



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 7, 2021

Ana Koster
Global Regulatory Affairs Manger
Certis USA, LLC
9145 Guilford Road
Suite 175
Columbia, MD 21046

Subject: Labeling Notification per Pesticide Registration Notice (PRN) 98-10 – Add Optional Graphics and Non-FIFRA Related Optional Statement
Product Name: CX-9032
EPA Registration Number: 70051-107
Application Date: 02/23/2021
OPP Action Code Case Number: 00292691

Dear Ms. Koster:

The U.S. Environmental Protection Agency (EPA) is in receipt of your application for notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped “Notification” and will be placed in our records. You must submit one (1) copy of the final printed labeling with the modifications.

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 the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the 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 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.

If you have any questions, please contact me by phone at (703) 347-0305 or via email at boukedes.alexandra@epa.gov.

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Sincerely,

A handwritten signature in cursive script that reads "Alexandra Boukedes".

Alexandra Boukedes, Risk Manager
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

MASTER LABEL
SUBLABEL A: Agricultural Use

CX-9032

BIOFUNGICIDE

(Alternate Brand Names: Amylo-X® AS, Double Nickel® LC, Amylo-X®SC,
Amylo-X® LC, Double Tap 55)

Aqueous Suspension Biofungicide/Bactericide



FOR ORGANIC PRODUCTION



Active Ingredient:

Bacillus amyloliquefaciens strain D747* 98.85 %

Other Ingredients..... 1.15%

Total 100.00%

*Contains a minimum of 1×10^{10} colony-forming units (cfu) per milliliter of product

KEEP OUT OF REACH OF CHILDREN

See [Inside][Side] [Panel][Panels] for [Additional] [Precautionary Statements], [Direction for Use], [and] [Storage and Disposal]

MANUFACTURED BY:

Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046



EPA Reg. No. 70051-107
EPA Est. No. 70051-CA-1

Lot Number:

Net Contents:

NOTIFICATION

70051-107

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

04/07/2021

PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Mixer/loaders and applicators must wear a NIOSH approved particulate filter with any N, R, 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 the 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.

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 170.607 (d), (e), and (f)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticides get 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.
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

For Terrestrial Uses: Do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift or runoff from treated areas.

PRODUCT INFORMATION

CX-9032 is a broad-spectrum preventative biofungicide/bactericide for control or suppression of fungal and bacterial plant diseases. The active ingredient of CX-9032 is a strain (D747) of the beneficial bacterium *Bacillus amyloliquefaciens*. CX-9032 also colonizes plant root hairs, preventing establishment of disease-causing fungi and bacteria.

CX-9032 can be applied alone or in combination and/or rotation with chemical fungicides as a tool for integrated disease management in agricultural crops, ornamental and nursery plants, and turfgrass. CX-9032 offers a valuable tool for management of resistance to chemical fungicides through its multiple and unique modes of action.

CX-9032 can be applied up to and including the day of harvest.

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 State or Tribal agency responsible for pesticide regulation.

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.

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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: coveralls, chemical resistant gloves (made of any waterproof material), shoes plus socks.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

MIXING AND HANDLING INSTRUCTIONS

Mix the required amount of CX-9032 in water with sufficient agitation to maintain a uniform suspension in the spray or mixing tank. Tank should be cleaned prior to use. Do not use highly alkaline or highly acidic water to mix sprays. Use a buffering agent if necessary to maintain

neutrality (pH 6 to 8) of water in the tank. Maintain agitation during application. Apply immediately after mixing; do not allow spray mix to stand overnight.

CX-9032 can be mixed and used with other agricultural chemicals for which such mixing is permitted by the product labels, in accordance with the most restrictive of those label limitations and precautions. If such a mixture is planned, a compatibility “jar test” should first be conducted by mixing the correct proportions of CX-9032 and these products in a small volume of water.

APPLICATION METHODS

Ground: CX-9032 can be applied in most commonly-used ground application equipment, such as (but not limited to): tractor-mounted boom, airblast, high clearance, hose-end, backpack, and other pressurized sprayers; hose-end or hand-held sprayers; foggers or mist blowers; water wheel and other drench applicators; and shank or other soil injection method.

Aerial: CX-9032 can be applied by fixed or rotary winged aircraft in a minimum of 3 gallons of water per acre. Standard precautions should be taken to minimize spray drift.

Chemigation: CX-9032 can be applied through drip (trickle) and sprinkler-type irrigation equipment. Refer to the section entitled “Chemigation Instructions” for detailed instructions.

Agricultural Crops

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
Vegetables and Melons		
Brassica Leafy Vegetables such as broccoli, cabbage, cauliflower, brussel sprouts, kohlrabi and other cole crops, mustard and collard greens, kale, bok choy and related crops (including those grown for seed production).	Pin rot complex (<i>Alternaria/Xanthomonas</i>)† Leaf spots (<i>Alternaria</i> spp., <i>Xanthomonas</i> spp.) Downy mildew (<i>Peronospora</i> spp.) Powdery mildew (<i>Erysiphe polygoni</i>)	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Phytophthora</i> , or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Bulb Vegetables such as onions, garlic, shallot, and others. (including those grown for seed production).	<i>Botrytis</i> spp. (neck rot, leaf blight) Purple blotch (<i>Alternaria</i> spp.) Downy mildew (<i>Peronospora</i> spp.) Powdery mildew (<i>Erysiphe</i> spp.) Rust (<i>Puccinia porii</i>)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Phytophthora</i> , or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
<p>Cucurbit Vegetables such as cucumber, squash (all types), cantaloupe, muskmelon, watermelon, and other melons (including those grown for seed production).</p>	<p>Powdery mildew (<i>Erysiphe</i> and <i>Sphaerotheca</i> spp.) Downy mildew (<i>Pseudoperonospora</i> spp.) Gummy stem blight (<i>Didymella bryoniae</i> and <i>Phoma cucurbitacearum</i>)</p>	
	<p>Vine decline (<i>Monosporascus cannonballus</i>) ** Charcoal rot (<i>Macrophomina phaseoli</i>)** “Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, or <i>Verticillium</i>† spp.</p>	<p>See instructions for “Soil application.” ** Not for use in California. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
<p>Fruiting Vegetables such as tomato, pepper, eggplant, tomatillo, okra, and others. (including those grown for seed production).</p>	<p>Bacterial spot (<i>Xanthomonas</i> spp.)†‡ Bacterial speck (<i>Pseudomonas syringae</i> pv. <i>tomato</i>)† ‡ Gray mold (<i>Botrytis cinerea</i>) Powdery mildew† (<i>Leveillula</i>, <i>Oidiopsis</i>, <i>Erysiphe</i>, and <i>Sphaerotheca</i> spp.) Early blight (<i>Alternaria solani</i>)† Late blight (<i>Phytophthora infestans</i>)†</p>	<p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. ‡ Tank mix or rotate with copper-based fungicides at label rates for improved control.</p>
	<p>“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, or <i>Verticillium</i>† spp. Southern blight (<i>Sclerotium rolfsii</i>)†**</p>	<p>See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. ** Not for use in California.</p>
<p>Leafy Vegetables (Except Brassica Vegetables) such as head and leaf lettuce, celery, spinach, radicchio, arugula, watercress, and others, including those grown for seed production.</p>	<p>Downy mildew (<i>Bremia lactucae</i>, <i>Peronospora</i> spp.)† Powdery mildew (<i>Golovinomyces (Erysiphe) cichoracearum</i>)† Bacterial blights Leaf spots (<i>Cercospora</i> spp.) <i>Botrytis</i> spp. Rusts (<i>Puccinia</i> spp.)</p>	<p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
	<p>Head and leaf drop (<i>Sclerotinia</i> spp.) Pink rot (<i>Sclerotinia sclerotiorum</i>) White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.</p>
	<p>“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, or <i>Verticillium</i>† spp. Bottom rot (<i>Rhizoctonia solani</i>)</p>	<p>See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
<p>Legume Vegetables (Succulent or Dried) succulent and dried beans and peas such</p>	<p>Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Microsphaera diffusa</i>) Rusts†, including <i>Uromyces appendiculatus</i>, <i>Puccinia</i> spp., and Asian soybean rust (<i>Phyospora pachyrhizi</i>)</p>	<p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
<p>as green, snap, shell, and Lima bean, garbanzo bean, chickpea, soybean, dry bean, pea, split pea, lentil, and other legumes, including those grown for seed production.</p>	<p>White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.</p>
	<p>“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, or <i>Verticillium</i>† spp.</p>	<p>See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
<p>Root, Tuber, and Corm Vegetables such as potato, sweet potato, carrot, cassava, beet, ginger, radish, horseradish, ginseng, turnip, and other root, tuber and corm crops. (including those grown for seed production).</p>	<p>Black root/crown rot (<i>Alternaria</i> spp.) Bacterial leaf blight (<i>Xanthomonas campestris</i>) Downy mildew (<i>Peronospora</i> spp.) Powdery mildew (<i>Erysiphe</i> spp.) Gray mold (<i>Botrytis</i> spp.) Black leg /bacterial soft rot (<i>Erwinia carotovora</i>)** Early blight (<i>Alternaria solani</i>)† Late blight (<i>Phytophthora infestans</i>)†</p>	<p>** Not for use in California. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
	<p>White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.</p>
	<p>Black scurf (<i>Rhizoctonia solani</i>) Cavity spot (<i>Pythium</i> spp.) “Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, or <i>Verticillium</i>† spp.</p>	<p>See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. For treatment of horseradish roots immediately before transplanting: immerse bare roots (individually or in bunches) for 10 seconds in a suspension of 1 to 2 pints CX-9032 per gallon of water.</p>
<p>Other Vegetables such as asparagus, peanut</p>	<p>White mold (<i>Sclerotinia sclerotiorum</i>)</p>	<p>Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.</p>

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
	<i>Botrytis</i> spp. Rusts (<i>Puccinia</i> spp.) Leaf spots (<i>Cercospora</i> and <i>Cercosporidium</i> spp.)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Phytophthora</i> , or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Tree Fruits and Nuts		
Citrus Fruit such as orange, lemon, lime, grapefruit, tangerine (mandarin), tangelo, pummelo, and other citrus	Greasy spot (<i>Mycosphaerella citri</i>)†	Apply at first new foliar flush and repeat with each new flush. Tank mix with spray oil or copper based fungicide at listed rates. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Citrus canker (<i>Xanthomonas campestris</i> pv. <i>citri</i>)‡	‡ Tank mix or rotate with copper-based fungicides at label rates for improved control.
	Scab (<i>Elsinoe fawcetti</i>)†	Start applications at first new foliage flush and repeat at petal fall and when fruit are ½ inch in diameter. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Postbloom fruit drop (<i>Colletotrichum acutatum</i>)† <i>Alternaria</i> leaf spot (<i>Alternaria alternata</i>) Melanose (<i>Diaporthe citri</i>)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Root and collar rots† caused by <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , <i>Rhizoctonia</i> , <i>Armillaria</i>	See instructions for “Root diseases” and “Collar rots.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Pome Fruit such as apple, pear, crabapple, quince, and others	Powdery mildew (<i>Podosphaera leucotricha</i>)	Make first application at or before tight cluster if conditions favor disease development. Repeat at 7-10 day intervals through the second cover spray or longer on susceptible varieties or if environmental conditions favor rapid disease development.
	Flyspeck (<i>Zygophiala jamaicensis</i>)** Sooty blotch disease complex** Brooks spot (<i>Mycosphaerella pomi</i>)** Bot rot/white rot (<i>Botryosphaeria dothidea</i>)** Bitter rot (<i>Colletotrichum</i> spp.) Cedar apple rust (<i>Gymnosporangium juniperi-virginianae</i>)**	Begin applications before bloom when environmental conditions favor disease development, repeating at 7 to 14 day intervals or as needed. Control may be enhanced by addition of a surfactant to improve spray coverage. Use only surfactants known to be safe for use on the crop and for which such use is allowed. ** Not for use in California.

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
	Fire blight (<i>Erwinia amylovora</i>)†	Rotate with antibiotics registered for fire blight control for improved performance. Begin applications at 1-5% open blossoms and repeat every 3-7 days as necessary until petal fall, when intervals can be increased to 7 days. CX-9032 can also be used in summer “cover spray” applications to control the shoot blight phase of fire blight and summer diseases. Can be mixed with copper fungicides to improve control. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Scab (<i>Venturia</i> spp.)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Root and collar rots† caused by <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , <i>Rhizoctonia</i> , <i>Armillaria</i>	See instructions for “Root diseases” and “Collar rots.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Stone Fruit such as apricot, cherry, nectarine, peach, plum, prune, prunus hybrids (such as pluot, aprium, plumcot) and others	Powdery mildew (<i>Sphaerotheca</i> and <i>Podosphaera</i> spp.)†	Make first application at popcorn stage and repeat every 7 days. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Bacterial canker (<i>Pseudomonas</i> spp.) Peach leaf curl (<i>Taphrina deformans</i>)	
	Brown rot blossom blight (<i>Monilinia laxa</i>)	Start applying at early bloom stage and repeat every 7 days through petal fall.
	Brown rot (<i>Monilinia fructicola</i>)†	Pre-harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Gray mold (<i>Botrytis cinerea</i>)	Pre-harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections.
	Bacterial leaf spot (<i>Xanthomonas arbuticola</i> pv. <i>pruni</i>)‡ Rusty spot (<i>Podosphaera leucotricha</i>)‡	‡ Tank mix or rotate with copper-based fungicides at label rates for improved control.
	Root and collar rots† caused by <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , <i>Rhizoctonia</i> , <i>Armillaria</i>	See instructions for “Root diseases” and “Collar rots.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Tree Nuts such as almond, pistachio, pecan, walnut, filbert, hazelnut, chestnut,	Walnut blight (<i>Xanthomonas campestris</i>)	Begin applications at or before pistillate bloom, repeating every 7-10 days. Apply before rainfall if possible, and tank mix or rotate with a copper-based bactericide registered for such use for improved control.

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
macadamia, and other tree nuts.	Anthracnose (<i>Colletotrichum acutatum</i>)† Shot hole (<i>Wilsonomyces carpophilus</i>) † Brown rot (<i>Monilinia</i> spp.)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Bacterial canker (<i>Pseudomonas syringae</i>)	
	Pecan scab (<i>Cladosporium caryigenum</i>)†‡**	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. ‡ Tank mix or rotate with copper-based fungicides at label rates for improved control. ** Not for use in California.
	Root and collar rots† caused by <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , <i>Rhizoctonia</i> , <i>Armillaria</i>	See instructions for “Root diseases” and “Collar rots.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Pomegranates	Leaf and fruit spots (<i>Cercospora</i> , <i>Gloeosporium</i> and <i>Pestalotia</i> spp.)‡	‡ Tank mix or rotate with copper-based fungicides at label rates for improved control.
	Fruit rots (<i>Alternaria</i> , <i>Botrytis</i> , and other spp.)	Pre-harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections.
	Powdery mildew (<i>Sphaerotheca pannosa</i>)	
	Root and collar rots† caused by <i>Phytophthora</i> , <i>Pythium</i> , <i>Fusarium</i> , <i>Rhizoctonia</i> , <i>Armillaria</i>	See instructions for “Root diseases” and “Collar rots.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Other Fruits		
Strawberry	Powdery mildew (<i>Sphaerotheca macularis</i> , <i>Erysiphe</i> spp.)†	Start applications at or just before flowering and repeat every 7-10 days as needed through harvest. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Gray mold (<i>Botrytis cinerea</i>)†	Begin applications at or before pistillate bloom, repeating every 7-10 days. Apply before rainfall if possible, and tank mix or rotate with a copper-based bactericide registered for such use for improved control. † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Anthracnose (<i>Colletotrichum acutatum</i>)	
	Angular leaf spot (<i>Xanthomonas fragariae</i>)‡	‡ Tank mix or rotate with copper-based fungicides at label rates for improved control.
	“Damping off” and root or crown diseases caused by <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Pythium</i> , <i>Phytophthora</i> , and/or <i>Verticillium</i> † spp. Charcoal rot (<i>Macrophomina phaseolina</i>)**	See instructions for “Soil application” and “Root dip.” For treatment of roots immediately before transplanting: immerse bare roots (individually

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
		<p>or in bunches) for 10 seconds in a suspension of 1 or 2 pints of CX-9032 per gallon of water.</p> <p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p> <p>** Not for use in California.</p>
<p>Berries such as blueberry, blackberry, raspberry, loganberry, huckleberry, kiwifruit, gooseberry, elderberry, cranberry (non-flooded fields), currant, and other berries. Excludes strawberries.</p>	<p>Mummy berry (<i>Monilinia vaccinii-corymbosi</i>)†</p>	<p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
	<p>Botrytis blight (<i>Botrytis cinerea</i>)</p>	
	<p>Sclerotinia (<i>Sclerotinia sclerotiorum</i>)</p>	
	<p>Bacterial canker (<i>Pseudomonas</i> spp.)</p>	<p>Apply before fall rains and again during dormancy before spring growth.</p>
<p>Grapes such as wine grapes, table grapes, and raisins</p>	<p>Powdery mildew (<i>Erysiphe</i> (formerly <i>Uncinula</i>) <i>necator</i>)</p>	<p>Start applications when new shoots are ½ to 1½ inches long. Repeat at 3-5 inches, 8-10 inches, and then at 7-10 day intervals until disease conditions no longer exist.</p>
	<p>Gray mold (<i>Botrytis cinerea</i>) Sour rot complex</p>	<p>Apply at bloom, before bunch closure, at veraison, and before harvest.</p>
	<p>Downy mildew (<i>Plasmopara viticola</i>)†</p>	<p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
	<p>Phomopsis (<i>Phomopsis viticola</i>)</p>	<p>Apply when shoots are ½ to 1 inch long and again when 6-8 inches long.</p>
	<p>Eutypa (<i>Eutypa lata</i>)</p>	<p>Mix 2 fluid ounces CX-9032 per gallon of water and apply to pruning wounds.</p>
	<p>Root and collar rots† caused by <i>Phytophthora</i>, <i>Pythium</i>, <i>Fusarium</i>, <i>Rhizoctonia</i>, <i>Armillaria</i></p>	<p>See instructions for “Root diseases” and “Collar rots.”</p> <p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
<p>Tropical and Subtropical Fruit, Inedible Peel such as avocado, mango, papaya, pineapple, banana, plantain, and others.</p>	<p>Anthracnose (<i>Colletotrichum</i> spp.) Scab (<i>Sphaceloma perseae</i>) Bacterial canker (<i>Xanthomonas campestris</i>)</p>	<p>For avocado and mango: Apply at budbreak and repeat on 14-21 day interval as needed through harvest.</p> <p>For papaya and pineapple: Apply at flowering and repeat on 14-21 day interval as needed through harvest.</p>
	<p>Sigatoka (<i>Mycosphaerella fijiensis</i>)</p>	<p>Apply at first appearance of leaves and repeat at 7-21 day intervals as needed, in sufficient water to obtain thorough coverage of foliage. Tank mix with spray oil or other registered fungicides for improved control.</p>
	<p>Root and collar rots† caused by <i>Phytophthora</i>, <i>Pythium</i>, <i>Fusarium</i>, <i>Rhizoctonia</i>, <i>Armillaria</i></p>	<p>See instructions for “Root diseases” and “Collar rots.”</p> <p>† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.</p>
<p>Other Crops</p>		

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
Herbs and Spices such as basil, thyme, coriander, dill, cilantro, parsley, mint, and others.	Powdery mildews (<i>Oidium</i> spp. and others) Bacterial diseases (<i>Erwinia</i> , <i>Xanthomonas</i> , and <i>Pseudomonas</i> spp.) Rusts (<i>Puccinia</i> spp. and others)	
	Downy mildews (<i>Peronospora</i> spp. and others)† Leaf spots (<i>Alternaria</i> , <i>Septoria</i> , <i>Colletotrichum</i> , and <i>Cercospora</i> spp.)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	“Damping off” and root or crown diseases caused by <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Pythium</i> , <i>Phytophthora</i> , and/or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Coffee	Coffee berry disease (<i>Colletotrichum coffeanum</i>)‡ Coffee rust (<i>Hemileia vastatrix</i>)‡**	‡ Tank mix or rotate with copper-based fungicides at label rates for improved control. ** Not for use in California.
	Anthracnose (<i>Colletotrichum</i> spp.) <i>Botrytis</i> flower blight <i>Cercospora</i> leaf spot** and berry blotch**	** Not for use in California.
	“Damping off” and root or crown diseases caused by <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Pythium</i> , <i>Phytophthora</i> , and/or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Tobacco	Angular leaf spot (<i>Pseudomonas</i> spp.) Anthracnose (<i>Colletotrichum</i> and <i>Glomerella</i> spp.) Blue mold or downy mildew (<i>Peronospora</i> spp.)† Brown spot (<i>Alternaria</i>) Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Erysiphe cichoracearum</i>) Target spot (<i>Rhizoctonia solani</i>)	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	Barn spot/ frog-eye leaf spot (<i>Cercospora nicotianae</i>)	Pre-harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections.
	Collar rot (<i>Sclerotinia sclerotiorum</i>)	Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.
Corn	“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Olpidium</i> , <i>Phytophthora</i> , or <i>Verticillium</i> † spp. Charcoal rot (<i>Macrophomina phaseolina</i>) Black root rot (<i>Thielaviopsis basicola</i>) Black shank (<i>Phytophthora</i> spp.)† Southern blight/southern stem rot (<i>Sclerotium rolfsii</i>)†	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
including field corn, sweet corn, popcorn, silage corn, seed corn, and other corn crops.	Southern leaf blight (<i>Bipolaris maydis</i> / <i>Cochliobolus heterostrophus</i> / <i>Helminthosporium maydis</i>) Rusts (<i>Puccinia</i> spp.)	
	Leaf spots (<i>Cercospora</i> and <i>Cercosporidium</i> spp.)† Common rust (<i>Puccinia sorghi</i>)†	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
	White mold (<i>Sclerotinia sclerotiorum</i>)	Apply at or immediately following planting (but before plant emergence) as a banded seedline treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.
	“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i> , <i>Phytophthora</i> , or <i>Verticillium</i> † spp.	See instructions for “Soil application.” † Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use.
Cereal Grains** such as barley, millet, oats, rice, rye, sorghum, triticale, wheat, and other cereal grain crops (including those grown for seed).	Powdery mildew (<i>Erysiphe graminis</i>) Rust (<i>Puccinia</i> spp.)† Rice blast (<i>Pyricularia oryzae</i>) Sheath spot/blight (<i>Rhizoctonia</i> and <i>Thanatephorus</i> spp.) Smut (<i>Tilletia barclayana</i>) Bacterial blight/streak (<i>Xanthomonas</i> spp.) Stem rots (<i>Magnaporthe</i> and <i>Sclerotium</i> spp.) <i>Cercospora</i> leaf spot Brown rot/leaf spots/smuts (<i>Ceratobasidium</i> , <i>Cochliobolus</i> , <i>Dreschlera</i> , and <i>Entyloma</i> spp.)	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. ** Not for use in California.
Oilseed Crops** such as canola, castor, coconut, cotton, flax, oil palm, olive, peanut, rapeseed, safflower, sesame, sunflower, soybeans, and other oilseed crops, including those grown for seed production.	White mold/Stem rot (<i>Sclerotinia sclerotiorum</i>) Rusts†, including <i>Uromyces appendiculatus</i> , <i>Puccinia</i> spp., and Asian soybean rust (<i>Phayospora pachyrhizi</i>) Bacterial Speck (<i>Pseudomonas syringae</i> pv. <i>glycinea</i>) Bacterial Pustule (<i>Xanthomonas</i> spp.) Brown Spot (<i>Septoria glycines</i>) <i>Cercospora</i> Leaf Spot Pod and Stem Blights (<i>Diaporthe</i> and <i>Phomopsis</i> spp.) Downy Mildew (<i>Peronospora mansherica</i>)	† Suppression only. For improved control, mix or rotate with chemical fungicide approved for such use. ** Not for use in California.
Mint	Rust (<i>Puccinia</i> spp.)	

CROPS	DISEASES/PATHOGENS	ADDITIONAL INFORMATION
Hops	Powdery mildew (<i>Sphaerotheca macularis</i>)	Mix 6 to 10 fluid ounces CX-9032 per 100 gallons of water and apply in minimum of 20 gallons per acre from emergence to training, 50 gallons per acre from training to wire, and 100 gallons per acre from wire touch through harvest.
Sugar beets** including crops grown for seed production	Leaf spots (<i>Cercospora</i> and <i>Ramularia</i> spp.) Powdery mildew (<i>Erysiphe</i> spp.) Rust (<i>Uromyces betae</i>)	** Not for use in California.
Hemp	<p>Anthracnose (<i>Colletotrichum</i> spp.) Brown blight (<i>Alternaria alternata</i>) Brown leaf spot and stem canker (<i>Ascochyta</i> spp.) Gray mold (<i>Botrytis cinerea</i>) Hemp leaf spot (<i>Bipolaris</i> sp.) Powdery mildew (<i>Leveillula</i> and <i>Sphaerotheca</i> spp.) White leaf spot (<i>Phomopsis ganjae</i>) Yellow leaf spot (<i>Septoria</i> spp.) Olive leaf spot (<i>Cercospora cannabis</i>) Stemphylium leaf and stem spot (<i>Stemphylium botryosum</i>) Bacterial blight (<i>Pseudomonas cannabina</i>) Xanthomonas leaf spot (<i>Xanthomonas campestris</i>)</p> <p>“Damping off,” seedling blights, and root or crown diseases caused by <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Fusarium</i>, <i>Phytophthora</i>, <i>Botrytis</i>, <i>Verticillium</i> spp. Charcoal rot (<i>Macrophomina phaseolina</i>) Fusarium wilt, foot rot, stem canker (<i>Fusarium</i> spp.) Hemp canker (<i>Sclerotinia sclerotiorum</i>) Southern blight/southern stem blight (<i>Sclerotium rolfsii</i>) Verticillium wilt (<i>Verticillium</i> spp.)</p>	See instructions for “Soil application.”

APPLICATION INSTRUCTIONS:

For root diseases: Apply 1 to 2 quarts of CX-9032 per acre as a banded soil spray or drench, or as chemigated injection via microsprinkler, drip (elevated, buried or ground-lay) or other irrigation systems. Apply in sufficient water or irrigate immediately after application to move the product to the root zone. Begin applications in early spring, timed for root flush and early shoot growth. Continue applications at 4-6 week intervals through fall root flush.

For collar rots: Apply as drench or spray at the base of the trunk, covering the soil contact zone.

Foliar application: For control of diseases on foliage, flowers, fruit, or other above-ground parts of plants: Mix CX-9032 in water and apply as a spray at a rate of **0.5 to 6 quarts** of CX-

9032 per acre in sufficient water to achieve thorough coverage of the crop canopy with minimal runoff. Begin applications at crop emergence, transplanting, or when conditions are conducive to development of disease. Repeat application every 3 to 10 days as needed, for as long as conditions favor disease development. Lower rates (0.5 to 3 quarts per acre) may be applied under light disease pressure, to smaller (e.g. newly-emerged) plants, or when CX-9032 is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (3-6 quarts/acre), apply more frequently (every 3-7 days), and mix or rotate CX-9032 with other fungicides for improved performance.

Soil application: For control of soil-borne diseases infecting seeds, seedlings, roots, crown, stems, or other plant parts below ground or in contact with soil: Apply CX-9032 at **0.5 to 4.5 pints per acre**. Mix the required amount in sufficient water to apply by one of the following methods:

- Soil drench applied to transplants in flats or pots in the greenhouse or nursery any time prior to transplanting (see additional drench instructions under “Nurseries, greenhouses, shade houses, and ornamental plants” below).
- Soil drench at transplanting, using a “water wheel” injector, spray nozzles/hoses, or other method to drench each root ball and/or planting hole.
- Soil or seedline drench, or banded spray (in-furrow) at planting. See the section on “Banded (in-furrow) application” below for additional instructions.

Follow-up (post-planting) preventative applications can be made every 2-4 weeks by one or more of the following methods, if needed:

- Drip (trickle) or any type of sprinkler irrigation, any time after planting or transplanting. See Chemigation Instructions for additional information.
- Spray directly onto the soil surface and/or lower plant parts. If targeting root disease, follow immediately with sufficient overhead sprinkler irrigation to move CX-9032 to the root zone.
- Injection directly into the rooting zone using shanks or similar equipment.

Lower rates (0.5 to 2 pints of CX-9032 per acre) may be applied under light disease pressure, to smaller plants, or when CX-9032 is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (2 - 4.5 pints per acre), apply more frequently (every 2 weeks), and mix or rotate CX-9032 with other fungicides for improved performance.

Banded (in-furrow) application: Use the table below (rate CX-9032 per acre) to determine the correct application rate in fluid ounces per 1,000 row feet based on row spacing and desired rate per acre. Mix the required amount of CX-9032 in water and apply as banded spray (4” to 6” wide) or seedline drench centered over the planting furrow. Apply directly over seeds in the furrow just before they are covered with soil. The volume of water required per acre or per 1,000 row feet will depend on the application equipment used. Consult your local cooperative extension service if you need assistance calibrating band spraying equipment.

Rates for banded (in-furrow) application: Find desired application rate of CX-9032 per acre in the left column. Read across that line to the correct row spacing indicated at the top to find the number of fluid ounces per 1,000 row feet that will provide the desired application rate per acre.

CX-9032 rate/acre		Space between rows (inches)														
Pints	fl oz	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
0.5	8	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
0.75	12	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9
1.0	16	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2
1.25	20	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.5
1.5	24	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8
1.75	28	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1
2.0	32	0.7	0.9	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.4
2.25	36	0.8	1.0	1.1	1.2	1.4	1.5	1.7	1.8	1.9	2.1	2.2	2.3	2.5	2.6	2.8
2.5	40	0.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.8	2.9	3.1
2.75	44	1.0	1.2	1.3	1.5	1.7	1.9	2.0	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.4
3.0	48	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.5	3.7
3.25	52	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
3.5	56	1.3	1.5	1.7	1.9	2.1	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.9	4.1	4.3
3.75	60	1.4	1.6	1.8	2.1	2.3	2.5	2.8	3.0	3.2	3.4	3.7	3.9	4.1	4.4	4.6
4.0	64	1.5	1.7	2.0	2.2	2.4	2.7	2.9	3.2	3.4	3.7	3.9	4.2	4.4	4.7	4.9
4.25	68	1.6	1.8	2.1	2.3	2.6	2.9	3.1	3.4	3.6	3.9	4.2	4.4	4.7	4.9	5.2
4.5	72	1.7	1.9	2.2	2.5	2.8	3.0	3.3	3.6	3.9	4.1	4.4	4.7	5.0	5.2	5.5

Nurseries, greenhouses, shadehouses, and ornamental plants

Spray application: Mix **0.5 to 6 quarts of CX-9032 per 100 gallons of water** and apply as a foliar spray of sufficient volume to wet the entire plant with minimal runoff. Begin preventative applications at plant emergence and repeat every 3-28 days as needed (every 3-7 days if disease pressure is high or environmental conditions are highly favorable to disease outbreak, 10-28 days under low pressure or less conducive conditions).

Drench application: Mix **0.5 to 4.5 pints of CX-9032 per 100 gallons of water** and apply as a drench or coarse spray to soil or other growing media in pots, flats, plugs, trays, or planting beds, for control or suppression of soil-borne diseases of seedlings, cuttings, bedding plants, and transplants (including vegetables and other transplanted food crops). Make first application at or immediately before seeding, sticking, germination, or transplanting. Repeat applications every 14-28 days as needed. Transplants can be treated immediately before transplanting into field soils to protect against damping-off and other diseases that reduce plant establishment.

Cutting or root dip: Dip basal end of cuttings or bare roots (individually or in bunches) in a suspension of **1 to 2 pints of CX-9032 per gallon of water**. Immerse for 5-10 seconds immediately before planting.

Chemigation: Mix **0.5 to 4.5 pints of CX-9032 per 100 gallons of water** and apply via drip, handheld, or sprinkler irrigation systems. Refer to “Chemigation Instructions” for more details.

CROPS/USE SITES	DISEASES/PATHOGENS
Indoor, outdoor, and shade- or other cover-grown ornamental trees and shrubs, flowering plants, foliage plants, tropical plants, potted plants, potted or cut flowers, bedding plants, forestry seedlings, conifer production for reforestation, fruit trees, vegetables and other crops grown in greenhouses or nurseries, or other cover, interiorscapes, and landscapes	Powdery mildews caused by <i>Erysiphe</i> , <i>Podosphaera</i> , <i>Sphaerotheca</i> , <i>Oidium</i> , and <i>Golovinomyces</i> spp. Anthracnose (<i>Colletotrichum</i> spp.) Bacterial leaf spots caused by <i>Erwinia</i> , <i>Pseudomonas</i> , and <i>Xanthomonas</i> spp. Damping-off disease (<i>Rhizoctonia</i> , <i>Pythium</i> , <i>Fusarium</i> spp.) Late blight, blackeye, and root rots caused by <i>Phytophthora</i> spp. Gray mold and blight caused by <i>Botrytis cinerea</i> Black root rot (<i>Aspergillus</i> spp.) Black spot of roses (<i>Diplocarpon rosae</i>) Downy mildew (<i>Peronospora</i> spp.) Leaf spots caused by <i>Alternaria</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Entomosporium</i> , <i>Helminthosporium</i> , and <i>Myrothecium</i> spp.) Rust (<i>Puccinia</i> spp.) Scab (<i>Venturia</i> spp.) Root rot, bottom rot, or stem rot caused by <i>Rhizoctonia solani</i> <i>Sclerotinia</i> blight <i>Fusarium</i> wilts

Turfgrass application

For control of foliar diseases, apply CX-9032 at **1 to 4 fluid ounces per 1,000 square feet** as a ground-directed spray in sufficient water to provide thorough coverage. To control root and crown diseases in or on the soil, immediately follow the spray with sufficient overhead sprinkler irrigation to move the product into the root zone.

USE SITES/CROPS	DISEASES/PATHOGENS
Turf, sod, lawns, golf course (fairways, roughs, greens, tees), grass seed production Including but not limited to: Bluegrass, Bentgrass, Bermudagrass (common & hybrid), Dichondra, Fescue, Orchardgrass, <i>Poa annua</i> , St. Augustine grass, Ryegrass, <i>Zoysia</i> , mixtures, and other grasses or ornamental turf	Anthracnose (<i>Colletotrichum graminicola</i>) Brown patch (<i>Rhizoctonia solani</i>) Dollar spot (<i>Lanzia</i> and <i>Moellerodiscus</i> spp., formerly <i>Sclerotinia homeocarpa</i>) Powdery mildew (<i>Erysiphe graminis</i>) Rust (<i>Puccinia</i> spp.) Gray leaf spot (<i>Pyricularia grisea</i>) “Damping off” or seedling blights caused by <i>Pythium</i>

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

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

Container Handling:

-for containers equal to or less than 5 gallons-

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

-for containers greater than 5 gallons-

Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

-for 250 gal. and 5000 gal. refillable containers-

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When empty, return to point of sale or to the manufacturer.

CHEMIGATION INSTRUCTIONS

General information:

1. Apply this product only through drip (trickle) irrigation (including micro-irrigation through spaghetti tubes or individual tubes) or sprinkler irrigation (including impact or microsprinklers, microjet, overhead boom, water gun, solid set, lateral move, end tow, side-roll, center pivot, or hand move, including mist-type systems); or with hand-held calibrated irrigation equipment (such as a hand-held wand with injector). Do not apply this product through any other type of irrigation system.
2. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
3. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
4. 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 systems are in place.
5. 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.

Public water system chemigation

Public water system means a system for the provision to the public of piped water for 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.

1. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
3. 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.
4. 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.
5. 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.
6. Do not apply when wind speed favors drift beyond the area intended for treatment.

7. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and flush with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.
8. 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. Application should be continuous in sufficient water to apply the specified rate evenly to the entire treated area.

Drip (trickle) and micro-irrigation chemigation

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. 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 to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

Sprinkler chemigation:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system

interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. 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 to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

WARRANTY

Certis USA LLC warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purpose referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease problem, condition of the crop, incompatibility with other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, 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.

MASTER LABEL



SUBLABEL B: Residential Use

CX-9032

BIOFUNGICIDE

(Alternate Brand Names: Amylo-X® AS, Double Nickel® LC, Amylo-X®SC, Amylo-X® LC, Double Tap 55)

Aqueous Suspension Biofungicide/Bactericide for control of plant diseases in and around homes and home gardens: [indoor] houseplants, tropical plants, vegetables, ornamental and fruit trees, shrubs, lawns, flowers, bedding plants, and [[indoor] [and/or] [outdoor]] potted ornamental plants
[Foliar Spray or Soil Drench]



FOR ORGANIC GARDENING



[FOR ORGANIC GARDENING AND ORGANIC LAWN CARE]

Active Ingredient:

Bacillus amyloliquifaciens strain D747* 98.85 %

Other Ingredients..... 1.15 %

Total 100.00%

*Contains a minimum of 1×10^{10} colony-forming units (cfu) per milliliter of product

KEEP OUT OF REACH OF CHILDREN

See [Inside][Side] [Panel][Panels] for [Direction for Use] [and] [Storage and Disposal]

MANUFACTURED BY:

Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046



EPA Reg. No. 70051-107
EPA Est. No. 70051-CA-1

Lot Number:

Net Contents:

ENVIRONMENTAL HAZARDS:

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PRODUCT INFORMATION

CX-9032 is a broad-spectrum preventative biofungicide/bactericide for control or suppression of fungal and bacterial plant diseases. The active ingredient of CX-9032 is a strain (D747) of the beneficial bacterium *Bacillus amyloliquefaciens*. CX-9032 also colonizes plant root hairs, preventing establishment of disease-causing fungi and bacteria.

DIRECTIONS FOR USE

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

MIXING INSTRUCTIONS:

CX-9032 must be mixed with water and applied as a spray to fruit, [flowers], and/or foliage, or as a drench to plant roots. See below for specific mix rate information.

APPLICATION RATES AND METHODS:

Spray application: For control of powdery mildews, leaf spots, anthracnose, gray mold, and other diseases affecting leaves, flowers, fruit, and other above-ground plant parts of [indoor] [and/or] [outdoor] potted plants [and/or] home garden [plants] {or} [[vegetables,] [[ornamental] [and/or] [fruit] [and/or] [nut] trees,]] [tropical plants,] [shrubs,] [flowers,] [and] [bedding plants]]: Mix 1 teaspoon of CX-9032 per gallon of water and apply directly to plants using a hand pump sprayer or other suitable spray equipment. Spray just enough to wet all leaves and fruit with minimal run-off or dripping. Total coverage depends on the size of plants to be sprayed and the type of sprayer used. Repeat as needed to maintain disease control, typically every 7-10 days. If disease is prevalent or environmental conditions such as high humidity favor disease outbreak, increase the mixing rate to 1 tablespoon per gallon and shorten the interval between sprays to every 3-7 days.

Drench application: For control of diseases affecting plant roots, tubers, or other parts of plants in contact with soil in the home and home garden: Mix 1 teaspoon of CX-9032 per gallon of water and apply to the soil by one of the following methods:

For potted plants (indoors or outdoors):

- Apply in sufficient water to wet the entire root mass using a watering can or tank-fed watering wand. Do not water plants again until 24 hours after application. Alternatively, use a hand-pump or other sprayer to spray the mixture on the soil surface in each pot, then immediately apply sufficient water to move the product into the roots.
- Drench the roots of transplants with approx. 4 fluid ounces of the mixture immediately before transplanting into pots or garden soil. Allow to soak into the root ball before transplanting.

For outdoor-grown plants:

- Use a watering can or sprayer to drench the soil in the planting furrow or transplant hole immediately before planting or transplanting. The amount of water required will depend on the size of the hole or length of furrow.
- Alternatively, apply in the first watering after planting or transplanting, either by mixing directly into the water at the rate indicated above, or by spraying onto the soil surface at the base of each plant and immediately watering in with a watering can, hose, sprinkler, or other watering device.

CX-9032 can be applied up to and including the day of harvest.

For application to lawns and other grass areas: Mix 1 teaspoon of CX-9032 per gallon of water and apply as a fine spray to the surface of the lawn or grass area. Total amount of mix required will depend on the type of sprayer used and area to be covered, but typically 2 to 5 gallons of spray mix may be required per 1,000 square feet of lawn. CX-9032 can be “watered in” for control of soilborne root and crown diseases by thorough watering immediately after application either with sprinklers or by spraying just before or during light rain.

STORAGE AND DISPOSAL

PESTICIDE STORAGE:

Keep in original container. Store away from direct sunlight, feed, or foodstuffs.
Keep container tightly sealed when not in use.

PESTICIDE DISPOSAL AND CONTAINER HANDLING

Non-refillable container. Do not reuse or refill container.

{For retail containers less than or equal to 5 gallons}

If empty: Place in trash or offer for recycling, if available.

If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

Optional Language for Attaching Container to a Garden Hose

See Attachments

OPTION 1

Hose-End Spray Instructions

The sprayer attached to the container is ready-to-use. Simply attach to your garden hose and follow these instructions:

1. Ensure the large, round “on/off” knob is set to OFF.
2. Turn on Water.
3. PUSH IN small knob near front of sprayer. This allows water and product to mix.
4. Hold sprayer and container level and point towards area to be sprayed.
5. Turn large, round “on/off” knob to ON.
6. Begin spraying product evenly over area you wish to treat.
7. Spray until visibly wet.
8. To stop spraying, turn large, round knob to OFF.
9. PULL OUT small knob near front of sprayer. This prevents product from mixing with water.
10. Turn off water at faucet. Relieve water pressure in the hose by turning large, round “on/off” knob ON until water pressure is reduced.
11. Turn the knob to OFF for storage of unused product and/or disposal of empty container.

NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 2

HOW TO USE

Make sure water control knob on hose sprayer is in the “OFF” position. Hold by handle and shake vigorously, turning bottle as you shake. Attach the hose to spray nozzle. Blend safety tab back and break off. Turn control to “WATER” position. Slowly turn on water supply to moderate rate of flow. Point nozzle toward spray area, turn control knob to “ON”. Product will automatically mix with water. Slowly sweep the area to be treated. To stop spraying, turn control valve to the “OFF” position. Turn off water at faucet. To relieve pressure, turn control valve to the “WATER” position pointing sprayer away from self. Remove from hose.

NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 3

TWIST & SHOOT™ READY TO SPRAY INSTRUCTIONS

1. Make sure control knob is in “OFF” position, then connect to garden hose.
2. Turn water on at faucet. When spraying low growing plants and small shrubs, twist the control knob right, to the “FAN” position. When spraying taller trees, shrubs and other plants, twist the control knob left to the “STREAM” position for extended reach and more uniform coverage. The product mixes automatically with the water as you spray.
3. To stop spraying turn the control knob lever to the “OFF” position. Turn off the water at the faucet and disconnect sprayer from garden hose.

NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 4

Ready-To-Spray Instructions

For Outdoor Use Only

Double Knob Sprayer Instructions

The sprayer attached to the container is ready-to-use. Simply attach to the garden hose and follow these simple instructions:

1. Ensure the large “ON/OFF” knob is set to OFF
2. Turn on water.
3. Rotate the small, star-shaped product control knob align the flat portion of the knob with the vertical portion of the lock tab and PUSH IN the knob to open. This allows product to mix with water
4. Hold sprayer and container level and point towards area to be sprayed.
5. Turn large, round “ON/OFF” knob forward (away from you) to ON.
6. Begin spraying the product evenly over the area you wish to treat.
7. To stop spraying, turn large, round “ON/OFF” knob backward (toward you) to OFF.
8. PULL OUT and rotate the small, star-shaped product control knob. This prevents product from mixing with water.
9. Turn off water at the faucet. Relieve water pressure in the hose by turning large round “ON/OFF” knob to ON until water pressure is reduced.
10. Turn the knob to OFF for storage or unused product and/or disposal of empty container.

Single Knob Sprayer Instructions

The sprayer attached to the container is ready-to-use. Simply attach to the garden hose and follow these instructions:

1. Turn on water.
2. Hold sprayer and container level and point towards area to be sprayed.

3. Bend yellow tab back and turn knob backward (toward you) to ON.
4. Begin spraying product evenly over area you wish to treat.
5. To stop spraying, turn knob forward (away from you) to OFF.
6. Turn off water.

Properly store unused product or dispose of empty container.

NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 5

USING THE READY SPRAY NOZZLE

1. *Shake container well before using*
2. Connect a garden hose to the Ready Spray nozzle. Make sure the dial on the nozzle is in the "OFF" position with the safety tab in the valve notch.
3. Turn on water at faucet. Extend hose to the farthest area to be treated and work back toward the faucet so you don't come in contact with the treated area.
4. To BEGIN spraying, point nozzle toward treatment site and a) bend safety tab back (located at right of dial) with your thumb and b.) hold while turning the dial clockwise until it stops. Water will automatically mix with the product.
5. Spray until wet to control insects. Walk at a steady pace while spraying using an even sweeping motion, slightly overlapping treated areas.
6. To STOP spraying, QUICKLY turn the dial counterclockwise until it stops and the safety tab engages into the notch in the valve. Turn water off at faucet. To relieve pressure before removing nozzle from hose, bend the safety tab back and turn dial "ON" until water stops spraying.
7. To STORE unused product, make sure the dial is in the "OFF" position with the safety tab in the valve notch. Place in a cool area away from heat, sunlight or open flame.

NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 6

READY-TO-USE DIRECTIONS FOR OUTDOORS ONLY

HOW TO USE THE READY-TO-USE SPRAY SYSTEM

Connect

1. Shake well before using.
2. Connect Sprayer to hose.
3. Turn on water.

Spray

1. To begin spraying, point nozzle in the direction you want to spray.
2. [Bend small plastic tab back and] Turn knob [clockwise] to ON position.

3. Spray evenly to the area to be treated. Refer to the [sight gauge] clear view strip (graduated scale) on the side of the container to determine the amount of product sprayed.

Finish

1. To stop spraying, [turn knob counter clockwise] to OFF position.
2. Turn off water.
3. Relieve water pressure by [bending plastic tab back and] turning knob to ON position until water slows to a drip. Then turn knob back to OFF position.

Disconnect sprayer from hose.

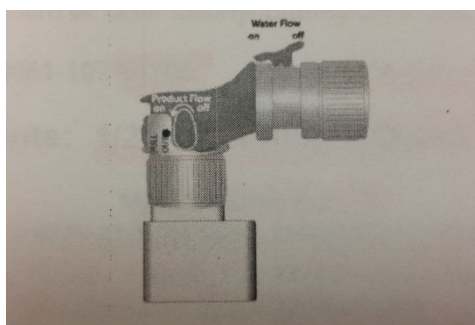
NOTE: This product is non-staining to most home siding depending on age and cleanliness. However, before using in areas where the spray may contact home siding (vinyl siding in particular), test in an inconspicuous area and recheck in a few hours. Do not use if any staining is observed.

OPTION 7

Hose-End Sprayer Instructions:

The sprayer attached to the container is ready-to-use. Simply attach to your garden hose and follow these instructions:

1. Before you start, the blue top water flow valve should be in the “OFF” position, and the red product flow valve should be in the up, “OFF” position.
2. Shake container well and attach it to your garden hose.
3. Turn on the water from faucet.
4. To apply, remove side pin (labeled “PULL OUT”) and rotate red product flow valve to “ON”; then while holding the sprayer at waist level and pointing in a direction away from face and body, push blue water flow valve forward to activate water.
5. When you are finished spraying or if you have to stop spraying at any time, press blue water flow valve with thumb to the rear to shut off water and return side red valve to the upright “OFF” position and replace side pin.
6. Turn off water at the faucet.
7. Remove the container from the garden hose; then rinse thoroughly and store according to storage instructions.



Other Optional Application Instructions:

Product Information

CX-9032 is a broad-spectrum preventative biofungicide/bactericide for control or suppression of fungal and bacterial plant diseases on roses, vegetables, fruits, nuts, flowers, houseplants, foliage, trees, and shrubs in residential landscapes, home gardens, and residential greenhouses.

Application Instructions

Shake well before using. Spray leaves, stems, and new shoots to runoff, providing complete coverage of the entire plant. For best results, treat new plants before disease development or at the first visible signs of infection. Repeat at weekly intervals, or as needed. Spray interval may be shortened under conditions favorable to rapid disease development, such as high humidity, excessive rain, or other conditions of extreme moisture. Allow spray to dry at least 4 hours before watering if foliage will also be watered.

CX-9032 may be used on the following plants:

Vegetables, fruits, nuts, ornamental trees, shrubs, flowering plants, houseplants, and tropical plants grown in and around home gardens or home greenhouses.

Diseases controlled by CX-9032:

Anthracnose (*Colletotrichum* species)

Bacterial leaf blights, spots, and specks (*Erwinia*, *Pseudomonas*, and *Xanthomonas* species)

Black mold, brown spot, black crown rot (*Alternaria* species)

Black spot of roses (*Diplocarpon* species)

Gray mold, botrytis blight, fruit rot (*Botrytis* species)

Leaf spots (*Alternaria*, *Cercospora*, *Entomosporium*, *Helminthosporium*, *Myrothecium*, and *Septoria* species)

Powdery mildews (*Podosphaera*, *Erysiphe*, *Golovinomyces*, *Sphaerotheca* and *Oidium* species; *Uncinula necator*, *Oidiopsis taurica*, *Leveillula taurica*).

Diseases suppressed by CX-9032:

Downy Mildew (*Bremia lactucae*, *Pernospora* and *Plasmospora* species)

Early blight (*Alternaria solani*)

Late blight (*Phytophthora infestans*)

Fire blight (*Erwinia amylovora*)

Pin rot (*Alternaria/Xanthomonas* complex)

Scab (*Venturia* species)

{The following claims and product information may or may not be presented on the product's label or labeling:}

- Makes up to 48 gallons for gardens and landscapes
- For lawns, covers 9,000 to 24,000 sq. ft.
- Covers 5,000 sq. ft. or equivalent per 32 fl. oz. container size. (Covers 2,500 sq. ft. or equivalent per 16 fl. oz. container size)]
- Colonizes Roots
- Top to Bottom Disease Control* *(when used for both foliar and soil treatment)
- Triggers Plant Immune Response
- Provides Fungal and Bacterial Plant Protection
- As little as 1 tsp/gal* *(when used for lawns and other grass areas)
- For Indoor/Outdoor Use
- Spray & Drench applications for control of listed diseases affecting foliage, roots and tubers.
- May be used up to the day of harvest
- Controls listed [blights], [molds], [rots], [spots] and [mildews] on [Vegetables], [Fruits], [Nuts], [Ornamental Trees], [Shrubs], [Flowers], [Houseplants] and [Tropical Plants] [grown in and around the home].
- [Concentrate] makes up to [48] [96] [192] gallons
- Store and transport in an upright position.
- To the extent consistent with applicable law, buyers guarantee limited to label claims.
- Made in [America] {or} [the USA] {may be accompanied by an American flag graphic}
- Monterey® is a registered trademark of Brandt Consolidated, Inc.

{The following graphics may or may not be presented on the product's label or labeling:}



WARRANTY

Certis USA LLC warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purpose referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease problem, condition of the crop, incompatibility with other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, 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.

MASTER LABEL
SUBLABEL C: Seed Treatment

CX-9032

BIOFUNGICIDE

(Alternate Brand Names: Amylo-X® AS, Double Nickel® LC, Amylo-X® SC,
Amylo-X® LC, Double Tap 55)

Aqueous Suspension Biofungicide/Bactericide



FOR ORGANIC PRODUCTION



Active Ingredient:

Bacillus amyloliquefaciens strain D747* 98.85 %

Other Ingredients 1.15%

Total 100.00%

*Contains a minimum of 1×10^{10} colony-forming units (cfu) per milliliter of product

KEEP OUT OF REACH OF CHILDREN

See [Inside][Side] [Panel][Panels] for [Additional] [Precautionary Statements], [Direction for Use], [and] [Storage and Disposal]

MANUFACTURED BY:
Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046

EPA Reg. No. 70051-107
EPA Est. No. 70051-CA-1

Lot Number:



Net Contents:

PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

Mixer/loaders and applicators must wear a NIOSH approved particulate filter with any N, R, 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.

Workers involved with treating the seed (e.g. connecting and disconnecting hoses and transfer pumps, mixing, equipment calibration, etc.) and others exposed to the concentrate, and cleaners/repairers of seed treatment equipment must wear a long-sleeve shirt and long pants, shoes plus socks, chemical resistant gloves (made of any waterproof material), and a NIOSH approved particulate filter with any N, R, 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.

Baggers and bag sewers must wear a long-sleeve shirt and long pants, shoes plus socks.

Follow the 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.

When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.607 (d) and (e)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticides get 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.
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

For Terrestrial Uses: Do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift or runoff from treated areas.

PRODUCT INFORMATION

CX-9032 is a biological fungicide for seed treatment that provides early season protection of seedlings against “damping off” disease caused by *Rhizoctonia* and other pathogens. Seed should be sound and well-cured before treatment. Do not use CX-9032 in combination with other seed treatment products unless compatibility has been verified. Read and follow carefully all label directions of each combination product. When using combinations of products, the most restrictive of label limitations and precautions must be followed.

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 State or Tribal 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 intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

Seed Treatment Equipment:

CX-9032 may be used both for commercial and for on-farm application. It can be applied with mechanical, slurry, or mist-type seed treating equipment, as long as the equipment can be calibrated to accurately and uniformly apply the product to seed without undue mechanical damage to the seed. Uniform application to seed is important for all seed treatment products.

Seed should be sound and well-cured before treatment. Refer to the label rates below. CX-9032 is typically diluted with water and/or mixed with other products to attain an appropriate slurry application volume per hundredweight (cwt., or 100 pounds) of seed (fl.oz./cwt. slurry rates) to provide effective treating. The appropriate volume of slurry depends on crop, weather, type of treater and other factors and should be adjusted as per normal treating practices for the circumstances. Contact your local supplier or distributor representative for specific recommendations.

CX-9032 plus water and/or other treatments should be mixed thoroughly prior to treating seed. Recalibrate treating equipment to compensate for the required slurry rate to ensure all products are applied at the correct rate.

APPLICATION INSTRUCTIONS

CROP(S)	APPLICATION RATE
Wheat, barley, oats, rye and triticale	0.015-0.3 fl.oz/cwt
Millet, sorghum	0.15-3 fl.oz/cwt
Rice	0.015-0.3 fl.oz/cwt
Field Corn, Sweet Corn, Popcorn	0.04-0.4 fl.oz/seed unit (80,000 kernels) (Equivalent to 0.09-0.90 fl.oz/cwt at a seed weight of 1,800 seeds/pound)
Soybeans	0.07-0.7 fl.oz/seed unit (140,000 seeds) Equivalent to 0.15-1.5 fl.oz/cwt at a seed weight 2,979 seeds per pound.
Peanuts	0.01-0.3 fl.oz/cwt
Canola	0.5-12 fl.oz/cwt
Cotton	0.01-0.3 fl.oz/cwt
Sunflowers, safflower	0.01-0.3 fl.oz/cwt
Grass Seed: For turf, sod, lawns, golf course (fairways, roughs, greens, tees), and grass seed production including: Bluegrass, Bentgrass, Bermudagrass (common & hybrid), Dichondra, Fescue, Orchardgrass, <i>Poa annua</i> , St. Augustine grass, Ryegrass, Zoysia, mixtures, and other grasses or ornamental turf seed	0.15-3 fl.oz/cwt
Brassica Leavy Vegetables: Broccoli (<i>Brassica oleracea</i> var. <i>botrytis</i>); Broccoli, Chinese (gai lon) (<i>Brassica alboglabra</i>); Broccoli raab (rapini) (<i>Brassica campestris</i>); Brussels sprouts (<i>Brassica oleracea</i> var. <i>gemmifera</i>); Cabbage (<i>Brassica oleracea</i>); Cabbage, Chinese (bok choy) (<i>Brassica chinensis</i>); Cabbage, Chinese (napa) (<i>Brassica pekinensis</i>); Cabbage, Chinese mustard (gai choy) (<i>Brassica campestris</i>); Cauliflower (<i>Brassica oleracea</i> var. <i>botrytis</i>); Cavalo broccolo (<i>Brassica oleracea</i> var. <i>botrytis</i>); Collards (<i>Brassica oleracea</i> var. <i>acephala</i>); Kale (<i>Brassica oleracea</i> var. <i>acephala</i>); Kohlrabi (<i>Brassica oleracea</i> var. <i>gongylodes</i>); Mizuna (<i>Brassica rapa</i> Japonica Group); Mustard greens (<i>Brassica juncea</i>); Mustard spinach (<i>Brassica rapa</i> Pervirdis Group); Rape greens (<i>Brassica napus</i>)	0.01-0.4 fl.oz per 100,000 seeds

CROP(S)	APPLICATION RATE
<p>Bulb Vegetables: Chive, fresh leaves (<i>Allium schoenoprasum</i> L.); Chive, Chinese, fresh leaves (<i>Allium tuberosum</i> Rottler ex Spreng); Daylily, bulb (<i>Hemerocallis fulva</i> (L.) L. var. <i>fulva</i>); Elegans hosta (<i>Hosta sieboldiana</i> (Hook.) Engl); Fritillaria, bulb (<i>Fritillaria</i> L. fritillary); Fritillaria, leaves (<i>Fritillaria</i> L. fritillary); Garlic, bulb (<i>Allium sativum</i> L. var. <i>sativum</i>) (<i>A. sativum</i> Common Garlic Group); Garlic, great headed, bulb (<i>Allium ampeloprasum</i> L. var. <i>ampeloprasum</i>) (<i>A. ampeloprasum</i> Great Headed Garlic Group); Garlic, Serpent, bulb (<i>Allium sativum</i> var. <i>ophioscorodon</i> or <i>A. sativum</i> Ophioscorodon Group); Kurrat (<i>Allium kurrat</i> Schweinf. Ex. K. Krause or <i>A. ampeloprasum</i> Kurrat Group); Lady's leek (<i>Allium cernuum</i> Roth); Leek <i>Allium porrum</i> L. (syn: <i>A. ampeloprasum</i> L. var. <i>porrum</i> (L.) J. Gay) (<i>A. ampeloprasum</i> Leek Group); Leek, wild (<i>Allium tricoccum</i> Aiton); Lily, bulb (<i>Lilium</i> spp. (<i>Lilium leichtlinii</i> var. <i>maximowiczii</i>, <i>Lilium lancifolium</i>)); Onion, Beltsville bunching (<i>Allium x proliferum</i> (Moench) Schrad.) (syn: <i>Allium fistulosum</i> L. x <i>A. cepa</i> L.); Onion, bulb (<i>Allium cepa</i> L. var. <i>cepa</i>) (<i>A. cepa</i> Common Onion Group); Onion, Chinese, bulb (<i>Allium chinense</i> G. Don.) (syn: <i>A. bakeri</i> Regel); Onion, fresh (<i>Allium fistulosum</i> L. var. <i>caespitosum</i> Makino); Onion, green (<i>Allium cepa</i> L. var. <i>cepa</i>) (<i>A. cepa</i> Common Onion Group); Onion, macrostem (<i>Allium macrostemom</i> Bunge); Onion, pearl (<i>Allium porrum</i> var. <i>sectivum</i> or <i>A. ampeloprasum</i> Pearl Onion Group); Onion, potato, bulb (<i>Allium cepa</i> L. var. <i>aggregatum</i> G. Don.) (<i>A. cepa</i> Aggregatum Group); Onion, Welsh, tops (<i>Allium fistulosum</i> L.); Shallot, bulb (<i>Allium cepa</i> var. <i>aggregatum</i> G. Don.); Shallot, fresh leaves (<i>Allium cepa</i> var. <i>aggregatum</i> G. Don.)</p>	<p>0.01-0.4 fl.oz per 100,000 seeds</p>
<p>Cucurbit Vegetables: Chayote (fruit) (<i>Sechium edule</i>); Chinese waxgourd (Chinese preserving melon) (<i>Benincasa hispida</i>); Citron melon (<i>Citrullus lanatus</i> var. <i>citroides</i>); Cucumber (<i>Cucumis sativus</i>); Gherkin (<i>Cucumis anguria</i>); Gourd, edible (<i>Lagenaria</i> spp.) (includes hyotan, cucuzza); (<i>Luffa acutangula</i>, <i>L. cylindrica</i>) (includes hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i>) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (<i>Cucurbita</i> spp.); Squash, summer (<i>Cucurbita pepo</i> var. <i>meloepo</i>) (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (<i>Cucurbita maxima</i>; <i>C. moschata</i>) (includes butternut squash, calabaza, hubbard squash); (<i>C. mixta</i>; <i>C. pepo</i>) (includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of <i>Citrullus lanatus</i>)</p>	<p>0.01-0.4 fl.oz per 100,000 seeds</p>
<p>Fruiting Vegetables: Eggplant (<i>Solanum melongena</i>); Groundcherry (<i>Physalis</i> spp.); Pepino (<i>Solanum muricatum</i>); Pepper (<i>Capsicum</i> spp.) (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); Tomatillo (<i>Physalis ixocarpa</i>); Tomato (<i>Solanum lycopersicum</i>, syn. <i>Lycopersicon esculentum</i>)</p>	<p>0.01-0.4 fl.oz per 100,000 seeds</p>
<p>Leafy Vegetables (Excluding Brassicas): Amaranth (leafy amaranth, Chinese spinach, tampala) (<i>Amaranthus</i> spp.); Arugula (Roquette) (<i>Eruca sativa</i>); Cardoon (<i>Cynara cardunculus</i>); Celery (<i>Apium graveolens</i> var. <i>dulce</i>); Celery, Chinese (<i>Apium graveolens</i> var. <i>secalinum</i>); Celtuce (<i>Lactuca sativa</i> var. <i>angustana</i>); Chervil (<i>Anthriscus cerefolium</i>); Chrysanthemum, edible-leaved (<i>Chrysanthemum coronarium</i> var. <i>coronarium</i>); Chrysanthemum, garland (<i>Chrysanthemum coronarium</i> var. <i>spatiosum</i>); Corn salad (<i>Valerianella locusta</i>); Cress, garden (<i>Lepidium sativum</i>); Cress, upland (yellow rocket, winter cress) (<i>Barbarea vulgaris</i>); Dandelion (<i>Taraxacum officinale</i>); Dock (sorrel) (<i>Rumex</i> spp.); Endive (escarole) (<i>Cichorium endivia</i>); Fennel, Florence (finochio) (<i>Foeniculum vulgare</i> Azoricum Group); Lettuce, head and leaf (<i>Lactuca sativa</i>); Orach (<i>Atriplex hortensis</i>); Parsley (<i>Petroselinum crispum</i>); Purslane, garden (<i>Portulaca oleracea</i>); Purslane, winter (<i>Montia perfoliata</i>); Radicchio (red chicory) (<i>Cichorium intybus</i>); Rhubarb (<i>Rheum rhabarbarum</i>); Spinach (<i>Spinacia oleracea</i>); Spinach, New Zealand (<i>Tetragonia tetragonioides</i>, <i>T. expansa</i>); Spinach, vine (Malabar spinach, Indian spinach) (<i>Basella alba</i>); Swiss chard (<i>Beta vulgaris</i> var. <i>cicla</i>)</p>	<p>0.01-0.4 fl.oz per 100,000 seeds</p>

CROP(S)	APPLICATION RATE
<p>Legume Vegetables (Dry and Succulent) Except Soybean and Rice: Bean (<i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); Bean (<i>Phaseolus</i> spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); Bean (<i>Vigna</i> spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); Broad bean (fava bean) (<i>Vicia faba</i>); Chickpea (garbanzo bean) (<i>Cicer arietinum</i>); Guar (<i>Cyamopsis tetragonoloba</i>); Jackbean (<i>Canavalia ensiformis</i>); Lablab bean (hyacinth bean) (<i>Lablab purpureus</i>); Lentil (<i>Lens esculenta</i>); Pea (<i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); Pigeon pea (<i>Cajanus cajan</i>); Soybean (immature seed) (<i>Glycine max</i>); Sword bean (<i>Canavalia gladiata</i>)</p>	<p>0.01-0.3 fl.oz/cwt</p>

Use higher rates when there is a history of heavy *Rhizoctonia* pressure in the field or for higher levels of protection.

TREATED SEED LABELING

Seed that has been treated with this product that is then packaged or bagged for future use must contain the following labeling on the outside of the seed package or bag:

"This bag contains seed treated with *Bacillus amyloliquefaciens* strain D747. Do not use for Food, Feed, or Oil Purposes. Store away from feed and food stuffs. Wear long pants, long-sleeved shirt, and protective gloves when handling treated seed."

USE RESTRICTIONS

Do not use treated seed for food, feed or oil purposes. Care must be exercised in the handling of treated seed. Augers used for handling treated seed should not be used to move seed for feed, food or oil processing. Do not re-use bags from treated seed to handle food or feed products.

Treatment of mechanically damaged seed or seed of low vigor or poor quality may result in reduced germination. Treat and conduct germination tests on a small test sample of seed before using this product on commercial quantities. Due to seed quality and seed storage conditions beyond the control of Certis USA LLC, Certis USA LLC makes no claims or guarantees as to germination of carry-over seed.

TO ENSURE UNIFORMITY, MIX PRODUCT WELL BEFORE USE

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

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

Container Handling:

-for containers equal to or less than 5 gallons-

Nonrefillable *container*. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

-for containers greater than 5 gallons-

Nonrefillable *container*. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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. To the extent consistent with applicable law, 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.