UNIT STATES ENVIRONMENTAL PROTECTIO GENCY



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

March 23, 2010

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Christine A. Dively Director of Regulatory Affairs CERTIS USA, LLC 9145 Guilford Road, Suite 175 Columbia, MD 21046

> RE: Product Name: SAN 420-I WG EPA Reg. No: 70051-69 Application for Notification dated November 13, 2009, to add container reuse statement to the Storage and Disposal section as permitted by PR Notices 2007-4 and 2008-1.

Dear Ms. Dively,

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under Pesticides Registration Notice (PRN) 98-10 dated above. A preliminary screen of this request has been conducted for its applicability under PRN 98-10 and it has been determined that the action(s) requested falls within the scope of PRN 98-10. Our records have been duly noted, and the letter submitted with this application has been stamped "Notification, received and accepted" and will be placed accordingly in our records.

Questions concerning this action should be directed to Mary Paden (703) 308-0411 or email at <u>paden.mary@epa.gov</u>.

Sincerely,

Sheryl K. Reilly

Sheryl K. Reilly, Ph.D., Chief Microbial Pesticides Branch Biopesticides and Pollution Prevention Division (7511P)

	CONCURRENCES	
SYMBOL MJILP		
SURNAME Daden		
DATE 318-10		
EPA Form 1320–1A (1/90)	Printed on Recycled Paper	OFFICIAL FILE COPY

	<u> </u>		<b>.</b> .			Print Form
	ں Environmental	nited States Protection Age agton, DC 20460	Form Appr	Registra Amend X Other		OPP Identifier Number
······································		Application for I	Pesticide - Sec	tion I		
1. Company/Product Nun 70051-69	nber		2. EPA Product Man Microbial Pesticid		3. Pro	posed Classification
4. Company/Product (Na SAN 420-I WG	me}		PM# 92			None Restricted
Certis U.S.A., L.L.C. 9145 Guilford Road, S Columbia, MD 21788	Applicant <i>linclude ZIP Co</i> uite 175 <i>this is a new address</i>	de) 8		is similar or iden	tical in cor	FIFRA Section 3(c)(3) nposition and labeling GATION Actor 0:03-18-10 4 A T
		Sec	tion - II	A. 1.	wee by	maloner
Notification - Explanation: Use add     Notification     the require     been made     U.S.C. See     with the red	esponse to Agency letter ein below. tional page(s) if necessary on of label change per PR I ements of EPA's regulation to the labeling or the Cor c. 1001 to willfully make a equirements of 40 CFR §§ 1 I may be subject to enfor	7. (For section I and Se Notice 2007-4. This noti is at 40 CFR §§ 156.10, inidential Statement of Fo ny false statement to EP 156.10, 156.140, 156.14 cement action and penal	Agency lett "Me Too" Other - Exp ction 11.) fication is consistent w 156.140, 156.144, 156 ormula for this produc A. I further understand 4, 156.146, and 156.12 lifes under sections 12	Application. Main below. With the guidance in .146, and 156.156. I. I understand that d thatif the amende 56, this product ma	n PR Notice No other ch tit is a violat ed label is no	anges have ion of 18 ot consistent
a statute to the Decision	NGU De Deskered be	5601	tion - III			
1. Material This Product Child-Resistant Peckagin Yes* X No Certification must	g Unit Packaging Yes X No If "Yes"	No. per If "Yes			f Conteiner Metal Plastic Glass Paper	
be submitted	Unit Packaging wgt. I	container Packag	je wgt containe I	'   L	Other (S	pecify)
3. Location of Net Conte	nts Information Container	4. Size(s) Retail Contai 1 and 5 lb. bag	ner	5. Location of La X On Labo On Labo	bl	ns panying product
6. Manner in Which Labe	is Affixed to Product	Lithograph Paper glued Stenciled	Othe	r		
		Sect	ion - IV			
1. Contact Point (Compl	ete items directly below fo	or identification of indivi	idual to be contacted,	if necessary, to p	rocess this	application.)
Name Christine Dively		Title Director	Reg. Affairs		Telephone 301-483-	No. (Include Area Code) 3806
l acknowledge that both under applica	atements I have made on any knowingly false or m ble law. A. Divec	isleading statement ma				6. Date Application Received (Stamped)
4. Typed Name Christine Dively		V 5. Date	Vov. 13,200	7	<u> </u>	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

# SAN 420 I® WG **BIOLOGICAL INSECTICIDE**

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

		MRI
FOR ORGANIC PRODUCTION		rials Review Institute
ACTIVE INGREDIENT:	Date Reviewed: <u>03-18</u> Reviewed By: <u>m</u>	-10 Ler
Bacillus thuringiensis, subspecies kurstaki strain stoxins*	SA-12 solids, spores, and insect	
OTHER INGREDIENTS:		<u>15.0%</u>
	TOTAL	100.0 <b>%</b>

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

## **KEEP OUT OF REACH OF CHILDREN**

# **CAUTION**

# SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY **STATEMENTS**

Made in the USA EPA REG. NO.: 70051-69

. .

#### Lot No.

EPA EST. NO.: 70051-CA-001

**Net Contents:** 

e e cececc

Manufactured by: CERTIS USA, L.L.C. 9145 GUILFORD ROAD, SUITE 175 COLUMBIA, MD 21046	ς <b>ς ζ ζ ζ ζ ζ ζ ζ</b> ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ ζ	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SAN 420I®WG is a registered trademark of Certis USA, LLC		ι ι ι ι ι ι ι
Page 1 of 16		0 (( 6 6 6 6 6 6 6 6

Page 1 of 16

#### SAN 420 I® WG **BIOLOGICAL INSECTICIDE**

,

#### **PRECAUTIONARY STATEMENTS** HAZARDS TO HUMANS (AND DOMESTIC ANIMALS) CAUTION

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. Causes moderate eye irritation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID	FIRST AID		
If in eyes	<ul> <li>-Hold eyes open and rinse slowly and gen 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>	he	
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of ward for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
If inhaled	-Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably mouth-to-mouth, if possible. -Call a poison control center or doctor for treatment advice.		
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		0 c	
	ιιις. ιις. ις. ις. ις. ις. ις. ις		

#### **Personal Protective Equipment:**

Applicators and other handlers must wear:

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

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.

All mixer/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

#### **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.

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.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal aseas c. below the mean water mark. Do not contaminate water when disposing of equipment 000000 washwaters.

This product must not be applied aerially within <sup>1</sup>/<sub>4</sub> mile of any habitats of endangered or terrete threatened Lepidoptera. No manual application can be made within 300 ft. of any threatened or 0 6 6 endangered Lepidoptera. ι ι ι ι ι ι ι ι ι ι ι

4

#### **DIRECTION 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.

00F1%

#### 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 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

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.		
Pesticide Storage:	Store in original container in a cool, dry place inaccessilit pets and away from heat and direct sunlight. Protect from Storage at temperatures above 90°F may impair effective at room temperature (+21°C to 24°) SAN 420 I® WG w	m freezii eness. W	ng.° Vhển kếpt
	approximately 2 years.		
Pesticide Disposal:	Pesticide, spray mixture, or rinse water that cannot be us label instruction must be disposed of according to Feder		
	procedures.		ς ζ ζ ζ ζ ι ι ί ι ι ι ι

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.

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

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

<u>NOTICE</u>: Read "WARRANTY" 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 Application Rates section).

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

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

Manufactured by: Certis USA LLC, 9145 Guilford Road, Suite 175, Columbia, Maryland 21046

#### GENERAL USE INSTRUCTIONS

For most consistent control, apply at first sign of newly hatched worms (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 worm or non-lepidopterous populations is necessary, include an effective contact insecticide in combination with **SAN 420 I® WG**. Use tank mixes only in states where the tank mix product and application site are registered.

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 volueres will provide better crop coverage and improve SAN 420 I® WG performance, control of the second second

1041X

Read and follow <u>all</u> 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.

#### Mixing:

Fill spray or mixing tank <sup>3</sup>/<sub>4</sub> 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, 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.

сe

60£ 1X

**INSECTS CONTROLLED** 

ſ

,

# WHEN USED AS DIRECTED, SAN 420 I® WG WILL CONTROL THE FOLLOWING INSECTS

COMMON NAME	SCIENTIFIC NAME
Alfalfa caterpillar	Colias eurytheme (Boisduval)
Almond moth	Cadra cautella (Walker)
Armyworm	Pseudaletia unipuncta (Haworth)
Artichoke plume moth	Platyptilla carduidactyla (Riley)
Bagworm	Thyridopteryx ephemeraeformis (Haworth)
Banana skipper	Erionota thrax (Haworth)
Blueberry leafrollers	various
Blueberry spanworm	Itame argillacearia (Pack.)
Bollworm, Tomato Fruitworm, Corn Earworm	Helicoverpa zea (Boddie)
California oak moth	Phrygnidia californica (Packard)
Cherry fruitworm	Grapholita packardi (Zeller)
Citrus cutworm	Xylomyges curialis
Codling moth	Cydia pomonella (linnaeus)
Cotton Leafworm	Alabama argillacea (Hubner)
Cotton leaf perforator	Bucculatrix thurberiella (Busck)
Cutworm	various, family Noctuidae
Diamondback moth	Plutella xylosteella (Linnaeus)
Douglas-fir tussock moth	Orgyia pseudotsugata (McDunnough)
Elm spanworm	Ennomos subsignaria (Hubner)
Eruopean corn borer	Ostrinia nubilalis (Hubner)
Fall cankerworm	Alsophila pometaria (Harris)
Fall webworm	Hyphantria cunea (Drury)
Filbert webworm	Melissopus latiferreanus (Walsingham)
Fruit tree leafroller	Archips argyrospila (Walker)
Grape leaffolder	Desmia funeralisi (Hubner)
Grapeleaf skeletonizer	Harrisina americana (Guerin) 🗧 🕻
Green cloverworm	Plathypena scabra (Fabricius); · · · · · · · · · · · · · · · · · · ·
Green fruitworm	Lithophane antennata (Walker)

90f 18

COMMON NAME	SCIENTIFIC NAME	
Gypsy moth	Lymantria dispar (Linnaeus)	
Helicoverpa spp.	Helicoverpa spp.	
Heliothis spp.	Heliothis spp.	
Hornworms	Manduca spp.	
Imported cabbageworm	Pieris rapae (Linnaeus)	
Jack pine budworm	Chloristoneura pinus (Freeman)	
Loopers	various	
Mimosa webworm	Homadaula anisocentra (Meyri)	
Naval orangeworm	Amyelois transitella (Walker)	
Obliquebanded leafroller	Choristoneura rosaceanai (Harris)	
Ominverous leafroller	Platynota stultana	
Omniverous leaftier	Cnephasia longana (Haworth)	
Orangedog	Papilio cresphontes (Cramer)	
Orange tortrix	Argyrotaenia citrana (Fernald)	
Oriental fruit moth	Grapholita Molesta (Busck)	
Peach twig borer	Anarsia lineatella (Zeller)	
Pecan nut casebearer	Acrobasis nuxvorella (Neunzig)	
Redbanded leafroller	Argyotaenia velutinana (Walker)	
Redhumped caterpillar	Schizura concinna (J.E. Smith)	
Rindworm complex	various	
Roughskinned cutworm	Athetis mindara (Barnes & McDunnough)	
Saltmarsh caterpiller	Estigmene Acrea (Drury)	
Sod webworm	Crambus mutabilis	
Southwestern corn borer	Diatraea grandiosella (Dyar)	
Spotted cutworm	Xestia spp.	
Spring cankerworm	Paleacrita vernata (Peck)	
Spruce budworm	Choristoneura fumiferanai (Clemens) 🖞	
Tent caterpillar	various, family lasiocamidae	
Tobacco budworm	Heliothis virescens (Fabricius)	
Tobacco hornworm	Manduca sexta (Linnaeus)	
Tomato pinworm	Keiferia lycopersicella (Walsingham)	

• •

(

100f18

(

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

#### **Rate Selection Considerations**

Application rates are typically given as a range:

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

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

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

Use application rate 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.

ςιιοςο ς ο υς

..... .....

# **APPLICATION RATES**

(

120F P8

· .

CROPS	LBS./ACRE
VEGETABLE CROPS	
Artichokes	0.5-1.50
ADDITIONAL INSTRUCTIONS:	
For ground applications, apply in a minimum of 100 gal. of water per acre	
with a spray interval of 10 days or less.	
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 direct:	ions of the tank
mix partner regarding application, timing, gallonage, and schedules.	
Asparagus, Beans (Green, Lima, Mung), Broccoli, Broccoli Raab (Rapini),	0.25-1.50
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, Kohl 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	
ADDITIONAL INSTRUCTIONS:	
Apply as necessary to maintain control.	
Apply as necessary to maintain control.	
Apply as necessary to maintain control. FIELD CROPS	
FIELD CROPS	0.05.1.50
FIELD CROPS	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops ADDITIONAL INSTRUCTIONS:	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops ADDITIONAL INSTRUCTIONS: Under conditions of rapid plant growth and rapidly increasing armyworm	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops ADDITIONAL INSTRUCTIONS: Under conditions of rapid plant growth and rapidly increasing armyworm populations (10 worms or greater per 180° sweep) use the highest rate.	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops <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. Use a contact insecticide in combination with <b>SAN 420 I® WG</b> if 4 <sup>th</sup> and 5 <sup>th</sup>	0.25-1.50
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops <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. Use a contact insecticide in combination with <b>SAN 420 I® WG</b> if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg	0.25-1.50
	0.25-1.50 Eccceo
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops <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. Use a contact insecticide in combination with <b>SAN 420 I® WG</b> if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg	υ υ υ υ
FIELD CROPS Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops <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. Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg laying is occuring. The addition of a spreader sticker to SAN 420 I® WG may provide improved performance.	υς τοτο το το το το το το το το το το το τ
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose	ະດາເຮັດ ເດີຍ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ ເປັນ
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose         ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control.	ειιες ειτες 60-25-1,50 ετες ετες
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose         ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control.	ζειτέυ ξετοξο δ. 6. 25-1,50 <sup>°</sup> ετο τιτο
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose         ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control.	έτιτες ετο
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose         ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control.	<sup>2</sup> 0.25-1.50 <sup>°</sup> <sup>2</sup> 0.25-1.50 <sup>°</sup> <sup>2</sup> του
FIELD CROPS         Alfalfa (Hay and Seed), Sudan Grass, Hay Crops & Other Forage Crops         ADDITIONAL INSTRUCTIONS:         Under conditions of rapid plant growth and rapidly increasing armyworm         populations (10 worms or greater per 180° sweep) use the highest rate.         Use a contact insecticide in combination with SAN 420 I® WG if 4 <sup>th</sup> and 5 <sup>th</sup> instars of multiple worm species are present in the crop and continuous egg         laying is occuring.         The addition of a spreader sticker to SAN 420 I® WG may provide improved         performance.         Canola and Evening primrose         ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control.	<sup>2</sup>

Ory Beans and Peas, Lentils, Mint, Peanuts, Rice, Safflower, Soybeans Sugar Beets, Sunflower, Sorghum ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control Field Corn, Pop Corn, Seed Corn ADDITIONAL INSTRUCTIONS: Make initial application when economically damaging population exist. Repeat as necessary to maintain control. Applications must be made to early nstars prior to entering the ear or plant. Hops ADDITIONAL INSTRUCTIONS: Begin treatment as soon as possible after hatching and before larvae are	0.5-	5-1.50 1.50 1.50
ADDITIONAL INSTRUCTIONS: Make initial application when economically damaging population exist. Repeat as necessary to maintain control. Applications must be made to early nstars prior to entering the ear or plant. Hops ADDITIONAL INSTRUCTIONS:		
ADDITIONAL INSTRUCTIONS:	0.5-	1.50
protected by lead folds.		
<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.		1.50
Small Grains ADDITIONAL INSTRUCTIONS: Apply as necessary to maintain control	0.5-	1.50
<b>Cobacco</b> <b>ADDITIONAL INSTRUCTIONS</b> : Apply as necessary to maintain control.		5-1.50
Cotton ncluding Arizona and California Early and Mid-Season ADDITIONAL INSTRUCTIONS:	0.25	5-1.50
Repeat as necessary throughout season to maintain control. If egg laying requency indicates future moderate to heavy worm populations, time pplication spray to coincide with the 2 <sup>nd</sup> instar larvae. During periods of igh temperatures, worms will progress through 1 <sup>st</sup> and 3 <sup>rd</sup> instars very apidly and early application timing is necessary for control.		υ ιιιςς ιιιςς ιιιςς ι
/3 portion of the plant, aerial application of SAN 420 I® WG may not rovide adequate control.		ι ιις ιιειο ι ιιι ι ι

•

(

130918

(

CROPS	LB	S./ACRE
Except Arizona and California ADDITIONAL INSTRUCTIONS:		
Helcoverpa zea and Heliothis virescens Early Season Begin applications when at least 50% of plants are at pinhead square stage and Helicoverpa zea or Heliothis virescens are present at damaging levels. I Helicoverpa zea is the predominant species or if worm populations are high use a higher rate or tank mix with a labeled ovicide (see below).	f .	5-1.50
<b>Mid-Season</b> 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, worms 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.	0.2:	5-1.50
To be effective, <b>SAN 420 I® WG</b> spray must be deposited at the larval feeding site. When plant cover is dense and worm 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 added control of <i>Helicoverpa zea</i> and <i>Heliothis virescens</i> , 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 <i>Heliothis virescens</i> , include SAN 420 I® WG as a tank mix partner with pyrethroid applications.		
Spodoptera exigua Apply when Spodoptera exigua population densities are damaging. Time application when the majority of the worm population is in the egg-hatch to 3 <sup>rd</sup> instar stage. If populations are dense, use a higher rate.	0.5	0-1.50
To be effective, <b>SAN 420 I® WG</b> spray must be deposited at the larval feeding site. When the plant canopy is dense, for best control tank mix <b>SAN 420 I® WG</b> 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).		
Page 12 of 16		<u>ر ز ز ز ر</u> ز

· (

· .

(

140518

CROPS	LB	S./ACRE
FRUIT, NUT & VINE CROPS		
Apples and Pears 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 (2 <sup>nd</sup> -4 <sup>th</sup> instars)	0.5	-2.00
Avocados 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.)	0.5-	-1.50
Bananas ADDITIONAL INSTRUCTIONS: Hawaii only. Use calibrated ground equipment with adequate water to apply to point of runoff.	0.5-	-1.50
<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.	0.5-	1.50
(Amorbia [Mexican leafroller] is suppressed only.)		
Blueberries, Caneberries, Currants, Kiwi 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.	0.2:	5-1.50
Grapes ADDITIONAL INSTRUCTIONS: Start treating as soon as possible after hatching and before larvae are protected by leaf folds.	0.5-	-1.50
	οι ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	د د
Page 13 of 16		ι ι <b>ι</b> ι ι ι ι ι ι ι

.

.

(

150718

(

# 160F18 (LBS./ACRE 0 5-2 00 Almonds Apricots Cherries Filberts Nectarines Peaches Pecans

ADDITIONAL INSTRUCTIONS: Repeat as necessary throughout season to maintain control.	
TURF AND GRASS SEED PRODUCTION	ζοςςςς Δ.50-1550.ζς
Apply after eggs have hatched and early instar larvae are feeding on exposed foliage.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Apply when most larvae are $3^{rd} - 4^{th}$ instar. Also consider the opening of the bud cap to ensure foliage exposure.	с с ссскс
<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.	
SHADE TREES and ORNAMENTALS (INCLUDING ROSES)	0.25-1.50
In a tank mix with contact insecticides, use a minimum of <sup>1</sup> / <sub>2</sub> lb. of <b>SAN 420 I® WG</b> for the control of armyworm.	
Apply as necessary to maintain control.	
Strawberries ADDITIONAL INSTRUCTIONS:	0.25-1.50
Melons (Also see vegetables) ADDITIONAL INSTRUCTIONS: Apply at first sign of hatch before larvae enter fruit. Repeat as necessary to maintain control.	0.25-1.30
	0.25-1.50
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. SAN 420 I® WG 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.	s,
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).	
Almonds, Apricots, Cherries, Filberts, Nectarines, Peaches, Pecans Persimmons, Pistachios, Plums, Pomegranate, Prunes, Walnuts ADDITIONAL INSTRUCTIONS:	0.5-2.00

CROPS

.

.

#### CROPS

#### LBS./ACRE

eece

ι ιι ι ι ι ι ι ι

6.6

44 <u>6</u> 6 6 6 6 6

crice

# 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**. Apply spray mixture 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 <u>ft.)</u>	Surface Area (sq. ft.)	Bushels (to 4 in. (depth)	SAN 420 J Ra (by v	
			Grams	<u>0Z.</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.

Treat stored grain 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 0.25 - 1.50 lb. per 100 gallons of water for control of listed insects on this labely the second s

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

#### 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

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, the insect problem, 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. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ
 φ

 φ</

SAIS