

PM 18

55947-152

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

Registration Number:  
55947-152

Date of Issuance:  
SEP 21 1994

NOTICE OF PESTICIDE:  
  X   Registration  
      Reregistration

Term of Issuance: Conditional

Name of Pesticide Product:  
SAN 420 I WG  
Biological  
Insecticide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Sandoz Agro, Inc.  
1300 E. Touhy Avenue  
Des Plaines, IL 60018

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Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Change the label by revising the EPA Registration Number to read, "EPA Reg. No. 55947-152".
3. Submit two copies of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Signature of Approving Official:  
*For Phil Hutter*  
*Walter Nelson*

Date:  
SEP 21 1994

EPA Form 3370-6

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

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(CONTAINER LABEL)

# SAN 420 I® WG BIOLOGICAL INSECTICIDE

For Control Of Insect Pests Of Vegetables, Fruit and Field Crops

## ACTIVE INGREDIENT:

Bacillus thuringiensis, subspecies kurstaki, . . . . . 18.0%

INERT INGREDIENTS: . . . . . 82.0%

TOTAL 100.0%

Potency units should not be used to adjust use rates beyond those specified in the Directions for Use section.

\* Equivalent to 41 billion International Units per pound.

### KEEP OUT OF REACH OF CHILDREN

### WARNING

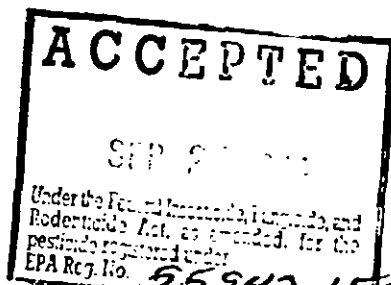
### AVISO

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

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Made in the USA  
EPA REG. NO.:

EPA EST. NO.: 55947-CA-2



Lot No.:

Net Contents.

Manufactured by:  
SANDOZ AGRO, INC.  
DES PLAINES, IL 60018

SAN 420 I® WG is a registered trademark of Sandoz Ltd.

# SAN 420 I® WG BIOLOGICAL INSECTICIDE

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS) WARNING

**Causes eye irritation. Do not get into eyes, on skin, or on clothing.**

Harmful if inhaled or absorbed through the skin. 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. Discontinue use if reaction occurs. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

### STATEMENT OF PRACTICAL TREATMENT

If On Skin: Wash with plenty of soap and water. Get medical attention, if irritation persists.  
If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

#### Personal Protective Equipment:

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

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

#### Engineering controls statements:

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

**User Safety Recommendations:**

Users should:

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

**ENVIRONMENTAL HAZARDS**

Do not contaminate water when disposing of equipment washwaters.

**DIRECTIONS FOR USE**

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

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

### AGRICULTURAL USE REQUIREMENTS

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

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

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

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Unless specifically stated, do not apply this product through any type of irrigation system. Refer to the Directions for Use booklet attached to this container for further directions.

### STORAGE AND DISPOSAL

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

**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. When kept at room temperature (+21°C to 24°C) SAN 420 1• WG will keep its activity approximately 2 years.

**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 Disposal:** Completely empty container into application equipment. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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(DIRECTIONS FOR USE)  
SAN 420 I® WG BIOLOGICAL INSECTICIDE

Made in the U.S.A.

EPA Reg. No.

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- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Prosper with pesticides by using them properly! Read and follow label directions.

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

**NOTICE:** Read "Limitation of Warranty and Limitation of Liability" on the container or in this Directions for Use section before buying or using. If terms are not acceptable, return at once unopened.

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

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

**SAN 420 I® WG** attacks the larval gut and must be ingested by the insect to be effective.

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

**SAN 420 I® WG** is a registered trademark of Sandoz Ltd.

Manufactured by: Sandoz Agro, Inc., 1300 East Touhy Avenue, Des Plaines, Illinois 60018.

## **GENERAL USE INSTRUCTIONS**

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

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

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

For heavy worm 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.



Tank mix recommendations are for use 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 rate recommendations, application timing, and precautions.

**Mixing:**

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. Do not allow diluted sprays to 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, it is advisable to 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.

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**INSECTS CONTROLLED**  
**WHEN USED AS DIRECTED, SAN 420 WG WILL CONTROL THE FOLLOWING**  
**INSECTS**

COMMON NAME	SCIENTIFIC NAME
Alfalfa caterpillar	<i>Colias eurytheme</i> (Boisduval)
Almond moth	<i>Cadra cautella</i> (Walker)
Armyworm	<i>Pseudaletia unipuncta</i> (Haworth)
Artichoke plume moth	<i>Platytilla carduidactyla</i> (Riley)
Bagworm	<i>Thyridopteryx ephemeraeformis</i> (Haworth)
Banana skipper	<i>Erionota thrax</i> (Haworth)
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 leafperforator	<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)
Fall cankerworm	<i>Alsophila pometaria</i> (Harris)
Fall webworm	<i>Hyphantria cunea</i> (Drury)
Filbert webworm	<i>Melissopus latiferreanus</i> (Walsingham)
Fruittree leafroller	<i>Archips argyrospila</i> (Walker)
Grape leaf folder	<i>Desmia funeralis</i> (Hubner)
Grapeleaf skeletonizer	<i>Harrisina americana</i> (Guerin)
Green cloverworm	<i>Plathypena scabra</i> (Fabricius)
Green fruitworm	<i>Lithophane antennata</i> (Walker)

COMMON NAME	SCIENTIFIC NAME
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)
Loopers	various
Mimosa webworm	<i>Homadula anisocentra</i> (Meyri)
Naval orangeworm	<i>Amyelois transitella</i> (Walker)
Obliquebanded leafroller	<i>Choristoneura rosaceana</i> (Harris)
Ominverous leafroller	<i>Platynota stultana</i>
Omniverous leaftier	<i>Cnephasis longana</i> (Haworth)
Orangedog	<i>Papilio cresphontes</i> (Cramer)
Orange tortrix	<i>Argyrotaenia citrana</i> (Fernald)
Oriental fruit moth	<i>Grapholita Moesta</i> (Busck)
Peach twig borer	<i>Anarsia lineatella</i> (Zeller)
Pecan nut casebearer	<i>Acrobasis nuxvorella</i> (Neunzig)
Redbanded leafroller	<i>Argyotaenia 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 corr. 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)

COMMON NAME	SCIENTIFIC NAME
Tropical sod webworm	<i>Herpetogramma phaeopteralis</i> (Guenee)
Tufted apple bud moth	<i>Platynota idaeusalis</i> (Walker)
Variiegated leafroller	<i>Platynota flavedana</i> (Clemens)
Velvetbean caterpillar	<i>Anticarsia gemmatalis</i> (Hubner)
Western tussock moth	<i>Orgyia vetusta</i> (Boisduval)

### Rate Selection Considerations

) Rate recommendations are typically given as a range:

**Lower rate ranges** may be desired when tank mixing with contact insecticides labeled for worm control or under conditions of light worm infestations or when uniformly small worms are present.

**Medium rate ranges** may be desired when multiple worm life stages are present, continuous egg hatches are occurring or young or light armyworm infestations exist.

**Upper rate ranges** may be desired for heavy worm infestations, mature (larger) worms or for moderate to heavy infestations of armyworm, bollworm or other difficult to control worm species.

) Use recommended amount of **SAN 420 I® 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.

## RECOMMENDED APPLICATION RATES

CROPS	LBS./ACRE
<b>VEGETABLE CROPS</b>	
<p><b>Artichokes</b></p> <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 ASANA® XL, AMBUSH®, or SUPRACIDE® by ground or air. Use and follow all label directions of the tank mix partner regarding application, timing, gallonage, and schedules.</p>	<p>0.25-1.50</p>
<p><b>Asparagus, Beans (Green, Lima, Mung), Broccoli, Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Cardoon, Carrots, Cauliflower, Celeriac, 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, etc.), Horseradish, Kale, Kohi Rabi, Leeks, Lettuce (Endive, Romaine, Head Lettuce, Escarole, Butter Crunch, Leaf, etc.), Melons (Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon, etc.), 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></p> <p><b>ADDITIONAL INSTRUCTIONS:</b>                      Apply as necessary to maintain control.</p>	<p>0.06-1.50</p>
<b>FIELD CROPS</b>	
<p><b>Alfalfa (Hay and Seed), Sudan Grass, Hay Crops &amp; Other Forage Crops</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b>                      Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 worms or greater per 180° sweep) use the highest rate. Against heterogenous worm populations, where 4th and 5th instars are present, and continuous egg laying is occurring, applications may provide variable control. Under these conditions, the addition of a contact insecticide in combination with SAN 420 I® WG is recommended.</p> <p>The addition of a spreader sticker to SAN 420 I® WG may provide improved performance.</p>	<p>0.12-1.50</p>
<p><b>Canola and Evening Primrose</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.</p>	<p>0.06-1.50</p>

CROPS	LBS./ACRE
<b>Dry Beans and Peas, Lentils, Mint, Peanuts, Rice, Safflower, Soybeans, Sugar Beets, Sunflower, Sorghum</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.	0.12-1.50
<b>Field Corn, Pop Corn, Seed Corn</b> <b>ADDITIONAL INSTRUCTIONS:</b> Make initial application when economically damaging populations exist. Repeat as necessary to maintain control. Applications must be made to early instars prior to entering the ear or plant.	0.25-1.50
<b>Hops</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.	0.12-1.50
<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.	0.25-1.50
<b>Small Grains</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.	0.50-1.50
<b>Tobacco</b> <b>ADDITIONAL INSTRUCTIONS:</b> Apply as necessary to maintain control.	0.06-1.50
<b>Cotton</b>  <b>Including Arizona and California</b> <b>Early and Mid-Season</b> <b>ADDITIONAL INSTRUCTIONS:</b> Repeat as necessary throughout season to maintain control. If egg laying frequency indicates future moderate to heavy worm populations, time application spray to coincide with the 2nd instar larvae. During periods of high temperatures, worms will progress through 1st and 3rd instars very rapidly and early application timing is necessary for control.  To be effective, <b>SAN 420 I® WG</b> spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower 2/3 portion of the plant, aerial application of <b>SAN 420 I® 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 worms (1st instar larvae).	0.25-1.50

CROPS	LBS./ACRE
<p>Except Arizona and California            ADDITIONAL INSTRUCTIONS:</p>	
<p><i>Helicoverpa zea</i> and <i>Heliothis virescens</i></p>	
<p><b>Early Season</b></p>	0.12-1.50
<p>Begin applications when at least 50% of plants are at pinhead square stage and <i>Helicoverpa zea</i> or <i>Heliothis virescens</i> are present at damaging levels. If <i>Helicoverpa zea</i> is the predominant species or if worm populations are high, use a higher rate or tankmix with a labeled ovicide (see below).</p>	
<p><b>Mid-Season</b></p>	0.25-1.50
<p>Repeat as necessary throughout season to maintain control. Time application at peak egg hatch or 1st 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 2nd instar larvae. During periods of high temperature, worms will progress through 1st and 3rd instars very rapidly and early application timing is necessary for control. Continue applications as needed based on field scouting up to pyrethroid spray window.</p>	
<p>To be effective, SAN 420 I® WG spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower 2/3 portion of the plant, aerial application of SAN 420 I® WG may not provide adequate control.</p>	
<p>For added control of <i>Helicoverpa zea</i> and <i>Heliothis virescens</i>, tank mixing 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) (0.125-0.25 lb a.i./acre) is recommended. For added control of pyrethroid resistant <i>Heliothis virescens</i>, include SAN 420 I® WG as a tank mix partner with pyrethroid applications.</p>	
<p><i>Spodoptera exigua</i></p>	0.50-1.50
<p>Apply when <i>Spodoptera exigua</i> population densities are damaging. Time application when the majority of the worm population is in the egg-hatch to 3rd instar stage. If populations are dense, use a higher rate.</p>	
<p>To be effective, 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).</p>	

CROPS	LBS./ACRE
<b>FRUIT, NUT, &amp; VINE CROPS</b>	
<b>Apples and Pears</b> ADDITIONAL INSTRUCTIONS: 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 (2nd-4th instars).	0.25-2.00
<b>Avocados</b> ADDITIONAL INSTRUCTIONS: 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.)	0.25-1.50
<b>Bananas</b> ADDITIONAL INSTRUCTIONS: Hawaii only. Use calibrated ground equipment with adequate water to apply to point of runoff.	0.25-1.50
<b>Citrus</b> ADDITIONAL INSTRUCTIONS: 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.)	0.12-1.50
<b>Blueberries, Caneberries, Currants, Kiwi</b> ADDITIONAL INSTRUCTIONS: Apply by ground equipment only. Begin treatment as soon as possible after hatching. For leafrollers, apply before larvae are protected by leaf-folds.	0.12-1.50
<b>Grapes</b> ADDITIONAL INSTRUCTIONS: Start treating as soon as possible after hatching and before larvae are protected by leaf folds.	0.25-1.50



CROPS	LBS./ACRE
<p><b>Almonds, Apricots, Cherries, Filberts, Nectarines, Peaches, Pecans, Persimmons, Plums, Pomegranate, Prunes, Walnuts</b></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 (2nd to 4th 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<sup>®</sup> WG</b> must be present at egg hatch for best control. Make application when the majority of eggs are in the pink stage. For best control make two applications 7 days apart. If only one application is made, a minimum of 0.5 lb. should be applied.</p>	0.12-2.00
<p><b>Melons (Also see vegetables.)</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b>            Apply at first sign of hatch before larvae enter fruit. Repeat as necessary to maintain control.</p>	0.12-1.50
<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<sup>®</sup> WG</b> for the control of armyworm.</p>	0.12-1.50
<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 3rd-4th instar. Also consider the opening of the bud cap to ensure foliage exposure.</p> <p>Apply after eggs have hatched and early instar larvae are feeding on exposed foliage.</p>	0.06-1.50
<p><b>TURF AND GRASS SEED PRODUCTION</b></p> <p><b>ADDITIONAL INSTRUCTIONS:</b>            Repeat as necessary throughout season to maintain control.</p>	0.50-1.50

<b>CROPS</b>	<b>LBS./ACRE</b>
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**STORED SOYBEANS, GRAINS (INDIAN MEAL MOTH, ALMOND MOTH)**

**ADDITIONAL INSTRUCTIONS:**

To control and prevent Indian Meal Moth and Almond Moth infestations of stored soybeans and grains, prepare a spray mixture which includes 1 gallon of water for every 1.5 oz. by weight of **SAN 420 I® WG**. The spray mixture may be applied either by treating the top 4 inches of grain as it is being augered into storage (applying 0.6 pint of mixture per bushel in the grain stream), or by treating the surface of grain after it is in the bin. The Table below can be used as a guide in determining the total amount of **SAN 420 I® WG** needed according to the bin diameter or the number of bushels to be treated.

Bin Diameter (ft.)	Surface Area (sq. ft.)	Bushels (to 4 in. depth)	SAN 420 I® WG Rate (by weight)	
			<u>Grams</u>	<u>OZ.</u>
8	50	13	21	0.40
12	113	30	50	0.90
16	201	53	85	1.50
20	314	84	120	2.15
24	452	120	185	3.25
28	615	163	255	4.50
32	804	214	326	5.75

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

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

For the protection of bagged grain, apply spray mixture to entire grain mass, and mix thoroughly prior to bagging. **SAN 420 I® WG** at 3 oz. by weight per 10 gallons of water will treat approximately 100 bushels.

Treated grain may be used at any time after treatment.

**FLOWERS AND ORNAMENTALS**

**SAN 420 I® WG** may also be used on flowers and ornamentals outdoors and in the greenhouse at a rate of 0.12 - 1.50 lb. per 100 gallons of water for control of listed insects on this label.

CROPS		LBS./ACRE
<b>GUIDE FOR SMALL SPRAY VOLUME MIXING</b>		
<u>Rate</u> <u>Lbs./A</u>	<u>Conversion Rate*</u> <u>Teaspoons/Gallon</u>	
1/8	1/4	
1/4	1/2	
1/2	1	
* Assumes Application to spray runoff.		

## STORAGE AND DISPOSAL

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

**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. When kept at room temperature (+21°C to 24°C) SAN 420 1• WG will keep its activity approximately 2 years.

**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 Disposal:** Completely empty container into application equipment. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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