

July 24, 2009

New York State Department
of Environmental Conservation
Division of Solid & Hazardous Materials
Pesticide Product Registration



Sprout-Stop®

Liquid Growth Retardant

For preventing the sprouting of Onions and Potatoes.

ACTIVE INGREDIENT:

Potassium salt of 6-hydroxy-3-(2H)-
pyridazinone* 30.2%

OTHER INGREDIENTS: 69.8%

TOTAL: 100.0%

*Hereafter called Potassium salt of maleic hydrazide.
This product contains 2.25 pounds of Maleic hydrazide equivalent per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See **FIRST AID** Below

EPA Reg. No. 19713-2

EPA Est. No. 19713-XX-XXX Net Content: _____

FIRST AID

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.

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 treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing dust, vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

(Continued)

PRECAUTIONARY STATEMENTS (Cont'd)

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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

For terrestrial uses, do not apply directly to water, 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.

SURFACE WATER ADVISORY

Under some conditions, maleic hydrazide may have a significant potential for runoff into surface water (primarily via dissolution in runoff water) for several days post-application. Conditions favoring runoff include poorly drained soils or wet soils with readily visible slopes, frequently flooded areas, areas where an intense or sustained rainfall is forecast to occur within 48 hours, areas overlying extremely shallow groundwater and areas overlying tiles drainage systems that flow to surface water.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product through any type of irrigation system. 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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS. Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soils or water is: Coveralls, chemical-resistant gloves made of any waterproof material and shoes plus socks.

Manufactured By:

Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

TO CONTROL SPROUTING OF ONIONS IN STORAGE

This product will control the sprouting of dry-bulb Onions, dry-bulb Shallots and Garlic. See "APPLICATION NOTES" for additional instructions.

Onion Varieties: Combine the use of this product with a good "keeping" variety of Onion. Do not use on varieties with a poor "keeping" quality as it will not make them equal to the good "keeping" varieties.

WHEN TO APPLY

The spray should be applied when the bulbs are fully mature, have 5 to 8 green leaves and necks soft enough for the tops to fall if they have not already done so. The spray is often applied when 50% of the tops are still green. This condition usually occurs about 10 to 14 days before harvest time. Green tops are essential for the absorption and effectiveness of this product.

Note: Avoid spraying edible Onions too early. Spongy bulbs might result if spraying is done earlier than 2 weeks before maturity.

APPLICATION METHODS AND RATES

1. **Ground Application:** Apply 5.5 to 7 pints of this product in a minimum of 30 gallons of water per acre with a ground sprayer. Complete coverage is essential for obtaining satisfactory sprout control.

2. **Aerial Application (West of the Rocky Mountains):** Apply 5.5 to 7 pints of this product in a minimum of 10 gallons of water per acre.

Aerial Application (East of the Rocky Mountains): Apply 5.5 to 7 pints of this product in sufficient water to gain complete coverage.

Note: Applications should be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe, reduces exposure of droplets to evaporation and wind.

3. **Spray Adjuvant Use—(West of the Rocky Mountains):** The use of a commercial non-ionic surfactant (such as Drexel's Surf-Ac® 820) is recommended at the rate of 1 quart per 100 gallons of spray solution. In arid sections of the U.S., the adjuvant may help provide better coverage and aid in translocation of this product. The non-ionic surfactant used must be cleared for application to growing crops.

East of the Rocky Mountains: The use of surfactants is not normally recommended.

TO CONTROL SPROUTING POTATOES IN STORAGE EAST OF THE ROCKY MOUNTAINS

Benefits For Use on Potatoes East of the Rocky Mountains:

Control of Sprouting: This product will control the sprouting of Potatoes in storage when applied as instructed. It will not make poor "keeping" Potato varieties (such as Norgold or Norchip) into a good "keeping" Potato.

Volunteer Reduction: This product will reduce the number of volunteer Potatoes in the following Spring due to its ability to control sprouting.

Improvement of Grade: This product may improve the grade of Potatoes (Russet Burbank variety) if the application is made prior to any secondary tuber formation.

Undersized Potatoes: This product will help reduce any additional sets of Potatoes, thereby decreasing the number of undersized Potatoes in the field at harvest time.

Shrinkage Reduction: Applications of this product at labeled rates can reduce shrinkage in storage up to 15%.

WHEN TO APPLY

The timing of application may occur as early as 2 to 3 weeks after full bloom when the primary and secondary inflorescences have lost most of their flowers and a few third order inflorescences and buds are present. This occurs when a yellow color shows on a few of the lower leaves. Application before this time may result in reduced tuber size and phytotoxicity. Provided that the above conditions have been met, the following tuber sizes may also be used as a guide:

Russet Burbank and other Russet (Elongated types)—The smallest tubers that are required to reach the size of 4 to 6 ounces minimum, should be 1.5 to 2 inches in diameter and elongating at the time of application, except for Norgold which must be at least 2 inches in diameter at the time of application.

Other Varieties (Round types)—The smallest tubers that are required to reach maximum size should be 1.5 inches in diameter at the time of application, except for Norchip which must be at least 2 inches in diameter at the time of application.

APPLICATION METHODS AND RATES

1. **Ground Application:** Apply 1 to 1.33 gallons of this product in a minimum of 30 gallons of water per acre. Use the 1.33 gallons rate when vines are hardy and in areas where the vines will stay green and robust up through the time of crop desiccation. The higher rate should be used on readily sprouting varieties such as Norgold, or when Potato storage will be under extended high temperatures.

2. **Aerial Application:** Apply 1 to 1.33 gallons of this product in a sufficient quantity of water to gain complete and uniform coverage of one acre. Use the 1.33 gallons rate when vines are hardy and robust up through the time of crop desiccation. The higher rate should be used on readily sprouting varieties such as Norgold, or when Potato storage will be under extended high temperatures.

Note: Applications should be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

TO CONTROL SPROUTING POTATOES IN STORAGE WEST OF THE ROCKY MOUNTAINS

Benefits For Use on Potatoes West of the Rocky Mountains:

Control of Sprouting: This product will control the sprouting of Potatoes in storage when applied as instructed. It will not make poor "keeping" Potato varieties into a good "keeping" Potato.

Volunteer Reduction: This product will reduce the number of volunteer Potatoes in the following Spring due to its ability to control sprouting.

Improvement of Grade: This product may improve the grade of Potatoes if the application is made prior to any secondary tuber growth.

Shrinkage Reduction: Application of this product at labeled rates can reduce shrinkage in storage up to 15%.

WHEN TO APPLY

The timing of application may occur when the smallest tubers that you want to harvest are 2 to 2.5 ounces in weight or 2 to 2.5 inches in diameter. This usually occurs 11 to 12 weeks after emergence or 3 to 4 weeks after full bloom on the Russet Burbank variety. The smallest tubers that are required to reach marketable size should begin to elongate on Russet Burbank or similar varieties at the time of application. Application before this time may result in reduced tuber size and phytotoxicity. If you will be desiccating the vines, apply this product at a minimum of 2 weeks prior to vine desiccation for best sprout control and storage results. DO NOT apply to Potato plants that are under stress.

APPLICATION METHODS AND RATES

1. **Ground Application:** Apply this product at 1 to 1.33 gallons in a minimum of 30 gallons of water per acre. Use the 1.33 gallons rate when vines are hardy and in areas where the vines will stay green and robust up through the time of crop desiccation.

2. **Aerial Application:** Apply 1 to 1.33 gallons of this product in a minimum of 10 gallons of water per acre. Use the 1.33 gallons rate where the vines will stay green and robust up through the time of crop desiccation.

Note: Applications should be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

TO CONTROL WILD ONIONS AND WILD GARLIC IN LAWNS AND GRASS AREAS ALONG HIGHWAYS (NOT PASTURE OR CROPLAND):

Apply 1.33 to 2.67 gallons of this product in 20 to 100 gallons of water per acre in Spring or Fall when about 90 to 95% of the bulbs have started regrowth. Use on lawns only when grass is brown and dormant. Do not use on home lawns except along edges.

TO INHIBIT GRASS GROWTH: Apply this product to green grass since brown grass will not absorb the spray. Use of this product is limited to one application per year made either in the Fall or the Spring followed by correct maintenance procedures to produce required turf growth control.

SPRING APPLICATION (About April 10 to June 1)—Use 1.75 gallons of this product in 50 gallons of water per acre to reduce or eliminate mowing.

FALL APPLICATION (About October 1 to November 15)—Use 2.25 gallons of this product in 50 gallons of water per acre to reduce growth next season. The Fall treatment is applied to green grass before it becomes dormant.

DO NOT APPLY DURING THE SUMMER (June 1 to September 25) since most permanent grasses become partially dormant in the Summer.

USE OF 2,4-D: 2,4-D may be used with this product when control of Broadleaf weeds is desired in turf. A low volatile ester or amine salt formulation is compatible with this product. In some areas, weeds may emerge after this product is applied. A second application of 2,4-D would be necessary to control these weeds. Use 2,4-D only on Grasses recommended by the manufacturer's label. Follow manufacturer's label when handling or spraying 2,4-D to prevent drift.

FOR INDUCING DORMANCY IN YOUNG NON-BEARING CITRUS TREES IN FL: This product, by inducing dormancy, offers protection against frost damage down to 21°F in recent experiments. Add 5 pints of this product to 100 gallons of water and spray with coarse cone nozzle between November 1 to 15. Apply at a rate of 60 to 100 gallons of spray solution per acre, depending on the size of the trees. Apply the higher rate to larger trees; the lower rate to smaller trees. The spray should thoroughly wet upper and lower leaf surfaces, branches and trunks of trees. A second treatment may be necessary in 6 to 8 weeks, if unusually warm weather persists during November and December. Periodically check for bud swell which indicates that regrowth is occurring and respray if swelling of buds occurs. Do not spray trees at least 24 hours before rain. Rain occurring within 24 hours after application will reduce effectiveness. Citrus trees sprayed with this product may show a delay of regrowth in Spring for several weeks if the Winter remains cold. The first new growth of foliage may be slightly "Frenched" or narrow-leaved, but subsequent growth will be normal.

APPLICATION NOTES (For All Applications):

1. Always read and follow dosage recommendations carefully and spray fields uniformly.
2. Uneven applications may result in "elephant hide" and/or bud end cracking of the Potato tubers.
3. To obtain the desired results, the plants/crop should not be stressed from either too much or too little water before or after application.
4. Apply only one application per season.
5. Do not apply to Potato plants grown for seed.
6. Rain or overhead irrigation occurring within 24 hours after application may reduce effectiveness. Spray Onions or Potatoes at least 24 hours before rain or overhead irrigation.
7. A minimum of 2 weeks should be allowed between the use of this product on Potatoes and the use of a vine desiccant.
8. This product is non-volatile, but regardless, no drift should be permitted onto nearby crops. Special care should be taken to prevent drift when aerial applications are made.
9. This product should be applied at temperatures below 85°F or at temperatures of 80°F if expected to exceed 85°F later that same day. This product is water-soluble and under high temperatures and low humidity conditions it will crystallize on the leaf surface preventing normal absorption into the plant.
10. Spray adjuvants are not recommended for application of this product on Potatoes. For spray adjuvant use with Onions, see that specific section.
11. Although this product is compatible with most commonly used fungicides and insecticides, separate applications are recommended.
12. Occasionally, injury to the terminal growth of Potato foliage has been observed following application of this product according to label recommendations. Trials and usage have indicated that this injury does not adversely affect the yield or quality of the Potato tubers at harvest.
13. For control of wild Onions and Garlic do not apply to young seedlings less than one season old. Do not pasture livestock in, or cut hay from, treated areas.
14. This product is not corrosive to spray equipment.
15. Rinse spray equipment with water after application. Do not contaminate water by cleaning of equipment or disposal of waste.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Storage should be under lock and key in a ventilated room and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from heat or ignition source. Do not stack containers over 2 pallets high. Move containers by handles or case. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill. Absorb with a material such as sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer contents, as soon as possible to, an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below:

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:**Nonrefillable Container (rigid material; less than 5 gallons):**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons or greater):

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Containers:

Refillable container. Refill this container with this product only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and 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 and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.