



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 7, 2016

Karen E. Warkentien  
Director of Regulatory Affairs  
Certis USA LLC  
9145 Guilford Rd.  
Suite 175  
Columbia, MD 21046

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – to add:  
chemigation language, and updated respirator text  
Product Name: SAN 420 I® WG  
EPA Registration Number: 70051-69  
Application Date: August 12, 2015  
OPP Decision Number: 508403

Dear Ms. Warkentien:

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

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims

Page 2 of 2  
EPA Reg. No. 70051-69  
OPP Decision No. 508403

made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Susanne Cerrelli of my team by phone at (703) 308-8077 or via email at [cerrelli.susanne@epa.gov](mailto:cerrelli.susanne@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Alan Reynolds', written in a cursive style.

Alan Reynolds, Team Leader  
Microbial Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

**SAN 420 I<sup>®</sup> WG**  
**BIOLOGICAL INSECTICIDE**  
[Alternate Brand Name: Deliver<sup>®</sup>]

For Control of Listed Insect Pests on Listed Fruits, Nuts, Vegetables, Cotton, and Soybeans

 FOR ORGANIC PRODUCTION



**ACTIVE INGREDIENT:**

*Bacillus thuringiensis*, subspecies *kurstaki* strain SA-12 solids, spores,  
and Lepidopteran active toxins\* ..... 85.0%

**OTHER INGREDIENTS:** ..... 15.0%

**TOTAL** 100.0%

\* The percentage active ingredient does not indicate product performance and potency measurements are not federally standardized.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

Refer to attached booklet for additional Precautionary Statements, First Aid Statements, Directions for Use, and Storage and Disposal Statements.

Made in the USA

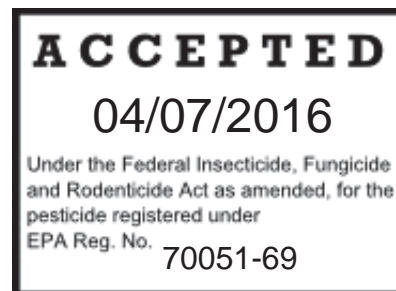
EPA REG. NO.: 70051-69

Lot No.

EPA EST. NO.: 70051-CA-001

Net Weight:

Manufactured by:  
CERTIS USA, L.L.C.  
9145 GUILFORD ROAD, SUITE 175  
COLUMBIA, MD 21046  
800-250-5024



SAN 420I®WG is a registered trademark of Certis USA, LLC

**SAN 420 I® WG  
BIOLOGICAL INSECTICIDE**

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if absorbed through the skin or inhaled. Avoid breathing vapors or spray mist. Prolonged or frequently repeated skin contact may cause an allergic reaction in some individuals. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>-Take off contaminated clothing.</li><li>-Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>-Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>-Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li><li>-Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>-Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>-Move person to fresh air.</li><li>-If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>-Call a poison control center or doctor for treatment advice.</li></ul>
Have a product container or label with you when calling a poison control center or doctor, or going for treatment. Hot Line Number: 1-800-255-3924	

## **Personal Protective Equipment (PPE):**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- A NIOSH approved particulate respirator with any N, R, or P filter with NIOSH approval number prefix TC-84A; or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. (Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

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

## **Engineering controls statements:**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.250 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## **User Safety Recommendations:**

Users should:

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

## **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean water mark. Do not contaminate water when disposing of equipment washwaters.

This product must not be applied aerially within 1/4 mile of any habitats of endangered or threatened Lepidoptera. No manual application can be made within 300 ft. of any threatened or endangered Lepidoptera.

## **DIRECTIONS FOR USE**

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

## AGRICULTURAL USE REQUIREMENTS

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

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

Do not 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
- Waterproof gloves
- Shoes plus socks

## SAN 420 I® WG BIOLOGICAL INSECTICIDE

This labeling must be in the possession of the user at the time of the pesticide application.

### GENERAL INSTRUCTIONS AND INFORMATION

**SAN 420 I® WG** is a biological insecticide specific for the control of lepidopterous larvae (see Application Rates section).

**SAN 420 I® WG** may be applied up to and on the day of harvest.

For most consistent control, apply at first sign of newly hatched larvae (1<sup>st</sup> and 2<sup>nd</sup> instar larvae). Instructions for specific crops are located in ADDITIONAL INSTRUCTION sections under APPLICATION RATES.

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

If rapid knockdown of heavy larvae or non-lepidopterous populations is necessary, include an effective contact insecticide in combination with **SAN 420 I® WG**.

For heavy larvae infestations, use the higher **SAN 420 I® WG** rate. During situations of dense foliage and/or rapid growth, shorter application intervals and increased water carrier volumes will provide better crop coverage and improve **SAN 420 I® WG** performance.

**Spray Drift:**

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

**Tank Mixing:**

Use tank mixes only in states where the tank mix product and application site are registered.

Read and follow all label directions for use for other pesticides used as tank mix partners with **SAN 420 I® WG** for specific application rates, application timing, and precautions.

Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

Fill spray or mixing tank 3/4 full. Turn on agitation and pour **SAN 420 I® WG** into water while maintaining continuous agitation. Add other spray material (if any) and add balance of water. Agitate as necessary to maintain suspension. It is recommended that diluted sprays not remain in the tank for more than 48 hours. **SAN 420 I® WG** is formulated to provide desirable coverage and adherence to leaf surfaces. Additional adjuvants, spreaders, or stickers may be added to improve product performance, especially under heavy dew or rainy conditions. Combinations with commonly used insecticides, fungicides, or other spray tank adjuvants are generally not deleterious to **SAN 420 I® WG** if the mix is used promptly. Before mixing in the spray tank, test physical compatibility by mixing all components in a small container in proportionate quantities.

**APPLICATION VOLUMES**

**SAN 420 I® WG** can be applied by ground or air in water sufficient to insure thorough and even coverage. Thorough and uniform crop coverage is required for adequate insect control. Applications at higher water volumes have demonstrated improved control of targeted pests. Early morning or evening applications, when air is calm, are generally best for aerial applications.

**INSECTS CONTROLLED  
SAN 420 I® WG WILL CONTROL THE FOLLOWING INSECTS**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Alfalfa caterpillar	<i>Colias eurytheme</i> (Boisduval)
Almond moth	<i>Cadra cautella</i> (Walker)
Armyworm	<i>Pseudaletia unipuncta</i> (Haworth)
Artichoke plume moth	<i>Platyptilla carduidactyla</i> (Riley)
Bagworm	<i>Thyridopteryx ephemeraeformis</i> (Haworth)

Banana skipper	<i>Erionota thrax</i> (Haworth)
Banana moth	<i>Opogona sacchari</i>
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Beet armyworm	<i>Spodoptera exigua</i>
Blueberry leafrollers	various
Blueberry spanworm	<i>Itame argillacearia</i> (Pack.)
Bollworm, Tomato Fruitworm, Corn Earworm	<i>Helicoverpa zea</i> (Boddie)
California oak moth	<i>Phrygnidia californica</i> (Packard)
Cherry fruitworm	<i>Grapholita packardi</i> (Zeller)
Citrus cutworm	<i>Xylomyges curialis</i>
Codling moth	<i>Cydia pomonella</i> (Linnaeus)
Cotton Leafworm	<i>Alabama argillacea</i> (Hubner)
Cotton leaf perforator	<i>Bucculatrix thurberiella</i> (Busck)
Cutworm	various, family Noctuidae
Diamondback moth	<i>Plutella xylostella</i> (Linnaeus)
Douglas-fir tussock moth	<i>Orgyia pseudotsugata</i> (McDunnough)
Elm spanworm	<i>Ennomos subsignaria</i> (Hubner)
European corn borer	<i>Ostrinia nubilalis</i> (Hubner)
European grapevine moth	<i>Lobesia botrana</i> *
Fall cankerworm	<i>Alsophila pometaria</i> (Harris)
Fall webworm	<i>Hyphantria cunea</i> (Drury)
Filbert webworm	<i>Melissopus latiferreanus</i> (Walsingham)
Fruit tree leafroller	<i>Archips argyrospila</i> (Walker)
Grape Berry moth	<i>Paralobesia viteana</i>
Grape leaf folder	<i>Desmia funeralisi</i> (Hubner)
Grapeleaf skeletonizer	<i>Harrisina americana</i> (Guerin)
Green cloverworm	<i>Plathypena scabra</i> (Fabricius)
Green fruitworm	<i>Lithophane antennata</i> (Walker)
Gypsy moth	<i>Lymantria dispar</i> (Linnaeus)
Helicoverpa spp.	<i>Helicoverpa</i> spp.
Heliothis spp.	<i>Heliothis</i> spp.
Hornworms	<i>Manduca</i> spp.
Imported cabbageworm	<i>Pieris rapae</i> (Linnaeus)



Jack pine budworm	<i>Chloristoneura pinus</i> (Freeman)
Light brown apple moth	<i>Epiphyas postvittana</i>
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Loopers	various
Mimosa webworm	<i>Homadaula anisocentra</i> (Meyri)
Naval orangeworm	<i>Amyelois transitella</i> (Walker)
Obliquebanded leafroller	<i>Choristoneura rosaceana</i> (Harris)
Omnivorous leafroller	<i>Platynota stultana</i>
Omnivorous leaf-tier	<i>Cnephasia longana</i> (Haworth)
Orangedog	<i>Papilio cresphontes</i> (Cramer)
Orange tortrix	<i>Argyrotaenia citrana</i> (Fernald)
Oriental fruit moth	<i>Grapholita molesta</i> (Busck)
Peach twig borer	<i>Anarsia lineatella</i> (Zeller)
Pecan nut casebearer	<i>Acrobasis nuxvorella</i> (Neunzig)
Redbanded leafroller	<i>Argyrotaenia velutinana</i> (Walker)
Redhumped caterpillar	<i>Schizura concinna</i> (J.E. Smith)
Rindworm complex	various
Roughskinned cutworm	<i>Athetis mindara</i> (Barnes & McDunnough)
Saltmarsh caterpillar	<i>Estigmene acrea</i> (Drury)
Sod webworm	<i>Crambus mutabilis</i>
Southwestern corn borer	<i>Diatraea grandiosella</i> (Dyar)
Spotted cutworm	<i>Xestia</i> spp.
Spring cankerworm	<i>Paleacrita vernata</i> (Peck)
Spruce budworm	<i>Choristoneura fumiferana</i> (Clemens)
Tent caterpillar	various, family lasiocamidae
Tobacco budworm	<i>Heliothis virescens</i> (Fabricius)
Tobacco hornworm	<i>Manduca sexta</i> (Linnaeus)
Tomato pinworm	<i>Keiferia lycopersicella</i> (Walsingham)
Tropical sod webworm	<i>Herpetogramma phaeopteralis</i> (Guenee)
Tufted apple bud moth	<i>Platynota idaeusalis</i> (Walker)
Variegated leafroller	<i>Platynota flavedana</i> (Clemens)
Velvetbean caterpillar	<i>Anticarsia gemmatilis</i> (Hubner)
Western tussock moth	<i>Orgyia vetusta</i> (Boisduval)

\*Apply at blackhead egg stage or when larvae are newly hatched before leaves are rolled or larvae have entered fruit.

### **Rate Selection Considerations**

Application rates are typically given as a range:

Use **Lower rate ranges** when tank mixing with contact insecticides labeled for larvae control or under conditions of light larvae infestations or when uniformly small larvae are present.

Use **Medium rate ranges** when multiple larvae life stages are present, continuous egg hatches are occurring or young or light armyworm infestations exist.

Use **Upper rate ranges** for heavy larvae infestations, mature (larger) larvae or for moderate to heavy infestations of armyworm, bollworm or other difficult to control larvae species.

Use application rate amount of **SAN 420 I<sup>®</sup> WG** in water sufficient to insure thorough coverage depending on type of crop, application equipment and requirements of state regulations. Low volume applications may be used, but proper application equipment must be used to insure adequate coverage. Thorough and uniform crop coverage is required for adequate insect control.

## APPLICATION RATES

CROPS	SAN420 I <sup>®</sup> WG LBS./ACRE
<b>VEGETABLE CROPS</b>	
<b>Artichokes</b>	0.5-1.50
<p><b>ADDITIONAL INSTRUCTIONS:</b>            For ground applications, apply in a minimum of 100 gal. of water per acre with a spray interval of 10 days or less.</p> <p>To aid in resistance management of the artichoke plume moth, apply 0.5 lb/A in combination with a pyrethroid by ground or air. Use and follow all label directions of the tank mix partner regarding application, timing, gallonage, and schedules.</p>	
<b>Asparagus, Beans (Green, Lima, Mung), Broccoli, Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Cardoon, Carrots, Cauliflower, Celery, Celery, Chick Peas, Chinese Broccoli, Chinese Cabbage, Collards, Cucumbers, Dry Bulb Onions, Eggplants, Garlic, Green Onions, Greens (Dandelion, Turnip, Mustard, Beet, China), Herbs (Basil, Cilantro, Dill, Oregano, Thyme), Horseradish, Kale, Kohlrabi, Leeks, Lettuce (Endive, Romaine, Head Lettuce, Escarole, Butter Crunch, Leaf, etc.), Melons (Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon), Okra, Onions, Parsley, Parsnips, Peas, Peppers, Potatoes, Pumpkins, Radishes, Rutabaga, Salsify, Spinach, Squash (Summer and Winter), Sweet Corn, Sweet Potatoes, Swiss Chard, Table Beets, Tomatoes, Turnip Root, Watercress, Yams</b>	0.25-1.50
<p><b>ADDITIONAL INSTRUCTIONS:</b>            Apply as necessary to maintain control.</p>	
<b>FIELD CROPS</b>	
<b>Alfalfa (Hay and Seed), Sudan Grass, Hay Crops</b>	0.25-1.50
<p><b>ADDITIONAL INSTRUCTIONS:</b>            Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 larvae or greater per 180° sweep) use the highest rate. Use a contact insecticide in combination with <b>SAN 420 I<sup>®</sup> WG</b> if 4<sup>th</sup> and 5<sup>th</sup> instars of multiple larval species are present in the crop and continuous egg laying is occurring.</p> <p>The addition of a spreader sticker to <b>SAN 420 I<sup>®</sup> WG</b> may provide improved performance.</p>	
<b>Canola and Evening primrose</b>	0.25-1.50
<p><b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.</p>	

CROPS	SAN 420 <sup>®</sup> I WG LBS./ACRE
<b>Dry Beans and Peas, Lentils, Mint, Peanuts, Rice, Safflower, Soybeans</b> <b>Sugar Beets, Sunflower, Sorghum</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control	0.25-2.0
<b>Field Corn, Pop Corn, Seed Corn</b> <b>ADDITIONAL INSTRUCTIONS:</b> Make initial application when economically damaging population exist. Repeat as necessary to maintain control. Applications must be made to early instars prior to entering the ear or plant.	0.5-1.50
<b>Hops</b> <b>ADDITIONAL INSTRUCTIONS:</b> Begin treatment as soon as possible after hatching and before larvae are protected by lead folds.	0.5-1.50
<b>Jojoba</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply in a minimum of 50 gallons of water per acre by ground equipment or a minimum of 10 gallons of water by aerial equipment. Thorough coverage of foliage is essential and dictates the minimum spray volumes necessary.	0.5-1.50
<b>Small Grains Wheat, Oats, Barley, Rye</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control	0.5-1.50
<b>Tobacco</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.	0.25-1.50
<b>Cotton</b> <b>Including Arizona and California</b> Early and Mid-Season <b>ADDITIONAL INSTRUCTIONS:</b> Repeat as necessary throughout season to maintain control. If egg laying frequency indicates future moderate to heavy larval populations, time application spray to coincide with the 2 <sup>nd</sup> instar larvae. During periods of high temperatures, larvae will progress through 1 <sup>st</sup> and 3 <sup>rd</sup> instars very rapidly and early application timing is necessary for control.  <b>SAN 420 I<sup>®</sup> WG</b> spray must be deposited at the larvae feeding site. When plant cover is dense and larvae are feeding in the lower 2/3 portion of the plant, aerial application of <b>SAN 420 I<sup>®</sup> WG</b> may not provide adequate control.  For the control of light to moderate infestations, apply at first sign of egg-laying or newly-hatched larvae (1 <sup>st</sup> instar larvae).	0.25-1.50

**CROPS****SAN 420 I® WGLBS./ACRE****Cotton**, (continued)**Except Arizona and California****ADDITIONAL INSTRUCTIONS:***Helicoverpa zea* and *Heliothis virescens***Early Season**

0.25-1.50

Begin applications when at least 50% of plants are at pinhead square stage and *Helicoverpa zea* or *Heliothis virescens* are present at damaging levels. If *Helicoverpa zea* is the predominant species or if larvae populations are high, use a higher rate or tank mix with a labeled ovicide (see below).

**Mid-Season**

0.25-1.50

Repeat as necessary throughout season to maintain control. Time application at peak egg hatch or 1<sup>st</sup> instar larvae. If egg laying is heavy and constant over a three-to-five day period, time application when eggs laid on the first day have developed into 2<sup>nd</sup> instar larvae. During periods of high temperature, larvae will progress through 1<sup>st</sup> and 3<sup>rd</sup> instars very rapidly and early application timing is necessary for control. Continue applications as needed based on field scouting up to pyrethroid spray window.

**SAN 420 I® WG** spray must be deposited at the larval feeding site. When plant cover is dense and larvae are feeding in the lower 2/3 portion of the plant, aerial application of **SAN 420 I® WG** may not provide adequate control.

For added control of *Helicoverpa zea* and *Heliothis virescens*, tank mix **SAN 420 I® WG** with a labeled ovicide, such as amitraz (0.125-0.25 lb a.i./acre), methomyl (0.125 lb a.i./acre), profenofos (0.25 lb a.i./acre), or thiodicarb (NOT FOR CALIFORNIA) (0.125 lb a.i./acre). For added control of pyrethroid resistant *Heliothis virescens*, include **SAN 420 I® WG** as a tank mix partner with pyrethroid applications.

*Spodoptera exigua*

0.50-1.50

Apply when *Spodoptera exigua* population densities are damaging. Time application when the majority of the larvae population is in the egg-hatch to 3<sup>rd</sup> instar stage. If populations are dense, use a higher rate.

**SAN 420 I® WG** spray must be deposited at the larval feeding site. When the plant canopy is dense, for best control tank mix **SAN 420 I® WG** with a labeled larvicide, such as chlorpyrifos (0.25-1.0 lb a.i./acre), methomyl (0.33-0.75 lb a.i./acre), profenofos (0.5-1.0 lb a.i./acre), or thiodicarb (NOT FOR CALIFORNIA) (0.6-0.9).

CROPS	SAN 420 I <sup>®</sup> WG LBS./ACRE
<b>FRUIT, NUT &amp; VINE CROPS</b>	
<b>Apples and Pears</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply when newly hatched larvae appear and before leaves are rolled. Continue applying as a part of the normal cover spray program until pest is adequately controlled. Apply when caterpillars are actively feeding (2 <sup>nd</sup> -4 <sup>th</sup> instars)	0.5-2.00
<b>Avocados, Papaya, Guava, Lychee, Sugar Apple</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control. Begin treatment as soon as possible after hatching and before larvae are protected by leaf folds.  (Amorbia [Mexican leafroller] is suppressed only.)	0.25-2.00
<b>Bananas</b> <b>ADDITIONAL INSTRUCTIONS:</b> Hawaii only. Use calibrated ground equipment with adequate water to apply to point of runoff.	0.25-2.00
<b>Citrus</b> <b>ADDITIONAL INSTRUCTIONS:</b> Use 50-600 gallons of water per acre when using ground equipment and 10 gallons of water minimum per acre by air.  (Amorbia [Mexican leafroller] is suppressed only.)	0.5-1.50
<b>Blueberries, Caneberries, Currants, Kiwi</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply by ground equipment only. Begin treatment as soon as possible after hatching. For leafrollers, apply before larvae are protected by leaf folds.	0.25-2.00
<b>Grapes</b> <b>ADDITIONAL INSTRUCTIONS:</b> Start treating as soon as possible after hatching and before larvae are protected by leaf folds.	0.5-2.00

CROPS	SAN 420I® WG LBS./ACRE
<p>Almonds, Apricots, Cherries, Filberts, Nectarines, Peaches, Pecans Persimmons, Pistachios, Plums, Pomegranate, Pome Fruit, Pluots, Prunes, Walnuts</p> <p><b>ADDITIONAL INSTRUCTIONS:</b> For leafrollers, start treating as soon as possible after hatching and before larvae are protected by leaf folds. Apply when caterpillars are actively feeding (2<sup>nd</sup> to 4<sup>th</sup> instar).</p> <p>Application timing is very important for good pecan nut casebearer suppression. Consult your local university or extension agent for information concerning specific modeling that predicts egg lay, typical application dates, and scouting techniques for your area. <b>SAN 420 I® WG</b> must be present at egg hatch for best control. Make application when the majority of eggs are in the pink stage. Make two applications 7 days apart. If only one application is made, a minimum of 0.5 lb. should be applied.</p>	0.25-2.00
<p><b>Melons</b> (Also see vegetables)</p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply at first sign of hatch before larvae enter fruit. Repeat as necessary to maintain control.</p>	0.25-1.50
<p><b>Coffee</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.</p>	0.25-2.00
<p><b>Strawberries</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.</p> <p>In a tank mix with contact insecticides, use a minimum of 1/2 lb. of <b>SAN 420 I® WG</b> for the control of armyworm.</p>	0.25-1.50
<p><b>Olives</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.</p>	0.25-2.00
<p><b>SHADE TREES and ORNAMENTALS (INCLUDING ROSES)</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply when leaf expansion reaches 40% to 50% as infestation warrants. If eggs hatch over a long period of time, or if reinfestation occurs, spray about 14 days after first application.</p> <p>Apply when most larvae are 3<sup>rd</sup> – 4<sup>th</sup> instar. Also consider the opening</p>	0.25-1.50

of the bud cap to ensure foliage exposure.

Apply after eggs have hatched and early instar larvae are feeding on exposed foliage.

**TURF AND GRASS SEED PRODUCTION**

0.50-1.50

**ADDITIONAL INSTRUCTIONS:**

Repeat as necessary throughout season to maintain control.

**FLOWERS AND ORNAMENTALS**

**SAN 420 I<sup>®</sup> WG** may also be used on flowers and ornamentals outdoors and in the greenhouse at a rate of 0.25 – 1.50 lb. per 100 gallons of water for control of listed insects on this label.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in original container in a cool, dry place inaccessible to children and pets and away from heat and direct sunlight. Protect from freezing. Storage at temperatures above 90°F may impair effectiveness.

**Pesticide Disposal:** Pesticide, spray mixture, or rinse water that cannot be used according to label instruction must be disposed of according to Federal, State, or Local procedures.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Warranty**

NOTICE: Read “WARRANTY” on the container before buying or using. If terms are not acceptable, return at once unopened.

Certis USA LLC warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein.



TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

**SAN 420 I® WG** is a registered trademark of Certis USA, L.L.C.

### **CHEMIGATION APPLICATIONS**

SAN 420 I® WG alone or in combination with other tank mixtures which are registered for sprinkler irrigation may be applied through irrigation systems.

Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply the pesticide continuously for the duration of the water application.

Apply this product only through sprinkler systems such as center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water system are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **OPERATING INSTRUCTIONS**

#### **Sprinkler Irrigation**

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigated pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operating valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

### **Chemigation Systems Connected to Public Water Systems**

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

### **CALIBRATION AND APPLICATION**

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural pesticide through sprinkler irrigation equipment.

#### **Center Pivot Irrigation Equipment (Use only with drive systems which provide uniform water distribution.)**

1. Determine the size of the area to be treated.
2. Determine the time required to apply 1/4-1/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Do not use the end gun for applications of SAN 420 I® WG through Center Pivot Irrigation Equipment.
5. Determine the amount of SAN 420 I® WG required to treat the area covered by the irrigation system. (Refer to table for use rates.)
6. Add the required amount of SAN 420 I® WG all at once to sufficient water in the injection solution tank to meet the injection time requirements. (See **Mixing Instructions** section of this label.)
7. Maintain constant agitation in the injection solution tank during the injection period.
8. Inject SAN 420 I® WG at the end of the irrigation cycle in 1/4-1/2 inch of water or as a separate application to maximize the effectiveness of the insecticide.

9. Continue to operate the system until the SAN 420 I® WG solution has cleared the last sprinkler head.

### **Solid Set, Hand Move, and Moving Wheel**

#### **Irrigation Equipment**

1. Determine the acreage covered by the sprinklers.
2. Fill the injection solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval.
3. Determine the amount of SAN 420 I® WG required to treat the area covered by the irrigation system.
4. Add the required amount of SAN 420 I® WG into the same quantity of water used to calibrate the injection period. (See **Mixing Instructions** section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Maintain constant agitation in the injection solution tank during the injection period.
7. Inject SAN 420 I® WG at the end of the irrigation cycle in 1/4-1/2 inch of water or as a separate application to maximize the effectiveness of the insecticide.
8. Stop injection equipment after the treatment is completed. Continue to operate the system until the SAN 420 I® WG solution has cleared the last sprinkler head.

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022416SG (08/14/15 EPA Fast Track Amendment label to add chemigation language)

031716 SG (08/14/15 FTA to add chemigation, updated respirator text)