

70051-108

07/27/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, D C 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

JUL 27 2012

Christine A Dively
Certis USA
9145 Guiford Road
Suite 175
Columbia, MD 21046

RE Product Name Double Nickel 55
EPA Reg No 70051-108
Application for Notification request dated June 7, 2012 for Revision to add text "Not Approved for use in California" and "Hawaii only" for Specific Use sites

Dear Ms Dively

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

Questions concerning this action should be directed to Susanne Cerrelli (703) 308-8077 or email at cerrelli.susanne@epa.gov

Sincerely,

Alan Reynolds,
Acting Branch Chief
Microbial Pesticides Branch
Biopesticides and Pollution Prevention
Division (7511P)

CONCURRENCES

SYMBOL	7511P	7511P					
SURNAME	S Cerrelli	Reynolds					
DATE	7/26/12	7/26/12					



United States
Environmental Protection Agency
 Washington DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1 Company/Product Number 70051 108	2 EPA Product Manager A Reynolds	3 Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4 Company/Product (Name) Double Nickel 55	PM# Microbial Pesticides Branch	
5 Name and Address of Applicant (Include ZIP Code) Certis USA LLC 9145 Guilford Road Suite 175 Columbia MD 21046 <input type="checkbox"/> Check if this is a new address	6 Expedited Review In accordance with FIFRA Section 3(c)(3) (b)(i) my product is similar or identical in composition and labeling to EPA Reg No _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification Explain below	<input type="checkbox"/> Other Explain below

Explanation Use additional page(s) if necessary (For section I and Section II)
 Notification to revise certain pests with asterisks that indicate Not for Use in California per PR Notice 98 10
 See attached certification statement

Section - III

1 Material This Product Will Be Packaged In				2 Type of Container	
Child Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes" Unit Packaging wgt	No per container	<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Package wgt	No per container		
3 Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4 Size(s) Retail Container 5 lbs		5 Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6 Manner in Which Label is Affixed to Product				<input type="checkbox"/> Other _____	
<input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled					

Section - IV

1 Contact Point (Complete items directly below for identification of individual to be contacted if necessary to process this application)		
Name Christine A Dively	Title Director of Reg Affairs	Telephone No (Include Area Code) 301 483 3806
Certification I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law		6 Date Application Received _____ (Stamped)
2 Signature <i>Christine A Dively</i>	3 Title Director of Regulatory Affairs	
4 Typed Name Christine A Dively	5 Date June 7 2012	



Certis USA
9145 Guilford Road
Suite 175
Columbia, MD 21046

(301) 604-7340

Fax 301-604-7015
www.certisusa.com

Courier

June 7, 2012

Mr Alan Reynolds
Team Leader
Microbial Pesticides Branch
Biopesticides and Pollution Prevention Division
U S Environmental Protection Agency

Re Certis USA, L L C
Double Nickel 55 (EPA Registration No 70051-108)
Notification of Revised Pests Not Approved for Use in California
(per PR Notice 98-10)

On behalf of Certis USA, L L C (9145 Guilford Rd, Suite 175, Columbia, MD 21046), I am respectfully submitting the following documents to support a Notification to add asterisks to several pests, as requested by California DPR. These asterisks indicate that Double Nickel 55 (EPA Reg No 70051-108) is not approved for use on these pests in the state of California. In addition, the text "Hawaii only" has been added after the crop coffee. Please note that no other changes have been made to this label.

The following documents are enclosed

- EPA Form 8570-1, Application for Pesticide
- Certification Statement per PF Notice 98-10
- Copy of the EPA Stamped label
- Marked version of the amended label
- Clean copy of the amended label
- Self-addressed, stamped postcard to be returned upon Notification acceptance

Please do not hesitate to contact me if you have any questions about this submission. I can be reached by telephone at 301-483-3806, or by email at cdively@certisusa.com

Sincerely,

Christine A Dively
Director of Regulatory Affairs
Certis USA, L L C

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Double Nickel 55™

BIOFUNGICIDE

Water Dispersible Granular Biofungicide

FOR ORGANIC PRODUCTION



Active Ingredient

Bacillus amyloliquefaciens strain D747*

25.0%

Other Ingredients

75.0%

Total

100.0%

*Contains a minimum of 5×10¹⁰ colony forming units (cfu) per gram

EPA Reg No 70051-108
EPA Est No 70051-CA-001

Manufactured by Certis USA, L L C
9145 Guilford Rd , Suite 175
Columbia, MD 21046

NET WEIGHT 5 LBS Lot No

Notification Accepted

Date JUL 27 2012

Reviewer *Suzanne Crowell*

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID - Agricultural Use

IF IN EYES Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN Take off contaminated clothing. Rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product label with you when calling a poison control center or doctor. Hot Line No 1-800-255-3924 for additional information.

PRECAUTIONARY STATEMENTS - Agricultural Use

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

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

Mixer/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95 Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization Follow manufacturer’s instructions for cleaning and maintaining PPE If no instructions are available, use detergent and hot water for washables Keep and wash PPE separately from other laundry

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides, 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

ENVIRONMENTAL HAZARDS- Agricultural Use

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

GENERAL INFORMATION

DOUBLE NICKEL 55™ is a broad-spectrum preventative biofungicide for control or suppression of fungal and bacterial plant diseases The active ingredient of DOUBLE NICKEL 55™ is a naturally occurring strain (D747) of the beneficial rhizobacterium *Bacillus amyloliquefaciens*, which colonizes roots, leaves, and other plant surfaces D747 rapidly colonizes plant root hairs, leaves, and other surfaces, preventing establishment of disease-causing fungi and bacteria

DOUBLE NICKEL 55™ 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, in accordance with the most restrictive of those label limitations and precautions DOUBLE NICKEL 55™ offers a valuable tool for management of resistance to chemical fungicides through its multiple and unique modes of action

DOUBLE NICKEL 55™ 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 cover-alls, 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

MIXING AND HANDLING INSTRUCTIONS

Mix the required amount of DOUBLE NICKEL 55™ in cool 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

APPLICATION METHODS

Ground DOUBLE NICKEL 55™ can be applied in most commonly-used ground application equipment, such as 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 DOUBLE NICKEL 55™ 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 DOUBLE NICKEL 55™ 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 (See footnotes for additional information)
Vegetables and melons	
<p>Brassica vegetables such as broccoli cabbage cauliflower Brussels sprouts kohlrabi and other cole crops</p>	<p>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>) Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
<p>Bulb vegetables such as onions garlic shallots and others</p>	<p><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>)* Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
<p>Cucurbits such as cucumbers squash (all types) cantaloupes muskmelons watermelons and other melons</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>) See instructions below for Soil application against the following diseases 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 Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp</p>
<p>Fruiting vegetables such as tomatoes peppers eggplant tomatillo okra and others</p>	<p>Bacterial spot (<i>Xanthomonas</i> spp)*¹ Bacterial speck (<i>Pseudomonas syringae</i> pv <i>tomato</i>)*¹ Gray mold (<i>Botrytis cinerea</i>) Powdery mildew* (<i>Leveillula Oidiopsis Erysiphe</i> and <i>Sphaerotheca</i> spp) Early blight (<i>Alternaria solani</i>)* Late blight (<i>Phytophthora infestans</i>)* See instructions below for Soil application against the following diseases Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp Southern blight (<i>Sclerotium rolfsii</i>)* and**</p>
<p>Leafy vegetables such as head and leaf lettuce celery spinach radicchio arugula watercress and others (including leafy <i>Brassica</i> vegetables such as mustard and collard greens kale bok choi and related crops)</p>	<p>Downy mildew (<i>Bremia lactucae Peronospora</i> spp)* Powdery mildew (<i>Golovinomyces (Erysiphe) cichoracearum</i>)* Bacterial blights Head and leaf drop (<i>Sclerotinia</i> spp)² Pink rot (<i>Sclerotinia sclerotiorum</i>)² Leaf spots (<i>Cercospora</i> spp) See instructions below for Soil application against the following diseases Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp Bottom rot (<i>Rhizoctonia solani</i>)</p>
<p>Legume vegetables succulent and dried beans and peas such as green snap shell and Lima beans garbanzo beans chickpeas soybeans dry beans peas split peas lentils and other legumes</p>	<p>White mold (<i>Sclerotinia sclerotiorum</i>)² Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Microsphaera diffusa</i>) Rusts* including <i>Uromyces appendiculatus Puccinia</i> spp and Asian soybean rust (<i>Phayospora pachyrhizi</i>) Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
<p>Root, tuber, and corm vegetables such as potato sweet potato carrot cassava beets ginger radish horseradish²² ginseng turnip and other root tuber and corm crops</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) White mold (<i>Sclerotinia sclerotiorum</i>)² Black leg /bacterial soft rot (<i>Erwinia carotovora</i>)**</p>

	<p>Early blight (<i>Alternaria solani</i>)* Late blight (<i>Phytophthora infestans</i>)* See instructions below for Soil application against the following diseases 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 Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp</p>
<p>Other vegetables such as sweet corn popcorn asparagus peanut and watercress</p>	<p><i>Botrytis</i> spp Rusts (<i>Puccinia</i> spp) White mold (<i>Sclerotinia sclerotiorum</i>)² Leaf spots (<i>Cercospora</i> and <i>Cercosporidium</i> spp)* Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Phytophthora</i> or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
Tree fruits and nuts	
<p>Citrus such as orange lemon lime grapefruit tangerine (mandarin) tangelo pummelo and other citrus</p>	<p><i>Alternaria</i> leaf spot (<i>Alternaria alternata</i>) Postbloom fruit drop (<i>Colletotrichum acutatum</i>)* Greasy spot (<i>Mycosphaerella citri</i>)*³ Citrus canker (<i>Xanthomonas campestris</i> pv <i>citri</i>)¹ Scab (<i>Elsinoe fawcetti</i>)*⁴ Melanose (<i>Diaporthe citri</i>)*</p>
<p>Pome fruits such as apple pear crabapple quince and others</p>	<p>Powdery mildew (<i>Podosphaera leucotricha</i>)⁵ Scab (<i>Venturia</i> spp)* Flyspeck (<i>Zygothia jamaicensis</i>)^{6 **} Sooty blotch disease complex^{6 **} Brooks spot (<i>Mycosphaerella pomi</i>)^{6 **} Bot rot/white rot (<i>Botryosphaeria dothidea</i>)^{6 **} Bitter rot (<i>Colletotrichum</i> spp)⁶ Cedar apple rust (<i>Gymnosporangium juniperi virginianae</i>)^{6 **} Fire blight (<i>Erwinia amylovora</i>)⁷</p>
<p>Stone fruits such as apricot cherry nectarine peach plum prune pluot and others</p>	<p>Powdery mildew (<i>Sphaerotheca</i> and <i>Podosphaera</i> spp)*⁸ Bacterial canker (<i>Pseudomonas</i> spp) Brown rot blossom blight (<i>Monilinia laxa</i>)⁹ Brown rot (<i>Monilinia fructicola</i>)*¹⁰ Gray mold (<i>Botrytis cinerea</i>)¹⁰ Peach leaf curl (<i>Taphrina deformans</i>) Bacterial leaf spot (<i>Xanthomonas arbuticola</i> pv <i>pruni</i>)¹ Rusty spot (<i>Podosphaera leucotricha</i>)¹</p>
<p>Tree nuts such as almond pistachio pecan walnut filbert hazelnut chestnut macadamia, and other tree nuts</p>	<p>Walnut blight (<i>Xanthomonas campestris</i>)¹¹ Anthracnose (<i>Colletotrichum acutatum</i>)* Bacterial canker (<i>Pseudomonas syringae</i>) Shot hole (<i>Wilsonomyces carpophilus</i>)* Brown rot (<i>Monilinia</i> spp)* Pecan scab (<i>Cladosporium caryigenum</i>)*¹ and **</p>
<p>Pomegranates</p>	<p>Leaf and fruit spots (<i>Cercospora Gloeosporium</i> and <i>Pestalotia</i> spp)¹ Fruit rots (<i>Alternaria Botrytis</i> and other spp)¹⁰ Powdery mildew (<i>Sphaerotheca pannosa</i>)</p>
Other fruits	
<p>Strawberry</p>	<p>Powdery mildew (<i>Sphaerotheca macularis Erysiphe</i> spp)*¹² Gray mold (<i>Botrytis cinerea</i>)*¹¹ Anthracnose (<i>Colletotrichum acutatum</i>) Angular leaf spot (<i>Xanthomonas fragariae</i>)¹ For the following diseases see instructions below for Soil application (and also root dip instructions²²) Damping off and root or crown diseases caused by <i>Rhizoctonia Fusarium Pythium Phytophthora</i> and/or <i>Verticillium</i>* spp Charcoal rot (<i>Macrophomina phaseolina</i>)*^{**}</p>

<p>Berries, including blueberry blackberry raspberry loganberry huckleberry gooseberry elderberry cranberry (non flooded fields) currant and other berries</p>	<p>Mummy berry (<i>Monilinia vaccinii-corymbosi</i>)* Botrytis blight (<i>Botrytis cinerea</i>) Bacterial canker (<i>Pseudomonas</i> spp)¹³ Anthracnose fruit rot (<i>Colletotrichum acutatum</i>)¹⁰</p>
<p>Grapes including wine grapes table grapes and raisins</p>	<p>Powdery mildew (<i>Erysiphe</i> (formerly <i>Uncinula</i>) <i>necator</i>)¹⁴ Gray mold (<i>Botrytis cinerea</i>)¹⁵ Sour rot complex¹⁵ Downy mildew (<i>Plasmopara viticola</i>)* Phomopsis (<i>Phomopsis viticola</i>)¹⁶ Eutypa (<i>Eutypa lata</i>)¹⁷</p>
<p>Tropical fruits such as avocado¹⁸ mango¹⁸ papaya¹⁹ pineapple¹⁹ banana, plantain and others</p>	<p>Anthracnose (<i>Colletotrichum</i> spp) Scab (<i>Sphaceloma perseae</i>) Bacterial canker (<i>Xanthomonas campestris</i>) Sigatoka (<i>Mycosphaerella fijiensis</i>)²⁰</p>
<p>Other Crops</p>	
<p>Herbs and spices such as basil thyme coriander dill cilantro parsley mint and others</p>	<p>Powdery mildews (<i>Oidium</i> spp and others) Downy mildews (<i>Peronospora</i> spp and others)* Damping off diseases (<i>Rhizoctonia Pythium Alternaria</i> and <i>Fusarium</i> spp) Leaf spots (<i>Alternaria Septoria Colletotrichum</i> and <i>Cercospora</i> spp)* Bacterial diseases (<i>Erwinia Xanthomonas</i> and <i>Pseudomonas</i> spp) Rusts (<i>Puccinia</i> spp and others) Damping off and root or crown diseases caused by <i>Rhizoctonia Fusarium Pythium Phytophthora</i> and/or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
<p>Coffee (Hawaii only)</p>	<p>Coffee berry disease (<i>Colletotrichum coffeanum</i>)¹ Coffee rust (<i>Hemileia vastatrix</i>)¹ Anthracnose (<i>Colletotrichum</i> spp) <i>Botrytis</i> flower blight <i>Cercospora</i> leaf spot and berry blotch Damping off and root or crown diseases caused by <i>Rhizoctonia Fusarium Pythium Phytophthora</i> and/or <i>Verticillium</i>* spp (see instructions below for Soil application)</p>
<p>Tobacco</p>	<p>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>) Barn spot/ frog-eye leaf spot (<i>Cercospora nicotianae</i>)¹⁰ Collar rot (<i>Sclerotinia sclerotiorum</i>)² Gray mold (<i>Botrytis cinerea</i>) Powdery mildew (<i>Erysiphe cichoracearum</i>) Target spot (<i>Rhizoctonia solani</i>) See instructions below for Soil application against the following diseases Damping off seedling blights and root or crown diseases caused by <i>Pythium Rhizoctonia Fusarium Olpidium 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>)*</p>
<p>Mint</p>	<p>Rust (<i>Puccinia</i> spp)</p>
<p>Hops</p>	<p>Powdery mildew (<i>Sphaerotheca macularis</i>)²¹</p>

Footnotes

*Suppression only for improved control mix or rotate with chemical fungicide approved for such use ****NOT FOR USE IN CALIFORNIA**

- ¹ Tank mix or rotate with copper based fungicides at label rates for improved control
- ² 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.
- ³ For greasy spot suppression apply at first new foliar flush and repeat with each new flush. Tank mix with spray oil or copper based fungicide at labeled rates.
- ⁴ For suppression of citrus scab start applications at first new foliage flush and repeat at petal fall and when fruit are 1/2 inch in diameter.
- ⁵ 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.
- ⁶ 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.
- ⁷ 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. Double Nickel 55™ 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.
- ⁸ Make first application at popcorn stage and repeat every 7 days.
- ⁹ Start applying at early bloom stage and repeat every 7 days through petal fall.
- ¹⁰ Pre harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections.
- ¹¹ 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.
- ¹² Start applications at or just before flowering and repeat every 7-10 days as needed through harvest.
- ¹³ Apply before fall rains and again during dormancy before spring growth.
- ¹⁴ Start applications when new shoots are 1/2 to 1 1/2 inches long. Repeat at 3-5 inches, 8-10 inches and then at 7-10 day intervals until disease conditions no longer exist.
- ¹⁵ Apply at bloom before bunch closure at veraison and before harvest.
- ¹⁶ Apply when shoots are 1/2 to 1 inch long and again when 6-8 inches long.
- ¹⁷ Mix 2 fluid ounces Double Nickel 55™ per gallon of water and apply to pruning wounds.
- ¹⁸ Apply at budbreak and repeat on 14-21 day interval as needed through harvest.
- ¹⁹ Apply at flowering and repeat on 14-21 day interval as needed through harvest.
- ²⁰ 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.
- ²¹ Mix 6 to 10 fluid ounces Double Nickel 55™ 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.
- ²² For treatment of horseradish or strawberry roots immediately before transplanting immerse bare roots (individually or in bunches) for 10 seconds in a suspension of 1 to 2 pints Double Nickel 55™ per gallon of water.

Foliar application For control of diseases on foliage flowers fruit, or other above-ground parts of plants Mix DOUBLE NICKEL 55™ in water and apply as a spray at a rate of **0.25 to 3 pounds 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 7 to 10 days, or as needed, for as long as conditions favor disease development Lower rates (0.25 to 1 pound per acre) may be applied under light disease pressure, to smaller (e.g. newly-emerged) plants, or when DOUBLE NICKEL 55™ 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 (1 to 3 pounds per acre), apply more frequently (every 3 to 7 days), and mix or rotate DOUBLE NICKEL 55™ with other fungicides for improved performance

Soil application For control of soilborne diseases infecting seeds seedlings roots crown stems or other plant parts below ground or in contact with soil Apply DOUBLE NICKEL 55™ at **0.125 to 1 pound 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 DOUBLE NICKEL 55™ to the root zone
- Injection directly into the rooting zone using shanks or similar equipment

Lower rates (0.125 to 0.5 pounds per acre) may be applied under light disease pressure, to smaller plants, or when DOUBLE NICKEL 55™ 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 (0.5 to 1 pound per acre), apply more frequently (every 2 weeks), and mix or rotate DOUBLE NICKEL 55™ with other fungicides for improved performance

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Banded (in-furrow) application Use the table below to determine the correct application rate of DOUBLE NICKEL 55™ per 1,000 row feet, based on row spacing and desired rate per acre. Mix the required amount of DOUBLE NICKEL 55™ 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 in the left column. Read across that line to the correct row spacing indicated at the top to find the number of ounces (dry) per 1,000 row feet that will provide the desired application rate per acre. To convert to **level teaspoons**, multiply the number of ounces by 8.2. For **level tablespoons**, multiply the number of ounces by 2.75.

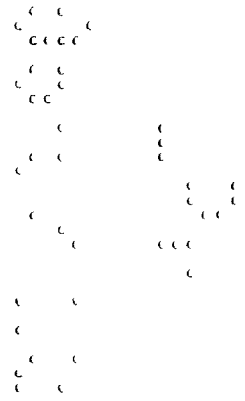
Rate/acre (pounds)	Space between rows (inches)														
	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
0.25	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6
0.75	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9
1.0	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	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	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	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	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	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	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	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	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

Nurseries, greenhouses, shadehouses, and ornamental plants

Spray application Mix 0.25 to 3 pounds of DOUBLE NICKEL 55™ 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 0.125 to 2 pounds of DOUBLE NICKEL 55™ 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 soilborne 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 pounds of DOUBLE NICKEL 55™ per gallon of water. Immerse for 5-10 seconds immediately before planting.



Chemigation Mix 0 125 to 2 pounds of **DOUBLE NICKEL 55™** 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	Powdery mildews caused by <i>Erysiphe Podosphaera Sphaerotheca Oidium</i> and <i>Golovinomyces</i> spp) Anthracnose (<i>Colletotrichum</i> spp) Bacterial leaf spots caused by <i>Erwinia Pseudomonas</i> and <i>Xanthomonas</i> spp Damping off disease (<i>Rhizoctonia Pythium 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 Septoria Cercospora Entomosporium 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 **DOUBLE NICKEL 55™** at **0.5 to 1 ounce 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 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 may be disposed of onsite or at an approved waste disposal facility

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

CHEMIGATION INSTRUCTIONS

General information

Apply this product only through drip (trickle) irrigation (including micro-irrigation through spaghetti tubes or individual tubes) or sprinkler irrigation (including impact or microsprinklers, overhead boom, 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

Crop injury or lack of effectiveness can result from non-uniform distribution of treated water

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise

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

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

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection

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

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

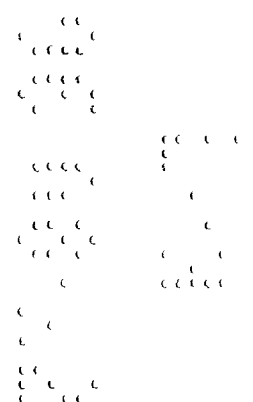
Systems must use a metering pump, such as a positive displacement injection pump (e g , diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock

Do not apply when wind speed favors drift beyond the area intended for treatment

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

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 L L C 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.