

HELENA

BRAND

30% Maleic Hydrazide

LIQUID GROWTH RETARDANT FOR PREVENTING GROWTH OF TOBACCO
SUCKERS AND THE SPROUTING OF POTATOES AND ONIONS

CAUTION: KEEP OUT OF REACH OF CHILDREN
See left panel for additional cautions

ACTIVE INGREDIENTS:

Diethanolamine salt of 6 hydroxy 3, 2H pyridazinone* 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.

ACCEPTED
2-4-74
5905-224

Shake well before using
READ ENTIRE LABEL BEFORE USING THIS PRODUCT

RECEIVED
JAN 24 1974

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: HELENA BRAND 30% MALEIC HYDRAZIDE, a plant inhibitor, offers a new method of controlling sucker growth by keeping suckers from growing rather than by killing them. Since HELENA BRAND 30% MALEIC HYDRAZIDE 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 HELENA BRAND 30% MALEIC HYDRAZIDE to each plant at time of topping.

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

a. 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 HELENA BRAND 30% MALEIC HYDRAZIDE uniformly onto the entire field within 24 hours after topping. (See notes 1-9).

b. If there is a wide range in the time of flowering, the following procedure should be used:

1. Go through the field and top the few early-flowering plants.

2. Wait until the remaining plants are in full flower, top them, remove all suckers from the entire field and apply HELENA BRAND 30% MALEIC HYDRAZIDE within 24 hours after topping. (See notes 1-9). Tip leaves to be harvested should be at least 6 inches long at time of spraying.

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

a. Tractor or mule-drawn insecticide sprayers: Any number of nozzles may be used. Can be applied in the same manner as insecticides, spraying one or more rows at a time, wetting upper 1/3 to 1/2 of plant.

b. 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 HELENA BRAND 30% MALEIC HYDRAZIDE per 1000 plants.

Example: Use 3 quarts HELENA BRAND 30% MALEIC HYDRAZIDE for 6000 plants per acre, or 1 gallon HELENA BRAND 30% MALEIC HYDRAZIDE 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 HELENA BRAND 30% MALEIC HYDRAZIDE 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 have fallen but all 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 HELENA BRAND 30% MALEIC HYDRAZIDE.

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 of Potatoes in Storage: Apply 1 gallon HELENA BRAND 30% MALEIC HYDRAZIDE 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. HELENA BRAND 30% MALEIC

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.

- 2 Rains occurring within 12 hours after spraying may reduce effectiveness.
 - 3 Follow dosage recommendations carefully. Spray field uniformly and do not use less than the minimum amount of water recommended on tobacco.
 - 4 HELENA BRAND 30% MALEIC HYDRAZIDE has been used successfully with tobacco insecticides but separate application is recommended until further studies are completed.
 - 5 Do not use on tobacco or potato plants grown for seed production.
 - 6 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 broad jet type of spray.)
 - 7 Closely hand-suckered or HELENA BRAND 30% MALEIC HYDRAZIDE treated tobacco will not ripen as rapidly as poorly suckered tobacco. Also under some conditions HELENA BRAND 30% MALEIC HYDRAZIDE 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 HELENA BRAND 30% MALEIC HYDRAZIDE treated tobacco by using time and color of the leaves as your only guide to ripeness. Use other characteristics indicative of ripeness such as:
 - a Fading of color from midrib
 - b Change in apparent leaf texture
 - 8 If tobacco plants have been grown under drought conditions absorption of HELENA BRAND 30% MALEIC HYDRAZIDE will be slow and results may not be as good as plants treated under normal conditions.
 - 9 Too little HELENA BRAND 30% MALEIC HYDRAZIDE 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
- 10 For control of wild onions and garlic do not apply to young seedlings less than one season old or winter pastures consisting of small grains such as rye. Do not pasture livestock in or cut hay from treated area.
 - 11 Spray potatoes at least 24 hours before rain. Rain occurring within 24 hours after application will reduce effectiveness.
 - 12 HELENA BRAND 30% MALEIC HYDRAZIDE is not corrosive to spray equipment. It does not offer drift problems on nearby crops.
 - 13 Rinse spray equipment with water after application. Do not contaminate water by cleaning of equipment or disposal of wastes.

WARRANTY AND LIMITATION OF DAMAGES. Helena 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 risk referred to therein. Helena Chemical Company makes no other express or implied warranty, including any other express or implied warranty of **FITNESS** or of **MERCHANTABILITY** or the agent of Helena 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 lost profits or income.

DO NOT RE-USE THIS CONTAINER FOR ANY PURPOSE

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ACCEPTED WITH COMMENTS