

# **VEGETABLES - SPINACH**

## General Information

### GENERAL INSTRUCTIONS

KOCIDE 3000 may be applied as an aerial, ground dilute or ground concentrate spray unless specifically directed otherwise in the specific crop use directions. The per acre use rate of KOCIDE 3000 is applicable for both dilute and concentrate spraying. Depending upon the equipment used and the specific crop, the spray volume applied per acre will differ. Refer to Minimum Recommended Spray Volume Table.

Complete spray coverage is essential to assure optimum performance from KOCIDE 3000. When treating by aerial application or with low volume application equipment, unless you have had specific previous experience, it is advisable to test for compatibility and tolerance to crop injury prior to full scale commercial utilization.

Consult the KOCIDE 3000 label for specific rates and timing of application by crop. Where application rates and intervals are provided in a range (e.g. 4 to 12 pounds and 7 to 10 days), the higher rates and shorter spray intervals are recommended when rainfall is heavy and/or disease pressure is high. Use the higher rates for large mature tree crops.

### SPECIAL PRECAUTIONS

The Pre-Harvest Interval (PHI) for KOCIDE 3000 is 0-days unless noted.

- If KOCIDE 3000 is applied in a spray solution having a pH of less than 6.5, phytotoxicity may occur.
- Do not tank mix KOCIDE 3000 with "Aliette" fungicide for use on any registered crops unless appropriate precautions have been taken to buffer the spray solution because severe phytotoxicity may result. Use in accordance with the most restrictive of label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.
- This product may be reactive on masonry and metal surfaces such as galvanized

roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.

- Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of KOCIDE 3000 resulting in possible phytotoxicity or loss of effectiveness.
- Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by a state/local expert, it is advisable to test for compatibility and potential crop injury prior to commercial use of a new tank mix.
- It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.
- Apply this product only through one or more of the following types of systems: sprinkler, including center pivot, lateral move, traveler, big gun, or plastic pipe solid set system(s). Do not apply this product through any other type of irrigation system. In California, do not apply in systems which contain aluminum parts or components.
- While volume is important in obtaining full spray coverage, often factors such as foliage density, environmental conditions and sprayer calibration have a greater impact. Always be sure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within those recommended by State and local regulatory authorities.
- When mixing, fill the spray tank one-half full with water. Add KOCIDE 3000 slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank or contact your chemical supplier. Observe all precautions and limitations on the labels of all products used in mixtures

**GREENHOUSE AND SHADEHOUSE CROPS:** KOCIDE 3000 may be used in greenhouses and shadehouses to control diseases on any crop on this label where physiology allows greenhouse or shadehouse culture. While specific directions are presented for Citrus, Cucumber, Eggplant, Pepper and Tomato; general use may occur for any crop on this label where physiology allows greenhouse or shadehouse

culture. Consequently; injuries arising from the use of KOCIDE 3000 on these types of greenhouse and shadehouse crops are the responsibility of the user.

## FROST INJURY PROTECTION

### BACTERIAL ICE NUCLEATION INHIBITOR

Application of KOCIDE 3000 made to all crops listed on this label at rates and stages of growth indicated on this label, at least 24 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola*, and *Pseudomonas fluorescens*) and may therefore provide some protection against light frost. Not recommended for those geographical areas where weather conditions favor severe frost.

### GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler, including center pivot, lateral move, traveler, big gun, or plastic pipe solid set system(s). Do not apply this product through any other type of irrigation system. In California, do not apply in systems which contain aluminum parts or components.

Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should 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.

Shut off injection equipment after treatment and continue to operate irrigation system until KOCIDE 3000 has been cleared from the last sprinkler head.

### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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 the 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 pump.

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.

NOTE: It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.

When mixing, fill the nurse tank half full with water. Add KOCIDE 3000 slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures.

Agitation of the mixture in the nurse tank is recommended.

KOCIDE 3000 should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until KOCIDE 3000 has been cleared from the last sprinkler head.

#### SPRINKLER CHEMIGATION

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 also 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 which will stop the water pump motor 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.

NOTE: It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and some synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use. When mixing, fill the nurse tank half full with water. Add KOCIDE® 3000 slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all precautions and limitations on the labels of all products used in mixtures.

Agitation of the mixture in the nurse tank is recommended.

KOCIDE 3000 should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Shut off injection equipment after treatment and continue to operate irrigation system until KOCIDE 3000 has been cleared from the last sprinkler head.

Limitations, Restrictions, and Exceptions

Use Instructions

Begin application when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals if needed. Use the higher rates when

conditions favor disease.

NOTE: Flecking may occur on spinach leaves.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Rates

[field rates 0](#)

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Restricted Entry Interval

48 hours

Timings

[When disease first appears or when conditions favor disease development.](#)