

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 13, 2017

Ms. Patricia G. Devine Product Registration Manager DuPont Crop Protection E. I. du Pont de Nemours and Company P.O. Box 30 Newark, DE 19714

Subject: PRIA Label Amendment – Changes to Precautionary Label Statments

Product Name: DuPont Avaunt EVO Insect Control

EPA Registration Number: 352-906 Application Date: November 1, 2016

Decision Number: 523385

Dear Ms. Devine:

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.

Page 2 of 2 EPA Reg. No. 352-906 Decision No. 523385

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 with FIFRA section 6. If you have any questions, please contact Eric Bohnenblust by phone at (703) 347-0426, or via email at Bohnenblust.eric@epa.gov.

Sincerely,

Richard Gebken Product Manager 10

Invertebrate & Vertebrate Branch 2

Registration Division (7505P)

Office of Pesticide Programs

Enclosure



**INSECTICIDE** 

# **DuPont<sup>™</sup> Avaunt<sup>®</sup> eVo**

# **INSECT CONTROL**

Dispersible Granules			
Active Ingredient			By Weight
Indoxacarb (S)-methyl 7-chloro-2,5-dihydro-2-[1,2-e][1,3,4]oxadiazine-4a(3H)-car	[(methoxycarbonyl)[4-(trifluoromethoxy)phenyl	]amino]carbonyl]indeno	30%
Other Ingredients	boxyrate		70%
TOTAL			100%
EPA Reg. No. 352-906	ACCEPTED	EPA Est. No	
Nonrefillable Container  Net: OR  Refillable Container  Net:	03/13/2017  Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under		

**GROUP** 

# KEEP OUT OF REACH OF CHILDREN CAUTION

352-906

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

#### **FIRST AID**

**IF INHALED**: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice. **IF SWALLOWED**: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by the poison control center or doctor. Do not give anything to an unconscious person.

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

**IF ON SKIN OR CLOTHING**: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-441-3637** for emergency medical treatment information.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if inhaled. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing dust. Remove contaminated clothing and wash clothing before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT

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

#### **Applicators and other handlers must wear:**

Long-sleeved shirt and long pants.

Chemical Resistant Gloves, such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber, all  $\geq$ 14 mils. 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. 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. IMPORTANT: when reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicator and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

# **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 clothing.

# **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to mammals, birds, fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment rinsewater. Do not apply where/when conditions could favor runoff. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Cover, incorporate, or clean up granules that are spilled.

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

# **DIRECTIONS FOR USE**

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

DuPont<sup>™</sup> AVAUNT® eVo insect control, referred to below as DuPont<sup>™</sup> AVAUNT® eVo or AVAUNT® eVo, must be used only in accordance with the directions on this label, in separately issued labeling or exemptions under FIFRA (Supplemental Labels, Special Local Need Registrations, FIFRA Section 18 exemptions), or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

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

AVAUNT® eVo must be used 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 for all crops.

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, wear:

Coveralls over long-sleeved shirt and long pants,

Socks plus chemical resistant footwear,

Chemical Resistant Gloves, such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber, all >14 mils.

#### PRODUCT INFORMATION

AVAUNT® eVo is a water dispersible granule that can be applied as a foliar spray to control many important insects. AVAUNT® eVo is mixed with water for application.

# **USE RESTRICTIONS**

- Use only in commercial and farm plantings.
- Not for use in home plantings.
- Do not formulate this product into any other end-use products without written permission of DuPont.

CHEMIGATION: Do not apply this product through any type of irrigation system except for application to cranberries, mint, potatoes and sweet corn and as allowed by Federal Supplemental and Special Local Need (SLN) labeling. (See "Application By Chemigation" section of the label.)

#### INTEGRATED PEST MANAGEMENT

DuPont supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program which can include biological, cultural, and genetic practices aimed at preventing economic pest

damage. IPM principles and practices include field scouting or other pest detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants, product manufacturer or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

# **SCOUTING**

Monitor insect populations to determine whether or not there is a need for application of DuPont™ AVAUNT® eVo based on label recommendations and locally determined economic thresholds. More than one treatment of AVAUNT® eVo may be required to control a population of pests.

# INSECT RESISTANCE MANAGEMENT

Indoxacarb, the active ingredient in AVAUNT® eVo, is a group 22 insecticide (voltage-dependent sodium channel blocker) based on the mode of action classification system of the Insect Resistance Action Committee (IRAC). Repeated and exclusive use of AVAUNT® eVo or other group 22 insecticides may lead to the buildup of resistant strains of insects in some crops. Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, this product may be used as part of resistant management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

Unless directed otherwise in the specific crop/pest sections of this label, the best practices are to follow these instructions to delay the development of insecticides resistance:

- Avoid using the same mode of action (same IRAC number and subgroup) on consecutive generations of insect pests.
- Avoid using less than the labeled rates of AVAUNT® eVo when applied alone or in tank mixtures.
- Target the most susceptible insect life stages, whenever possible.
- Make no more than 2 successive applications per generation or within a 30 day period to the same insect species on a crop.
- The following application to the target pest(s) must be with an effective product with a different mode of action.
- Monitor insect populations for product effectiveness. If resistance to AVAUNT® eVo develops in your area, AVAUNT® eVo, 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 DuPont Crop Protection company representative or agricultural advisor for the best alternate method of control for your area.

For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at http://www.irac-online.org.

# **APPLICATION**

Apply at the listed rates when insect populations reach locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

Follow-up treatments of AVAUNT® eVo should be applied, as needed, to keep pest populations within threshold limits. Apply AVAUNT® eVo on most crops every 3 to 5 days, as specified in the specific crop sections, to maintain control. For bushberry, cranberry, dry bean, pome and stone fruit the minimum interval between treatments is 7 days.

Use sufficient water to obtain thorough, uniform coverage.

Because AVAUNT® eVo is most effective through ingestion of treated plant material, thorough spray coverage is essential for optimum control of targeted pest insects. Using increased water volumes will typically result in better spray coverage, especially under adverse conditions such as dry, hot weather or dense plant foliage. AVAUNT® eVo may be applied by ground, aerial or overhead sprinkler chemigation application equipment. For aerial application use the following directions unless otherwise specified in this label: use a minimum of 5 gallons per acre (gpa) of water, except in tree and vine crops use a minimum of 10 gpa. For ground applications, use the following directions unless otherwise specified in this label: use a minimum of 10 gallons per acre (gpa) of water, except in tree and vine crops use a minimum of 50 gpa and a maximum of 200 gpa of water.

Use of Adjuvants: In some situations where coverage is difficult to achieve such as closed canopy, dense foliage, plants with waxy leaf surfaces, or less than optimum application equipment, an adjuvant may improve performance. Use only adjuvant products that are labeled for agricultural use and follow the directions on the manufacturer's label. For uses in fruit crops, use a proven and recommended adjuvant that does not affect fruit finish.

Do not use an adjuvant on bushberries or garden beets.

#### SPRAY PREPARATION

Spray equipment must be well-maintained, clean and free of previous pesticide deposits before applying DuPont™ AVAUNT® eVo Insect Control. AVAUNT® eVo is a water dispersible granule. Fill spray tank 1/4 to 1/2 full of water. Add AVAUNT® eVo directly to spray tank. Mix thoroughly to fully disperse the insecticide while adding the remaining water. Once AVAUNT® eVo is fully dispersed continued agitation is required. Use mechanical or hydraulic means; do not use air agitation. Spray mix must not be stored overnight in spray tank. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

Tank Mixing and Compatibility - Since formulations may be changed and new ones introduced, it is a best practice that users premix a small quantity of a desired tank mix and observe for possible physical incompatibility (settling out, flocculation, crystallization, etc.). This product can be tank mixed with pesticide products labeled for use on crops on this label in accordance with the most restrictive of label limitations and precautions. Do not exceed label dosage rates for any products being mixed. This product cannot be mixed with any product containing a label prohibition against such mixing.

Spray volumes of less than 3 gallons of water and tank mixtures of more than two products can increase the chances of incompatible spray mixtures. A jar test (as described below) should be conducted when label guidance is not given or prior experience with a specific tank mixture is unknown. The jar test should follow the proper sequence of addition at the spray water volume planned to assure that the tank mixture is compatible. Constant agitation may be needed during mixing and spraying of mixtures. AVAUNT® eVo is compatible with most commonly used plant protectants.

Steps to conduct a jar test to determine physical tank mix compatibility of AVAUNT® eVo with other products:

- Add clean water to the jar in proportion to the planned water volume that will be used in the spray tank (a jar size of 8-16 oz is acceptable).
- While wearing the most restrictive PPE, mix proper proportional amounts of AVAUNT® eVo and desired tank mix partner(s) as will be present in the spray tank. Add one product at a time following the sequence of addition according to formulation type provided in this label.
- Seal and shake mixture after each product is added.
- Allow to stand for 1 hour.
- View jar to determine if settling, flocculation, crystallization or any other undesirable changes have happened.
- If none of the above is observed or the solution can be easily remixed after shaking, the mixture is compatible with AVAUNT® eVo.
- If the tank mixture is not compatible, a higher water volume, reduced rate of the tank mix partner(s), reduced number of tank mix partners or a compatibility agent may be needed.

# **Tank Mixtures and Crop Safety**

AVAUNT® eVo is a water dispersible granule. The crop safety of AVAUNT® eVo alone or in a tank mix with many common insecticides, fungicides, nutritionals and adjuvants has been found to be acceptable. Some materials including oils, surfactants, adjuvants, nutritionals and pesticide formulations when applied individually, sequentially or in tank mixtures may solubilize the plant cuticle, facilitate penetration into plant tissue, and increase the potential for crop injury.

Applying AVAUNT® eVo with any product that produces adverse crop response in a tank mixture may also cause adverse crop response when applied in a short time sequence (i.e. seven days apart or less between applications). Such uses should be tested as described below before broad application is made.

Crop varieties can differ in their responsiveness to tank mixtures, and environmental conditions can have an influence on product performance and crop response. It is not possible to test AVAUNT® eVo alone or with all possible tank mix combinations and sequences on all varieties under all environmental conditions. When considering the use of a tank mixture on a labeled crop without prior experience, or which is not specifically described on AVAUNT® eVo product labeling or in other DuPont product use instructions, or when applying any products in close sequence with AVAUNT® eVo, it is important to check crop safety first. To test for crop safety, prepare a small volume of the intended tank mixture or products to be applied in a sequence, apply to an area of the target crop as directed by both this and the other product labels, and observe the treated crop to ensure that a phytotoxic response does not occur.

Use of AVAUNT® eVo in any tank mixture or sequence of applications that is not specifically described on AVAUNT® eVo product labeling or other DuPont product use instructions could potentially result in crop injury. Follow the precautions on this label and on the label for any other product to be used in tank mixtures or in sequential applications before making such applications to your crops. Follow the most restrictive label. DuPont will not be responsible for any crop injury arising from the use of a tank mixture or sequence of applications that is not specifically described on the AVAUNT® eVo product labeling or in other DuPont product use instructions.

<u>Tank Mixing Sequence</u> - Add different formulation types in the sequence indicated below.\* Allow time for complete mixing and dispersion after addition of each product.

- 1. Products in water soluble bags (WSB)
- 2. Water soluble granules (SG)
- 3. AVAUNT® eVo and other water dispersible granules (WG, XP, DF)
- 4. Wettable powders (WP)

- 5. Water based suspension concentrates (SC)
- 6. Water soluble concentrates (SL)
- 7. Suspoemulsions (SE)
- 8. Oil Based suspension concentrates (OD)
- 9. Emulsifiable concentrates (EC)
- 10. Adjuvants, surfactants and oils
- 11. Soluble fertilizers
- 12. Drift retardants
- \*- Unless otherwise specified by manufacturer directions for use or by local expertise.

# **SPRAY TANK CLEANOUT**

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom and nozzles with clean water.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

# APPLICATION BY CHEMIGATION – CRANBERRY, MINT, POTATOES, SPINACH\* AND SWEET CORN

\*Use on spinach via overhead sprinkler irrigation is allowed only in the states of Arkansas, Georgia, Missouri, North Carolina, New Mexico, Oklahoma, and Texas unless otherwise permitted in supplemental labeling.

#### Instructions for the Use of DuPont™ AVAUNT® eVo in Overhead Sprinkler Chemigation Systems.

Overhead chemigation applications offer the advantage of greater penetration and coverage of the target plant. However, typical chemigation applications are more dilute than ground or aerial applications. For best results, it is recommended to keep the concentration of AVAUNT® eVo as high as possible in the application. Apply AVAUNT® eVo in 0.1 to 0.2 inches of water per acre. AVAUNT® eVo is most active as an ingestion insecticide, although it does have activity as a direct contact insecticide. For best results, applications of AVAUNT® eVo should ensure thorough coverage of the target plant to maximize the opportunity for target insects to ingest AVAUNT® eVo.

#### **Types of Chemigation Systems:**

AVAUNT® eVo may be applied only through overhead sprinkler irrigation systems. Overhead irrigation systems include the following; center pivot, end tow, hand move, lateral move, side roll, solid set and wheel line. Center pivot and lateral move irrigation systems are preferred. Other overhead sprinkler systems may be used if they provide uniform water distribution. Do not apply AVAUNT® eVo through any other type of irrigation system. Do not use filter screens smaller than 50 mesh throughout the system, due to possible build up of material on 100 mesh or smaller screens.

#### **Directions for Chemigation:**

#### **Preparation**

Use a pesticide tank for the application of AVAUNT® eVo in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank 1/4 to 1/2 full with water and the agitator running, measure the required amount of AVAUNT® eVo and add it to the tank. Then add additional water to bring your total pesticide mixture up to the desired volume for your application. Note: Always add the AVAUNT® eVo to water, never put AVAUNT® eVo into a dry tank or other mixing equipment without first adding water. See container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation, do not use air agitation. Highly alkaline water must be buffered so that the pH of the spray solution is in the range of neutral to slightly acidic.

# **Injection Into Chemigation Systems**

Inject the proper amount of AVAUNT® eVo into the irrigation water flow using a positive displacement injection pump. Inject the mixture at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. For continuously moving systems, inject the solution containing AVAUNT® eVo into the irrigation water line continually and uniformly throughout the irrigation cycle. Apply in no more than 0.2 inches of water per acre. For overhead sprinkler systems that are stationary, add the solution containing AVAUNT® eVo to the irrigation water line and apply no more than 0.2 inches of water per acre just before the end of the irrigation cycle.

#### **Uniform Water Distribution**

The irrigation system used for application of AVAUNT® eVo must provide for uniform distribution of AVAUNT® eVo treated water. Non-uniform distribution might result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

#### **Equipment Calibration**

Calibrate the irrigation system and injector before applying DuPont<sup>™</sup> AVAUNT® eVo. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.

# **Monitoring of Chemigation Applications**

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when AVAUNT® eVo is in the irrigation water.

#### **Required System Safety Devices**

Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

- 1. 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.
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. 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.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. 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.
- 6. 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.
- 7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or 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 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.

#### **Operation**

Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injection system according to the directions above. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

- End guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage.
- Plug nozzles in the immediate area of control panels, chemical supply tanks and system safety devices to prevent contamination of these areas.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.
- Do not allow irrigation water to collect or run-off during chemigation.

#### **Cleaning the System**

Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Consult your owner's manual or your local equipment dealer for cleanout procedures for your injection system.

#### SPRAY DRIFT RESTRICTIONS

# **AERIAL APPLICATIONS**

Swath Adjustment - When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must 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.).

The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

#### SPRAY DRIFT MANAGEMENT

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

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

#### IMPORTANCE OF DROPLET SIZE

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions.

A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and lower drift potential.

#### CONTROLLING DROPLET SIZE - GROUND APPLICATION

- **Nozzle Type** Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.
- **Pressure** The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.
- Flow Rate/Orifice Size Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.

#### **CONTROLLING DROPLET SIZE - AIRCRAFT**

- Nozzle Type Solid stream, or other low drift nozzles produce the coarsest droplet spectra.
- Number of Nozzles Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum.
- Nozzle Orientation Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.
- **Pressure** Selecting the pressure that produces the coarsest droplet spectrum for a particular nozzle and airspeed reduces spray drift potential. For some nozzle types such as solid streams, lower pressures can produce finer droplet spectra and increase drift potential.

#### BOOM LENGTH (AIRCRAFT), AND APPLICATION HEIGHT

- Boom Length (aircraft) Using shorter booms decreases drift potential. Boom lengths are expressed as a percentage of an aircraft's wingspan or a helicopter's rotor blade diameter. Shorter boom length and proper positioning can minimize drift caused by wingtip or rotor vortices.
- **Application Height** (aircraft) Applications made at the lowest height that are consistent with pest control objectives and the safe operation of the aircraft will reduce the potential for spray drift.
- **Application Height (ground)** Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize bounce, will reduce the exposure of spray droplets to evaporation and wind, and reduce spray drift potential.

#### **WIND**

Drift potential is lowest when applications are made in light to gentle sustained winds (2-10 mph), which are blowing in a constant direction. Many factors, including droplet size and equipment type also determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

Local terrain can also influence wind patterns. Every applicator is expected to be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

#### SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which may cause small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature 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. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are minimizing drift potential, and not interfering with uniform deposition of the product.

#### AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

### AIR ASSISTED (AIR BLAST) - TREE AND VINE SPRAYERS

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. These sprayers are not suitable for applying herbicides. In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Movement of spray that goes beyond the edge of the cultivated area may be minimized by practices such as spraying the outside row only from outside the planting.

#### SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effects of spray drift.

#### DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology.

#### **CROP ROTATION**

Crops that are on this label and alfalfa, cotton, peanuts and soybeans may be planted immediately following harvest. Do not plant for food or feed any other crops not registered for use with indoxacarb for 30 days after last use.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Bean, Dried (except soybean) Including: Dried cultivars of bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (Vigna) (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		0.065 - 0.11	3.5 - 6.0	7	12 hrs

Do not apply more than 24 oz AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 7 days.

For ground applications, make a uniform application in approximately 20-100 gallons of water per acre.

	Corn Earworm European Corn Borer	0.065 - 0.11	3.5 - 6.0	3	12 hrs
Including: bean	European Corn Borer				
(Phaseolus) (includes					
lima bean, green;					
broad bean, succulent;					
runner bean, snap					
bean, wax bean); bean					
(Vigna) (includes asparagus bean,					
blackeyed pea,					
Chinese longbean,					
cowpea, moth bean,					
southern pea, yardlong					
bean); jackbean; sword bean					
sword bean					

Make no more than 4 applications per acre per crop.

 $Do \ not \ apply \ more \ than \ 24 \ oz \ AVAUNT @eVo \ or \ 0.44 \ lbs \ a.i. \ of \ indox a carb \ containing \ products \ per \ acre \ per \ crop.$ 

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 7 days.

For ground applications, make a uniform application in approximately 20-100 gallons of water per acre.

		DuPont™ AVAUNT	® eVo Rate Per Acre	Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Including: Broccoli,	Diamondback moth Cabbage looper	0.065* 0.045 - 0.065*	3.5* 2.5 - 3.5*	3	12 hrs.
Broccoli raab, Brussels sprouts, Cabbage, Chinese cabbage (napa and bok	Cabbage webworm (except California) Cross striped cabbageworm (except California) Imported cabbageworm				

Make no more than 4 applications per acre per crop. Do not apply more than 14 oz AVAUNT® eVo or 0.26 lbs a.i. of indoxacarb containing products per acre per crop. Do not apply more than 56 oz of AVAUNT® eVo or 1.04 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

Do not apply to greenhouse or field grown brassica crops grown for transplant.

Resistance Management for Diamondback Moth: Do not apply AVAUNT® eVo more than twice to any generation of diamondback moth larvae. After the second application, rotate to another insecticide with a different mode of action (ie. a product with a different IRAC group number). Do not apply less than 3.5 ounces of AVAUNT® eVo per acre. If applications of AVAUNT® eVo do not result in reduction in diamondback moth larvae populations, immediately stop use of AVAUNT® eVo and apply a registered insecticide with a different mode of action. Do not make more than 6 total applications of AVAUNT® eVo per calendar year for control of diamondback moth per farm location. In the State of Georgia: Do not apply more than 4 applications of AVAUNT® eVo per calendar year for the control of diamondback moth per farm location.

Bushberries Including: Aronia berry, Blueberries	Cranberry fruitworm, Cherry fruitworm Winter moth	0.065 - 0.11	3.5 - 6.0	7	12 hrs.
(Highbush blueberry, and Lowbush blueberry), Chilean guava, Currants (Black currant, Buffalo currant and Red currant), European barberry, Elderberry, Gooseberry, Highbush cranberry, Honeysuckle, Huckleberry, Jostaberry, Juneberry, Salal, Sea buckthorn; cultivars, varieties and/or hybrids of these.		0.11	6.0		

Make no more than 4 applications per season.

Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per year.

Do not apply dilute applications of more than 200 gallons of water per acre. Do not use adjuvants.

For best results apply in 20 - 50 gallons of water per acre by ground or 10 gallons of water per acre by air.

Minimum interval between treatments is 7 days.

<sup>\*</sup>Add a wetting agent to improve spray coverage.

<sup>\*\*</sup>For use on turnips grown for tops or greens, not for the production of turnip roots.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
For application	European corn borer (except California) Fall armyworm Corn earworm	0.045 - 0.065	2.5 - 3.5	3 (35 for fodder and stover)	12 hrs. (14 days for hand harvesting)

Whorl stage through tassel push (prior to silking) application only.

Do not apply more than 14 oz AVAUNT® eVo or 0.26 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 42 oz of AVAUNT® eVo or 0.78 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

Overhead Chemigation - AVAUNT® eVo may be applied to sweet corn by overhead chemigation. For specific guidance see label section titled APPLICATION BY CHEMIGATION – CRANBERRY, MINT, POTATOES, SPINACH AND SWEET CORN. Begin application when sweet corn is in the V1 (1st collar) stage of growth up to tassel push (V15) when damage from larvae populations exceed recommended thresholds. For best results, a slurry of AVAUNT® eVo, vegetable oil and an emulsifier must be kept continuously agitated in the injection tank to keep the mixture in suspension and to ensure application of the proper rate per acre.

and/or hybrids of these	subgroup, (except lowbush blueberry and strawberry) Including: Bearberry; bilberry; cloudberry; cranberry; lingonberry; muntries; partrideberry; cultivars, varieties	Spanworm	0.11	6.0	30	12 hrs
-------------------------	---	----------	------	-----	----	--------

Do not apply to flow through bogs or allow release of irrigation water from bogs for at least 1 day following application.

Make no more than 4 applications per season.

Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per season.

The minimum interval between sprays is 7 days.

\*Apply up to two applications to the spring (overwintering) generation of adult cranberry weevil prior to bloom. Do not apply more than 12 oz. AVAUNT® eVo (0.22 lb ai) per acre per season for control of cranberry weevils.

\*\* Black vine weevil adults are nocturnal feeders - it is important to monitor adult emergence by regular sweeping or trapping in the evening hours. Make repeat applications on a 7 to 10 day schedule if monitoring indicates continued adult feeding activity. Broadcast applications may need supplemental spot treatments in localized areas of heavy insect pressure. Allow 5 to 7 days to achieve maximum results, then follow-up with night time monitoring.

 $For CRANBERRY \ only - AVAUNT @ \ eVo \ may \ be \ applied \ by \ overhead \ chemigation. For \ specific \ guidance \ see \ label \ section \ titled \ APPLICATION \ BY \ CHEMIGATION - CRANBERRY, MINT, POTATOES, SPINACH \ AND \ SWEET \ CORN$ 

	DuPont™ AVAUNT® eVo Rate Per Acre		Last Application		
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Including: Chayote (fruit), Chinese Pi	abbage Looper Ielonworm ickleworm	0.045 - 0.11	2.5 - 6.0	3	12 hrs
	eet Armyworm	0.065 - 0.11	3.5 - 6.0		

Do not apply more than 24 oz AVAUNT® eVo or 0.44~lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 5 days.

For ground applications, apply using a minimum of 10 gallons per acre of water.

Fruiting Vegetables	Beet armyworm	0.065 - 0.11	3.5 - 6.0	3	12 hrs.
and Okra	European Corn Borer*				
Including: eggplant,	(except California) - bell				
groundcherry, pepino,	pepper only				
peppers (bell, chili,	Leafminer (Use on				
cooking, pimento and	Florida tomatoes only -				
sweet), tomatillo and	suppression only)**				
tomato	Southern armyworm				
	Tomato fruitworm				
	(corn earworm)				
	Tomato pinworm				
	Western yellowstriped				
	armyworm				
	Hornworms	0.045 - 0.11	2.5 - 6.0		
	Loopers	0.0.0	2.6 0.6		
	Zoopeis				

Make no more than 4 applications per acre per crop.

Do not apply more than 24 oz AVAUNT® eVo or 0.44~lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 5 days.

<sup>\*-</sup> European corn borer applications for use only on bell peppers - For best results, begin applications of AVAUNT® eVo following two applications of an organo-phosphate insecticide labeled for European corn borer control in bell pepper.

<sup>\*\*</sup> Suppression of leafminer on Florida tomatoes- Use of an adjuvant may improve performance.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Garden beet	Beet armyworm	0.065 - 0.11	3.5 - 6.0	7	12 hrs.

Do not apply more than 24 oz AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days. Do not use adjuvants.

Grape	Grape leaffolder Japanese beetle (except California) Omnivorous leafroller* Western grapeleaf skeletonizer	0.065 - 0.11	3.5 - 6.0	7	12 hrs
	European grapevine moth Grape berry moth (except California) Leafhoppers (suppression only) Light brown apple moth	0.09 - 0.11	5.0 - 6.0		
	Katydid (nymphs)**	0.11	6.0		

Make the first application at initiation of egg hatch or at the first signs of infestation. Use the higher application rate for moderate to heavy insect pressure. Make application before pests reach damaging levels. Monitor fields and make an additional application if populations rebuild to potentially damaging levels. Apply in sufficient water to obtain thorough coverage of foliage. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action threshold levels for these pests.

Make no more than 2 applications per season.

Do not apply more than 12 oz AVAUNT® eVo or 0.22 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 21 days.

For best results, use an adjuvant to help increase coverage, penetration and thus performance.

- \* Use the 5-6 ounce rate/A for control of omnivorous leafroller and the 3.5-5 ounce/A rate for SUPPRESSION of omnivorous leafroller.
- \*\* Forktailed bush katydid (Scudderia furcate) and Angularwinged katydid (Microcentrum retinerve). Correct timing of spray application is to the early nymphal stages; thorough spray coverage is critical to achieve best results. Make repeat applications if monitoring indicates continued feeding activity.

climbing subgroup, (except fuzzy kiwifruit) Including: Amur river	Grape leaffolder Japanese beetle (except California) Western grapeleaf skeletonizer	0.065 - 0.11	3.5 - 6.0	7	12 hrs
grape; gooseberry; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these	Grape berry moth (except California) Leafhoppers (suppression only) Omnivorous leafroller	0.09 - 0.11	5.0 - 6.0		

Make the first application at initiation of egg hatch or at the first signs of infestation. Use the higher application rate for moderate to heavy insect pressure. Make application before pests reach damaging levels. Monitor fields and make an additional application if populations rebuild to potentially damaging levels. Apply in sufficient water to obtain thorough coverage of foliage. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action threshold levels for these pests.

Make no more than 2 applications per season.

Do not apply more than 12 oz AVAUNT® eVo or 0.22 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 21 days.

For best results, use an adjuvant to help increase coverage, penetration and thus performance.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Leafy Green Vegetables, (except	Beet armyworm Corn earworm	0.065 - 0.11	3.5 - 6.0	3	12 hrs.
1 1 1 1	Cabbage looper	0.045 - 0.11	2.5 - 6.0		

Do not make more than 3 applications of indoxacarb containing products at the 0.11 lb ai rate per acre per crop. A total of 4 applications of indoxacarb containing products per crop can be made but total amounts cannot exceed 0.33 lbs ai of indoxacarb per acre per crop or 1.32 lbs ai of indoxacarb per acre per year.

Do not apply more than 18 oz AVAUNT® eVo or 0.33 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

	Beet Armyworm Cabbage looper	0.065 - 0.11	3.5 - 6.0	3	12 hrs
and Swiss chard					

Make no more than 3 applications per acre per crop.

Do not apply more than 18 oz AVAUNT® eVo or 0.33 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

Mint	Cabbage looper	0.065	3.5	7	12 hrs
(Peppermint and	Spotted cutworm				
Spearmint)	1				

Make no more than 4 applications per acre per crop.

Do not apply more than 14 oz AVAUNT® eVo or 0.26 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

For ground applications, apply using a minimum of 20 gallons per acre of water.

AVAUNT® eVo may be applied to mint by overhead chemigation. For specific guidance see label section titled APPLICATION BY CHEMIGATION – CRANBERRY, MINT, POTATOES, SPINACH AND SWEET CORN.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
	Codling moth - East of the Rocky Mountains	0.09 - 0.11	5.0 - 6.0	28	12 hrs.
	Codling moth - West of the Rocky Mountains*	0.09 - 0.11	5.0 - 6.0		
	Light brown apple moth Oriental fruit moth Pandemis leafroller (except California) Redbanded leafroller White apple leafhopper (except California)	0.09 - 0.11	5.0 - 6.0		
	Earwigs (adults) (suppression only)**	0.11	6.0		

Make no more than 3 applications prior to hand-thinning. No hand-thinning after the 4th application. Make no more than 4 applications per season. Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per year.

Do not apply dilute applications of more than 200 gal water per acre. For best results apply 50 - 150 gal water per acre.

The minimum interval between treatments is 7 days.

Codling Moth Resistance Management: To minimize resistance development by codling moth: Only apply AVAUNT® eVo (or other Group 22 insecticides) to one generation of codling moth per year. Application(s) to other generations of codling moth must be with an effective product with a different mode of action (i.e. a product with a different IRAC group number).

- \* West of the Rockies. For use against low to moderate infestations in conjunction with alternate control measures such as established Mating Disruption blocks.
- \*\* Make foliar application of AVAUNT® eVo as a fruit protection spray to SUPPRESS adult earwigs feeding on fruit. AVAUNT® eVo will not be effective against adult earwigs that are not actively feeding on fruit. When adult earwig pressure is high, two sequential applications 10-14 days apart may be needed for best results.

Pome Fruit (except pear) Including: Apple, Crabapple, Loquat, Mayhaw, and Quince	Codling moth - East of the Rocky Mountains	0.09 - 0.11	5.0 - 6.0	14	12 hrs.
	Codling moth - West of the Rocky Mountains*	0.09 - 0.11	5.0 - 6.0		
	European apple sawfly (except California) Green fruitworm (except California) Lesser appleworm Light brown apple moth Oriental fruit moth Pandemis leafroller Plum curculio Potato leafhopper Redbanded leafroller Spotted tentiform leafminer - suppression only** (except California) Tarnished plant bug Tufted apple bud moth White apple leafhopper***	0.09 - 0.11	5.0 - 6.0		
	Lacanobia fruitworm (except California)	0.056 - 0.11	3.0 - 6.0		
	Apple maggot**** Earwigs (adults) (suppression only)†)	0.11	6.0		
				1	

Make no more than 3 applications prior to hand-thinning. No hand-thinning after the 4th application.

Make no more than 4 applications per season. Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per year.

Do not apply dilute applications of more than 200 gal water per acre. For best results apply 50 - 150 gal water per acre.

The minimum interval between treatments is 7 days.

Codling Moth Resistance Management: To minimize resistance development by codling moth: Only apply AVAUNT® eVo (or other Group 22 insecticides) to one generation of codling moth per year. Application(s) to other generations of codling moth must be with an effective product with a different mode of action (i.e. a product with a different IRAC group number).

- \*West of the Rockies. For use against low to moderate infestations in conjunction with alternate control measures such as established Mating Disruption blocks.
- \*\*Use of an adjuvant may improve performance. For best results, especially when using the lower use rate, use an adjuvant.
- \*\*\*White apple leafhopper (OR and WA only)-application rates of 2.5 4.9 ounces per acre (0.045 0.089 lbs. A.I./acre) may be used for suppression of light infestations.
- \*\*\*\*Apple maggot apple maggot entering the orchard from border areas may not be controlled if they do not feed on treated apples prior to oviposition.
- $\dagger$  Make foliar applications of AVAUNT® eVo as a fruit protection spray to suppress adult earwigs feeding on fruit. AVAUNT® eVo will not be effective against adult earwigs that are not actively feeding on fruit. When adult earwig pressure is high, two sequential applications 10 to 14 days apart may be needed for best results.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Spinach, New Zealand spinach, Vine spinach and Amaranth (leafy amaranth, Chinese spinach amaranth)	Beet armyworm Cabbage looper	0.065	3.5	3	12 hrs

Do not apply more than 14 oz AVAUNT® eVo or 0.26 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 56 oz of AVAUNT® eVo or 1.04 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 3 days.

Make sequential applications at 3 day intervals or until insect populations are brought below threshold. Use on spinach via overhead sprinkler irrigation is allowed only in the states of Arkansas, Georgia, Missouri, North Carolina, New Mexico, Oklahoma, and Texas unless otherwise permitted in supplemental labeling. For specific guidance see label section titled APPLICATION BY CHEMIGATION – CRANBERRY, MINT, POTATOES, SPINACH AND SWEET CORN.

	Light brown apple moth Plum curculio	0.09 - 0.11	5.0 - 6.0	14	12 hrs.
cherry, Nectarine,	Katydid (nymphs)* Oriental fruit moth** Peach twig borer*** Earwigs (adults) (suppression only)†	0.11	6.0		

Make no more than 3 applications prior to hand-thinning. No hand-thinning after the 4th application.

Make no more than 4 applications per season. Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per year.

Do not apply dilute applications of more than 200 gal water per acre. For best results apply 50 - 150 gal water per acre.

The minimum interval between treatments is 7 days.

- \* Forktailed bush katydid (Scudderia furcata) and Angularwinged katydid (Microcentrum retinerve) Correct timing of spray application is to the early nymphal stages; thorough spray coverage is critical to achieve best results. Make repeat applications on a 7 to 10 day schedule if monitoring indicates continued feeding activity.
- \*\* Oriental fruit moth (OFM) For applications East of the Rockies: AVAUNT® eVo is effective for control of OFM when used as part of an effective IPM program. Rotate to a product with another mode of action after each AVAUNT® eVo application. West of the Rockies: AVAUNT® eVo provides suppression only of OFM.
- \*\*\*Peach twig borer (dormant and delayed dormant, CA only) Avaunt may be used as a dormant or delayed dormant spray for the control of first generation peach twig borer. Make application with an EPA registered dormant oil; for specific recommendations on the use of oil consult the manufacturer's label. For best performance, ground application equipment is recommended.
- $\dagger$  Make foliar applications of AVAUNT® eVo as a fruit protection spray to suppress adult earwigs feeding on fruit. AVAUNT® eVo will not be effective against adult earwigs that are not actively feeding on fruit. When adult earwig pressure is high, two sequential applications 10 to 14 days apart may be needed for best results.

		DuPont™ AVAUNT® eVo Rate Per Acre		Last Application	
Crops	Insects	Lbs. A.I.	Ounces	(Days to Harvest)	REI
Arrowroot, Chinese Artichoke, Jerusalem	Colorado potato beetle* European corn borer (except California) Potato tuberworm**	0.045 - 0.11 0.065 - 0.11 0.056 - 0.11	2.5 - 6.0 3.5 - 6.0 3.0 - 6.0	7	12 hrs.
Ginger, Leren, Potato, Sweet Potato, Tanier (cocoyam), Tumeric, Yam Bean (jicama, manoic pea), and True Yam					

Do not apply more than 24 oz of AVAUNT® eVo or 0.44 lbs a.i. of indoxacarb containing products per acre per crop.

Do not apply more than 72 oz of AVAUNT® eVo or 1.32 lbs a.i. of indoxacarb containing products per acre per year.

The minimum interval between sprays is 5 days.

For POTATO only - AVAUNT® eVo may be applied by overhead chemigation. For specific guidance see label section titled APPLICATION BY CHEMIGATION - CRANBERRY, MINT, POTATOES, SPINACH AND SWEET CORN.

\*Colorado potato beetle - In situations where Colorado potato beetle populations are known or suspected to be difficult to control with current insect control products, the inclusion of piperonyl butoxide (PBO), a synergist, with AVAUNT® eVo may be necessary to achieve optimum control. In these situations, a combination of AVAUNT® eVo applied at a rate of 3.5 - 6.0 oz.per acre combined with 0.25 lb a.i.per acre of PBO may be necessary to achieve the most effective control of Colorado potato beetle larvae.

Apply the low rates on small plants, small insects and light infestations of insects. Use intermediate rates on large insects and heavier infestations of insects. Use the highest specified rate for controlling severe infestations. Apply AVAUNT® eVo insecticide as a thorough coverage spray using properly calibrated air or ground spray equipment. Use sufficient water to obtain thorough and uniform coverage. For aerial application, use a minimum of 5 gallons of water per acre.

\*\*Potato tuberworm foliar feeding larvae - AVAUNT® eVo is most effective when applied by ground, air or overhead chemigation to vigorously growing plants through tuber bulking prior to the beginning of crop scenescence. For control of potato tuberworm foliar feeding larvae, apply AVAUNT® eVo insecticide when tuberworm larvae and/or moth counts reach locally established treatment threshold populations. AVAUNT® eVo is absorbed into leaf tissue via translaminar movement and is most effective when applied to vigorously growing plants through tuber bulking (Growth Stage IV) prior to the beginning of crop scenescence (Growth Stage V). Repeat applications of effective insecticides may be needed to keep tuberworm larvae populations as low as possible prior to harvest in order to reduce the risk of tuber damage. Failure to adequately control tuberworm larvae prior to crop scenescence or vinekill increases the risk of tuber damage. To improve control of adults (moths), apply AVAUNT® eVo in a tankmix with a pyrethroid insecticide.

Potato tuberworm is a difficult pest to control due to several factors; eggs can be laid deep in the canopy and on the underside of the leaf, and larvae feed inside the leaves prior to moving to the soil to feed on the tubers. An integrated spray approach is essential. Foliar sprays alone (ground or air) may not provide adequate control of larvae in the mid to lower crop canopy. For best results, apply via chemigation or integrate chemigation applications into the foliar spray program. Ensure thorough coverage by using sufficient spray volumes. For ground applications use at least 10 gallons of water per acre. For aerial applications, use at least 5 gallons of water per acre. For best results with foliar sprays, add Methylated Seed Oil (MSO) as a spray adjuvant at 1 gallon per 100 gallons of spray volume (1% v/v). For chemigation applications, apply in 0.1 to 0.2 acre inch of water and add MSO at 12 to 16 fl oz/A.

Do not make more than two sequential applications of AVAUNT® eVo for control of potato tuberworm before rotating to another registered insecticide having a different mode of action.

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Refillable Container" or "Nonrefillable Container" designation.

For Small (Capacity equal to or less than 50 Pounds) Disposable Containers: Nonrefillable 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. 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. 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.

For Large (Capacity greater than 50 Pounds) Disposable Containers: Nonrefillable 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. 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. 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.

For Nonrefillable Paper or Plastic Bags or Fiber Sacks: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag or fiber sack into manufacturing or application equipment 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 empty paper or plastic bag or fiber sack in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**For Nonrefillable Fiber Drums With Liners:** Nonrefillable 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 the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

For Refillable Fiber Drums With Liners: Refillable container (fiber drum only). Refill this container with DuPont™ AVAUNT® eVo insect control containing indoxacarb only. Do not reuse this container for any other purpose. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Cleaning the container (fiber drum) 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 (fiber drum) before final disposal, completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer the container for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For All Other Refillable Containers: Refillable container. Refill this container with AVAUNT® eVo insect control containing indoxacarb 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.

Do not transport if container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

**NOTICE TO BUYER--**Purchase of this material does not confer any rights under patents of countries outside of the United States.

The DuPont Oval Logo, DuPont $^{TM}$  and AVAUNT® are trademarks or registered trademarks of E. I. duPont de Nemours and Company.

#### D - 2030MSTR 030917

# LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read this Limitation of Warranty and Liability Before Buying or Using This Product. DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by DuPont. User assumes all risks associated with such non-directed use. If the terms are not acceptable; return the product at once; unopened and the purchase price will be refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

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

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND 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 DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

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