

83529-27

3/24/2011

1 of 67



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7504P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Registration
 Number:
 83529-27

Date of Issuance:
 MAR 24 2011

NOTICE OF PESTICIDE:

Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance: **Unconditional**

Name of Pesticide Product:
Paraquat Concentrate

Name and Address of Registrant (include ZIP Code):
Sharda USA, LLC c/o **Wagner Regulatory Associates, Inc.**
7460 Lancaster Pike, Suite 9 P.O. Box 640
Hockessin, DE 19707 Hockessin, DE 19707

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA provided that you submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.

The Basic Confidential Statement of Formula (CSF) dated March 2, 2011 is acceptable.

A stamped copy of the label is enclosed for your records. Submit one (1) copy of the revised final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this Notice or the next printing of the label, whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

If you have any questions regarding this Notice, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Signature of Approving Official:

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

Date:

MAR 24 2011

2 of 67

Restricted Use Pesticide

Due to acute toxicity. For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

PARAQUAT CONCENTRATE

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

NEVER PUT INTO FOOD, DRINK OR OTHER CONTAINERS.
IF SWALLOWED, TAKE IMMEDIATE ACTION AS PRESCRIBED IN FIRST AID.
SYMPTOMS ARE PROLONGED AND PAINFUL.
DO NOT USE OR STORE IN OR AROUND THE HOME.
DO NOT REMOVE CONTENTS EXCEPT FOR IMMEDIATE USE.
THE ODOR OF THIS PRODUCT IS FROM THE STENCHING AGENT WHICH HAS BEEN ADDED, NOT FROM PARAQUAT.

Active Ingredient:

Paraquat dichloride (1,1'-dimethyl-4,4'-bipyridinium dichloride) 43.2%
Other Ingredients:.....56.8%
Total:.....100.0%

Contains 3.0 pounds paraquat cation per gallon as 4.14 pounds of dichloride salt per gallon.
Contains emetic and stench (odor).

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO



POISON

ACCEPTED
MAR 24 2011
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. <u>83529-27</u>

Si usted no entiende la etiqueta, busque a alguien 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.)

Manufactured for: Sharda USA LLC
P.O. Box 640
Hockessin, DE 19707

EPA Reg. No. 83529-27
EPA Establishment No.

Net Contents: 1 gallon

FIRST AID Contains Paraquat, a Bipyridinium Herbicide. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor IMMEDIATELY for treatment advice. • SPEED IS ESSENTIAL. Immediate medical attention is required. If available, give an absorbent 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN Administer either activated charcoal (100g for adults or 2g/kg body weight in children) or Fuller's Earth (15% solution; 1 liter for adults or 15ml/kg body weight in children). NOTE: The use of gastric lavage without administration of an absorbent 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:

TRANSPORTATION EMERGENCY (CHEMTREC) 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. Wear protective eyewear. Do not breathe spray mist. Wear a dust mist respirator. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin. Prolonged or frequently repeated contact may cause allergic reactions in some individuals.

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 - Category A (e.g. barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton)
- Shoes plus socks
- Protective eyewear
- NIOSH-approved particulate filtering respirator equipped with N, R or P class filter media. The respirator should have a NIOSH approval number prefix TC-84A. It is recommended that you require that respirator wearer to be fit tested, and trained in the use, maintenance and limitations of the respirator.

Mixers and loaders must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves - Category A (e.g., barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton)
- Shoes plus socks
- Chemical resistant apron
- Face shield
- NIOSH-approved particulate filtering respirator equipped with N, R or P class filter media. The respirator should have a NIOSH approval number prefix TC-84A. It is recommended that you require that respirator wearer to be fit tested, and trained in the use, maintenance and limitations of the respirator.

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:

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

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 around home gardens, schools, recreational parks, golf courses or playgrounds.

AGRICULTURAL USE REQUIREMENTS

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

For preplant or preemergence (broadcast or banded), chemical fallow, postemergence directed spray applications, early postemergence 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 restricted-entry interval (REI) of 12 hours.

For harvest aid and desiccation application: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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

- Coveralls,
- Chemical resistant gloves - Category A (e.g. barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton),
- Shoes plus socks, and
- Protective eyewear

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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.

PRODUCT INSTRUCTIONS AND INFORMATION

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

When PARAQUAT CONCENTRATE 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.

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°. Where states have more stringent regulations, they shall be observed.

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

Where states have more stringent regulations, they must be observed.

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 should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making 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 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

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

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft 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 should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

PRODUCT INFORMATION

PARAQUAT CONCENTRATE is a liquid formation containing 3 lbs. 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

PARAQUAT CONCENTRATE 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 PARAQUAT CONCENTRATE 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 PARAQUAT CONCENTRATE 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 with PARAQUAT CONCENTRATE.

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

ROTATIONAL CROPS

After the last application PARAQUAT CONCENTRATE, all rotational crops may be planted immediately.

RAINFASTNESS

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

USE OF A NONIONIC SURFACTANT OR CROP OIL CONCENTRATE

The following should always be added and be used at the listed rates or there will be a reduction in efficacy of PARAQUAT CONCENTRATE.

Nonionic Surfactant: Either add a nonionic surfactant cleared for the current use containing 50-74% surface-action agent at 0.25% v/v (2 pts./100 gals.), or add nonionic 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 nonionic 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 15-20% approved emulsifier, with 1.0% v/v, (1 gal./100 gals.) of the finished spray volume. Add 1 pt. of crop oil concentrate per acre for aerial applications. **For cotton harvest aid, do not use crop oil concentrate when using PARAQUAT CONCENTRATE.**

NOZZLE SELECTION

The use of flat-fan nozzles is the most effective application of PARAQUAT CONCENTRATE. 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.

Recommended Nozzle Type and Spray Pressures and Setup

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

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

SPRAY CARRIER

PARAQUAT CONCENTRATE 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 PARAQUAT CONCENTRATE 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 nonionic surfactant still be used with PARAQUAT CONCENTRATE. The use of liquid fertilizer carriers are not substitutes for surfactants.

RATES OF PARAQUAT CONCENTRATE

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 0.50 lbs. a.i./A 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 1-6 inches in height. If possible, when green foliage is removed either from grazing or mowing, allow the weeds to grow 2-4 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 PARAQUAT CONCENTRATE 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 PARAQUAT CONCENTRATE.

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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 PARAQUAT CONCENTRATE is:	Add The Following Amount of PARAQUAT CONCENTRATE to 1 Gallon of Water
1 1/2 pts.	1/3 fl. oz.
2 pts.	3/8 fl. oz.
2 1/2 pts.	1/2 fl. oz.
3 pts.	2/3 fl. oz.

Add 1/3 -1/2 fl. oz. of a nonionic 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 PARAQUAT CONCENTRATE with other herbicides. The addition of other photosynthetic inhibitors (PSI) herbicides will slow the activity of PARAQUAT CONCENTRATE. This allows PARAQUAT CONCENTRATE to thoroughly distribute throughout a treated leaf, thus achieving better control than if PARAQUAT CONCENTRATE was applied alone.

PARAQUAT CONCENTRATE 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
 Princep® Herbicide
 Sencor® Herbicide

Always refer to the respective product label(s) for rates of applications, directions for use, limitations, and restrictions.

130967

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 PARAQUAT CONCENTRATE.

Order of Tank Mixing

It is advisable to tank mix PARAQUAT CONCENTRATE and other listed products as follows:

1. Fill spray tank 1/2 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 PARAQUAT CONCENTRATE to tank.
6. Add nonionic surfactant to tank.
7. Fill remainder of spray tank.

Always read other pesticide products labels for weeds controlled, rates of applications, directions for use, limitations, and restrictions.

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

14 of 67

PRODUCT PRECAUTIONS AND RESTRICTIONS

EQUIPMENT

PARAQUAT CONCENTRATE is **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 PARAQUAT CONCENTRATE 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.

LIMITATIONS AND PRECAUTIONS

- **Unless otherwise indicated, PARAQUAT CONCENTRATE will severely injure or kill crop plants emerged at time of application if they come in contact with sprays.**
- 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 around home gardens, schools, recreational parks, or playgrounds.
- Do not apply to soils lacking clay minerals such as peat, muck, pure sand, artificial planting media for preplant and preemergence (to the crop) uses.
- 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 damaged when they come in contact with plastic mulch used for preplant weed control and that has been treated with this product. To prevent damage to the crop, sufficient wash-off such as rainfall or sprinkler irrigation prior to planting may be needed.
- PARAQUAT CONCENTRATE will be ineffective in controlling or suppressing weeds and grasses that have emerged after application.

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APPLICATION INSTRUCTIONS

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
ALFALFA (California only) New seedlings		Broadcast	0.7-1.3 pts. See Table 2.	Ground: 10 gals. Air: 5 gals.	70
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than one application per year. <p>Applications should be made during late winter or early spring.</p> <ul style="list-style-type: none"> • Do not cut or harvest within 70 days after application. • Alfalfa foliage present at time of application will be burned. • Replanting may be needed due to the reduction of seedling stands. • Do not apply to seedling alfalfa grown for seed. 					
ALFALFA Preplant or Preemergence (No-till or conventional planting)		Broadcast or Banded Over Row	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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. 					

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or. Preharvest Interval (Days)
ALFALFA Dormant season Established plantings Region A - See table at end of Alfalfa section	Weeds, including bluegrass, chickweed, henbit, downy brome, ryegrass, cheatgrass, dogfennel, tansymustard, London Rocket, Sowthistle, rescue brome, wild oats, and other winter annuals; and suppression of perennial weeds.	Broadcast	1.3 – 2.0 pts.	Ground: 10 gals. Air: 5 gals.	42

Additional Precautions, Restrictions and Directions

- Do not make more than one application per year
- Fall Regrowth: Do not apply if last 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.

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray per Acre	Grazing or Preharvest Interval (Days)
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	0.7-1.3 pts.	Ground: 10 gals. Air: 10 gals.	42

Additional Precautions, Restrictions and Directions

- Do not make more than 2 applications per year.
- When weeds are less than 4 inches tall apply at 0.7 pt. rate PARAQUAT CONCENTRATE
- Mix PARAQUAT CONCENTRATE with 1-2 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.
- Do not cut or harvest within 42 days of application.

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray per Acre	Grazing or Preharvest Interval (Days)
ALFALFA Dormant Season On established plantings: Region B: See table at end of Alfalfa section.	Weeds including London rocket, sowthistle, rescue brome, wild oats, chickweed, ryegrass, bluegrass, cheatgrass, dogfennel, tansymustard, henbit, downy brome, and other winter annuals; and suppression of perennial weeds	Broadcast	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	60
On fall-seeded newly established stands less than 1-year-old: Region A - See table at end of Alfalfa Section.	California: Desiccation of weeds including bluegrass, ryegrass, shepherdspurse, chickweed, tanseymustard, foxtail, sowthistle and groundsel.	Broadcast	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	60
On fall-seeded newly established stands less than 1-year-old: Region B - See table at end of Alfalfa section		Broadcast	0.5-0.8 pts.	Ground: 10 gals. Air: 5 gals.	60

Additional Precautions, Restrictions and Directions

- Do not make more than one application per year.
- Applications should be made 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.
- **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.

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Additional Precautions, Restrictions and Directions (Continued)

- 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.

California

- If ryegrass, shepherdspurse, sowthistle or groundsel are present, use higher rate.

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray per Acre	Grazing or Preharvest Interval (Days)
ALFALFA (East of the Rocky Mountains) Between-cuttings treatment in established plantings. (Includes first year alfalfa)		Broadcast	0.7 pt.	Ground: 10 gals.	30

Additional Precautions, Restrictions and Directions

- Do not make more than 3 applications per year.
- Control of weeds beyond the seedling stage and weed stubble cut off during harvest are less affected by this treatment.
- Make applications immediately after alfalfa has been removed for hay or silage.
- Do not treat more than 5 days after cutting.
- A reduction in first year alfalfa stands and yields may occur if alfalfa is allowed to regrow more than 2 inches.
- Burning of alfalfa foliage will occur at time of application.
- Weed control may be reduced where moisture is limited such as in arid climates.
- Do not cut or harvest within 30 days of application.
- Apply as needed up to three times during the growing season in addition to a dormant application.
- Do not make more than 2 applications during the first growing season of first-year alfalfa.

2006/67

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray per Acre	Grazing or Preharvest Interval (Days)
ALFALFA (For use only in the following states: ID, MT, NV, OR, UT, WA, WY) Desiccation of alfalfa to aid harvesting alfalfa seed		Broadcast	1.7-2.7 pts.	Ground: 20-25 gals. Air: 5-10 gals.	See Precautions
PARAQUAT CONCENTRATE/ Reglone Tank Mix		Broadcast	1.3-2.7 pts. PARAQUAT CONCENTRATE/ 2 pts. Reglone	Ground: 20-25 gals. Air: 5-10 gals.	See Precautions

Additional Precautions, Restrictions and Directions

- Do not make more than 2 applications per year.
- Do not harvest until at least 4 days after application.
- Do not apply when weather conditions favor drift from treated areas.
- Do not apply by ground equipment within 25 ft., or by air within 75 ft. of lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds.
- Use only on fields in production of alfalfa seed.
- Do not use on fields producing alfalfa for livestock feed.
- Do not use any portion of the treated field for human or animal feed, including seed, seed screenings, hay forage, or stubble.
- Do not cut current year's treated alfalfa seed crop for hay or forage.
- Do not graze current year's treated alfalfa seed crops.
- Do not use treated alfalfa seed for sprouting. Tag all alfalfa seed treated with PARAQUAT CONCENTRATE/Reglone tank mix at processing plants with, "NOT FOR HUMAN CONSUMPTION".
- The grower is responsible for notifying the processing plants of any seed crop treated with PARAQUAT CONCENTRATE/Reglone tank mix.
- Remove ALL PARAQUAT CONCENTRATE/Reglone treated alfalfa seed screenings from the market because all screening from alfalfa seed processing are prohibited from feed channels.

2/26/17

Table 2. ALFALFA: New Seedlings - Suppression and control of broad leaf weeds and grasses in new alfalfa seedlings grown for hay (California only).

For Control of:	Rate/Acre*	
	For Suppression	For Control
Annual Bluegrass	-	10.7-21.3 fl. oz.
Chickweed	-	10.7-21.3 fl. oz.
Fiddleneck (6 inches tall or less)	5.4-10.7 fl. oz.	21.3 fl. oz.
Red Maids (6 inches tall or less)	-	10.7-21.3 fl.oz.
Shepherdspurse	10.7-21.3 fl. oz.	-
Spikeweed (4 inches tall or less)	5.4 fl. oz.	10.7-16.0 fl.oz.
Volunteer Small Grain (8 inches, tall or less)	5.4-10.7 fl. oz.	21.3 fl.oz.

*** 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
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Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
ALMONDS	Directed Spray	0.8-2.7 pts.	Ground: 10 gals.	--
Additional Precautions/ Restrictions, and Directions				
<ul style="list-style-type: none"> • 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. 				
ARTICHOK E (GLOBE)	Directed Spray	1.7-2.7 pts.	Ground: 20-100 gals.	1
Additional Precautions/ Restrictions, and Directions				
<ul style="list-style-type: none"> • 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	Preplant or Preemergence Broadcast or Banded Over-Row	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions/ Restrictions, and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Application should be made prior to emergence of the crop. • Emerged asparagus at time of application will be killed. 				

230267

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
ASPARAGUS Preemergence to established plantings at least 2 years old	Broadcast or Banded Over-Row	1.7-2.7 pts.	Ground: 10 gals.	6
<p>Additional Precautions/ Restrictions, and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Application should be made prior to emergence of the crop or after last harvest. • Emerged asparagus at time of application will be killed. 				
<p>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 Kidney beans Lablab beans Moth beans Mung beans Navy beans Pinto beans Rice beans Tepary beans Urd beans Guar PEAS, DRY Not for use in California Blackeyed peas Chickpeas Cowpeas</p>	Harvest-Aid	0.8-1.3 pts.	Ground: 20 gals. Air: 5 gals.	7

24067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
Crowder peas Southern peas Catjang				
<p>Additional Precautions/ Restrictions, and Directions</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Add nonionic spreader at 1 qt./100 gals. of spray mix. • Use a single application of the higher rate for vining type beans or bush type with lush growth. • May also be applied as a split application and improve vine coverage. However do not make more than 2 applications per year or exceed a total of 1:3 pints per acre. • 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. • Do not apply when weather conditions favor spray drift. To reduce drift, a drift control agent may be included. • Not registered for use in dry beans and dry peas in California. 				
BERRIES Blackberry Blueberry Boysenberry Currant Elderberry Gooseberry Huckleberry Loganberry Raspberry	Postemergence Directed Spray	1.3-2.7 pts.	Ground: 50 gals.	-
<p>Additional Precautions/ Restrictions, and Directions</p> <ul style="list-style-type: none"> • 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	1.3-2.7 pts.	Ground: 50-200 gals.	1
<p>Additional Precautions/ Restrictions, and Directions</p> <ul style="list-style-type: none"> • Do not make more than 5 applications per year. • Apply when weeds are succulent and growth is from 1-6". • 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. 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CASSAVAS , TANIERS & YAMS (Puerto Rico only)	Shielded Post Directed Spray	1.3 pts.	Ground: 50 gals.	90
Additional Precautions/ Restrictions, and Directions <ul style="list-style-type: none"> • 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 1-6" • 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. 				

Product 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 PARAQUAT CONCENTRATE. 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 PARAQUAT CONCENTRATE, cut wheat as high as possible to avoid cutting weeds too short, and allow the weeds to grow at least 2-3" 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 5-60 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 30-40 psi.
 - Apply only in a tank mix with atrazine at a minimum of 0.5 lb. a.i./acre.
 - By air: apply in 5-10 gallons of spray mix per acre.

2600f b7

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CHEMICAL FALLOW Continuous Wheat (2-3 month recropping interval)	Broadcast	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2.0 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	—

Additional Precautions, Restrictions and Directions

- Do not make more than 3 applications per year.
- Apply at least 45 days before seeding.
- For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of PARAQUAT CONCENTRATE per acre with a Photosynthetic Inhibitor Herbicide.
- Refer to the section "Product Information for Chemical Fallow".

CHEMICAL FALLOW Wheat-Fallow- Wheat Rotations (Fall applied after harvest; seeded 12-14 months later)	Broadcast	Weeds 1-3": 1.3- 1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	—
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Additional Precautions, Restrictions and Directions

- Do not make more than 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, Marksman® Herbicide, or Command® 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 refer to the section "Product Information for Chemical Fallow".

270617

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CHEMICAL FALLOW Wheat-Fallow- Wheat Rotations (Spring applied: seeded 3-5 months later)	Broadcast	Weeds 1-3": 1.3- 1.7 pts. Weeds 3-6": 1.7- 2 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	-
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • To conserve moisture, application should be made March 1 to April 15, prior to spring rains. • Even though moisture loss is greater when applications are made after the boot stage, volunteer wheat is easier to control after this stage. • For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of PARAQUAT CONCENTRATE per acre with a Photosynthetic Inhibitor Herbicide. • Refer to the section "Product Information for Chemical Fallow". • For burn down and residual control of grass and broadleaf weeds, tank mix with metribuzin, (Sencor 75DF/Lexone). • Always refer to the label for metribuzin (Sencor 75DF/Lexone) for rates of applications, directions for use, limitations, and restrictions. 				
CHEMICAL FALLOW Wheat-Annual Crop ₁ -Wheat Rotations (Fall applied in wheat stubble)	Broadcast	Weeds 1 - 3": 1.3- 1.7 pts. Weeds 3-6": 1.7- 2 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	-
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • 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. • Make applications after wheat harvest and before weeds produce seed. • If grasses such as foxtails or banyardgrass recover, respray before seed production. • Applications made late August to November help control volunteer wheat and downy brome. • Refer to the section "Product Information for Chemical Fallow". 				

280967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CHEMICAL FALLOW Wheat-Annual Crop-Wheat Rotations (Spring applied prior to planting an annual crop ₁)	Broadcast	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	-

Additional Precautions, Restrictions and Directions

- Do not make more than 3 applications per year.
- 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.
- For volunteer wheat or downy brome control in spring, use at least 1.3 pts. of PARAQUAT CONCENTRATE per acre with a Photosynthetic Inhibitor Herbicide.
- Refer to the section "Product Information for Chemical Fallow".
- Refer to the Atrazine label for directions pertaining to soil pH and recropping intervals.

₁Approved Annual Crops are grain sorghum, corn, wheat, or proso millet.

290967

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CLOVER AND OTHER LEGUMES Including velvetbean, lespedeza, lupine, sainfoin, trefoil, vetch, crown vetch, and milk vetch. Dormant Season On established plantings: Region A - See table at end of Alfalfa section.	For desiccation of weeds, including London rocket, sowthistle, rescue brome, wild oats, chickweed, ryegrass, bluegrass, cheatgrass, dogfennel, tansymustard, henbit, downy brome, and other winter annuals, and suppression of perennial weeds. California Use for desiccation of weeds including bluegrass, ryegrass, shepherdspurse, chickweed, tansy mustard, foxtail, sowthistle and groundsel.	Broadcast	1.3-2.1 pts.	Ground: 10 gals, -Air: 5 gals.	60
On established plantings: Region B-See table at end of Alfalfa section		Broadcast	0.7-1.3pts.	Ground: 10 gals. Air: 5 gals.	60
On fall- seeded newly established stands less than 1-year-old : Region A - See table at end of Alfalfa section.		Broadcast	0.7-1.3pts.	Ground: 10 gals. Air: 5 gals.	60
On fall-seeded, newly established stands less than 1-year-old: Region B – See table at end of Alfalfa section.		Broadcast	0.5-0.8 pts.	Ground: 10 gals. Air: 5 gals.	60

30067

Crop	Weeds	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
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Additional Precautions, Restrictions and Directions

- Do not make more than 1 application per year.
 - Applications should be made during late fall or winter months after the last cutting and before first spring cutting
 - Do not apply if regrowth after grazing or cutting is more than 2"
 - Do not harvest within 60 days of application.
 - 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.
 - Discoloration and temporary stunting will occur in clover or other legumes foliage present at the time of application.
 - 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 proportionate to the loss of weed weight.
- In California: • If ryegrass, shepherdspurse, sowthistle or groundsel are present, use higher rate.

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CORN FIELD CORN POPCORN SWEET CORN SEED CORN (Used alone)	Preplant or Preemergence Broadcast or Banded Over Row	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.	-

Additional Precautions, Restrictions and Directions

- 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.

3/10/07

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
CORN Tank mixes for no-till/reduced till	Preplant or Preemergence Broadcast or Banded Over Row	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.*	-
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> Do not make more than 3 applications per year. Applications should be made as broadcast sprays before, during or after planting, but before crop emergence. PARAQUAT CONCENTRATE may be tank mixed with the following herbicides for improved burndown or residual control: 2,4-D Ester (Low Volatile) Harness®, Harness® Extra, AAtrex®/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, Surpass® 100, (Preplant only) Topnotch® PARAQUAT CONCENTRATE 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. <p>* Always refer to respective product label(s) to confirm if these products can be applied by air.</p>				
FIELD CORN, POPCORN, SWEET CORN, SEED CORN	Postemergence Directed Spray (including Hooded or Shielded)	0.7-1.3 pts.	Ground: 10 gals.	-
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> Do not make more than 3 applications per year. Applications should be made when weeds are actively growing. Use a higher rate on larger or hard to control weeds. Weeds 6" or taller may not be controlled. Severe damage and/or complete kill can occur if spray contacts corn plants <p>For Hooded Or Shielded Sprayers:</p> <ul style="list-style-type: none"> 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. Apply by directing spray between the rows and using hooded or shielded sprayers to prevent spray contact with crop plants. <p>For Directed Spray Without Hooded Or Shielded Sprayers: Corn height is measure from soil surface to top of whorl.</p> <ul style="list-style-type: none"> Apply when corn is at least 10" tall with nozzles arranged to spray no higher than the lower 3" of corn stalks. Corn plants shorter than 10" may be injured and not recover. For corn more than 20" tall: Arrange the nozzles to spray no higher than the lower 1/3 of the corn stalks. Injury to corn foliage will occur if sprayed. However, corn will recover and develop normally. 				

320967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
FIELD CORN, POPCORN, SEED CORN	Harvest Aid Broadcast	0.8-1.3 pts.	Ground: 20 gals. Air: 5 gals.	7
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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 nonionic 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)	Postemergence Directed Spray USDA Witchweed Eradication Program	1.3 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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	Postemergence Directed Spray USDA Witchweed Eradication Program	5.4 fl. oz. +0.5 lb. 2,4-D Amine AE	Ground: 10 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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 respective product label(s) for rates of applications, directions for use, limitations, and restrictions. 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
COTTON (Used alone)	Preplant or Preemergence	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply prior to during or after planting but before crop emergence. <p>For fallow bed treatment, beds should be preformed to permit maximum weed and grass emergence prior to treatment.</p> <ul style="list-style-type: none"> • Seeding should be done with a minimum of soil disturbance. 				
COTTON (California only; Used alone)	Preplant	5.4-10.7 fl. oz.	Ground: 10 gals. Air: 5 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • For control of volunteer barley in preformed seedbeds. 				
COTTON Goal® Herbicide Tank Mix	Preplant or Fallow Bed Broadcast	1.7-2.7 pts.	Ground: or Air: - 10 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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	Preplant or Preemergence	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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, PARAQUAT CONCENTRATE may be tank mixed with the following herbicides: Caparol® Herbicide, Cotoran® Herbicide, Cotton-Pro® Herbicide, Diurone®, Dual MAGNUM®, Harmony Extra (Preplant Only), Meturon® Herbicide, MSMA Prowl®, Zorial® Herbicide • When tank mixing with Cotoran DF® or Meturon DF®, follow mixing instructions carefully, maintain constant agitation, and see Order of Tank Mixing section in respective labels. • When tank mixing with any of the herbicides listed above, always refer to respective product label(s) for weeds controlled, rates of applications, directions for use, limitations, and restrictions. 				

340967

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 pts./A 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. PARAQUAT CONCENTRATE 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.

35 of 67

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
SOUTHERN COTTON Harvest aid for boll opening and defoliation (Tank mix with phosphate and chlorate defoliant).	Broadcast	5.4 fl. oz. + 1 pt. phosphate or 1 gal. chlorate	Ground: 10 gals. Air: 5 gals.	7
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 4 applications per year. • Development of immature bolls will be inhibited. • Apply when 80% or more of the bolls are open and the remaining bolls to be harvested are mature. • Always refer to tank mix product label(s) for rates of applications, directions for use, limitations, and restrictions. 				
SOUTHERN COTTON Additional tank mixes for boll opening and defoliation	Broadcast	2.1-3.3 fl.oz.	Ground: 10 gals. Air: 5 gals.	-
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 4 applications per year. • PARAQUAT CONCENTRATE may be tank mixed with the following products to aid in defoliation and opening of mature bolls: Accelerate®, Defoliant Def®, Defoliant Dropp®, Defoliant Ethephon Plant Growth Regulator Folex®, Defoliant Harvade®, 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. 				

360967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
SOUTHERN COTTON Post Defoliation - To aid in opening of mature bolls and to desiccate green weeds.	Broadcast	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	3
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 4 applications per year. • If weed infestation is heavy or dense, use higher 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 PARAQUAT CONCENTRATE approximately 3-7 days to minimize leaf sticking. 				
WESTERN COTTON Harvest aid for boll opening and early defoliation	Broadcast	3.7-5.4 fl. oz. + phosphate or sodium chlorate; and/ or other compatible harvest aid products.	Ground: 10 gals. Air: 5 gals.	7
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 4 applications, per year. • On rank cotton, use higher rate. • Do not use more than 5.4 fl. oz of PARAQUAT CONCENTRATE 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. 				

370967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
WESTERN COTTON Harvest aid for boll opening and mid-to late defoliation	Broadcast	5.4-10.7 fl.oz. alone or tank mix with sodium chlorate or phosphate defoliation and/ or other compatible harvest aid products.	-	3 (Alone)
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 4 applications per year. • Use the 10.7 fl. oz. rate of PARAQUAT CONCENTRATE 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	2.1-7.5 fl.oz.	Ground: 10 gals. Air: 5 gals.	3
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • 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. • PARAQUAT CONCENTRATE may be applied alone or tank mixed with the following cotton harvest aids: Accelerate Defoliant®, Def Defoliant®, Dropp Defoliant®, Ethephon® Plant Growth Regulator, Folex Defoliant®, Harvade® Harvest Growth Regulator Prep™ PGR • May be applied as a split application. Do not exceed a total of 1.3 pts./A. • To avoid leaf sticking, apply PARAQUAT CONCENTRATE as a desiccant approximately 3-7 days after defoliant or a conditioning application and 7-14 days before harvest. • Cooler temperatures may cause a longer waiting period between application of PARQUAT CONCENTRATE 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. 				

38067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
COTTON Late season desiccation	Broadcast	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	3
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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 PARAQUAT CONCENTRATE approximately 3-7 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	0.75-1.25 pts.	Ground: 10 gals. Air: 5 gals.	3
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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)	Preemergence	1.7-2.7 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not exceed two applications per year. 				

39067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
FALLOW LAND Prior to planting of any crops.	Preplant Broadcast to Fallow Land	1.0-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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, chickweed, henbit, downy brome, ryegrass, cheatgrass, dog fennel, tansy mustard, London rocket, sowthistle, rescue brome, wild oats, volunteer cereals and other winter annuals and for the suppression of perennial weeds or sedges. • For weeds approaching the maximum size of 6", the higher 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)	Preplant, at Planting, or Preemergence	1.3-2.7 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Prepare the seedbeds and allow weeds to germinate. • Apply PARAQUAT CONCENTRATE when weeds are at the 3-5 leaf stage. • Applications may be repeated as necessary (but only up to 3 applications per year) prior to grass emergence. • Do not graze treated areas or use the seed or straw from treated areas for animal feed or bedding. 				
GUAR (Preharvest desiccation)	Preharvest	1.3 pts.	Ground: 10 gals.	4
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
GUAVA	Directed Spray	2.5 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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 PARAQUAT CONCENTRATE 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	0.8-1.3 pts.	Ground: 20 gals. Air: 7 gals.	7
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Add nonionic 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./A. 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. 				

4/26/07

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
MINT (Peppermint, Spearmint)	Dormant Season	1.3-2.0 pts.	Ground: 10 gals. Air 5 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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./A 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	Preplant/ Preemergence	1.7-2.7 pts.	Ground: 10 gals.	60 200 (CA only)
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 1 application per year. • For heavy weed infestations or wild oat control use the higher rate. Apply only one application per season at the 2.7 pts./A dosage. • Allow maximum weed and grass emergence prior to treatment but apply prior to crop emergence. • Apply a maximum of 2.7 pts./A per season. 				
PASSION FRUIT	Directed Spray	2.5 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 5 applications per year. • If bark is still green at application time, use a shield or wrap vine. • Pick all fruit off the ground prior to application if application is to be made during harvest season. • Do not allow animals to graze on treated areas. • It may be necessary to retreat or spot treat. 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
PEANUTS	Broadcast At Ground Crack Postemergence	5.4-10.8 fl. oz.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • To control or suppress small (1-6") 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, PARAQUAT CONCENTRATE can be tank mixed with Pursuit® 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 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® Herbicide Tank Mix	Broadcast At Ground Crack Postemergence	5.4-10.8 fl. oz.	Ground: 10 gals.	--
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Tank mix PARAQUAT CONCENTRATE with Basagran at 1 pt./A. for improved control of weeds such as cocklebur, bristly starbur, smartweed and prickly sida. • 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. • 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. • Always refer to the Basagran label for weeds controlled, rates of applications, directions for use, limitations, and restrictions. • 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. • During prolonged periods of drought or unseasonably cold weather do not apply this tank mix as unsatisfactory weed control may result. • Do not apply by air. 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
PEANUTS Butyrac® Herbicide or Butoxone® 200 Herbicide Tank Mix	Broadcast Postemergence	5.4-10.8 fl. oz.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 2 applications per year. • For improved control of weeds such as cocklebur, sicklepod and morningglory, tank mix PARAQUAT CONCENTRATE with 8-16 oz. (0.125-0.25 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
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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	1.3-2.7 pts.	Ground: 10 gals.	20
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not exceed 3 applications per season. • More mature weeds may require retreatment. 				
POTATO	Preplant or Preemergence Broadcast	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply up to ground cracking stage, before potatoes have emerged. 				
POTATO (California, Washington, Oregon, Idaho only; used alone)	Preplant Broadcast	0.4-0.7 pts.	Ground: 10gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • For control of volunteer barley in preformed seedbeds. 				

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Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
<p>POTATO Fresh Market Only Preharvest vine killing and weed desiccation.</p> <p>For Use Only in the states of: Colorado, 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</p>	Broadcast	0.7-1.3pts.	Ground: 20 gals.	3
<p>Additional Precautions, Restrictions and Directions</p> <p>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.)</p> <ul style="list-style-type: none"> • 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 use to desiccate the vines of seed potatoes as seed pieces may fail to germinate and grow normally. • DO NOT pasture livestock in treated potato fields. • DO NOT exceed 2.6 pts./A per season. • Begin application when leaves begin to turn yellow. • Immature potato foliage is tolerant to PARAQUAT CONCENTRATE. However, desiccation will not be complete under this condition. • Use 1.3 pts./A rate where quick vine kill is desired. • For dense vine growth, use 2 applications of 0.6 pt/ A. Split applications must be applied a minimum of five days apart. 				

450967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
RICE	Preplant or Preemergence Broadcast	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2.0 pts. Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.	-
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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. • PARAQUAT CONCENTRATE 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	Preplant or Preemergence Broadcast or Banded Over	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply before, during and after planting but before crop emergence. 				
SAFFLOWER (California only)	Preplant Broadcast	0.7 pt.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • For control of volunteer barley in preformed seedbeds. 				
SMALL GRAINS (Barley, wheat)	Preplant or Preemergence	Weeds 1-3": 1.3- 1.7 pts Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 5 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. 				

400967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
SMALL GRAINS (Wheat Only) Hoelon® 3EC TankMix	Preplant or Preemergence	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • A tank mix with Hoelon 3EC will improve grass control. • Apply when weeds are actively growing and 1-6" in height. Weeds 6 inches or taller may not be controlled. • Do not apply this tank mix to barley as crop injury may result. • Always refer to the Hoelon 3EC label for weeds controlled, rates of applications, directions for use, limitations, and restrictions. 				
SORGHUM (Grain)	Preplant/ Preemergence Broadcast or Band	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7	Ground: 10 gals. Air: 5 gals.	48 (grain) 20 (forage)
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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	Preplant or Preemergence	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.		48 (grain) 20 (forage)
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • PARAQUAT CONCENTRATE 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. 				

47067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
SORGHUM (Grain) Harmony® Extra Herbicide Tank Mix	Preplant	1.3-2.5 pts.	Ground: 10 gals.	48 (grain) 20 (forage)
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • For Improved weed control, PARAQUAT CONCENTRATE 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. 				

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Crop	PARAQUAT CONCENTRATE		Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
	Use Pattern	Rate Per Acre		
SORGHUM (Grain)	Postemergence Directed (Including Hooded or Shielded)	0.7-1.3 pts.	Ground: 10 gals.	48 (grain) 20 (forage)
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Apply when weeds are actively growing. • Use higher rate on larger or hard to control weeds. Weeds 6" or taller may not be controlled. • Severe damage and/or complete kill can occur if spray contacts sorghum plants. • Do not exceed 2 postemergence-directed applications or exceed a total of 5.3 pts. PARAQUAT CONCENTRATE per season. <p>HOODED OR SHIELDED SPRAYERS</p> <ul style="list-style-type: none"> • To avoid excessive crop phytotoxicity, use a hooded or shielded sprayer with skids or wheels on the spray boom to maintain spray height. • Apply by directing spray between the rows and by using hooded or shielded sprayers to prevent spray contact with crop plants. <p>DIRECTED SPRAY WITHOUT HOODED OR SHIELDED SPRAYERS</p> <ul style="list-style-type: none"> • Apply when sorghum is at least 12" tall when naturally standing. • Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift. • 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. • Some crop injury will occur. The degree of injury is related to the precision of application and spraying conditions. 				
SOYBEAN S	Preplant or Preemergence	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Do not exceed a total of 4.0 pts. of PARAQUAT CONCENTRATE per season. • Apply as a broadcast spray before, during or after planting, but before crop emergence. • PARAQUAT CONCENTRATE may be tank mixed with the following herbicides for improved burndown or residual control: 2,4-DB Lorox, Canopy Dual, MAGNUM, Pursuit Herbicide, Goal, Harmony Extra, Scepter Herbicide {Preplant Only} Sencor Herbicide, Lasso, Surflan® 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 PARAQUAT CONCENTRATE. 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 postemergence 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). 				

49 of 67

Crop	PARAQUAT CONCENTRATE		Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
	Use Pattern	Rate Per Acre		
SOYBEAN S 2,4-D ester (Low Volatile) Tank Mix	Preplant or Preemergence	Weeds 1-3": 1.3-1.7 pts. Weeds 3-6": 1.7-2 pts. Weeds 6": 2-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply 2,4-D ester (Low Volatile) at 0.35-0.475 lbs. a.i./A at least 7 days prior to planting. • Apply 2,4-D ester (Low Volatile) at 0.475-0.95 lbs. a.i./A at least 30 days prior to planting. • 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. <ul style="list-style-type: none"> • Do not use amine formulation as PARAQUAT CONCENTRATE activity may be reduced. • May be tank mixed with residual herbicides listed above. • Always refer to the 2,4-D ester (Low Volatile) label for weeds controlled, rates of application, directions for use, limitations, and restrictions. 				

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Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
SOYBEANS	Postemergence Directed Spray (Includes Hooded or Shielded)	3.0-5.3 fl. oz.	Ground: 10 gals.	
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply when weeds are actively growing. • Use the lower rate of PARAQUAT CONCENTRATE for control of seedling johnsongrass, crabgrass, goosegrass, Brachiaria, Texas millet and pigweed less than 2" tall. • For control of 2-4" red rice, Brachiaria, barnyard grass, crabgrass, goosegrass, seedling johnsongrass, giant foxtail, and fall panicum, use 5.3 fl. oz. of PARAQUAT CONCENTRATE. • Use 5.3 fl. oz. of PARAQUAT CONCENTRATE for control of 2-3" sicklepod, purslane, pigweed, cutleaf ground cherry, and common ragweed. • Apply PARAQUAT CONCENTRATE at 5.3 fl. oz./A plus 0.2 lb. active ingredient per acre of a 2,4-D formulation for control of 2-4" grasses in mixture with common cocklebur, morningglory, and red rice. Always refer to the 2,4-D label for weeds controlled, rates of applications, directions for use, limitations, and restrictions. • Do not graze or harvest for forage or hay. • If necessary, make a second and final application 7-14 days later. <p>HOODED OR SHIELDED SPRAYERS</p> <ul style="list-style-type: none"> • Apply by directing spray between the rows and using hooded or shielded sprayers to prevent spray contact with crop plants. • Use higher rate on larger (less than 6") or hard to control weeds. Weeds 6" or taller may not be controlled. • Severe damage and/or complete kill can occur if spray intentionally or accidentally (including drift of fine droplets) contacts the plants. <p>DIRECTED SPRAY WITHOUT HOODED OR SHIELDED SPRAYERS</p> <ul style="list-style-type: none"> • Do not treat on soybeans that are less than 8" tall. • 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. • Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift. • Some crop injury will occur. The degree of injury is dependent upon the precision of application and spraying conditions. 				

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
SOYBEANS	Harvest Aid	5.4-10.7 fl. oz	Ground: 20 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> •Do not make more than 3 applications per year. •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, 1/2 of leaves have dropped, and remaining leaves are yellowing. •Injury will occur on immature soybeans. •Mature cocklebur, especially drought-stressed plants are tolerant to PARAQUAT CONCENTRATE and desiccation will not be complete. Always use the higher rate when treating cocklebur. •Do not apply within 15 days of harvest. •Do not graze or harvest for forage or hay. 				
STRAWBERRIE S	Postemergence Directed Spray	1.3 pts.	Ground: 20 gals.	21
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> •Do not make more than 3 applications per year. • Direct spray between the rows, using shields to prevent spray contact with crop plants. •Do not allow spray to contact strawberry plants as injury or excessive residues may result. •Do not apply more than 3 times per season. •Do not graze livestock in treated areas. 				
SUGAR BEETS	Preplant or Preemergence	1.3-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • 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. 				

Crop	Use Pattern	PARAQUAT CONCENT- RATE Rate Per Acre	Minim-u m Total Spray Per Acre	Grazing or Preharves t Interval (Days)	Additional Precautions Restrictions and Directions
SUGARC- ANE	Postemergen- ce Directed Spray (includes Hooded or Shielded)				<ul style="list-style-type: none"> • 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 2-6" high. • Do not graze treated areas or feed treated forage to livestock.
—Florida—		1.3 pts.	Ground: 50 gals		<ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Optimum results can be obtained by applying in early spring (March-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.		<ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Do not apply after cane rows have closed in.
—Louisia- na—		0.7-2.0 pts.	Ground: 20 gals.	30	<ul style="list-style-type: none"> • 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.

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Crop	Use Pattern	PARAQUAT CONCENT- RATE Rate Per Acre	Minimu- m Total Spray Per Acre	Grazing or Preharve- st Interval (Days)	Additional Precautions Restrictions and Directions
—Florida & Texas—	Harvest Aid	0.4-0.7 pts.	Air: 5 gals.	—	<ul style="list-style-type: none"> • Do not make more than 1 application per year. • Under cool, cloudy weather conditions use higher rate. • Apply 3-14 days before burning and harvest.
SUNFLO- WER	Preplant or Preemergence Broadcast or Banded Over Row	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.		<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • Apply before, during, or after planting but before crop emergence.
SUNFLO- WER	Preharvest Desiccation Broadcast	0.8-1.3 pts.	Ground: 10 gals. Air: 5 gals.	7	<ul style="list-style-type: none"> • 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, DRYLAN D (Hawaii Only)	Postemergenc e Directed Spray	1.3-2.1 pts.	Ground: 10 gals.	180	<ul style="list-style-type: none"> • 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 1-4" high. • Weeds emerging after the application will not be controlled. • A single re-treatment may be made; however, do not harvest dryland taro within 6 months of the last application.

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Crop	Use Pattern	PARAQUAT CONCENT- RATE Rate Per Acre	Minimu- m Total Spray Per Acre	Grazing or Preharve- st Interval (Days)	Additional Precautions Restrictions and Directions
TREE PLANTAT- ION ESTABLI- SHMENT Deciduous and Conifers	Preplant Broadcast	1.3-2.7 pts.	Ground: 20 gals.		<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • To allow maxim 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 PARAQUAT CONCENTRATE 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./A as weed control will be reduced.

55067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
TREES AND VINES Orchards, Vineyards Windbreak, Shade & Ornamental Trees: Acerola, Apples Apricots, Avocados Bananas, Beechnut Brazil nut, Butternut Calamondjn, Cashew Cherries, Chestnut Chinquapin, Citrus citron, Coffee, Figs Filberts, Grapefruit Grapes, Hickory nut Kiwi fruit, Kumquat Lemon, Lime Macadamia nuts, Mandarin, 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.	Directed Spray	1.7-2.7pts	Ground: 10 gals.	Apricots 28 Cherries 28 Figs 13 Kiwi Fruit 14 Nectarines 28 Olives 13 Peaches 14 Pistachios 7 Plums 28

Additional Precautions, Restrictions and 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.
- Do not allow spray to make contact with green stems (except suckers), fruit or foliage.
- Use the shield or wrap plant when spraying around young trees or vines.
- Do not graze treated areas.
- Do not feed covered crops grown in treated areas to livestock.
- Do not apply when figs, nuts or olives to be harvested are on the ground.
- For apricots - Do not harvest within 28 days after application and do not exceed 3 postemergence directed applications per season.
- For cherries - Do not harvest within 28 days after application and do not exceed 3 postemergence directed applications per season.
- For figs - Do not harvest within 13 days after application and do not exceed 5 postemergence directed applications per season.
- For grapes - Treat when sucker growth is no more than 8" long. Late season applications to weeds should be made to avoid contact with desirable foliage.
- For kiwi fruit - Do not treat more than 3 times per year.
- For mature woody weeds, perennial weeds, late germinating weeds and green suckers, retreatment or spot treatment may be necessary.
- For nectarines - Do not harvest within 28 days after application and do not exceed 3 postemergence directed applications per season.
- For olives - Do not harvest within 13 days after application and do not exceed 4 postemergence directed applications per season
- For peaches -Do not harvest within 14 days after application and do not exceed 3 postemergence directed applications per season.
- For pistachios - Do not exceed 2 applications after shells split.
- For plums - Do not harvest within 28 days after application and do not exceed 3 postemergence directed applications per season.

57 of 67

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
TREES AND VINES Tank Mixes	Directed Spray	1.7-2.7 pts.	Ground: 10 gals.	Always refer to other Tank Mix labels
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> 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. PARAQUAT CONCENTRATE may be tank mixed with the following herbicides: Devrinol® Herbicide, Goal®, Karmex®, Krovar® Herbicides, Princep®, Sinbar®, Solicam® Herbicide, Surflan® Always refer to other herbicide labels for weeds controlled, rates of applications, directions for use, limitations, and restrictions. 				
TYFON (New Hampshire only)	Preplant Preemergence	1.7-2.7 pts.	Ground: 10 gals.	—
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> 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. 				

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Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
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, Pepper, Pumpkin, Squash, Sweet Corn, Tomatillo Turnips, Tomatoes, Watermelons	Preplant Preemergence	1.3-2.7 pts.	Ground: 10 gals. Air: 5 gals.	-
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • 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. • PARAQUAT CONCENTRATE can be used in fallow bed/stale seedbed for weed control alone or tank mixed with Goal®. 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. 				

59 of 67

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
VEGETABLES Eggplant Peppers Tomatoes	Directed Spray	1.3 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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	1.6-2.5 pts.	Ground: 40-120 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Apply in 40-120 gallons of water per acre (0.62-0.93 lb. a.i./A). • 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. • PARAQUAT CONCENTRATE 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	0.4-0.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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. 				

60067

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
VEGETABLES Rhubarb	Dormant	1.7-2.7 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none">• Do not exceed 2 applications per year.• Apply during dormant season before buds in crown begin to grow.				

RESIN SOAKING

Pines including Loblolly, Shortleaf, Longleaf, Slash, Virginia, Pond, Pitch, 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 PARAQUAT CONCENTRATE 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 PARAQUAT CONCENTRATE treatments 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 water-diluted PARAQUAT CONCENTRATE 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 1-2 ft. from ground level. Do not exceed 1/3 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 (about 1.7-5.0 ml) PARAQUAT CONCENTRATE solution (1-5% 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% PARAQUAT CONCENTRATE solution 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: There should be at least a 6-month interval between application of PARAQUAT CONCENTRATE and tree harvest. However it is preferable the interval is from 12-24 months, even though intervals of over 6 months may not be possible under conditions of drought or serious pine beetle attacks possibly making early harvest necessary.

With this treatment, there is a potential for promoting beetle attack or causing premature death of the tree. At high dosage rates, desiccation of the xylem tissue, rather than the desired resin soaking, may occur.

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

62067

Dilution Table for PARAQUAT CONCENTRATE (3.0 lbs. cation per gallon)	
Concentration of Cation Desired (wt./wt. basis)	Add the Following No. Gal. of Water to 2/3 Gallon of PARAQUAT CONCENTRATE
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

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
CONSERVATION RESERVE, FEDERAL SET-ASIDE, CONSERVATION COMPLIANCE PROGRAMS (For use in compliance with the Federal Conservation Reserve Program or Federal set-aside programs)	Broadcast	1.7-2.7 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 3 applications per year. • PARAQUAT CONCENTRATE 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- 2.7 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • 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. 				

030967

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Pre harvest Interval (Days)
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	0.7-1.3 pts.	Ground: 10 gals. Air: 5 gals.	See specific geographic directions
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 3 applications per year. West of Cascade and Sierra Nevada Mountains <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Use the 1.3 pts rate on vigorous or coarse sod species such as brome grass. • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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)	0.7-1.3 pts. followed by 0.7-1.3 pts.	Ground: 10 gals.	
Additional Precautions, Restrictions and Directions <ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Use split applications of 10-21 days apart if necessary. • Do not exceed 2.6 pts./A total in preparation for reseeding. • For spring plantings, the initial application of 0.7-1.3 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. 				

040667

Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
*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	
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • 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 PARAQUAT CONCENTRATE and 1/3 fl. oz. of a nonionic 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 PARAQUAT CONCENTRATE per acre per year. • Apply only to pastures with no more than 3" of height at time of treatment. • Tank mix with Grazon® P+D Specialty® herbicide at a rate of 1-2 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.	
<p>Additional Precautions, Restrictions and Directions</p> <ul style="list-style-type: none"> • 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 nonionic surfactant in a minimum of 5 gal spray solution. • Monitor juniper leaf moisture content. Maximum leaf moisture reduction generally occurs 3-4 weeks after PARAQUAT CONCENTRATE 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. 				

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Crop	Use Pattern	PARAQUAT CONCENTRATE Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)
*Native Pastures *Not for use in California	Broadcast	1.0-1.25 pts.	Ground: 10 gals. Air: 5 gals.	
Additional Precautions, Restrictions and Directions				
<ul style="list-style-type: none"> • Do not make more than 2 applications per year. • Apply PARAQUAT CONCENTRATE 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. PARAQUAT CONCENTRATE per year. • Apply only to pastures with no more than 3" of height at time of treatment. 				

Conversion Table PARAQUAT CONCENTRATE 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 (1/3)	0.12	24.2
5.52	0.35	0.13	23.2
10.00	0.63 (5/8)	0.23	12.8
11.00	0.69	0.26	11.6
11.20	0.70	0.26	11.4
12.00	0.75 (3/4)	0.28	10.7
16.00	1.00	0.38	8.0
20.00	1.25 (1 1/4)	0.47	6.4
20.80	1.30	0.49	6.2
24.00	1.50 (1 1/2)	0.56	5.3
28.00	1.75 (1 3/4)	0.66	4.6
32.00	2.00	0.75	4.0
40.00	2.50 (2 1/2)	0.94	3.2
43.20	2.70	1.00	3.0

66 of 67

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 Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) 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 ¼ 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. Pressure 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. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Sharda USA LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

67 of 67

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