

62719-294

4/30/2010

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Dr. Kenneth Racke
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

APR 30 2010

Subject: SpinTor 2SC, EPA Reg. No. 62719-294
Date of Registrant Submission: February 16, 2010
Decisions: 428887

Dear Dr. Racke:

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

Two (2) copies of the finished labeling must be submitted prior to releasing each product for shipment. If you have any questions regarding this letter, please contact Samantha Hulkower at (703) 603-0683.

Sincerely,

Mark Suarez
Product Manager 13
Insecticide Branch
Registration Division (7505P)

Enclosure: Copy of Labels Stamped "Accepted"

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(Base label):

SpinTor® 2SC**Naturalyte® Insect Control**

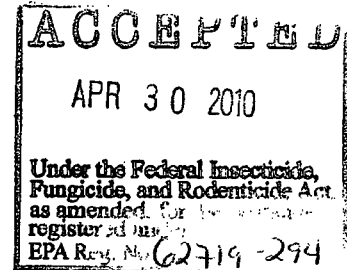
A Naturalyte® insect control product for control or suppression of lepidoptera larvae (worms or caterpillars), leafminers and thrips

Group	5	INSECTICIDE
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Active Ingredient:

spinosad (a mixture of spinosyn A and spinosyn D)	22.8%
Other Ingredients	77.2%
Total	100.0%

Contains 2 lb of active ingredient per gallon.

**Keep Out of Reach of Children****Precautionary Statements****Personal Protective Equipment (PPE)****Applicators and other handlers must wear:**

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

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

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Environmental Hazards

This product is toxic to bees exposed to treatment for 3 hours following treatment. Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period. This product is toxic to aquatic invertebrates. 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 contaminate water when disposing of equipment washwaters.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

(Storage and Disposal for rigid containers 5 gal or less)**Storage and Disposal**

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

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

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

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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.

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. Offer for recycling if available.

(Storage and Disposal for refillable rigid containers larger than 5 gal)

Storage and Disposal

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

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

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

Container Handling: Refillable container. 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two 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, or by incineration, or by other procedures allowed by state and local authorities.

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Refer to label booklet for Directions for Use.

Notice: Read the entire label before using. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Shake Well Before Use -- Avoid Freezing

EPA Reg. No. 62719-294

EPA Est. _____

®Trademark of Dow AgroSciences LLC

**Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268**

Net Contents _____

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(Label booklet cover):

SpinTor[®] 2SC

Naturalyte[®] Insect Control

A Naturalyte[®] insect control product for control or suppression of lepidoptera larvae (worms or caterpillars), leafminers and thrips

Active Ingredient:

spinosad (a mixture of spinosyn A and spinosyn D)	22.8%
Other Ingredients	77.2%
Total	100.0%

Contains 2 lb of active ingredient per gallon.

Keep Out of Reach of Children

Agricultural Use Requirements
 Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for additional precautionary information including Directions for Use.

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**Produced for
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Precautionary Statements

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

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

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Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Environmental Hazards

This product is toxic to bees exposed to treatment for 3 hours following treatment. Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period. This product is toxic to aquatic invertebrates. 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 contaminate water when disposing of equipment washwaters.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 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 made of any waterproof material
- Shoes plus socks

Storage and Disposal

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

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

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

Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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.

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. Offer for recycling if available.

Refillable containers 5 gallons or larger:

Container Handling: Refillable container. 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two 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, or by incineration, or by other procedures allowed by state and local authorities.

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General Information

SpinTor® 2SC is a Naturalyte® insect control product for control of many foliage feeding pests including lepidoptera larvae (worms or caterpillars), Colorado potato beetles, leafminers and thrips infesting labeled crops. This product's active ingredient, spinosad, is biologically derived from the fermentation of *Saccharopolyspora spinosa*, a naturally occurring soil organism. Mix SpinTor 2SC with water and apply as a foliar spray with aerial or ground equipment equipped for conventional insecticide spraying.

General Use Precautions

Integrated Pest Management (IPM) Programs

SpinTor 2SC is recommended for IPM programs in labeled crops. Apply SpinTor 2SC when field scouting indicates target pest densities have reached the economic threshold, i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control. Other than reducing the target pest species as a food source, SpinTor 2SC does not have a significant impact on certain parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites or spiders. The feeding activities of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. If SpinTor 2SC is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of SpinTor 2SC in an IPM program may be reduced.

Insecticide Resistance Management (IRM)

SpinTor 2SC contains spinosad, a Group 5 insecticide. Insect/mite biotypes with acquired resistance to Group 5 insecticides may eventually dominate the insect/mite population if Group 5 insecticides are used repeatedly in the same field or area, or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by SpinTor 2SC or other Group 5 insecticides. Currently, only spinetoram and spinosad active ingredients are classified as Group 5 insecticides. These two insecticide active ingredients share a common mode of action and must not be rotated with each other for control of pests listed on this label. Spinetoram and spinosad may be rotated with all other labeled insecticide active ingredients.

To delay development of insecticide resistance, the following practices are recommended:

- Carefully follow the specific label guidelines within the use directions sections of this label, especially in regard to IRM recommendations.
- Avoid use of the same active ingredient or mode of action (same insecticide group) on consecutive generations of insects. However, multiple applications to reduce a single generation are acceptable. Treat the next generation with a different active ingredient that has a different mode of action or use no treatment for the next generation.
- Avoid using less than labeled rates of any insecticide when applied alone or in tank mixtures.
- Applications should be targeted against early insect developmental stages whenever possible.
- Base insecticide use on comprehensive IPM programs including crop rotations.
- Monitor treated insect populations in the field for loss of effectiveness.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, contact your local Dow AgroSciences representative or by calling 800-258-3033.

Mixing Directions

Always shake well before use. Avoid freezing.

Application Rate Reference Table

Application Rate of SpinTor 2SC (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Acres per Gallon of SpinTor 2SC
1.5	0.023	85
3	0.047	43
4	0.062	32
6	0.094	21
8	0.125	16
10	0.156	13

SpinTor 2SC - Alone: Fill the spray tank with water to about 1/2 of the required spray volume. Start agitation and add the required amount of SpinTor 2SC. Continue agitation while mixing and filling the

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spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

SpinTor 2SC - Tank Mix: When tank mixing SpinTor 2SC with other materials, a compatibility test (jar test) using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. If foliar fertilizers are used, the jar test should be repeated with each batch of fertilizer utilizing the mixing water source. Do not use acidifying buffering agents in tank mixes with SpinTor 2SC. Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Mixing Order for Tank Mixes: Fill the spray tank with water to 1/4 to 1/3 of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:

1. Water dispersible granules
2. Wettable powders
3. SpinTor 2SC and other aqueous suspensions

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add:

4. Emulsifiable concentrates and water-based solutions
5. Spray adjuvants, surfactants and oils
6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Spray Tank pH: A spray tank pH between 6.0 and 9.0 is suggested to achieve maximum performance of SpinTor 2SC. If the water source is outside of this pH range, or tank mixing other pesticides, adjuvants, or foliar nutrients will cause the pH to fall outside this range, consider adjusting the spray tank pH to be between 6.0 and 9.0 before adding SpinTor 2SC. To do this, add all other tank mix components first, then check the spray tank pH, adjust if desired, and then add SpinTor 2SC. If you require additional information on how to adjust spray tank pH, contact your Dow AgroSciences representative.

Use of Adjuvants: Adjuvants may be used to improve the control of leafminers and thrips in situations where achieving uniform plant coverage is difficult (such as closed crop canopy or dense foliage), or penetration into waxy leaf surfaces is necessary for pest control.

- Use only adjuvant products labeled for agricultural use and follow the manufacturer's label directions. A nominal concentration of 1 to 2 quarts per 100 gallons (0.25 to 0.5% v/v) is generally sufficient.
- For leafminers and thrips, emulsified crop oils or methylated crop oil plus organosilicone combination products are recommended.
- When using adjuvants, always conduct a jar test to determine the compatibility of the various components in the spray mixture. Crop safety should be evaluated in a small area of the crop whenever there is a significant change in spray mixture ingredients or source of water for the spray mixture.
- Do not use diesel fuel or pure mineral oil.
- When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a

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Chemical Producers and Distributors Association certified adjuvant

Application Directions

Do not apply SpinTor 2SC in greenhouses or other enclosed structures used for growing crops.

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. The following directions are provided for ground and aerial application of SpinTor 2SC. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Row Crop Application

Use calibrated power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles to obtain uniform crop coverage. A minimum of 5 to 10 gallons per acre should be utilized, increasing volume with crop size and/or pest pressure. Use hollow cone, twin jet flat fan nozzles or other atomizer suitable for insecticide spraying to provide a fine to coarse spray quality (per ASABE S-572, see nozzle catalogs). Under certain conditions, drop nozzles may be required to obtain complete coverage of plant surfaces. Follow manufacturer's specifications for ideal nozzle spacing and spray pressure. Minimize boom height to optimize uniformity of coverage and maximize deposition (optimize on-target deposition) to reduce drift.

Orchard Spraying Application

Dilute Spray Application: This application method is based upon the premise that all plant parts are thoroughly wetted, to the point of runoff, with spray solution. To determine the number of gallons of dilute spray required per acre, contact your state agricultural experiment station, certified pest control advisor, or extension specialist for assistance.

Concentrate Spray Application: This application method is based upon the premise that all the plant parts are uniformly covered with spray solution but not to the point of runoff as with a dilute spray. Instead, a lower spray volume is used to deliver the same application rate per acre as used for the dilute spray.

Aerial Application

Apply in spray volume of 5 gallons or more per acre (10 gallons or more per acre for tree, vines or orchard crops). Nozzle configuration should provide a medium to fine droplet size per ASABE S-572 standard (see USDA-ARS or NAAA handbook). Guidance for ASABE S-572 nozzle configuration can be found at the following web site: www.cproductsinc.com. Boom length must be less than 75% of wing or 85% of rotor span and swath adjustment (offset) to compensate for crosswinds. Observe minimum safe application height (maximum 12 feet for ag canopies). Use GPS equipment, swath markers or flagging to ensure proper application to the target area. Configure the boom nozzle used (e.g., at NAAA Fly-In) for both crosswind and near parallel winds. If application is made parallel to the wind direction, adjust swath width downward. Use swath adjustment (offset) to compensate for crosswinds. Do not apply under completely calm wind conditions. It is best to apply when wind speed is between 2 to 10 mph. Under conditions of low humidity and high temperatures, adjust spray volume and droplet size upward to compensate for evaporation of spray droplets. Insect control by aerial application may be less than control by ground application because of reduced coverage.

Chemigation Application

SpinTor 2SC may be applied through properly equipped chemigation systems for insect control in corn, cranberries and potatoes. Follow use directions for these crops in the Uses section of this label. Do not apply SpinTor 2SC by chemigation to other labeled crops except as specified in Dow AgroSciences supplemental labeling or product bulletins.

General Directions for Sprinkler Chemigation: SpinTor 2SC may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any

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other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing SpinTor 2SC must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

General Directions for Drip Chemigation: SpinTor 2SC may be applied through surface or buried drip systems or micro-sprinklers. Drip irrigation application procedures are designed to minimize soil adsorption and maximize the bio-availability of SpinTor 2SC to target pests. For best results, make the application in conjunction with continuous drip irrigation or a normal drip irrigation cycle as described in the following steps:

- **Pre-irrigation:** Moderate pre-irrigation is required. Soil in the vicinity of emitters should be at or above field capacity prior to injection of SpinTor 2SC.
- **Application Rate:** Apply an amount equivalent to the labeled broadcast application rate for the labeled crop.
- **Injection:** Prior to injection, fully charge the drip irrigation system and make sure it is in operation. Injection of SpinTor 2SC should occur without interruption following pre-irrigation. Mix SpinTor 2SC in a dilution volume sufficient for a 1- to 4-hour injection period based upon the system calibration. Continuously agitate the mixture in the injection system supply tank throughout the injection cycle. Inject the diluted mixture of SpinTor 2SC into the center of the irrigation water stream using a suitable dip tube to encourage thorough mixing and even distribution within the drip irrigation system. This is especially important if flow is slow or laminar.

Chemigation Preparation: The following use directions are to be followed when this product is applied through irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of SpinTor 2SC needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

Chemigation Equipment Calibration: In order to calibrate the irrigation system and injector to apply the mixture containing SpinTor 2SC, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation, and the system should be monitored during operation.

Chemigation Operation: Start the water pump and irrigation system, and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. 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 injection system to be thoroughly flushed clean before stopping the system.

Chemigation Precautions:

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

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- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
- Limit application of SpinTor 2SC by drip irrigation systems to coarse textured soils with low organic matter content. Product effectiveness is reduced in soils with significant clay or organic matter.
- Do not tank mix SpinTor 2SC with other pesticides or agricultural products when applying through drip irrigation systems.
- If SpinTor 2SC is applied by drip irrigation, do not make broadcast foliar applications of SpinTor 2SC during the crop cycle.

Chemigation Specific Equipment Requirements:

- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply 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 when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

Uses**Asparagus****(Post Harvest Protection of Ferns Only)****Pest and Application Rates:**

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Pest	Application Rate	
	Active Ingredient (lb/acre)	SpinTor 2SC (fl oz/acre)
asparagus beetle	0.062 - 0.094	4 - 6

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of the labeled pest. Make applications **only to asparagus ferns**. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control asparagus beetle in asparagus fern. Use a higher rate in the rate range for heavy infestations or advanced growth stages of the beetle. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** This use is only for asparagus ferns; do not apply within 60 days of spear harvest.
- Do not apply more than a total of 18 fl oz of SpinTor 2SC (0.28 lb ai spinosad) per acre per crop.
- Do not make more than three applications per crop.
- Do not feed treated ferns to meat or dairy animals.

Brassica (Cole) Leafy Vegetables (Crop Group 5)¹

¹Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo, Chinese broccoli, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens

In the state of Georgia, do not apply SpinTor 2SC to: broccoli raab, Chinese cabbage (bok choy), collards, kale, mizuna, mustard greens, mustard spinach, rape greens

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
diamondback moth	1.5 - 4
cabbage looper imported cabbageworm	3 - 6
armyworms (including beet armyworm) leafminers ¹ thrips ¹	4 - 10
flea beetle (suppression)	4 - 8

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

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Application Rate: Apply as a foliar spray at the rate specified to control target pest. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. For diamondback moth, if additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least two applications. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Make treatment decisions for the entire farm and consider area wide programs if other growers are in close proximity. Do not make more than six applications of SpinTor 2SC per calendar year for diamondback moth over an entire farm (an area of abutting or nearby fields).

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not apply to seedling cole crops grown for transplant within a greenhouse, shade house, or field plot.

Bulb Vegetables (Crop Group 3)¹

¹Bulb vegetables (crop group 3) including dry bulb onion, garlic, great-headed (elephant) garlic, green onion, leek, shallot, welch onion

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
armyworms dipteran leafminers European corn borer fleabeetle loopers	3 – 6
thrips (suppression) ¹	4 – 8

¹Control of thrips may be improved with the addition of an adjuvant to the spray mixture. See Use of Adjuvants under Mixing Directions. If thorough coverage is desired, then high pressure (>70 psi) directed sprays with dual directed nozzles can assist leaf penetration of onion.

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for larger larvae or heavier infestations.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

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- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than five applications per calendar year.

Bushberries (Subgroup 13B)¹

(Insect Suppression)

¹Bushberries (subgroup 13B) including blueberry, currant, elderberry, gooseberry, huckleberry, juneberry, lingonberry, salal

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
armyworms blueberry gall midge cherry fruitworm cranberry fruitworm currant fruitfly fireworms leafrollers light brown apple moth loopers thrips ¹	4 - 6

¹Control of thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon plant size, volume of foliage present and pest pressure. Use a lower rate in the rate range for light infestations and/or small plants and a higher rate in the rate range for heavy infestations and/or larger plants.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 6 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than six applications per calendar year or more than three applications per crop.

Caneberries (Subgroup 13A)¹

¹Caneberries (subgroup 13A) including blackberry, loganberry, red and black raspberry, cultivars and/or hybrids of these

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
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armyworms green fruitworm leafrollers light brown apple moth raspberry fruitworm sawfly	4 - 6
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Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon plant size, volume of foliage present and pest pressure. Use a higher rate in the rate range for larger larvae or moderate to severe infestations and/or larger plant volume.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than six applications per calendar year.

Citrus (Crop Group 10)¹

¹Citrus (crop group 10) including grapefruit, lemons, limes, oranges, tangerines

Pests and Application Rates :

Pests	SpinTor 2SC (fl oz/acre)
citrus leafminer citrus orangedog citrus thrips ¹ light brown apple moth	4 - 10

¹Control of thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional area use recommendations for your area.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon tree size and pest pressure. Use a lower rate in the rate range for light infestations and/or small trees and a higher rate in the rate range for heavy infestations and/or large trees.

Resistance Management: Citrus thrips are present most of the time on the crop during the growing season and have demonstrated a high potential to develop resistance to insect control products. Do not apply SpinTor 2SC more than two times per year. If additional treatments are required, rotate to another class of products. For resistance management purposes, do not apply to citrus nurseries or citrus in greenhouses.

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Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.

Corn (Field, Sweet, Seed and Popcorn) and Teosinte**Pests and Application Rates:**

Pests	SpinTor 2SC (fl oz/acre)
armyworms (including fall armyworm) European corn borer	1.5 - 6
corn earworm southwestern corn borer western bean cutworm	3 - 6

Application Timing: Scout for European corn borer and armyworms with enough regularity to monitor egg laying and egg hatch. Time applications of SpinTor 2SC to coincide with peak egg hatch of each generation. Frequent treatments may be necessary when the crop is growing rapidly, during silking or under heavy pest pressure. For corn earworm control, a 1- to 2-day re-treatment schedule may be necessary at silking. For control of all other pests, a 5- to 7-day re-treatment schedule may be necessary if the crop is growing rapidly or if there is heavy pest pressure.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Spray Delivery: For control of **first generation European corn borer** and **armyworms**, apply broadcast or as a directed spray into the leaf whorls. For control of **corn earworm**, apply broadcast or direct spray to ear zone. Use sufficient spray volume and nozzle pressure to ensure thorough wetting of the silks.

Chemigation: SpinTor 2SC may be applied to corn by chemigation at labeled rates. Refer to the Chemigation Application section.

Restrictions:**Sweet Corn, Popcorn, Seed Corn**

- **Preharvest Interval:** Do apply within 28 days of fodder harvest, 1 day of grains harvest or 7 days of forage harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per year.

Field Corn and Teosinte

- **Preharvest Interval:** Do not apply within 28 days of grain or fodder harvest or within 7 days of forage harvest.
- Do not apply more than a total of 12 fl oz of SpinTor 2SC (0.188 lb ai spinosad) per acre per year.

Cranberry**(Insect Suppression)****Pests and Application Rates:**

Pests	SpinTor 2SC (fl oz/acre)
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armyworms currant fruitfly fireworms leafrollers light brown apple moth loopers sparganothis fruitworm thrips	4 - 10
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Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Application rate within the rate range will depend upon plant size and volume of foliage present and pest pressure. Use a higher rate in the rate range for larger larvae or moderate to severe infestations and and/or larger plant volume.

Chemigation: SpinTor 2SC may be applied to cranberries by chemigation at labeled rates. Refer to the Chemigation Application section.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 21 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than six applications per calendar year.

Cucurbit Vegetables (Crop Group 9)¹

¹Cucurbit vegetables (crop group 9) including cucumber, edible gourds, muskmelons (cantaloupe, honeydew, etc.), pumpkin, summer squash, watermelon, winter squash

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
armyworms cabbage looper melon worm pickleworm rindworms	4 - 8
leafminers ¹ thrips ¹	6 - 8

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional area use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 3 days of harvest for all crops except cucumbers. Do not apply within 1 day of harvest for cucumbers.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per season.
- Do not make more than six applications per crop.

Fruiting Vegetables (Crop Group 8)¹ and Okra

¹Fruiting vegetables (crop group 8) including eggplant, ground cherry, pepino, pepper, tomatillo, tomato

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
lepidopterous larvae (maintenance only)	1.5 - 3
Colorado potato beetle European corn borer hornworms light brown apple moth loopers tomato fruitworm	3 - 6
armyworms (including beet armyworm) flea beetle (suppression) flower thrips ^{1,2} thrips palmi ^{1,2} tomato pinworm	4 - 8
leafminers ¹ (<i>Liriomyza</i> spp.)	6 - 10

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

²For thrips, if additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least two applications.

Application Timing: Scout weekly throughout the season to monitor and track populations of leafminers and thrips to determine when economic thresholds are exceeded. Scout weekly throughout the season to monitor and track pest and beneficial populations. For tracking lepidopterous larvae, scout with enough regularity to monitor the population size of each of the labeled pests. Time applications of SpinTor 2SC to coincide with peak egg hatch in species without overlapping generations. Consult current pest management recommendations for specific guidelines.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. For

thrips, if additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least two applications. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Do not apply Group 5 insecticides to consecutive generations of Colorado potato beetle and do not make more than two applications per single generation of Colorado potato beetle.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not apply to seedling fruiting vegetables and okra grown for transplant within a greenhouse, shade house, or field plot.

Grape

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
grape berry moth light brown apple moth redbanded leafroller thrips	4 - 8

Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Carefully adjust equipment and spray volume to assure thorough uniform coverage of infested parts of the crop. Use a higher rate in the rate range for larger larvae or moderate to severe infestations and/or larger plant volume.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- The maximum seasonal application rate east of the Rocky Mountains is 0.36 lb ai spinosad per acre.

Herbs (Subgroup 19A)¹

(Insect Suppression)

¹Herbs (subgroup 19A) including angelica, balm, basil, borage, burnet, camomile, catnip, chervil (dried), chive, chive (Chinese), cilantro, cilantro (leaf), clary, coriander (leaf), costmary, curry (leaf), dillweed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram, nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage, savory (summer and winter), sweet bay, tansy, tarragon, thyme, wintergreen, woodruff, wormwood.

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
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armyworms loopers thrips (suppression)	4 – 6
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Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for larger larvae or high infestations and/or larger plant volume. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not apply more than a total of 30 fl oz of SpinTor 2SC (0.47 lb ai spinosad) per acre per crop.
- Do not make more than five applications per calendar year or more than three applications per crop.

Hops, Dried Cones

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
armyworms loopers thrips (suppression)	4 – 6

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for larger larvae or high infestations and/or larger plant volume. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 5 days apart.
- Do not apply more than a total of 30 fl oz of SpinTor 2SC (0.47 lb ai spinosad) per acre per crop.
- Do not make more than five applications per crop.

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Leafy Vegetables (Except *Brassica*) (Crop Group 4)¹, Leaves of Root and Tuber Vegetables (Crop Group 2)² and Leaves of Legume Vegetables (Crop Group 7A)³, Turnip Greens, and Watercress

¹Leafy vegetables (except *Brassica*) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, Chinese spinach, corn salad, dandelion, dock, edible-leaved chrysanthemum, endive (escarole), Florence fennel, garden cress, garden purslane, garland chrysanthemum, head lettuce, leaf lettuce, leafy amaranth, New Zealand spinach, orach, parsley, radicchio (red chicory), rhubarb, spinach, Swiss chard, tampala, upland cress, vine spinach, winter cress, winter purslane, yellow rocket

²Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, oriental radish (daikon), parsnip, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanager, true yam, turnip, turnip-rooted chervil

³Leaves of legume vegetables (crop group 7A) including any cultivar of bean and field pea (except soybean)

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
diamondback moth	1.5 - 3
cabbage looper imported cabbage worm	3 - 6
armyworms (including beet armyworm)	4 - 8
leafminers ¹ thrips ¹	6 - 10

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Scout at least weekly and consider the impact of both pests and beneficials. Treat when economic thresholds are exceeded, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pest. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

• **Preharvest Intervals:**

Leafy vegetables (including watercress): Do not apply within 1 day of harvest.

Leaves of root, tuber and legume vegetables: Do not apply within 3 days of harvest.

- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not apply to seedling leafy crops grown for transplant within a greenhouse or shade house.

Legume Vegetables (Succulent and Dried Beans and Peas) (Crop Group 6)¹

¹Legume vegetables (succulent and dried beans and peas) (crop group 6) including adzuki bean, blackeyed pea, chickpea, cowpea, crowder pea, edible-pod pea, English pea, fava bean, field bean, field pea, garbanzo bean, garden pea, green pea, kidney bean, lentil, lima bean, lupins, mungbean, navy

bean, pigeon pea, pinto bean, runner bean, snap bean, snow pea, sugar snap pea, tepary bean, wax bean, yardlong bean

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
European corn borer (eggs and larvae)	3 - 6
armyworms corn earworm loopers	4 - 6
leafminers ¹ thrips ¹	4.5 - 6

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Heavy infestations may require repeat applications, but follow resistance management guidelines. Treat when pests appear, targeting eggs at hatch or small larvae. For **European corn borer**, initiate when moth flights first appear and use the lower rate of the rate range to control eggs and larvae every three days before they enter the plant. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- Do not make more than six applications per crop.

Succulent Beans and Peas:

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per season.

Dried Beans and Peas:

- **Preharvest Interval:** Do not apply within 28 days of harvest.
- Do not apply more than a total of 12 fl oz of SpinTor 2SC (0.188 lb ai spinosad) per acre per season.
- Do not feed forage or hay to meat or dairy animals.

Peanut

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
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armyworms, including: beet armyworm fall armyworm true armyworm yellowstriped armyworm cabbage looper corn earworm European corn borer green cloverleaf worm red-necked peanut worm saltmarsh caterpillar soybean looper velvetbean caterpillar	3 - 6
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Application Timing: Regularly monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Use a higher rate in the rate range for larger larvae or moderate to severe infestations and/or larger plant volume.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 3 days of nut harvest or within 14 days of forage.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than three applications per calendar year.
- Do not allow grazing of crop residue or harvest of crop residue for hay until 14 days after the last application.

Peppermint and Spearmint

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
armyworms cutworms dipteran leafminers ¹ loopers thrips (suppression) ¹	4 - 10

¹Control of leafminers and thrips may be improved with the addition of an adjuvant to the spray mixture. See Use of Adjuvants under Mixing Directions. Control in peppermint and spearmint has been variable; high pressure directed sprays can assist leaf penetration of peppermint and spearmint.

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Heavy infestations may require repeat applications, but follow resistance management guidelines. Use a higher rate in the rate range for heavier infestations or advanced growth stages of target pests.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than four applications per calendar year or more than three applications per crop.

Pome Fruits (Crop Group 11)¹

¹Pome fruits (crop group 11) including apples, crabapple, mayhaw, pears, quince

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
leafminers ¹ spotted tentiform western tentiform	4 - 10
codling moth European corn borer gypsy moth leafrollers oblique-banded pandemis light brown apple moth oriental fruit moth thrips ¹ tufted apple budmoth	6 - 10

¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Optimal timing for **leafminers** and **leafrollers** may vary between species and geographic location. For **leafminers**, monitor the moth flights and infestation densities of both the sap-feeding and tissue-feeding stage. For optimum control, treat at first appearance of leaf mining activity. For **leafrollers**, monitor the moth flights and the infestation densities of the larval stages. Repeat application as necessary to maintain control. Closely follow regional spray recommendations for **codling moth** and **oriental fruit moth** treatments based upon biofix dates and pheromone trap catches. **Codling moth** and **oriental fruit moth** larvae must be controlled before they penetrate the fruit. **Codling moth** and **oriental fruit moth** applications will provide control for no more than 10 days. Repeat application as necessary to maintain control. Consult with your Dow AgroSciences representative, state agricultural experiment station, certified pest control advisor or extension specialist for specific application timings in your area.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon tree size and pest pressure. Use a lower rate in the rate range for light infestations and/or small trees and a higher rate in the rate range for heavy infestations and/or larger trees.

Resistance Management: Do not make more than three consecutive applications of Group 5 insecticides (spinetoram and spinosad) within a crop season. If additional treatments are required after three consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Do not treat consecutive generations of codling moth, oriental fruit moth, and leafrollers.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not apply more than three sprays targeted at leafrollers per season.

Root and Tuber Vegetables (Crop Group 1)¹ and Artichoke

¹Root and tuber vegetables (crop group 1) including arracacha, arrowroot, bitter cassava, black salsify, carrot, celeriac, chayote root, chicory, Chinese artichoke, chufa, dasheen, edible burdock, edible canna, garden beet, ginger, ginseng, horseradish, Jerusalem artichoke, leren, oriental radish, parsnip, potato, radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, sweet cassava, sweet potato, tanager, true yam, turmeric, turnip, turnip-rooted chervil, turnip-rooted parsley, yam bean

Pests and Application Rates:

Crops	Pests	SpinTor 2SC (fl oz/acre)
black salsify carrot chicory ginseng horseradish parsnip salsify skirret Spanish salsify turnip-rooted chervil turnip-rooted parsley	armyworms dipteran leafminers European corn borer fleabeetle loopers thrips ¹	3 - 6
celeriac edible burdock oriental radish radish rutabaga turnip		
arracacha arrowroot	Colorado potato beetle European corn borer	3 - 10

artichoke bitter cassava chayote root Chinese artichoke chufa dasheen edible canna garden beet ginger Jerusalem artichoke leren potato sugar beet sweet cassava sweet potato tanier true yam turmeric, yam bean	armyworms artichoke plume moth dipteran leafminers (<i>Liriomyza</i>) loopers thrips ¹	4.5 - 10
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¹Control of thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. When plants are growing rapidly, repeat applications may be necessary to protect new foliage. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations or advanced growth stages of target pests. Heavy infestations may require repeat applications but follow resistance management guidelines.

Chemigation: SpinTor 2SC may be applied to potatoes by chemigation at labeled rates. Refer to the Chemigation Application section.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Do not apply SpinTor 2SC to consecutive generations of Colorado potato beetle and do not make more than two applications per single generation of Colorado potato beetle.

Restrictions:

- **Garden beet and sugar beet**

Preharvest Interval: Do not apply within 3 days of harvest.

Minimum Treatment Interval: Do not make applications less than 7 days apart.

Do not apply more than a total of 21 fl oz of SpinTor 2SC (0.33 lb ai spinosad) per crop.

Do not make more than four applications per crop.

- **Black salsify, carrot, chicory, ginseng, horseradish, parsnip, salsify, skirret, Spanish salsify, turnip-rooted chervil, turnip-rooted parsley:**

Preharvest Interval: Do not apply within 3 days of harvest.

Minimum Treatment Interval: Do not make applications less than 5 days apart.

Do not apply more than a total of 21 fl oz of SpinTor 2SC (0.33 lb ai spinosad) per acre per crop.

Do not make more than four applications per calendar year.

- **Arracacha, arrowroot, bitter cassava, chayote root, Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, Ieren, potato, sweet cassava, sweet potato, taniel, true yam, turmeric, yam bean**

Preharvest Interval: Do not apply within 7 days of harvest.

Minimum Treatment Interval: Do not make applications less than 7 days apart.

Do not apply more than a total of 21 fl oz of SpinTor 2SC (0.33 lb ai spinosad) per crop.

Do not make more than four applications per crop.

- **Artichoke**

Preharvest Interval: Do not apply within 2 days of harvest.

Minimum Treatment Interval: Do not make applications less than 7 days apart.

Do not apply more than a total of 21 fl oz of SpinTor 2SC (0.33 lb ai spinosad) per crop.

Do not make more than four applications per crop.

- **Celeriac, edible burdock, Oriental radish, radish, rutabaga, turnip and other root vegetables not specifically listed:**

Preharvest Interval: Do not apply within 3 days of harvest.

Minimum Treatment Interval: Do not make applications less than 5 days apart.

Do not apply more than a total of 18 fl oz of SpinTor 2SC (0.28 lb ai spinosad) per acre per crop.

Do not make more than three applications per calendar year.

Small Cereal Grains and Grain Amaranth

Small cereal grains including barley, buckwheat, milo, oats, pearl millet, proso millet, rye, sorghum, triticale, wheat

Pests and Application Rates:

Pests	Spintor 2SC (fl oz/acre)
cereal leaf beetle	2 - 6
armyworms	3 - 6
grasshoppers	

Application Timing: Scout for **armyworms** and **grasshoppers** with enough regularity to monitor egg laying and egg hatch and treat when thresholds are reached. Applications of Spintor 2SC perform best when timed to coincide with peak egg hatch and/or small larval stage of growth of each generation.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for heavy infestations, advanced growth stages of target pests, or difficult spray coverage situations.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 21 days of grain or straw harvest or within 3 days of forage, fodder or hay harvest.
- Do not apply more than a total of 19 fl oz of SpinTor 2SC (0.28 lb ai spinosad) per acre per year.
- Do not allow cattle to graze treated area until spray has dried.

Spices (Except Black Pepper) (Subgroup 19B)¹

¹Spices (except black pepper) (subgroup 19B) including allspice, anise (seed), annatto (seed), black caraway, caper (buds), caraway, cardamom, cassia (buds), celery (seed), cinnamon, clove (buds), common fennel, coriander (seed), culantro (seed), cumin, dill (seed), Florence fennel (seed), fenugreek, grains of paradise, juniper (berry), lovage (seed), mace, mustard (seed), nutmeg, poppy (seed), saffron, star anise, vanilla, white pepper

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
lepidopteran larvae	4 - 6
flea beetles dipteran leafminers ¹ thrips ¹	6 - 10

¹Suppression of leafminers and thrips may be improved with the addition of an adjuvant to the spray mixture. See Use of Adjuvants under Mixing Directions.

Application Timing: For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for larger larvae or heavy infestations. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 10 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai of spinosad) per acre per crop.
- Do not make more than five applications per calendar year.

Stone Fruits (Crop Group 12)¹

¹Stone fruits (crop group 12) including apricot, cherries, nectarine, peach, plum, prune

Pests and Application Rates:

Pests	SpinTor 2SC	
	(fl oz/acre)	Dilute Spray (fl oz/100 gal)
cherry fruit fly (such as black cherry, western cherry) (suppression) green fruitworm lepidopterous leafminers ¹ (such as spotted tentiform, western tentiform) leafrollers (such as fruit tree)	4 - 8	1.3 - 2.7

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oblique-banded pandemis redbanded variegated) light brown apple moth oriental fruit moth peach twig borer thrips ¹ western cherry fruit fly		
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¹Control of leafminers and thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Peach twig borer applications can be made dormant, delayed dormant or as summer sprays. Optimal timing for lepidopteran leafminers and leafrollers may vary between species and geographic location. For lepidopteran leafminers, monitor the moth flights and the infestation densities of both the sap-feeding and tissue-feeding stage, but for optimal control, treat before significant tissue-feeding mines are observed. For leafrollers, monitor the moth flights and the infestation densities of the larval stages and re-treat as necessary to maintain control; thorough coverage is necessary for optimal control. For cherry fruit fly, western cherry fruit fly, and other related species, maintain protective sprays at 7-day intervals while adults are present and fruit is susceptible to attack. For oriental fruit moth, no more than 10 days of residual control can be expected. If longer residual is required, make a second application of SpinTor 2SC or other insecticide labeled for oriental fruit moth. For thrips, a 3- to 4-day re-treatment schedule may be necessary at flowering. After flowering, a 5- to 7-day re-treatment schedule may be followed. For all pests, consult with your Dow AgroSciences representative, state agricultural experiment station, certified pest control advisor or extension specialist for specific application timings in your area.

Application Rate: Use a higher rate in the rate range for large trees, heavy infestations, or advanced growth stages of target pest, especially if spray volume or coverage is marginal.

Spray Volume: Dilute sprays are sprayed to the point of runoff. The application rate range in the table is based upon a spray volume of 300 gallons per acre. Gallonage of dilute sprays will vary depending upon tree size, density of canopy, stage of seasonal growth, and spacing in the orchard.

Resistance Management: Do not make more than three consecutive applications of Group 5 insecticides (spinetoram and spinosad) within a crop season. If additional treatments are required after three consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Do not treat consecutive generations of oriental fruit moth and leafrollers. Do not apply more than 3 sprays targeted at leafrollers per season.

Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of harvest for apricots, within 7 days of harvest for cherries, plums, prunes and other stone fruit crops, or within 1 day of harvest for nectarines and peaches.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per year.
- Do not apply more than three sprays targeted at leafrollers per season.

Strawberry

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
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amyworms, including beet armyworms leafrollers light brown apple moth thrips ¹	4 - 6
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¹For thrips, if additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least two applications

Application Timing: Treat when pests appear, targeting eggs at hatch or small larvae. For **thrips**, a 3- to 4-day re-treatment schedule may be necessary if there is heavy pest pressure or if the pest population is increasing rapidly. For control of all other pests, a 5- to 7-day re-treatment schedule may be necessary if the crop is growing rapidly or if there is heavy pest pressure. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: Apply as a foliar spray at the rate specified to control target pests. Use a higher rate in the rate range for larger larvae or moderate to severe pest infestations. Heavy infestations may require repeat applications but follow resistance management guidelines.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. For thrips, if additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least two applications. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not make more than five applications per year.

Tree Farms or Plantations

Conifers, including Christmas trees, and deciduous trees

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
lepidopterous larvae, such as: bagworm fall webworm gypsy moth hemlock looper jackpine budworm pine tip moth redhumped caterpillar spruce budworm tent caterpillar tussock moths light brown apple moth sawfly larvae, such as: European pine pear redheaded pine	2 - 8

Application Timing: Time applications to reach larvae when small or just hatching. Repeat application as necessary to maintain control. Consult with your Dow AgroSciences representative, state agricultural experiment station, certified pest control advisor or extension specialist for information on application timing for specific pests in your area.

Application Rates: The rate of SpinTor 2SC applied per acre will depend upon tree size and severity of infestation. Use a higher rate in the rate range for large trees or heavy infestations. Apply in sufficient volume to ensure thorough coverage.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per year.

Tree Nuts (Crop Group 14)¹ and Pistachios

¹Tree nuts (crop group 14) including almonds, cashew, chestnut, filbert (hazelnut), macadamia nut, pecan, walnut

Pests and Application Rates:

Pests	SpinTor 2SC	
	(fl oz/acre)	Dilute Spray (fl oz/100 gal)
fall webworm	4 - 10	1 - 2.5
filbert worm		
hickory shuckworm		
light brown apple moth		
navel orange worm		
oblique banded leafroller		
peach twig borer		
pecan nut casebearer		
redhumped caterpillar		
walnut caterpillar		
walnut husk fly		

Application Timing: Apply SpinTor 2SC as either a dormant or a foliar spray when pests appear or in accordance with local conditions. Apply as a concentrate or dilute spray using conventional, power operated spray equipment (see Orchard Spraying section under Application Directions). Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Use of Crop Oils: Crop oils labeled for agricultural use may be added to the dormant spray solution for suppression of overwintering mites and scale insects. Consult specific oil labels and University of California recommendations for precautions and restrictions regarding the use of oils in nut and fruit trees.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon tree size and volume of foliage present and pest pressure. Use a higher rate in the rate range for large trees or heavy infestations.

Spray Volume: Dilute sprays are sprayed to the point of runoff. The application rate range in the table is based upon a spray volume of 400 gallons per acre. Gallonage of dilute sprays will vary depending upon

tree size, density of canopy, stage of seasonal growth, and spacing in the orchard.

Resistance Management: Do not make more than three consecutive applications of Group 5 insecticides (spinetoram and spinosad) within a crop season. If additional treatments are required after three consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Interval:** Do not apply within 1 day of harvest of all tree nuts and pistachios.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- Do not apply more than three sprays targeted at leafrollers per season.

Tropical Tree Fruits¹

(Insect Suppression)

¹Tropical tree fruits including acerola, atemoya, avocado, biriba, black sapote, canistel, cherimoya, custard apple, feijoa, guava, ilama, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, soursop, Spanish lime, star apple, starfruit, sugar apple, ti leaves, wax jambu (wax apple), white sapote

Pests and Application Rates:

Pests	SpinTor 2SC (fl oz/acre)
katydids	4 - 10
lepidopterous larvae	
avocado leafroller	
citrus peelminer	
cutworms	
fruit tree leafroller	
naval orange worm	
orange tortrix	
western tussock moth	
light brown apple moth	
thrips ¹	

¹Control of thrips may be improved by addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

Application Timing: Treat when pests appear or in accordance with local economic thresholds. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

Application Rate: The amount of SpinTor 2SC applied per acre will depend upon tree size and pest pressure. Use a lower rate in the rate range for light infestations and/or small trees and a higher rate in the rate range for heavy infestations and/or large trees.

Resistance Management: Do not make more than two consecutive applications of Group 5 insecticides (spinetoram and spinosad). If additional treatments are required after two consecutive applications of Group 5 insecticides, rotate to another class of effective insecticides for at least one application. Consult your local Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Restrictions:

- **Preharvest Intervals:** Do not apply within 1 day of harvest.

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- Do not apply more than a total of 29 fl oz of SpinTor 2SC (0.45 lb ai spinosad) per acre per crop.
- In order to prevent or delay resistance development in thrips, do not apply SpinTor 2SC more than two times per year.
- For resistance management purposes, do not apply to tropical tree fruits grown in nurseries or in greenhouses.

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