

PEST OR DISEASE SUPPRESSION

General Information

GENERAL INFORMATION

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

Double Nickel LC 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. Double Nickel LC offers a valuable tool for management of resistance to chemical fungicides through its multiple and unique modes of action.

Double Nickel LC can be applied up to and including the day of harvest.

APPLICATION METHODS

Ground: Double Nickel LC 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: Double Nickel LC 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 LC can be applied through drip (trickle) and sprinkler type irrigation equipment. Refer to the section entitled "Chemigation Instructions" for detailed instructions.

Banded (in-furrow) application: See the table (rate Double Nickel LC 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 Double Nickel LC 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.

See table Rates for banded (in-furrow) application

Limitations, Restrictions, and Exceptions

Grapes

APPLICATION INSTRUCTIONS:

Begin applications in early spring, timed for root flush and early shoot growth. Continue applications on a 4-6 week reapplication interval with a final application timed for fall root flush. Apply via drip (elevated, buried or ground-lay), banded drench, microsprinkler, or other common chemigation techniques.

Foliar application: For control of diseases on foliage, flowers, fruit, or other aboveground parts of plants: Mix Double Nickel LC in water and apply as a spray at a rate of 0.5 to 6 quarts of Double Nickel LC 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, or 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 Double Nickel LC 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 Double Nickel LC with other fungicides for improved performance.

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Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil application](#)

Rates

[field_rates 0](#)

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Restricted Entry Interval

4 hours

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.

Timings

[At crop emergence, transplanting, or when conditions are conducive to development of disease.](#)