

**\*PATENTED PRODUCTION PROCESS\***

# **NUTROL®**

**Fungicide, Plant Nutrient & Tank Buffering Agent**  
**CROP PROTECTION WITH Nutrol**

For the Control of Powdery Mildew on Apples, Cucurbits (Cucumbers, Melons, Squash and Watermelons), Grapes, Leafy Vegetables, Mangoes, Peppers, Roses, Stone Fruits (Cherries, Nectarines, Peaches and Plums), Tomatoes, Ornamentals and Turfgrass.

**Active Ingredient:** Potassium Dihydrogen Phosphate . . . . .100%

## **KEEP OUT OF REACH OF CHILDREN**

## **CAUTION**

**SEE BOOKLET FOR FIRST AID, ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE**

**Precaucion al usuario:**

Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicada ampliamente.

**Warranty and Disclaimer**

1. Seller warrants that this product consists of the ingredients specified and is reasonably fit for the purpose stated on this label when used in accordance with directions under normal conditions of use. No one, other than the officer of Seller, is authorized to make any warranty, guarantee or direction concerning this product.
2. To the extent permitted by applicable law, the seller's liability for handling, storage and use of this product contrary to label instructions shall be limited to replacement of product or refund of purchaser price.

**Net Weight: 50 lb. (22.7 kg.)**



Distributed and Guaranteed by:  
LidoChem LLC  
20 Village Court  
Hazlet, NJ 07730  
Phone 732-888-8000 Fax 732-264-2751

☐ **EPA REG. NO. 70644-1**  
☐ **EPA EST. 67536-FL-1**  
☐ **EPA EST. 14322-NY-1**

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Manufactured and Packaged for LidoChem LLC

FIRST AID	
<b>If Inhaled:</b>	<ul style="list-style-type: none"> <li>* Move person to fresh air.</li> <li>* If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>* Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>* Immediately call a poison control center or doctor for treatment advice.</li> <li>* Have person sip a glass of water if able to swallow.</li> <li>* Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>* Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <li>* Take off contaminated clothing.</li> <li>* Immediately rinse skin with plenty of water for 15-20 minutes.</li> <li>* Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <li>* Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>* Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>* Call a poison control center or doctor for treatment advice.</li> </ul>
<b>Hot Line Number:</b> Have the product container or label with you when calling a poison control center or doctor or when going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1.800.858.7378 seven days a week, 6:30am-4:30pm Pacific time (NPIC website: <a href="http://www.npic.orst.edu">www.npic.orst.edu</a> ). For medical emergencies call your poison control center at 1.800.222.1222.	

#### PRECAUTIONARY STATEMENTS

##### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist. Thoroughly wash with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

##### 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 cleaning equipment or disposing of equipment wash water or rinsate.

#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt, long pants, waterproof gloves, shoes and socks. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are given for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### User Safety Recommendations

**Users should:** Immediately remove clothing/PPE if pesticide gets inside, then thoroughly wash and put on clean clothing. Immediately remove PPE after handling product. Wash the outside of gloves before removing. As soon as possible, thoroughly wash and change into clean clothing.

#### 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 four (4) 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 and socks.

#### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Do not enter treated area without protective clothing until sprays have dried.

#### Engineering Controls

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. **Important:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

## 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 in a way that will contact workers or other persons, either directly or through drift. Only protected handlers (long sleeved shirt, long pants, waterproof gloves, shoes and socks) are to be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

### Crop Protection with Nutrol

**Nutrol** is a soluble crystalline product to be mixed with water. Application rates vary according to the specific volumes of water applied to the crop. When the crop can be completely covered with the spray solution, use the lower range of spray volumes. Surfactant use and spray efficiency will impact coverage. Select a water volume and corresponding rate of **Nutrol** necessary to thoroughly spray/mist all fruit and foliage surfaces. Gradually add the specific amount of product to a half-filled sprayer tank and mix, then add the balance of required water while continuing to agitate the solution. Always add **Nutrol** to the tank mix first, then add other products after all **Nutrol** has been completely solubilized. **Add an approved/compatible "spreader-sticker" to the solution to assure complete spray coverage of plant surfaces.** Plant disease pressure can increase when plant surfaces are frequently wet and temperatures are warm. Under these severe disease conditions use the higher spray rate and apply at the shorter spray interval.

**Nutrol** suppresses existing mildew disease and inhibits further development of new mildew growth on plant tissue. Use alone, in alternating applications or in tank-mix spray programs with other compatible, EPA-approved fungicides. It is rapidly absorbed by the plant and is mobile within the plant tissues, improving the potassium and phosphorus content in the plant. It therefore acts in a dual role as a biocompatible fungicide for plant disease control and as an essential plant food. **Nutrol** will also acidify/buffer your spray tank solution to help reduce alkaline hydrolysis of other compatible, tank-mixed materials.

Best performance is attained by beginning **Nutrol** applications prior to the onset of disease, as a preventative disease control program. **DO NOT MIX with copper fungicides or with any spray materials that warn against low pH (<5.5) applications.**

## IMPORTANT

### Resistant Powdery Mildew Fungus Strains May Be Present!

If treatment is not effective following use of conventional fungicides as instructed, a resistant strain of the fungus may be present. If this occurs, then fungicides such as benzimidazole, thiophanate or DMI type will not give effective control. When resistant fungus strains are present, give serious consideration to the use of **Nutrol** for effective mildew control and crop protection. **Nutrol** controls mildew strains that are resistant to other fungicides and is a valuable **resistance management** tool. The pH of a 1% aqueous solution of **Nutrol** is  $4.5 \pm 0.3$ .

## 0-50-32

### Guaranteed Analysis

Available Phosphate ( $P_2O_5$ ).....50%  
Soluble Potash ( $K_2O$ ).....32%  
Derived from: Monopotassium Phosphate

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.htm> or by writing to LidoChem, Inc. at the address on this label and referring to the lot/batch # on this container.

In Virginia this lawn/turf fertilizer contains phosphorous and is only for nonagricultural use on (i) turf during its first growing season; (ii) on turf areas being repaired or renovated; and (iii) on turf where a soil test performed within the last 3 years indicates a phosphorous deficiency. This fertilizer is not for the routine maintenance of turf.

### Product Description

**Nutrol** is manufactured specifically as a low salt, water soluble, foliar and special application fungicide and plant nutrient. Its use is suggested as a supplement to a grower's standard practice fungicide and fertilizer programs. The target is reduced pesticide use and enhanced yield and quality. **Nutrol** is a highly soluble, low salt index formulation developed to supplement standard fertility practices by providing a highly available source of phosphorus and potassium.

Research has shown that foliar-applied nutrients, in a pure and soluble form, are absorbed more efficiently by foliage than are those supplied in the soil. Nutrient translocation to all parts of the plant is generally more rapid when nutrients are applied foliarly. Foliar fertilization with **Nutrol** is intended as a supplement to a regular fertilization program and will not, by itself, provide all the nutrients normally required by agricultural crops.

A good tissue testing program may be helpful to monitor and maintain optimum plant growth and development. Adverse conditions such as moisture, stress, weather, salts, soil type, etc. may induce nutrient deficiency symptoms. When applied as directed, **Nutrol** application is a means of obtaining a quick response to needed nutrients.

Salt Index: 8.4 (0.097 per 1% of plant nutrient)  
pH (1% solution):  $4.5 \pm 0.3$

### Mixing Directions

- Fill tank approximately 1/2 full of water before gradually adding **Nutrol**. Thoroughly agitate while adding **Nutrol** and the remaining water. When tank mixing, add pesticide last.
- When temperatures are cold, allow extra time for this product to completely dissolve.
- Research has demonstrated enhanced uptake with the addition of a surfactant. Do not use with surfactants when plants are under severe stress conditions, such as heat or water stress. Immediately begin applications after adverse stress conditions subside.
- Mix **Nutrol** at 1.9 lb. or less per gallon of water. Consider the pH of the solution when using concentrations greater than 1-1.9 lb. per gallon. Do not store high concentration mixes in temperatures less than 60°F.

### Compatibility

**Nutrol** is compatible with most pesticides and liquid fertilizers. Apply **Nutrol** in an alternating tank mix program. **Tank Mix Compatibility Testing:** Perform a jar test prior to tank mixing to ensure compatibility of this product with other products. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jells, has oily films, layers or other precipitates, it is not compatible; do not use the tank mix combination.

**NOTE: Nutrol** acts as a buffer resulting in an acidic spray solution. Do not combine **Nutrol** with copper fungicides or with any spray materials that warn against low pH (<5.5) solutions. Always test tank mixes for compatibility, via a jar test, before mixing large batches. In accordance with local crop protection practices, it has been found that the combination of **Nutrol** with Prudent fertilizers, ArmorTech 44 or N pHource 42 aids in the protection of listed crops.

### Notification of Possible Admixes

For practical purposes, **Nutrol** is rarely used alone; instead, **Nutrol** is generally part of a formulation or tank mix. Those formulations, as a rule, contain an inert support and/or an inert surfactant in addition to active material. These inert admixes are dictated by local and cultural practices. An inert support may be organic or mineral, natural or synthetic. These inert supports facilitate the application of **Nutrol** to the plant, to seeds or soil and aid in its transportation and handling. Inert surfactants include ionic or non-ionic emulsifiers, dispersants, wetting agents, fatty acids or fatty amines. If desired, prepare **Nutrol** to include a penetration agent, adhesive, anti-lumping agent and/or colorant.

### Other Possible Inert Additives May Include

- A carbon skeleton component: Water-soluble carbohydrates such as sucrose, fructose, glucose and other mono-, di- and oligosaccharides are suitable.
- A macronutrient component: The macronutrients are essential to nutrition and growth. The most important macronutrients are N, P and K. Nitrogen sources include: nitric acid salts, ammonium salts, urea, methylene ureas, amino acids, proteins and nucleic acids. Phosphate sources include salts of phosphorus acid. Potassium sources include potassium salts.
- A micronutrient component: The most important micronutrients are salts of Zn, Fe, Cu, Mn, B, Co and Mo.
- Complexing agents: The following inert materials serve as anti-precipitation agents: citric acid, fulvic acid, humic acid, EDTA, EDDA, EDDHA, HEDTA, LPCA, MEA, IDS and EDDS.
- Seaweed or kelp extracts. Seaweed or kelp extracts as nutritional supplements.
- Plant extracts.

### Chemigation

Only apply this product through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move) or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Refer to the *Mixing Directions* above when preparing the chemigation mixture. Apply **Nutrol** for the duration of the water application.

**For Drip (Trickle) and Sprinkler Chemigation:** The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**For Sprinkler Chemigation:** Do not apply when wind speed favors drift beyond the area intended for treatment.



### Nutrol Guidelines for Nutritional Application

Crop	Rate	Timing
<b>Alfalfa</b>	Foliar: 5-8 lb./acre per application. Apply after cuttings at a maximum concentration of 1.9 lb./acre only if label mixing directions are followed. Chemigation: Apply 40 - 50 lb./acre	Foliar: Apply at first regrowth - when alfalfa is 6-8" tall; apply after each cutting. Chemigation: Apply one week after every cut through irrigation.
<b>Apples</b>	10-20 lb./acre per application. Use a maximum of 1.5 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 4 lb. of product per 10 gallons of spray solution by air.	Mid-Season Sprays: Apply during June/July, up to 4 successive sprays 7-10 days apart. Finish Spray: Apply at the color break period. Post Harvest Spray: Apply immediately after harvest.
<b>Avocado</b>	25-40 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply 2-3 times from fruit set until 30 days before harvest every 30 days.
<b>Banana</b>	20-30 lb./acre per application. Use a maximum of 2 lb. of product per 10 gallons of spray solution.	Apply 1-2 times - 15 and 21 days after shooting. Apply 1 time 21-30 days before bloom.
<b>Beans such as Dry, Succulent and Limas</b>	5-8 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply at first flower and 2 additional applications during the main filling stage of pod development 7-10 days apart.
<b>Berries: Bush Type</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Make 2-4 foliar applications, at 14-21 day intervals, starting at first flower.
<b>Citrus such as Grapefruit, Lemons, Oranges and Tangerines</b>	20-25 lb./acre per application. Use a maximum of 4 lb. of product per 10 gallons of spray solution.	Apply up to 3 times: Pre-bloom, late June (after June drop) and in early September.
<b>Corn: Field and Sweet</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Two applications: Apply 2 weeks prior to tasseling and again between tasseling and silking.
<b>Cotton</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution by ground rig and a maximum of 10 lb. of product per 10 gallons of spray solution by air.	Make applications at 30 (square development), 60 (first flowering) and 90 (boll set) days after emergence.
<b>Cucurbits and Melons such as Cantaloupe, Cucumber, Honeydew, Musk melon, Pumpkin and Squash</b>	8-12 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply 2-4 sprays beginning at fruit set on a 7 -14 day interval.
<b>Deciduous Fruits such as Apricots, Cherries, Nectarines, Peaches, Pears, Plums and Prunes</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply as a pre-bloom and post-bloom spray.
<b>Grapes</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply starting at the 1-2 inch (3 to 5 cm) shoot stage through veraison every 2-4 weeks.
<b>Hops</b>	5-10 lb./acre per application. Use sufficient water for complete coverage by ground sprayers. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Begin applications at early season training and continue through end of bloom period as often as every 7 days.
<b>Legumes such as Garbanzos, Lentils and Peas (Dry and Succulent)</b>	5-8 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply at first flower with 2 additional applications during the mid-filling stage of pod development 7-10 days apart.
<b>Mango</b>	15-20 lb./acre per application. Use a maximum of 4 lb. of product per 10 gallons of spray solution.	Apply up to 3 times after panicle development every 14 days.
<b>Nuts such as Almonds, Filberts, Pecans, Pistachios and Walnuts</b>	Foliar: Pre-bloom: 5-10 lb./acre; Finish: 5-15 lb./acre Use a maximum of 1.5 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 4 lb. of product per 10 gallons of spray solution by air.	Bloom; mid-season (7-14 day interval); finish. Almonds: begin at petal fall and continue through hull split at 30 day intervals.
<b>Onions and Garlic</b>	8-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Make 2-4 applications beginning at transplanting. Repeat applications every 30 days.
<b>Ornamentals</b>	Use 1 lb. in 10 gallons of water and spray to wet. Transplants - Use 1-2 lb. of product per 10 gallons and apply approximately 1/2 gallon per transplanted shrub/tree.	Apply at bloom, spring shoot push or shortly after transplant and repeat in 14-21 days. Use any time new growth is pushing or in conjunction with pesticide applications.
<b>Peanuts</b>	5-8 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply 3 times- first at early bloom with 2 additional sprays at 80 days after planting and 10 days later.
<b>Peppers and Tomatoes</b>	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution.	Apply 2-6 sprays every 14 days starting at first bloom.
<b>Potato</b>	5-10 lb./acre per application. Use a maximum of 5 lb. of product per 10 gallons of spray solution.	Apply at early initial tuber formation. Apply subsequent sprays with fungicide applications.
<b>Produce such as Celery, Cole crops and Lettuce</b>	2-4 lb./acre per application. Use a maximum of 1 lb. of product per 10 gallons of spray solution.	Use multiple low rate applications 10-14 days apart starting just after transplant. Use as a preharvest application 3-14 days before harvest to improve color.

### Nutrol Guidelines for Nutritional Application *(continued)*

Crop	Rate	Timing
Rice	3-6 lb./acre per application. Use a maximum of 1 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 5 lb. of product per 10 gallons of spray solution by air.	Spray 2 times, first at the end of tillering and then at panicle initiation.
Root Crops such as Beets, Carrots and Sweet potatoes	2-8 lb./acre per application. Use a maximum of 2 lb. of product per 10 gallons of spray solution.	Apply at increasing rates every 14-21 days from early root swell until 2 weeks before harvest.
Small Grains such as Barley, Oats and Wheat	8-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 8 lb. of product per 10 gallons of spray solution by air.	Apply at late anthesis stage.
Soybean	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 8 lb. of product per 10 gallons of spray solution by air.	Apply 2 times - first at the early bloom stage and then at the main pod filling stage.
Strawberry	5-10 lb./acre per application. Use a maximum of 3 lb. per 10 gallons of spray solution. Chemigation: Apply 5-10 lb./acre.	Apply 2-4 times during the harvest period on a 7-14 day schedule. Apply as needed through chemigation.
Sugarbeet	5-10 lb./acre per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution by ground rig or a maximum of 8 lb. of product per 10 gallons of spray solution by air.	Apply when leaves are 10" across and again 3-4 weeks later. Apply again 4 weeks before harvest.
Turf Grass, Cool Season	2-4 oz. per 1,000 sq. ft. (6-11 lb./acre) per application. Use a maximum of 3 lb. of product per 10 gallons of spray solution. Use higher rates in chemigation systems where <b>Nutrol</b> is the primary source of P and K.	Apply every 7-14 days throughout the season.
Turf Grass, Warm Season	2-4 oz. per 1,000 sq. ft. (6-11 lb./acre) per application. If used as a starter, apply 4-6 oz. per 1,000 sq. ft. (11-16 lb./acre). Use a maximum of 3 lb. of product per 10 gallons of spray solution. Use higher rates in chemigation systems where <b>Nutrol</b> is the primary source of P and K.	Apply every 7-14 days throughout the season. Use as a starter fertilizer during transition periods to cool season grasses.

### Blossom Thinning Aid for Peaches, Nectarines, Plums, Plouts and Prunes

Combine **Nutrol** with labeled rates of ENTRY, A Wilbur-Ellis Co. surfactant, during local flowering thinning practices. The end user must contact a Wilbur-Ellis Co. representative or a specialist in the Univ. of California Horticulture Department for specific rates, timing and use recommendations.

### Nutrol Guidelines for Nutritional Seed Treatment Applications

#### On-Site Seed Treatments

Prior to planting, mix 0.25-4.0 ounces of **Nutrol** per gallon of water. Stir solution for several minutes to ensure complete suspension. Pour seeds into solution and allow seeds to soak for 10-30 minutes. For very small seeds, soaking seedlings in plug trays after germination might be easier. Do not store excess treated seeds beyond planting time.

#### Commercial Seed Treatments

#### Agricultural & Horticultural Seed Treatment

Apply at the rate of 1-5 ounces per 100 pounds of seed for the crops listed below. Not for seed treatment use in hopper-box, planter-box or other non-commercial seed treatment applications at planting.

Crop Group
Barley, Buckwheat, Millet, Oats, Rice, Rye, Sorghum, Triticale and Wheat
<b>Brassica (Cole) Leafy Vegetables</b> such as Broccoli (including Cavalo, Chinese and Raab), Brussels sprouts, Cabbage (including Chinese bok choy, Chinese napa and Mustard), Cauliflower, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach and Rape greens
<b>Bulb Vegetables</b> such as Garlic, Leek, Onion (dry bulb and green) and Shallot
Canola, Mustard Seed and Rapeseed
Corn (Field, Sweet and Pop)
Cotton
<b>Cucurbit Vegetables</b> such as Chayote (fruit), Chinese wax gourd, Citron melon, Cucumber, Gherkin, Edible gourd (including Chinese okra, Cucuzza, Hechima and Hyotan), Momordica spp. (includes Balsam apple, Balsam pear, Bitter melon, Chinese cucumber), Muskmelon (including Cantaloupe, Casaba, Crenshaw melon, Golden pershaw melon, Honeydew melon, Honey balls, Mango melon, Persian melon, Pineapple melon, Santa Claus melon, Snake melon and True cantaloupe), Pumpkin, Summer squash (including Crookneck squash, Scallop squash, Straightneck squash, Vegetable marrow and Zucchini), Winter squash (including Butternut squash, Calabaza and Hubbard squash), Cucumis mixtar, Cucumis pepo (including Acorn squash and Spaghetti squash) and Watermelon (including Hybrids and/or varieties of Citrullus lanatus)
<b>Fruiting Vegetables</b> such as Eggplant, Groundcherry, Pepino, Pepper (including Bell pepper, Chili pepper, Cooking pepper, Pimento and Sweet pepper), Tomatillo and Tomato

Crop Group
<b>Leafy Vegetables</b> such as Amaranth (Chinese spinach) Cardoon, Celery (including Chinese), Celtuce, Chervil, Chrysanthemum (Edible-leaved and Garland), Corn salad, Cress (Garden and Upland), Dandelion, Dock, Endive, Fennel (Finocchio), Lettuce (Head and Leaf), Orach, Parsely, Purslane (Garden and Winter), Radicchio, Rhubarb, Spinach (including New Zealand and Vine) and Swiss chard
<b>Legume Vegetables (except soybean)</b> such as Adzuki bean, Asparagus bean, Blackeyed peas, Broad bean (Fava), Catjang, Chickpea (Garbanzo bean), Chinese longbean, Cowpea, Crowder pea, Dwarf pea, Edible-pod bean, English pea, Field bean, Field pea, Garden pea, Green pea, Guar, jackbean, Kidney bean, Lima bean, Lentil, Lupin (Grain, Sweet, White and White sweet), Moth bean, Mung bean, Navy bean, Pigeon pea, Rice bean, Runner bean, Snap bean, Snow pea, Southern pea, Sugar snap pea, Tepary bean, Urd bean, Yard long bean and Wax bean
<b>Peanuts</b>
<b>Root and Tuber Vegetables</b> such as Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (Garden and Sugar), Burdock (Edible), Canna (Edible), Carrot, Cassava (Bitter and Sweet), Celery root, Chayote, Chervil, Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Leren, Parsley (Turnip rooted), Parsnip, Potato, Radish (including Oriental dalkon), Rutabaga, Salsify (including Black and Spanish), Skirret, Sweet potato, Tanier, Tumeric, Turnip, Yam bean and Yam (true)
<b>Soybeans</b>
<b>Sunflowers</b>
<b>Tobacco</b>
<b>Turf and Forage Grasses</b>

**Nutrol Crop Protection Fungicide Application Guidelines**  
 For each crop, see the following table for additional rates per water volume.

CROP PROTECTION with Nutrol lb./Acre												
Crop	Water Volume gal. / Acre						Crop	Water Volume gal. / Acre				
	50	100	150	200	250			50	100	150	200	250
Apples	8	8-16	17-20	21-32	33-40		Peppers	8	8-16	17-20	20	20
Cucurbits	10	10-20	17-20	20	20		Roses	5	6-8	9-10	10	10
Grapes	8	8-16	17-20	21-32	33-40		Stone Fruits	8	8-16	17-20	20	20
Leafy Vegetables	10	10-20	17-20	20	20		Tomatoes	8	8-16	17-20	20	20
Mangoes	8	8-16	17-20	21-32	33-40		Turfgrass	8-13	13-25	19-38	25-40	25-40
Ornamentals	8-13	13-16	19-38	25	40							

**Apples**  
 For control of powdery mildew (*Podosphaera leucotricha*) on Apples, use 8-40 lb. of **Nutrol** per acre. Start spraying at tight cluster and continue spraying every 7-10 days until terminal shoots cease their vegetative growth. The rate of product per acre will vary depending upon the tree size (canopy development) and the volume of water.  
**Min:** 8 lb./50 gallons spray solution per acre.  
**Max:** 40 lb./250 gallons spray solution per acre.  
 DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Cucurbits**  
**(Cucumber, Melons, Squash and Watermelons)**  
 For control of powdery mildew (*Sphaerotheca fuligenea*) on the above listed cucurbits use 10-20 lb. of **Nutrol** per acre. Start spraying when plants begin to run or when disease pressure is anticipated. Repeat at 7-14 day intervals as needed. Under conditions of severe disease pressure, use the higher rate and apply at 7 day intervals. For best results, do not apply when temperatures are over 85°F and humidity is high. Shading is necessary for greenhouse use.  
**Min:** 10 lb./50 gallons spray solution per acre.  
**Max:** 20 lb./250 gallons spray solution per acre.  
 DO NOT exceed 20 lb. per 100 gallons of finished spray solution.

**Grapes**  
 For control of powdery mildew (*Uncinula necator*) on grapes use 8-40 lb. of **Nutrol** per acre. Start spraying in the spring when shoots are 1-2 inches (3-5 cm) in length and when disease pressure is anticipated. Repeat every 10-14 days. When disease pressure is low, use low per acre rates early in the season. The per acre rate must be increased as disease pressure increases. For improved appearance on table grapes, use lower application rates.  
**Min:** 8 lb./50 gallons spray solution per acre.  
**Max:** 40 lb./250 gallons spray solution per acre.  
 DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Leafy Vegetables**  
**(such as Lettuce, Cabbage, Greens, Spinach and Parsley)**

For control of powdery mildew (*Erysiphe cichoracearum*) on the above listed leafy vegetables, use 10-20 lb. of **Nutrol** per acre. Start spraying when plants begin to run or when disease pressure is anticipated. Repeat at 7-14 day intervals as needed. Under conditions of severe disease pressure, use the higher rate and apply at 7 day intervals. For best results, do not apply when temperatures are over 85°F and humidity is high. Shading is necessary for greenhouse use.

**Min:** 10 lb./50 gallons spray solution per acre.

**Max:** 20 lb./250 gallons spray solution per acre.

DO NOT exceed 20 lb. per 100 gallons of finished spray solution.

**Mangoes**

For control of powdery mildew (*Oidium mangiferae*) on mango use 8-40 lb. of **Nutrol** per acre. Start spraying at first appearance of bloom panicles (approximately 2 inches long) and repeat at 7-14 day intervals until all fruit are set. If additional sprays are required, continue at 2-3 week intervals until shoot growth ceases - which should be about 6 sprays.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 40 lb./250 gallons spray solution per acre.

DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Ornamentals**

For control of powdery mildew such as *Microsphaeri alni* and *Erysiphe cichoracearum* on woody and herbaceous ornamentals, use 8-40 lb. of **Nutrol** per acre. Start spraying in early spring when conditions become favorable for disease development (i.e. cool, humid, cloudy periods) and continue spraying on a 7-14 day schedule for the entire season.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 40 lb./250 gallons spray solution per acre.

DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Peppers**

For control of powdery mildew (*Leveillula taurica*) on peppers: **Greenhouse Grown:** Mix 10 lb. of **Nutrol** per 100 gallons and apply 1.5 gallons of finished spray per 1,000 sq. ft. at 5-7 day intervals. Use shading to reduce temperatures during spraying. **Field Grown:** Use 8-20 lb. of **Nutrol** per acre when disease pressure begins to increase. Repeat at 7-10 day intervals.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 20 lb./250 gallons spray solution per acre.

DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Roses**

For control of powdery mildew (*Sphaerotheca Pannosa* var. *rosae*), use 5-10 lb. of **Nutrol** per acre. Apply at 5-7 day intervals as needed. Best performance will be achieved with full wetting of leaves without runoff.

**Min:** 5 lb./50 gallons spray solution per acre.

**Max:** 10 lb./250 gallons spray solution per acre.

DO NOT exceed 8 lb. per 100 gallons of finished spray solution.

**Stone Fruits**  
**(Peaches, Nectarines, Plums and Cherries)**

For control of powdery mildew (*Sphaerotheca pannosa* var. *persicae* and *Podosphaera oxycanthae*) on stone fruits as listed use 8-20 lb. of **Nutrol** per acre. Follow local recommendations for powdery mildew control timings or apply when disease pressure is anticipated and repeat every 7-14 days.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 20 lb./250 gallons spray solution per acre.

DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Tomatoes**

For control of powdery mildew (*Leveillula taurica*) on tomatoes: **Greenhouse Grown:** Use 10 lb. of **Nutrol** per 100 gallons and apply 1.5 gallons of finished spray per 1,000 sq. ft. at 5-7 day intervals. Use shading to reduce temperatures during spraying. **Field Grown:** Use 8 -20 lb. of **Nutrol** per acre when disease pressure begins to increase. Repeat at 7-10 day intervals.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 20 lb./250 gallons spray solution per acre.

DO NOT exceed 16 lb. per 100 gallons of finished spray solution.

**Turfgrass**

For control of powdery mildew (*Erysiphe graminis* D.C.), use 8-40 lb. of **Nutrol** per acre. Start spraying in early spring when conditions become favorable for disease development (i.e. cool, humid, cloudy periods) and continue spraying on a 7-14 day schedule for the entire season.

**Min:** 8 lb./50 gallons spray solution per acre.

**Max:** 40 lb./250 gallons spray solution per acre.

DO NOT exceed 25 lb. per 100 gallons of finished spray solution.

## Nutrol Crop Protection Fungicide Application Guidelines (*continued*)

### Expanded Efficacy with Product Combinations

**Nutrol** in combination with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 is acceptable with local crop protection practices. The end user must contact a LidoChem, Inc. representative or specialist for specific rates, timing and use recommendations. It has been found that the combination of **Nutrol** and all Prudent fertilizers, ArmorTech 44 or N pHource 42 aids in the protection of the following crops:

### Ornamentals and Bedding Plants

Use all Prudent fertilizers, ArmorTech 44 or N pHource 42 combined with labeled rates of **Nutrol** on ornamentals and bedding plants grown in field nursery, greenhouse, landscaping and conifer nursery situations, for control of diseases caused by *Pythium* and *Phytophthora*.

Use all Prudent fertilizers, ArmorTech 44 or N pHource 42 combined with labeled rates of **Nutrol** on ornamentals for control of downy mildew and fire blight and for the suppression of bacterial blight caused by certain pathovars of *Xanthomonas campestris*. Applications must be made prior to disease development and must be made in conjunction with good cultural management practices. Use the higher rate when disease pressure is severe. Do not exceed recommended rates or apply more frequently than at specified intervals or plant injury will occur.

### Ornamentals

Foliar applications to plants such as Aglaonema, Aphelandra, Azalea, Bougainvillea, Boxwood, *Cattelya skinneri*, Cissus, Dieffenbachia, Hibiscus, Juniper, Leather-leaf Fern, Pittosporum, Philodendron, Pothos, Rhododendron, Spathiphyllum and *Taxus media*: Mix 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 7 days.

Drench applications to plants such as Aphelandra, Azalea, Boxwood, Cissus, Dieffenbachia, Japanese Holly, Juniper, Monterey Pine, Philodendron, Pieris, Pittosporum, Rhododendron, Schefflera, Spathiphyllum and *Taxus media*: Mix 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 7 days.

### Bedding Plants

Foliar applications to plants such as Begonia, Pansy, Vinca, Marigold, Zinnia, Petunia, Geranium, and Impatiens: Mix 11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 7 days.

### For Use on Conifers in Nurseries to Prevent Phytophthora Root Rot

Dip treatments to conifers such as Douglas fir, spruce and pines: Dip in a mix of 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 30 days. Dip immediately before transplanting. When making dip applications, wear chemical/water resistant gloves, goggles or face shield, long pants (coveralls), long-sleeved shirt, shoes, and socks.

Foliar applications to conifers such as Douglas fir, spruce and pines: Mix 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 30 days. For injection applications contact a LidoChem, Inc. representative.

### Downy Mildew Control in Roses

Foliar applications to Roses (field, container, landscape and mini varieties) to control Downy mildew (*Peronospora sparsa*): Applications must be made in conjunction with a disease sanitation program to reduce the spread of the disease to uninfected plants. Mix 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 7 days.

### Fire Blight Suppression

Foliar applications to plants such as ornamental pear, pyracantha and hawthorne: Applications must be made in conjunction with a strict sanitation program to reduce the spread of the disease to uninfected plants. Mix 8-11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary. **Nutrol** and all Prudent fertilizers, ArmorTech 44 or N pHource 42 work solely as a preventive treatment. Begin spray treatments at prebloom stage and continue at 7 day Intervals until bloom period ends. Do not exceed one application every 7 days. For injection applications, contact a Lidochem, Inc. representative.

### Bacterial Blight Suppression

Foliar applications to plants, such as English ivy, schefflera, anthurium, dieffenbachia, spathaphyllum, syngonium and ficus, for the suppression of the *Xanthomonas campestris* pathovars *hederae*, *dieffenbachiae*, *syngonii* and *fici*: Applications must be made in conjunction with a disease sanitation program to reduce the spread of the disease to uninfected plants. Mix 8- 11 pounds of **Nutrol** with labeled rates of all Prudent fertilizers, ArmorTech 44 or N pHource 42 per 100 gallons of water and apply as necessary, but do not exceed one application every 7 days. Refer to compatibility statements concerning use of coppers or other compounds.

Crop	Disease Name	Pathogen
Almond	Bacterial Diseases	<i>Pseudomonas syringae</i>
Apple	Gray Mold Rots	<i>Botrytis cinerea</i>
	Crown Rot	<i>Phytophthora cactorum</i>
Apricot	Bacterial Diseases	<i>Pseudomonas syringae</i>
Artichoke	Downy Mildew	<i>Plasmopara halstedii</i>
	Powdery Mildew	<i>Erysiphe cichoracearum</i>
Cherry	Bacterial Diseases	<i>Xanthomonas pruni</i> , <i>Pseudomonas syringae</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
Citrus	Brown Rot	<i>Phytophthora citrophthora</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>



Nutrol Crop Protection Fungicide Application Guidelines (continued)

Crop	Disease Name	Pathogen
Eggplant, Pepper	Downy Mildew	<i>Peronospora tabacina</i>
	Damping-Off of Seedlings	<i>Pythium ultimum</i> , <i>P. debarysanum</i>
	Verticillium Wilt	<i>Verticillium</i> sp., <i>Rhizoctonia solani</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
	Fusarium Wilt	<i>Fusarium annuum</i>
Grape Vine	Downy Mildew	<i>Plasmopara viticola</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
Lettuce, Endive, Chicory	Powdery Mildew	<i>Erysiphe cichoracearum</i>
	Damping-Off of Seedlings	<i>Pythium</i> sp.
	Bottom Rot	<i>Rhizoctonia solani</i>
	Downy Mildew	<i>Bremia lactucae</i>
Melon, Cucumber, Zucchini	Downy Mildew	<i>Pseudoperonospora cubensis</i>
	Fusarium Wilt	<i>Fusarium oxysporum</i> sp. <i>cucurbitae</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
	Damping-Off of Seedlings	<i>Pythium</i> sp., <i>Rhizoctonia solani</i>
Peach	Bacterial Diseases	<i>Xanthomonas pruni</i> , <i>Pseudomonas syringae</i>
	Verticillium Wilt	<i>Verticillium albo-atrum</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
	Crown Canker	<i>Phytophthora</i> sp.
Pear	Powdery Mildew	<i>Podosphaera leucotricha</i> , <i>P. oxycanthae</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
	Bacterial Diseases	<i>Pseudomonas syringae</i>
	Collar Rot	<i>Phytophthora cactorum</i>
Plums	Bacterial Diseases	<i>Xanthomonas pruni</i>
Potato	Powdery Mildew	<i>Erysiphe cichoracearum</i> , <i>Oidium</i> sp.
	Fusarium Wilt	<i>Fusarium oxysporum</i>
	Verticillium Wilt	<i>Verticillium</i> sp., <i>Rhizoctonia solani</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
	Late Blight	<i>Phytophthora infestans</i>
Roses	Downy Mildew	<i>Peronospora sparsa</i>
Strawberry	Powdery Mildew	<i>Sphaerotheca macularis</i>
	Fruit Rots	<i>Rhizoctonia solani</i>
	Red Stele	<i>Phytophthora fragariae</i>
	Verticillium Wilt	<i>Verticillium albo-atrum</i>
	Gray Mold Rots	<i>Botrytis cinerea</i>
Tomato	Late Blight	<i>Phytophthora infestans</i>
	Leaf Mold Diseases	<i>Cladosporium fulvum</i>
	Root Rot	<i>Thielaviopsis basicola</i>
	Damping-Off of Seedlings	<i>Pythium</i> sp., <i>Rhizoctonia solani</i>
	Fusarium Wilt	<i>Fusarium oxysporum</i> var. <i>lycopersici</i>
Turf	Pythium Root Rot	<i>Pythium aphanidermatum</i>
	Pythium Blight	<i>Pythium ultimum</i>
	Fusarium Blight	<i>Fusarium</i> sp.
	Brown Patch	<i>Rhizoctonia</i> sp.
Walnut	Bacterial Diseases	<i>Xanthomonas campestris</i> pv. <i>juglandis</i>



#### **Storage and Disposal**

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

**Pesticide Storage:** Store product in original container away from children and domestic animals.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, send remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Disposal:** Non-refillable container; do not reuse or refill this container. Completely empty bag contents into application equipment by shaking and tapping sides and bottom to loosen clinging particles; then offer for recycling, if available, or dispose of empty bag in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.



**\*PATENTED PRODUCTION PROCESS\***

# **NUTROL®**

**Fungicide, Plant Nutrient & Tank Buffering Agent**  
**CROP PROTECTION WITH Nutrol**

For the Control of Powdery Mildew on Apples, Cucurbits (Cucumbers, Melons, Squash and Watermelons), Grapes, Leafy Vegetables, Mangoes, Peppers, Roses, Stone Fruits (Cherries, Nectarines, Peaches and Plums), Tomatoes, Ornamentals and Turfgrass.

**Active Ingredient:** Potassium Dihydrogen Phosphate . . . . .100%

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

**SEE BOOKLET FOR FIRST AID, ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE**

**Precaucion al usuario:**

Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicada ampliamente.

**Warranty and Disclaimer**

1. Seller warrants that this product consists of the ingredients specified and is reasonably fit for the purpose stated on this label when used in accordance with directions under normal conditions of use. No one, other than the officer of Seller, is authorized to make any warranty, guarantee or direction concerning this product.

To the extent permitted by applicable law, the seller's liability for handling, storage and use of this product contrary to label instructions shall be limited to replacement of product or refund of purchaser price.

**Net Weight: 50 lb. (22.7 kg.)**



Distributed and Guaranteed by:  
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Hazlet, NJ 07730  
Phone 732-888-8000 Fax 732-264-2751

☐ **EPA REG. NO. 70644-1**  
☐ **EPA EST. 67536-FL-1**  
☐ **EPA EST. 14322-NY-1**

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