

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 4, 2019

Luz G Chan Registration Manager Drexel Chemical Company P.O. Box 13327 Memphis, TN 38113-0327

Subject: Notification per PRN 98-10 – Add optional instruction referral statement

Product Name: Drexel Quik-Quat EPA Registration Number: 19713-617 Application Date: March 26, 2019

Decision Number: 552541

Dear Ms. Chan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records. Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, please contact Lydia Crawford by phone at 703-347-0622, or via email at Crawford.Lydia@epa.gov.

Sincerely, Emily Schmid

Emily Schmid, Product Manager 25

Herbicide Branch

Registration Division (7505P) Office of Pesticide Programs

## RESTRICTED USE PESTICIDE

Due to acute toxicity. To be used by certified applicators only - NOT to be used by uncertified persons working under the supervision of a certified applicator.

> PARAQUAT DICHLORIDE **GROUP** 22 **HERBICIDE**



Defoliant and desiccant herbicide for the control of weeds and grasses and as a harvest aid.

## **ACTIVE INGREDIENT:**

Paraquat dichloride (1,1'-dimethyl-4,4'-bipyridinium dichloride)	43.2%
OTHER INGREDIENTS:	56.8%
TOTAL:	100.0%
Contains 3.0 pounds paraguat cation per gallon as 4.14 pounds of paraguat dichloride salt per gallon.	

Contains emetic and stenching (odor) agent.

## KEEP OUT OF REACH OF CHILDREN (MANTENER FUERA DEL ALCANCE DE LOS NIÑOS)

## DANGER / PELIGRO

## 19713-617 The applicant has certified that no

changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

NOTIFICATION

11/04/2019

## POISON / VENENO

Si usted no entiende la etiqueta, busque a alquien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

- CORROSIVE TO SKIN AND EYES.
- NEVER TRANSFER THIS PRODUCT INTO FOOD OR BEVERAGE CONTAINERS OR CONTAINERS NOT EXPLICITLY INTENDED FOR PESTICIDES.
- READ ENTIRE LABEL PRIOR TO USING THIS PRODUCT.
- IN THE CASE OF AN ACCIDENT, SEEK IMMEDIATE MEDICAL ATTENTION. SYMPTOMS ARE PROLONGED, PAINFUL, AND CAN BE FATAL.

- CORROSIVO PARA LA PIEL Y LOS OJOS.
- NUNCA TRANSFEIERA ESTE PRODUCTO A RECIPIENTES PARA COMIDA O DE BEBIDAS O RECIPIENTES NO EXPLÍCITAMENTE PREVISTOS PARA PLAGUICIDAS.
- LEA LA ETIQUETA COMPLETA ANTES DE USAR ESTE PRODUCTO.
- EN CASO DE ACCIDENTE, BUSQUE ATENCIÓN MÉDICA INMEDIATA. LOS SÍNTOMAS SON PROLONGADOS, DOLOROSOS, Y PUEDEN SER MORTALES.

EPA Reg. No. 19713-617 **EPA Est. No. XXXXX-XX-X** 

Net Content: \_\_\_\_ Gals. (\_\_\_\_L)

617SP-0319\*

#### **ATTENTION**

- DANGER FATAL IF SWALLOWED OR INHALED.
- · CAUSES SEVERE EYE INJURY.
- · CORROSIVE TO SKIN.
- NEVER TRANSFER THIS PRODUCT INTO FOOD OR BEVERAGE CONTAINERS OR CONTAINERS NOT EXPLICITLY INTENDED FOR PESTICIDES.
- STORE TIGHTLY CLOSED IN ORIGINAL CONTAINER AND IN A LOCKED PLACE AWAY FROM CHILDREN AND ANIMALS.
- NEVER USE THIS PRODUCT IN RESIDENTIAL OR PUBLIC RECREATIONAL SETTINGS (e.g., HOMES, HOME GARDENS, SCHOOLS, RECREATIONAL PARKS, GOLF COURSES, AND/OR PLAYGROUNDS.
- THIS PRODUCT IS TOXIC! AN ALERTING AGENT (ODOR) HAS BEEN ADDED TO HELP PREVENT ACCIDENTAL INGESTION.
- SEE BACK OF PRODUCT CONTAINER FOR IMPORTANT SAFETY INFORMATION.

## **ATENCIÓN**

- PELIGRO MORTAL SI SE INGIERE O INHALA.
- · CAUSA LESIONES GRAVES EN LOS OJOS.
- CORROSIVO PARA LA PIEL.
- NUNCA TRANSFEIERA ESTE PRODUCTO A RECIPIENTES PARA COMIDA O DE BEBIDAS O RECIPIENTES NO EXPLÍCITAMENTE PREVISTOS PARA PLAGUICIDAS.
- GUARDE BIEN CERRADO EN EL ENVASE ORIGINAL Y EN UN LUGAR CERRADO LEJOS DE NIÑOS Y ANIMALES.
- NUNCA USE ESTE PRODUCTO EN ÁREAS RESIDENCIALES O PÚBLICAS (COMO HOGARES, JARDINES, ESCUELAS, PARQUES RECREATIVOS, CAMPOS DE GOLF, O SALONES DE JUEGOS).
- IESTE PRODUCTO ES TÓXICO! SE HA AGREGADO UN AGENTE DE ALERTA (OLOR) PARA AYUDAR A PREVENIR SU INGESTIÓN ACCIDENTAL.
- LA PARTE POSTERIOR DEL ENVASE DEL PRODUCTO TIENE INFORMACIÓN DE SEGURIDAD IMPORTANTE.

## [Optional: See Booklet (Container Labeling) for Full Use Instructions]

## **FIRST AID**

Contains paraquat, a bipyridylium herbicide. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### IF SWALLOWED:

- Call a poison control center or doctor IMMEDIATELY for treatment advice.
- SPEED IS ESSENTIAL. Immediate medical attention is required. If available, give an adsorbent such as activated charcoal, bentonite or Fuller's Earth.
- · Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- · Do not give anything by mouth to an unconscious person.

#### IF INHALED:

- · Move person to fresh air.
- The odor of this product is from the stenching agent, which has been added, not from the paraquat.
- If person is not breathing, call 911 or an ambulance
- · Call a poison control center or doctor for treatment advice.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- · Call a poison control center or doctor for treatment advice.

### IF ON SKIN OR CLOTHING:

- · Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- · Call a poison control center or doctor for treatment advice.

**NOTE TO PHYSICIAN:** Administer either activated charcoal (100 grams for adults or 2 g/kg body weight in children) or Fuller's Earth (15% solution; 1 liter for adults or 15 ml/kg body weight in children). NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit. Do not use supplemental oxygen. Eye splashes from concentrated material should be treated by an eye specialist after initial treatment. With the possibility of late onset corneal ulceration, it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation. Use treatment that is appropriate for chemical burns. Intact skin is an effective barrier to paraquat; however, contact with irritated or cut skin or repeated contact with intact skin may result in poisoning.

#### **HOT LINE NUMBERS**

Have the product container or label with you when calling a poison control center or doctor or when going for treatment. Call the National Poison Control Center at 1-800-222-1222 for emergency medical treatment information. For a transportation emergency, please contact CHEMTREC at 1-800-424-9300.

## PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** May be fatal if swallowed. Fatal if inhaled. Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin. Do not breathe spray mist. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**IMPORTANT:** Inhalation is an unlikely route of exposure due to low vapor pressure and large spray droplet size, but mucosal irritation or nose bleeds may occur. Prolonged contact with this concentrated product can irritate your skin.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers (other than mixers and loaders) must wear: Long-sleeved shirt and long pants; Chemical resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils or viton  $\geq$  14 mils; shoes plus socks; protective eyewear; a NIOSH-approved particulate respirator with any N, R, or P filter, NIOSH approval number prefix TC-84A, or a NIOSH-approved powered air-purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

#### Mixers and loaders must wear:

Long-sleeved shirt and long pants; Chemical resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils or viton  $\geq$  14 mils; shoes plus socks; chemical-resistant apron; face shield; a NIOSH-approved particulate respirator with any N, R, or P filter, NIOSH approval number prefix TC-84A, or a NIOSH-approved powered air-purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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

## **ENGINEERING CONTROLS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 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:** 1) Wash hands before eating, drinking, and chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## **ENVIRONMENTAL HAZARDS**

This product is toxic to wildlife. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

Paraquat dichloride is toxic to non-target crops and plants if off-target movement occurs because it desiccates all green plant tissue. Extreme care must be taken to ensure that off-target drift is minimized to the greatest extent possible. Refer to the local state laws, regulations, guidelines, and spray drift information contained in the "Directions For Use" section of this label for proper application to avoid off-target movement. Do not apply under conditions involving possible drift to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use, or consumption. Do not apply when weather conditions favor drift from treated areas. To avoid drift, do not make aerial application during periods of thermal inversion.

### PHYSICAL AND CHEMICAL HAZARDS

This product is mildly corrosive to aluminum and produces hydrogen gas which may form a highly combustible gas mixture. Do not mix or store in containers, spray tanks, nurse tanks, or such systems made of aluminum or having aluminum fittings. The product is compatible with high density polyethylene and rubber-lined steel containers.

## CERTIFIED APPLICATOR TRAINING

Applicators must complete an EPA approved paraquat training listed on the following website: https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators. The training must be completed a minimum of every three years.

## **DIRECTIONS FOR USE**

#### RESTRICTED USE PESTICIDE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not use this product in residential or public recreational settings (e.g. homes, home gardens, schools, recreational parks, golf courses, and/or playgrounds).

## AGRICULTURAL USE REQUIREMENTS

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

For chemical fallow and early post-emergence broadcast in peanuts and dormant season applications, and "between cutting" applications in alfalfa: Do not enter or allow worker entry into treated areas during the REI of 12 hours.

For harvest aid and desiccation applications; pre-plant or pre-emergence (broadcast or banded) and post-emergence directed spray applications: Do not enter or allow worker entry into treated areas during the REI of 24 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, shoes plus socks, protective eyewear, and chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils.

## **NON-AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow others to enter the treated area until sprays have dried.

Avoid working in spray mist.

Keep all unprotected persons out of operating areas or vicinity where there may be danger of drift.

Certain states may require more restrictive reentry intervals; consult your State Department of Agriculture for further information.

## **USE INSTRUCTIONS AND INFORMATION**

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

When THIS PRODUCT is applied at less than 10 gallons per acre finished spray volume, a drift control or spray deposition additive SHOULD be used. Refer to the additive label for rates of applications, directions for use, limitations, and restrictions.

## RESISTANCE MANAGEMENT

## PARAQUAT DICHLORIDE GROUP 22 HERBICIDE

For resistance management, this product is a Group 22 mode of action herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 22 mode of action herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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

- •Rotate the use of this product or other Group 22 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- •Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management directions for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Drexel Chemical Company representatives at (901) 774-4370.

#### SPRAY DRIFT INFORMATION

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. 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. 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°.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

## **AERIAL DRIFT REDUCTION ADVISORY INFORMATION**

#### **Information on Droplet Size**

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

## **Controlling Droplet Size**

**Volume** - Use high flow rate nozzles to apply the highest spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. 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 that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle 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 the largest droplets and the lowest drift.

#### **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 must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making application at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

## **Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up

and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

#### Wind

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

## **Temperature and Humidity**

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

## **Temperature Inversions**

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

#### **Sensitive Areas**

The pesticide must 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).

## **USE INFORMATION**

THIS PRODUCT is a liquid formulation containing 3 pounds of active ingredient per gallon. It contains a nontoxic odor to help prevent accidental ingestions. It also contains an emetic (an agent which will induce vomiting if the product is swallowed).

## **APPLICATION**

THIS PRODUCT is a contact herbicide for control or suppression of a broad spectrum of emerged weeds including most small annual broadleaf and grass weeds. It can also be used to suppress perennial weeds by destroying green foliage and as a desiccant/ defoliant at harvest.

Complete coverage of target weeds is necessary to get good control because THIS PRODUCT is a contact-type herbicide. It is also necessary to obtain complete coverage for good crop desiccation and defoliations. Undesirable weed control and undesirable crop desiccation/defoliation will result if improper application technique and/or application to large, stressed, or mown weeds are made. Refer to the following details for specific application instructions.

Thorough coverage of all green foliage is required for efficacious weed control and crop defoliation and desiccation because THIS PRODUCT requires actively growing green plant tissue to function. Drought-stressed weeds, weeds with little green foliage (i.e., mowed or cut weeds), or mature woody bark of trees and vines are unaffected by application of THIS PRODUCT.

There is no residual soil activity to affect later-planted crops or later germinating weeds because clay and organic matter rapidly tie up THIS PRODUCT.

## **ROTATIONAL CROPS**

After the last application of THIS PRODUCT, all rotational crops may be planted immediately.

## **RAINFASTNESS**

Rain occurring 30 minutes or more after application will have no effect on the activity of THIS PRODUCT because it is rapidly absorbed by the weed foliage.

## USE OF A NON-IONIC SURFACTANT OR CROP OIL CONCENTRATE

The following should always be added and be used at the recommended rates or there will be a reduction in efficacy of THIS PRODUCT.

**Non-ionic Surfactant:** Either add a non-ionic surfactant cleared for the current use containing 50 to 74% surface-action agent at 0.25% v/v (2 pts./100 gals.), or add non-ionic surfactant containing 75% or more surface-active agent at 0.125% v/v (1 pt./100 gals.), of the finished spray volume for ground applications. Add a non-ionic surfactant at 0.25% v/v (2 pts./100 gals.) of the finished spray volume for aerial applications.

**Crop Oil Concentrate:** For ground applications, add a nonphytotoxic crop oil concentrate cleared for the current use that contains 15 to 20% approved emulsifier, with 1.0% v/v (1 gal./100 gals.) of the finished spray volume. Add 1 pint of crop oil concentrate per acre for aerial applications. **For cotton harvest aid, do not use crop oil concentrate when using THIS PRODUCT.** 

## **NOZZLE SELECTION**

The use of flat-fan nozzles is the most effective application of THIS PRODUCT. The use of flood nozzles may result in a reduction of weed control due to inadequate coverage because they produce large uneven droplets.

Use only flat fan nozzles when spraying less than 20 gallons of spray carrier per acre using the following table.

	Noz	zle Type
	Flat Fan	Flood
Maximum Size	8	15
Spray Pressure (at nozzle)	30 to 50 psi	30 to 50 psi
Maximum Nozzle Spacing	30"	40"
Direction of Spray Pattern	Down	Down
Maximum Speed	10 mph	10 mph
Spray Overlap (at each edge)	30%	50%

**Nozzle Type and Spray Pressures and Setup** 

Reduced control will result if nozzles, pressures, or setups differ from the above chart.

## **SPRAY CARRIER**

THIS PRODUCT may be inactivated by muddy water, or suspension-type fertilizers containing clay. Therefore, always use clean water (free of mud or clay), clear liquid nitrogen, or complete clear liquid fertilizers as the carrier when spraying this product. Never use suspension-type fertilizers containing clay as the spray carrier. Always use the higher rate of THIS PRODUCT and surfactant if using a complete clear liquid fertilizer containing high phosphate levels as the spray carrier.

Note: It is important that when using liquid fertilizers such as 28% N as a spray carrier, that non-ionic surfactant still be used with THIS PRODUCT. The use of liquid fertilizer carriers are not substitutes for surfactants.

## **RATES OF THIS PRODUCT**

With each use, follow rates listed in the following tables. When weeds are larger or are dense, use the higher label rates. For use as a harvest aid, use higher rate when crop vegetation is dense. Do not exceed 0.5 pound a.i. per acre in a minimum of 30 gallons of spray for broadcast applications with backpack sprayers.

## **SPRAY VOLUME**

With each use, follow rates listed in the following tables. Spray volumes should be increased as necessary to obtain complete coverage of the target weed or plant without runoff from the foliage, because the volumes listed are minimum volumes only.

TARGET WEEDS SHOULD NOT EXCEED SIX INCHES IN HEIGHT WHEN SPRAYING LESS THAN 20 GALLONS OF SPRAY CARRIER PER ACRE.

## **APPLICATION TIMING**

Applications should be made to small emerged weeds. Larger weeds more than 6 inches in height may be more difficult to control than weeds 1 to 6 inches in height. If possible, when green foliage is removed either from grazing or mowing, allow the weeds to grow 2 to 4 inches in height. Also, during harvesting forage or grain crops before spraying, weeds present in the field are also cut. Therefore, raise cutter bars as high as possible from the ground to cut stubble and weeds at a greater height, allowing sufficient green foliage to remain for applications.

#### **BURNDOWN OF GRASS COVER CROPS OR VOLUNTEER CEREALS**

The best results occur for control of grass cover crops or volunteer cereals when THIS PRODUCT is applied prior to tillering or after boot stage, especially with a wheat cover crop or volunteer wheat. Complete control may not be achieved with treatments made between tillering and boot stage. Complete control of perennial cover crops should not be expected.

#### **ENVIRONMENTAL CONDITIONS**

This product is active over a wide range of environmental conditions such as cool (below 55°F), cloudy or overcast weather. However, these conditions will slow the activity of THIS PRODUCT.

## **SPOT SPRAYING**

Refer to the following table if only small areas are to be sprayed with labeled applications.

## Mixing Instructions for Small Quantities for Spot Spraying

If the Broadcast Rate Per Acre for THIS PRODUCT is:	Add The Following Amount of THIS PRODUCT to 1 Gallon of Water
1.5 pts.	0.33 fl. oz
2 pts.	0.375 fl. oz.
2.5 pts.	0.5 fl oz.
3 pts.	0.66 fl. oz.

Add 0.33 to 0.5 fluid ounce of a non-ionic surfactant for each gallon of spray at all times. Thoroughly wet the foliage, but not to the point of runoff when spot spraying in this manner.

# TANK MIXING: ENHANCED BURNDOWN OF DIFFICULT-TO-CONTROL WEEDS AND FOR RESIDUAL WEED CONTROL

## **Photosynthetic Inhibitor Herbicides**

To control difficult weeds, tank mix THIS PRODUCT with other herbicides. The addition of other photosynthetic inhibitors (PSI) herbicides will slow the activity of THIS PRODUCT. This allows THIS PRODUCT to thoroughly distribute throughout a treated leaf, thus achieving better control than if THIS PRODUCT was applied alone.

THIS PRODUCT may be applied in tank mixture with the following PSI herbicides:

AAtrex® Herbicide

Atrazine Herbicide

Bicep Lite II MAGNUM® Herbicide

Bicep MAGNUM® Herbicide

Canopy® Herbicide

Lariat® Herbicide

Lexone® Herbicide

Linex® Herbicide

Lorox® Herbicide

Lorox Plus™ Herbicide

Princep® Herbicide

Sencor® Herbicide

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

## Improved Weed Control with PSI's

The addition of a PSI herbicide will help improve the control of difficult weeds listed below. Make a second application for best results.

Barnyardgrass

Broadleaf signalgrass

Cheatgrass

Cocklebur

Fall panicum

Giant ragweed

Knotweed

Kochia

Lambsquarters

Malva (cheeseweed)

Marestail

Morningglory

Pennsylvania smartweed

Perennial weeds (suppression only)

Prickly lettuce

Sedges

Tansymustard

Velvetleaf

Volunteer wheat

## Improved Control of Perennial and Annual Broadleaf Weeds

Tank mixing with labeled 2,4-D ester (Low Volatile), 2,4-DB or Banvel® herbicide will help improve control when perennial broadleaf weeds such as Canada thistle, bindweed, dandelion, etc., or difficult to control annual broadleaf weeds such as giant ragweed or morningglory are present. Reduced grass control may be achieved when tank mixing the amine formulation of 2,4-D with THIS PRODUCT.

## **Order of Tank Mixing**

It is advisable to tank mix THIS PRODUCT and other listed products as follows:

- 1. Fill spray tank one-half full with clean water or other approved carriers such as clear liquid fertilizer.
- 2. Begin tank agitation and continue throughout mixing and spraying.
- 3. Add dry formulations (WP, DF, etc.) to tank.
- 4. Add liquid formulations (SC, EC, L, etc.) to tank.
- 5. Add THIS PRODUCT to tank.
- 6. Add non-ionic surfactant to tank.
- 7. Fill remainder of spray tank.

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

It is advisable to perform a jar test to check physical compatibility when using different formulation of the herbicides listed on this label.

## **USE PRECAUTIONS**

#### **EQUIPMENT**

THIS PRODUCT is **mildly corrosive to aluminum**. Thoroughly flush all aluminum spray equipment and aluminum aircraft structures that are exposed to spray solution or spray drift with water immediately after use.

The activity of THIS PRODUCT may be reduced in dry areas where dust stirred up by high winds or equipment tires can coat weed or plant leaves. Therefore, avoid applications in extremely dusty conditions.

## **USE PRECAUTIONS**

- Unless otherwise indicated, THIS PRODUCT will severely injure or kill crop plants emerged at time of application if they come in contact with sprays.
- To enable maximum weed and grass emergence prior to treatment, seedbeds and plantbeds should be formed as far ahead of planting and treatment as possible.
- Avoid disturbing soil when seeding or transplanting.
- Transplanted plants may become damage when they come in contact with plastic mulch used for pre-plant weed control and that has been treated with this product. To prevent damage to the crop, sufficient washoff such as rainfall or sprinkler irrigation prior to planting may be needed.
- THIS PRODUCT will be ineffective in controlling or suppressing weeds and grasses that have emerged after application.

## **USE RESTRICTIONS**

- Do not pasture livestock in treated fields or feed treated foliage in cotton when this product is used as a cotton harvest aid.
- Do not use this product in residential or public recreational settings (e.g. homes, home gardens, schools, recreational parks, golf courses, and/or playgrounds).
- Do not apply to soils lacking clay minerals such as peat, muck, pure sand, artificial planting media for pre-plant and pre-emergence (to the crop) uses.

## **APPLICATION INSTRUCTIONS**

Crop	Weeds	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
ALFALFA (California only) New seedlings		Broadcast	0.7 to1.3 pts.  See Table on "Alfalfa: New Seedlings (CA Only)"	Ground: 10 gals. Air: 5 gals.	70	<ul> <li>Do not make more than one application per year.</li> <li>Apply during late winter or early spring.</li> <li>Do not cut or harvest within 70 days after application.</li> <li>Alfalfa foliage present at time of application will be burned.</li> <li>Replanting may be needed due to the reduction of seedling stands.</li> <li>Do not apply to seedling alfalfa grown for seed.</li> </ul>
ALFALFA Pre-plant or Pre-emergence (No-till or conventional planting)		Broadcast or Banded Over Row	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.		Do not make more than 2 applications per year. Apply prior to emergence of the crop. Avoid disturbing soil when seeding. Crop plants emerged at time of application will be killed.
ALFALFA Dormant season Established plantings  Region A - See table at end of Alfalfa section	Weeds, including bluegrass, cheatgrass, chickweed, dogfennel, downy brome, henbit, London rocket, rescue brome, ryegrass, sowthistle, tansymustard, wild oats and other winter annuals; and suppression of perennial weeds.	Broadcast	1.3 to 2.0 pts.	Ground: 10 gals. Air: 5 gals.	42	Do not make more than one application per year.     Fall regrowth: Do not apply if last fall cutting is greater than 6."     Spring regrowth: Do not apply if last cutting is greater than 2".     After the crop is dormant, apply to well-established stands that are at least 1 year old.     Yield of first cutting may be reduced because alfalfa foliage present at the time of application will be burned.     Do not cut or harvest within 42 days after application.     For improved and longer-lasting weed control, tank mix with metribuzin (Lexone or Sencor). Always refer to the metribuzin label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
ALFALFA Dormant season Tank Mix with Velpar® L-Herbicide Region A - See table at end of Alfalfa section	Weeds including chickweed, downy brome and tansymustard	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 10 gals.	42	Do not make more than 2 applications per year. When weeds are less than 4 inches tall apply at 0.7 pt. rate THIS PRODUCT Mix THIS PRODUCT with 1 to 2 qts. of Velpar L per acre. Use lower rate of Velpar L on loamy sands or sandy loams. Always refer to the Velpar L label for weeds controlled, rates of applications, directions for use, limitations, and restrictions. During the dormant season, make one application to established alfalfa stands. Fall regrowth: Do not apply if last fall cutting is greater than 6". Spring regrowth: Do not apply if last cutting is greater than 2". Do not apply to alfalfa during the first season after seeding. Temporary chlorosis may occur on alfalfa regrowth. Increased chances of crop injury may occur if stress which may be caused in part by low fertility, disease, insects, winterkill, over cutting, drought or frost. DO NOT USE on gravelly or rocky soils, exposed subsoils, hardpan, sand or poorly drained alkaline soils as crop injury, including mortality, may result.

Crop	Weeds	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
ALFALFA Dormant Season On established plantings: Region B: See table at end of Alfalfa section.	Weeds including bluegrass, cheatgrass, chickweed, dogfennel, downy brome, henbit, London rocket, rescue brome, regrass sowthistle	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	60	Do not make more than one application per year. Appy before first spring cutting and during late fall or winter months after the last fall cutting.  California: Do not apply if spring regrowth after grazing or cutting is more than 2 inches in Orange and Riverside counties, and all counties north of these counties.
On Fall-seeded newly established stands less than 1 year old: Region A - See table at end of Alfalfa section	rescue brome, ryegrass, sowthistle, tansymustard, wild oats, and other winter annuals; and suppression of perennial weeds  California: Desiccation of weeds including bluegrass, chickweed, foxtail, groundsel, ryegrass, shepherdspurse, sowthistle and tansymustard	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	60	All other areas within Region B: Do not apply if regrowth after grazing or cutting is more than 2 inches.     Do not harvest within 60 days of application.     Applications to alfalfa that is not dormant or has broken dormancy may result in stand and/or yield reductions. Replanting may be necessary. Green alfalfa foliage present at time of application will be burned.     If there is a severe weed infestation, total hay yield of first cutting may be reduced in alfalfa fields and the reduction is typically directly proportionate to the loss of weed weight.     For improved and residual weed control in dormant established (at least 1 year-old) alfalfa, tank mix with metribuzin (Lexone or Sencor). Do not apply tank mix with metribuzin on alfalfa that is less than 1 year old.     Always refer to metribuzin label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
On Fall-seeded newly established stands less than 1 year old: Region B - See table at end of Alfalfa section		Broadcast	0.5 to 0.8 pt.	Ground: 10 gals. Air: 5 gals.	60	California If groundsel, ryegrass, shepherdspurse or sowthistle are present, use higher rate.

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
ALFALFA (East of the Rocky Mountains) Between-cuttings treatment in established plantings. (Includes first year alfalfa)	Broadcast	0.7 pt.	Ground: 10 gals.	30	<ul> <li>Do not make more than 3 applications per year.</li> <li>Control of weeds beyond the seedling stage and weed stubble cut off during harvest are less affected by this treatment.</li> <li>Make applications immediately after alfalfa has been removed for hay or silage.</li> <li>Do not treat more than 5 days after cutting.</li> <li>A reduction in first year alfalfa stands and yeilds may occur if alfalfa is allowed to regrow more than 2 inches.</li> <li>Burning of alfalfa foliage will occur at time of application.</li> <li>Weed control may be reduced where moisture is limited such as in arid climates.</li> <li>Do not cut or harvest within 30 days of application.</li> <li>Apply as needed up to three times during the growing season in addition to a dormant application.</li> <li>Do not make more than 2 applications during the first growing season of first-year alfalfa.</li> </ul>

	R	ate/Acre*
For Control of:	For Suppression	For Control
Annual Bluegrass	_	10.7 to 21.3 fl. oz.
Chickweed	_	10.7 to 21.3 fl. oz.
Fiddleneck (6 inches tall or less)	5.4 to 10.7 fl. oz.	21.3 fl. oz.
Red Maids (6 inches tall or less)	_	10.7 to 21.3 fl. oz.
Shepherdspurse	10.7 to 21.3 fl. oz.	
Spikeweed (4 inches tall or less)	5.4 fl. oz.	10.7 to16.0 fl. oz.
Volunteer Small Grain (8 inches tall or less)	5.4 to 10.7 fl. oz.	21.3 fl. oz.

<sup>\*</sup>Use the 5.4 fl. oz. rate only when alfalfa has at least 3 trifoliate leaves; use the 10.7 fl. oz. rate only when alfalfa has 6 trifoliate leaves; or use rates over 10.7 fl. oz. only when there are 9 trifoliate leaves.

## Alfalfa - Regions

## **REGION A**

Alaska, California (counties of Del Norte, Siskiyou, Modoc, Shasta, Lassen, Plumas, Sierra and Nevada), Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

## **REGION B**

Alabama, Arizona, Arkansas, California (all other counties not listed in Region A), Florida, Georgia, Hawaii, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
ALMONDS	Directed Spray	0.8 to 2.7 pts.	Ground: 10 gals.	1	Do not make more than 5 applications per year. Avoid allowing spray to contact green stems (except suckers) or foliage. When spraying around young trees, use a shield or wrap plant. Do not graze treated areas and do not feed cover crops grown in treated areas to livestock. Do not apply when nuts to be harvested are on the ground. Retreatment or spot treatments may be necessary for mature woody weeds, perennial weeds, late germinating weeds and green suckers.
ARTICHOKE (GLOBE)	Directed Spray	1.7 to 2.7 pts.	Ground: 20 to100 gals.	1	Do not make more than 3 applications per year. Do not exceed 8 pts. per season. Applications must be made at least 7 days apart. Do not harvest within 24 hours of last application.
ASPARAGUS	Pre-plant or Pre-emergence Broadcast or Banded Over Row	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Apply prior to emergence of the crop.     Emerged asparagus at time of application will be killed.
ASPARAGUS Pre-emergence to established plantings at least 2 years old	Broadcast or Banded Over Row	1.7 to 2.7 pts.	Ground: 10 gals.	6	Do not make more than 3 applications per year.     Apply prior to emergence of the crop or after last harvest.     Emerged asparagus at time of application will be killed.

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
BEANS, DRY Not for use in California Sweet lupin White sweet lupin White lupin Grain lupin Adzuki beans Asparagus beans Black beans Broad beans Field beans Garbanzo beans Guar Kidney beans Lablab beans Moth beans Navy beans Pinto beans Pinto beans Tepary beans Urd beans Tepary beans Urd beans Crowder peas Catjang Cowpeas Crowder peas Southern peas	Harvest-Aid	0.8 to 1.3 pts.	Ground: 20 gals. Air: 5 gals.	7	<ul> <li>Do not make more than 2 applications per year.</li> <li>Add non-ionic spreader at 1 qt./100 gals.of spray mix.</li> <li>Use a single application of the higher rate for vining type beans or bush type with lush growth.</li> <li>May also be applied as a split application and may improve vine coverage. However do not make more than 2 applications per year or exceed a total of 1.3 pts./Ac.</li> <li>Apply when at least 80% of the pods are yellowing and mostly ripe and when leaves are no more than 40% of bush type peas or beans or 30% of vine type peas or beans are green .</li> <li>Do not apply when weather conditions favor spray drift. To reduce drift, a drift control agent may be included.</li> <li>Not registered for use in dry beans and dry peas in California.</li> </ul>
BERRIES Blackberry, Blueberry, Boysenberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry	Post-emergence Directed Spray	1.3 to 2.7 pts.	Ground: 50 gals.	_	Do not make more than 5 applications per year.     New canes or shoots can be injured. Therefore, apply before their emergence.     To prevent crop injury from spray mist, apply as a coarse spray.
CACAO	Directed Spray	1.3 to 2.7 pts.	Ground: 50 to 200 gals.	1	Do not make more than 5 applications per year. Apply when weeds are succulent and growth is from 1 to 6". Retreatment or spot treatments may be necessary for mature woody weeds, late-germinating weeds and grasses and for perennials. Use a shield for young trees to prevent sprays from contacting cacao plants, as injury may result. Do not spray under windy conditions. Do not graze treated areas or feed treated cover crops to livestock.
CASSAVAS, TANIERS & YAMS (Puerto Rico only)	Shielded Post Directed Spray	1.3 pts.	Ground: 50 gals.	90	Cassavas and Taniers: Do not make more than 3 applications per year. Yams: Do not make more than 2 applications per year. Make applications when weeds are succulent and growth is 1 to 6". Prevent spray from contacting crop to prevent injury to crop. Do not spray under windy conditions. Do not graze treated areas or feed treated forage to livestock.

#### **Use Information for Chemical Fallow**

- As the density of stubble, crop residue or weeds increases, use higher spray volumes for better coverage.
- To control volunteer wheat or downy brome, Fall-applied treatments generally work best with THIS PRODUCT. If possible, tank mix with atrazine for maximum burndown and residual control.
- Apply from immediately after harvest up to emergence of the newly seeded crop as a broadcast or band treatment.
- Before applying THIS PRODUCT, cut wheat as high as possible to avoid cutting weeds too short, and allow the weeds to grow at least 2 to 3" after harvest.
- The addition of dicamba (Banvel) or 2,4-D ester (Low Volatile) may aid in the suppression of emerged perennial broadleaf weeds and large annual broadleaf weeds. Always refer to the product label(s) for 2,4-D ester (Low Volatile), Banvel, or residual herbicide for rates of applications, directions for use, limitations, and restrictions.
- It is permissible to tank mix with registered residual herbicide combinations other than listed for extended weed control during the fallow period.
- Weeds and grasses emerging after application and weeds taller than 6 inches will not be controlled.
- Crop plants emerged at the time of application will be killed.
- The minimum total spray per acre allowed is 5 gallons for ground and 5 gallons for air applications.
- Apply 5 to 60 gallons spray mix per acre by ground application. When applying at less than 10 GPA by ground:
  - Do not apply with floaters or exceed a speed of 10 mph.
  - Apply with flat fan nozzles at 30 to 40 psi.
  - Apply only in a tank mix with atrazine at a minimum of 0.5 lb. a.i. per acre.
- By air: Apply in 5 to 10 gallons of spray mix per acre.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
CHEMICAL FALLOW Continuous Wheat (2 to 3 month recropping interval)	Broadcast	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2.0 pts. Weeds 6": 2 to 2.7 pts.	Ground: 5 gals. Air: 5 gals.	_	<ul> <li>Do not make more than 3 applications per year.</li> <li>Apply at least 45 days before seeding.</li> <li>For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of THIS PRODUCT per acre with a Photosynthetic Inhibitor Herbicide.</li> <li>Refer to the section "Use Information for Chemical Fallow".</li> </ul>
CHEMICAL FALLOW Wheat-Fallow- Wheat Rotations (Fall applied after harvest; seeded 12 to 14 months later)	Broadcast	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.	Ground: 5 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Spray before weeds produce seeds.     Control of volunteer wheat and downy brome control increases when applications are made late August or early September.     For improved burndown and residual control of weeds, tank mix with Atrazine, Marksman₃ Herbicide, or Command₃ Herbicide.     For improved burndown and residual control of grass and broadleaf weed tank mix with metribuzin (Sencor 75DF).     Always refer to the respective product label(s) for rates of applications, directions for use, limitations, and restrictions.     Refer to the section "Use Information for Chemical Fallow".
CHEMICAL FALLOW Wheat-Fallow- Wheat Rotations (Spring applied: seeded 3 to 5 months later)	Broadcast	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.	Ground: 5 gals. Air: 5 gals.	-	<ul> <li>Do not make more than 3 applications per year.</li> <li>To conserve moisture, application should be made March 1 to April 15, prior to spring rains.</li> <li>Even though moisture loss is greater when applications are made after the boot stage, volunteer wheat is easier to control after this stage.</li> <li>For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of THIS PRODUCT per acre with a Photosynthetic Inhibitor Herbicide.</li> <li>Refer to the section "Use Information for Chemical Fallow".</li> <li>For burn down and residual control of grass and broadleaf weeds, tank mix with metribuzin, (Sencor 75DF/Lexone).</li> <li>Always refer to the label for metribuzin (Sencor 75DF/Lexone) for rates of applications, directions for use, limitations, and restrictions.</li> </ul>
CHEMICAL FALLOW Wheat-Annual Crop¹ - Wheat Rotations (Fall applied in wheat stubble)	Broadcast	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2 pts. Weeds 6": 2 to 2.7 pts.	Ground: 5 gals. Air: 5 gals.		<ul> <li>Do not make more than 3 applications per year.</li> <li>For improved burndown and residual weed control, tank mix with Atrazine or Marksman. Always refer to the respective product label(s) for rates of applications, directions for use, limitations, and restrictions.</li> <li>Make applications after wheat harvest and before weeds produce seed.</li> <li>If grasses such as foxtails or barnyardgrass recover, respray before seed production.</li> <li>Applications made late August to November help control volunteer wheat and downy brome.</li> <li>Refer to the section "Use Information for Chemical Fallow".</li> </ul>
CHEMICAL FALLOW Wheat-Annual Crop-Wheat Rotations (Spring applied prior to planting an annual crop¹)	Broadcast  pps are grain sorghi	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.  Jun, corn, wheat, or proso	Ground: 5 gals. Air: 5 gals. millet.		<ul> <li>Do not make more than 3 applications per year.</li> <li>For enhanced burndown and residual weed control, tank mix with Atrazine. Always refer to the respective product label(s) for Atrazine for rates of applications, directions for use, limitations, and restrictions.</li> <li>For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of THIS PRODUCT per acre with a Photosynthetic Inhibitor Herbicide.</li> <li>Refer to the section "Use Information for Chemical Fallow".</li> <li>Refer to the Atrazine label for directions pertaining to soil pH and recropping intervals.</li> </ul>

Сгор	Weeds	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
CLOVER AND OTHER LEGUMES Including crown vetch, lespedeza, lupine, milk vetch, sainfoin, trefoil, velvetbean, and vetch  Dormant Season: On established plantings: Region A – See table at end of Alfalfa section.	Weeds including bluegrass, cheatgrass, chickweed, dogfennel, downy brome, henbit, London rocket, rescue brome, ryegrass, sowthistle, tansymustard, wild oats, and other winter annuals; and suppression of perennial weeds  California: Desiccation of weeds including bluegrass, chickweed, foxtail, groundsel, ryegrass, shepherdspurse, sowthistle and tansymustard	Broadcast	1.3 to 2.1 pts.	Ground: 10 gals. Air: 5 gals.	60	<ul> <li>Do not make more than 1 application per year.</li> <li>Apply during late fall or winter months after the last cutting and before first spring cutting.</li> <li>Do not apply if regrowth after grazing or cutting is more than 2".</li> <li>Do not harvest within 60 days of application.</li> <li>CAUTION: Stand and/or yield reductions may occur when applications are made to clover or other legumes that are not dormant, or have broken dormancy. Therefore, it may be necessary to replant. Burning will occur to green clover or other legumes foliage present at the time of application.</li> <li>Discoloration and temporary stunting will occur in clover or other legumes foliage present at the time of application.</li> <li>If there is severe weed infestation, the total hay yield of first cutting may be reduced in clover or other legumes fields and is usually directly roportionate to the loss of weed weight.</li> <li>In California:</li> <li>If groundsel, ryegrass, shepherdspurse or sowthistle are present, use higher rate.</li> </ul>
Dormant Season: On established plantings: Region B - See table at end of Alfalfa section.		Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	60	
Dormant Season: On Fall-seeded, newly established stands less than 1 year old: Region A - See table at end of Alfalfa section.		Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	60	
Dormant Season: On Fall-seeded, newly established stands less than 1 year old: Region B - See table at end of Alfalfa section.		Broadcast	0.5 to 0.8 pts.	Ground: 10 gals. Air: 5 gals.	60	

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
CORN FIELD CORN POPCORN SWEET CORN SEED CORN (Used alone)	Pre-plant or Pre-emergence Broadcast or Banded Over Row	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year. Includes field, fresh sweet, forage, fodder and popcorn. To permit maximum weed and grass emergence, seedbeds should be formed as far ahead of planting and treatment as possible. Seeding should be done with a minimum amount of soil disturbance. Control will not occur when applications are made after weeds and grasses have emerged. However, crop plants emerged at time of application will be killed.
CORN Tank mixes for notill/ reduced till	Pre-plant or Pre- emergence Broadcast or Banded Over Row	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.*	_	Do not make more than 3 applications per year. Apply as broadcast sprays before, during or after planting, but before crop emergence. THIS PRODUCT may be tank mixed with the following herbicides for improved burndown or residual control: 2,4-D Ester (Low Volatile) Harness® AAtrexs/Atrazine Lasso® Herbicide Banvel® Linex® Bicep MAGNUM® Lorox® Bicep Lite II MAGNUM® Princep® Dual MAGNUM Prowl® Herbicide Frontier® Simazine Guardsman® Surpass® EC Harmony® Extra Herbicide (Pre-plant only) Topnotch® THIS PRODUCT may also be tank mixed with Ambush® insecticide. Always refer to respective product label(s) for rates of applications, directions for use, limitations, and restrictions.  * Always refer to respective product label(s) to confirm if these products can be applied by air.
FIELD CORN, POPCORN, SWEET CORN, SEED CORN	Post-emergence Directed Spray (including Hooded or Shielded)	0.7 to 1.3 pts.	Ground: 10 gals.		<ul> <li>Do not make more than 3 applications per year.</li> <li>Apply when weeds are actively growing.</li> <li>Use a higher rate on larger or hard to control weeds. Weeds 6" or taller may not be controlled.</li> <li>Severe damage and/or complete kill can occur if spray contacts corn plants</li> <li>For Hooded Or Shielded Sprayers: <ul> <li>Use a hooded or shielded sprayer with skids or wheels on the spray boom to maintain spray height in order to prevent excessive crop phytotoxicity.</li> <li>Apply by directing spray between the rows and using hooded or shielded sprayers to prevent spray contact with crop plants.</li> </ul> </li> <li>For Directed Spray Without Hooded Or Shielded Sprayers:  Corn height is measure from soil surface to top of whorl. <ul> <li>Apply when corn is at least 10" tall with nozzles arranged to spray no higher than the lower 3" of corn stalks.</li> <li>Corn plants shorter than 10" may be injured and not recover.</li> <li>For corn more than 20" tall: Arrange the nozzles to spray no higher than the lower one-third of the corn stalks.</li> <li>Injury to corn foliage will occur if sprayed. However, corn will recover and develop normally.</li> </ul> </li> </ul>

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
FIELD CORN, POPCORN, SEED CORN	Harvest Aid Broadcast	0.8 to 1.3 pts.	Ground: 20 gals. Air: 5 gals.	7	Do not make more than one application per year. Make ONE (1) application at least 7 days prior to harvest.  Apply after the corn is mature. This is indicated by a black layer which forms at the base of the kernels. You may consult your local agricultural authority for help in identifying the black layer.  Add non-ionic surfactant containing at least 75% surface active ingredient at 0.25% v/v.  To desiccate mature broadleaf weeds and grasses or broadleaf weeds and grasses that are taller than 18", use 1.3 pts.  Drought stressed plants, especially broadleaf weeds, can be difficult to kill, and desiccation may not be complete.
FIELD CORN ONLY (grain, fodder, forage)	Post-emergence Directed Spray USDA Witchweed Eradication Program	1.3 pts.	Ground: 10 gals.	-	Do not make more than 3 applications per year. If regrowth occurs, initiate sprays in late June to early July and repeat in early August. Follow application instructions in post-emergence directed spray section above.
FIELD CORN ONLY (grain, fodder, forage) 2,4-D Amine AE Tank Mix	Post-emergence Directed Spray USDA Witchweed Eradication Program	5.4 fl. oz. + 0.5 lb. 2,4-D Amine AE	Ground: 10 gals.	-	Do not make more than 3 applications per year. Apply as directed spray onto grassy weeds and witchweed before witchweed blooms. If regrowth occurs, reapply. Follow application instructions in post-emergence directed spray section above. Always refer to respective product label(s) for rates of applications, directions for use, limitations, and restrictions.
COTTON (Use Directions for All Cotton Uses)		All Cotton Uses			Do not exceed 8 pints of this product (3 lbs. a.i.) per acre per season for all uses on Cotton.
COTTON (Used alone)	Pre-plant or Pre- emergence	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	-	Do not make more than 3 applications per year.     Apply prior to, during or after planting, but before crop emergence.     For fallow bed treatment, beds should be preformed to permit maximum weed and grass emergence prior to treatment.     Seeding should be done with a minimum of soil disturbance.
COTTON (California only; Used alone)	Pre-plant	5.4 to 10.7 fl. oz.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     For control of volunteer barley in preformed seedbeds.
COTTON  Goal <sub>®</sub> Herbicide  Tank Mix	Pre-plant or Fallow Bed Broadcast	1.7 to 2.7 pts.	Ground or Air: 10 gals.	_	Do not make more than 3 applications per year.     Always refer to the Goal label for weeds controlled, rates of applications, and directions for use, limitations, and restrictions.
COTTON Other Tank Mixes	Pre-plant or Pre- emergence	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Apply as a broadcast spray before, during or after planting, but before crop emergence.     For improved residual control or burndown, THIS PRODUCT may be tank mixed with the following herbicides:

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
COTTON	Post-emergence Directed Spray (Hooded or Shielded)	0.8 to 1.3 pts.	10 gals.	-	<ul> <li>Maximum number of applications per year is 3.</li> <li>Apply when weeds are actively growing and between 1 to 6" in height.</li> <li>If multiple applications are made, allow 14 days between applications.</li> <li>Use higher rate on dense populations and/or larger or hard to control weeds. Weeds 6" or taller may not be controlled.</li> <li>AVOID CONTACT WITH CROP. Intentional or accidental contact, including drift of this product with the crop may result in severe damage or loss of the crop.</li> <li>Apply by directing spray between the rows using hooded or shielded sprayers to prevent contact with the crop plant.</li> <li>Equipment should be in good operating condition. Avoid leakage or dripping onto crop. Variation in equipment design may affect the level of weed control.</li> <li>Keep hoods or shields adjusted to insure adequate contact with weeds while shielding the crop from the herbicide.</li> <li>To minimize drift, do not use nozzles or nozzle configurations or adjuvants which produce fine spray droplets (mist).</li> <li>This product may be tank mixed with other post-emergence directed herbicides. Unless otherwise directed on this label, refer to tank mix product labels for rates, directions, limitations and precautions.</li> </ul>

## **Cotton Harvest Aid Use Restrictions**

- Do not make more than 4 applications per year.
- Do not pasture livestock in treated fields or feed treated foliage.
- Do not apply to cotton within 3 days before harvest.
  Repeat application if necessary. Do not exceed a total of 1.3 pints per acre as a harvest aid.
- May be tank mixed with other cotton harvest aid materials known to be effective by a local expert. Unless otherwise instructed in this label, always refer to the respective product label(s) for rates of applications, directions for use, limitations, and restrictions.
- THIS PRODUCT can be applied in a tank mix with methyl parathion and/or Karate insecticide. Always refer to the respective product label(s) for rates of applications, directions for use, limitations, and restrictions.
- Nodes above cracked bolls (NACB) timing is for guidance and is not intended to restrict the local expert in their use of the product.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
SOUTHERN COTTON Harvest aid for boll opening and defoliation (Tank mix with phosphate and chlorate defoliants).	Broadcast	5.4 fl. oz. + 1 pt. phosphate or 1 gal. chlorate	Ground: 10 gals. Air: 5 gals.	7	<ul> <li>Do not make more than 4 applications per year.</li> <li>Development of immature bolls will be inhibited.</li> <li>Apply when 80% or more of the bolls are open and the remaining bolls to be harvested are mature.</li> <li>Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions.</li> </ul>
SOUTHERN COTTON Additional tank mixes for boll opening and defoliation	Broadcast	2.1 to 3.3 fl. oz.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 4 applications per year.  THIS PRODUCT may be tank mixed with the following products to aid in defoliation and opening of mature bolls. Accelerate₀ Defoliant, Def₀ Defoliant, Dropp₀ Defoliant, Ethephon Plant Growth Regulator, Folex₀ Defoliant Harvade₀ Harvest Growth Regulator, Prep™ PGR  Apply when 60% or more of the bolls are open and the remaining bolls to be harvested are mature.  Development of immature bolls will be inhibited.  Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions.
SOUTHERN COTTON  Post Defoliation - To aid in opening of mature bolls and to desiccate green weeds.	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	3	Do not make more than 4 applications per year.  If weed infestation is heavy or dense, use higher specified rate.  Apply when 75% or more of bolls are open and remaining bolls to be harvested are mature.  Development of immature bolls will be inhibited.  After a defoliation or conditioning application has been made, delay desiccation application of THIS PRODUCT approximately 3 to 7 days to minimize leaf sticking.
WESTERN COTTON Harvest aid for boll opening and early defoliation	Broadcast	3.7 to 5.4 fl. oz. + phosphate or sodium chlorate; and/ or other compatible harvest aid products.	Ground: 10 gals. Air: 5 gals.	7	Do not make more than 4 applications per year.  On rank cotton, use higher specified rate.  Do not use more than 5.4 fl. oz. of THIS PRODUCT for early defoliation as excessive desiccation may occur.  Early defoliation timing is when 60% or more of the bolls are open and the remaining bolls to be harvested are mature (approximately 4 NACB).  Development of immature bolls will be inhibited.  Do not use more than 4.0 lbs. of actual sodium chlorate defoliant per acre at this early defoliation timing.  Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
WESTERN COTTON Harvest aid for boll opening and mid-to-late defoliation	Broadcast	5.4 to 10.7 fl. oz. alone or tank mix with sodium chlorate or phosphate defoliation and/ or other compatible harvest aid products.	-	3 (Alone)	Do not make more than 4 applications per year.  Use the 10.7 fl. oz. rate of THIS PRODUCT in desert cotton areas or on rank vigorous cotton.  Mid-to-late defoliation timing is when 75% or more of the bolls are open and remaining bolls to be harvested are mature (approximately 3 or fewer NACB).  Development of immature bolls will be inhibited.  Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions.
COTTON Stripper or Spindle Harvested Harvest aid for defoliation and boll opening	Broadcast	2.1 to 7.5 fl. oz.	Ground: 10 gals. Air: 5 gals.	3	Do not make more than 4 applications per year.     BECAUSE OF EXTREMES IN ENVIRONMENTAL AND PLANT CONDITIONS, IT IS ADVISABLE TO APPLY THE RANGE OF RATES ON A SMALL BLOCK OF COTTON TO DETERMINE THE RATE THAT BEST FITS YOUR NEEDS.     Apply when 75% of the bolls are open and the remaining bolls to be harvested are mature.     DEVELOPMENT OF IMMATURE BOLLS WILL BE INHIBITED, SLICE BOLLS AND INSPECT THE SEED FOR MATURITY.     THIS PRODUCT may be applied alone or tank mixed with the following cotton harvest aids: Accelerate Defoliant₅, Def Defoliant₅, Dropp Defoliant₅, Ethephon Plant Growth Regulator, Folex Defoliant₅, Harvade₅ Harvest Growth Regulator, Prep™ PGR.     May be applied as a split application. Do not exceed a total of 1.3 pts./Ac.     To avoid leaf sticking, apply THIS PRODUCT as a desiccant approximately 3 to 7 days after defoliant or a conditioning application and 7 to 14 days before harvest.     Cooler temperatures may cause a longer waiting period between application of THIS PRODUCT as a desiccant and defoliation/ conditioner.     South of Interstate 10 in Texas, where temperatures are typically higher during defoliation, lower rates in the range may be necessary.     Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions.
COTTON Late season desiccation	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	3	Do not make more than 4 applications per year. BECAUSE OF EXTREMES IN ENVIRONMENTAL AND PLANT CONDITIONS, IT IS ADVISABLE TO APPLY THE RANGE OF RATES ON A SMALL BLOCK TO DETERMINE THE RATE THAT BEST FITS YOUR NEEDS. May be applied as a split application. Do not exceed a total of 1.3 pts./A. Apply when 85% of the bolls are open and the remaining bolls to be harvested are mature (approximately 0 NACB). Development of immature bolls will be inhibited. Slice bolls and inspect the seed for maturity. South of Interstate 10 in Texas, where temperatures are typically higher during defoliation, lower rates in the range may be necessary. Delay desiccation application of THIS PRODUCT approximately 3 to 7 days to minimize leaf sticking if a defoliation or conditioning application has been made. May be tank mixed with other harvest aid materials known to the local expert to be effective.
COTTON Desiccation of regrowth	Broadcast	0.75 to 1.25 pts.	Ground: 10 gals. Air: 5 gals.	3	Do not make more than 4 applications per year.  Use to desiccate regrowth occurring after defoliation or desiccation.  Because regrowth is difficult to control, thorough coverage with the full listed rate is necessary.  Control is dependent on growing conditions and desiccation of small new regrowth may not always be complete.  If regrowth is excessive, use higher rate.
EASTER LILIES (Field grown)	Pre-emergence	1.7 to 2.7 pts.	Ground: 10 gals.	_	Do not exceed two applications per year.

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
FALLOW LAND Prior to planting of any crops.	Pre-plant Broadcast to Fallow Land	1.0 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.		Do not make more than 2 applications per year, during the fallow period. Fallow land may be between operations such as disking, ripping, plowing, leveling, irrigating or listing for ground preparation purposes. Use for the control of weeds such as bluegrass, cheatgrass, chickweed, dog fennel, downy brome, henbit, London rocket, rescue brome, rye grass, sowthistle, tansy mustard, volunteer cereals, wild oats and other winter annuals and for suppression of perennial weeds or sedges. For weeds approaching the maximum size of 6", the higher specified rate may be used. No more than 2 applications should be made during the fallow period. Prior to application, allow maximum weed emergence to maximize the benefit of this use. Adhere to the preharvest intervals and other crop specific restrictions for planted crops elsewhere on this label.
GRASSES (For seed) (For use in seedbed preparation)	Pre-plant, at Planting, or Pre- emergence	1.3 to 2.7 pts.	Ground: 10 gals.	_	<ul> <li>Do not make more than 3 applications per year.</li> <li>Prepare the seedbeds and allow weeds to germinate.</li> <li>Apply THIS PRODUCT when weeds are at the 3 to 5 leaf stage.</li> <li>Applications may be repeated as necessary (but only up to 3 applications per year) prior to grass emergence.</li> <li>Do not graze treated areas or use the seed or straw from treated areas for animal feed or bedding.</li> </ul>
GUAR (Preharvest desiccation)	Preharvest	1.3 pts.	Ground: 10 gals.	4	Do not make more than 3 applications per year. Apply after the pods are fully mature. Do not graze treated areas or use the treated forage for animal feed.
GUAVA	Directed Spray	2.5 pts.	Ground: 10 gals.	_	Do not make more than 4 applications per year. Do not allow spray to contact green stems, fruit or foliage. Do not graze treated areas. Do not feed cover crops grown in treated areas to livestock. Retreatment or spot spraying may be necessary for mature woody weeds, late-germinating weeds and grasses and perennials.
HOPS (ID, OR, & WA only)	Directed Spray and/ or Suckering and Stripping.	1.3 pts.	Ground: 10 gals.	14	Do not make more than 3 applications per year. Retreatment of spot treatment may be necessary. Do not allow spray to contact green stems, foliage, flowers, or cones as injury may result. Do not allow animals to graze in treated hopyards. Silage and hop vine refuse may be fed to livestock. Spray only the basal 2 ft. of the vines for sucking and stripping. Repeat as necessary, but only up to 3 applications per season. Experience with varieties other than Cascade, Yakima Cluster, and Bullion is limited. If using THIS PRODUCT on other varieties than these, test the use pattern on a small number of vines of each variety to determine sensitivity to injury. Do not use on unlisted varieties if unacceptable crop injury occurs. Chemical Pruning: Spray when vines are less than 3 ft. tall to burn back existing vines and obtain even emergence of subsequent vines. APPLICATION TO HOP VINES LESS THAN 6 FT. TALL MAY CAUSE UNACCEPTABLE INJURY.
LENTILS  NOT REGISTERED FOR  USE ON LENTILS IN  CALIFORNIA.	Harvest Aid	0.8 to 1.3 pts.	Ground: 20 gals. Air: 7 gals.	7	Do not make more than 2 applications per year. Add non-ionic surfactant at 0.25% v/v (2 pts./100 gals.) of the finished spray volume.  May also be applied as a split application. DO NOT make more than 2 applications or exceed a total of 1.3 pts./Ac. The split application may improve coverage.  Apply when crop is mature and at least 80% of the pods are yellowing and mostly ripe with no more than 30% of the leaves still green in color.  DO NOT apply when weather conditions favor spray drift. To reduce spray drift a drift control agent may be included.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
MINT (Peppermint, Spearmint)	Dormant Season	1.3 to 2.0 pts.	Ground: 10 gals. Air: 5 gals.	-	Do not make more than 2 applications per year.     For suppression of weeds such as groundsel, chickweed, downy brome, bluegrass, Italian ryegrass, prickly lettuce.     Apply when crop is dormant before spring growth begins and when weeds are less than 6" tall.     Do not apply more than 2.0 pts./Ac. per dormant season.     May be tank mixed with Sinbar⊚ Herbicide (terbacil) weed killer for improved contact activity and residual control of Italian ryegrass, prickly lettuce and groundsel. Apply this tank mixture no more than once per season. Always refer to Sinbar (terbacil) label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
ONIONS (seeded) AND GARLIC	Pre-plant/ Pre- emergence	1.7 to 2.7 pts.	Ground: 10 gals.	60 200 (CA only)	<ul> <li>Do not make more than 1 application per year.</li> <li>For heavy weed infestations or wild oat control use the higher rate. Apply only one application per season at the 2.7 pts./Ac. dosage.</li> <li>Allow maximum weed and grass emergence prior to treatment but apply prior to crop emergence.</li> <li>Apply a maximum of 2.7 pts./Ac. per season.</li> </ul>
PASSION FRUIT	Directed Spray	2.5 pts.	Ground: 10 gals.		<ul> <li>Do not make more than 5 applications per year.</li> <li>If bark is still green at application time, use a shield or wrap vine.</li> <li>Pick all fruit off the ground prior to application if application is to be made during harvest season.</li> <li>Do not allow animals to graze on treated areas.</li> <li>It may be necessary to retreat or spot treat.</li> </ul>
PEANUTS	Broadcast At Ground Crack Post- emergence	5.4 to 10.8 fl. oz.	Ground: 10 gals.		Do not make more than 2 applications per year.     To control or suppress small (1 to 6") emerged annual grass and broadleaf weeds in peanuts at ground crack. A second application may be made up to 28 days after ground crack.     For at ground crack use, THIS PRODUCT can be tank mixed with Pursuite Herbicide or Dual MAGNUM for residual weed control.     Always refer to the Pursuit or Dual Magnum label for a list of weeds controlled, application rates, necessary precautions, and use limitations.     Make no more than 2 applications per season and do not apply a total of more than 10.8 fl. oz. of product per acre per season.     Crop foliage sprayed will be injured in the form of bronzing and crinkling, but the crop will recover and develop normally.     Do not apply by air.
PEANUTS  Basagran <sub>®</sub> Herbicide  Tank Mix	Broadcast At Ground Crack Post- emergence	5.4 to 10.8 fl. oz.	Ground: 10 gals.	_	<ul> <li>Do not make more than 2 applications per year.</li> <li>Tank mix THIS PRODUCT with Basagran at 1 pt./Ac. for improved control of weeds such as bristly starbur, cocklebur, prickly sida and smartweed.</li> <li>This tank mix can be applied at the ground crack stage of peanuts. A second application may be made up to 28 days after ground crack.</li> <li>Make no more than 2 applications per season and do not apply a total of more than 10.8 fl. oz. of product per acre per season.</li> <li>Crop foliage sprayed will be injured in the form of bronzing and crinkling, but the crop will recover and develop normally.</li> <li>Always refer to the Basagran label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.</li> <li>If peanuts show injury (leaf phytotoxicity and/or plant stunting) produced by any other herbicide treatment, do not apply this tank mix as injury may be enhanced and/or prolonged.</li> <li>During prolonged periods of drought or unseasonably cold weather do not apply this tank mix as unsatisfactory weed control may result.</li> <li>Do not apply by air.</li> </ul>

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
PEANUTS  Butyrac₃ Herbicide or Butoxone₃ 200 Herbicide Tank Mix	Broadcast Post- emergence	5.4 to 10.8 fl. oz.	Ground: 10 gals.	_	Do not make more than 2 applications per year. For improved control of weeds such as cocklebur, morningglory and sicklepod, tank mix THIS PRODUCT with 8 to 16 oz. (0.125 to 0.25 lbs.) per acre of Butyrac or Butoxone 200. Do not apply a total of more than 10.8 fl. oz. of product per season and make no more than 2 applications per season Crop foliage sprayed will be injured in the form of bronzing and crinkling but the crop will recover and develop normally. Always refer to the Butyrac or Butoxone 200 labels for weeds controlled, rates of applications, directions for use, limitations, and restrictions. Do not apply by air.
PIGEON PEAS (Puerto Rico only)	Directed Spray	1.3 pts.	Ground: 10 gals.	60	Do not make more than 1 application per year.  Avoid contact with pigeon pea foliage.  Do not make more than 1 application per season.  Do not graze treated areas or feed treated forage to livestock.  Cannery waste can be fed to livestock.
PINEAPPLE	Directed Spray	1.3 to 2.7 pts.	Ground: 10 gals.	20	Do not exceed 3 applications per season.     More mature weeds may require retreatment.
POTATO	Pre-plant or Pre-emergence Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.		Do not make more than 3 applications per year.     Apply up to ground cracking stage, before potatoes have emerged.
POTATO (California, Idaho, Oregon, Washington only; used alone)	Pre-plant Broadcast	0.4 to 0.7 pts.	Ground: 10 gals. Air: 5 gals.		Do not make more than 3 applications per year.     For control of volunteer barley in preformed seedbeds.
POTATO Fresh Market Only  Preharvest vine killing and weed desiccation  For Use Only in the states of: Colorado, Florida, Delaware, Idaho, Illinois, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Utah, Washington, Wisconsin and Wyoming	Broadcast	0.7 to 1.3 pts.	Ground: 20 gals.	3	For Fresh Market Potatoes Only. (Fresh Market Potatoes include potatoes that are sent directly from the field to a consumer, grocery store, or processor for use.)  • DO NOT make more than 2 applications per year.  • DO NOT use on potatoes that will be stored as tuber decomposition may result.  • Potatoes must be harvested promptly after desiccation and processed or consumed immediately.  • DO NOT apply to drought stressed potato vines.  • DO NOT apply to drought stressed potatoes as seed pieces may fail to germinate and grow normally.  • DO NOT pasture livestock in treated potato fields.  • DO NOT pasture livestock in treated potato fields.  • DO NOT exceed 2.6 pts./Ac. per season.  • Begin application when leaves begin to turn yellow.  • Immature potato foliage is tolerant to THIS PRODUCT. However, desiccation will not be complete under this condition.  • Use 1.3 pts./Ac. rate where quick vine kill is desired.  • For dense vine growth, use 2 applications of 0.6 pt/ Ac. Split applications must be applied a minimum of five days apart.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
RICE	Pre-plant or Pre-emergence Broadcast	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2.0 pts. Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Apply as a broadcast spray before, during or after planting, but before crop emergence. When vegetation is dense, use higher rates and spray volumes.     Seeding should be done with a minimum amount of soil disturbance.     This product will not control weeds and grasses emerging after application. Crop plants emerged at time of application will be killed.     THIS PRODUCT may be tank mixed with other herbicides registered for this use for improved or extended weed control. Always refer to the tank mix product label(s) for weeds controlled, rates of applications, directions for use, limitations, and restrictions.     Do not flood/flush within 48 hours of application in order to ensure complete kill of vegetation. If cool, cloudy and/or wet weather delays speed of kill, do not flood/flush until complete kill is evident.
SAFFLOWER	Pre-plant or Pre-emergence Broadcast or Banded Over Row	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Apply before, during and after planting but before crop emergence.
SAFFLOWER (California only)	Pre-plant Broadcast	0.7 pt.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     For control of volunteer barley in preformed seedbeds.
SMALL GRAINS (Barley, wheat)	Pre-plant or Pre-emergence	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2 pts. Weeds 6": 2 to 2.7 pts.	Ground: 5 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.
SMALL GRAINS (Wheat Only) Hoelon⊚ 3EC Tank Mix	Pre-plant or Pre-emergence	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1. to 2 pts. Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	<ul> <li>Do not make more than 3 applications per year.</li> <li>A tank mix with Hoelon 3EC will improve grass control.</li> <li>Apply when weeds are actively growing and 1 to 6" in height. Weeds 6 inches or taller may not be controlled.</li> <li>Do not apply this tank mix to barley as crop injury may result.</li> <li>Always refer to the Hoelon 3EC label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.</li> </ul>
SORGHUM (Grain)	Pre-plant/ Pre- emergence Broadcast or Band	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2 pts. Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	48 (grain) 20 (forage)	Do not make more than 3 applications per year.     To allow maximum weed and grass emergence, seedbeds should be formed as far ahead of planting as possible     Seeding should be done with a minimum amount of soil disturbance.
SORGHUM (Grain) Atrazine & 2,4-D ester [Low Volatile] Tank Mix	Pre-plant or Pre-emergence	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2 pts. Weeds 6": 2 to 2.7 pts.		48 (grain) 20 (forage)	Do not make more than 3 applications per year.     THIS PRODUCT may be tank mixed with Atrazine for improved preemergence or residual weed control. The addition of 2,4-D ester (Low Volatile) may assist in the suppression of perennial and annual broadleaf weeds emerged at the time of application. Always refer to the specific product label(s) for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
SORGHUM (Grain) Harmony⊚ Extra Herbicide Tank Mix	Pre-plant	1.3 to 2.5 pts.	Ground: 10 gals.	48 (grain) 20 (forage)	Do not make more than 3 applications per year. For Improved weed control, THIS PRODUCT may be tank mixed with Harmony Extra. Always refer to the Harmony Extra label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
SORGHUM (Grain)	Post- emergence Directed (Including Hooded or Shielded)	0.7 to 1.3 pts.	Ground: 10 gals.	48 (grain) 20 (forage)	<ul> <li>Do not make more than 2 applications per year.</li> <li>Apply when weeds are actively growing.</li> <li>Use higher rate on larger or hard to control weeds. Weeds 6" or taller may not be controlled.</li> <li>Severe damage and/or complete kill can occur if spray contacts sorghum plants.</li> <li>Do not exceed 2 post-emergence directed applications or exceed a total of 5.3 pts. of THIS PRODUCT per season.</li> <li>HOODED OR SHIELDED SPRAYERS</li> <li>To avoid excessive crop phytotoxicity, use a hooded or shielded sprayer with skids or wheels on the spray boom to maintain spray height.</li> <li>Apply by directing spray between the rows and by using hooded or shielded sprayers to prevent spray contact with crop plants.</li> <li>DIRECTED SPRAY WITHOUT HOODED OR SHIELDED SPRAYERS</li> <li>Apply when sorghum is at least 12" tall when naturally standing.</li> <li>Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift.</li> <li>Use precision directed-spray application equipment adjusted so that no more than the lower 3" of the sorghum stalk is contacted by the application spray.</li> <li>Some crop injury will occur. The degree of injury is related to the precision of application and spraying conditions.</li> </ul>
SOYBEANS	Pre-plant or Pre-emergence	Weeds 1 to 3": 1.3 to 1.7 pts.  Weeds 3 to 6": 1.7 to 2 pts.  Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year. Do not exceed a total of 4.0 pts. of THIS PRODUCT per season. Apply as a broadcast spray before, during or after planting, but before crop emergence. THIS PRODUCT may be tank mixed with the following herbicides for improved burndown or residual control:  2,4-DB Lorox Canopy Lorox Plus Prowl Dual MAGNUM Pursuit Herbicide Goal Scepter Herbicide Harmony Extra (Pre-plant Only) Sencor Herbicide Lasso Surflan₀ Herbicide Lexone Turbo Herbicide Linex  The rate of this product to be used in these tank mixtures is dependent on weed height and growing conditions. Where weed canopy is dense or under dry conditions, use the highest rate of THIS PRODUCT. Always refer to the respective product label(s) for a list of weeds controlled, rates of applications, directions for use, limitations, and restrictions. The lower application rate may be used when weeds are less than 4" tall and a selective post-emergence spray or cultivation will be made within 3 weeks after planting. Seeding should be done with a minimum amount of soil disturbance. Do not graze or harvest for forage or hay before the R3 stage of soybean development (early pod).
SOYBEANS 2,4-D ester (Low Volatile) Tank Mix	Pre-plant or Pre-emergence	Weeds 1 to 3": 1.3 to 1.7 pts. Weeds 3 to 6": 1.7 to 2 pts. Weeds 6": 2 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	-	<ul> <li>Do not make more than 3 applications per year.</li> <li>Apply 2,4-D ester (Low Volatile) at 0.35 to 0.475 lbs. a.i./Ac. at least 7 days prior to planting.</li> <li>Apply 2,4-D ester (Low Volatile) at 0.475 to 0.95 lbs. a.i/Ac. at least 30 days prior to planting.</li> <li>Do not apply 2,4-D ester (Low Volatile) prior to planting soybeans if you are not able to accept the results of soybean injury including possible loss of stand and yield.</li> <li>Do not use amine formulation as THIS PRODUCT activity may be reduced.</li> <li>May be tank mixed with residual herbicides listed above.</li> <li>Always refer to the 2,4-D ester (Low Volatile) label for weeds controlled, rates of application, directions for use, limitations, and restrictions.</li> </ul>

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
SOYBEANS	Post- emergence Directed Spray (Includes Hooded or Shielded)	3.0 to 5.3 fl. oz.	Ground: 10 gals.		<ul> <li>Do not make more than 3 applications per year.</li> <li>Apply when weeds are actively growing.</li> <li>Use the lower rate of THIS PRODUCT for control of seedling johnsongrass, crabgrass, goosegrass, Brachiaria, Texas millet and pigweed less than 2" tall.</li> <li>For control of 2 to 4" barnyard grass, Brachiaria, crabgrass, fall panicum, giant foxtail, goosegrass, red rice and seedling johnsongrass, use 5.3 fl. oz. of THIS PRODUCT.</li> <li>Use 5.3 fl. oz. of THIS PRODUCT for control of 2 to 3" cutleaf ground cherry, common ragweed, purslane, pigweed and sicklepod.</li> <li>Apply THIS PRODUCT at 5.3 fl. oz./Ac. plus 0.2 lb. active ingredient per acre of a 2,4-D formulation for control of 2 to 4" grasses in mixture with common cocklebur, morningglory and red rice.</li> <li>Always refer to the 2,4-D label for weeds controlled, rates of applications, directions for use, limitations, and restrictions</li> <li>Do not graze or harvest for forage or hay.</li> <li>If necessary, make a second and final application 7 to 14 days later.</li> <li>HOODED OR SHIELDED SPRAYERS</li> <li>Apply by directing spray between the rows and using hooded or shielded sprayers to prevent spray contact with crop plants.</li> <li>Use higher rate on larger (less than 6") or hard to control weeds. Weeds 6" or taller may not be controlled.</li> <li>Severe damage and/or complete kill can occur if spray intentionally or accidentally (including drift of fine droplets) contacts the plants.</li> <li>DIRECTED SPRAY WITHOUT HOODED OR SHIELDED SPRAYERS</li> <li>Do not treat on soybeans that are less than 8" tall.</li> <li>Use precision directed spray application equipment adjusted so that no more than the lower 3" of the soybean plant is contacted by the application spray.</li> <li>Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift.</li> <li>Some crop injury will occur. The degree of injury is dependent upon the precision of application and spraying conditions.</li> </ul>
SOYBEANS	Harvest Aid	5.4 to 10.7 fl. oz.	Ground: 20 gals. Air: 5 gals.	_	<ul> <li>Do not make more than 3 applications per year.</li> <li>Indeterminant varieties: Applications should be made when at least 65% of the seed pods have reached a mature brown color or when seed moisture is 30% or less. Determinant varieties: Apply when plants are mature, i.e., beans are fully developed, one-half of leaves have dropped and remaining leaves are yellowing.</li> <li>Injury will occur on immature soybeans.</li> <li>Mature cocklebur, especially drought-stressed plants are tolerant to THIS PRODUCT and desiccation will not be complete. Always use the higher rate when treating cocklebur.</li> <li>Do not apply within 15 days of harvest.</li> <li>Do not graze or harvest for forage or hay.</li> </ul>
STRAWBERRIES	Post- emergence Directed Spray	1.3 pts.	Ground: 20 gals.	21	<ul> <li>Do not make more than 3 applications per year.</li> <li>Direct spray between the rows using shields to prevent spray contact with crop plants.</li> <li>Do not allow spray to contact strawberry plants as injury or excessive residues may result.</li> <li>Do not apply more than 3 times per season.</li> <li>Do not graze livestock in treated areas.</li> </ul>
SUGAR BEETS	Pre-plant or Pre-emergence	1.3 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year. For heavier weed infestations, use the higher label rate. Seeding or transplanting should be done with a minimum amount of soil disturbance. Crop plants emerged at time of application will be killed. Can be used in fallow bed/stale seedbed for weed control. Seedbeds or plantbeds should be formed as far ahead of treatment as possible to permit maximum weed emergence.

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
SUGARCANE	Post- emergence Directed Spray (includes Hooded or Shielded)				Do not make more than 2 applications per year, except applications made by air in Florida and Texas in which the maximum number of applications allowed is 1 per year.  Apply as a hooded, shielded or directed spray to avoid contact with cane foliage to prevent leaf burn and yield reduction.  If necessary, a second and final application can be made when new weed growth is 2 to 6" high.  Do not graze treated areas or feed treated forage to livestock.
—Florida—		1.3 pts.	Ground: 50 gals.	_	Do not make more than 2 applications per year. Optimum results can be obtained by applying in early spring (March to April) when weeds are small. Do not apply after June 1 as cane growth may be stunted and yields reduced.
—Hawaii—		1.3 pts.	Ground: 20 gals.	_	Do not make more than 2 applications per year.  Do not apply after cane rows have closed in.
—Louisiana—		0.7 to 2.0 pts.	Ground: 20 gals.	30	Do not make more than 2 applications per year. For tiller control, apply when tillers are less than 18" high. For heavier weed infestations or tiller growth use the higher rate.
—Florida & Texas—	Harvest Aid	0.4 to 0.7 pts.	Air: 5 gals.	_	Do not make more than 1 application per year. Under cool, cloudy weather conditions use higher rate. Apply 3 to 14 days before burning and harvest.
SUNFLOWER	Pre-plant or Pre-emergence Broadcast or Banded Over Row	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     Apply before, during, or after planting but before crop emergence.
SUNFLOWER	Preharvest Desiccation Broadcast	0.8 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	7	Do not make more than 2 applications per year. Apply when sunflower seeds reach physiological maturity (when seed moisture is 35% or lower). For many varieties, this is equivalent to the time when the back of the heads are yellow and the bracts are turning brown. Do not graze treated areas or feed treated forage to livestock. When crop stands or weed infestations are heavy, use the higher label rate.
TARO, DRYLAND (Hawaii Only)	Post- emergence Directed Spray	1.3 to 2.1 pts.	Ground: 10 gals.	180	Do not make more than 2 applications per year. Do not allow spray to contact the taro plants as injury may result. Make the first application when weed growth is 1 to 4" high. Weeds emerging after the application will not be controlled. A single retreatment may be made; however, do not harvest dryland taro within 6 months of the last application.
TREE PLANTATION ESTABLISHMENT Deciduous and Conifers	Pre-plant Broadcast	1.3 to 2.7 pts.	Ground: 20 gals.	-	Do not make more than 3 applications per year. To allow maximum emergence of weeds prepare ground early. Apply prior to planting. Plant with minimal soil disturbance. For heavier weed infestations, use the higher application rate. For improved burndown or residual control, tank mix THIS PRODUCT with other herbicides labeled for this use. Always refer to the specific tank mix herbicide label(s) for weeds controlled, rates of applications, directions for use, limitations, and restrictions. Do not apply in less than 20 gals./Ac. as weed control will be reduced.

Crop	Use Pattern	THIS PRODUCT	Minimum Total	Grazing or Preharvest	Additional Directions
Отор	OSC I ditelli	Rate Per Acre	Spray Per Acre	Interval (Days)	Additional Directions
TREES AND VINES	Directed Spray	1.7 to 2.7 pts.	Ground:	Apricots	Do not make more than 5 applications per year, except for: Apricots,
Orchards	,		10 gals.	28	Cherries, Kiwi fruit, Nectarines, Peaches, Plums, no more than 3 applications
Vineyards					per year, Olives, no more than 4 applications and Pistachios, no more than
Windbreak. Shade &				Cherries	5 applications but only 2 applications after shells split.
Ornamental Trees:				28	• Do not allow spray to make contact with green stems (except suckers), fruit
Acerola					or foliage.
Apples				Figs	Use the shield or wrap plant when spraying around young trees or vines.
Apricots				13	Do not graze treated areas.
Avocados					Do not feed covered crops grown in treated areas to livestock.
Bananas				Kiwi Fruit	• Do not apply when figs, nuts or olives to be harvested are on the ground.
Beechnut				14	• For apricots - Do not harvest within 28 days after application and do not
Brazil nut					exceed 3 post-emergence directed applications per season.
Butternut				Nectarines	• For cherries - Do not harvest within 28 days after application and do not
Calamondin				28	exceed 3 post-emergence directed applications per season.
Cashew				20	• For figs - Do not harvest within 13 days after application and do not exceed
Cherries				Olives	5 post-emergence directed applications per season.
Chestnut				13	• For grapes - Treat when sucker growth is no more than 8" long. Late
Chinquapin				10	season applications to weeds should be made to avoid contact with desirable
Citrus				Peaches	foliage.
Citron				14	• For kiwi fruit - Do not treat more than 3 times per year.
Coffee				17	• For mature woody weeds, perennial weeds, late germinating weeds and
Figs				Pistachios	green suckers, retreatment or spot treatment may be necessary.
Filberts				7	• For nectarines - Do not harvest within 28 days after application and do not
Grapefruit				,	exceed 3 post-emergence directed applications per season.
Grapes				Plums	• For olives - Do not harvest within 13 days after application and do not
Hickory nut				28	exceed 4 post-emergence directed applications per season.
Kiwi fruit				20	• For peaches - Do not harvest within 14 days after application, and do not
Kumquat					exceed 3 post-emergence directed applications per season.
Lemon					• For pistachios - Do not exceed 2 applications after shells split.
Lime					• For plums - Do not harvest within 28 days after application and do not
Macadamia nuts					exceed 3 post-emergence directed applications per season.
Mandarin					oxocou o post emergenee unesteu applicatione per seuson.
Nectarines					
Olives					
Orange (sour & sweet)					
Papayas					
Peaches					
Pears					
Pistachios					
Plums					
Prunes					
Pummelo					
Satsuma					
mandarin					
Walnuts					
Other shade and					
ornamental trees such as					
arborvitae, ash, elm, fir,					
oak, pine, etc.					

Crop  TREES AND VINES Tank Mixes	Use Pattern  Directed Spray	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre  Ground: 10 gals.	Grazing or Preharvest Interval (Days) Always refer to other Tank Mix labels	Additional Directions  • Do not make more than 5 applications per year, except for: Apricots, Cherries, Kiwi fruit, Nectarines, Peaches, Plums, no more than 3 applications per year; Olives, no more than 4 applications and Pistachios, no more than 5 applications but only 2 applications after shells split.  • This product may be tank mixed with registered residual herbicides listed below for combined emerged and residual weed control.  THIS PRODUCT may be tank mixed with the following herbicides:  Devrinole Herbicide  Goale  Karmexe  Krovare Herbicides  Princepe  Sinbare  Solicame Herbicide  Surflane  • Always refer to other herbicide labels for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
TYFON (New Hampshire only)	Pre-plant Pre- emergence	1.7 to 2.7 pts.	Ground: 10 gals.	_	Do not make more than 3 applications per year. Seeding should be done with a minimum of soil disturbance. Weeds and grasses emerging after treatment will not be controlled. Crop plants emerged at time of application will be injured.
VEGETABLES (Seeded or Transplanted) Beans (Lima, Snap) Broccoli Cabbage Cantaloupe Carrots Cauliflower Chayote fruit Chinese cabbage Chinese waxgourd Citron melon Collards Cucumber Eggplant Gherkin Gourd, Edible Groundcherry Lettuce Momordica spp. Musk melons Peas Pepino Peppers Pumpkin Squash Sweet Corn Tomatillo Turnips Tomatoes Watermelons	Pre-plant Pre-emergence	1.3 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year. Seedbeds or plantbeds should be formed as far ahead of treatment as possible to permit maximum weed emergence. Banded or broadcast treatment applications can be made before, during or after planting but prior to the crop emergence. For heavier weed infestations, use the higher rate. Seeding or transplanting should be done with a minimum amount of soil disturbance. Crop plants emerged at time of application will be killed. THIS PRODUCT can be used in fallow bed/stale seedbed for weed control alone or tank mixed with Goale. Always refer to the Goal label for weeds controlled, rates of applications, directions for use, limitations, and restrictions. Do not harvest tomatoes within 30 days after application.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
VEGETABLES  Eggplant Peppers Tomatoes	Directed Spray	1.3 pts.	Ground: 10 gals.	_	Do not make more than 3 applications per year. For control or suppression of emerged weeds between rows after crop establishment.  Use precision directed spray application equipment adjusted to prevent spray contact with crop plants. Do not exceed 30 psi nozzle pressure. Do not spray under conditions which may cause excessive drift. Apply when weeds are succulent and weed growth is less than 6". Do not apply more than 3 applications per season. Do not allow animals to graze in treated areas. Do not harvest tomatoes within 30 days after application.
VEGETABLES Tomatoes	After Final Harvest	1.6 to 2.5 pts.	Ground: 40 to 120 gals.	_	Do not make more than 2 applications per year. Apply in 40 to 120 gallons of water per acre (0.62 to 0.93 lb. a.i./Ac.). Add NIS containing 75% or more surface active agent at 0.125 v/v (1 pt./100 gals. spray solution). To ensure maximum herbicide burndown, tomato vines should be thoroughly covered. THIS PRODUCT may be deactivated and less efficacious when dirty or muddy water is used. To aid in the removal of sweet potato whitefly, burn tomato vines with propane burners as soon as possible after the vines have dried down sufficiently. DO NOT apply more than a total of 3 lbs. active ingredient (paraquat) per acre per season. To minimize drift, do not use nozzles or nozzle configurations which produce fine spray droplets (mist).
VEGETABLES  (California, Washington, Oregon, Idaho only)  Lettuce Melon Sugar Beets Tomatoes	Broadcast	0.4 to 0.7 pts.	Ground: 10 gals. Air: 5 gals.	-	Do not make more than 2 applications per year.     For control of volunteer barley in preformed seedbeds.     Do not harvest tomatoes within 30 days after application.
<b>VEGETABLES</b> Rhubarb	Dormant	1.7 to 2.7 pts.	Ground: 10 gals.	_	Do not exceed 2 applications per year.     Apply during dormant season before buds in crown begin to grow.

## **RESIN SOAKING**

Pines including Loblolly, Longleaf, Pitch, Pond, Shortleaf, Slash, Virginia and Spruce Pines.

**Tree Selection** -Trees should be selected from stands on sites not subject to stress from periods of extreme drought stress because the desiccating effect of THIS PRODUCT is accentuated during drought, causing a reduction in the amount of oleoresin deposited in the xylem. Vigorous, non-stagnated natural or planted stands should be selected. Plan treatments of THIS PRODUCT in stagnated or commercial timber stands not sooner than three years after a commercial thinning.

**Application Directions:** To bring the treatment into contact with sapwood (or xylem), apply THIS PRODUCT water-diluted to an appropriate wound in the tree trunk.

Bark Streaks or Cuts: Use a standard or rotary bark hack or a chainsaw shipping tool (used in naval stores work) to remove a single 1 inch wide streak of bark about 1 to 2 feet from ground level. Do not exceed one-third of the circumference of the tree. Serious girdling of the trunk and premature death of the tree can result if multiple streaks or cuts are made. Apply a coarse spray solution (about 1.7 to 5.0 ml) of THIS PRODUCT (1 to 5% cation, wt./wt. basis) to runoff to the exposed xylem, using a low-pressure sprayer. The amount of spray required per cut depends on tree circumference and the length of cut or streak. For example, for a 9 inch diameter tree, using 3 ml of 2 or 4% solution of THIS PRODUCT will cover the 1 inch wide streak and will result in application of 60 or 120 mg per streak.

**Time of Treatment:** Less severe pine beetle infestation and longer tree life usually result during cool season treatments under non-drought seasons. However, resin soaking can occur from treatments made any time of the year.

**Interval between Treatment and Tree Harvest:** The interval between application of this product and tree harvest should be a minimum of 6 months and preferably from 12 to 24 months. Intervals of over 6 months may not be possible under conditions of drought or serious Pine beetle attacks, which may make early harvest necessary. Treatment of this product may encourage Beetle attack or may cause premature death of the tree. Desiccation of the xylem tissue, rather than the desired resin soaking, may occur, and is more likely at higher dosage rates.

**Note:** This type of treatment may reduce stem growth during the interval between treatment and tree harvest.

Dilution Table for THIS PRODUCT (3.0 lbs. cation per gallon)					
Concentration of Cation Desired (wt./wt. basis)	Add the Following No. Gal. of Water to 0.66 Gallon of THIS PRODUCT				
0.2%	118.8				
0.5%	46.8				
1.0%	22.9				
2.0%	10.9				
3.0%	6.9				
4.0%	4.9				
5.0%	3.7				

Сгор	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
CONSERVATION RESERVE, FEDERAL SET-ASIDE, CONSERVATION COMPLIANCE PROGRAMS (For use in compliance with the Federal Conservation Reserve Program or Federal set-aside programs)	Broadcast	1.7 to 2.7 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 3 applications per year.     THIS PRODUCT may be tank mixed with other herbicides registered for this use for improved emerged weed control or extended weed control. Always refer to tank mix herbicide labels for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
NONCROP USES	Broadcast or Spot Treatment	1.7 to 2.7 pts.	Ground: 10 gals.	_	Repeat applications as necessary but do not make more than 10 applications per year. To be used in noncrop areas including public airports, electric transformer stations, pipeline pumping stations, around commercial buildings, storage yards and other installations, and fence lines. Avoid spray contact with the foliage of ornamentals or desired plants.
PASTURE RESEEDING  For suppression of existing sod and undesirable emerged broadleaf weeds and grasses prior to or at time of planting grasses or forage legumes	Broadcast	0.7 to 1.3 pts.	Ground: 10 gals. Air: 5 gals.	See specific geographic recommendation	Do not make more than 3 applications per year.  West of Cascade and Sierra Nevada Mountains     Apply in October through December after first fall rains and after weeds have emerged and sod has started new growth.     Apply on moderately to heavily grazed areas for best seeding results.     Do not use in heavy sod and weed growth areas.  East of Rocky Mountains     Use the 1.3 pts. rate on vigorous or coarse sod species such as bromegrass.     Apply prior to, or at time of seeding grasses or forage legumes.     Apply only to grazed or mowed pastures not more than 3" in height at time of treatment.  Bermudagrass or Bahiagrass Sods     Apply in late summer or early fall to sod not exceeding 3" in height.     For control of emerged little barley, apply in February or March before the mid-boot stage of little barley.  Bermudagrass and Coastal Bermudagrass Pastures     Apply when bermudagrass is dormant.     For control of little barley, apply before the mid-boot stage.     Do not mow for hay until 40 days after treatment.
For control of Endophyte (fungus) infected fescue forage legume/grass mixture and other grass pastures	Broadcast (Split Application)	0.7 to 1.3 pts. followed by 0.7 to1.3 pts.	Ground: 10 gals.	_	Do not make more than 2 applications per year. Use split applications of 10 to 21 days apart if necessary. Do not exceed 2.6 pts./Ac. total in preparation for reseeding. For spring plantings, the initial application of 0.7 to 1.3 pts. may be made the previous fall. Apply when fescue is actively growing and no more than 4" high. To reduce the infestation of endophyte-infested grass, do not allow fescue to go to seed starting with the preceding year's crop.

Crop	Use Pattern	THIS PRODUCT Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Additional Directions
For prickly pear desiccation in pastures*  *Not for use in California	Spot Sprays	0.8 fl. oz. per gallon of water	Spray to wet weed foliage	_	Do not make more than 10 applications per year. Hand-held equipment such as knapsacks backpack sprayers, pump-up pressure sprayers, hand-guns, and hand-wands, can be used to direct the spray onto weed foliage so that the spray thoroughly wets foliage.  Mix 0.8 fl. oz. of THIS PRODUCT and 0.33 fl. oz. of a non-ionic surfactant per gallon of water.  Completely and uniformly cover all green prickly pear foliage with spray.  Apply in May through September for best desiccation results. Do not use more than 1.6 pts. of THIS PRODUCT per acre per year.  Apply only to pastures with no more than 3" of height at time of treatment. Tank mix with Grazon₅ P+D Specialty₅ herbicide at a rate of 1 to 2 fl. oz. per gallon of water for improved desiccation and perennial control of prickly pear.  Always refer to the Grazon P+D Specialty herbicide label for weeds controlled, rates of applications, directions for use, limitations, and restrictions.
For Juniper Species leaf moisture reduction or desiccation prior to prescribed burning of pastures*  *Not for use in California	Broadcast	1.3 pts.	Air: 5 gals.	_	Do not make more than 10 applications per year.  Use only in conjunction with prescribed burning as recommended and monitored by local SCS or University and Extension Range Specialists.  Apply during hot, dry weather conditions (generally July and August).  Use 2% v/v non-ionic surfactant in a minimum of 5 gal spray solution.  Monitor juniper leaf moisture content. Maximum leaf moisture reduction generally occurs 3 to 4 weeks after THIS PRODUCT application.  Significant soil moisture and/or wet weather conditions prior to or after application will decrease the potential for juniper crown burns.  Reduction in leaf moisture can be adversely affected by cool or humid weather conditions.  Do not graze livestock after application or prior to burning.
Native Pastures*  *Not for use in California	Broadcast	1.0 to 1.25 pts.	Ground: 10 gals. Air: 5 gals.	_	Do not make more than 2 applications per year. Apply THIS PRODUCT for control of downy and Japanese brome. Apply in spring after 90% node formation of brome species, but before full bloom. Emerged native perennial grasses will be burned by application, but application after 90% node formation will allow adequate time for native grasses to recover and attain maximum growth in the use season. Do not apply more than 1.25 pts. of THIS PRODUCT per year. Apply only to pastures with no more than 3" of height at time of treatment.

Conversion Table THIS PRODUCT to Be Applied					
Fluid Ounces	Pints	Lb. a.i.	Acres/Gallon		
2.5	0.16	0.06	51.3		
4.8	0.30	0.11	26.7		
5.28	0.33	0.12	24.2		
5.52	0.35	0.13	23.2		
10.00	0.63	0.23	12.8		
11.00	0.69	0.26	11.6		
11.20	0.70	0.26	11.4		
12.00	0.75	0.28	10.7		
16.00	1.00	0.38	8.0		
20.00	1.25	0.47	6.4		
20.80	1.30	0.49	6.2		
24.00	1.50	0.56	5.3		
28.00	1.75	0.66	4.6		
32.00	2.00	0.75	4.0		
40.00	2.50	0.94	3.2		
43.20	2.70	1.00	3.0		

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original container and place in a locked storage area. Do not mix or store in containers, spray tanks, nurse tanks, or such systems made of aluminum or having aluminum fittings. Store at temperatures above 32°F. For Emergencies involving a Spill, Leak, Fire, Exposure, or Accident, contact: CHEMTREC at (800) 424-9300.

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

## **CONTAINER HANDLING:**

#### Nonrefillable Container (rigid material; < 5 gallons):

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## Nonrefillable Container (rigid material; > 5 gallons):

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## WARRANTY — CONDITIONS OF SALE

Seller warrants that this product conforms to the chemical description and is reasonably fit for purposes stated on the label when used in accordance with the directions and instructions under normal conditions of use; but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and to the extent consistent with applicable law, Buyer assumes the risk of any such use.

Manufactured For:

Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

QUIK-QUAT and the DREXEL logo are either trademarks or registered trademarks of Drexel Chemical Company. All other brand names, product names, or trademarks belong to their respective owners.

## **SUPPLEMENTAL WARNING MATERIALS:**

1. Components of Sticker to be affixed to the cap of all paraquat dichloride product containers:



2. Language for Product Package Safety Requirements Sticker to be affixed to all paraquat dichloride product containers:

NEVER TRANSFER THIS PRODUCT INTO FOOD OR BEVERAGE CONTAINERS OR CONTAINERS NOT EXPLICITLY INTENDED FOR PESTICIDES.	NUNCA TRANSFIERA ESTE PRODUCTO A RECIPIENTES PARA COMIDA O DE BEBIDAS O RECIPIENTES NO EXPLÍCITAMENTE PREVISTOS PARA PLAGUICIDAS.	
ONE SIP CAN KILL.	UN SORBO PUEDE CAUSAR LA MUERTE.	POISON X PELIGRO VENENO X
CONTACT WITH SKIN MAY RESULT IN POISONING.	EL CONTACTO CON LA PIEL PUEDE CAUSAR ENVENENAMIENTO.	
EXPOSURE TO EYES MAY CAUSE SUBSTANTIAL EYE INJURY.	EXPOSICIÓN A LOS OJOS PUEDE CAUSAR LESIONES SUSTANCIALES EN LOS OJOS.	DANGER EYE IRRITANT  (continued)

(continued)

(continuation)

PARAQUAT SHOULD ALWAYS BE STORED TIGHTLY CLOSED IN ORIGINAL CONTAINER AND IN LOCKED PLACE AWAY FROM CHILDREN AND ANIMALS.	EL PARAQUAT DEBE ALMACENARSE SIEMPRE CERRADO EN SU RECIPIENTE ORIGINAL, Y EN UN LUGAR CERRADO, ALEJADO DE NIÑOS Y ANIMALES.	
READ ENTIRE LABEL PRIOR TO USING THIS PRODUCT.	LEA LA ETIQUETA COMPLETA ANTES DE USAR ESTE PRODUCTO.	

3. Language for Paraquat Dichloride Counter Safety Card to be distributed with all paraquat dichloride products:

NEVER TRANSFER DREXEL QUIK-QUAT INTO FOOD OR BEVERAGE CONTAINERS OR CONTAINERS NOT EXPLICITLY INTENDED FOR DREXEL QUIK-QUAT.	NUNCA TRANSFIERA DREXEL QUIK-QUAT A RECIPIENTES PARA COMIDA O DE BEBIDAS O RECIPIENTES NO EXPLÍCITAMENTE PREVISTOS PARA DREXEL QUIK-QUAT.		
ONE SIP CAN KILL.	UN SORBO PUI LA MUERTE.	EDE CAUSAR	DANGER POISON X PELICITO VPMP NO SE
CONTACT WITH SKIN MAY RESULT IN POISONING.	EL CONTACTO CON LA PIEL PUEDE RESULTAR EN ENVENENAMIENTO.		
EXPOSURE TO EYES MAY CAUSE SUBSTANTIAL EYE INJURY.	LA EXPOSICIÓN A LOS OJOS PUEDE CAUSAR LESIONES GRAVES A LOS OJOS.		DANGER EYE IRRITANT
PARAQUAT SHOULD ALWAYS BE STORED TIGHTLY CLOSED IN ORIGINAL CONTAINER, AND IN A LOCKED PLACE AWAY FROM CHILDREN AND ANIMALS.	EL PARAQUAT ALMACENARS CERRADO EN S RECIPIENTE OI EN UN LUGAR ALEJADO DE N ANIMALES.	E SIEMPRE SU RIGINAL, Y CERRADO,	
READ ENTIRE LABEL PRIOR TO USING THIS PRODUCT.	LEA LA ETIQUETA COMPLETA ANTES DE USAR ESTE PRODUCTO.		
DISREGARDING LABEL DIRECT VIOLATION OF FEDERAL LAW PUNISHABLE BY SUCH.		REPRESENTA	AS INDICACIONES DE LA ETIQUETA L'UNA INFRACCIÓN DE LA LEY S PENADO COMO TAL.