DoubleNickel55™

BIOFUNGICIDE

Water Dispersible Granular Biofungicide

FOR ORGANIC PRODUCTION

OMRI LISTED For Organic Use

Active Ingredient:
Bacillus amyloliquefaciens strain D747* 25.0%
Other Ingredients: 75.0%
Total 100.0%

*Contains a minimum of 5×10^{10} colony-forming units (cfu) per gram

Net Weight: 5 Pounds
EPA Reg. No. 70051-108
EPA Est. No. 70051-CA-001

Lot No:

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

CERTIS

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, 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	
Brassica vegetables such as broccoli, cabbage, cauliflower, Brussels sprouts, kohlrabi, and other cole crops (including those grown for seed production).	Pin rot complex *(Alternaria/Xanthomonas)** Leaf spots (*Alternaria* spp., *Xanthomonas* spp.) Downy mildew (*Peronospora* spp.) Powdery mildew (*Erisyphe polygoni*) "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. (see instructions below for "Soil application").

(continued)

CROPS	DISEASES/PATHOGENS (See footnotes for additional information)
Vegetables and melons *(continued)*	
Bulb vegetables such as onions, garlic, shallots, and others (including those grown for seed production).	*Botrytis* spp. (neck rot, leaf blight) Purple blotch (*Alternaria* spp.) Downy mildew (*Peronospora* spp.) Powdery mildew (*Erisyphe* spp.) Rust *(Puccinia pori)** White rot *(Sclerotium cepivorum)* "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. (see instructions below for "Soil application").
Cucurbits such as cucumbers, squash (all types), cantaloupes, muskmelons, watermelons. and other melons (including those grown for seed production).	Powdery mildew (*Erisyphe and Sphaerotheca* spp.) Downy mildew (*Pseudoperonospora* spp.) Gummy stem blight (*Didymella bryoniae* and *Phoma cucurbitacearum*) See instructions below for "Soil application" against the following diseases: Vine decline *(Monosporascus cannonballus)*** Charcoal rot *(Macrophomina phaseoli)*** "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp.
Fruiting vegetables such as tomatoes, peppers, eggplant, tomatillo, okra, and others (including those grown for seed production).	Bacterial spot (*Xanthomonas* spp.)*[1] Bacterial speck (*Pseudomonas syringae* pv. *tomato*)*[1] Gray mold *(Botrytis cinerea)* Powdery mildew* (*Leveillula, Oidiopsis, Erisyphe,* and *Sphaerotheca* spp.) Early blight *(Alternaria solani)** Late blight *(Phytophthora infestans)** See instructions below for "Soil application" against the following diseases: "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. Southern blight *(Sclerotium rolfsii)** and**
Leafy vegetables such as head and leaf lettuce, celery, spinach, radicchio, arugula, watercress, and others (including leafy Brassica vegetables such as mustard and collard greens, kale, bok choi, and related crops), including those grown for seed production.	Downy mildew (*Bremia lactucae, Peronospora* spp.)* Powdery mildew *(Golovinomyces (Erysiphe) cichoracearum)** Bacterial blights Head and leaf drop (*Sclerotinia* spp.)[2] Pink rot *(Sclerotinia sclerotiorum)*[2] Leaf spots (*Cercospora* spp.) See instructions below for "Soil application" against the following diseases: "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. Bottom rot (*Rhizoctonia solani*)
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, including those grown for seed production.	White mold *(Sclerotinia sclerotiorum)*[2] Gray mold *(Botrytis cinerea)* Powdery mildew *(Microsphaera diffusa)* Rusts*, including *Uromyces appendiculatus, Puccinia* spp., and Asian soybean rust *(Phayospora pachyrhizi)* "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. (see instructions below for "Soil application").

(continued)

CROPS	DISEASES/PATHOGENS (See footnotes for additional information)
Vegetables and melons *(continued)*	
Root, tuber, and corm vegetables such as potato, sweet potato, carrot, cassava, beets, ginger, radish, horseradish[22], ginseng, turnip, and other root, tuber and corm crops (including those grown for seed production).	Black root/crown rot (*Alternaria* spp.) Bacterial leaf blight *(Xanthomonas campestris)* Downy mildew (*Peronospora* spp.) Powdery mildew (*Erisyphe* spp.) Gray mold (*Botrytis* spp.) White mold *(Sclerotinia sclerotiorum)*[2] Black leg /bacterial soft rot *(Erwinia carotovora)*** Early blight *(Alternaria solani)** Late blight *(Phytophthora infestans)** See instructions below for "Soil application" against the following diseases: Black scurf *(Rhizoctonia solani)* Cavity spot (*Pythium* spp.) "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp.
Other vegetables such as sweet corn, popcorn, asparagus, peanut, and watercress	*Botrytis* spp. Rusts (*Puccinia* spp.) White mold *(Sclerotinia sclerotiorum)*[2] Leaf spots (*Cercospora* and *Cercosporidium* spp.)* "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Phytophthora,* or *Verticillium** spp. (see instructions below for "Soil application").
Tree fruits and nuts	
Citrus such as orange, lemon, lime, grapefruit, tangerine (mandarin), tangelo, pummelo, and other citrus	*Alternaria* leaf spot *(Alternaria alternata)* Postbloom fruit drop *(Colletotrichum acutatum)** Greasy spot *(Mycosphaerella citri)**[3] Citrus canker (*Xanthomonas campestris* pv. *citri*)[1] Scab *(Elsinoe fawcetti)**[4] Melanose *(Diaporthe citri)**
Pome fruits such as apple, pear, crabapple, quince, and others	Powdery mildew *(Podosphaera leucotricha)*[5] Scab (*Venturia* spp.)* Flyspeck *(Zygophiala jamaicensis)*[6]** Sooty blotch disease complex[6]** Brooks spot *(Mycosphaerella pomi)*[6]** Bot rot/white rot *(Botryosphaeria dothidea)*[6]** Bitter rot (*Colletotrichum* spp.)[6] Cedar apple rust *(Gymnosporangium juniperi-virginianae)*[6]** Fire blight *(Erwinia amylovora)**[7]
Stone fruits such as apricot, cherry, nectarine, peach, plum, prune, pluot, and others	Powdery mildew (*Sphaerotheca and Podosphaera* spp.)*[8] Bacterial canker (*Pseudomonas* spp.) Brown rot blossom blight *(Monilinia laxa)*[9] Brown rot *(Monilinia fructicola)**[10] Gray mold *(Botrytis cinerea)*[10] Peach leaf curl *(Taphrina deformans)* Bacterial leaf spot *(Xanthomonas arbicola* pv. *pruni)*[1] Rusty spot *(Podosphaera leucotricha)*[1]
Tree nuts such as almond, pistachio, pecan, walnut, filbert, hazelnut, chestnut, macadamia, and other tree nuts.	Walnut blight *(Xanthomonas campestris)*[11] Anthracnose *(Colletotrichum acutatum)** Bacterial canker *(Pseudomonas syringae)* Shot hole *(Wilsonomyces carpophilus)** Brown rot (*Monilinia* spp.)* Pecan scab *(Cladosprium caryigenum)**[1] and**
Pomegranates	Leaf and fruit spots (*Cercospora, Gloeosporium* and *Pestalotia* spp.)[1] Fruit rots (*Alternaria, Botrytis,* and other spp.)[10] Powdery mildew *(Sphaerotheca pannosa)*

CROPS	DISEASES/PATHOGENS (See footnotes for additional information)
Other fruits	
Strawberry	Powdery mildew *(Sphaerotheca macularis, Erisyphe spp.)**[12] Gray mold *(Botrytis cinerea)**[11] Anthracnose *(Colletotrichum acutatum)* Angular leaf spot *(Xanthomonas fragariae)*[1] For the following diseases, see instructions below for "Soil application" (and also root dip instructions[22]): "Damping off" and root or crown diseases caused by *Rhizoctonia, Fusarium, Pythium, Phytophthora,* and/or *Verticillium** spp. Charcoal rot *(Macrophomina phaseolina)***
Berries, including blueberry, blackberry, raspberry, loganberry, huckleberry, kiwifruit, gooseberry, elderberry, cranberry (non-flooded fields), currant, and other berries	Mummy berry *(Monilinia vaccinii-corymbosi)** Botrytis blight *(Botrytis cinerea)* Bacterial canker (*Pseudomonas* spp.)[13] Anthracnose fruit rot *(Colletotrichum acutatum)*[10] Sclerotinia *(Sclerotinia sclerotiorum)*
Grapes including wine grapes, table grapes, and raisins	Powdery mildew *(Erisyphe* (formerly *Uncinula*) *necator)*[14] Gray mold *(Botrytis cinerea)*[15] Sour rot complex[15] Downy mildew *(Plasmopara viticola)** Phomopsis *(Phomopsis viticola)*[16] Eutypa *(Eutypa lata)*[17]
Tropical fruits such as avocado[18], mango[18], papaya[19], pineapple[19], banana, plantain, and others.	Anthracnose (*Colletotrichum* spp.) Scab *(Sphaceloma perseae)* Bacterial canker *(Xanthomonas campestris)* Sigatoka *(Mycosphaerella fijiensis)*[20]
Other Crops	
Herbs and spices such as basil, thyme, coriander, dill, cilantro, parsley, mint, and others (including those grown for seed production).	Powdery mildews (*Oidium* spp. and others) Downy mildews (*Peronospora* spp. and others)* Damping off diseases (*Rhizoctonia, Pythium, Alternaria,* and *Fusarium* spp.) Leaf spots (*Alternaria, Septoria, Colletotrichum,* and *Cercospora* spp.)* Bacterial diseases (*Erwinia, Xanthomonas,* and *Pseudomonas* spp.) Rusts (*Puccinia* spp. and others) "Damping off" and root or crown diseases caused by *Rhizoctonia, Fusarium, Pythium, Phytophthora,* and/or *Verticillium** spp. (see instructions below for "Soil application").
Coffee	Coffee berry disease *(Colletotrichum coffeanum)*[1] Coffee rust** *(Hemileia vastatrix)*[1] Anthracnose (*Colletotrichum* spp.) *Botrytis* flower blight *Cercospora* leaf spot** and berry blotch** "Damping off" and root or crown diseases caused by *Rhizoctonia, Fusarium, Pythium, Phytophthora,* and/or *Verticillium** spp. (see instructions below for "Soil application").

(continued)

CROPS	DISEASES/PATHOGENS (See footnotes for additional information)
Other Crops *(continued)*	
Tobacco	Angular leaf spot (*Pseudomonas* spp.) Anthracnose (*Colletotrichum* and *Glomerella* spp.) Blue mold or downy mildew (*Peronospora* spp.)* Brown spot *(Alternaria)* Barn spot/ frogeye leaf spot *(Cerrcospora nicotianae)*[10] Collar rot *(Sclerotinia slcerotiorum)*[2] Gray mold *(Botrytis cinerea)* Powdery mildew *(Erysiphe cichoracearum)* Target spot *(Rhizoctonia solani)* See instructions below for "Soil application" against the following diseases: "Damping off," seedling blights, and root or crown diseases caused by *Pythium, Rhizoctonia, Fusarium, Olpidium, Phytophthora,* or *Verticillium** spp. Charcoal rot *(Macrophomina phaseolina)* Black root rot *(Thielaviopsis basicola)* Black shank (*Phytophthora* spp.)* Southern blight/southern stem rot *(Sclerotium rolfsii)**
Corn, including field corn, sweet corn, popcorn, sileage corn, seed corn, and other corn crops.	Commmon rust *(Puccinia sorghi)** Southern leaf blight *(Bipolaris maydis/Cochliobolus heterostrophus/ Helminthosporium maydis)*
**** Cereal grains,** such as barley, millet, oats, rice, rye, sorghum, triticale, wheat, and other cereal grain crops (including those grown for seed).	Powdery mildew *(Erysiphe graminis)* Rust (*Puccinia* spp.)* Rice blast *(Pyricularia oryzae)* Sheath spot/blight (*Rhizoctonia* and *Thanatephorus* spp.) Smut *(Tilletia barclayana)* Bacterial blight/streak (*Xanthomonas* spp.) Stem rots (*Magnaporthe* and *Sclerotium* spp.) *Cercospora* leaf spot Brown rot/leaf spots/smuts *(Ceratobasidium, Cochliobolus, Dreschlera,* and *Entyloma* spp.)
**** Oilseed crops,** including 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 *(Sclerotinia sclerotiorum)* Rusts*, including *Uromyces appendiculatus, Puccinia* spp., and Asian soybean rust *(Phayospora pachyrhizi)* Bacterial Speck (*Pseudomonas syringae* pv.*glycinea*) Bacterial Pustule (*Xanthamonas* spp.) Brown Spot *(Septoria glycines)* Cercospora Leaf Spot Pod and Stem Blights (*Diaporthe* and *Phomopsis* spp.) Downy Mildew *(Peronospora mansherica)*
Mint	Rust (*Puccinia* spp.)
Hops	Powdery mildew *(Sphaerotheca macularis)*[21]
**** Sugar beets** (including crops grown for seed production).	Leaf spots (*Cercospora* and *Ramularia* spp.) Powdery mildew (*Erysiphe* spp.) Rust *(Uromyces betae)*

(continued)

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 ½ 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 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.

[15] Apply at bloom, before bunch closure, at veraison, and before harvest.

[16] Apply when shoots are ½ to 1 inch long and again when 6-8 inches long.

[17] Mix 1 ounce 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 0.5-1 lb 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 2-4 ounces 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 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.

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

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.

032414

PROOF

THIS PROOF IS TO BE CHECKED FOR ACCURACY

Please review and approve **Text, Spelling, Copy Placement, Size, Shape, Colors** and **Dieline.**

Authorized signature accepts responsibility for accuracy of all copy, color break and artwork. Cimarron Label is not liable for any discrepancies subsequently identified.

PLEASE NOTE: Due to color variance between printers/monitors, the colors represented by this proof cannot be deemed accurate. Please refer to a color matching system such as the Pantone Matching System for a truer representation of spot colors.

THIS PROOF IS NOT ACCURATE FOR COLOR-MATCH.

Dieline does not print.

Cimarron Label
Experts in Extended Text Labeling

4201 North Westport Ave. • Sioux Falls, SD 57107
Phone: (605) 978-0451 • Fax: (605) 978-0463

DATE	JOB NUMBER
9/23/16	120436
CUSTOMER	**LABEL SIZE**
Certis	11" x 8.5"

LABEL COLORS

PATTERN VARNISH: ☐ YES ☒ NO

Form: CS 006P - 11/8/2011

☑ ***ARTWORK IS APPROVED*** ☐ ***REVISED PROOF NEEDED***

Signed Ron DeWald

Date 9/29/2016

WE CANNOT PROCESS THIS ORDER WITHOUT AN AUTHORIZED SIGNATURE