PENDIMETHALIN | GROUP 3 HERBICIDE

PIN-DEE™ 3.3 EC

Herbicide

For use in Alfalfa (Forage, Hay or Seed Production), Bearing Citrus Fruit Trees, Bearing Nut Trees, Bearing Pome Fruit Trees, Bearing Stone Fruit Trees, Carrots, Carrots Grown For Seed, Corn (Field, Pop, Seed, Sweet), Cotton, Edible Beans, Forage Legumes, Fruiting Vegetables (Pepper, Tomatoes), Garlic, Grain Sorghum, Juneberry, Leek, Lentils, Mint, Nonbearing Fruit Tree and Nut Trees, Nonbearing Vineyards, Onions (Dry, Bulb, Green), Peas, Pomegranate, Shallots, Peanuts, Potatoes, Rice, Soybeans, Strawberries, Sugarcane, Sunflowers, Tobacco and Wheat. Also for use as a pre-emergence weed control herbicide in Turfgrasses, Industrial (Unimproved) Turf, Ornamentals, Landscapes and Ground Maintenance, Noncropland including Tree Plantations and Total Vegetation Control.

ACTIVE INGREDIENT:

Pendimethalin	37.4%
OTHER INGREDIENTS*:	62.6%
TOTAL:	100.0%

This product contains 3.3 pounds of Pendimethalin per gallon.

* Contains Petroleum distillate.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See FIRST AID Below

EPA Reg. No. 19713-668 **Net Content:**
EPA Est. No. 19713-XX-X **2.5 Gals. (9.46 L)**

FIRST AID

IF SWALLOWED:
- Immediately call a poison control center or doctor for treatment advice.
- Do not give any liquid to person.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

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.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- 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. You may also call CHEMTREC at 800-424-9300 for medical emergency information.

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

(Continued)

PRECAUTIONARY STATEMENTS *(Cont.)*

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils and shoes plus socks.

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

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 CPR 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) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 2) 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

This product is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters or rinsate.

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 may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

This label must be in the possession of the user at the time of pesticide application. Observe all precautions and restrictions in this label and the labels of products used in combination with this product. The use of this product not consistent with this label can result in injury to crops, animals or persons.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands or animals.

Do not enter or allow other people (or pets) to enter the treated area until sprays have dried.

Manufactured By:
Drexel Chemical Company
P.O. Box 13327, Memphis, TN 38113-0327
SINCE 1972

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), notification to workers 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 to treated areas during the REI of 24 hours.

Exception: If the product is soil-injected or soil-incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. 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, soil or water is: Coveralls, chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils and shoes plus socks.

PRODUCT INFORMATION

PIN-DEE 3.3 EC is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. This product will not control established weeds. Destroy emerged weeds prior to application.

This product is most effective in controlling weeds mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.

Unusually cold, excessively wet or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

Uneven application or improper soil incorporation can decrease weed control or cause crop injury. Soil incorporation deeper than directed can reduce weed control. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and plants and increase the possibility of crop damage from this product. Under these conditions, crop yields can be reduced.

In the event of crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted without adverse effects the same year (see *"CROPS"* section for exceptions).

ENDANGERED SPECIES PROTECTION

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your country or parish has a bulletin, and to obtain that bulletin, consult http://www.epa.gov/espp/ or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use bulletins that are in effect in the month in which the pesticide will be applied. New bulletins will generally be available from the above sources 6 months prior to their effective dates.

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASABE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger). Wind can be no more than 8 mph and release height must be 15 feet or less.

RESISTANCE MANAGEMENT

PENDIMETHALIN | GROUP 3 | HERBICIDE

For resistance management, this product is a Group 3 mode of action herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 3 mode of action herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank-mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Drexel Chemical Company representatives at (901) 774-4370.

WEEDS CONTROLLED

See *"CROPS"* section for additional weeds controlled.

Weeds Controlled By Up to 2.4 Qts. of This Product Per Acre		
Grasses		
Annual ryegrass	Foxtail (Yellow)	Panicum (Fall)
Barnyardgrass	Goosegrass	Panicum (Texas)
Canarygrass*,[a]	Hairy chess*,[b]	Sandbur (Field)
Cheat*,[a]	Itchgrass*	Shattercane*
Crabgrass	Italian ryegrass*	Signalgrass*
Crowfootgrass	Japanese brome*,[b]	Wild proso millet*
Downy brome* (Cheatgrass)	Johnsongrass (Seedling)	Witchgrass
Foxtail (Giant)	Jointed goatgrass*,[b]	Woolly cupgrass*
Foxtail (Green)	Oat (Wild)*	
Broadleaves		
Amaranth (Palmer)	Lambsquarters (Common)	Pusley (Florida)
Bugloss (Small)[b]	Lambsquarters (Slimleaf)	Shepherdspurse*
Carpetweed	London rocket*	Smartweed (Pennsylvania)*
Chickweed (Common)*	Mustard (Black)[a]	Spurge (Annual)
Henbit	Pigweed spp.	Velvetleaf*
Kochia	Purslane	Waterhemp spp.
Lady's thumb		

*Suppression but controlled when use rate of this product is greater than 2.4 qts./ac.
[a] Not controlled in California.
[b] Neither suppressed nor controlled in California.

Weeds Controlled By 2.4 Qts. or Greater of This Product Per Acre		
Grasses		
Annual bluegrass	Lovegrass	Swollen fingergrass
Browntop Panicum	Sprangletop (Mexican)	
Guinea grass[a]	Sprangletop (Red)	
Junglerice		
Broadleaves		
Dodder*	Knotweed (Prostate)	Puncturevine
Fiddleneck	Morningglory**	

*Use the highest labeled rate of this product specified in the specific crop for optimum control of Dodder.
**Suppression
[a] Not controlled in California.

APPLICATION RATE

Use rates for this product when used alone, in tank-mix or sequential applications are given in the *"CROPS"* section. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

Use rates of this product vary by soil texture and organic matter. See the following table for soil texture groupings used in this label.

Soil Texture	Soil Type
Coarse	Loamy sand, Sand, Sandy loam
Medium	Loam, Sandy clay, Sandy clay loam*, Silt, Silt loam
Fine	Clay, Clay loam, Silty clay, Silty clay loam*
Peat and Muck**	—

* Sometimes considered as transitional soils and may be classified as either Medium or Fine textured soil.

** This product may be used on Peat and Muck soils but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop.

TIMING OF APPLICATION

This product will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into the soil within 7 days after application by rainfall, sprinkler irrigation or mechanical tillage prior to weed seedling emergence from soil. This product can also be applied through chemigation including flooded basin irrigation systems. Apply this product as pre-plant surface, pre-plant incorporated, surface incorporated, pre-emergence, early post-emergence, post-emergence incorporated (CULTI-SPRAY) or lay-by treatment. See the *"CROPS"* section for specific application directions by crop.

Pre-plant Surface Applications: Apply this product alone or in tank-mixtures up to 45 days before planting in minimum tillage or no-tillage production systems. When making early pre-plant surface applications (15 to 45 days prior to planting), tank-mix this product or follow by a post-emergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

Pre-plant Incorporated Applications: Apply this product and incorporate into the upper (1 to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation. Two-pass incorporation usually results in a more consistent result.

Surface Incorporated Applications: Uniformly apply this product as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between tree rows. Within 7 days after application, incorporate into upper (1 to 2 inches) soil surface using either rainfall, sprinkler irrigation or shallow mechanical incorporation using an implement capable of giving uniform incorporation. Two-pass mechanical incorporation usually results in a more consistent result.

Pre-emergence Surface Applications: Broadcast treatment uniformly to the soil surface at-planting and up to 2 days after planting. Rainfall, sprinkler irrigation or shallow mechanical incorporation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

Early Post-emergence Applications: Apply this product prior to weed seedling emergence or in a tank-mix with products that control the emerged weeds. Refer to the *"CROPS"* section for specific post-emergence application directions by crop.

Post-emergence Incorporated Applications (CULTI-SPRAY):
Prior to application, cultivate crops in such a manner as to throw at least 1 inch of soil over the base of the crop plants. This will prevent direct contact of this product and the zone of brace root formation. Broadcast apply this product with a ground sprayer when crop is at least 4 inches tall up to lay-by. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate treatments of this product into the soil with (1) a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil or (2) adequate overhead irrigation water or rainfall. See *"CORN"* and *"GRAIN SORGHUM"* under the *"CROPS"* section for more details on Culti-Spray application.

Lay-by Application: Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (lay-by). See the *"CROPS"* section for more details on lay-by application.

Split Applications: This product may be applied pre-plant incorporated up to 60 days prior to planting followed by a pre-emergence application at-planting or up to 2 days after planting. The total amount of this product applied per acre per season cannot exceed the highest specified rate for any given soil type. See the *"CROPS"* section for more details on split applications.

Fall Applications: This product may be used in Fall application programs in certain crops. See the *"CROPS"* section for details on Fall application timing.

APPLICATION INSTRUCTIONS

This product may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, this product may be impregnated on dry bulk fertilizer. Do not use sprayable fluid fertilizer as a carrier after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

AERIAL APPLICATION

Uniformly apply in 5 or more gallons of water per acre.

Exercise precautions to minimize drift. Do not apply during periods of gusty winds or when wind conditions favor drifting.

Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

GROUND APPLICATION (BROADCAST)

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Use sprayers equipped with appropriate nozzles that provide uniform and accurate spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh. Application of this product during periods of gusty winds may result in uneven applications. Do not apply this product post-emergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of this product alone or with other herbicides based on the following compatibility jar test:

1. Add 1 pint of fertilizer to a quart jar.
2. Add 1 to 4 teaspoons of the Dry Flowable (DF), Wettable Powder (WP), Aqueous Solution (SL), Flowable (SC) or Liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula:

$$\frac{\text{Lbs. or Pts. of the Product/Acre}}{\text{Gals. of Fertilizer/Acre}} \times 11.4 = \text{No. of Tsps. of Herbicide to Add to 1 Pt. of Fertilizer}$$

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials, add appropriate number of teaspoons of this product to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.
5. Evaluate compatibility.
   (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
   (b) If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
   (c) If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
6. If the need for a compatibility agent is demonstrated, the following procedure is recommended: Using a clean quart jar, repeat step 1 above and add one-half teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, do not use this product with that specific liquid fertilizer.

GROUND APPLICATION (BAND)

Uniformly apply the broadcast equivalent rate and volume per acre. To determine these:

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Rate per Acre} = \text{Band Rate per Acre}$$

$$\frac{\text{Band width in Inches}}{\text{Row width in Inches}} \times \text{Broadcast Volume per Acre} = \text{Band Volume per Acre}$$

GROUND APPLICATION (DRY BULK FERTILIZER)

Apply this product/dry bulk fertilizer mixtures with ground equipment only. **Do not** impregnate this product onto coated Ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of Ammonium nitrate or limestone may be impregnated with this product. A minimum of 200 pounds of impregnated dry bulk fertilizer excluding the weight of Ammonium nitrate or limestone must be applied per acre.

Use the following formula to determine the amount of this product (in qts.) to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

$$\frac{2000}{\text{Lbs. of Dry Fertilizer}} \times \text{Qts. of This Product (Specified Rate per Acre)} = \text{Qts. of This Product per Ton of Fertilizer}$$

To impregnate this product on bulk fertilizer, use a closed rotary drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

Apply this product/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. This product/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

CHEMIGATION APPLICATION (VIA SPRINKLER IRRIGATION SYSTEMS)

This product may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to *"CROPS"* section for individual crops.

Do not apply this product via chemigation to crops unless specified in the *"CROPS"* section.

Apply this product ONLY through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move. Do not apply this product through any other type of sprinkler irrigation system.

Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, contact your State Extension Service Specialists, equipment manufacturers or other experts. The system must be properly calibrated (with water only) to ensure that the amount of this product applied corresponds to the specified rate. Apply this product in one-half to three-fourths inches of water during the first sprinkler set (use at least 1 inch of water in the states of New Mexico, Oklahoma and Texas). Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

Instructions for Low Volume Micro Sprinklers

Output of low volume sprinkler equals 4 to 50 gallons per hour (gph) per emitter. Point of application must be above ground.

Irrigation system should run a sufficient amount of time prior to injection of this product to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain water treated with this product. Add this product to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in the injection tank containing this product. Mix this product in clean water and inject down-line from filters. Following injection of this product, flush the system for a period of time sufficient to clear the line of this product. (If application of this product is made during a normal irrigation cycle, make the injection during the last stage.)

Calibration of Low Volume Micro Sprinklers

Calculation of use rate is based on wetted area around emitters, **not** on tree acres. To determine the correct amount of this product, use the following formula:

1. Treated area per each emitter = A
   A = 3.14 x (radius x radius)
2. The area in square feet wet in each acre = B
   $B = \frac{A \times \text{Emitters/Acre}}{144}$
3. The total area (sq. ft.) wet by your system = C
   C = B x Acres covered by system
4. Rate per treated acre of this product (based on length of control desired) = R

$$\text{Amount of This Product to Inject (S)} = \frac{C}{43{,}560} \times R = \text{Qts. of This Product}$$

Example:

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then:

A = 3.14 x (13" x 13") and A = 530.7 sq. in.

If there are 300 emitters per acre, then:

$B = \frac{530.7 \times 300}{144}$ and B = 1105.6 sq. ft. wetted per acre

If the system covers 20 acres, then:

$$C = \frac{1105.6 \text{ sq. ft.}}{} \times \frac{20 \text{ acres}}{} \text{ and } C = \frac{22{,}112 \text{ sq. ft.}}{} \text{ wetted by the system}$$

If the desired application rate per treated acre is 2.4 quarts of this product, then:

$$S = \frac{22{,}112}{43{,}560} \times 2.4 \text{ and } S = \text{1.2 qts. of this product have to be injected into the system}$$

Special Restrictions For Chemigation

1. Do not apply when wind speed favors drift beyond the area intended for treatment.
2. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. 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.
4. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. It 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.
5. The sprinkler chemigation 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. In addition, 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.
6. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Chemigation Systems Connected to Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section *"Special Restrictions for Chemigation"*.

CHEMIGATION APPLICATION (VIA FLOODED BASIN IRRIGATION SYSTEMS)

This product may be applied via flooded basin irrigation systems, but only to the following crops: Alfalfa grown for forage, hay or seed production; Bearing and Nonbearing Fruit and Nut trees; and Nonbearing vineyards.

Use Instructions and Restrictions for Flooded Basin Irrigation

1. This product may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.
2. Follow all label directions for this product regarding rates per acre, timing of application and crop specific use restrictions.

3. Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
4. 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.
5. Mix this product with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
6. Recirculate tail water (runoff water) from flood irrigation that contains this product and contain in the field of initial application or use only on adjacent tree or vine crops or Alfalfa for which this product is registered for this type of application.
7. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow water.
8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
   - The system must contain a functional check valve, vacuum-relief valve and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
   - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards 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 a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
   - The irrigation pipe or water pump must include a functional pressure switch, which will stop the 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) of effective design and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
   - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
9. Be sure to regularly measure the flow in the field to ensure the correct amount of this product is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of this product can vary with water temperature and speed of water flow across the field.
10. Uniform distribution of irrigation water treated with this product is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
11. If you have questions about calibration, contact your State Extension Service Specialists, equipment manufacturers or other experts.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions. It is the responsibility of the applicator to avoid spray drift onto non-target areas.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

1. The distance of the outermost nozzles on the boom must not exceed three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed. The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see "*Wind", "Temperature and Humidity"* and *"Temperature Inversions"*).

Controlling Droplet Size

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
Pressure - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
Nozzle Orientation - Orient nozzles so that the spray released parallel to the airstream produces larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid or straight-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest 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.

Swath Adjustment

When applications are made with crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.
Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species or non-target crops or plants) is minimal (e.g., when wind is blowing away from the sensitive areas).

ADDITIVES

Spray adjuvants have little or no influence on performance of this product when applications are made prior to weed emergence. However, several tank-mixes with this product require adjuvants to improve burndown of emerged weeds. Therefore, surfactants,

liquid fertilizer (28%, 30% or 32% UAN (Urea Ammonium Nitrate) or Ammonium sulfate) or crop oil concentrate may be used with this product tank-mixed applied pre-plant, pre-emergence or early post-emergence to the crop. Follow the adjuvant directions for use on the label of the tank-mix partner.

TANK-MIXING INFORMATION

This product may be applied in a tank-mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to this product.

When using tank-mixtures or sequential applications with this product, always read the companion product label(s) to determine the specific use rate by soil types, weed species and weed or crop growth stage. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

Tank-Mixture With Other Product(s)

If compatibility with tank-mix partners is not known, perform a mixing test to check the compatibility of this product with the tank-mix partners.

Mixing Instructions

1. Fill tank one-half to three-fourths full with clean or liquid fertilizer and agitate. Prior to mixing this product or tank-mixtures of this product in liquid fertilizer, refer to appropriate label sections for use in liquid fertilizer, application instructions and compatibility determinations.

   Note: This product will not mix in high salt formulation fertilizers such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use one of the following:

   a) Pre-slurry this product in water prior to adding to the tank. Use 1:1 ratio of water to this product.

   b) Add water to fertilizer solution prior to adding this product. The amount of water should be equal or greater than the amount of this product to be used.

2. This Product Alone

   When using this product alone, add this product to partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

3. This Product in Tank-Mixture

   Add the tank-mixture products in the order listed below prior to adding this product. For tank-mixtures with 2,4-DB, Paraquat or Glyphosate, see mixing instructions at the end of this section.

   a) Wettable Powder (WP) formulations - Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.

   b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations - Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.

   c) Flowable (SC) formulations: Add the SC formulation to the partially filled tank while agitating.

   d) Water Soluble Concentrate (WSC) formulations: Add the WSC formulation to the partially filled tank while agitating.

   e) Emulsifiable Concentrate (EC) formulations: Add the EC formulation to the partially filled tank while agitating.

After complete mixing, add this product to the tank.

   f) **Note:** For tank-mixes including 2,4-DB, Paraquat or Glyphosate: After complete mixing of this product, continue filling the sprayer with water and add 2,4-DB or Paraquat or Glyphosate near the end of the filling process.

   If Paraquat is included in the tank-mixture, add 8 fluid ounces of non-ionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Thorough and continuous sprayer-tank agitation must be maintained during mixing and spraying of this product. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to re-suspend the mixture before spraying is resumed.

Continue agitation while spraying.

CLEANING SPRAY EQUIPMENT

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

USE RESTRICTIONS

- Do not exceed the maximum labeled rate for any soil type.
- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a pre-plant incorporated application of this product can be replanted the same year without adverse effects (see *"CROPS"* section for exceptions). If replanting is necessary, do not work the soil deeper that the treated zone.
- Refer to the *"CROPS"* section for crop specific Pre-Harvest Intervals (PHI) and feeding and grazing restrictions.

CROP ROTATION

- Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations. However, various environmental and agronomic factors such as arid conditions make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of this product include: *Coarse soils*, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought and heavy rainfall soon after application.
- When this product is used in tank-mix or sequential combinations, refer to label(s) of other herbicide(s) for additional rotational crop restrictions.
- Restrictions for rotational cropping after the use of this product are dependent on the application use rate of this product in the primary crop. Read the following restrictions to determine the rotational crops for their specific situation according to application use rate.

CROP ROTATION RESTRICTIONS AND LIMITATIONS

Rotational Crop Restrictions Following Applications of This Product to Field and Row Crops

1. Application Rate ≤ 2.4 Quarts (≤ 2 lbs. a.i.) per Acre

a) Crops which are labeled for pre-plant incorporated application:
These crops may be planted the same season in which this product was applied.

b) Sugar beets, Red beets and Spinach:
To avoid crop injury, do not plant Sugar beets, Red beets or Spinach for 12 months following a Spring application of this product or 14 months following a Fall application of this product. Do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a crop.

To ensure thorough mixing of soil prior to planting Sugar beets, Red beets and Spinach, plow the land using a moldboard plow to a depth of 12 inches.

c) Proso millet, Sorghum (Milo) and Annual or Perennial grass crops or Mixtures:
Do not plant Proso millet, Sorghum (Milo) and annual or perennial Grass crops or mixtures for 10 months after a Spring application of this product or 12 months after a Fall application this product except in the following conditions:

- In the states of Minnesota, North Dakota and South Dakota: Do not plant these crops for 18 months following a Spring application of this product or 21 months following a Fall application of this product.
- To avoid the possibility of crop injury in areas that receive less than 20 inches of rainfall or irrigation to produce a crop, do not plant these crops for 18 months following a Spring application of this product or 20 months following a Fall application of this product if rainfall or irrigation was not sufficient to produce a field or row crop.

d) Wheat and Barley:
Wheat and Barley may be planted 4 months after an application of this product except under the following conditions:

- If less than 12 inches of rainfall or overhead irrigation was received between application and rotational crop planting, do not plant Wheat before 12 months after a Spring application of this product or 14 months after a Fall application of this product.
- In dryland areas and/or areas where irrigation is necessary to produce the crop treated with this product, do not plant Winter wheat or Barley as a follow crop if crop failure/destruction occurs and land is fallowed during the Summer.

e) All Other Rotational Crops Not Specifically Addressed Above:
Crops other than those to which this product may be applied as a pre-plant incorporated treatment may be planted the year following application of this product except under the following condition:

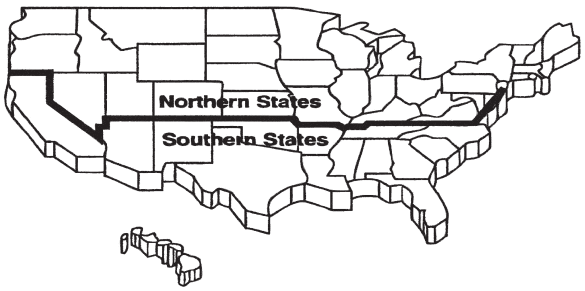
- If rainfall or irrigation was not sufficient to produce a crop, delay planting for 18 months following a Spring application of this product or 20 months following a Fall application of this product.

2. Application Rate > 2.4 Quarts (> 2 lbs. a.i.) per Acre
In the growing season following application of this product to field and row crops at greater than 2.4 quarts per acre, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not plant other crops for 24 months.

Rotational Crop Restrictions Following Applications of This Product to Grove, Orchard and Vineyard Crops

In the growing season following application of this product to bearing Fruit and Nut trees, plant only those crops for which this product is labeled for pre-plant incorporated treatment or crop injury may occur. Do not rotate to other crops (except for Fruit trees, Grapes or Nut crops) for 24 months following an application of this product to bearing Fruit or Nut trees.

USE AREA



CROPS

Disclaimer: The use of this product may result in crop injury, loss or damage including but not limited to agronomic, cultural, mechanical and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of this product even when directions for use are completely followed. The user or grower should take all such risks into consideration before deciding to apply the product.

Drexel recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test this product in order to determine its suitability. A grower should only use this product to the extent that in his sole opinion, the benefit of use of this product outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield including but not limited to insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain heat or cold), lack of excessive moisture, crusting, fertility or hardpans. Risk of loss or damage to crops may be associated with the use of this product and contribute to poor stands due to failure of crop to emerge, swelling of roots or other below ground plant parts, less vigorous plant growth and development and reduction in yield potential.

ALFALFA (GROWN FOR FORAGE, HAY OR SEED PRODUCTION)

Methods of Application, Timing and Rates

Apply this product by ground, air, chemigation, flooded basin irrigation systems or on dry bulk fertilizers.

Established Alfalfa for Forage/Hay (Defined as Alfalfa planted in the Fall or Spring that has gone through a first cutting/mowing): Uniformly apply this product at a broadcast rate of 1.2 to 4.8 quarts per acre prior to weed emergence. Applications can be made in the Fall after the last mowing/cutting, during Winter dormancy, in the Spring or between cuttings. Apply prior to Alfalfa reaching 6 inches in regrowth.

Established Alfalfa Grown for Seed Production (Defined as Alfalfa planted in the Fall or Spring that has gone through a Summer season of cutting/mowing): Uniformly apply this product at a broadcast rate of 1.2 to 4.8 quarts per acre prior to weed emergence in one of the following ways:

1. Apply to dormant established Alfalfa.
2. Apply before Alfalfa exceeds 10 inches in height after first mowing/beating.
3. Once Alfalfa reaches 10 inches in height or if Alfalfa has been mowed/beaten two or more times, this product must be applied with drop nozzles directing the spray so that there is little to no contact with the foliage.

Seedling Alfalfa (Defined as Alfalfa planted in the Fall or Spring which has NOT gone through a cutting/mowing): Uniformly apply this product at a broadcast rate of 0.6 to 1.2 quarts per acre prior to weed emergence. Applications can be made once the seedling Alfalfa has reached the 2nd trifoliate stage of growth. Apply prior to Alfalfa reaching 6 inches in growth.

Alfalfa Stand Establishment: Apply this product at a broadcast rate of 0.6 to 0.9 quart per acre as a pre-plant incorporated or pre-emergence treatment in direct-seeded Alfalfa. Some crop stand reduction and stunting may occur with this use of this product, however, reduced weed competition will allow establishment of a quality stand. Use the lower rates on *Coarse textured soil* or in lower rainfall areas (receiving less than 20 inches of rainfall and irrigation a year).

- Pre-plant incorporated – Uniformly incorporate this product into the top 2 to 3 inches of the final seedbed prior to planting.
- Pre-emergence – Apply directly after drill seeding Alfalfa. Plant Alfalfa into a seedbed that is firm and free of clods.

Chemigation Applications:
This product may be applied through sprinkler irrigation systems. Follow all chemigation directions, special instructions and precautions found in *"APPLICATION INSTRUCTIONS"* section of this label.

Flooded Basin Irrigation Systems: This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flooded basin irrigation found in *"Chemigation Application (Via Flooded Basin Irrigation Systems)"* under the *"APPLICATION INSTRUCTIONS"* section of this label.

Use Precautions on Alfalfa

- Some stunting and chlorosis of Alfalfa may occur with post-emergence applications.
- Applications made after Alfalfa exceeds 6 inches in height may result in poor weed control due to possible reduced spray coverage to the soil.
- Follow all use precautions and restrictions on label(s) of product(s) applied in combination with this product. Follow the most restrictive label.

Use Restrictions on Alfalfa

- Do not exceed 4.8 quarts of this product per acre in any one crop season.
- Pre-Harvest Interval (PHI): Do not apply this product less than 50 days prior to Alfalfa harvest for forage or hay.
- Pre-Harvest Interval (PHI): Do not apply this product less than 90 days prior to Alfalfa harvest for seed.

BEARING FRUIT AND NUT TREES

This product may be applied in the following individual crops within the Fruit tree and Tree nut crop groupings:

CITRUS FRUIT CROP GROUPING		
Calamondin	Kumquat	Orange (Sour, Sweet)
Citrus citron	Lemon	Pummelo
Citrus hybrids	Lime	Satsuma mandarin
Grapefruit	Mandarin (Tangerine)	Tangelo

POME FRUITS CROP GROUPING		
Apples	Mayhaw	Quince
Crabapple	Pear	
Loquat	Pear (Oriental)	

STONE FRUITS CROP GROUPING		
Apricot	Peach	Plumcot
Aprium	Plum	Pluot
Cherries (Sweet, Tart)	Plum (Chickasaw, Damson, Japanese)	Prunes
Nectarine		

OTHER FRUIT TREES	
Pomegranate	Juneberry

TREE NUTS CROP GROUPING		
Almond	Chestnut	Pecan
Beech nut	Chinquapin	Pistachio
Brazil nut	Filbert (Hazelnut)	Walnut
Butternut	Hickory nut	
Cashew	Macadamia nut	

Methods of Application, Timing and Rates

- Apply this product by ground, chemigation or flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at the rate of 2.4 to 4.8 quarts per acre depending on desired length of control (see below table) per application.

Use Rates:

Short-term control	2.4 qts. per ac.
Long-term control	4.8 qts. per ac.

Ground Applications: This product may be applied surface-incorporated or surface pre-emergence.
Apply this product as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the trees and/or in areas between rows. Do not apply over the top of trees with leaves or buds or fruit. Contact by the spray mixture with leaves, shoots or buds may cause injury.
Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section. Do not apply irrigation water treated with this product over top of trees with leaves or buds or fruits. Contact with leaves, shoots or buds by spray mixture may cause injury.
Flooded Basin Irrigation Systems: This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flood basin found in the *"APPLICATION INSTRUCTIONS"* section.

Use Restrictions on Bearing Fruit and Nut Trees

- Do not apply by air.
- Do not apply to newly seeded nursery stock.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.2 quarts of this product per acre per year in Citrus and Nut trees.
- Pre-Harvest Interval (PHI): Do not apply within 1 day of harvest of Citrus fruit.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of harvest of Pome and Stone fruits or other Tree fruits.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of harvest of nuts except Almonds.
- Pre-Harvest Interval (PHI): Do not apply within 120 days of harvest of Almonds.
- Do not feed forage or graze livestock in treated groves or orchards.

CARROTS

Methods of Application, Timing and Rates

Apply this product by ground, air or chemigation.
Pre-emergence Applications: Make a single broadcast application by ground or air or by chemigation using 1.2 quarts of this product per acre as a post-plant treatment prior to emergence of the crop and before weed emergence. Apply a pre-emergence treatment within 2 days after planting.
Lay-by: This product may be applied only by ground equipment at lay-by (last mechanical cultivation) at 1 quart per acre as a directed spray to the soil between rows. Apply this product prior to weed emergence. Emerged weeds will not be controlled by this treatment. Do not allow the spray to contact Carrot plants or injury may occur. Do not apply lay-by applications by chemigation or by air.
Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section.
Do not allow irrigation water treated with this product to contact Carrot plants. Do not apply tank-mixtures through any type of irrigation system unless the label instructions on chemigation of all products are followed.

Use Restrictions on Carrots

- Do not apply more than 1.2 quarts of this product per acre per season.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply lay-by applications by chemigation or by air.

CARROTS GROWN FOR SEED PRODUCTION

Methods of Application, Timing and Rates

Apply this product only by lay-by.
Last Cultivation (Lay-by): Apply this product following the last mechanical cultivation (lay-by) at the rate of 0.6 to 2.4 quarts of this product per acre (on a broadcast basis). Uniformly apply as directed spray to the soil between rows.
Do not allow the spray to contact Carrot plants or injury may occur. Use protective shields to avoid contact with Carrot foliage. Use properly calibrated and accurate nozzles and equipment.
Lay-by applications can be applied to Carrots previously treated with herbicide(s) registered in/on Carrots. Consult the label(s) of the herbicide(s) for directions for use, rates to be used and precautions or restrictions for use in Carrots and for rotational crops.

Use Restrictions on Carrots Grown For Seed Production

- Do not apply as a broadcast spray over the top of Carrots or crop injury may result.
- Do not apply lay-by applications by chemigation or by air.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of Carrot seed harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not harvest Carrots for food or feed use.

Special Use Restriction on Carrots Grown For Seed Production

The pesticide applicator, the producer of the crop and the seed conditioner must be aware that use of this product according to this labeling is deemed a non-feed/non-food use. If the applicator of this pesticide is not the producer, the applicator should provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product or cause the product to be used on a field they operate, should provide a copy of this pesticide label to the seed conditioner.
Consequently, no portion of this Carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage and seed screenings, may be used or distributed for food or feed purposes.
Processed Carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes. The seed conditioner shall keep records of screening disposal for 3 years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm disposal, disposal at a controlled dumpsite, incinerator, composter or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s) and the date of disposal.

CORN (Field, Pop, Seed, Sweet)

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Corn with CULTI-SPRAY application: Wild proso millet and Shattercane.

Methods of Application, Timing and Rates

- Apply this product ground, air or chemigation.
- Apply this product in conventional, minimum or no-till as a pre-emergence, post-emergence or post-emergence incorporated (CULTI-SPRAY) application in Field corn.
- Apply this product in conventional tillage as a pre-emergence or post-emergence application in Popcorn, Seed corn or Sweet corn.

Note: Regardless of tillage system, plant Corn at least 1.5 inches deep and completely cover with soil.
In conventional tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the Corn seed.
In no-till systems, utilize a no-till planter that is capable of planting through crop residue. The use of no-till planters under conditions that do not allow good soil coverage of the Corn seed can result in reduced crop stand or injury if this product contacts the germinating Corn seed. Check equipment to ensure good seed coverage.
Treatments of this product alone or this product in tank-mix combination(s) are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting or weed germination, use shallow tillage and make certain that Corn seeds are below the tilled area.
Pre-emergence: Apply this product after planting but before weeds and crop emerge.
Post-emergence: Apply this product post-mergence until Field corn is 30 inches tall (20 to 24 inches tall for Pop, Seed and Sweet corn) or in the V8 growth stage, whichever is more restrictive. If the Corn canopy prevents applications from reaching the soil, use drop nozzles and apply as directed spray.
Culti-Spray: Apply this product alone or this product plus Atrazine when Field corn is at least 4 inches tall until last cultivation (lay-by). This product plus Atrazine must be applied before Field corn reach 12 inches in height. Observe the maximum allowable rates for Atrazine on the Atrazine label.
Under situations of low rainfall or soil moisture when deep germinating weeds such as Shattercane or Field sandbur are anticipated, mechanical incorporation will provide best results. If cultivation is needed after application and incorporation of this product, the depth of cut should be no deeper than the depth of cut used to incorporate.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation found in the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Pre-Emergence or Post-Emergence Applications			
Soil Texture	Organic Matter		
	< 1.5% (Qts./Ac.)	1.5 to 3% (Qts./Ac.)	> 3% (Qts./Ac.)
Coarse	0.9 to 1.2	1.2 to 1.8	1.8
Medium	1.2 to 1.8	1.8	1.8 to 2.4
Fine	1.2 to 1.8	1.8 to 2.4	1.8 to 2.4

Culti-Spray Applications - Field Corn Only		
Soil Texture	Southern States* (Qts./Ac.)	Northern States* (Qts./Ac.)
Coarse	0.6 to 0.9	0.9 to 1.2
Medium	0.9 to 1.2	1.2 to 1.8
Fine	0.9 to 1.8	1.2 to 1.8
*See map for specific states in the *"USE AREA"* section.		

Use Restrictions on Corn

- Do not apply this product in reduced, minimum or no-till Sweet corn, Seed corn or Popcorn.
- Do not apply this product in no-till in California.
- Do not apply this product pre-plant incorporated.
- Do not apply this product post-emergence in liquid fertilizer.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Corn after 21 days following application.

COTTON

Additional Weeds Suppressed

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will suppress Russian thistle in the state of Arizona.

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation in conventional, minimum, stale seedbed or no-till.
- Apply this product as a pre-plant surface, pre-plant incorporated, pre-emergence or lay-by application in Cotton. Pre-plant surface, pre-emergence and lay-by treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days after application, use shallow tillage (rotary hoe or light harrow) and make sure Cotton seeds are below tilled area. The use of a post-emergence herbicide treatment may be required to control weed escapes at-planting or following Cotton emergence.

Pre-plant Surface: Apply this product up to 15 days prior to planting. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-emergence: Apply this product at-planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply tank-mixes of this product and sequential programs as specified under the *"TANK-MIXING INFORMATION"* section.

Pre-plant Incorporated Followed by Pre-emergence Applications: Apply this product up to 60 days prior to planting and incorporate within 7 days of application. Make overlay application of this product at-planting or up to 2 days after planting. Total amount of this product applied per acre cannot exceed the highest labeled rate for a given soil type. Pre-plant incorporated and pre-emergence applications of this product may be applied with the labeled tank-mix herbicide(s).

Lay-by Application (At last cultivation): Apply this product directly to the soil between rows as a directed spray following the last normal cultivation (lay-by). Lay-by applications can be applied in Cotton previously treated with this product or any herbicide(s) registered for use in Cotton. Consult the labels of those herbicide(s) for use directions, rates to be used, precautions or restrictions for use in Cotton and restrictions for rotational crops. The total amount of this product applied per acre per season cannot exceed the highest labeled rate for a given soil type.

Do not apply as a broadcast spray over the top of Cotton or serious crop injury can result. Avoid contact of spray to the non-woody portion of Cotton stems and to Cotton foliage or serious crop injury can result. To reduce the potential for crop injury caused by herbicide contact with Cotton foliage and stems, use protective shields when conditions favor spray drift.

Glyphosate-containing products may be applied with this product at lay-by in Cotton with the Glyphosate tolerant gene. DO NOT apply Glyphosate-containing products at lay-by on non-Glyphosate tolerant Cotton. Do not apply this product and Glyphosate tank-mix as a broadcast spray over the top of Cotton or crop injury may result.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Fall Application: This product may be applied to control weeds in Cotton in the Fall after October 15 (up to 140 days prior to planting Cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. Apply this product at the broadcast rate of 1.2 quarts per acre on *Coarse* or *Medium soils* and 1.8 quarts per acre on *Fine soils*.

Use Rates:

Soil Texture	Conventional or Minimal Tillage (Qts./Ac.)	No-Till** (Qts./Ac.)
Coarse	0.6 to 1.2*	0.9 to 1.2
Medium	0.9 to 1.2	1.2 to 1.8
Fine	1.2 to 1.8	1.8 to 2.4
* Do not exceed 0.9 qt. per acre on Coarse textured soils in California. ** Not for use on soils with more than 3% organic matter.		

Use Restrictions on Cotton

- Do not apply this product in no-till in California.
- Pre-Harvest Interval (PHI) is 60 days between last application of this product and Cotton harvest.
- Do not exceed the highest seasonal rate of this product per acre for any given soil type as specified in the *"Use Rates"* table.
- Do not feed forage or graze livestock in treated Cotton fields.

EDIBLE BEANS [Chickpeas (Garbanzo Beans), Dry, Lima, Snap, Southern Peas (Cowpeas) and Sweet Lupine]

Methods of Application, Timing and Rates

- Apply this product in the Fall pre-plant surface or pre-plant incorporated in Chickpeas (Garbanzo beans), Dry beans, Lima beans, Snap beans and Southern peas (Cowpeas).
- Apply this product in the Fall pre-plant surface or pre-plant incorporated or pre-emergence in Sweet lupines.

Pre-plant Incorporated: Apply up to 60 days prior to planting and incorporate within 7 days of application.

Pre-emergence: Apply only to Sweet lupines at-planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods.

Use Rates:

Soil Texture	Southern States* (Qts./Ac.)	Northern States*	
		≤ 3% Organic Matter (Qts./Ac.)	> 3% Organic Matter (Qts./Ac.)
Coarse	0.9	1.2	1.2
Medium	1.2	1.5	1.8
Fine	1.8	1.8	1.8
*See map for specific states in the *"USE AREA"* section.			

Fall Applications: Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Dry beans (including Black turtle, Cranberry, Great northern, Navy, Red kidney and Small white type), Edible beans [Chickpeas (Garbanzo beans)], Lima beans, Snap beans, Southern peas (Cowpeas) and Sweet lupines the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.

DO NOT apply when air temperature is below 45°F.

Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.6 to 1.2	1.2
Medium	0.9 to 1.5	1.5 to 1.8
Fine	1.2 to 1.8	1.8

Use Restrictions on Edible Beans

- Do not apply this product more than once per cropping season.
- Do not apply in any type of irrigation system.
- Do not feed Lupine hay and forage or graze livestock in treated Lupine fields.

FORAGE LEGUMES

This product may be used in Forage legumes used as a cover crop in the Federal set-aside or Conservation Reserve Program (CRP) areas. Some stand reduction of the Legume cover crops may occur with this use. Consult local county extension service or the local ASC committee for recommended cover crops.

If loss of cover crop occurs due to adverse weather conditions, any crop registered for pre-plant incorporated use of this product can be replanted the same year into the soil treated with this product without adverse effects. If replanting is necessary, do not rework the soil deeper than the zone treated with this product. Do not feed or graze Legume cover crops established following application of this product. Destroy ultimately the cover crop residue by tillage or by leaving on the surface to retard erosion or as directed by the local ASC committee.

Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or pre-emergence for weed control in Legume cover crops.

Use Rates:

Pre-Plant Incorporated or Pre-Emergence	
Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	1.2 to 1.5

FRUITING VEGETABLES

This product may be applied to the following fruiting vegetables: Eggplant, Groundcherry (*Physalis* spp.), Pepino, Pepper (includes Bell, Chili, Cooking, Pimento, Sweet), Tomatillo, Tomato.

Methods of Application, Timing and Rates

- Apply this product uniformly by ground or air only.
- Apply this product as a broadcast pre-plant incorporated or as a broadcast pre-plant surface prior to transplanting fruiting vegetables or as a post-directed application to transplanted or established direct-seeded fruiting vegetables.

Do not apply prior to direct-seeded fruiting vegetables. Do not apply post-emergence over the top of or to foliage of fruiting vegetables as severe injury may occur.

This product can be applied as a post-directed spray on the soil at the base of the plant, beneath the plants and between rows. Avoid direct contact with foliage or stems. Be sure roots of transplants are established. Following the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at "lay-by." Apply this product prior to weed emergence. Emerged weed will not be controlled by this treatment.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	0.9 to 1.8

Use Restrictions on Fruiting Vegetables

- Do not apply more than 1.8 quarts of this product per acre per season.
- Pre-Harvest Interval (PHI): Do not apply within 70 days of harvest.
- Do not allow the soil treated with this product to come in contact with transplant area.
- Do not apply if row is to be covered later with plastic.

GARLIC

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

Pre-emergence: Apply after planting but before crop and weeds emerge.

Post-emergence: Apply at the 1st to 5th true leaf growth stage.

Split Applications: Apply at both pre-emergence and post-emergence timings.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true leaf stage (2nd to 6th true leaf stage in California). Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.9
Medium	1.2
Fine	1.8

Use Restrictions on Garlic

- Do not exceed 1.8 quarts of this product per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts of this product per acre per crop for Dodder control.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.

GRAIN SORGHUM

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Grain sorghum as a CULTI-SPRAY application: Wild proso millet and Shattercane.

Methods of Application, Timing and Rates

- Apply this product uniformly in water by ground equipment or by aircraft.
- Apply this product as a post-emergence incorporated (CULTI-SPRAY) in Grain sorghum in all states.
- Apply this product early post-emergence in Grain sorghum grown in states east of the Mississippi River and in Arkansas, Louisiana, the Missouri "Bootheel" and Eastern Texas.

Culti-Spray: Treatments of this product can be applied from the 4-inch growth stage to as late as the last cultivation (lay-by) of Grain sorghum. See specific directions for CULTI-SPRAY application under the *"TIMING OF APPLICATION"* section.

Early Post-emergence: For use only in states east of the Mississippi River plus Arkansas, Louisiana, the "Bootheel" of Missouri and Eastern Texas. The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant Grain sorghum at least 1.5 inches deep to ensure good seed coverage.

Use Rates:

Culti-Spray Application		
Soil Texture	Southern States* (Qts./Ac.)	Northern States* (Qts./Ac.)
Coarse	0.9	1.2
Medium	1.2	1.8
Fine	1.8	1.8
*See map for specific states in the *"USE AREA"* section.		

Early Post-Emergence Application	
Soil Texture	This Product (Qts./Ac.)
Coarse	DO NOT USE
Medium, Fine	1.2

Use Restrictions on Grain Sorghum

- Do not apply this product pre-plant incorporated or pre-emergence as serious crop injury can result.
- Do not apply this product in Grain sorghum more than once per crop season.
- Do not apply this product as a CULTI-SPRAY treatment in Grain sorghum planted in double row beds.
- Do not replant Grain sorghum if crop loss occurs.
- Do not apply in liquid fertilizer.
- Livestock can graze or be fed forage from Grain sorghum fields treated by this product after 21 days following application.

GREEN ONIONS (Green Eschalots or Green Shallots, Japanese Bunching Onions, Leeks, Scallions or Spring Onions)

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, post-emergence or split application.

Pre-emergence or Post-emergence: Uniformly apply 1.2 quarts of this product per acre as a broadcast spray to the soil surface as pre-emergence spray or as a post-emergence spray to the crop at the 2 to 3 true leaf stage at least 30 days before harvest.

If this product is to be applied sequentially both as a pre-emergence and post-emergence spray, the pre-emergence spray must be applied 30 days prior to the post-emergence spray.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply at 2 to 3 true leaf stage at least 30 days before harvest. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Restrictions on Green Onions

- Do not apply more than 1.2 quarts of this product per acre per application.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Pre-Harvest Interval (PHI): Do not apply within 30 days of harvest.
- Do not feed forage or graze livestock in treated fields.

LENTILS AND PEAS (Dry, Dwarf, Edible Pod, English, Garden, Green, Pigeon) (Except CA)

Methods of Application, Timing and Rates

Apply this product pre-plant surface or pre-plant incorporated in Lentils and Peas.

Pre-plant Incorporated: Apply this product 60 days prior to planting up to immediately before planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.

Note: Any crop registered for a pre-plant incorporated application of this product can be double-cropped after Peas.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.9
Medium	1.2
Fine	1.8

Fall Applications: Fall pre-plant surface and pre-plant incorporated applications may be made in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply this product and incorporate (rainfall, irrigation or mechanically) in late Fall prior to planting Lentils or Peas (Dry, Dwarf, Edible pod, English, Garden, Green, Pigeon) the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes.

DO NOT apply when air temperature is below 45°F.

Pre-plant Surface and Pre-plant Incorporated (Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming Only)

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.6 to 0.9
Medium	0.9 to 1.2
Fine	1.2 to 1.8

Use Restrictions on Lentils and Peas

- Do not use in California.
- Do not use this product pre-emergence in Peas.
- Do not apply this product more than once per cropping season.
- Do not apply to Lentils, Peas, Lentil or Pea forage, Pea silage, Pea hay or Pea straw grown for livestock feed.
- Do not apply in any type of irrigation system.

MINT (Peppermint, Spearmint)

Methods of Application, Timing and Rates

- Apply this product by ground or air.
- Apply this product pre-emergence.

Pre-emergence: Make a single broadcast pre-emergence application of this product to Mint using 0.9 to 2.4 quarts of this product per acre depending on soil texture (see table below) to dormant established Mint before weed emergence. After application of this product, some temporary crop injury may be observed early in the growing season as Mint breaks dormancy and begins to grow.

This product will not cause crop injury when applied according to the label under normal growing conditions.

Non-uniform application may result in injury to crops, poor stands or soil residues. Conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity or drought may weaken seedlings and plants and make them more susceptible to herbicidal damage.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.9 to 1.2
Medium	1.2 to 2.4
Fine	1.2 to 2.4

Use Restrictions on Mint

- Do not apply this product to "baby" Mint in the first year of growth and establishment.
- Do not apply to Mint that has broken dormancy or crop injury may result. Application to Mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to Mint dormancy break.
- Do not apply to Mint stands that have been weakened by age, disease, cold weather, excessive moisture or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.
- Do not apply more than 2.4 quarts of this product per acre per season.
- Pre-Harvest Interval (PHI): Do not apply within 90 days of harvest.
- Do not allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- Do not apply this product on Mint through any type of irrigation system.
- Do not use in California except as directed in supplemental labeling.

NONBEARING FRUIT AND NUT TREES AND NONBEARING VINEYARDS

Methods of Application, Timing and Rates

- Apply this product as pre-plant incorporated, pre-plant surface, surface incorporated or pre-emergence weed control in several nonbearing Fruit and Nut trees and nonbearing Vineyards. This product may be used before or after transplanting the following nonbearing crops:

Almonds	Lemons	Plums
Apples	Nectarines	Prunes
Apricots	Oranges	Tangelo
Cherries	Peaches	Tangerine
Citrus	Pears	Walnut (English)
Grapes	Pecans	
Grapefruit	Pistachio	

Apply the spray directly to the ground beneath the trees or vines. Do not apply over the top of trees or vines with leaves or buds. Contacting the leaves, shoots or buds with the spray mixture may cause malformed plant tissues. Do not apply to newly seeded nursery stock.

For newly transplanted and 1 year old Grapevines:

i) Apply only to dormant Grapevines.
ii) Do not apply if buds have started to swell. Application after buds have started to swell may result in leaf distortion.
iii) Do not apply to newly transplanted trees or vines until ground has settled and no cracks are present.

- Apply this product by ground, air, chemigation or by flooded basin irrigation systems.
- Apply this product either in a single application or sequentially with an interval of 30 days or more.
- Apply this product at 2.4 to 4.8 quarts per acre per application depending on the desired length of control (see *"Use Rate"* table below) but not to exceed a total of 4.8 quarts per acre per year in Pome, Stone and other Fruit trees. In Citrus, Grapevines and Nut trees, do not exceed a total of 7.3 quarts per acre per year.

Pre-plant Surface: Prior to transplanting, apply uniformly with ground or aerial equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Pre-plant Incorporated: Apply uniformly this product prior to transplanting but before weeds emerge. Incorporate this product to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Pre-emergence (Post-plant): Applications may be made in a band or broadcast.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section. Do not apply irrigation water treated with this product over the top of trees or vines with leaves or buds.

Flooded Basin Irrigation Systems: This product may be applied in flooded basin irrigation systems. Follow all directions, special instructions and precautions for flooded basin irrigation systems under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Short-term control	2.4 qts. / ac.
Long-term control	4.8 qts. / ac.

Use Restrictions on Nonbearing Fruit and Nut Trees and Nonbearing Vineyards

- Do not feed forage or graze livestock in treated fields.
- Do not apply more than 4.8 quarts of this product per acre per year in Pome, Stone and other Fruit trees.
- Do not apply more than 7.3 quarts of this product per acre per year in Citrus, Grapevines and Nut trees.

ONIONS [Direct Seeded and Transplanted Dry Bulb and Shallots (Dry Bulb)]

Methods of Application, Timing and Rates

Apply this product by ground, air or chemigation.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true leaf stage (2nd to 6th true leaf stage in California) unless otherwise specified below. Do not irrigate in excess of one-half inch of water. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

MINERAL SOILS

Methods of Application, Timing and Rates

In all states except California, apply this product as a broadcast treatment when Onions or Shallots have 2 to 9 true leaves.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.9
Medium	1.2
Fine	1.8

State Specific Instructions

California:

This product may only be applied as a single application when Onions or Shallots have 2 to 6 true leaves.

Additional Use in Colorado, Kansas and Nebraska:

This product may be applied sequentially in seeded Onions. Apply first application of this product at loop stage. Apply sequential application of this product early post-emergence (2nd to 9th true leaf stage). Do not exceed the maximum labeled rate for a given soil texture. Do not apply this product at loop stage through the 9th true leaf stage if heavy rains are expected or severe crop injury may result.

Additional Use in Colorado and the High Plains of Texas (Transplanted Onions Only):

Apply and shallow incorporate (less than 2 inches deep) this product into preformed beds prior to transplanting,

Additional Use in Idaho, Oregon and Washington:

Apply this product as a broadcast treatment when Onions or Shallots are between the flag leaf to 9th true leaf stage.

This product may be used at 1.8 to 2.4 quarts per acre for Dodder control on *Medium* and *Fine textured soils*. Do not apply this product using chemigation at the Dodder control rate.

This product may be applied in the Fall or Spring to the furrow area of land bedded in the Fall preparation for planting seed of Dry bulb onions the following Spring. Apply this product as a banded application at rates based on appropriate soil texture. Band width should be approximately one-half the width of the row spacing.

Keep away from the area where Onion seed will be planted. Harrow-off tops of beds following furrow applications of this product prior to planting Onions. For selective weed control in the Onion row, apply this product as banded post-emergence to flag leaf Onions at the labeled rates based on soil texture.

Apply this product only once to the furrow area and once to the Onion row as a post-emergence application.

Additional Use in Michigan:

For *Mineral soils* containing greater than 10% organic matter, follow the directions for *Muck soils* (see *"MUCK SOILS"*).

Use Restrictions on Mineral Soils

- Do not incorporate mechanically except as specified for use on Dry bulb onions in Colorado and the Texas High Plains.
- Do not exceed 1.8 quarts per acre per crop (except Idaho, Oregon and Washington). In Idaho, Oregon and Washington, do not exceed 2.4 quarts per acre per crop.
- Pre-Harvest Interval (PHI): Do not apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- Do not feed or graze these crops.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.

MUCK SOILS (Except CA)

Methods of Application, Timing and Rates

Apply this product sequentially on *Muck soils* as follows:

Time of Application and Growth Stage	Rate (Qts./Ac.)
Pre-emergence through loop stage	2.4
Early post-emergence (2nd to 6th true leaf stage)	2.4
Late post-emergence (6th to 9th true leaf stage)	2.4

Use Restrictions on *Muck Soils*

- Do not apply to *Muck soils* in California.
- Pre-Harvest Interval (PHI): Do not apply within 45 days of harvest.
- Do not feed or graze these crops.
- Do not apply more than 7.2 quarts of this product per acre per growing season on *Muck soils*. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay pre-emergence applications to the loop stage, if possible.
- Do not apply this product pre-emergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application of this product at the pre-emergence through loop stage, do not irrigate in excess of one-half inch of water.
- Do not plant Spinach, Sugar beets, Red beets, Winter barley or Winter wheat as rotational crops on *Muck soils* for 12 months from the time of last application if more than 1.8 quarts of this product per acre is applied to the Onion crop.
- If loss of Onion crop occurs, do not replant any crop other than Onions in *Muck soil* during the same cropping year and do not work the soil deeper than 2 inches.

PEANUTS (Except CA)

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-plant incorporated.
- Apply this product pre-emergence to Peanuts grown under overhead irrigation.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days after applications.

Pre-emergence: Apply this product at-planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of three-fourths inch of overhead irrigation or rainfall within 48 hours of application.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Region	Rate (Qts./Ac.)
New Mexico, Oklahoma and Texas	0.6 to 1.2
Other Peanut growing states*	1.2
* For heavy weed infestations especially *Texas panicum*, up to 1.8 qts. of this product per acre can be used in Alabama, Georgia or Florida.	

POTATOES

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Potatoes: Stinging nettle.

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Apply this product pre-emergence, pre-emergence incorporated or early post-emergence.

Pre-emergence: Apply this product after planting but before Potatoes and weeds emerge or after drag-off.

Pre-emergence Incorporated: Apply this product and incorporate after planting but before Potatoes and weeds emerge. Where drag-off is practiced, apply this product and incorporate before, at or after drag-off but before Potatoes and weeds emerge. Incorporate this product within 7 days of application. This product must be thoroughly and uniformly incorporated into the top 1 to 2 inches of soil. Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

Early Post-emergence: Apply this product from crop emergence to the 6 inch stage of growth. Do not apply this product post-emergence if Potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

Chemigation: This product may be applied through sprinkler irrigation systems. Apply this product pre-emergence after planting, after drag-off or early post-emergence through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section.

Use Rates:

Soil Texture	Rate (Qts./Ac.)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	0.9
Medium	1.2	1.8
Fine	1.8	1.8

Use Restrictions on Potatoes

- Do not apply to Sweet potatoes or Yams.
- Do not apply pre-plant.
- Do not make more than 1 application of this product per season.
- Application of this product on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

RICE

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control the following weeds in Rice: Junglerice and Sprangletop.

Methods of Application, Timing and Rates

This product may be applied as a pre-flood, pre-emergence in dry-seeded or drilled Rice or as a delayed pre-emergence application in drilled dry-seeded Rice or as an early post-emergence in dry-seeded Rice. Treatments may be applied to conventional, reduced or minimum tillage and no-till (stale seedbed) Rice. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. The use of a planter under conditions that do not allow good soil coverage of the Rice seed can result in reduced stand or stunting if this product contacts germinating Rice seed.

Pre-Flood, Pre-emergence: This product may be applied for pre-emergence weed control as a pre-flood, pre-rice germination herbicide in lightly incorporated dry-seeded Rice or on drilled Rice.

Seeding Directions

For all Rice seed incorporation methods, seed must be incorporated shallowly or no more than 1 inch below soil surface. Seed left on the surface may be injured or killed by this product. **However, to ensure that seed is not covered too deeply, 15 to 20% of seed total has to be visible at surface.** Increase seeding rates by a percentage corresponding to the amount of seed left on the surface. Adjust seeding ratios to meet individual practices, incorporation depths and field conditions. **For Example:** Target seeding rate is 150 pounds per acre. If approximately 15% of seed is left on soil surface, seeding rate should then be increased 22.5 pounds per acre to 177.5 pounds per acre.

Seeding depths can be affected by soil textures, tillage practices, irrigation and methods of mechanical incorporation. Seed that is incorporated either mechanically and/or by irrigation flush must remain at a shallow depth of no more than 1 inch below the soil surface. Fields where Rice seed is incorporated too deeply will experience reduced crop stands.

Following are examples of typical implements that can be used for Rice seed incorporation: Rice roller/ridger, ring roller, light harrow or flat roller. Regardless of the implement or method of incorporation used, seed incorporation must be less than 1 inch below the soil surface.

After Rice seed is incorporated, uniformly apply to soil surface as broadcast spray the tank-mixture of this product at 1.2 quarts of this product per acre plus FirstChoice® SafeGuard™ spray adjuvant at 0.8 quart per acre. Use of this product without tank-mixing with FirstChoice SafeGuard spray adjuvant can result in crop injury and loss of Rice stand.

After herbicide application, flush field with irrigation water with method best employed to facilitate a thorough soaking of field and a rapid drain. Recirculate and contain in the field of initial application tail water (runoff water) from flood irrigation that contains this product or use only on adjacent crops for which this product or other Pendimethalin based products is registered for use.

Rice seed covered with water for longer than 8 days may result in reduced stand and weed control.

Delayed Pre-emergence (Except CA): Apply this product alone or with tank-mix partner for delayed pre-emergence weed control in grain-drilled, dry-seeded Rice. Apply this product alone or in tank-mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with this product may be injured. Apply only when growth conditions favor vigorous Rice growth. The seedbed should have adequate moisture for seed germination.

Uniformly apply the specified rate of this product after Rice planting and before Rice and weed emergence (spiking). Apply after the Rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80% of germinated seeds have a primary root (radicle) or shoot at least one-half inch long. If there is insufficient moisture, flush before application of this product to supply moisture for root (radicle) initiation and for vigorous Rice and weed growth.

If applied to soil prior to these conditions or to cracked soil, stand reduction or stunting of Rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application or flushing after application may result in herbicide injury to Rice. Rice can overcome moderate injury with appropriate cultural practices.

Due to the residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

Early Post-emergence: Apply this product as a tank-mix partner. Base applications on weed and crop size guidelines of the tank-mix partner. Do not apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous Rice and weed growth. Since soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application or cracks in the soil that form after application may result in reduced weed control.

Because of residual activity of this product, this treatment may be applied if Rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal Rice growth and activity of this product.

Since the residual activity of this product is activated by moisture, this product is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 7 days after application.

Use Rates:

Delayed Pre-Emergence Applications	
Soil Texture	**Rate (Qts./Ac.)**
Sand, Loamy sand	DO NOT USE
Sandy loam	0.9
Loam, Silt loam, Silt, Sandy clay loam	1.2
Silty clay loam, Clay loam, Sandy clay, Silty clay, Clay	1.2

Early Post-Emergence Application	
Soil Texture	**Rate (Qts./Ac.)**
Coarse	0.9
Medium	1.2
Fine	1.2

Use Restrictions on Rice

- Do not apply this product as a pre-flood, pre-emergence treatment in Rice unless tank-mixed with FirstChoice SafeGuard spray adjuvant.
- Do not apply this product through any type of irrigation system.
- Do not apply in liquid fertilizer.
- Do not use on water-seeded Rice except as specified in other labeling.
- Do not apply to Rice fields if fields are used for fish production, especially catfish or crayfish farming.
- Do not use water containing residues of this product from Rice cultivation to irrigate food or feed crops that are not registered for use with this product.

- In case of a crop failure due to weather conditions or disease following treatment with this product alone or in a tank-mixture, only drilled dry-seeded Rice may be immediately replanted. However, the grower assumes all risks and consequences associated with replanting of Rice because there is the potential for stand reduction or stunting. A 10% percent increase in seeding rate is suggested. Replant seed below the herbicide layer because reduced stand or stunting may occur if this product contacts germinating Rice seed. Do not replant with gibberellic acid-treated seed. Do not reapply this product alone or in a tank-mixture.
- Do not apply this product and then flush for germination.
- Do not apply to stressed Rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage or deep water after application.
- Do not apply early pre-emergence or pre-plant incorporated as severe Rice injury is possible.
- Do not feed forage or graze livestock in treated fields.

SOYBEANS (Except CA)

Additional Weeds Controlled

In addition to the weeds listed in the *"WEEDS CONTROLLED"* table, this product will control or reduce competition from the following weeds in Soybeans: Itchgrass and Red rice. (See *"Use Rates"* below for specific rates for these weeds.)

Methods of Application, Timing and Rates

Apply this product in conventional, minimum or no-till as a Fall surface, Fall incorporated, pre-plant surface, pre-plant incorporated or pre-emergence application in Soybeans.

Fall Applications: This product may be surface applied or incorporated in the Fall, after Fall harvest and prior to ground freeze in states North of Interstate-80 and the entire states of Iowa, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma and Texas. Fall applications of this product will not provide season-long weed control.

Pre-plant Surface: Apply this product up to 15 days prior to planting. This product may be applied up to 45 days prior to planting when used in a tank-mix or applied sequentially with Glyphosate plus Imazethapyr, Imazamox or Imazethapyr. Apply tank-mixes of this product and sequential programs as specified under the tank-mix section.

Pre-plant Incorporated: Apply this product up to 60 days prior to planting and incorporate within 7 days after application.

Pre-emergence: Apply this product at-planting or up to 2 days after planting. Apply to a firm seedbed free of clods. Do not make applications of this product pre-emergence North of Interstate-80 except in the states of Indiana, Michigan and Ohio or as specified in the supplemental labeling.

Use Rates:

Fall Surface, Fall Incorporated, Pre-Plant Surface or Pre-Plant Incorporated Applications		
Soil Texture	Rate (Qts./Ac.)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	1.2
Medium	1.5*	1.8
Fine**	1.8	1.8

* Do not exceed 1.0 qt. of this product per acre for Southern states. See map for specific states in the *"USE AREA"* section.

** For heavy Clay soils, apply this product at the broadcast rate of 1.8 qts. of this product per ac.

Pre-Emergence Applications		
Soil Texture	Rate (Qts./Ac.)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	0.9
Medium	1.2	1.2
Fine	1.2	1.5

Pre-Plant Incorporated Applications for Red Rice Control and Itchgrass Suppression	
Soil Texture	Rate (Qts./Ac.)
	Up to 3% Organic Matter*
Coarse	1.8
Medium	1.8
Fine	2.4

* This use is not for soils with more than 3% organic matter.

Use Restrictions on Soybeans

- Do not apply post-emergence on Soybeans or serious crop injury can result.
- Do not use this product in Soybeans in California.
- Pre-Harvest Interval (PHI): Do not apply within 85 days of harvest.
- Do not exceed 1 application per crop season at the highest rate per acre for any given soil type and application method.
- Livestock can graze or be fed forage from treated Soybean fields.

STRAWBERRIES

Methods of Application, Timing and Rates

- Apply this product by ground, air or chemigation.
- Stunting, reduced growth, or reduction in daughter plants may occur with this use. Uniformly apply 0.9 to 1.8 quarts of this product per acre as a broadcast spray to the soil surface at pre-transplant time. A second application of 0.9 to 1.8 quarts of this product per acre may be applied in a band to the soil between crop rows 35 days before harvest but DO NOT CONCENTRATE THE RATE per acre into the treated area. Do no not allow spray to contact Strawberry plants. The second application rate is based on per unit of treated area.

Chemigation: This product may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions for chemigation under the *"APPLICATION INSTRUCTIONS"* section. Do not allow irrigation water treated with this product to contact Strawberry plants.

Use Rates:

Soil Texture	Broadcast Rate (Qts./Ac.)
Coarse	0.9
Medium	1.2 to 1.5
Fine	1.5 to 1.8

Use Restrictions on Strawberries

- Do not apply more than 1.8 quarts of this product per acre per application.
- Do not apply more than 3.6 quarts of this product per acre per season.
- Pre-Harvest Interval (PHI): Do not apply within 35 days of harvest.
- Do not feed forage or graze livestock in treated fields.
- Do not apply if row is to be covered later with plastic.

SUGARCANE

Methods of Application, Timing and Rates

- Apply this product pre-emergence through lay-by to plant or ratoon Sugarcane.
- Applications may be made band or broadcast. Although there may be adequate crop tolerance for post-emergence applications at lay-by, spray must be directed under the Sugarcane canopy to obtain effective weed control.
- This product must be thoroughly and uniformly incorporated into the soil with either (a) mechanical incorporation equipment as outlined below or (b) with rainfall or irrigation, if rainfall or irrigation is adequate for good crop and weed emergence and received within 7 days after application. If rainfall or irrigation is not obtained, incorporate this product mechanically.

Mechanical Incorporation: Apply this product to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application.

Use Rates:

Use Area	Broadcast Rate* (Qts./Ac.)
All states except Hawaii	2.4 to 3.6
Muck soil (Florida only)	2.4 to 4.85
Hawaii	2.4 to 4.85

* Use the high rate if: i) Clay soils. ii) No mechanical incorporation is planned. iii) Heavy weed populations are anticipated. iv) Itchgrass infestation is anticipated. v) Shaving is planned.

Use Restrictions on Sugarcane

- Do not exceed 7.2 quarts of this product per acre in one growing season.
- Do not use less than 11 gallons of water as a carrier when applying this product for weed control.
- Ratoon sugarcane must be lightly shaved in early Spring to remove the old stubble before incorporation over the line of Sugarcane if possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.
- Do not make aerial applications at close-in because complete and uniform coverage cannot be obtained.
- Do not apply through any type of irrigation system.
- Pre-Harvest Interval (PHI): Do not apply within 90 days of harvest.
- Do not graze treated fields or feed treated forage or fodder to livestock.

SUNFLOWER

Methods of Application, Timing and Rates

- Apply this product pre-plant incorporated in all states.
- Fall pre-plant incorporated applications may be made in Minnesota, North Dakota and South Dakota.
- Apply this product pre-emergence in conventional tillage Sunflower except in California.

Note: Plant Sunflower 1.5 to 2 inches deep and completely cover with soil.

Pre-plant Incorporated (Spring): Apply up to 60 days prior to planting and incorporate within 7 days after application.

Pre-plant Incorporated (Fall Applications in Minnesota, North Dakota and South Dakota): Apply this product and immediately incorporate in late Fall prior to planting Sunflower the following Spring. Apply this product in the late Fall when soil temperatures are 45°F or below but before the ground freezes. Do not apply when air temperature is below 45°F. Prior to planting Sunflower in the Spring, fields treated with this product should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

Pre-emergence: Apply this product at-planting or up to 2 days after planting. Pre-emergence applications of this product to Sunflowers may increase the likelihood of crop injury especially when Sunflowers are grown in stress situations such as compacted soils. Decreased herbicide performance compared to pre-plant incorporated applications may also result from a pre-emergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecasted, apply this product prior to planting and mechanically incorporate with tillage.

Use Rates:

Pre-Plant Incorporated (Spring) or Pre-Emergence (Conventional Tillage)			
Soil Texture	Southern States*	Northern States	
	Rate (Qts./Acre)	Rate (Qts./Ac.)	
		≤ 3% Organic Matter	> 3% Organic Matter
Coarse	0.9	1.2	1.2
Medium	1.2	1.5	1.8
Fine	1.8	1.8	1.8
*See map of specific states under the *"USE AREA"* section.			

Pre-Plant Incorporated (Fall) Application*		
Soil Texture	Rate (Qts./Ac.)	
	≤ 3% Organic Matter	> 3% Organic Matter
Coarse	1.5	1.5
Medium	1.8	2.1
Fine	2.1	2.1
*For use in Minnesota, North Dakota and South Dakota only.		

SUNFLOWER (No-Till) (Except CA)

Methods of Application, Timing and Rates

Apply this product at 2.8 quarts per acre up to 30 days before planting (pre-plant) up to immediately after planting (pre-emergence).

This product is most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application.

Use Restrictions (All Tillage Types)

- Do not apply this product post-emergence.
- Do not feed forage or graze livestock in treated Sunflower fields.
- Do not use in California.

TOBACCO

Methods of Application, Timing and Rates

Apply this product pre-plant incorporated or as a lay-by application in transplanted Tobacco.

Pre-plant Incorporated: Apply this product with ground sprayer up to 60 days prior to transplanting Tobacco and incorporate within 7 days after application.

Applied according to directions and under normal growing conditions, this product will not harm transplanted Tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, this product can produce a temporary retardation of Tobacco development.

Lay-by: This product may be applied as a directed spray following the last normal cultivation (lay-by), usually 4 to 6 weeks after transplanting Tobacco. Apply this product in a 16 to 24 inch band between the crop rows. The spray should not contact Tobacco plants.

Use Rates:

Pre-Plant Incorporated Application		
Use Area	Soil Texture	Rate (Qts./Ac.)
Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia	Coarse	1.2
	Medium: Sandy clay loam, Loam	1.2
	Medium: Silt loam, Silt	1.5
	Fine	1.5
Other states	Coarse	1.2
	Medium	1.8
	Fine	1.8

Lay-by Application	
Soil Texture	Rate (Qts./Ac.)
Coarse	0.9
Medium	1.2
Fine	1.2

Use Restrictions on Tobacco

Do not apply as a broadcast spray as contact may cause malformed Tobacco leaves.

WHEAT

Methods of Application, Timing and Rates

- This product may be applied by ground or air.
- This product may be applied pre-emergence, delayed pre-emergence or post-emergence to Wheat for weed control in Fall, Winter or Spring seeded Wheat.

Apply to a seedbed that is firm and free of clods and trash. Prepare the seedbed to ensure good seed coverage by the soil and seed-to-soil contact. Use high quality seed. When applications of this product are intended to be made pre-emergence or delayed pre-emergence, plant seed at least 1 inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of this product are intended to be made post-emergence, plant seed at least 0.5 inch to 1.0 inch to avoid crop injury.

Uniformly apply this product as a pre-emergence, delayed pre-emergence (after Wheat seed has germinated) or post-emergence treatment from the 1st leaf stage of Wheat until before the flag leaf is visible/emerged for weed control. Apply prior to weed emergence. Emerged weeds will not be controlled by this product. Adequate rainfall or irrigation within 7 days after application will provide the most consistent weed control.

For control of established weeds, this product may be tank-mixed with any post-emergence herbicide registered for use in Wheat. This product will provide residual control of the weeds listed in this label. If compatibility is not known, always perform a mixing test to check the compatibility of this product with other potential tank-mix partner(s).

Use Rates:

Soil Texture	Southern States* Rate (Qts./Ac.)	Northern States* Rate (Qts./Ac.)
Coarse	0.9 to 1.2	0.9
Medium	0.9 to 1.8	1.5
Fine	1.2 to 1.8	1.2 to 1.8
*See map of specific states under the *"USE AREA"* section.		

Use Restrictions on Wheat

- Do not apply more than 1.8 quarts of this product per acre per season.
- If loss of grain crop occurs, any crop registered for this product pre-plant incorporated use may be replanted the same year without adverse effects. Do not replant Wheat.
- Pre-Harvest Interval (PHI): Do not apply this product within 60 days of harvest of Wheat grain or straw.
- Pre-Harvest Interval (PHI): Do not apply this product within 28 days of harvest of Wheat hay.
- Pre-Harvest Interval (PHI): Do not apply this product within 11 days of harvest of Wheat forage.

TURFGRASSES, INDUSTRIAL (UNIMPROVED) TURF, ORNAMENTALS, LANDSCAPES AND GROUND MAINTENANCE, NON-CROPLAND INCLUDING TREE PLANTATIONS AND TOTAL VEGETATION CONTROL

USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Do not apply this product in greenhouses, shade houses or other enclosed structures. Not for use for commercial seed production.
- Do not exceed a maximum of 4.8 pints per acre per application for use on residential turf grass such as residences, parks, schools, and playgrounds.
- Do not exceed a maximum of 7.2 pints per acre per application for use on commercial turfgrass.

WEEDS CONTROLLED

This product is used for pre-emergence control of the weeds listed below. This product will not control established weeds. If weeds should develop prior to activation of herbicide, shallow cultivate to destroy existing weeds or where practical, remove by hand. When cultivating for any reason, it should be shallow. This product may be used in conjunction with herbicides registered for post-emergence use [i.e., Glyphosate (e.g., Imitator®, Roundup®) or Glufosinate (e.g., Finale®)] for the control of established weeds. Do not apply sprays containing Glyphosate (e.g., Imitator, Roundup) or Glufosinate (e.g., Finale) over-the-top of desirable plants. Application of this product may be followed by any registered herbicide to control weeds not listed on this label.

Efficacy of this product will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may result if this product is not activated by rainfall or irrigation within 30 days.

Common Name	Scientific Name
Barnyardgrass	*Echinochloa crus-galli*
Bluegrass, Annual	*Poa annua*
Burweed, Lawn	*Soliva pterosperma*
Carpetweed	*Mollugo verticillata*
Chickweed, Common	*Stellaria media*
Chickweed, Mouseear	*Cerastium vulgatum*
Clover, Hop	*Trifolium procumbens*
Crabgrass	*Digitaria* spp.
Crowfootgrass	*Dactyloctenium aegyptium*
Cudweed	*Gnaphalium* spp.
Evening primrose	*Oenothera biennis*
Fiddleneck	*Amsinckia intermedia*
Filaree	*Erodium* spp.
Foxtail, Giant	*Setaria faberi*
Foxtail, Green	*Setaria viridis*
Foxtail, Yellow	*Setaria glauca*
Goosegrass	*Eleusine indica*
Henbit	*Lamium amplexicaule*
Itchgrass	*Rottboellia exaltata*
Johnsongrass (from seed)	*Sorghum halepense*
Junglerice	*Echinochloa colona*
Knotweed, Prostrate	*Polygonum aviculare*
Kochia	*Kochia scoparia*
Lambsquarters	*Chenopodium album*
Lovegrass (from seed)	*Eragrostis* spp.
Panicum, Browntop	*Panicum fasciculatum*
Panicum, Fall	*Panicum dichotomiflorum*
Panicum, Texas	*Panicum texanum*
Pigweed	*Amaranthus* spp.
Puncturevine	*Tribulus terrestris*
Purslane	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*
Rocket, London	*Sisymbrium irio*
Sandbur, Field	*Cenchrus incertus*
Shepherdspurse	*Capsella bursa-pastoris*
Signalgrass	*Brachiaria platyphylla*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Speedwell, Corn	*Veronica arvensis*
Sprangletop, Mexican	*Leptochloa uninervia*
Sprangletop, Red	*Leptochloa filiformis*

(Continued)

(Cont.)

Common Name	Scientific Name
Spurge, Annual	*Euphorbia* spp.
Spurge, Prostrate	*Euphorbia humistrata*
Velvetleaf (Buttonweed)	*Abutilon theophrasti*
Witchgrass	*Panicum capillare*
Woodsorrel, Yellow	*Oxalis stricta*
Woolly cupgrass	*Eriochloa villosa*

USE SITES

This product is a selective soil applied herbicide for pre-emergence control of most annual grasses and certain broadleaf weeds as they germinate in any Turfgrass sites (lawns, sod, turf areas) such as grounds or lawns around residential and commercial establishments, airports, athletic fields, cemeteries, golf courses, houses of worship, military and other institutions, multifamily dwellings, parks, picnic grounds, prairiegrass areas, roadsides, schools and sod farms. This product can also be used in and around field, liner and container grown ornamental nurseries; established landscape ornamentals and ornamental gardens; listed groundcovers; nonbearing fruit and nut trees; Conifers and hardwood seedling nurseries; and for tree plantation site preparation and maintenance. Also, this product can be applied for general grounds maintenance around areas such as alleyways, bike and jogging paths, buildings, driveways and roadsides, markers and fence lines, mulch beds, parking lots, stone gardens and gravel yards, vacant lots and other similar areas. It may be used under asphalt or concrete treatments as part of a site preparation program. This product is also used for pre-emergence control of most annual grasses and certain broadleaf weeds as they germinate in any noncropland area such as bridge abutments and approaches, delineators, fence rows, highway guardrails, highway and pipeline rights-of-way, paved or gravel surfaces, petroleum tank farms, pumping installations, railroad, sign posts, storage areas, utility, utility substations, and windbreaks and shelterbelts; and other similar areas where weed control is desired.

This product will not control established weeds. Established weeds should be controlled before applying this product or by using this product in conjunction with an appropriate post-emergence herbicide. Unusually cold, excessively wet, or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

One-half inch of rainfall or its equivalent in sprinkler irrigation following application of this product or tank-mix combinations of this product improves weed control. Erratic weed control may result in the absence of rainfall or irrigation within 30 days of application of this product.

Follow label directions of this product or tank-mix combinations of this product carefully to avoid crop injury. Over-application can result in crop stand loss, crop injury or excessive soil residues. Uneven application, improper soil incorporation or soil incorporation deeper than what is directed can decrease weed control and/or cause crop injury. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and plants and increase the possibility of crop damage and/or reduce crop yields from this product.

This product may cause temporary discoloration of sprayed surfaces. Rinse immediately to avoid staining. Spray colorants or dyes can be added to alter the color of the spray solution to match the treated surfaces.

MIXING INSTRUCTIONS

Ground Driven Sprayer

1. Fill tank one-half to three-quarters full with clean water.
2. Add this product to the partially filled tank while agitating and then fill the remainder of the tank with water.
3. Maintain continuous agitation while adding this product and until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed. Continue agitation while spraying.
4. If this product is to be used in tank-mixtures with other registered herbicides, then follow directions on the labels of those products which recommend tank-mixing.

Backpack Sprayer

1. Begin with a clean spray tank.
2. Fill the spray tank one-half full with clean water and add the required amount of this product to the sprayer.
3. Cap sprayer and agitate to ensure mixing.
4. Uncap sprayer and finish filling tank to desired level.
5. Cap sprayer and agitate once again.

During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

Liquid Fertilizers

If compatibility is not known, always test small quantities using a simple jar test before mixing. Add the required amount of this product to half-filled spray tank while agitating, then add the fertilizer product. Complete filling spray tank to desired level.

Dry Bulk Fertilizers

This product may be impregnated on dry bulk fertilizers.

For additional mixing instructions, refer to the section *"TANK-MIXING INFORMATION"* found at the beginning of this label.

SPRAYING INSTRUCTIONS

Apply with properly calibrated ground equipment in at least 40 gallons of water per acre to provide uniform spray distribution. Low pressure (i.e., 20 to 40 psi) sprayers are recommended. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Check sprayer routinely for proper calibration. Avoid overlaps that will increase rates above those recommended. Avoid application when winds may cause drift. Avoid unintentional contact of spray solution with driveways, stone, wood or other porous surfaces. Rinse immediately to avoid staining.

TURFGRASSES

Use this product for pre-emergence control of grasses and certain broadleaf weed species as they germinate in any Turfgrass site (Golf courses, Lawns, Sod farms and other Turf areas) and landscape ornamental maintenance areas. Examples of such sites include, but are not limited to: grounds or lawns around Residential and Commercial establishments, Multifamily dwellings, Military and other institutions, Parks, Airports, Roadsides, Schools, Picnic grounds, Athletic fields, Houses of worship, Cemeteries, Golf courses; Prairie grass areas and Sod farms.

Efficacy of this product will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If this product is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

To prevent establishment of weeds along the edges of treated area, it may be necessary to overlap the spray 3 to 6 inches onto sidewalks or driveways, etc., to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is to be avoided, do not rub or scrub surface. Rinse area immediately using a heavy spray of water to avoid staining. Treated Turfgrass should be dry before entering to avoid staining onto non-treated surfaces.

TYPES OF TURFGRASSES	WEEDS CONTROLLED	RATES OF THIS PRODUCT	
		Qts./Ac.	Ozs./1000 Sq. Ft.
Cool Season Grasses: Fescue (Fine) Fescue (Tall) Kentucky bluegrass Perennial ryegrass ***(Continued)***	Barnyardgrass, Crabgrass, Evening primrose, Fall panicum, Foxtail, Hop clover, Knotweed, Oxalis, *Poa annua*, Prostrate spurge, Purslane	1.8 to 2.4	1.3 to 1.8
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. For extended weed control or where weed infestation is expected to be heavy, repeat application using 1.25 to 1.8 qts./ac. (1 to 1.3 ozs. per 1000 sq. ft.) after 5 to 8 weeks.		

(Continued)

(Cont.)

TYPES OF TURFGRASSES	WEEDS CONTROLLED	RATES OF THIS PRODUCT	
		Qts./Ac.	Ozs./1000 Sq. Ft.
(Cont.) **Cool Season Grasses:** Fescue (Fine) Fescue (Tall) Kentucky bluegrass Perennial ryegrass	**For Residential Turf* Uses Only:** Goosegrass	1.8 to 2.4	1.3 to 1.8
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. If the lower rate was used initially or for extended control, repeat application at 1.8 qts./ac. (1.3 ozs./1000 sq. ft.). Do not exceed a maximum of 2.4 qts./ac. per application for use on residential Turfgrass. ***Note:** Residential turf is defined as Turf in any residential situation as well as Home lawns, Schools, Parks and Playgrounds.		
	For Commercial or Other Non-Residential Turf: Goosegrass	1.8 to 3.6	1.3 to 2.6
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. If the lower rate was used initially or for extended control, repeat application at 1.8 qts./ac. (1.3 ozs./1000 sq. ft.). Do not exceed a maximum of 3.6 qts./ac. per application for use on commercial or other non-residential Turfgrass.		
	Chickweed, Corn speedwell, Cudweed, Henbit, Lawn burweed, *Poa annua*	1.8 to 2.4	1.3 to 1.8
	USE INSTRUCTIONS: Apply in late Summer or early Fall prior to weed germination.		
Warm Season Grasses: Bahiagrass Bermudagrass Buffalograss Centipedegrass Fescue (Tall) St. Augustinegrass Zoysiagrass	**For Residential Turf* Uses Only:** Barnyardgrass, Crabgrass, Evening primrose, Fall panicum, Foxtail, Hop clover, Knotweed, Oxalis, *Poa annua,* Prostrate spurge, Purslane	1.8 to 2.4	1.3 to 1.8
	USE INSTRUCTIONS: Use as initial application prior to weed germination in Spring. Repeat application at 1.25 to 1.8 qts./ac. (1 to 1.3 ozs. per 1000 sq. ft.) after 5 to 8 weeks if necessary. Do not exceed a maximum of 2.4 qts./ac. per application for use on residential Turfgrass. ***Note:** Residential turf is defined as turf in any residential situation as well as Home lawns, Schools, Parks and Playgrounds.		
	Goosegrass	1.8	1.3
	USE INSTRUCTIONS: Apply prior to weed germination in Spring. Make a second application 6 to 8 weeks later. For extended control, an additional application of 1.8 qts./ac. (1.3 ozs./1000 sq. ft.) may be made 8 weeks after the second application.		
	Chickweed, Corn speedwell, Cudweed, Henbit, Lawn burweed, *Poa annua*	1.3 to 2.4	1.3 to 1.8
	USE INSTRUCTIONS: Apply in late Summer or early Fall prior to weed germination.		

To prevent establishment of weeds along the edges of lawns, it may be necessary to overlap the spray 3 to 6 inches onto sidewalks or driveways, etc. Rinse pavement immediately to avoid temporary discoloration.

THIS PRODUCT IN TANK-MIXTURE

To control emerged weeds in Turfgrasses, this product can be mixed with post-emergence herbicides. To control emerged annual grass, this product can be mixed with Fenoxaprop (e.g., Acclaim® Extra) or MSMA (e.g., MSMA 6 Plus) whereas broadleaved weeds can be controlled using 2,4-D + Mecoprop + Dicamba (e.g., Trimec®), Three-Way™, 2,4-D (e.g., De-Amine®) and other similar products. If compatibility is not known, conduct a simple jar test before tank-mixing to insure compatibility of herbicides.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

USE PRECAUTIONS FOR TURFGRASS

- Use on well established Turfgrass with a dense and uniform stand.
- On newly planted areas, application should not be made until the Turfgrass has filled in and has been mowed at least four times.
- On Turf that has been thinned or damaged due to Winter injury, excessive moisture, etc., allow Turf to recover prior to application.
- Applications made to overseeded warm-season Turfgrasses may cause thinning or injury of the overseeded species.
- Do not use on greens or injury may occur.
- Delay reseeding or Winter overseeding of treated Turfgrass for at least 3 months following the last application of this product
- Delay sprigging Turfgrass for 5 months after application of this product.

INDUSTRIAL (UNIMPROVED) TURF

(Rights-of-Way, Roadsides, Construction Sites, Parks, Substations, Lots or Similar Areas)

Industrial or unimproved Turf areas often have a different spectrum of weeds to be controlled than those found in fine Turf. This product will control annual grasses and broadleaf weeds mentioned in *"TURFGRASSES"* section of this label as well as the following weeds that might germinate in established grasses.

Annual spurge	London rocket
Browntop panicum	Lovegrass
Carpetweed	Mexican sprangletop
Crowfootgrass	Pennsylvania smartweed
Fiddleneck	Pigweed
Field sandbur	Puncturevine
Filaree	Red sprangletop
Florida pusley	Shepherdspurse
Itchgrass	Signalgrass
Johnsongrass (from seed)	Texas panicum
Junglerice	Velvetleaf
Kochia	Witchgrass
Lambsquarters	Woolly cupgrass

Apply before weeds germinate. To control established weeds, 2,4-D (e.g., De-Amine) MSMA (e.g., MSMA 6 Plus) or similar post-emergence herbicides may be tank-mixed with this product. Apply according to label instructions for the respective products and follow the most restrictive label.

ORNAMENTALS

This product can be applied for pre-emergence weed control around and over the top of the established plants listed below. However, not all varieties or strains of the plants listed have been tested. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage prior to full scale application.

GROUNDCOVERS	
Common Name	**Scientific Name**
Ajuga	*Ajuga reptans*
Capeweed	*Arctotheca calendula*
Cinquefoil, Spring	*Potentilla verna*
Daisy, Trailing African	*Osteospermum fruticosum*
Gazania	*Gazania splendens*
Iceplant, Large Leaf	*Carpobrotus edulis*
Ivy, English	*Hedera helix*
Ivy, Geranium	*Pelargonium peltatum*
Jasmine, Asiatic	*Trachelospermum asiaticum*
Jasmine, Primrose	*Jasminum mesnyn*
Mondograss	*Ophiopogon japonica*
Myoporum	*Myoporum parviflolium*
Pachysandra	*Pachysandra terminalis*
Potentilla	*Potentilla fruticosa*
Rose-of-Sharon	*Hypericum calycinum*
Wintercreeper	*Euonymous fortunei*

ORNAMENTAL GRASSES	
Common Name	**Scientific Name**
Beach grass	*Ammophila breviligulata*
Fescue, Blue	*Festuca ovina*
Fescue, Sheep	*Festuca ovina*
Fountain grass	*Pennisetum setaceum*
Pampas grass	*Cortaderia selloana*
Reed canary grass	*Phalaris arundinacea*
Reed, Giant	*Arundo* spp.
Ribbon grass	*Phalaris arundinacea*
Tufted hair grass	*Deschampsia caespitosa*

ORNAMENTAL SHRUBS	
Common Name	**Scientific Name**
Abelia, Glossy	*Abelia grandiflora*
Aucuba, Gold	*Aucuba japonica*
Azalea	*Rhododendron spp.*
Bamboo, Heavenly	*Nandina domestica*
Barberry	*Berberis gladwynensis*
Barberry, Japanese	*Berberis thunbergii*
Blue indigo bush	*Dalea gregii*
Bottlebrush, Lemon	*Callistemon citrinus*
Boxwood, Common	*Buxus sempervirens*
Boxwood, Japanese	*Buxus microphylla*
Camellia	*Camellia japonica*
Cape jasmine	*Gardenia jasminoides*
Cordyline	*Cordyline spp.*
Correa	*Correa spp.*
Cotoneaster	*Cotoneaster apiculatus*
Cotoneaster, Bearberry	*Cotoneaster dammeri*
Cotoneaster, Rock	*Cotoneaster horizontalis*
Cypress, Italian	*Cupressus sempervirens*
Cypress, Leyland	*Cupressocyparis leylandii*
Deutzia, Slender	*Deutzia gracilis*
Dogwood, Red twig	*Cornus sericea*
Elaeagnus	*Elaeagnus ebbingei*
Escallonia	*Escallonia fradesii*
Euonymus	*Euonymus fortunei*
Euonymus, Golden	*Euonymus japonica*
Euonymus, Winged	*Euonymus alata*
Firethorn	*Pyracantha coccinea*
Forsythia, Border	*Forsythia intermedia*
Fragrant olive	*Osmanthus fragrans*
Fuschia, California	*Zauschineria californica*
Gardenia	*Gardenia jasminoides*
Hawthorne, Indian	*Raphiolepis indica*
Hibiscus	*Hibiscus syriacus*
Holly, Chinese	*Ilex cornuta*
Holly, Japanese	*Ilex crenata*
Holly, Fosters	*Ilex attenuata 'Fosteri'*
Holly, Savannah	*Ilex attenuata*
Holly, Yaupon	*Ilex vomitoria*

(Continued)

(Cont.)

ORNAMENTAL SHRUBS	
Common Name	**Scientific Name**
Honeysuckle, Bush	*Diervilla lonicera*
Juniper	*Juniperus* spp.
Juniper, Chinese	*Juniperus chinensis v. pfitzer*
Juniper, Shore	*Juniperus conferta*
Juniper, Trailing	*Juniperus horizontalis*
Laurel, Cherry	*Prunus laurocerasus*
Laurel, Mountain	*Kalmia latifolia*
Laurel, Otto luyken	*Prunus laurocerasus*
Laurel, Schipka	*Prunus schipkanesis*
Laurustinus	*Viburnum tinus*
Lavender, English	*Lavandula angustifolia*
Leucothoe	*Leucothoe fontanesiana*
Leucothoe, Coast	*Leucothoe axillaris*
Lilac, Cut-leaf	*Syringa laciniata*
Lily-of-the-Nile	*Agapanthus africanus*
Mahonia	*Mahoria aquifolium*
Mock orange	*Pittosporum tobira*
Myrtle, Compact	*Myrtus communis*
Myrtle, Wax	*Myrica cerifera*
Nandina	*Nandina domestica*
Oleander	*Nerium oleander*
Oregon grape	*Mahonia aquifolium*
Osmanthus	*Osmanthus fragrans*
Palm, European fan	*Chamaerops humillis*
Palm, Mediterranean fan	*Chamaerops* spp.
Phlox, Prickly	*Leptodactylon californicum*
Photinia, Fraser	*Photinia X Fraseri*
Pieris, Japanese	*Pieris japonica*
Pine, Mugo	*Pinus mugo*
Plum, Natal	*Carissa grandiflora*
Privet, California	*Ligustrum ovalifolium*
Privet, Glossy	*Ligustrum lucidum*
Privet, Variegated	*Ligustrum sinensis*
Privet, Waxleaf	*Ligustrum japonicum*
Pyracantha	*Pyracantha coccinea*
Quince, Flowering	*Chaenomeles japonica*
Ranger, Texas	*Leucophyllum frutescens*
Redroot	*Ceanothus* spp.
Rhododendron	*Rhododendron* spp.
Robira	*Pittosporum tobiri*
Spice plant	*Illicium parviflorum*
Spiraea	*Spiraea vanhouttei*
Spiraea, Anthony waterer	*Spiraea X bumalda*
Spiraea, Japanese	*Spirea japonica*
Sweet bay	*Laurus nobilis*
Trumpet bush	*Tecoma stans*
Verbena, Lemon	Aloysia triphylla
Viburnum	*Viburnum suspensum*
Vitex	*Vitex* spp.
Weigela	*Weigela florida*
Wild lilac	*Ceanothus* spp.
Xylosma	*Xylosma congestum*
Yellowbells	*Tecoma stans*
Yew*	*Taxus media*
Yew, Japanese*	*Taxus cuspidata*
Yew, Southern	*Podocarpus macrophyllus*
Yucca, Adam's	*Yucca filamentosa*
Yucca, Weeping	*Yucca pendula*

* Applications should not be made during Spring growth or injury to terminals may occur.

ORNAMENTAL TREES	
Common Name	**Scientific Name**
Alder, European black	*Alnus glutinosa*
Apple	*Malus* spp.
Arborvitae, American	*Thuja occidentalis*
Arbutus	*Arbutus* spp.
Ash, Red	*Fraxinus pennsylvanica*

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ORNAMENTAL TREES	
Common Name	**Scientific Name**
Ash, White	*Fraxinus americana*
Aspen, Bigtooth	*Populus grandidentata*
Aspen, Quaking	*Populus tremuloides*
Basswood	*Tilia* spp.
Birch, European weeping	*Betula pendula*
Birch, River	*Betula nigra*
Buckeye, Red	*Aesculus pavia*
Cedar, White	*Thuja occidentalis*
Chamaecyparis, Boulevard	*Chamaecyparis pisifera*
Cherry, Black	*Prunus serotina*
Cherry, Choke	*Prunus virginiana*
Cherry, Kwanzan	*Prunus serrulata*
Cherry, Nanking	*Prunus tomentosa*
Cottonwood	*Populus deltoides*
Crabapple	*Malus* spp.
Crepe Myrtle	*Lagerstroemia indica*
Cryptomeria, Japanese cedar	*Cryptomeria japonica*
Cypress, Bald	*Taxodium distichum*
Cypress, Leyland	*Cupressocyparis leylandii*
Dogwood, Flowering	*Cornus florida*
Dogwood, Korean	*Cornus kousa*
Dogwood, Silky	*Cornus amomum*
Dogwood, Shrub	*Cornus* spp.
Elm	*Ulmus japonica*
Fir, Balsam	*Abies balsamae*
Fir, Douglas	*Pseudotsuga menziesii*
Fir, Fraser	*Abies fraseri*
Fir, White	*Abies concolor*
Franklinia	*Franklinia* spp.
Ginkgo	*Ginkgo biloba*
Gum, Black	*Nyssa sylvatica*
Gum, Sour	*Nyssa sylvatica*
Haw, Black	*Viburnum prunifolium*
Hawthorn	*Crataegus* spp.
Hemlock, Canada	*Tsuga canadensis*
Hemlock, Eastern	*Tsuga canadensis*
Holly, American	*Ilex opaca*
Honeylocust	*Gleditsia triacanthos*
Lilac, Common	*Syringa vulgaris*
Lilac, Japanese tree	*Syringa reticulata*
Linden	*Tilia* spp.
Magnolia, Saucer	*Magnolia soulangiana*
Magnolia, Southern	*Magnolia grandiflora*
Magnolia, Star	*Magnolia stellata*
Maidenhair tree	*Ginkgo biloba*
Maple, Japanese	*Acer palmatum*
Maple, Norway	*Acer plantanoides*
Maple, Red	*Acer rubrum*
Maple, Sugar	*Acer saccharum*
Nannyberry, Rusty	*Viburnum rufidulum*
Oak, Chinquapin	*Quercus muehlenbergii*
Oak, Live	*Quercus virginiana*
Oak, Pin	*Quercus palustris*
Oak, Red	*Quercus rubra*
Oak, Swamp chestnut	*Quercus michauxii*
Oak, Water	*Quercus nigra*
Oak, White	*Quercus alba*
Oak, Willow	*Quercus phellos*
Olive	*Olea europaea*
Palm date	*Phoenix* spp.
Palm, Fan	*Washingtonia* spp.
Palm, Pindo	*Butia* spp.
Palm, Washington	*Washingtonia* spp.
Peach	*Prunus persica*
Pear, Bradford	*Pyrus calleryana 'bradford'*
Pecan	*Carya illinoensis*
Pine, Austrian	*Pinus nigra*

(Continued)

(Cont.)

ORNAMENTAL TREES	
Common Name	**Scientific Name**
Pine, Italian stone	*Pinus pinea*
Pine, Loblolly	*Pinus taeda*
Pine, Monterey	*Pinus radiata*
Pine, Red	*Pinus resinosa*
Pine, Scotch	*Pinus sylvestris*
Pine, Slash	*Pinus elliottii*
Pine, Virginia	*Pinus virginiana*
Pine, White	*Pinus strobus*
Plum, Purple leaf	*Prunus cerasifera*
Poplar, Black	*Populus nigra*
Redcedar, Eastern	*Juniperus virginiana*
Redcedar, Western	*Thuja plicata*
Red ironbark	*Eucalyptus sideroxylon 'rosea'*
Redwood, Dawn	*Metasequoia glytostroboides*
Sequoia, Giant	*Sequoiadendron giganteum*
Serviceberry	*Amelanchier laevis*
Sourwood	*Oxydendrum arboreum*
Spruce, Colorado blue	*Picea pungens*
Spruce, Dwarf Alberta	*Picea glauca 'albertiana'*
Spruce, Norway	*Picea abies*
Spruce, White	*Picea glauca*
Sweetgum	*Liquidambar styraciflua*
Sycamore	*Platanus occidentalis*
Trachycarpus	*Trachycarpus* spp.
Tulip tree	*Liriodendron tulipifera*
Walnut, Black	*Juglans nigra*
Willow, Weeping	*Salix babylonica*
Yellowwood	*Cladrastis lutea*

PERENNIALS	
Common Name	**Scientific Name**
Bleeding heart	*Dicentra spectabilis*
Calla lily	*Zantedeschia aethiopica*
Canna, Common garden	*Canna generalis 'Lucifer'*
Chincherinchee	*Ornithogalum thyrsoides*
Crinum Lily	*Crinum* spp.
Fern, Asparagus	*Asparagus officinalis*
Fern, Leatherleaf	*Rumohra adiantiformis*
Freesia	*Freesia x hybrida*
Heather, Dwarf	*Calluna vulgaris*
Hosta	*Hosta* spp.
Lily	*Lillium* spp.
Liriope, Creeping	*Liriope spicata*
Liriope, Variegated	*Liriope muscari*
Montbretia	*Crocosmia crocosmiiflora*
Orchid, Peacock	*Acidanthera bicolor*
Peony, Chinese	*Paeonia lactiflora*
Wisteria	*Wisteria* spp.
Zephyr lily	*Zephyranthes* spp.

This product may be used on plant species not listed on this label. The suitability for such uses should be determined by treating a small number of such plants at the labeled rate. Treated plants should be evaluated 1 to 2 months following treatment for possible injury. The user assumes responsibility for any crop damage or other liability.
DO NOT treat plants grown for food or feed. Do not use treated plants for food or feed.

APPLICATION RATES

Apply this product for pre-emergence weed control using broadcast spray equipment using the following rates:

APPLICATION RATES		
Duration of Control*	**This Product (Qts./Ac.)**	**This Product (Fl. Ozs./1000 Sq. Ft.)**
Short term (2 to 4 months)	2.4	1.8
Long term (6 to 8 months)	4.8	3.6

For Hand-held Spray Equipment

Refer to the *"APPLICATION RATES"* table to determine the amount of this product to be applied per 1000 square feet. The amount of water to be used for the application should be sufficient for thorough coverage without runoff. Calibration of backpack or other handheld equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Refer to *"MIXING INSTRUCTIONS"* section of this label.
The efficacy of this product will improve if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control will result if this product is not activated by rainfall or irrigation within 30 days.

THIS PRODUCT IN TANK-MIXTURE FOR ORNAMENTALS

This product can be tank-mixed with Fluazifop (e.g., Ornamec®), Glufosinate (e.g., Finale), Glyphosate (e.g., Imitator, Roundup), Izoxaben (e.g., Gallery®), Sethoxydim (e.g., Segment®), Simazine (e.g., Simazine 4L) and other similar products to control emerged weeds in Ornamentals. Do not apply tank-mixtures containing Glufosinate or Glyphosate over the top of ornamental plants. If compatibility is not known, conduct a simple jar test before tank-mixing to insure compatibility of herbicides.
It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

USE PRECAUTIONS

1. Apply this product to established plantings.
2. When making applications to established liners or transplants, direct sprays to the soil.
3. Delay application to seedbeds, transplant beds or liners until plants have become well rooted. Allow soil or planting mixes to settle firmly following transplanting before applying this product. Do not allow direct contact of this product with roots.
4. On established rootstock, application of this product can be made before budding/grafting the plants.
5. Plant only those plant species listed on this label into soil treated the previous season with this product to avoid plant injury.
6. For container grown Ornamentals, delay first application of this product to bareroot liners 2 to 4 weeks after transplanting.
7. It is recommended that treated plants be evaluated for 1 to 2 months prior to making application to a large number of plants. The user assumes responsibility for any crop damage or other liability.

USE RESTRICTIONS FOR ORNAMENTALS

1. Do not apply this product in Greenhouses, Shadehouses or other enclosed structures.
2. Do not make applications to grafted (or budded) liners at any time.
3. Do not make over the top applications to liners or transplants.
4. Do not apply this product to liners or transplants during budbreak or at time of first flush of new growth.
5. Do not allow spray to cover or penetrate foliage and/or buds or injury is likely to occur.

LANDSCAPE AND GROUND MAINTENANCE

This product can be incorporated into landscape and ground maintenance programs to provide extended pre-emergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as fence lines and borders, mulch beds, parking areas and roadsides, around statuary or monuments and similar areas should be free of emerged weeds before application. To remove emerged weeds, either cultivate or tank-mix this product with a post-emergence herbicide labeled for such use.
Refer to the *"APPLICATION RATES"* table under the *"ORNAMENTALS"* section of this label for use rates. Avoid unintentional contact of spray solution of this product to stone, wood or other porous surfaces as staining may occur. To avoid staining, rinse immediately.

NON-CROPLAND INCLUDING TREE PLANTATIONS

This product can be used for maintenance of grounds in Non-cropland areas; pre-emergence control of the weed species listed in and around established Tree plantations (including Christmas trees); Pulpwood and Fiber farms; in and around established Ornamentals planted in Non-cropland areas such as Highway Rights-of-Way and Utility substations.
This product may be used for hardwood and Conifer regeneration on conservation reserve program land or similar areas.
Refer to the *"APPLICATION RATES"* table under the *"ORNAMENTALS"* section of this label for use rates. This product may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to avoid direct contact of tree roots with this product or this product being washed into the root zone via the open slit or root stunting may occur.

For post-emergence use, tank-mix combination of this product with Glufosinate (e.g., Finale), Glyphosate (e.g., Imitator, Roundup) or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Rates for the tank-mix compounds should be determined from the product labels of both this product and partner herbicides prior to use.

Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. This product plus Diuron (e.g., Diuron 4L) or Simazine (e.g., Simazine 4L) combinations will broaden weed control spectrum, however, use of combinations may restrict this product usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

TOTAL VEGETATION CONTROL

This product tank-mixed with Diuron (e.g., Diuron 4L), Glufosinate (e.g., Finale), Glyphosate (e.g., Imitator, Roundup), Imazapyr (e.g., Arsenal®, Sahara®), Imazapic (e.g., Plateau®), Sulfometuron (e.g., Oust®) or other products can provide bare ground or total vegetation control. This product can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tank-mix partner labels regarding effects on desirable plants. Do not tank-mix with Arsenal, Sahara or Plateau in California.

Applications may be made to existing weeds controlled by the partner herbicide. Determine the rates from the product labels prior to use. Follow the most restrictive label instructions.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture.

For Kochia: Combine this product with Diuron (e.g., Diuron 4L) or Imazapyr (e.g., Arsenal, Sahara) if control has been a problem for other herbicides. Refer to the *"APPLICATION RATES"* table under the *"ORNAMENTALS"* section of this label for use rates.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store below 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

PESTICIDE DISPOSAL: To avoid waste, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer 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 HANDLING:

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 up to < 250 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. Fill 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.

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STORAGE AND DISPOSAL *(Cont.)*

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide 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. To the extent consistent with applicable law, Manufacturer makes no other warranties or representations of any kind, expressed or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.