

## **SPINACH - ALFALFA LOOPER, CABBAGE LOOPER, ETC.**

### General Information

#### DIRECTIONS FOR USE

Do not formulate this product into other End-use products without written permission from Rotam.

Do not apply thru Drip Chemigation unless accompanied by Rotam Supplemental Labeling.

NUDRIN SP INSECTICIDE should be used only in accordance with directions for use on the label or in separate Rotam supplemental labeling. Rotam will not be responsible for use of the product in a manner not specified by Rotam in the product's labeling and User assumes all risk for such use.

NUDRIN SP INSECTICIDE is a dry powder to be dissolved in water for application by mechanical ground, overhead sprinkler, or aerial application. Hand-held equipment is prohibited for application to crops.

Do not apply by ground equipment within 25 feet, or by air within 100 feet of lakes, reservoirs, rivers, estuaries, commercial fish ponds and natural, permanent streams, marshes or natural, permanent ponds. Increase the buffer zone to 450 feet from the above aquatic areas when ultra low volume application is made.

Pilots must not assist in the mixing and loading operations.

Use only in commercial and farm plantings. Not for use in home plantings. Not for use during any period after a commercial crop site is opened for public entry as a "U-Pick", "Pick Your Own" or similar operation; in no case shall preharvest applications be made after first public entry. The restricted entry interval and preharvest interval for the crop stated elsewhere on the label must be followed.

#### RESISTANCE MANAGEMENT

For resistance management, NUDRIN SP INSECTICIDE is a group 1A insecticide. Repeated and exclusive use of NUDRIN SP INSECTICIDE or other group 1A insecticides may lead to the build-up of resistant strains of insects in some crops.

Not all members of this group have been shown to be cross-resistant. Different resistance mechanisms that are not linked to target site of action, such as enhanced metabolism, are common for this group of chemicals. Alternation of compounds from different sub-groups within this group may be an acceptable part of an integrated pest management program.

Some insects are known to develop resistance to products used repeatedly for control. When this occurs, the recommended dosages fail to suppress the pest population below the economic threshold. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area. For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

## INTEGRATED PEST MANAGEMENT

This product should be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## SCOUTING

Monitor insect populations to determine whether or not there is a need for application of NUDRIN SP INSECTICIDE based on locally determined economic thresholds. More than one treatment of NUDRIN SP INSECTICIDE may be required to control a population of pests.

## BENEFICIAL ARTHROPODS

NUDRIN SP INSECTICIDE at rates of 1/8 to 1/4 lb. per acre helps conserve certain beneficials, including big-eyed bugs, damsel bugs, flower bugs and spiders in cotton and soybeans. While these beneficials cannot be relied upon to control pests, they are of potential value and should be monitored along with pests in pest management programs on these crops.

## APPLICATION

Apply at the recommended rates when insect populations reach locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

Follow-up treatments of NUDRIN SP INSECTICIDE should be applied, as needed, to keep pest populations within threshold limits. On most crops, NUDRIN SP INSECTICIDE should be applied at 5 to 7 day intervals to maintain control. Refer to crop specific directions for use in the crop tables for more specific information on treatment intervals.

Use sufficient water to obtain thorough, uniform coverage. Since NUDRIN SP INSECTICIDE is a fast acting contact insecticide, best results follow direct spraying of the target insect.

For aerial, use a minimum of 2 gals. per acre (gpa) except 10 gpa for peaches and nectarines; 15 gpa for oranges, lemons, grapefruit, tangelos and tangerines.

For certain crops a minimum of 1 gallon per acre may be used providing the following conditions are met:

- equipment is adjusted to distribute spray uniformly over the spray swath.
- wind conditions and other factors such as temperature and humidity are such that the spray is delivered to the target area,
- local regulations do not prohibit low-volume aerial sprays,
- use rates are applied as directed on the package label or supplemental labeling for the following crops:

Alfalfa, Anise, Asparagus, Barley, Beans, Broccoli, Brussels sprouts, Cabbage, Carrot, Cauliflower, Celery, Collards, Corn, Cotton, Cucumber, Lettuce, Melons, Mint, Oats, Peanuts, Peas (succulent), Peppermint, Peppers, Potato, Rye, Soybean, Spinach, Sugar beet, Summer Squash, Wheat

Apply the low rates on small plants, small insects and light infestations of insects. Use intermediate rates on large insects and heavier infestations of insects. Use 1 to 3 applications of the highest recommended rate for controlling severe infestations. Thereafter, use the lowest rate possible to maintain control.

#### Limitations, Restrictions, and Exceptions

#### SPINACH

Do not apply when minimum daily temp. is 32° F, or lower.

Do not apply to seedlings less than 3\" diameter.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

#### Pre-Harvest Interval

7 days

#### Rates

[field\\_rates 0](#)

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#### Restricted Entry Interval

48 hours

Timings

When target pest populations reach locally determined action thresholds.