

524-465

10/21/2002

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

OCT 21 2002

Ms. Rhonda M. Mannion
Monsanto Company
600 13th Street, N. W., Suite 660
Washington, DC 20005

Dear Ms. Mannion:

Subject: MON 12037 Herbicide (Incorporate Supplementals and Reformat Master Label)
Sempra Herbicide
Permit Herbicide
Manage Turf Herbicide
EPA Registration No. 524-465
Your Application Dated July 23, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable. Amended labeling supercedes all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

James A. Tompkins
James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

MASTER LABEL FOR EPA REG. NO. 524-465
--

Paranthetical text () denotes optional wording.

Registered Brand Names:
 MON 12037 Herbicide
 Permit Herbicide
 Sempra Herbicide
 Manage Herbicide

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I. MAIN LABEL FOR FOOD CROP USES

[INSERT BRAND NAME]
Herbicide

Complete Directions For Use [Pamphlet or Booklet]

EPA Reg. No. 524-465

Read the entire label before using this product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

Bullet, Harness, Degree, Degree Xtra, Lasso, Micro-Tech, Partner, Roundup, and Semptra are registered trademarks of Monsanto Technology LLC.

Permit is a registered trademark of, and used under license from, Nissan Chemical Industries, Ltd.

Pioneer is a registered trademark of Pioneer Hi-Bred International, Inc.

Accent is a trademark of E. I. duPont de Nemours & Co.

Banvel, Clarity, and Marksman are trademarks of BASF Corporation.

Beacon, Dual Magnum, and Evik are trademarks of Novartis Finance Corporation.

Asulox and Buctril is a trademark of Aventis Cropscience USA, Inc.

Eradicane and Sutan+ are trademarks of Syngenta Crop.

Surpass is a trademark of Dow AgroSciences LLC.

© [year] MONSANTO COMPANY

ST. LOUIS, MISSOURI 63167 U.S.A.

Formulated in the United States using Active Ingredient made in Japan.

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Halosulfuron-methyl.....	75.0%
OTHER INGREDIENTS:	25.0%
	100.0%

* Manufactured by Nissan Chemical Industries, Ltd.

This product is protected by U.S. Patent No. 4,668,277.

2.0 IMPORTANT PHONE NUMBERS

1. In case of emergency involving this product, or for medical assistance, Call Collect, day or night, (314) 694-4000.
2. For product information or assistance in using this product, call toll-free, 1-800-332-3111.

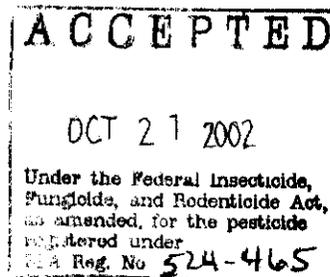
3.0 PRECAUTIONARY STATEMENTS

3.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.
HARMFUL IF SWALLOWED.



Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. • Call poison control center or physician for treatment advice.
IF SWALLOWED	<ul style="list-style-type: none"> • Call poison control center or physician immediately for treatment advice. • Remove visible particles from mouth. • Have person rinse mouth thoroughly with water, spit out rinse water. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
<ul style="list-style-type: none"> • Have the product container or label with you when calling a poison control center or physician, or going for treatment. • In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000. • This product is identified as [insert brand name], EPA Reg. No. 524-465. 	

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants 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.

When handlers use closed systems, or enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

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

3.2 ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

4.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions For Use on this label or in separately published Monsanto Supplemental 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 regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- shoes plus socks
- chemical resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

For more product information, call toll-free 1-800-332-3111.

5.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

STORAGE: Store under cool, dry conditions (below 120° F). Do not store under moist conditions.

Water Soluble Packaging [Permit]

Keep outer pouch **TIGHTLY** sealed to prevent moisture from damaging any unused water soluble bags.

DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal in accordance with applicable Federal, state or local procedures, or in such other method as is approved under those procedures.

Water Soluble Packaging [Permit]: Emptied foil pouch and cardboard box retain vapor and product residue. Observe all labeled safeguards until containers are destroyed. Do not reuse foil pouch or box.

Completely use water soluble bags in application equipment. Then dispose of empty foil pouch and cardboard box in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

Plastic Bottle Packaging [MON 12037, Sempra]: Do not reuse container. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

DISPOSAL AUTHORITIES: If none of the foregoing procedures is permitted by state and local authorities, then contact your State Pesticide or Environmental Control Agency, or your local Hazardous Waste Disposal office, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

6.0 GENERAL INFORMATION

Biological Information

The level of weed control following [insert brand name] herbicide application is dependent upon application rate, weed species and size at application time, and growing conditions. For best results, applications should be made to actively growing weeds at the heights defined in the "USE RATE GUIDE" sections of this label. Heavy infestations should be treated early before the weeds become too competitive with the crop. When early postemergence treatments are used (in corn), sequential applications may be required to control later weed flushes.

Soon after [insert brand name] is applied, growth of susceptible weeds is inhibited, and susceptible weeds are no longer competitive with the crop. Following growth inhibition, the leaves and growing point begin to discolor. Complete control typically occurs within 7 to 14 days depending on the weed size, species and growing conditions.

7.0 MIXING INSTRUCTIONS

Fill the spray tank to about three-fourths of the desired volume with water or carrier. Add the recommended amount of this product as listed in the "WEEDS CONTROLLED" sections. Complete the filling process while maintaining agitation. Remove the hose from the mixing tank immediately after filling to avoid siphoning back into the carrier source. Add nonionic surfactant and other adjuvants as the last ingredients in the tank.

Spray solutions should be applied within 24 hours after mixing.

Adjuvants: A **nonionic surfactant (NIS)** is the only adjuvant required in the spray solution. Use only nonionic surfactants which are approved by EPA for use on food crops and which contain at least 80 percent active ingredient. Use 0.25 to 0.5 percent nonionic surfactant concentration (1 to 2 quarts per 100 gallons of spray solution).

Crop oil concentrate (COC) may be used with [insert brand name] herbicide **instead of** nonionic surfactants. Do not use both NIS and COC in the spray mixture. Add COC to the spray mixture at 1% vol./vol. (1 gallon per 100 gallons of spray mixture). Use only good quality petroleum- or vegetable-based crop oil concentrates which contain at least 14 percent emulsifiers.

Nonionic surfactant **OR** COC are the only additives necessary for [insert brand name] herbicide applications. Liquid nitrogen fertilizer solution (e.g., 28-0-0) may be added to the spray solution to improve the control of certain species, particularly if [insert brand name] herbicide is being tank mixed with a companion herbicide which requires use of a liquid nitrogen additive. However, a nonionic surfactant **OR** COC will still be necessary. Refer to the companion product label for specific additive requirements. Otherwise, add liquid nitrogen fertilizer at a rate of 2 to 4 quarts per acre. Do not use liquid nitrogen fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur. A high quality, spray grade ammonium sulfate (e.g., 21-0-0) may be applied at a rate of 2 to 4 pounds per acre in place of the liquid nitrogen fertilizer.

8.0 APPLICATION EQUIPMENT AND INSTRUCTIONS

Applications may be made by ground [(or aerial) if corn, sorghum, or rice] equipment to healthy, actively growing weeds. For best results, avoid applications when weeds are under drought stress, disease, or insect damage. Rainfall or irrigation occurring within 4 hours after application may also reduce effectiveness.

8.1 Ground Applications

Apply [insert brand name] herbicide uniformly with properly calibrated ground equipment in 10 or more gallons of water per acre. Other water based spray carriers may be used for directed applications, avoiding contact with crop foliage. Select spray volumes that ensure thorough and uniform weed coverage. Choose

nozzles which provide optimum spray distribution and coverage at the appropriate pressure (psi). Use only ground application equipment. Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during applications.

Do not apply this product through any type of irrigation system.

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following application.

Thoroughly clean application equipment immediately after [insert brand name] herbicide use and prior to spraying a crop other than corn or grain sorghum. Prepare a tank cleaning solution which consists of a 1 percent solution of household ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Repeat the procedure with the ammonia solution. Complete the cleaning process by rinsing with clean water.

8.2 Aerial Applications [For Corn, Sorghum, & Rice (dry seeded) only]

Aerial applications may only be made to (Rice, Corn, and Sorghum). Apply this product or approved tank mixtures with properly calibrated equipment in 3 to 15 gallons of water per acre.

Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during applications.

Spray Drift Management

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment - and weather - related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The importance of spray 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 may not prevent drift if applications are made improperly or under unfavorable environmental conditions (see the following "Wind", "Temperature and Humidity", and "Temperature Inversion" sections of this advisory).

Controlling initial droplet size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher flow rates produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher 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** - Orienting nozzles so the spray stream is released backwards, parallel to the airstream, will produce 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 stream nozzles oriented straight back produce larger droplets than other nozzle types.

Controlling placement of spray droplets:

- **Boom length** - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height** - Applications should not be greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Greater application heights result in greater droplet size reduction through evaporation and greater movement in air currents. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- **Application speed** - Slower aircraft speeds within a safe range will produce less air turbulence and fewer small droplets.
- **Swath adjustment** - When applications are made with a cross-wind, 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 (wind speed, droplet size, etc.).

Key environmental factors:

- **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 when wind speeds are below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Applicators should be familiar with local wind patterns and how they affect 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 air currents that are 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 detector. 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:

Pesticides 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, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following application.

Thoroughly clean application equipment immediately after the use of [insert brand name] herbicide. Prepare a tank cleaning solution that consists of a 1 percent solution of household ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Repeat the procedure with the ammonia solution. Complete the cleaning process by rinsing with clean water.

9.0 CROPS (alphabetical)

[see individual brand name DFU sections]

10.0 TANK MIXTURES

This product may be applied in combination with other products that are registered for the same crop and application.

Refer to the companion product label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

Before mixing in the spray tank, it is recommended that compatibility be tested by mixing all components in a small container in proportionate quantities. For tank mixtures, add individual formulations to the spray tank in the following sequence: water soluble bags, dry flowables, emulsifiable concentrates, drift control additive, water soluble liquids followed by nonionic surfactant or crop oil concentrate.

Tank mixtures should not be applied if the crop is under severe stress due to drought, water-saturated soils, poor fertility (especially low nitrogen levels), hail, frost, insects or when the maximum daytime temperature is above 92°F. Tank-mix applications under these conditions may cause temporary crop injury.

[see individual brand name DFU sections for specific tank-mix recommendations]

11.0 ROTATIONAL CROP INFORMATION

Labeled crops may be planted at specified time intervals following application of approved rates of [insert brand name] herbicide. Use the time intervals listed below to determine the required time interval before planting.

**TIME INTERVAL BEFORE PLANTING
(Months after treatment with [insert brand name])**

Crop	Months
IR/IMR Field corn	0
Sugarcane	0
IT Field corn	1
Normal Field corn	1
Barley (winter)	2
Forage Grasses	2
Oats	2
Proso Millet	2
Rice	2
Rye (winter)	2
Seed corn	2
Sorghums	2
Spring cereal crops	2
Wheat (winter)	2
Popcorn, Sweetcorn*	3
Cotton	4
Peanuts	6
Tomato (transplant)	8

Alfalfa	9
Clovers	9
Dry Beans	9
Field Peas	9
Peas	9
Potatoes	9
Cucumbers, Pumpkins, Squash	9
Snap Beans	9
Soybeans	9
Peppers	10
Eggplant	12
Radish	12
Cabbage	15
Canola	15
Carrot	15
Mint	15
Broccoli, Cauliflower, Collards	18
Leeks, Onions	18
Lettuce crops	18
Sunflowers	18
Sugarbeet (Michigan only)	21
Sugarbeet and Red Beet	24
Spinach	24
Sugarbeet (ND, MN, Red River Valley)**	36

* In-crop and preplant applications of [insert brand name] herbicide to sweetcorn and popcorn are based on application rates and timings specific for use in those crops. Rotational interval must be adhered to for planting subsequent sweetcorn or popcorn crops after [insert brand name] herbicide applications in sweetcorn or popcorn crops that are lost, terminated, or harvested.

**Also includes other regions where rainfall is sparse or irrigation is required.

Refer to individual product labels to determine rotational crop restrictions when tank mixtures are used.

12.0 LIST OF COMMON AND SCIENTIFIC NAMES OF BROADLEAF WEEDS

Bindweed, hedge <i>Calystegia sepium</i>	Morningglory, tall <i>Ipomoea purpurea</i>
Burcucumber <i>Sicyos angulatus</i>	Mustard, wild <i>Sinapis arvensis</i>
Cocklebur, common <i>Xanthium strumarium</i>	Nutsedge, yellow <i>Cyperus esculentus</i>
Dogbane, hemp <i>Apocynum cannabinum</i>	Nutsedge, purple <i>Cyperus rotundus</i>
Fleabane, Philadelphia <i>Erigeron philadelphicus</i>	Passionflower, maypop <i>Passiflora incarnata</i>
Horsenettle	Pigweed, redroot

<i>Solanum carolinense</i>	<i>Amaranthus retroflexus</i>
Kyllinga, green <i>Kyllinga brevifolia</i>	Pokeweed, common <i>Phytolacca americana</i>
Kochia <i>Kochia scoparia</i>	Radish, wild <i>Raphanus raphanistrum</i>
Jimsonweed <i>Datura stramonium</i>	Ragweed, common <i>Ambrosia artemisiifolia</i>
Lambsquarters, common <i>Chenopodium album</i>	Ragweed, giant <i>Ambrosia trifida</i>
Mallow, Venice <i>Hibiscus trionum</i>	Smartweed, Pennsylvania <i>Polygonum pensylvanicum</i>
Milkweed, common <i>Asclepias syriaca</i>	Sunflower, common <i>Helianthus annuus</i>
Milkweed, honeyvine <i>Ampelamus albidus</i>	Velvetleaf <i>Abutilon theophrasti</i>
Morningglory <i>Ipomoea spp.</i>	Waterhemp, common <i>Amaranthus rudis</i>
Morningglory, ivyleaf <i>Ipomoea hederacea</i>	Waterhemp, tall <i>Amaranthus tuberculatus</i>

13.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label pamphlet ("Directions") when used in accordance with those Directions under the conditions described therein. **NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.** This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

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THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

I.A. MON 12037 HERBICIDE

WATER SOLUBLE GRANULE

MON 12037 is a selective herbicide for the control of listed annual broadleaf weeds and nutsedge in field corn and field corn grown for seed. This product is recommended for use following a preemergence application of Harness® Harness Xtra, Micro-Tech.

9.1 FIELD CORN AND FIELD CORN GROWN FOR SEED

Corn Growth Stage: When used alone, MON 12037 herbicide can be applied over-the-top or with drop nozzles from the spike through layby stage of field corn.

MON 12037 herbicide may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

WEEDS CONTROLLED
MON 12037 HERBICIDE
CORN USE RATE GUIDE

Use Rate - 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

Table with 2 columns: Weed Species and Size Range Height (inches). Lists weeds like Cocklebur, Fleabane, Kochia, Mallow, etc.

Use Rate - 1 to 1 1/3 ounces of product by weight per acre (0.047 to 0.062 pound active ingredient per acre)

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Weed Species	Size Range Height (inches)
Cocklebur, common	9 to 14
Mallow, Venice	4 to 12
Milkweed, honeyvine	1 to 6
Mustard, wild	4 to 6
Nutsedge, ¹ yellow	4 to 12
purple	4 to 12
Pigweed, redroot ²	4 to 6
Radish, wild	4 to 6
Ragweed: common	9 to 12
giant	4 to 6
Sunflower, common	12 to 15
Velvetleaf ²	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 ounce Height (in.)	1 to 1 1/3 ounce Height (in.)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3
Nutsedge, yellow	4 to 12	*
purple	4 to 12	*

* Refer to "WEEDS CONTROLLED" section of this label.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

I.B. PERMIT® HERBICIDE

WATER SOLUBLE GRANULE PREMEASURED IN WATER SOLUBLE BAG

Permit® is a selective herbicide for the control of listed annual broadleaf weeds and nutsedge in field corn, field corn grown for seed, grain sorghum (milo), sweet corn, popcorn, rice, sugarcane, cotton, and fallow ground. Permit is not registered for use in sweetcorn, popcorn, rice, sugarcane, or cotton in New York.

9.1 FIELD CORN AND FIELD CORN GROWN FOR SEED

Corn Growth Stage: When used alone, Permit herbicide can be applied over-the-top or with drop nozzles from the spike through layby stage of field corn.

Permit herbicide may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

WEEDS CONTROLLED PERMIT HERBICIDE CORN USE RATE GUIDE

Use Rate - 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

Table with 2 columns: Weed Species and Size Range Height (inches). Lists weeds like Cocklebur, Fleabane, Kochia, etc. with their height ranges.

Use Rate - 1 to 1 1/3 ounces of product by weight per acre
(0.047 to 0.062 pound active ingredient per acre)

Weed Species	Size Range
	Height (inches)
Cocklebur, common	9 to 14
Mallow, Venice	4 to 12
Milkweed, honeyvine	1 to 6
Mustard, wild	4 to 6
Nutsedge, ¹ yellow	4 to 12
purple	4 to 12
Pigweed, redroot ²	4 to 6
Radish, wild	4 to 6
Ragweed: common	9 to 12
giant	4 to 6
Sunflower, common	12 to 15
Velvetleaf ²	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 ounce Height (in.)	1 to 1 1/3 ounce Height (in.)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3
Nutsedge: yellow	4 to 12	*
purple	4 to 12	*

* Refer to "WEEDS CONTROLLED" section of this label.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

Tank Mixtures for Corn Only

Ensure that spray equipment is set up to avoid applying an excessive rate directly over the rows and into the whorl of the cornstalk. To insure good spray coverage of weeds and to reduce the risk of spraying directly into the whorl, tank-mix applications made after corn is 24 inches tall should be directed or semi-directed using drop nozzles.

Permit[®] Herbicide Tank-Mixture Options in Field Corn & Seed Corn

Tank Mix Partners	Rate per Acre	Additives	Application Method	Comments
Banvel or Clarity™	2 to 8 fl ounces	NIS	<ul style="list-style-type: none"> Broadcast up to 36" tall corn. Use lower Banvel rates or directed sprays on corn taller than 8". 	<ul style="list-style-type: none"> COC may cause crop injury, especially with higher Banvel/Clarity rates. For large corn, avoid direct spraying into whorl of cornstalk.
Marksman™	1/2 to 2 pints	NIS	<ul style="list-style-type: none"> Broadcast up to 8" tall corn. 	<ul style="list-style-type: none"> COC may cause crop injury.
2,4-D (4 pounds/gal)	4 to 8 fl ounces	NIS	<ul style="list-style-type: none"> Broadcast up to 8" tall corn. 	<ul style="list-style-type: none"> If corn exceeds 8", directed sprays with drop nozzles are required.
Buctril™	1/2 to 1 pint	NIS	<ul style="list-style-type: none"> Broadcast to corn up to tassel emergence. 	<ul style="list-style-type: none"> Leaf burn may occur. COC or 28 percent may cause additional leaf burn.
BUCTRIL+atrazine	1 to 2 pints	NIS	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Leaf burn may occur. COC or 28 percent may cause additional leaf burn.
Atrazine 4L	1 1/2 to 3 pints	COC	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Control is best when weeds are small. Effective for burndown of grass weed escapes. Antagonism may occur on larger broadleaf weeds.
Accent	2/3 ounce	COC or NIS	<ul style="list-style-type: none"> Broadcast or apply with drop nozzles to corn up to 24" tall. For corn 24 to 36" tall, apply with drop nozzles only. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive. Avoid spraying directly into whorls of larger cornstalks. Refer to Accent label for soil insecticide interaction information.
Beacon	0.76 ounce 1/2 packet	COC or NIS	<ul style="list-style-type: none"> Broadcast or apply with drop nozzles to corn up to 20" tall. For corn 20" to pretassel, apply with drop nozzles only. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive. Avoid spraying directly into whorls of larger corn. Refer to Beacon label for soil insecticide interaction restrictions. Consult your dealer, seed supplier, or Novartis representative for a list of susceptible hybrids.
Accent Gold	2.9 ounces	COC	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g. 28 percent) is also recommended as an

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				additive.
				<ul style="list-style-type: none"> • Do not apply to seed corn • Refer to Accent Gold label for soil insecticide interactions..
Basis Gold	14 ounces	COC or NIS	• Broadcast to corn up to 12" tall.	<ul style="list-style-type: none"> • Ammonium nitrogen fertilizer (e.g. 28 percent) is also recommended as an additive. • Do not apply to seed corn • Refer to Accent Gold label for soil insecticide

NIS = Nonionic surfactant. COC = Crop oil concentrate.

Refer to "MIXING INSTRUCTIONS", "TANK MIXTURES" and "USE RATE GUIDES" sections of this label for detailed information.

Refer to the specific product labels and observe all precautions, mixing and application instructions for all products used in tank mixtures.

PERMIT HERBICIDE plus ACCENT™

A tank mixture of Permit herbicide plus Accent may be used for the postemergence control of annual broadleaf weeds and annual grasses in corn only. Permit herbicide plus Accent may be applied over-the-top or with drop nozzles to field corn up to 24 inches tall (free standing). For corn 24 to 36 inches tall, refer to the Accent label for application restrictions. Banvel, Marksman, Clarity, Buctril or BUCTRIL + atrazine may also be added to this tank mixtures for improved control of certain weed species.

Refer to the Accent label for use instructions and restrictions on corn varieties and insecticides.

PERMIT HERBICIDE plus BEACON™

A tank mixture of Permit herbicide plus Beacon may be used for the postemergence control of annual broadleaf weeds and annual grasses in corn only. Permit herbicide plus Beacon may be applied over-the-top or directed to field corn when corn height is between 4 and 20 inches tall. Drop nozzles are required with the Beacon mixture when corn is between 20 inches tall and tassel emergence. Banvel, Marksman, Clarity, Buctril or BUCTRIL + atrazine may also be added to this tank mixtures for improved control of certain weed species.

Refer to the Beacon label for use instructions and restrictions on corn varieties and insecticides.

Additional grass species controlled by tank mixing with Accent or Beacon.

Grasses	Size Range Height (inches)	
	Permit + Accent (2/3 - 1 oz) + (2/3 oz)	Permit + Beacon (2/3 - 1 oz) + (1/2 packet)
Barnyardgrass	2 to 4	
Cupgrass, woolly	2 to 4	
Foxtails: giant, yellow,	2 to 4	
green, bristly	2 to 4	
Itchgrass	2 to 6	
Johnsongrass, rhizome	8 to 18	8 to 16
seedling	4 to 12	4 to 12
Millet, wild proso	1 to 4	
Oats, wild	2 to 4	
Panicum, browntop	1 to 3	
Panicum, fall	2 to 4	Less than 2
Panicum, Texas	1 to 3	
Quackgrass	4 to 10	4 to 8
Ryegrass, Italian	2 to 6	
Sandbur	1 to 3	
Shattercane	4 to 12	4 to 12
Signalgrass, broadleaf	1 to 2	
Sorghum-almum	4 to 12	4 to 12

PERMIT plus SOIL RESIDUALS

Micro-Tech® or Bullet or Harness® or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus Permit may be applied early postemergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide postemergence control of small emerged grasses and broadleaf weeds as well as residual preemergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra herbicide labels.

Apply these tank-mixtures to emerged grasses at the 2-leaf stage or less and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

RECOMMENDED RATES/ACRE:

Soil Residual (Quarts)	Plus Permit (Ounces)
Labeled rate	2/3

PERMIT plus ACCENT plus SOIL RESIDUALS

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Micro-Tech® or Bullet or Harness® or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus Permit plus Accent may be applied early postemergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide postemergence control of emerged foxtails as well as residual preemergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra herbicide labels.

Apply these tank-mixtures to emerged foxtails less than 2 inches tall and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

RECOMMENDED RATES/ACRE:

Soil Residual (Quarts)	Plus Permit (Ounces)	Plus Accent (Ounces)
Labeled rate	2/3	1/3 to 1/2

PERMIT® plus ROUNDUP® AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

Permit herbicide may be applied at 2/3 ounce by weight per acre in combination with Roundup herbicides labeled for agricultural uses for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge with **Pioneer IR** corn hybrids only. **Pioneer IR** hybrids are required to ensure crop safety due to the preplant application. Banvel or 2,4-D may also be applied in this tank mixture for enhanced preplant burndown of broadleaf weeds.

PERMIT® HERBICIDE SOIL APPLICATIONS

When used exclusively with **Pioneer IR field corn hybrids**, Permit herbicide may be soil applied at the rate of 1 1/3 to 2 ounces by weight per acre (0.062 to 0.094 pound of active ingredient per acre) for residual control of velvetleaf, common cocklebur, common lambsquarters, common ragweed, pigweed, smartweed, sunflower and other difficult to control weeds.

This product is recommended as an early preplant surface-applied, preplant incorporated, or preemergence treatment. Permit herbicide offers effective broadleaf control across all tillage systems and is intended for use in tank mixtures with preemergence grass herbicides, including but not limited to: **Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra, Micro-Tech, Bullet, Lariat and Lasso.**

Refer to the labels for these products, or any other grass preemergence herbicide used for use instructions, weeds controlled, and application restrictions.

PERMIT HERBICIDE plus BANVEL plus NONIONIC SURFACTANT

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For the control of additional broadleaf weeds, Permit herbicide may be applied in tank mixtures with Banvel. A Permit herbicide tank mixture with low rates of Banvel may be applied during the period beginning at corn emergence and continuing until corn is 36 inches in height. Applications should not be made after corn exceeds 36 inches or 15 days before tassel emergence, whichever comes first. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for Banvel, Clarity, and Marksman products for label restrictions.

PERMIT HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

For the control of additional broadleaf weeds, Permit herbicide may be applied in tank mixtures with 2,4-D. Avoid spraying just after corn leaves unfold, as injury may occur. A Permit herbicide tank mixture with 2,4-D may be applied during the period from corn emergence through the 5 leaf stage or 8 inches tall, whichever comes first. If corn exceeds 8 inches, directed spray applications with drop nozzles must be used for tank mixtures with 2,4-D.

Refer to the labels for 2,4-D products for label restrictions.

**PERMIT HERBICIDE
USE RATE GUIDE**

**PERMIT HERBICIDE plus BANVEL plus NONIONIC SURFACTANT
PERMIT HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT**

- Permit Use Rate - 2/3 ounce of product by weight per acre
- Banvel Use Rate - 1/4 to 1/2 pint per acre
- 2,4-D Use Rate - 1/4 to 1/2 pint per acre
- (0.125 to 0.25 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Bindweed	1 to 6
Burcucumber ¹	4 to 12
Cocklebur, common	1 to 12
Dogbane, hemp ³	1 to 6
Horsenettle	1 to 8
Jimsonweed	1 to 4
Kochia ¹	1 to 6
Lambsquarters, common ²	1 to 6
Mallow, Venice	1 to 3
Milkweed, common	1 to 6
Morningglory, ivyleaf	1 to 6
Morningglory, tall	1 to 6
Nightshade, black ¹	1 to 6
Pigweed, redroot	1 to 12
Pokeweed, common ¹	1 to 18
Ragweed: common	1 to 12

giant ¹	1 to 6
Smartweed, Pennsylvania	1 to 3
Sunflower, common	1 to 12
Thistle, Canada ¹	1 to 6
Velvetleaf	1 to 12

-
- ¹ Banvel tank mixture only.
 - ² A tank mixture of Permit herbicide (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint per acre) is recommended for the control of common lambsquarters less than 4 inches in height.
 - ³ Provides suppression of this weed.

PERMIT HERBICIDE plus BUCTRIL plus NONIONIC SURFACTANT

Permit herbicide may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for postemergence control of many annual broadleaf weeds in corn. Use 2/3 ounce of Permit herbicide by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and BUCTRIL + atrazine labels for use instructions, weeds controlled and application restrictions.

PERMIT HERBICIDE plus ATRAZINE

Permit herbicide may be applied in combination with atrazine for postemergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for Permit herbicide plus atrazine 4L at 1 1/2 to 3 pints per acre (0.75 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

9.2 GRAIN SORGHUM (MILO)

Grain Sorghum Growth Stage: Permit herbicide, alone, can be applied from the 2-leaf through layby stage (before grain head emergence).

Only apply Permit herbicide in a single application with the total application rate not to exceed 1.0 ounce of product by weight (0.047 pound active ingredient) per acre per use season.

Temporary stature reduction may occur to the crop following application of Permit herbicide if the grain sorghum is under stress. This effect will be most evident 7 to 10 days after application. The crop will quickly recover under normal growing conditions.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

**WEEDS CONTROLLED
PERMIT HERBICIDE
SORGHUM USE RATE GUIDE**

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Passionflower, maypop	1 to 3
Pigweed, redroot	1 to 3
Pokeweed, common	1 to 6
Ragweed: common	1 to 9
giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf	1 to 9

Use Rate - 1.0 ounce of product by weight per acre
(0.047 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Nutsedge: yellow	4 to 12
purple	4 to 12

WEEDS SUPPRESSED

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Burcucumber	1 to 3
Lambsquarters, common	1 to 2
Milkweed, common	3 to 5
Milkweed, honeyvine	1 to 3
Nutsedge: yellow	4 to 12
purple	4 to 12

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Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

Tank Mixtures for Grain Sorghum

PERMIT HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

A Permit herbicide tank mixture with 2,4-D may be applied to grain sorghum when the crop is 6 to 15 inches tall. If sorghum exceeds 8 inches, use drop nozzles and keep the spray off foliage. Do not treat during the boot, flowering or dough stage.

Applications should not be made when grain sorghum exceeds 15 inches. Do not treat grain sorghum during the boot, flowering, or dough stage. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for 2,4-D, Clarity and Marksman products for label restrictions.

**PERMIT HERBICIDE
USE RATE GUIDE**

PERMIT HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

Permit Use Rate - 2/3 ounce of product by weight per acre

2,4-D Use Rate - 1/4 to 1/2 pint per acre

- (0.125 to 0.25 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Bindweed	1 to 6
Burcucumber ¹	4 to 12
Cocklebur, common	1 to 12
Dogbane, hemp ³	1 to 6
Horsenettle	1 to 8
Jimsonweed	1 to 4
Kochia ¹	1 to 6
Lambsquarters, common ²	1 to 6
Mallow, Venice	1 to 3
Milkweed, common	1 to 6
Morningglory, ivyleaf	1 to 6
Morningglory, tall	1 to 6
Nightshade, black ¹	1 to 6
Pigweed, redroot	1 to 12
Pokeweed, common ¹	1 to 18
Ragweed: common	1 to 12
giant ¹	1 to 6
Smartweed, Pennsylvania	1 to 3
Sunflower, common	1 to 12
Thistle, Canada ¹	1 to 6
Velvetleaf	1 to 12

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- ¹ Banvel tank mixture only.
 - ² A tank mixture of Permit herbicide (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint per acre) is recommended for the control of common lambsquarters less than 4 inches in height.
 - ³ Provides suppression of this weed.

PERMIT HERBICIDE plus BUCTRIL plus NONIONIC SURFACTANT

Permit herbicide may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for postemergence control of many annual broadleaf weeds in grain sorghum. Use 2/3 ounce of Permit herbicide by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and BUCTRIL + atrazine labels for use instructions, weeds controlled and application restrictions.

PERMIT HERBICIDE plus ATRAZINE

Permit herbicide may be applied in combination with atrazine for postemergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for Permit herbicide plus atrazine 4L at 1 1/2 to 3 pints per acre (0.75 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

9.3 SWEET CORN AND POPCORN

Corn Growth Stage: When used alone, this product may be applied over-the-top or with drop nozzles from the spike through layby stage of the corn.

Apply 2/3 ounce by weight (0.031 pound active ingredient) of this product per acre broadcast over the top or with drop nozzles in sweetcorn or popcorn. Mechanical cultivation may be required to control weed species not on the label. Avoid cultivation for at least 7 days following application. If necessary, a **sequential treatment** of this product at 2/3 ounce by weight per acre may be applied only with drop nozzles **semi-directed or directed** to avoid application into the corn plant whorl. No more than 2 applications of this product may be made per year in sweetcorn or popcorn. (Any single application must not exceed 2/3 ounce by weight per acre).

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

This product may be applied to sweetcorn and popcorn, however, the user assumes responsibility for such use. All hybrids/varieties have not been tested for sensitivity to Permit herbicide nor does Monsanto have access to all seed company or processor data. Consequently, any injury arising from the use of this product on sweetcorn or popcorn is the responsibility of the user. Do not apply this product to sweetcorn or popcorn unless the seed company, processor or State Agricultural Extension service has tested this product on the particular

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hybrid/variety and specifically approves and recommends the use. Do not apply this product to sweetcorn or popcorn if the crop is under severe stress due to drought, water-saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions. Refer to the following "WEEDS CONTROLLED" section for use rate recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

This product is not recommended for use on 'Jubilee' sweetcorn.

Monsanto does not recommend application of this product to sweetcorn or popcorn previously treated with soil applied organophosphate insecticides. Do not apply an organophosphate insecticide within 7 days before or 3 days after any application of this product.

**WEEDS CONTROLLED
SWEET CORN & POPCORN
USE RATE GUIDE**

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Passionflower, maypop	1 to 3
Pigweed, redroot	1 to 3
Pokeweed, common	1 to 6
Ragweed: common	1 to 9
giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf	1 to 9

. WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 ounce	Height (in.)
Burcucumber	1 to 3	
Kochia	*	
Lambsquarters, common	1 to 2	
Milkweed, common	3 to 5	
Milkweed, honeyvine	1 to 3	

Morningglory	---
Nutsedge, yellow	4 to 12
purple	4 to 12

9.4 SUGARCANE

For use only in Louisiana and Texas

When used alone, this product may be applied prior to planting, prior to emergence or after the emergence of the sugarcane, and until row closure. Apply 2/3 to 1 1/3 ounces by weight (0.031 to 0.062 pound active ingredient) of this product per acre. Mechanical cultivation may be required to control weed species not on the label. If so, a **sequential treatment** may be required to control weeds in areas of disturbed soil. No more than 3 applications (including preplant applications) may be made with the total use rate not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per year.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

This product may be applied at 2/3 to 1 1/3 ounces by weight per acre (0.031 to 0.062 pound active ingredient per acre) in combination with Roundup® agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

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**WEEDS CONTROLLED
SUGARCANE**

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Cocklebur, common	1 to 9	9 to 14
Fleabane, Philadelphia	1 to 3	--
Kochia	1 to 3	--
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	---	1 to 6
Mustard, wild	---	4 to 6
Nutsedge ¹ :		
yellow	---	4 to 12
purple	---	4 to 12
Passionflower, maypop	1 to 3	--
Pigweed, redroot ²	1 to 3	4 to 6
Pokeweed, common	1 to 6	--
Radish, Wild	---	4 to 6
Ragweed:		
common	1 to 9	9 to 12
giant	1 to 3	4 to 6
Smartweed, Pennsylvania	1 to 2	--
Sunflower, common	1 to 12	12 to 15
Velvetleaf ²	1 to 9	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3

Nutsedge, yellow	4 to 12	*
purple	4 to 12	*

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* Refer to "WEEDS CONTROLLED" section of this label.

Tank Mixtures for Sugarcane

Permit herbicide may be tank mixed with Asulox™, atrazine 4L, Evik™ or 2,4-D for application in sugarcane.

PERMIT HERBICIDE plus ROUNDUP AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

Permit herbicide may be applied at 2/3 to 1 1/3 ounces by weight per acre (0.031 to 0.062 pound ai/acre) in combination with recommended rates of Roundup agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

Refer to the Roundup agricultural herbicide label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

PERMIT HERBICIDE plus ASULOX plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

Permit herbicide may be applied in tank mixtures with Asulox for the control of labeled grasses. A Permit herbicide tank mixture with Asulox may be applied to sugarcane before crop emergence or postemergence until 90 days before harvest. Up to 2 applications per year may be made in accordance with label recommendations.

Permit Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight per acre per year.

Asulox Use Rate - 6 to 8 pints of product per acre. Up to 2 treatments per year may be applied.

Refer to the Asulox label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

PERMIT HERBICIDE plus ATRAZINE 4L plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

Permit herbicide may be applied in combination with atrazine 4L for postemergence control of labeled broadleaf weeds in sugarcane. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less). Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds.

Permit Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight per acre per year.

Atrazine Use Rate - 4 to 8 pints per acre (1 to 2 pounds active ingredient). Follow the specific recommendations on the atrazine label for number and timing of applications and for maximum number of applications per year.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated and application restrictions.

Permit herbicide may be applied in tank mixtures with Evik for the control of additional broadleaf weeds and grasses. A Permit herbicide tank mixture with Evik may be applied to sugarcane before crop emergence or postemergence until row closure.

Permit Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight.

Evik Use Rate - 1/2 to 1 1/2 pounds of product per acre. Follow the specific recommendations on the Evik label for number and timing of applications and for maximum number of applications per year.

Refer to the Evik label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

PERMIT HERBICIDE plus 2,4-D AMINE plus NONIONIC SURFACTANT

Permit herbicide may be applied in tank mixtures with 2,4-D amine for the control of additional broadleaf weeds. A Permit herbicide tank mixture with 2,4-D may be applied to sugarcane before crop emergence or postemergence until 6 weeks before harvest.

Permit Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight.

2,4-D Use Rate - 2 to 4 pints per acre (1 to 2 pounds active ingredient per acre). Up to 4 treatments per year may be applied.

Refer to the 2,4-D amine label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

Refer to the companion product labels for use rates, restrictions and other important application information. See the companion labels for additional weeds controlled by these tank mixtures. Always follow the directions for use provided on the companion product label, including any state restrictions.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

9.5 RICE

PREEMERGENCE AND POSTEMERGENCE APPLICATIONS TO RICE

For use only in Arkansas, Louisiana, Mississippi, Missouri and Texas

Permit herbicide, when applied alone, may be applied for postemergent weed control from prior to the emergence of rice until field flooding occurs.

Permit herbicide may be applied at 2/3 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce of product by weight (0.062 lb. active ingredient) per acre per use season.

Permit herbicide may be applied at 2/3 ounce by weight per acre in combination with Roundup® agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge. If this product is applied preplant burndown, refer to "TIME INTERVAL BEFORE PLANTING" table in complete directions for use.

Do not apply within 48 days of harvest.

This product may be tankmixed with propanil containing rice herbicides (e.g. Stam M4 and Propanil 4E) at 2/3 to 1 1/3 ounce per acre of this herbicide and labeled rates of the tankmix products.

For aerial applications in Rice Only. Apply this product or approved tank mixtures with properly calibrated equipment in 3-15 gallons of water per acre. **NOTE:** See "APPLICATION EQUIPMENT AND INSTRUCTION" section for spray drift management techniques.

**WEEDS CONTROLLED BY
PERMIT HERBICIDE
RICE USE RATE**

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.032 to 0.062 pound active ingredient per acre)

ounces by weight per acre

Weed Species	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Cocklebur, common	1 to 9	9 to 14
Dayflower	1 to 2	3 to 4
Eclipta	1 to 4	4 to 8
Flatsedge rice	1 to 9	9 to 12
Fleabane, Philadelphia	1 to 3	---
Jointvetch	1 to 2	3 to 4
Kochia	1 to 3	---
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	---	1 to 6
Mustard, wild	---	4 to 6
Nutsedge ¹ :		
yellow	1 to 6 ---	6 to 12
purple	1 to 6 ---	6 to 12
Passionflower, maypop	1 to 3	
Pigweed, redroot ²	1 to 3	4 to 6
Pokeweed, common	1 to 6	---
Radish, Wild	---	4 to 6
Ragweed:		
common	1 to 9	9 to 12
giant	1 to 3	4 to 6
Sesbania, Hemp	1 to 3	3 to 6
Sida, Prickly	1 to 2	3 to 4
Smartweed, Pennsylvania	1 to 2	---
Sunflower, common	1 to 12	12 to 15
Velvetleaf ²	1 to 9	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.032 to 0.062 pound active ingredient per acre)

ounces by weight per acre

Weed Species	2/3 oz.	1 to 1 1/3 oz.
	Height (inches)	Height (inches)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3
Nutsedge:		
yellow	4 to 12	*
purple	4 to 12	*

* Refer to "WEEDS CONTROLLED" section of the label booklet.

9.6 COTTON

Permit may be applied as a directed spray in hooded equipment for postemergent weed control in emerged cotton. Applications may be made anytime after cotton emergence until row closure inhibits use of hooded spray equipment. The applicator is responsible for maintaining proper spray speed and equipment position so spray mist does not contact cotton plants.

Permit, alone, may be applied at 2/3 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce of product by weight (0.063 lb. active ingredient) per acre per use season. Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

Do not apply within 28 days of harvest.

Also refer to the "Rotational Crop Information" section of this label for applicable rotational crop restrictions.

9.7 FALLOW GROUND

Applications of Permit herbicide may be made to fallow ground at use rates ranging between 2/3 to 1 1/3 ounces of product by weight per acre. Permit herbicide may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Refer to the "FIELD CORN" section of this label for weed control recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions

Sempre is a selective herbicide for postemergence control of listed broadleaf weeds and nutsedge in field corn, field corn grown for seed, grain sorghum (milo), sweetcorn, popcorn, sugar cane, fallow ground, rice, cotton, turfgrass sod & seed farms, and tree nuts (Almonds, Beechnuts, Brazil nuts, Butternuts, Cashews, Chestnuts, Chinquapins, Filberts, Hickory nuts, Macadamia nuts, Pecans, Pistachios, Walnuts {Black and English}).

9.1 FIELD CORN AND FIELD CORN GROWN FOR SEED

Corn Growth Stage: When used alone, Sempra herbicide can be applied over-the-top or with drop nozzles from the spike through layby stage of field corn.

Sempre herbicide may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

WEEDS CONTROLLED SEMPRA HERBICIDE CORN USE RATE GUIDE

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Passionflower, maypop	1 to 3
Pigweed, redroot	1 to 3
Pokeweed, common	1 to 6
Ragweed: common	1 to 9
giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf	1 to 9

Use Rate - 1 to 1 1/3 ounces of product by weight per acre
(0.047 to 0.062 pound active ingredient per acre)

Weed Species	Size Range
	Height (inches)
Cocklebur, common	9 to 14
Mallow, Venice	4 to 12
Milkweed, honeyvine	1 to 6
Mustard, wild	4 to 6
Nutsedge, ¹ yellow	4 to 12
purple	4 to 12
Pigweed, redroot ²	4 to 6
Radish, wild	4 to 6
Ragweed: common	9 to 12
giant	4 to 6
Sunflower, common	12 to 15
Velvetleaf ²	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 ounce Height (in.)	1 to 1 1/3 ounce Height (in.)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3
Nutsedge: yellow	4 to 12	*
purple	4 to 12	*

* Refer to "WEEDS CONTROLLED" section of this label.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

Tank Mixtures for Corn Only

Ensure that spray equipment is set up to avoid applying an excessive rate directly over the rows and into the whorl of the cornstalk. To insure good spray coverage of weeds and to reduce the risk of spraying directly into the whorl, tank-mix applications made after corn is 24 inches tall should be directed or semi-directed using drop nozzles.

Sempre® Herbicide Tank-Mixture Options in Field Corn & Seed Corn

Tank Mix Partners	Rate per Acre	Additives	Application Method	Comments
Banvel or Clarity™	2 to 8 fl ounces	NIS	<ul style="list-style-type: none"> Broadcast up to 36" tall corn. Use lower Banvel rates or directed sprays on corn taller than 8". 	<ul style="list-style-type: none"> COC may cause crop injury, especially with higher Banvel/Clarity rates. For large corn, avoid direct spraying into whorl of cornstalk.
Marksman™	1/2 to 2 pints	NIS	<ul style="list-style-type: none"> Broadcast up to 8" tall corn. 	<ul style="list-style-type: none"> COC may cause crop injury.
2,4-D (4 pounds/gal)	4 to 8 fl ounces	NIS	<ul style="list-style-type: none"> Broadcast up to 8" tall corn. 	<ul style="list-style-type: none"> If corn exceeds 8", directed sprays with drop nozzles are required.
Buctril™	1/2 to 1 pint	NIS	<ul style="list-style-type: none"> Broadcast to corn up to tassel emergence. 	<ul style="list-style-type: none"> Leaf burn may occur. COC or 28 percent may cause additional leaf burn.
BUCTRIL+atrazine	1 to 2 pints	NIS	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Leaf burn may occur. COC or 28 percent may cause additional leaf burn.
Atrazine 4L	1 1/2 to 3 pints	COC	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Control is best when weeds are small. Effective for burndown of grass weed escapes. Antagonism may occur on larger broadleaf weeds.
Accent	2/3 ounce	COC or NIS	<ul style="list-style-type: none"> Broadcast or apply with drop nozzles to corn up to 24" tall. For corn 24 to 36" tall, apply with drop nozzles only. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive. Avoid spraying directly into whorls of larger cornstalks. Refer to Accent label for soil insecticide interaction information.
Beacon	0.76 ounce 1/2 packet	COC or NIS	<ul style="list-style-type: none"> Broadcast or apply with drop nozzles to corn up to 20" tall. For corn 20" to pretassel, apply with drop nozzles only. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive. Avoid spraying directly into whorls of larger corn. Refer to Beacon label for soil insecticide interaction restrictions. Consult your dealer, seed supplier, or Novartis representative for a list of susceptible hybrids.
Accent Gold	2.9 ounces	COC	<ul style="list-style-type: none"> Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> Ammonium nitrogen fertilizer (e.g. 28 percent)

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				is also recommended as an additive.
				<ul style="list-style-type: none"> • Do not apply to seed corn • Refer to Accent Gold label for soil insecticide interactions..
Basis Gold	14 ounces	COC or NIS	<ul style="list-style-type: none"> • Broadcast to corn up to 12" tall. 	<ul style="list-style-type: none"> • Ammonium nitrogen fertilizer (e.g. 28 percent) is also recommended as an additive. • Do not apply to seed corn • Refer to Accent Gold label for soil insecticide

NIS = Nonionic surfactant. COC = Crop oil concentrate.

Refer to "MIXING INSTRUCTIONS", "TANK MIXTURES" and "USE RATE GUIDES" sections of this label for detailed information.

Refer to the specific product labels and observe all precautions, mixing and application instructions for all products used in tank mixtures.

SEMPRA HERBICIDE plus ACCENT™

A tank mixture of Sempra herbicide plus Accent may be used for the postemergence control of annual broadleaf weeds and annual grasses in corn only. Sempra herbicide plus Accent may be applied over-the-top or with drop nozzles to field corn up to 24 inches tall (free standing). For corn 24 to 36 inches tall, refer to the Accent label for application restrictions. Banvel, Marksman, Clarity, Buctril or BUCTRIL + atrazine may also be added to this tank mixtures for improved control of certain weed species.

Refer to the Accent label for use instructions and restrictions on corn varieties and insecticides.

SEMPRA HERBICIDE plus BEACON™

A tank mixture of Sempra herbicide plus Beacon may be used for the postemergence control of annual broadleaf weeds and annual grasses in corn only. Sempra herbicide plus Beacon may be applied over-the-top or directed to field corn when corn height is between 4 and 20 inches tall. Drop nozzles are required with the Beacon mixture when corn is between 20 inches tall and tassel emergence. Banvel, Marksman, Clarity, Buctril or BUCTRIL + atrazine may also be added to this tank mixtures for improved control of certain weed species.

Refer to the Beacon label for use instructions and restrictions on corn varieties and insecticides.

Additional grass species controlled by tank mixing with Accent or Beacon.

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Grasses	Size Range Height (inches)	
	Sempre + Accent (2/3 - 1 oz) + (2/3 oz)	Sempre + Beacon (2/3 - 1 oz) + (1/2 packet)
Barnyardgrass	2 to 4	
Cupgrass, woolly	2 to 4	
Foxtails: giant, yellow, green, bristly	2 to 4	
Itchgrass	2 to 6	
Johnsongrass, rhizome seedling	8 to 18 4 to 12	8 to 16 4 to 12
Millet, wild proso	1 to 4	
Oats, wild	2 to 4	
Panicum, browntop	1 to 3	
Panicum, fall	2 to 4	Less than 2
Panicum, Texas	1 to 3	
Quackgrass	4 to 10	4 to 8
Ryegrass, Italian	2 to 6	
Sandbur	1 to 3	
Shattercane	4 to 12	4 to 12
Signalgrass, broadleaf	1 to 2	
Sorghum-almum	4 to 12	4 to 12

SEMPRA plus SOIL RESIDUALS

Micro-Tech® or Bullet or Harness® or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus Sempra may be applied early postemergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide postemergence control of small emerged grasses and broadleaf weeds as well as residual preemergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra herbicide labels.

Apply these tank-mixtures to emerged grasses at the 2-leaf stage or less and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

RECOMMENDED RATES/ACRE:

Soil Residual (Quarts)	Plus Sempra (Ounces)
Labeled rate	2/3

SEMPRA plus ACCENT plus SOIL RESIDUALS

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Micro-Tech® or Bullet or Harness® or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus Sempra plus Accent may be applied early postemergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide postemergence control of emerged foxtails as well as residual preemergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra herbicide labels.

Apply these tank-mixtures to emerged foxtails less than 2 inches tall and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

RECOMMENDED RATES/ACRE:

Soil Residual (Quarts)	Plus Sempra (Ounces)	Plus Accent (Ounces)
Labeled rate	2/3	1/3 to 1/2

SEMPRA® plus ROUNDUP® AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

Sempra herbicide may be applied at 2/3 ounce by weight per acre in combination with Roundup agricultural herbicides labeled for agricultural uses for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge with Pioneer IR corn hybrids only. Pioneer IR hybrids are required to ensure crop safety due to the preplant application. Banvel or 2,4-D may also be applied in this tank mixture for enhanced preplant burndown of broadleaf weeds.

SEMPRA® HERBICIDE SOIL APPLICATIONS

When used exclusively with Pioneer IR field corn hybrids, Sempra herbicide may be soil applied at the rate of 1 1/3 to 2 ounces by weight per acre (0.062 to 0.094 pound of active ingredient per acre) for residual control of velvetleaf, common cocklebur, common lambsquarters, common ragweed, pigweed, smartweed, sunflower and other difficult to control weeds.

This product is recommended as an early preplant surface-applied, preplant incorporated, or preemergence treatment. Sempra herbicide offers effective broadleaf control across all tillage systems and is intended for use in tank mixtures with preemergence grass herbicides, including but not limited to: **Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra, Micro-Tech, Bullet, Lariat and Lasso.**

Refer to the labels for these products, or any other grass preemergence herbicide used for use instructions, weeds controlled, and application restrictions.

SEMPRA HERBICIDE plus BANVEL plus NONIONIC SURFACTANT

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For the control of additional broadleaf weeds, Sempra herbicide may be applied in tank mixtures with Banvel. A Sempra herbicide tank mixture with low rates of Banvel may be applied during the period beginning at corn emergence and continuing until corn is 36 inches in height. Applications should not be made after corn exceeds 36 inches or 15 days before tassel emergence, whichever comes first. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for Banvel, Clarity, and Marksman products for label restrictions.

SEMPRA HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

For the control of additional broadleaf weeds, Sempra herbicide may be applied in tank mixtures with 2,4-D. Avoid spraying just after corn leaves unfold, as injury may occur. A Sempra herbicide tank mixture with 2,4-D may be applied during the period from corn emergence through the 5 leaf stage or 8 inches tall, whichever comes first. If corn exceeds 8 inches, directed spray applications with drop nozzles must be used for tank mixtures with 2,4-D.

Refer to the labels for 2,4-D products for label restrictions.

**SEMPRA HERBICIDE
USE RATE GUIDE**

**SEMPRA HERBICIDE plus BANVEL plus NONIONIC SURFACTANT
SEMPRA HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT**

Sempra Use Rate - 2/3 ounce of product by weight per acre
Banvel Use Rate - 1/4 to 1/2 pint per acre
2,4-D Use Rate - 1/4 to 1/2 pint per acre
- (0.125 to 0.25 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Bindweed	1 to 6
Burcucumber ¹	4 to 12
Cocklebur, common	1 to 12
Dogbane, hemp ³	1 to 6
Horsenettle	1 to 8
Jimsonweed	1 to 4
Kochia ¹	1 to 6
Lambsquarters, common ²	1 to 6
Mallow, Venice	1 to 3
Milkweed, common	1 to 6
Morningglory, ivyleaf	1 to 6
Morningglory, tall	1 to 6
Nightshade, black ¹	1 to 6
Pigweed, redroot	1 to 12
Pokeweed, common ¹	1 to 18
Ragweed: common	1 to 12

giant ¹	1 to 6
Smartweed, Pennsylvania	1 to 3
Sunflower, common	1 to 12
Thistle, Canada ¹	1 to 6
Velvetleaf	1 to 12

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-
- ¹ Banvel tank mixture only.
 - ² A tank mixture of Sempra herbicide (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint per acre) is recommended for the control of common lambsquarters less than 4 inches in height.
 - ³ Provides suppression of this weed.

SEMPRA HERBICIDE plus BUCTRIL plus NONIONIC SURFACTANT

Sempra herbicide may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for postemergence control of many annual broadleaf weeds in corn. Use 2/3 ounce of Sempra herbicide by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and BUCTRIL + atrazine labels for use instructions, weeds controlled and application restrictions.

SEMPRA HERBICIDE plus ATRAZINE

Sempra herbicide may be applied in combination with atrazine for postemergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for Sempra herbicide plus atrazine 4L at 1 1/2 to 3 pints per acre (0.75 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

9.2 GRAIN SORGHUM (MILO)

Grain Sorghum Growth Stage: Sempra herbicide, alone, can be applied from the 2-leaf through layby stage (before grain head emergence).

Only apply Sempra herbicide in a single application with the total application rate not to exceed 1.0 ounce of product by weight (0.047 pound active ingredient) per acre per use season.

Temporary stature reduction may occur to the crop following application of Sempra herbicide if the grain sorghum is under stress. This effect will be most evident 7 to 10 days after application. The crop will quickly recover under normal growing conditions.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

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**WEEDS CONTROLLED
SEMPRA HERBICIDE
SORGHUM USE RATE GUIDE**

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Passionflower, maypop	1 to 3
Pigweed, redroot	1 to 3
Pokeweed, common	1 to 6
Ragweed: common	1 to 9
giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf	1 to 9

Use Rate - 1.0 ounce of product by weight per acre
(0.047 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Nutsedge: yellow	4 to 12
purple	4 to 12

WEEDS SUPPRESSED

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Burcucumber	1 to 3
Lambsquarters, common	1 to 2
Milkweed, common	3 to 5
Milkweed, honeyvine	1 to 3
Nutsedge: yellow	4 to 12
purple	4 to 12

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

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Tank Mixtures for Grain Sorghum

SEMPRA HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

A Sempra herbicide tank mixture with 2,4-D may be applied to grain sorghum when the crop is 6 to 15 inches tall. If sorghum exceeds 8 inches, use drop nozzles and keep the spray off foliage. Do not treat during the boot, flowering or dough stage.

Applications should not be made when grain sorghum exceeds 15 inches. Do not treat grain sorghum during the boot, flowering, or dough stage. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for 2,4-D, Clarity and Marksman products for label restrictions.

SEMPRA HERBICIDE USE RATE GUIDE

SEMPRA HERBICIDE plus 2,4-D plus NONIONIC SURFACTANT

Sempra Use Rate - 2/3 ounce of product by weight per acre
2,4-D Use Rate - 1/4 to 1/2 pint per acre
- (0.125 to 0.25 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Bindweed	1 to 6
Burcucumber ¹	4 to 12
Cocklebur, common	1 to 12
Dogbane, hemp ³	1 to 6
Horsenettle	1 to 8
Jimsonweed	1 to 4
Kochia ¹	1 to 6
Lambsquarters, common ²	1 to 6
Mallow, Venice	1 to 3
Milkweed, common	1 to 6
Morningglory, ivyleaf	1 to 6
Morningglory, tall	1 to 6
Nightshade, black ¹	1 to 6
Pigweed, redroot	1 to 12
Pokeweed, common ¹	1 to 18
Ragweed: common	1 to 12
giant ¹	1 to 6
Smartweed, Pennsylvania	1 to 3
Sunflower, common	1 to 12
Thistle, Canada ¹	1 to 6
Velvetleaf	1 to 12

¹ Banvel tank mixture only.

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- 2 A tank mixture of Sempra herbicide (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint per acre) is recommended for the control of common lambsquarters less than 4 inches in height.
- 3 Provides suppression of this weed.

SEMPRA HERBICIDE plus BUCTRIL plus NONIONIC SURFACTANT

Sempra herbicide may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for postemergence control of many annual broadleaf weeds in grain sorghum. Use 2/3 ounce of Sempra herbicide by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and BUCTRIL + atrazine labels for use instructions, weeds controlled and application restrictions.

SEMPRA HERBICIDE plus ATRAZINE

Sempra herbicide may be applied in combination with atrazine for postemergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for Sempra herbicide plus atrazine 4L at 1 1/2 to 3 pints per acre (0.75 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

9.3 SWEET CORN AND POPCORN

Corn Growth Stage: When used alone, this product may be applied over-the-top or with drop nozzles from the spike through layby stage of the corn.

Apply 2/3 ounce by weight (0.031 pound active ingredient) of this product per acre broadcast over the top or with drop nozzles in sweetcorn or popcorn. Mechanical cultivation may be required to control weed species not on the label. Avoid cultivation for at least 7 days following application. If necessary, a **sequential treatment** of this product at 2/3 ounce by weight per acre may be applied only with drop nozzles **semi-directed or directed** to avoid application into the corn plant whorl. No more than 2 applications of this product may be made per year in sweetcorn or popcorn. (Any single application must not exceed 2/3 ounce by weight per acre).

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

This product may be applied to sweetcorn and popcorn, however, the user assumes responsibility for such use. All hybrids/varieties have not been tested for sensitivity to Sempra herbicide nor does Monsanto have access to all seed company or processor data. Consequently, any injury arising from the use of this product on sweetcorn or popcorn is the responsibility of the user. Do not apply this product to sweetcorn or popcorn unless the seed company, processor or State Agricultural Extension service has tested this product on the particular hybrid/variety and specifically approves and recommends the use. Do not apply this product to sweetcorn or

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popcorn if the crop is under severe stress due to drought, water-saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions. Refer to the following "WEEDS CONTROLLED" section for use rate recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

This product is not recommended for use on 'Jubilee' sweetcorn.

Monsanto does not recommend application of this product to sweetcorn or popcorn previously treated with soil applied organophosphate insecticides. Do not apply an organophosphate insecticide within 7 days before or 3 days after any application of this product.

**WEEDS CONTROLLED
SWEET CORN & POPCORN
USE RATE GUIDE**

Use Rate - 2/3 ounce of product by weight per acre
(0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)
Cocklebur, common	1 to 9
Fleabane, Philadelphia	1 to 3
Kochia	1 to 3
Mallow, Venice	1 to 3
Passionflower, maypop	1 to 3
Pigweed, redroot	1 to 3
Pokeweed, common	1 to 6
Ragweed: common	1 to 9
giant	1 to 3
Smartweed, Pennsylvania	1 to 2
Sunflower, common	1 to 12
Velvetleaf	1 to 9

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre
	2/3 ounce Height (in.)
Burcucumber	1 to 3
Kochia	*
Lambsquarters, common	1 to 2
Milkweed, common	3 to 5
Milkweed, honeyvine	1 to 3
Morningglory	---

Nutsedge, yellow
purple

4 to 12

4 to 12

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9.4 SUGARCANE

When used alone, this product may be applied prior to planting, prior to emergence or after the emergence of the sugarcane, and until row closure. Apply $\frac{2}{3}$ to $1\frac{1}{3}$ ounces by weight (0.031 to 0.062 pound active ingredient) of this product per acre. Mechanical cultivation may be required to control weed species not on the label. If so, a **sequential treatment** may be required to control weeds in areas of disturbed soil. No more than 3 applications (including preplant applications) may be made with the total use rate not to exceed $2\frac{2}{3}$ ounces of product by weight (0.125 pound active ingredient) per acre per year.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

This product may be applied at $\frac{2}{3}$ to $1\frac{1}{3}$ ounces by weight per acre (0.031 to 0.062 pound active ingredient per acre) in combination with Roundup[®] agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

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**WEEDS CONTROLLED
SUGARCANE**

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Cocklebur, common	1 to 9	9 to 14
Fleabane, Philadelphia	1 to 3	--
Kochia	1 to 3	--
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	---	1 to 6
Mustard, wild	---	4 to 6
Nutsedge ¹ :		
yellow	---	4 to 12
purple	---	4 to 12
Passionflower, maypop	1 to 3	--
Pigweed, redroot ²	1 to 3	4 to 6
Pokeweed, common	1 to 6	--
Radish, Wild	---	4 to 6
Ragweed:		
common	1 to 9	9 to 12
giant	1 to 3	4 to 6
Smartweed, Pennsylvania	1 to 2	--
Sunflower, common	1 to 12	12 to 15
Velvetleaf ²	1 to 9	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.031 to 0.062 pound active ingredient per acre)

Weed Species	ounces by weight per acre	
	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---

Morningglory	---	1 to 3
Nutsedge, yellow	4 to 12	*
purple	4 to 12	*

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* Refer to "WEEDS CONTROLLED" section of this label.

Tank Mixtures for Sugarcane

Sempre herbicide may be tank mixed with Asulox™, atrazine 4L, Evik™ or 2,4-D for application in sugarcane.

SEMPRA HERBICIDE plus ROUNDUP AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

Sempre herbicide may be applied at 2/3 to 1 1/3 ounces by weight per acre (0.031 to 0.062 pound ai/acre) in combination with recommended rates of Roundup agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

Refer to the Roundup agricultural herbicide label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

SEMPRA HERBICIDE plus ASULOX plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

Sempre herbicide may be applied in tank mixtures with Asulox for the control of labeled grasses. A Sempra herbicide tank mixture with Asulox may be applied to sugarcane before crop emergence or postemergence until 90 days before harvest. Up to 2 applications per year may be made in accordance with label recommendations.

Sempre Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight per acre per year.

Asulox Use Rate - 6 to 8 pints of product per acre. Up to 2 treatments per year may be applied.

Refer to the Asulox label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

SEMPRA HERBICIDE plus ATRAZINE 4L plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

Sempre herbicide may be applied in combination with atrazine 4L for postemergence control of labeled broadleaf weeds in sugarcane. The addition of atrazine will also aid in the burndown and control of many grass weeds (1.5 inches or less) which have escaped preemergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less). Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds.

Sempre Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight per acre per year.

Atrazine Use Rate - 4 to 8 pints per acre (1 to 2 pounds active ingredient). Follow the specific recommendations on the atrazine label for number and timing of applications and for maximum number of applications per year.

Refer to the atrazine 4L label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated and application restrictions.

SEMPRA HERBICIDE plus EVIK plus NONIONIC SURFACTANT

Sempre herbicide may be applied in tank mixtures with Evik for the control of additional broadleaf weeds and grasses. A Sempra herbicide tank mixture with Evik may be applied to sugarcane before crop emergence or postemergence until row closure.

Sempre Use Rate - $2/3$ to $1\ 1/3$ ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding $2\ 2/3$ ounces of product by weight.

Evik Use Rate - $1/2$ to $1\ 1/2$ pounds of product per acre. Follow the specific recommendations on the Evik label for number and timing of applications and for maximum number of applications per year.

Refer to the Evik label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

SEMPRA HERBICIDE plus 2,4-D AMINE plus NONIONIC SURFACTANT

Sempre herbicide may be applied in tank mixtures with 2,4-D amine for the control of additional broadleaf weeds. A Sempra herbicide tank mixture with 2,4-D may be applied to sugarcane before crop emergence or postemergence until 6 weeks before harvest.

Sempre Use Rate - $2/3$ to $1\ 1/3$ ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding $2\ 2/3$ ounces of product by weight.

2,4-D Use Rate - 2 to 4 pints per acre (1 to 2 pounds active ingredient per acre). Up to 4 treatments per year may be applied.

Refer to the 2,4-D amine label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

Refer to the companion product labels for use rates, restrictions and other important application information. See the companion labels for additional weeds controlled by these tank mixtures. Always follow the directions for use provided on the companion product label, including any state restrictions.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

9.5 RICE

PREEMERGENCE AND POSTEMERGENCE APPLICATIONS TO RICE

Sempre herbicide, when applied alone, may be applied for postemergent weed control from prior to the emergence of rice until field flooding occurs.

Sempre herbicide may be applied at $2/3$ to $1\ 1/3$ ounce by weight per acre, with the total application rate not to exceed $1\ 1/3$ ounce of product by weight (0.062 lb. active ingredient) per acre per use season.

Sempre herbicide may be applied at $2/3$ ounce by weight per acre in combination with Roundup® agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge. If this product is

applied preplant burndown, refer to "TIME INTERVAL BEFORE PLANTING" table in complete directions for use.

Do not apply within 48 days of harvest.

This product may be tankmixed with propanil containing rice herbicides (e.g. Stam M4 and Propanil 4E) at 2/3 to 1 1/3 ounce per acre of this herbicide and labeled rates of the tankmix products.

For aerial applications in Rice Only. Apply this product or approved tank mixtures with properly calibrated equipment in 3-15 gallons of water per acre. **NOTE:** See "APPLICATION EQUIPMENT AND INSTRUCTION" section for spray drift management techniques.

**WEEDS CONTROLLED BY
SEMPRA HERBICIDE
RICE USE RATE**

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.032 to 0.062 pound active ingredient per acre)

ounces by weight per acre

Weed Species	2/3 oz. Height (inches)	1 to 1 1/3 oz. Height (inches)
Cocklebur, common	1 to 9	9 to 14
Dayflower	1 to 2	3 to 4
Eclipta	1 to 4	4 to 8
Flatsedge rice	1 to 9	9 to 12
Fleabane, Philadelphia	1 to 3	---
Jointvetch	1 to 2	3 to 4
Kochia	1 to 3	---
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	---	1 to 6
Mustard, wild	---	4 to 6
Nutsedge ¹ :		
yellow	1 to 6 ---	6 to 12
purple	1 to 6 ---	6 to 12
Passionflower, maypop	1 to 3	
Pigweed, redroot ²	1 to 3	4 to 6
Pokeweed, common	1 to 6	---
Radish, Wild	---	4 to 6
Ragweed:		
common	1 to 9	9 to 12
giant	1 to 3	4 to 6
Sesbania, Hemp	1 to 3	3 to 6
Sida, Prickly	1 to 2	3 to 4
Smartweed, Pennsylvania	1 to 2	---
Sunflower, common	1 to 12	12 to 15
Velvetleaf ²	1 to 9	9 to 12

¹ Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

² For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

WEEDS SUPPRESSED

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre
(0.032 to 0.062 pound active ingredient per acre)

ounces by weight per acre

Weed Species	2/3 oz.	1 to 1 1/3 oz.
	Height (inches)	Height (inches)
Burcucumber	1 to 3	4 to 12
Kochia	*	3 to 6
Lambsquarters, common	1 to 2	---
Milkweed, common	3 to 5	6 to 12
Milkweed, honeyvine	1 to 3	---
Morningglory	---	1 to 3
Nutsedge:		
yellow	4 to 12	*
purple	4 to 12	*

* Refer to "WEEDS CONTROLLED" section of the label booklet.

9.6 COTTON

Sempre may be applied as a directed spray in hooded equipment for postemergent weed control in emerged cotton. Applications may be made anytime after cotton emergence until row closure inhibits use of hooded spray equipment. The applicator is responsible for maintaining proper spray speed and equipment position so spray mist does not contact cotton plants.

Sempre, alone, may be applied at 2/3 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce of product by weight (0.063 lb. active ingredient) per acre per use season. Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

Do not apply within 28 days of harvest.

Also refer to the "Rotational Crop Information" section of this label for applicable rotational crop restrictions.

9.7 FALLOW GROUND

Applications of Sempra herbicide may be made to fallow ground at use rates ranging between 2/3 to 1 1/3 ounces of product by weight per acre. Sempra herbicide may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Refer to the "FIELD CORN" section of this label for weed control recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions

Sempre herbicide is a selective herbicide for postemergence control of sedges such as purple and yellow nutsedge in sod or turf seed farms. This product will not injure nearby established ornamentals, trees and shrubs when used according to label directions.

For postemergence control of purple or yellow nutsedge found in established turfgrass, apply 2/3 to 1 1/3 ounces by weight of this product per acre (0.031 to 0.062 pounds active ingredient per acre) after nutsedge has reached the 3- to 8- leaf stage of growth. Use the lower rate in light infestations and the higher rate in heavy infestations.

A second treatment may be required 6 to 10 weeks after the initial treatment. As a sequential treatment, when new purple or yellow nutsedge plants have reached the 3- to 8- leaf stage of growth, apply 2/3 to 1 1/3 ounces by weight of this product per acre (0.031 to 0.062 pounds active ingredient per acre). Use the lower rate in light infestations and the higher rate in heavy infestations. No more than 2 applications can be made with the total use rate not exceeding 2 2/3 ounces of product (0.125 pound active ingredient) per acre per use season.

Use 0.25 to 0.5 percent nonionic surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) for broadcast applications. For high volume applications, DO NOT exceed 1 quart of surfactant per acre. Use only nonionic surfactants which contain at least 80 percent active material.

DO NOT exceed the recommended amount of surfactant due to the potential for turf injury at higher rates. Refer to the surfactant label and observe all precautions, mixing and application instructions.

When applied as directed under the conditions described, the following established turfgrasses are tolerant to application of this product:

Established Cool-Season Grasses

Bentgrass, creeping
Agrostis stolonifera
Bluegrass, Kentucky
Poa pratensis

Fescue, fine
Festuca rubra
Fescue, tall
Festuca arundinacea

Ryegrass, perennial
Lolium perenne

Established Warm-Season Grasses

Bahiagrass
Paspalum notatum

Seashore paspalum
Paspalum vaginatum

Bermudagrass
Cynodon dactylon

St. Augustinegrass
Stenotaphrum secundatum

Centipedegrass
Eremochloa ophiuroides

Zoysiagrass
Zoysia japonica

Kikuyugrass
Pennisetum clandestinum

Fallow Treatments in Turfgrass Seed and Sod Production Areas

This product may be used on fallow areas prior to establishing turfgrass plants. Allow 4 weeks between application and seeding or sodding of turfgrass.

Use Precautions

For optimum results, do not mow turf for 2 days before or 2 days after application.

This product is effective if no rainfall occurs within 3 hours, but best results are obtained with no rainfall or irrigation for at least 8 hours.

This product may be used on seeded, sodded, or sprigged turfgrass that is well established. Allow the turf to develop a good root system and uniform stand before application.

Avoid application of Sempra herbicide when turfgrass or nutsedge is under stress since turf injury and poor nutsedge control may result.

Do not apply as an over-the-top spray to desirable shrubs or trees.

Tank Mixtures for Turfgrass Renovation

**SEMPRA HERBICIDE plus ROUNDUP AGRICULTURAL HERBICIDES
plus NONIONIC SURFACTANT**

For **non-selective** control of all vegetation prior to turfgrass renovation, Sempra herbicide may be applied at 2/3 ounce by weight per acre in combination with Roundup agricultural herbicides for preplant burndown of emerged annual grasses, broadleaf weeds and nutsedge.

Refer to the Roundup agricultural herbicide label for use instructions, weeds controlled, and application restrictions.

9.9 TREE NUTS (ALMONDS, BEECHNUTS, BRAZIL NUTS, BUTTERNUTS, CASHEWS, CHESTNUTS, CHINQUAPINS, FILBERTS, HICKORY NUTS, MACADAMIA NUTS, PECANS, PISTACHIOS, WALNUTS (BLACK AND ENGLISH))

Growth Stage: Sempra herbicide may be applied as a directed spray to established tree nut crops. Established tree nut crops are defined as those that have been transplanted into their final growing location for a period of at least 12 months, and where the soil has firmly settled around the roots from packing and rainfall or irrigation.

Extreme care must be exercised to avoid contact of spray containing Sempra herbicide with trunk, stems, roots, or foliage of tree nut crops or severe damage or death may result.

Recommended rates are based on broadcast treatment. For band applications reduce the broadcast rate of Sempra herbicide in proportion to the area actually sprayed. For all applications, adjust the rate of Sempra herbicide to account for high volume output nozzles, such as off-center nozzles, and overlaps in the spray pattern. Use of controlled droplet application, spot application, irrigation, or chemigation equipment for application of this

product is not recommended due to variations in the actual application rate. Excessive application rates can result in severe tree injury or death. 54/73

Apply 2/3 to 1 1/3 ounces by weight (0.031 to 0.062 pound active ingredient) of Sempra herbicide per acre. Use a maximum of 1 ounce by weight (0.047 pound active ingredient) Sempra herbicide per acre on coarse textured soils classified as sands, loamy sands, and sandy loams with less than 18 percent clay and more than 65 percent sand, or on soils with less than 1 percent organic matter. Do not apply to gravelly soils. For the best results apply Sempra herbicide in the spring when nutsedge is not drought stressed and maximize the interval between application and subsequent irrigation.

Mechanical cultivation or mowing may be required to control weed species not on the Sempra herbicide label. If so, a **sequential treatment** may be required to control weeds in areas of disturbed soil. Sempra herbicide may be applied up to 2 applications with a total of all applications not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season. On coarse textured soils classified as sand, loamy sand, and sandy loam with less than 18 percent clay and more than 65 percent sand, or on soils with less than 1 percent organic matter, Sempra herbicide may be applied up to 2 applications with a total of all applications not to exceed 2 ounces of product by weight (0.094 pound active ingredient) per acre per use season.

If Sempra herbicide is applied to trees that have been weakened by or recovering from stress caused by, but not limited to, excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, winter injury, soil pan of any type, nutrient deficiency, or mechanical damage, severe injury or death may result. Application of Sempra herbicide to weakened or stressed trees as described, especially in soils with less than 1 percent organic matter, significantly increases the probability of severe injury or death. All such risks shall be assumed by the user.

Sempra herbicide may be applied at 2/3 to 1 1/3 ounces by weight per acre in combination with Roundup® agricultural herbicides for control of emerged annual grasses, broadleaf weeds and nutsedge.

Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

Do not apply Sempra herbicide within 1 day of harvest.

I.E	Supplemental Labeling
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I.E.1	Supplemental Labeling For Post-Emergent Weed Control in Rice
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SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR [insert brand name] BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

"Label" as used in this supplemental labeling refers to the label booklet for [INSERT BRAND NAME] and this supplemental.

[insert brand name]
Herbicide by Monsanto

EPA Reg. No. 524-465

FOR POST-EMERGENT WEED CONTROL IN RICE

Keep out of reach of children

CAUTION!

In case of emergency involving this product, Call Collect, day or night, (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This label must be in the possession of the user at the time of application.

See the "GENERAL INFORMATION" and "MIXING INSTRUCTIONS" sections of the label booklet for Sempra herbicide for essential product information.

Environmental Hazards

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

This pesticide is highly toxic to non-target plants. Do not apply to non-target areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of Federal Laws.

Weeds Controlled

Ricefield Bulrush
Redstem

Smallflower Umbrellaplant
California Arrowhead

Application Equipment and Instructions

[insert brand name] can be applied as a foliar spray or dry broadcast.

[insert brand name] can be applied using either ground or aerial equipment.

Ensure uniform application to avoid streaked, uneven or overlapped application. Calibrating spray equipment before each use will ensure proper application of [insert brand name]

For best results, make applications to healthy, actively growing weeds avoiding applications when weeds are under disease stress or insect damage. Avoid rainfall or irrigation within 4 hours after application to ensure effectiveness of [insert brand name].

CAUTION: To ensure product effectiveness avoid using [insert brand name] on rice fields which have a history of weed biotypes resistant to Londax.

Spray Drift Management

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. Chose nozzles and spray pressures that result in droplet sizes of 400 microns or greater.
2. The distance of the outer most nozzles on the boom must not exceed 2/3 the length of the wingspan or rotor.
3. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.
4. Altitudes of 10 feet above vegetation provide best coverage.
5. Do not fly within 100 feet of any crop other than rice. If wind up to 5 mph is blowing towards any crop other than rice do not apply within 500 feet of that crop. Winds blowing between 5 and 10 mph will require buffer zones in excess of 500 feet. Do not apply when winds are in excess of 10 mph or when inversion conditions exist.

The importance of spray 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 may not prevent drift if applications are made improperly or under unfavorable environmental conditions (see the following Wind, Temperature and Humidity, and Temperature Inversion sections of this advisory).

Controlling initial droplet size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher flow rates produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher 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** - Orienting nozzles so the spray stream is released backwards, parallel to the airstream, will produce 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 stream nozzles oriented straight back produce larger droplets than other nozzle types.

Controlling placement of spray droplets:

- **Boom length** - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height** - Applications should not be greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Greater application heights result in greater droplet size reduction through evaporation and greater movement in air currents. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- **Application speed** - Slower aircraft speeds within a safe range will produce less air turbulence and fewer small droplets.
- **Swath adjustment** - When applications are made with a cross-wind, 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 (wind speed, droplet size, etc.).

Key environmental factors:

- **Wind** - Drift potential is lowest between wind speeds of 2-10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided when wind speeds are below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Applicators 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 air currents that are 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 detector. 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:

Pesticides 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, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

RATE

Apply [insert brand name] at 1 to 1 1/3 ounce by weight per acre, with total application rate not to exceed 1 1/3 ounce product by weight per acre per use season.

GALLONAGE

With all foliar applications of [insert brand name] use a minimum of 7.5 gallons of water per acre for aerial equipment and a minimum of 10 gallons of water per acre for ground equipment. It is best to apply spray solutions the day they are mixed.

SURFACTANT

It is best to use 0.25 to 0.5 percent nonionic surfactant which contains at least 80% active ingredient with foliar applications of [insert brand name].

TIMING

Foliar applications of [insert brand name] may be made at the 3-5 leaf stage of rice when weeds have 2-4 leaves. Dry broadcast applications may be made at the 1-2 leaf stage of rice when weeds have two leaves or less.

Do not apply within 48 days of harvest.

WATER MANAGEMENT

Water levels in rice fields and checks should remain static (3 inch to 4 inch depth) to (4 inch to 6 inch depth) following dry broadcast applications of [insert brand name]. Do not reintroduce water into rice fields or checks for at least five days following dry broadcast applications of [insert brand name]. Rice fields and checks may be irrigated to maintain water level, but this may reduce weed control.

Control of emerged weeds with foliar applications is best when 70% - 80% of the weed foliage exposed. Control of submerged weeds is best when weeds have 2 leaves or less. Do not reintroduce water into rice fields or checks for at least 24 hours following foliar applications of [insert brand name].

SEQUENTIAL APPLICATIONS

[insert brand name] may be applied sequentially with Ordram or Bolero. Read the Ordram and Bolero labels for application information, restrictions and precautions.

TANK MIXTURES

[insert brand name] may be applied as a tank-mix with propanil. Crop oil concentrate at 1% vol/vol may be used with [insert brand name] instead of nonionic surfactant.

EQUIPMENT CLEANING

Thoroughly clean application equipment immediately after [insert brand name] use and prior to spraying crops other than rice. Use a 1% solution of household ammonia to thoroughly rinse all surfaces, lines and hoses. Repeat the procedure with household ammonia then rinse with clean water.

[insert brand name] is a registered trademark of [insert trademark owner]. [Permit is a registered trademark of, and used under license from Nissan Chemical Industries, Ltd. *Sempre* is a registered trademark of Monsanto Technology LLC]

Ordram is a registered trademark of Zeneca, Inc., Wilmington, DE
Bolero is a registered trademark of Valent USA Corp, Walnut Creek, CA

Read the "LIMIT OF WARRANTY AND LIABILITY" statement in the label booklet for Maverick herbicide before using. These terms apply to this SUPPLEMENTAL LABELING, and if these terms are not acceptable return the product unopened at once.

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St. Louis, Missouri 63167

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I.E.2 Supplemental Labeling For Post-Emergent Weed Control in Rice – California ONLY

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR [INSERT BRAND NAME] BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

“Label” as used in this supplemental labeling refers to the label booklet for [insert brand name] and this supplemental.

[insert brand name]
Herbicide by Monsanto

EPA Reg. No. 524-465

**[insert brand name] FOR POST-EMERGENT WEED CONTROL IN RICE
FOR DISTRIBUTION ONLY IN CALIFORNIA**

Keep out of reach of children

CAUTION!

In case of emergency involving this product, Call Collect, day or night, (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This label must be in the possession of the user at the time of application.

See the “GENERAL INFORMATION” and “MIXING INSTRUCTIONS” sections of the label booklet for [insert brand name] for essential product information.

Environmental Hazards

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

This pesticide is highly toxic to non-target plants. Do not apply to non-target areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of Federal Laws.

Weeds Controlled

Ricefield Bulrush
Redstem

Smallflower Umbrellaplant
California Arrowhead

Application Equipment and Instructions

[insert brand name] can be applied as a foliar spray or dry broadcast.

[insert brand name] can be applied using either ground or aerial equipment.

Ensure uniform application to avoid streaked, uneven or overlapped application. Calibrating spray equipment before each use will ensure proper application of [insert brand name].

For best results, make applications to healthy, actively growing weeds avoiding applications when weeds are under disease stress or insect damage. Avoid rainfall or irrigation within 4 hours after application to ensure effectiveness of [insert brand name].

CAUTION: To ensure product effectiveness avoid using [insert brand name] on rice fields which have a history of weed biotypes resistant to Londax.

RATE

Apply [insert brand name] at 1 ounce by weight per acre.

GALLONAGE

With all foliar applications of [insert brand name] use a minimum of 7.5 gallons of water per acre for aerial equipment and a minimum of 10 gallons of water per acre for ground equipment. It is best to apply spray solutions the day they are mixed.

SURFACTANT

It is best to use 0.25 to 0.5 percent nonionic surfactant which contains at least 80 percent active ingredient with foliar applications of [insert brand name].

TIMING

Foliar applications of [insert brand name] may be made at the 3 to 5 leaf stage of rice when weeds have 2 to 4 leaves. Dry broadcast applications may be made at the 1 to 2 leaf stage of rice when weeds have two leaves or less.

Do not apply within 69 days of harvest.

WATER MANAGEMENT

Water levels in rice fields and checks should remain static (3 inch to 6 inch depth) following dry broadcast applications of [insert brand name]. Do not reintroduce water into rice fields or checks for at least five days following dry broadcast applications of [insert brand name]. Rice fields and checks may be irrigated to maintain water level, but this may reduce weed control.

Control of emerged weeds with foliar applications is best when 70 to 80 percent of the weed foliage is exposed. Control of submerged weeds is best when weeds have 2 leaves or less. Do not reintroduce water into rice fields or checks for at least 24 hours following foliar applications of [insert brand name].

SEQUENTIAL APPLICATIONS

[insert brand name] may be applied sequentially with OrDRAM. Read the OrDRAM label for application information, restrictions and precautions.

TANK MIXTURES

[insert brand name] may be applied as a tank-mix with propanil. Crop oil concentrate at 1 percent vol/vol may be used with [insert brand name] instead of nonionic surfactant.

EQUIPMENT CLEANING

Thoroughly clean application equipment immediately after [insert brand name] use and prior to spraying crops other than rice. Use a 1 percent solution of household ammonia to thoroughly rinse all surfaces, lines and hoses. Repeat the procedure with household ammonia then rinse with clean water.

Aerial 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 the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. Each operating nozzle shall produce a droplet size not less than 500 microns volume median diameter with no more than 10 percent of the diameter by volume less than 200 microns.
2. The distance of the outer most nozzles on the boom must not exceed 2/3 the length of the wingspan or rotor.
3. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.
4. Applications shall not be made at a height greater than 10 feet above the top of the target plants unless greater height is required for aircraft safety.

The Importance of Spray 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 may not prevent drift if applications are made improperly or under unfavorable environmental conditions (see the following "Wind", "Temperature and Humidity", and "Temperature Inversion" sections of this advisory).

Controlling Initial Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher flow rates produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher 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** - Orienting nozzles so the spray stream is released backwards, parallel to the airstream, will produce 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 stream nozzles oriented straight back produce larger droplets than other nozzle types.

C Controlling Placement of Spray Droplets:

- **Boom length** - For some use patterns, reducing the effective boom length to less than 2/3 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height** - Applications should not be greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Greater application heights result in greater droplet size

reduction through evaporation and greater movement in air currents. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

- **Application speed** - Slower aircraft speeds within a safe range will produce less air turbulence and fewer small droplets.
- **Swath adjustment** - When applications are made with a cross-wind, 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 (wind speed, droplet size, etc.).

Key Environmental Factors:

- **Wind** - Drift potential is lowest between wind speeds of 3 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided when wind speeds are below 3 mph due to variable wind direction and high inversion potential.
NOTE: Local terrain can influence wind patterns. Applicators 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 air currents that are 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 detector. 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:

Pesticides 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, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Sensitive Crops:

Cotton Prunes

Buffer Zones:

1. Aerial applications shall not be made closer than four miles from sensitive crops.
2. Ground applications shall not be made closer than 1 mile from sensitive crops unless wind direction during the application is away from sensitive crops. When wind direction during the ground application is away from sensitive crops ground applications shall not be made closer than 0.5 miles from sensitive crops.

Londax is a registered trademark of E.I. duPont de Nemours and Company.

Ordram is a registered trademark of Syngenta, Inc.

[insert brand name] is a registered trademark of [insert trademark owner].

[Permit is a registered trademark of, and used under license from Nissan Chemical Industries, Ltd. Sempra is a registered trademark of Monsanto Technology LLC]

Read the “LIMIT OF WARRANTY AND LIABILITY” statement in the label booklet for [INSERT BRAND NAME] before using. These terms apply to this SUPPLEMENTAL LABELING, and if these terms are not acceptable return the product unopened at once.

©[year] Monsanto Company
St. Louis, Missouri 63167

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II. INDUSTRIAL, TURF & ORNAMENTAL USES

(Optional: Spanish language translation may be included in the printed label.)

**MANAGE®
TURF HERBICIDE**

BY MONSANTO

Complete Directions For Use [Pamphlet or Booklet]

Manage and Roundup Pro are registered trademarks of Monsanto Technology LLC.

EPA Reg. No. 524-465

Manage herbicide is a selective herbicide for the control of nutsedge and other weeds in turfgrass and landscaped areas.

2002-2

39002Y7-2/53

Read the entire label before using this product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

ACTIVE INGREDIENT:		
*Halosulfuron-methyl.....	75.0%	
OTHER INGREDIENTS:	<u>25.0%</u>	
		100.0%

* Manufactured by Nissan Chemical Industries, Ltd.

Product is protected by U.S. Patent No. 4,668,277.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

**CAUSES MODERATE EYE IRRITATION.
HARMFUL IF SWALLOWED.**

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. • Call poison control center or physician for treatment advice.
IF SWALLOWED	<ul style="list-style-type: none"> • Call poison control center or physician immediately for treatment advice. • Remove visible particles from mouth. • Have person rinse mouth thoroughly with water, spit out rinse water. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
<ul style="list-style-type: none"> • Have the product container or label with you when calling a poison control center or physician, or going for treatment. • In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000. • This product is identified as Manage Herbicide, EPA Reg. No. 524-465. 	

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants 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.

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

<p>User Safety Recommendations:</p> <p>Users should:</p> <ul style="list-style-type: none"> • Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. • Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. <p style="text-align: center;">In case of emergency involving this product, Call Collect, day or night, (314) 694-4000</p>

Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions For Use on this label or in separately published Monsanto Supplemental 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 regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

- PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls,
- shoes plus socks.
- chemical resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people off treated areas until spray solution has dried.

For more product information, call toll-free 1-800-332-3111.

 Storage and Disposal

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

STORAGE: Store under cool, dry conditions (below 120° F). Do not store under moist conditions.

DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures, or in such other method as approved under those procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed.

INSTRUCTIONS FOR WATER DISPERSIBLE GRANULE IN 1.3 OUNCE BOTTLE:

Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

INSTRUCTIONS FOR WATER DISPERSIBLE GRANULE PREMEASURED IN WATER SOLUBLE BAG:

Completely use water soluble bags in application equipment. Then dispose of empty foil pouch and cardboard box in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

DISPOSAL AUTHORITIES: If none of the foregoing procedures is permitted by state and local authorities, then contact your State Pesticide or Environmental Control Agency, or your local Hazardous Waste Disposal office, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

 GENERAL INFORMATION

Manage is a selective herbicide for postemergence control of sedges such as purple and yellow nutsedge in established lawns, ornamental turfgrass, and landscaped areas. Manage may be applied to commercial and residential turf and on other non-crop sites including: airports, cemeteries, fallow areas, golf courses, landscaped areas, public recreation areas, residential property, roadsides, school grounds, sod or turf seed farms, sports fields, landscaped areas with established woody ornamental and other similar sites.

TURFGRASSES

When applied as directed under the conditions described, the following established turfgrasses are tolerant to this product:

Cool-Season Grasses

Bentgrass, creeping <i>Agrostis stolonifera</i>	Fescue, fine <i>Festuca rubra</i>
Bluegrass, Kentucky <i>Poa pratensis</i>	Fescue, tall <i>Festuca arundinacea</i>
Ryegrass, perennial <i>Lolium perenne</i>	

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Warm-Season Grasses

- | | |
|---|--|
| Bahiagrass
<i>Paspalum notatum</i> | Seashore paspalum
<i>Paspalum vaginatum</i> |
| Bermudagrass
<i>Cynodon dactylon</i> | St. Augustinegrass
<i>Stenotaphrum secundatum</i> |
| Centipedegrass
<i>Eremochloa ophiuroides</i> | Zoysiagrass
<i>Zoysia japonica</i> |
| Kikuyugrass
<i>Pennisetum clandestinum</i> | |

ESTABLISHED WOODY ORNAMENTALS IN LANDSCAPED AREAS

This product may be applied at recommended rates as a post-directed spray around any established woody ornamental species in landscaped areas. For transplanted woody ornamentals, allow three months after transplanting before applying this product.

NOTE: Avoid contact of this product to leaves of desirable plants since foliar injury, discoloration or death may result.

FALLOW TREATMENTS

This product may be used on fallow areas prior to the establishment of turfgrass or woody ornamental plants. Allow 4 weeks between application and seeding or sodding of turfgrass, or transplanting woody ornamentals.

WEEDS CONTROLLED

When applied postemergence, this product will control the following weeds:

- | | |
|--|--|
| Purple nutsedge
<i>Cyperus rotundus</i> | Yellow nutsedge
<i>Cyperus esculentus</i> |
|--|--|

When applied postemergence, this product will suppress the following weed:

Kyllinga spp.

APPLICATION DIRECTIONS

Rates and Timing of Application

Broadcast Applications:

For postemergence control of purple or yellow nutsedge found in established turfgrass, apply 2/3 to 1 1/3 ounces by weight of this product per acre (0.031 to 0.062 pound active ingredient per acre) after nutsedge has reached the 3- to 8- leaf stage of growth. Use the lower rate in light infestations and the higher rate in heavy infestations.

A second treatment may be required 6 to 10 weeks after the initial treatment. As a sequential treatment, when new purple or yellow nutsedge plants have reached the 3- to 8- leaf stage of growth, apply 2/3 to 1 1/3 ounces by

weight of this product per acre (0.031 to 0.062 pound active ingredient per acre). Use the lower rate in light infestations and the higher rate in heavy infestations. No more than 4 applications can be made with the total use rate not exceeding (5 1/3 ounces by weight of this product (0.25 pound active ingredient) per acre per use season. 69/73

Use 0.25-0.5 percent v/v of a nonionic surfactant (1-2 quarts per 100 gallons of spray solution) for broadcast applications. For high volume applications, DO NOT exceed 1 quart of surfactant per acre. Use only nonionic surfactants which contain at least 80 percent active material.

Spot Treatments:

INSTRUCTIONS FOR WATER DISPERSIBLE GRANULE IN 1.3 OUNCE BOTTLE: Mix 0.9 gram of this product (using the measuring scoop provided) in one or two gallons of water to treat 1000 square feet. Add 2 teaspoons (1/3 fluid ounce) of nonionic surfactant per gallon of water. Ensure the product is measured as a level scoop and not rounded.

INSTRUCTIONS FOR WATER DISPERSIBLE GRANULE PREMEASURED IN WATER SOLUBLE BAG: Add one (1) water soluble bag of this product per one or two gallons of water in a hand-held or backpack sprayer to treat 1000 square feet. Add 2 teaspoons (1/3 fluid ounce) of a nonionic surfactant per gallon of spray solution. Mix or shake thoroughly for at least two minutes to ensure that the water soluble bag and ingredients are completely dispersed. Occasionally shake the spray solution while spraying to ensure that it remains thoroughly mixed.

Spray the target weeds thoroughly and wet the entire leaf surface of the undesirable plants.

DO NOT exceed the recommended amount of surfactant due to the potential for turf injury at higher rates. Refer to the surfactant label and observe all precautions, mixing and application instructions.

TANK MIX WITH ROUNDUP PRO® HERBICIDE IN LANDSCAPED AND FALLOW AREAS AND TURF RENOVATION

This product may be tank mixed with Roundup Pro herbicide for application as a directed spray in landscaped or fallow areas.

APPLICATION EQUIPMENT AND INSTRUCTIONS

Calibrate application equipment prior to application of this product. Application should be uniform and of sufficient volume to avoid streaking or skips. Avoid excessive overlap of the spray.

USE PRECAUTIONS

For optimum results, do not mow turf for 2 days before or 2 days after application.

This product is effective if no rainfall occurs within 3 hours, but best results are obtained with no rainfall or irrigation for at least 4 hours.

This product may be used on seeded, sodded, or sprigged turfgrass that is well established. Allow the turf to develop a good root system and uniform stand before application.

Treated areas may be overseeded with annual or perennial ryegrass or bermudagrass, 2 weeks after application.

Color plants or herbaceous ornamentals may be injured when transplanted into landscaped areas treated with Manage herbicide. 76/73

Avoid application of Manage herbicide when turfgrass or nutsedge is under stress since turf injury and poor nutsedge control may result.

Do not apply as an over-the-top spray to desirable flowers, ornamentals, vegetables, shrubs or trees.

Do not apply this product to golf course putting greens.

Do not apply this product through any type of irrigation system. Do not apply this product by air.

LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label pamphlet ("Directions") when used in accordance with those Directions under the conditions described therein. **NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.** This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this **LIMIT OF WARRANTY AND LIABILITY** which may not be varied by any verbal or written agreement.

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In case of emergency involving this product,
Call Collect, day or night, (314) 694-4000.

© [year] MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167 U.S.A.

Formulated in the United States Using Active Ingredient Made in Japan.

II. II.A. Supplemental Labeling for Industrial, Turf, & Ornamental Uses

SUPPLEMENTAL LABELING

READ AND FOLLOW THE ENTIRE LABEL FOR MANAGE® TURF HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Manage herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label pamphlet provided with the pesticide container and on this supplemental labeling. This supplemental must be in the possession of the user at the time of application.

**MANAGE®
TURF HERBICIDE**

BY MONSANTO

EPA Reg. No. 524-465

Manage and Roundup Pro are registered trademarks of Monsanto Technology LLC.

MANAGE TURF HERBICIDE FOR USE ON ROADSIDES AND OTHER INDUSTRIAL SITES AND FOR HORSETAIL CONTROL.

Keep out of reach of children.

CAUTION!

In case of emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with the labeling.

This label must be in the possession of the user at the time of the herbicide application.

NOTE: Applications of this product should not contact leaves of desirable plants since foliar injury, discoloration or death may result.

Roadsides And Other Industrial Sites

This product may be applied at recommended rates as a postemergence spray on roadsides and other industrial sites. See the label booklet for application instructions, rate recommendations, weeds controlled and proper growth stage.

When applied postemergence, this product will suppress the following weeds: cocklebur, common sunflower, common ragweed, giant ragweed, pigweed, and velvetleaf.

This product may be tank mixed with Roundup Pro® herbicide.

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Control Of Horsetail (*Equisetum arvense*)

For postemergence control of horsetail (*Equisetum arvense*), apply 2 2/3 ounces of this product per acre, or 1.8 grams of this product per 1000 square feet (0.125 pound active ingredient per acre) after horsetail has leafed out. This rate of product will control horsetail that is less than 6 inches tall and suppress horsetail that is greater than 6 inches tall.

Herbicide symptoms are likely to show within 2 weeks as a necrotic ring at the base of the plant, even though the leaves and stems remain green and a deep leathery green in color.

Read "LIMIT OF WARRANTY AND LIABILITY" in the label pamphlet for Manage herbicide before using this product. Those terms apply to this supplemental labeling and, if those terms are not acceptable, return the product unopened at once.

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ST. LOUIS, MISSOURI 63167

