

# Drexel

# MALEIC HYDRAZIDE 30%

## Liquid Growth Retardant for Preventing Growth of Tobacco Suckers and the Sprouting of Potatoes & Onions.

### ACTIVE INGREDIENTS:

Diethanolamine salt of 6-hydroxy-3(2H)-pyridazone\* ..... 58%

INERT INGREDIENTS ..... 42%

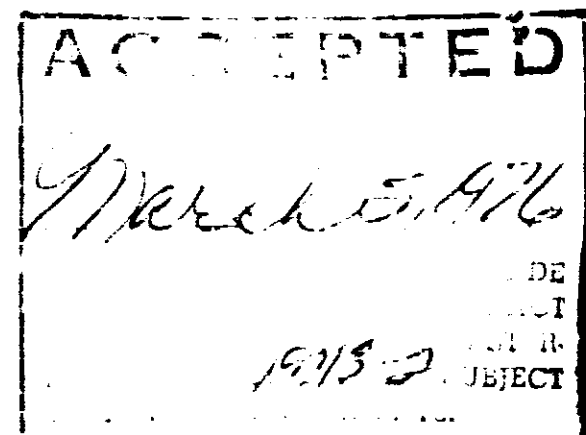
\*Hereinafter called diethanolamine salt of maleic hydrazide. Equivalent to 30% maleic hydrazide. Product contains 3 pounds maleic hydrazide equivalent per gallon.

## CAUTION KEEP OUT OF THE REACH OF CHILDREN

### READ ENTIRE LABEL BEFORE USING THIS PRODUCT

SEE LEFT PANEL FOR ADDITIONAL CAUTIONS

SHAKE WELL BEFORE USING



### READ ENTIRE LABEL BEFORE USING THIS PRODUCT

**CAUTION:** Keep out of the reach of children. Avoid inhalation of mist. Avoid contact with skin, eyes or clothing. May be harmful if swallowed.

**NOTICE:** Use of this material in a manner, or at any time other than in accordance with the directions may produce plant injury, excessive residues, or other undesirable results.

**CONTAINER DISPOSAL:** Do not reuse empty container. Chop holes in top and bottom. Bury 18" below soil surface at safe disposal site. Never reuse for food or water.

**DIRECTIONS FOR USE:** To prevent Sucker Development on Flue-cured and Burley tobacco: MALEIC HYDRAZIDE 30%, a plant inhibitor, offers a new method of controlling sucker growth by keeping suckers from growing rather than by killing them. Since MALEIC HYDRAZIDE 30% is absorbed and moves inside the tobacco plant. Spraying the whole plant is not necessary. Best results are obtained by spraying the upper 1/3 to 1/2 of the plant. It is very important to apply equal amounts of MALEIC HYDRAZIDE 30% to each plant at time of topping.

**When to Spray:** Satisfactory sucker control depends on correct timing of the spray.

- If all plants flower at about the same time, proceed as follows:  
As soon as the plants are in full flower top, pull all suckers from early maturing plants and spray MALEIC HYDRAZIDE 30% uniformly onto the entire field within 24 hours after topping. (See notes 1-9).
- If there is a wide range in the time of flowering, the following procedure should be used:
  - Go through the field and top the few early-flowering plants.
  - Wait until the remaining plants are in full flower, top them, remove all suckers from the entire field, and apply MALEIC HYDRAZIDE 30% within 24 hours after topping. (See notes 1-9). Top leaves to be harvested should be at least 6 inches long at time of spraying.

**How to Spray:** MALEIC HYDRAZIDE 30% may be applied with either tobacco or mule-drawn insecticide sprayer, or with a compressed air shoulder sprayer.

- Tractor or mule-drawn insecticide sprayers. Any number of nozzles may be used. Can be applied in the same manner as insecticide spraying one or more rows at a time, wetting upper 1/3 to 1/2 of plant.
- Compressed air shoulder sprayer with single nozzle spraying a wide cone. Spray one side of each tobacco row while walking at a constant rate. Use up and down motion of spray nozzle to moisten upper 6 to 8 leaves of each plant. Apply equal amounts of spray to each plant.

**Amount to Use:** 1 pint MALEIC HYDRAZIDE 30% per 1000 plants.

**Example:** Use 3 quarts MALEIC HYDRAZIDE 30% for 6000 plants per acre, or 1 gallon MALEIC HYDRAZIDE 30% for 8000 plants per acre. Use not less than 20 gallons of water per acre (from 20 to 50 gallons of water per acre can be used - see note 9).

**To Control Sprouting of Onions in Storage:** Apply 5 1/2 pints MALEIC HYDRAZIDE 30% in 100-150 gallons of water per acre with a ground sprayer. Airplane application can also be made. The spray should be applied when the bulbs are fully mature, have five to eight 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 percent of the tops are

still green. This condition usually occurs about two weeks to 10 days before harvest time. Green tops are essential for the absorption of MALEIC HYDRAZIDE 30%.

**CAUTION:** Avoid too early spraying of edible onions. Spongy bulbs might result if spraying is done earlier than two weeks before maturity.

**To Control Sprouting Potatoes in Storage:** Apply 1 gallon MALEIC HYDRAZIDE 30% in 30-150 gallons of water per acre by ground equipment. Airplane application can be made in irrigated sections of the country.

Check your field to see if you have a good set of potatoes. MALEIC HYDRAZIDE 30% is applied when most of the tubers set are approximately one inch in diameter. This occurs when the few lower leaves show a yellow color. In areas where potatoes flower uniformly this is one week after blossoms fall off the vine, usually in August about 4 to 6 weeks before harvest. (See notes 5 and 11.)

**To Control Wild Onions and Wild Garlic in Lawns and Grass Areas Along Highways (not pasture or cropland):** Apply 1 to 2 gallons MALEIC HYDRAZIDE 30% in 20 to 100 gallons of water per acre in spring or fall when about 90-95 percent of the bulbs have started regrowth. Use on lawns only when grass is brown and dormant. Do not use on home lawns except along the edges.

**To Inhibit Grass Growth:** Apply Maleic Hydrazide 30% to green grass since brown grass will not absorb the spray. One application per year made either in the fall or the spring followed by correct maintenance procedures will produce required turf growth control.

**Spring Application (About April 10 - June 1)** - Use 1-1/3 gallons Maleic Hydrazide 30% in 50 gallons of water per acre to reduce or eliminate mowing.

**Fall Application (About Oct. 1 - Nov. 15)** - Use 1-2/3 gallons Maleic Hydrazide 30% 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 - Sept. 25) since most permanent grasses become partially dormant in summer.

Use of 2,4-D: 2,4-D may be used with Maleic Hydrazide 30% when control of broadleaf weeds is desired in turf. A low volatile ester or amine salt formulation is compatible with Maleic Hydrazide 30%. In some areas weeds may emerge after Maleic Hydrazide 30% 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 Florida:** MALEIC HYDRAZIDE 30% by inducing dormancy offers protection against frost damage down to 21°F in recent experiments. Add two quarts MALEIC HYDRAZIDE 30% to 100 gallons water and spray with coarse cone nozzle between Nov 1-15. The spray should thoroughly wet upper and lower leaf surface, 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 within the year in which fruit is to be harvested is set. Spray citrus trees at least 24 hours before rain. Rain occurring within 24 hours after application will reduce effectiveness. MALEIC HYDRAZIDE 30% sprayed citrus trees 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.

### NOTES: Tobacco:

- To control tobacco suckers apply MALEIC HYDRAZIDE 30% at the proper time. Too early spraying may prevent normal development of top leaves. Too late spraying will allow some sucker growth. FULL FLOWER is the stage when 90% of your plants have begun to shed their first flowers.
- Rains occurring within 12 hours after spraying may reduce effectiveness.
- Follow dosage recommendations carefully, spray field uniformly and use less than the minimum amount of water recommended on tobacco.
- MALEIC HYDRAZIDE 30% has been used successfully with tobacco insecticide but separate application is recommended until further studies are completed.
- Do not use on tobacco plants grown for seed production.
- Do not spray tobacco in the middle of hot, dry days. When leaves are severely wilted. For best results spray during early morning, all day on cloudy days, avoiding the late afternoon or night applications. Use a nozzle delivering a fine mist spray. Do not use a broadcast type of spray.
- Closely hand-suckered or MALEIC HYDRAZIDE 30% treated tobacco will not ripen as rapidly as properly suckered tobacco. Also, under some conditions MALEIC HYDRAZIDE 30% treated tips have a tendency to turn yellow prematurely. This is not harmful and does not mean that your tobacco is ripe. Therefore, do not harvest MALEIC HYDRAZIDE 30% treated tobacco by using time and color of the leaves as your only guide to ripeness. Use other characteristics indicative of ripeness such as:
  - Fading of color from midrib.
  - Change in apparent leaf texture.
- If tobacco plants have been grown under drought conditions absorption of MALEIC HYDRAZIDE 30% will be slow and results may not be as good as plants treated under normal conditions.
- Too little MALEIC HYDRAZIDE 30% will result in less than desired control. Too much is wasteful and may cause burning of leaves and may reduce quality of tips.

### Other Crops:

- 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.
- Spray potatoes at least 24 hours before rain. Rain occurring within 24 hours after application will reduce effectiveness.
- MALEIC HYDRAZIDE 30% is not corrosive to spray equipment. It does not offer drift problems on nearby crops.
- Rinse spray equipment with water after application. Do not contaminate water by cleaning of equipment or disposal of wastes.

**WARRANTY AND LIMITATION OF DAMAGES:** Drexel Chemical Company warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use and Conditions of Sale, subject to the inherent risks referred to therein. Drexel Chemical Company makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Drexel Chemical Company is authorized to do so except in writing, with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages, and shall not include consequential commercial damages such as loss or profits or value, etc.

EPA REG. NO. 19713-2

EPA ESTABLISHMENT NO

Net Contents:

Manufactured for  
**Drexel Chemical Company** Memphis, Tennessee