Use Pesticide Expires: 12/31/2022

Active Ingredients: BIFENTHRIN, IMIDACLOPRID

Company Name: LOVELAND PRODUCTS, INC.

[www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=173271](https://www2.illinois.gov/sites/agr/.../Pages/Product.aspx?BrandKey=173271)

1 result

## Contact Information

Illinois Department of Agriculture  
State Fairgrounds

## **Exhibit K**

Minnesota Pesticide Registry Searches for “Aloft LC G,” “Alpine WSG,” “Assail 70WP,” “Cruiser 5FS Alfalfa,” “Gaucho 600,” “Merit 75 WSP,” “Swagger,” <http://www.kellysolutions.com/MN/pesticideindex.htm> (accessed Apr. 15, 2022)



# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">ALOFT LC G INSECTICIDE</a>	59639-215	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated: 4/12/2022**

[Home](#) [KellySolutions.com](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#)  
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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">ALPINE WSG WATER SOLUBLE GRANULE INSECTICIDE</a>	499-561	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated:** 4/12/2022

[Home](#) [KellySolutions.com](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#)  
[Multiple Criteria](#)

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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">ASSAIL 70WP</a>	8033-23-70506	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated: 4/12/2022**

[Home](#) [KellySolutions.com](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#)  
[Multiple Criteria](#)

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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">CRUISER 5FS ALFALFA</a>	100-941	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated: 4/12/2022**

[Home](#) [KellySolutions.com](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#)  
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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">GAUCHO 600 FLOWABLE</a>	264-968	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated:** 4/12/2022

[Home](#) [KellySolutions.com](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#)  
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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">MERIT 75 WSP INSECTICIDE</a>	432-1318	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

**Database Last Updated: 4/12/2022**

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# Minnesota Pesticide Data Searches

Minnesota Department of Agriculture  
625 Robert Street North; St. Paul, Minnesota 55155-2538  
Fax: 651-201-6117

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">SWAGGER</a>	34704-1045	ACTIVE	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [haley.johnson@state.mn.us](mailto:haley.johnson@state.mn.us). We will respond to all inquiries as soon as possible.

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[Multiple Criteria](#)

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## **Exhibit L**

Wisconsin Pesticide Registry Searches for “Aloft LC G,” “Alpine WSG,” “Assail 70WP,” “Gaucho 600,” “Merit 75 WSP,” “Swagger,”  
<http://www.kellysolutions.com/WI/pesticideindex.asp> (accessed Apr. 15, 2022)





# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Aloft LC G Insecticide</a>	59639-215	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Alpine WSG</a>	499-561	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Assail 70WP Insecticide</a>	8033-23-70506	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Gaucho 600 Flowable</a>	264-968	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Merit 75 WSP Insecticide</a>	432-1318	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# State of Wisconsin Department of Agriculture, Trade and Consumer Protection

## Search by Product Name

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">Swagger</a>	34704-1045	Active	12/31/2022

Total Number of Matching Products: 1

Database Last Updated: 4/11/2022

Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site](#) [Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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## Exhibit M

Iowa Pesticide Registry Searches for “Assail 70 WP,” “Swagger,” “Dyna-Shield Imidacloprid 5,” <http://www.kellysolutions.com/IA/pesticideindex.asp> (accessed Apr. 15, 2022, and April 18, 2022)



# IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">ASSAIL 70 WP</a>	8033-23-70506	Active	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [D'Ann Cord](#). We will respond to all inquiries as soon as possible.

**Database Last Updated:** 4/14/2022

[Home](#) [KellySolutions.com](#) [IDALS \(Pesticide Bureau\)](#) Search By: [Company Name](#) [Company ID](#) [Product Name](#) [Product EPA ID](#) [Active Ingredient](#) [Pest](#) [Site Formulation](#) [Pest-type](#) [RUP](#) [Multiple Criteria](#)

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# IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">SWAGGER</a>	34704-1045	Active	12/31/2022

**Total Number of Matching Products: 1**

If you find erroneous data, please e-mail the department at [D'Ann Cord](#). We will respond to all inquiries as soon as possible.

**Database Last Updated:** 4/14/2022

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# IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

Enter the Product Name (or part of the name):

(Any Product Name  this search-string will be displayed)

Product Name	EPA Reg. No.	Registration Status	Expiration Date
<a href="#">DYNA-SHIELD IMIDACLOPRID 5</a>	34704-940	Active	12/31/2022

**Total Number of Matching Products: 1**

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## **Exhibit N**

U.S. Environmental Protection Agency, “Schedule for Review of Neonicotinoid Insecticides,” <https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides> (last visited Apr. 15, 2022)

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# Schedule for Review of Neonicotinoid Pesticides

The dockets for all the neonicotinoid pesticides have been opened. Our goal is to review the pesticides in this class in the same timeframe so we can ensure consistency across the class. As EPA completes risk assessments for the neonicotinoids, the Agency will pursue risk mitigation, as appropriate.

Chemical Name and Docket Number	Planned Completion	Milestones
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<p><b>Imidacloprid</b> EPA-HQ-OPP-2008-0844 EXIT &lt;<a href="https://www.regulations.gov/docket/epa-hq-opp-2008-0844">https://www.regulations.gov/docket/epa-hq-opp-2008-0844</a>&gt;</p>	<p>2022</p>	<ul style="list-style-type: none"><li>• Preliminary pollinator-only risk assessment issued for public comment in 2016</li><li>• Preliminary aquatic-only ecological assessment issued for public comment in 2017</li><li>• Preliminary human health risk assessment issued for public comment in 2017</li><li>• Remaining non-pollinator ecological risk assessment issued for public comment in 2017</li><li>• Updated pollinator risk assessment and a proposed interim decision released in January 2020</li><li>• Final listed species biological evaluation will be issued in June 2022</li><li>• Registration Review Interim Decision will be issued in late-2022</li></ul>
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<p><b>Clothianidin</b> EPA-HQ-OPP-2011-0865 <small>EXIT</small> &lt;<a href="https://www.regulations.gov/docke/epa-hq-opp-2011-0865">https://www.regulations.gov/docke/epa-hq-opp-2011-0865</a>&gt;</p>	<p>2022</p>	<ul style="list-style-type: none"><li>• Preliminary pollinator-only risk assessment issued for public comment in 2017</li><li>• Preliminary human health and non-pollinator ecological assessments issued for public comment in 2017</li><li>• Updated pollinator risk assessment and a proposed interim decision released in January 2020</li><li>• Final listed species biological evaluation will be issued in June 2022</li><li>• Registration Review Interim Decision will be issued in late-2022</li></ul>
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<p><b>Thiamethoxam</b> EPA-HQ-OPP-2011-0581 <small>EXIT</small> &lt;<a href="https://www.regulations.gov/docket/epa-hq-opp-2011-0581">https://www.regulations.gov/docket/epa-hq-opp-2011-0581</a>&gt;</p>	2022	<ul style="list-style-type: none"><li>• Preliminary pollinator-only risk assessment issued for public comment in 2017</li><li>• Preliminary human health and non-pollinator ecological assessments issued for public comment in 2017</li><li>• Updated pollinator risk assessment and a proposed interim decision released in January 2020</li><li>• Final listed species biological evaluation will be issued in June 2022</li><li>• Registration Review Interim Decision will be issued in late-2022</li></ul>
<p><b>Dinotefuran</b> EPA-HQ-OPP-2011-0920 <small>EXIT</small> &lt;<a href="https://www.regulations.gov/docket/epa-hq-opp-2011-0920">https://www.regulations.gov/docket/epa-hq-opp-2011-0920</a>&gt;</p>	2022	<ul style="list-style-type: none"><li>• Preliminary pollinator-only risk assessment issued for public comment in 2017</li><li>• Preliminary human health and non-pollinator ecological assessments issued for public comment in 2017</li><li>• Updated pollinator risk assessment and a proposed interim decision released in January 2020</li><li>• Registration Review Interim Decision will be issued in late-2022</li></ul>

<p><b>Acetamiprid</b>  EPA-HQ-OPP-2012-0329 <small>EXIT</small>  &lt;<a href="https://www.regulations.gov/docket/epa-hq-opp-2012-0329">https://www.regulations.gov/docket/epa-hq-opp-2012-0329</a>&gt;</p>	<p>2022</p>	<ul style="list-style-type: none"> <li>• Preliminary human health and ecological risk assessments issued for public comment in 2018</li> <li>• Proposed interim decision released in January 2020</li> <li>• Registration Review Interim Decision will be issued in late-2022</li> </ul>
<p><b>Thiacloprid</b></p>	<p>Voluntarily canceled by registrant  Registration review case closure issued in November 2014</p>	

Try Pesticide Chemical Search for additional information on these and other pesticide ingredients.

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[Pollinator Protection Home <https://epa.gov/pollinator-protection>](https://epa.gov/pollinator-protection)

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[Pollinator Health Concerns <https://epa.gov/pollinator-protection/pollinator-health-concerns>](https://epa.gov/pollinator-protection/pollinator-health-concerns)

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— [Colony Collapse Disorder <https://epa.gov/pollinator-protection/colony-collapse-disorder>](https://epa.gov/pollinator-protection/colony-collapse-disorder)

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— [Factors Affecting Pollinator Health <https://epa.gov/pollinator-protection/pollinator-health-concerns#factors>](https://epa.gov/pollinator-protection/pollinator-health-concerns#factors)

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— [Risk Assessment <https://epa.gov/pollinator-protection/how-we-assess-risks-pollinators>](https://epa.gov/pollinator-protection/how-we-assess-risks-pollinators)

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— [EPA Actions to Protect Pollinators <https://epa.gov/pollinator-protection/epa-actions-protect-pollinators>](https://epa.gov/pollinator-protection/epa-actions-protect-pollinators)

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— [Partners in Pollinator Protection <https://epa.gov/pollinator-protection/partners-pollinator-protection>](https://epa.gov/pollinator-protection/partners-pollinator-protection)

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[What You Can Do <https://epa.gov/pollinator-protection/what-you-can-do-protect-honey-bees-and-other-pollinators>](https://epa.gov/pollinator-protection/what-you-can-do-protect-honey-bees-and-other-pollinators)