

# **SPINACH**

## General Information

### DIRECTIONS FOR USE

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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Sulfur may cause severe fruit and foliage injury to certain crops. Sulfur sensitive plants include D' Anjou and Comice pears, apricots, cranberries, certain varieties of cucurbits, filberts, spinach, Tung walnuts, and certain ornamentals. Apples, pears and strawberries are susceptible to foliage burn with sulfur under certain climatic conditions. Sulfur may burn foliage when temperature is high. As a result, Wilbur-Ellis Company LLC does not recommend application if temperatures during or within 3 days after application are expected to exceed 90°F in the area to be treated. Do not use within 2 weeks of an oil spray treatment (on citrus within 3-6 weeks).

SULFUR DRY FLOWABLE may be applied with oil during dormant and delayed dormant applications according to specific direction. When growing crops for processing consult the processor before applying sulfur.

Measure needed amount into bucket, stir to make thin slurry. Add to tank when part full and before other materials are added. Add wetting agents last to avoid foaming.

### DIRECTIONS FOR DILUTION

**DILUTE APPLICATION:** Ground application: Apply specified rate in 20-60 gallons of water per acre. Orchard application: Apply specified rates in 100-800 gallons of water per acre.

**CONCENTRATE APPLICATION:** Ground application: Apply specified rate in not less than 5 gallons of water per acre. Orchard application: Apply specified rate in 20-100 gallons of water per acre. Special concentrate equipment is necessary for these uses.

AERIAL APPLICATION: Apply specified rate in 5-20 gallons of water per acre. For orchard applications, do not apply in less than 10 gallons of water per acre.

USE HIGH DOSAGE RATES WHEN DISEASE PRESSURE IS SEVERE.

#### DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS

##### GENERAL INSTRUCTIONS:

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, or drip (mini-micro sprinklers, strip tubing, trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

##### PRECAUTIONS:

- Corrosion of aluminum and carbon/galvanized steel irrigation sprinkler system may be experienced with the use of sulfur fungicides. If the user elects to apply this product through such systems, it is essential that all application equipment containing this product be thoroughly flushed with clean water after each day's use. Continue to operate the system with clean water until all product has cleared the last sprinkler head.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have any questions about calibration, you should contact the State Extension Service Specialist in your area, the equipment manufacturer, and/or other experts.
- A person knowledgeable of the chemigation system and responsible for its operation (or under the supervision of the responsible person) must shut down the system and make necessary adjustments if a need arises.
- Do not connect chemigation system to any public water system. Public water system is a system for the provision of piped water for human consumption if such system has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days out of the year.
- This product may be applied in conjunction with chemically-neutral liquid fertilizers.

##### SYSTEM REQUIREMENTS:

- Systems utilizing a pressurized water and pesticide injection system must meet

the following requirements:

- 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- System 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.

#### APPLICATION INSTRUCTIONS:

- Observe the requirements in the Systems Requirements section.
- Apply product only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.
- Maintain a gentle continuous agitation in the mix tank during mixing and application to ensure a uniform suspension.
- Greater accuracy in calibration and distribution will be achieved by injecting a large volume of a more dilute suspension per unit time.
- Application of more than recommended quantities or irrigation water per acre may result in decreased product performance.
- Do not apply when wind speed favor drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when liens containing the product cannot be flushed and must be dismantled and drained. In a center pivot

system, block the nozzle set nearest the will/pivot/injection unit to prevent spray being applied to this area.

- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

#### SPRAY PREPARATION:

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a suspension of the product in a mix tank. Fill the tank with  $\frac{1}{2}$  or  $\frac{3}{4}$  of the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the require amount of product and then the remaining volume of water.

#### Sprinkler-Irrigation Notes:

Observe all Systems Requirements and Application Instructions listed above. Set sprinkler system to deliver 0.1-1.25 inches of water per acre. Volume of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of the product into the irrigation water line so as to deliver the desired rate per acre. The product's suspension must be injected with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. When treatment with the product has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop. Do not apply when wind speed favors drift beyond the area intended for treatment. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result. Check local restrictions and requirements regarding sprinkler irrigation applications as they may vary from state to state.

#### Limitations, Restrictions, and Exceptions

SPINACH: Powdery Mildew, Rust. For use on spinach to be processed only. Do not use on fresh spinach as sulfur has been shown to have phytotoxic effects on certain varieties of spinach. Spray on a small area first to test for phytotoxicity before making a full application. Apply when disease first appears and repeat at 7 to 10-day intervals or as needed.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

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## Restricted Entry Interval

24 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

[When disease first appears.](#)