

Willard F. Cummings  
Uniroyal Chemical Co., Inc.  
74 Amity Rd.  
Bethany, CT 06524-3402

Dear Mr. Cummings:

Subject: Revised Labeling  
Royal MH-30 (potatoes and onions)  
EPA Registration No. 400-84  
Royal MH-30 SG (potatoes, onions, etc.)  
EPA Registration No. 400-165  
Royal MH-30 XTRA (potatoes, onions)  
EPA Registration No. 400-452  
Your Submissions Dated October 3, 1994

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - In your directions for use of a non-ionic surfactant specify that the surfactant must be cleared for application to growing crops.
2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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A stamped copy of the labeling is enclosed for your records.

Sincerely yours,



Cynthia Giles-Parker  
Product Manager (22)  
Fungicide Herbicide Branch  
Registration Division (7505C)

Enclosure

# GROWTH RETARDANT FOR POTATOES AND ONIONS

ROYAL MH-30 XTRA contains 2.25 pounds of maleic hydrazide per U.S. gallon, compared to 1.5 pound in ROYAL MH-30



Net contents:

## COMPOSITION

Active Ingredient: (% by weight)	
Potassium salt of 1,2-dihydro-3,6-pyridazinedione .....	30.3%*
Inert Ingredients: .....	69.7%
Total: .....	100.0%

\*Contains 2.25 pounds of maleic hydrazide per U.S. gallon

\*Contains 270 grams of maleic hydrazide per liter

## KEEP OUT OF REACH OF CHILDREN CAUTION

### STATEMENT OF PRACTICAL TREATMENT

**IF IN EYES:** Flush eyes with plenty of water. Call a physician if irritation persists.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye injury. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT

**Applicators and Other Handlers Must Wear:** Long-sleeved shirt and long pants; waterproof gloves; shoes plus socks.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### ENVIRONMENTAL HAZARDS

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 by disposal of equipment washwaters.

**UNIROYAL  
CHEMICAL**

Uniroyal Chemical Company, Inc., Middlebury, CT 06749

EPA Reg. No. 400-452

EPA Est. No.

005WPS

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all label directions carefully before use.

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, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and 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. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves, shoes plus socks.

**BEST AVAILABLE COPY**

APPLICATION NOTES below for additional important information.

## **FOR USE ON POTATOES EAST OF THE ROCKY MOUNTAINS**

### **BENEFITS**

#### **Sprout Control**

ROYAL MH-30 XTRA will control sprouting of potatoes in storage. However, ROYAL MH-30 XTRA will not make a poor-keeping potato such as Norgold or Norchip into a good-keeping potato.

#### **Reduction of Volunteer Potatoes**

ROYAL MH-30 XTRA will reduce the number of volunteer potatoes the following spring because of its ability to control sprouting.

#### **May Improve Grade**

ROYAL MH-30 XTRA may improve the grade of potatoes, especially Russet Burbank variety, if the application is made prior to any secondary tuber formation.

#### **Undersize Potatoes**

ROYAL MH-30 XTRA will help reduce any additional "sets" of potatoes, thus decreasing the number of undersized potatoes in the field at harvest.

#### **Reduces Shrinkage**

ROYAL MH-30 XTRA applications can reduce shrinkage in storage up to 15 percent.

### **TIMING OF APPLICATION**

Timing of application may occur as early as 2 to 3 weeks past 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 few lower leaves show a yellow color. APPLICATION PRIOR TO THIS TIME MAY RESULT IN PHYTOTOXICITY AND REDUCED TUBER SIZE. The following tuber sizes may also be used as a guide, provided the above conditions have been met:

#### **Russet Burbank and other Russet (elongated) types**

The smallest tubers that are required to reach a minimum size of 4 to 6 oz. should be 1.5 to 2 inches in diameter and elongating at the time of spraying, except for Norgold, which must be at least 2 inches in diameter at the time of spraying.

#### **Other varieties (round types)**

The smallest tubers that are required to reach maximum size should be 1.5 inch in diameter at the time of spraying, except for Norchip, which must be at least 2 inches in diameter at the time of spraying.

### **RATE OF APPLICATION**

#### **Ground**

Use 1 to 1.33 gallon of ROYAL MH-30 XTRA per acre in a minimum of 30 gallons of water per acre. Use the 1.33 gallon rate when vines are robust and in areas where the vines stay green and vigorous up through the time of crop desiccation. The higher rate should also be used on varieties that sprout readily in storage (such as Norgold) or when potatoes will be stored under extended high temperatures.

#### **Aerial**

Use 1 to 1.33 gallon of ROYAL MH-30 XTRA per acre in a sufficient quantity of water to gain complete and uniform coverage. Use the 1.33 gallon rate when vines are robust and in areas where the vines stay green and vigorous up through the time of crop desiccation. The higher rate should also be used on varieties that sprout readily in storage (such as Norgold) or when potatoes will be stored under extended high temperatures. Do not fly at heights of less than 8 to 12 feet. Maintaining this height will give more uniform coverage and aid in preventing excessive build up of chemical on the left side of the treated swath. These heights should be reduced if cross wind velocities exceed 2 to 4 MPH.

#### **Reduction of Volunteer Potatoes**

ROYAL MH-30 XTRA will reduce the number of volunteer potatoes the following spring because of its ability to control sprouting.

#### **Reduces Shrinkage**

ROYAL MH-30 XTRA applications can reduce shrinkage in storage up to 15 percent.

### **TIMING OF APPLICATION**

ROYAL MH-30 XTRA should be applied 3 to 4 weeks prior to normal harvest but at least 2 weeks prior to potato vine desiccation for good sprout control and for storage benefits. APPLICATION PRIOR TO THIS TIME MAY RESULT IN PHYTOTOXICITY AND REDUCED TUBER SIZE. DO NOT USE ON POTATOES THAT HAVE BEEN STRESSED AT ANY TIME DURING THE GROWING SEASON.

### **RATE OF APPLICATION**

#### **Ground**

Use 1 to 1.33 gallon of ROYAL MH-30 XTRA per acre in a minimum of 30 gallons of water per acre. Use the 1.33 gallon rate when vines are robust and in areas where the vines stay green and vigorous up through the time of crop desiccation.

#### **Aerial**

Use 1 to 1.33 gallon of ROYAL MH-30 XTRA per acre in a minimum of 10 gallons of water per acre. Use the 1.33 gallon rate when vines are robust and in areas where the vines stay green and vigorous up through the time of crop desiccation. Do not fly at heights of less than 8 to 12 feet. Maintaining this height will give more uniform coverage and aid in preventing excessive build up of chemical on the left side of the treated swath. These heights should be reduced if cross-wind velocities exceed 2 to 4 MPH.

### **ONIONS**

#### **GENERAL INFORMATION**

ROYAL MH-30 XTRA will control sprouting of onions in storage. See APPLICATION NOTES below for additional important information.

#### **TIMING OF APPLICATION**

ROYAL MH-30 XTRA should be applied when the bulbs are fully mature, have at least 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 percent of the tops have fallen but all 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 ROYAL MH-30 XTRA.

**NOTE:** Avoid spraying edible onions too early. If spraying is done earlier than two weeks before maturity, spongy bulbs may result.

#### **RATE OF APPLICATION**

##### **Ground**

Use 7 pints of ROYAL MH-30 XTRA per acre in a minimum of 30 gallons of water per acre.

##### **Aerial**

Use 7 pints of ROYAL MH-30 XTRA per acre in a minimum of 10 gallons of water per acre. Do not fly at heights of less than 8 to 12 feet. Maintaining this height will give more uniform coverage and aid in preventing excessive build-up of chemical on the left side of the treated swath. These heights should be reduced if cross-wind velocities exceed 2 to 4 MPH.

#### **ONION VARIETIES**

Use of ROYAL MH-30 XTRA should be combined with selection of a good-keeping variety. Do not apply to onion varieties with poor keeping quality. ROYAL MH-30 XTRA will not make poor-keeping varieties equal to good-keeping varieties.

## SPRAY ADJUVANTS FOR ONIONS

West of the Rocky Mountains: Use a non-ionic surfactant similar to X-77\* or R-11\* at the rate of 1 quart per 100 gallons of spray solution in arid sections of the U.S. Such products may help provide better coverage and aid in translocation of ROYAL MH-30 XTRA.

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

®X-77 is a registered trademark of Loveland Industries, Inc.

®R-11 is a registered trademark of Wilbur-Ellis Company.

## APPLICATION NOTES: POTATOES AND ONIONS

1. Always follow dosage recommendations carefully and spray field uniformly. Uniform and complete coverage is essential for satisfactory results.
2. Uneven application may result in bud end cracking and/or "elephant hide" on potato tubers.
3. To obtain desired results, plants should not be stressed from either too little or excessive water before or after application.
4. Do not use on potato plants grown for seed production.
5. Spray potatoes or onions at least 24 hours before rain or applying overhead irrigation. Rain or overhead irrigation occurring within 24 hours after application may reduce effectiveness.
6. At least a 2-week interval should be allowed between a ROYAL MH-30 XTRA application to potatoes and the use of a vine desiccant.
7. Even though ROYAL MH-30 XTRA is non-volatile, no drift should be permitted onto nearby crops. Particular care should be taken to prevent drift when aerial applications are being made.
8. TEMPERATURE: ROYAL MH-30 XTRA should be applied at temperatures below 85°F or at temperatures below 80°F if the temperature is expected to exceed 85°F later that day. ROYAL MH-30 XTRA is water soluble and under high temperature and low humidity conditions will crystallize on the leaf surface and will not be readily absorbed into the plant.
9. SPRAY ADJUVANTS: For potatoes, do not add any additional wetting agents or commercial spray adjuvants to ROYAL MH-30 XTRA spray solutions. For onions, see Directions for Use.
10. COMPATIBILITY: ROYAL MH-30 XTRA is compatible with most commonly used insecticides and fungicides. However, separate application is recommended.
11. Occasional injury to the terminal growth of potato foliage has been observed following the application of ROYAL MH-30 XTRA. However, trials and usage indicate that this does not adversely affect the yield or the quality of the potato tubers at harvest, if the chemical is applied according to label recommendations.

**ALWAYS SHAKE OR STIR WELL BEFORE USE**

## STORAGE AND DISPOSAL

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

**STORAGE:** Store in the original container only. After partial use, replace lid and close tightly. Store in a secure place that is temperate and dry. Store ROYAL MH-30 XTRA at temperatures above 32°F; storage above 40°F is preferred. The active ingredient in ROYAL MH-30 XTRA will separate from the surfactant at temperatures above 134°F. If containers are exposed to excessive heating, the contents can be remixed by lowering the temperature of the entire formulation below 134°F and applying agitation. ALWAYS SHAKE OR STIR WELL BEFORE USE.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes can not be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**EQUIPMENT CLEANING:** ROYAL MH-30 XTRA is not corrosive to spray equipment. Following applications, all spray equipment should be thoroughly rinsed with water. Do not contaminate water by disposal of equipment washwaters.

**CONTAINER DISPOSAL: Plastic Containers:** Triple rinse (or equivalent). Pressure rinse is preferred. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Mini Bulk Containers:** Return empty containers for reuse.

**IMPORTANT NOTICE**—Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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