

DIQUAT DIBROMIDE

GROUP

22

HERBICIDE



DIQUAT 4SL

TO PREVENT ACCIDENTAL POSIONING, NEVER PUT INTO FOOD, DRINK, OR OTHER CONTAINERS.
USE STRICTLY IN ACCORDANCE WITH ENTIRE LABEL.

Uses: Alfalfa (Seed Crop Only), Canola, Clover (Seed Crop Only), Potato, Small Fruits (Cantaloupes and Watermelons) as listed, Vegetable crops (Acorn Squash, Carrots, Cilantro, Cucumbers, Eggplant, Green Peppers, Peppers, Radishes, Spinach, Sugar Beets, Table Beets, Tomatoes and Turnips) as listed, Tree, Vine, Small Fruit, Vegetable Crops Non-Bearing, Commercial Greenhouses and Nurseries, Landscape, Industrial, Recreational, Commercial, Residential and Public Areas, Turf Renovation (all turf areas except Commercial Sod Farms), Dormant Established Turfgrass (Bermudagrass, Zoysiagrass), Non-food or Feed crop, and Aquatic.

ACTIVE INGREDIENT:	By WT.%
Diquat dibromide: 6,7-dihydrodipyrdo(1,2-a:2',1'-c) pyrazinedium dibromide*	37.3%
OTHER INGREDIENTS:	62.7%
TOTAL:	100.0%

Contains 2 lbs. diquat cation per gal. (3.70 lbs. diquat dibromide per gal.)

KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you **DO NOT** understand this label, find someone to explain it to you in detail.)

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal.

Manufactured For:
RedEagle International LLC
5143 S. Lakeland Drive Suite 4
Lakeland, FL 33813

EPA Reg. No. 85678-94

FIRST AID	
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • 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 to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • IMMEDIATELY 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. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN	
<p>To be effective, treatment for diquat poisoning must begin IMMEDIATELY. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.</p> <p>If in eyes, treat symptomatically. Symptoms may develop gradually. Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should be continued until healing is complete.</p>	
HOTLINE NUMBERS	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal), call: 1-800-222-1222. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: 1-800-424-9300.</p>	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING/AVISO

Causes skin irritation. Harmful if swallowed. Harmful if inhaled. **DO NOT** get on skin or on clothing. Avoid breathing (dust, vapor, or spray mist). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Human flagging is prohibited.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All handlers must wear a minimum of:

- Protective Eyewear (safety glasses or face shield)
- Long-sleeved shirt
- Long pants
- Shoes and socks

Mixers, Loaders, Applicators, and other handlers must wear:

- Coveralls over short-sleeved shirt and long pants.
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils. Chemical-resistant footwear plus socks.
- Protective eyewear.
- Chemical-resistant headgear for overhead exposure.
- Chemical-resistant apron when cleaning equipment, mixing, or loading.
- A dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

In addition, handlers supporting applications to aquatic areas for the control of submersed weeds via trailing or submersed hoses, during the time in which they are mixing and/or loading the diquat-containing material, must wear:

- Minimum of a NIOSH-approved particulate filtering facepiece respirator with any N*, R or P filter; OR
- NIOSH-approved elastomeric particulate respirator with any N*, R or P filter; OR
- NIOSH-approved powered air purifying respirator with HE filters

Alternatively, such mixer/loaders may use closed mixing/loading systems. A closed system is one which removes the pesticide from its original container and transfers the pesticide product through connecting hoses, pipes and couplings that are sufficiently tight to prevent exposure of handlers to the pesticide product, except for the negligible escape associated with normal operation of the system (40 CFR § 170.607(d)).

In addition, 1) mixer/loaders supporting applications to aquatic areas with mechanically-pressurized handguns AND 2) mixer/loader/applicators using mechanically-pressurized handguns to treat aquatic areas, during mixing and loading operations ONLY, must wear:

- minimum of a NIOSH-approved particulate filtering facepiece respirator with any N*, R or P filter; OR
- NIOSH-approved elastomeric particulate respirator with any N*, R or P filter; OR
- NIOSH-approved powered air purifying respirator with HE filters.

Alternatively, these aquatic handlers may use closed mixing/loading systems.

In addition, applicators using groundboom equipment for all crop uses must wear:

- minimum of a NIOSH-approved particulate filtering facepiece respirator with any N*, R or P filter; OR
- NIOSH-approved elastomeric particulate respirator with any N*, R or P filter; OR
- NIOSH-approved powered air purifying respirator with HE filters.

In addition, mixer/loaders supporting groundboom applications to canola and potato must wear:

- minimum of a NIOSH-approved particulate filtering facepiece respirator with any N*, R or P filter; OR
- NIOSH-approved elastomeric particulate respirator with any N*, R or P filter; OR
- NIOSH-approved powered air purifying respirator with HE filters.

In addition, mixer/loader/applicators using backpack sprayers for treatments to rights-of-way (e.g., utilities, railroads, and roadways), and landscaping and turf sites (e.g., lawns, athletic fields, and parks) must wear:

- minimum of a NIOSH-approved particulate filtering facepiece respirator with any N*, R or P filter; OR
- NIOSH-approved elastomeric particulate respirator with any N*, R or P filter; OR
- NIOSH-approved powered air purifying respirator with HE filters.

Respirator fit testing, medical qualification, and training

Using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134), employers must verify that any handler who uses a respirator is:

- Fit-tested and fit-checked,
- Trained, and
- Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner if their health status or respirator style or use-conditions change.

Upon request by local/state/federal/tribal enforcement personnel, employers must provide documentation demonstrating how they have complied with these requirements.

Exception: After **DIQUAT 4SL** has been diluted to 0.50% or less in water (i.e. the labeled rate for some spot applications); applicators for **AQUATIC SURFACE APPLICATIONS** must, at a minimum wear (Note – Mixers and Loaders for this application method must still wear the personal protective equipment (PPE) as described in the above section):

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- Protective eyewear

Exception: At a minimum, applicators for **DIQUAT 4SL** must wear (Note-Mixers and loaders for this application method must still wear the personal protective equipment (PPE) as described in the above section):

- Short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks

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 CONTROL STATEMENTS

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.

Mixers/loaders supporting all aerial applications must use closed mixing/loading systems that meet the requirements listed in the WPS for agricultural pesticides 40 CFR 170.607(d) (2)(i) &(ii) for inhalation protection.

Mixers, loaders, and applicators using closed systems who meet these requirements may wear: long-sleeved shirt and long pants; protective eyewear; waterproof gloves; shoes plus socks; and a chemical-resistant apron when mixing, loading or cleaning equipment. If handling tasks are performed from inside an enclosed cab or aircraft with enclosed cockpits that meet the requirements may wear: long-sleeved shirt, long pants, shoes, and socks for labeling-specified PPE. All labeling-specific PPE must be immediately available for use in an emergency. All applicable requirements as specified in 40 CFR 170.240(d)(4-6) must be followed.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Prolonged contact of the product with the skin may produce burns.
- 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 pesticide is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. For Terrestrial Uses, **DO NOT** apply directly to water, or to areas where the surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinseate. For Aquatic Uses **DO NOT** apply directly to water except as specified on this label.

Physical Chemical Hazards

DO NOT mix or allow to come in contact with any oxidizing and reducing agent. Hazardous chemical reaction may occur.

NON-TARGET ORGANISM ADVISORY: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

DIRECTIONS FOR USE

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

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

READ ENTIRE LABEL PRIOR TO USE. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

DO NOT apply this product through any type of irrigation system.

AGRICULTURAL USE REQUIREMENTS

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

DO NOT enter or allow worker entry into treat areas during this 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 over short-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils. Chemical-resistant footwear plus socks
- Protective Eyewear
- Chemical-resistant headgear for overhead exposure

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep all unprotected persons out of operating areas or vicinity where there may be drift. **DO NOT** allow people or pets to touch treated plants until spray has dried.

For aquatic uses, **DO NOT** enter treated areas while treatments are in progress.

For terrestrial uses, **DO NOT** allow entry of maintenance workers into treated areas, or allow contact with treated vegetation wet with spray, dew, or rain, without appropriate protective clothing until spray has dried.

PRODUCT USE INFORMATION

DIQUAT 4SL is non-volatile herbicide chemical for use as a pre-harvest aid to desiccate certain crops in order to facilitate harvesting or for use as a herbicide to control weeds in commercial greenhouses and nurseries; ornamental seed crops (flowers, bulbs, etc. – except in the state of California); industrial sites (lumberyards, tank farms, airports, manufacturing plants, storage yards, parking lots), recreation areas (parks, fairgrounds, race tracks, tennis courts, athletic fields, golf courses), commercial buildings and structures (apartment buildings, office buildings, condominiums, hotels, motels), residential areas (ornamental gardens, landscapes, lawns, driveways, sidewalks, fences lines, walkways, patios) and public areas (rights of way including railroad, highways, roads, dividers and median, parking lots) landscape, turf renovation (all turf areas except commercial sod farms); dormant established turfgrass (bermudagrass, zoysiagrass – non-food or feed crop); and aquatic areas. **DIQUAT 4SL** is also used as a herbicide to control weeds in non-crop areas and non-bearing crops. **DIQUAT 4SL** is a contact-type herbicide and requires actively growing green plant tissue to function. Thorough coverage of all green plant tissue is essential for effective control. **DIQUAT 4SL** is rapidly absorbed by green plant tissue and interacts with the photosynthetic process to produce compounds which destroy plant cells. Herbicide activity is usually quite rapid with effect visible in a few days.

PRECAUTIONS

Avoid spray drift to crops, ornamentals, and other desirable plants during application, as injury may result.

Application to muddy water may result in reduced control. Minimize creating muddy water during application.

Use of dirty or muddy water for **DIQUAT 4SL** dilution may result in reduced herbicidal activity.

Avoid applying under conditions of high wind, water flow, or wave action. Retreatment may be necessary to control large weeds or established weeds. Rinse all spray equipment thoroughly with water after use.

WEED RESISTANCE MANAGEMENT

DIQUAT 4SL contains diquat dibromide and is classified in the pyridinium chemical family as a Group 22 herbicide, which inhibits Photosystem I. Herbicide resistance is defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. In a plant, resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis. Any weed population may contain or develop plants that are naturally resistant to **DIQUAT 4SL** and other Group 22 herbicides. Weed species with acquired resistance to Group 22 herbicides may eventually dominate the weed population if Group 22 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **DIQUAT 4SL** or other Group 22 herbicides.

Within the USA specific biotypes of a number of species, including horseweed/marestail (*Conyza canadensis*), hairy fleabane (*Conyza bonariensis*), goosegrass (*Eleusine indica*) and American black nightshade (*Solanum americanum*) have become resistant to diquat dibromide.

To delay herbicide resistance, consider the below best practices for resistance management:

- Plant into weed-free fields and keep fields as weed-free as possible.
- To the extent possible, use a diversified approach toward weed management. Whenever possible, incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult to control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- To the extent possible, **DO NOT** allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. **DO NOT** use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.
- Monitor treated weed populations for loss of field efficacy.
- Scout field(s) before and after application.
- Report lack of performance to registrant or their representative.

Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species.

Contact your local RedEagle International LLC sales representative, extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

DIRECTION FOR USE

APPLICATION

Since **DIQUAT 4SL** is a contact-type herbicide, it is essential to obtain complete coverage of the target weed or crop to achieve effective results. Improper application technique and/or application to large, stressed, or mowed weeds will generally result in unacceptable control. Complete coverage is also essential for effective performance in harvest aid applications. See details below for additional information.

Nozzle Selection

The use of flat fan nozzles will result in the most effective application of **DIQUAT 4SL**. The use of nozzles other than flat fans may result in reduced performance due to inadequate coverage.

Spray Volume

Follow the minimum spray volumes listed for each use of **DIQUAT 4SL**. These are minimum volumes only and increase spray volumes as necessary to obtain complete coverage of the target weed or plant without runoff from the foliage. When spraying less than 20 gals. of spray carrier per acre, target weeds are not to be greater than 6 inches in height.

SPRAY ADJUVANTS

Always add one of the Following:

Nonionic Surfactant (NIS)

- Add a NIS containing 75% or greater surface active agent at 0.06-0.5% v/v (½– 4 pts. per 100 gals.) of the finished spray volume.

Other Adjuvants

- Adjuvants other than NIS may be used providing the product meets the following criteria:
 - o Contains only EPA exempt ingredients.
 - o Is compatible in mixture. Compatibility may be established through a jar test.
 - o Is supported locally for use with **DIQUAT 4SL** through proven field trials and through university and extension recommendations.

RATES

Follow the application rates listed with each use of **DIQUAT 4SL**. Use the higher level rates when weeds are large or dense. Also, use higher labeled rates for harvest aid when crop vegetation is dense.

Application Timing

DIQUAT 4SL is to be applied to emerged weeds when they are small. Weeds 1 inch to 6 inches in height are the easiest to control. When weeds have been grazed or mowed, thus removing much of the green foliage, allow the weeds to regrow to a height of 2-4 inches before spraying. For proper application timing of harvest aid applications, refer to each crop for specific directions for use.

Weeds emerging after application of **DIQUAT 4SL** will not be controlled or suppressed.

Rainfastness

Because **DIQUAT 4SL** is rapidly absorbed by green plant tissue, rain occurring 30 minutes after application will have no effect on the activity of **DIQUAT 4SL**.

Tank Mixes

For broader spectrum performance, **DIQUAT 4SL** may be applied in tank mix combination with other products registered for use on crops listed in this label unless tank mixing with diquat is prohibited by the manufacturer's label.

When tank mixing, use the listed use rate of **DIQUAT 4SL**. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use.

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

ENVIRONMENTAL CONDITIONS

DIQUAT 4SL is active over a wide range of environmental conditions. Cool weather (below 55°F) will slow the activity of **DIQUAT 4SL**, as will cloudy, overcast weather, but not affect performance.

In dry areas, dust stirred up by high winds or equipment tires can coat target surface and reduce **DIQUAT 4SL** activity. Avoid spraying **DIQUAT 4SL** in extremely dusty conditions.

MANDATORY SPRAY DRIFT

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply during temperature inversions.

Groundboom Applications:

- User must only apply with the release height specified by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Groundboom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

Adjust Nozzles - Follow nozzle manufacturers' specifications for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Groundboom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boom-less Ground Applications

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications

Take precautions to minimize spray drift.

COMMERCIAL GREENHOUSES AND NURSERIES

For weed control in commercial greenhouses (beneath benches), field grown and container stock, **DIQUAT 4SL** may be applied pre-plant or post-plant pre-emergence in field grown ornamental nursery planting or post-emergence as a directed spray. **DIQUAT 4SL** may also be applied pre-emergence in ornamental seed crops (except in the state of California).

Spot Spray: 2 – 4 pts. **DIQUAT 4SL** (0.93 to 1.85 lbs. diquat dibromide) plus the labeled rate of 75% or greater nonionic surfactant per 100 gals. of water, or 0.75 oz. (22 mL) **DIQUAT 4SL** plus the labeled rate of 75% or greater nonionic surfactant per 1 gal. of water.

The use of mechanically-pressurized handguns to apply this product in greenhouses is prohibited.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 12 applications per year at 2 pts./acre, and **DO NOT** make more than 6 applications per year at the 4 pts. (1.85 lbs. diquat dibromide)/acre.
- The minimum spray interval is 5 days.
- **DO NOT** apply more than 24 pts. of this product (11.1 lbs. diquat dibromide) per acre per year.
- **DO NOT** use on food or feed crops.

Broadcast: 1-2 pts. **DIQUAT 4SL** (0.46 to 0.93 lb. diquat dibromide) per acre in a minimum of 15 gals. of water per acre. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gals. of spray mixture. Use an adequate spray volume to insure good coverage.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 12 applications per year at 2 pts./acre.
- The minimum spray interval is 28 days.
- **DO NOT** apply more than 24 pts. of this product (11.1 lbs. diquat dibromide) per acre per year.
- **DO NOT** use on food or feed crops.

ORNAMENTAL SEED CROPS (FLOWERS, BULBS, ETC.) EXCEPT IN THE STATE OF CALIFORNIA

For pre-harvest desiccation of ornamental seed crops. NOT FOR FOOD OR FIBER CROPS.

Broadcast (Air or Ground): 1.5 – 2 pts. **DIQUAT 4SL** (0.70 – 0.93 lb. diquat dibromide) per acre plus the labeled rate of a 75% or greater nonionic surfactant per acre in sufficient water (minimum of 5 gals. by air; 15 gals. by ground) for desiccation and weed burndown.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 3 applications per year.
- The minimum spray interval is 5 days.
- **DO NOT** apply more than 6 pts. of this product (2.78 lbs. diquat dibromide) per acre per year.
- **DO NOT** use seed, screenings, or waste as feed or for consumption.
- **DO NOT** use on food or fiber crops.
- **DO NOT** apply products containing diquat dibromide to production ornamentals at a rate more than 1 lb. a.i./A/year.
- **DO NOT** apply products containing diquat dibromide more than four times per year.

DIRECTIONS FOR LANDSCAPE, INDUSTRIAL RECREATIONAL, COMMERCIAL, RESIDENTAL AND PUBLIC AREAS

DIQUAT 4SL provides fast control of broadleaf and grassy weeds in industrial sites (lumberyards, tank farms, airports, manufacturing plants, storage yards, parking lots), recreation areas (parks, fairgrounds, race tracks, tennis courts, athletic fields, golf courses), commercial buildings and structures (apartment buildings, office buildings, condominiums, hotels, motels), residential areas (ornamental gardens, landscapes, lawns, driveways, sidewalks, fences lines, walkways, patios) and public areas (rights of way including railroad, highways, roads, dividers and median, parking lots).

DIQUAT 4SL is a non-selective herbicide that rapidly kills undesirable above ground weed growth in 24-36 hours.

DIQUAT 4SL is a contact/desiccant herbicide; it is essential to obtain complete coverage of the target weeds to get good control. Improper application technique and/or application to stressed weeds may result in unacceptable weed control. For best results, apply to actively growing, young weeds.

Difficult weeds (including perennial or deeply-rooted weeds) can often be controlled by tank mixing **DIQUAT 4SL** with other systemic- type herbicides. Refer to other product labels for specific application directions for use.

For residual weed control, tank mix **DIQUAT 4SL** with a pre-emergent herbicide labeled for the intended use site. When mixing **DIQUAT 4SL** with another herbicide, it is suggested to mix just a small amount first to determine if the mixture is physically compatible before proceeding with larger volumes.

RedEagle International LLC has not tested all possible tank mixtures with other herbicides for compatibility, efficacy or other adverse effects. Before mixing with other herbicides RedEagle International LLC urges you first consult your state experimental station, state university or extension agent.

Ground maintenance weeds control: **DIQUAT 4SL** can be used as a spot or broadcast spray to control weeds in landscapes, including landscape beds, lawns, golf courses and roadsides. **DIQUAT 4SL** can also be used for weed control around the edges and non-flooded portions of ponds, lakes and ditches.

Trim and Edge weed control: **DIQUAT 4SL** can be used to eliminate undesired grass and broadleaf plant growth in a narrow band along driveways, walkways, patios, cart paths, fence lines and around trees, ornamental gardens, buildings, other structures, and beneath non-commercial greenhouse benches. Vegetation control with **DIQUAT 4SL** is limited to the spray application width. **DO NOT** exceed the labeled rate of **DIQUAT 4SL** as excessive rates may result in staining of concrete-based materials.

DIQUAT 4SL, since it does not translocate systemically, can be used as an edging or pruning tool when precisely applied to select areas of grass or to undesirable growth on desirable ornamental bedding plants, ground covers, etc.

Industrial Weed Control: **DIQUAT 4SL** can be used as a spot or broadcast spray either alone or in combination with other herbicides as a fast burndown or control weeds in rights-of-ways, railroad beds/yards, highways, roads, dividers and medians, parking lots, pipelines, pumping stations, public utility lines, transformer stations and substations, electric utilities, storage yards.

Spot Spray: Apply either 2 - 4 pts. of **DIQUAT 4SL** (0.93 to 1.85 lbs. diquat dibromide) plus the labeled rate of a 75% or greater nonionic surfactant per 100 gals. of water, or 0.75 oz. (22 ml.) **DIQUAT 4SL** plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 3 applications per year at 2 pts./acre or 1 application at 4 pts. (1.85 lbs. diquat dibromide)/acre and a follow-up at 2 pts./acre.
- The minimum spray interval is 5 days.
- **DO NOT** apply more than 6 pts. of this product (2.78 lbs. diquat dibromide) per acre per year.

Broadcast: 1-2 pts. **DIQUAT 4SL** (0.46 to 0.93 lb. diquat dibromide) per acre in sufficient water to insure good spray coverage. Add the labeled rate of 75% or greater nonionic surfactant per 100 gals. spray mixture. Greater water volumes are necessary if the target plants are tall and/or dense. Use 60 gals. or greater water volume to obtain good coverage of dense weeds.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 3 applications per year at 2 pts./acre.
- **DO NOT** make more than 6 applications per year at 1 pt. (0.46 lb. diquat dibromide)/acre.
- The minimum spray interval is 28 days.
- **DO NOT** apply more than 6 pts. of this product (2.78 lbs. diquat dibromide) per acre per year.

TURF RENOVATION (ALL TURF AREAS EXCEPT COMMERCIAL SOD FARMS)

To desiccate golf course turf and other turf areas prior to renovation, apply 1-2 pts. of **DIQUAT 4SL** (0.46 to 0.93 lb. diquat dibromide) per acre plus the labeled rate of 75% or greater nonionic surfactant in 20-100 gals. of water (4 teaspoons of **DIQUAT 4SL** plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water) using ground spray equipment. Apply for full coverage and thorough contact with the turfgrass. Apply only when the turf is dry, free from dew and incidental moisture. For enhanced turf desiccation of treated turfgrass, especially in the case of thick turfgrass, use water volumes approaching 100 gallons, of water per acre.

For suppression of regrowth and quick desiccation of treated turfgrass, **DIQUAT 4SL** may be mixed with other systemic non-selective or systemic post-emergence grassy weed herbicides. Refer to other product labels for specific application directions and restrictions.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 2 applications per year.
- The minimum spray interval is 28 days.
- **DO NOT** apply more than 4 pts. of this product (1.85 lbs. diquat dibromide) per acre per year.
- **DO NOT** graze livestock on treat turf or feed treated thatch to livestock.

DORMANT ESTABLISHED TURFGRASS (BERMUDAGRASS, ZOYSIAGRASS), NON-FOOD OR FEED CROP

For control of emerged annual broadleaf and grass weeds, including Little Barley*, Annual Bluegrass Bromes including Rescuegrass, Sixweeks fescue, Henbit, Buttercup, and Carolina Geranium in established dormant bermudagrass lawns, parks, golf courses.

Apply 1-2 pts. **DIQUAT 4SL** (0.46 to 0.93 lb. diquat dibromide) per acre in 20-100 gals. of spray mix by ground as a broadcast application.

Add the labeled rate of 75% or greater nonionic surfactant per 100 gals. of spray mixture.

Bermudagrass must be dormant at application. Application to actively growing bermudagrass may cause delay or permanent injury. Users in the extreme Southern areas must be attentive to the extent of dormancy at the time of application.

*For the control of Little Barley, apply **DIQUAT 4SL** prior to the mid-boot stage.

Restrictions:

- **DO NOT** apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application.
- **DO NOT** make more than 2 applications per year.
- The minimum spray interval is 28 days.
- **DO NOT** apply more than 4 pts. of this product (1.85 lbs. diquat dibromide) per acre per year.

AQUATIC USE DIRECTIONS

New York – Not for Sale or Use in New York State.

Waters treated with this product may be hazardous to non-target aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not use products containing diquat dibromide to treat more than ½ of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation. Wait at least 7 days between diquat dibromide treatments of contiguous waterbody sections. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. Consult with the state or local agency with primary responsibility for regulating pesticides before applying this product to public waters to determine if a permit is required.

Necessary approval and/or permits must be obtained prior to application if required. Consult the responsible State Agencies (i.e. Fish and Game Agencies, State Water Conservation authorities, or Department of Natural Resources).

Treatment of dense weed areas may result in oxygen loss from decomposition of dead weeds. This loss of oxygen may cause fish suffocation. Therefore, treat only ½ to ½ of the water body area at one time and wait 14 days between treatments.

For best results on submersed weeds, **DIQUAT 4SL** apply only to actively growing (photosynthesizing) weeds when water temperatures have reached or exceeded approximately 50°F, typically during the Spring of early Summer.

For application only to still water (i.e. ponds, lakes, and drainage ditches) where there is minimal or no outflow to public waters

And/or:

For applications to public waters in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers, and other slow-moving or quiescent bodies of water for control of aquatic weeds.

For use by:

- Corps of Engineers; or
- Federal or State Public Agencies (i.e. Water Management District personnel, municipal officials); or
- Applicators and/or Licensees (Certified for aquatic pest control) that are authorized by the State or Local government.

AQUATIC USE RESTRICTIONS

- **DO NOT** apply this product on cattails (*Typha* spp.) as a target weed species.
- **DO NOT** apply this product at a rate greater than 2.5 lb ai/surface-acre per application for the control of floating, emergent, or marginal vegetation. **DO NOT** apply this product at a rate greater than 1 lb ai/acre-foot per application for the control of submersed weeds.

Treated water may be used according to the following table or until such time as an approved assay (example: PAM II Spectromatic Method) shows that the water does not contain more than the designated maximum contaminant level goal (MCLG) or 0.02 mg/l (ppm) of diquat dibromide (calculated as the diquat dibromide).

The use of a vehicle-mounted boom sprayer to apply this product above the water surface for treatment of floating, emergent, or marginal vegetation, except for applications made via aircraft, is prohibited. This prohibition does not apply to applications made below the water surface via submersed or trailing hoses.

WATER USE RESTRICTIONS FOLLOWING APPLICATIONS WITH DIQUAT 4SL

APPLICATION RATE	APPLICATION RATE (LBS. DIQUAT DIBROMIDE/ SURFACE AREA)	DRINKING	FISHING AND SWIMMING	LIVESTOCK/ DOMESTIC ANIMALS CONSUMPTION	SPRAY TANK APPLICATIONS** AND IRRIGATION TO TURF AND LANDSCAPE ORNAMENTALS	SPRAY TANK APPLICATIONS** AND IRRIGATION TO FOOD CROPS AND PRODUCTION
2 gals./surface acre	7.40 lbs.	3 days	0	1 day	3 days	5 days
1 gal./surface acre	3.70 lbs.	2 days	0	1 day	2 days	5 days
0.75 gal./surface acre	2.78 lbs.	2 days	0	1 day	2 days	5 days
0.50 gal./surface area	1.85 lbs.	1 day	0	1 day	1 day	5 days
Spot Spray* (<0.5 gal./ surface area)	1.85 lbs.	1 day	0	1 day	1 day	5 days

*Add a nonionic surfactant (with at least 75% of the constituent's active as a spray adjuvant) at the rate suggested by the manufacturer.

For preparing agricultural sprays for food crops, turf or ornamentals (to prevent phytotoxicity), **DO NOT use water treated with **DIQUAT 4SL** before the specified time period. When the contents of more than one spray tank is necessary to complete a single aquatic application, no water holding restrictions apply between the consecutive spray tanks.

No applications are to be made in areas where commercial processing of fish, resulting in the production of fish protein concentrate or fish meal, is practiced. Before application, coordination and approval of local and/or State authorities must be obtained.

Floating and Marginal Weeds Including:

Water lettuce, *Pistia stratiotes*

Water hyacinth, *Eichhornia crassipes*

Duckweed, *Lemna spp.*

Salvinia spp. (including *S. molesta*)

Pennywort (*Hydrocotyle spp.*)

Frog's Bit, *Limnobium spongia*)

*Not for use in California

DIQUAT 4SL may be applied by backpack, airboat, spray handgun, helicopter, airplane, or similar application equipment that results in thorough spray coverage.

Spot Treatment: Apply **DIQUAT 4SL** at 0.5 gallon (1.85 lbs. diquat dibromide) per surface acre in 100 gallons spray carrier (0.5% v/v solution) with an approved aquatic wetting agent at 0.25-1.0% v/v (1 quart to 1 gallon per 100 gallons water). For cattail control, apply **DIQUAT 4SL** prior to flowering at the maximum application rate 2 gallons of **DIQUAT 4SL** (7.40 lbs. diquat dibromide)/100 gallons spray carrier) per surface acre plus the wetting agent. Repeat treatments may be necessary for complete control. The minimum spray interval is 14 days.

Spray to completely wet target weeds but not to runoff. Densely packed weeds or mats may require additional applications due to incomplete spray coverage. Re-treat as needed.

Restrictions:

- **DO NOT** apply more than 2 gals. of this product (7.40 lbs. diquat dibromide) per surface acre per application.
- **DO NOT** make more than 12 applications per year.
- The minimum spray interval is 14 days.
- **DO NOT** apply more than 24 gals. of this product (88.80 lbs. diquat dibromide) per surface acre per year.

Broadcast Treatment: Apply **DIQUAT 4SL** at the rate of 0.5-2.0 gallons (1.85 to 7.40 lbs. diquat dibromide) per surface acre in sufficient carrier along with 16-32 oz./acre of an approved wetting agent. Re-treat as necessary for densely populated weed areas. The minimum spray interval is 14 days. Good coverage is necessary for control of the target weeds.

For duckweed control, apply **DIQUAT 4SL** at 1-2 gallons (3.70 to 7.40 lbs. diquat dibromide) per surface acre.

Restrictions:

- **DO NOT** apply more than 2.0 gals. of this product (7.40 lbs. diquat dibromide) per surface acre per application.
- **DO NOT** make more than 12 applications per year.
- The minimum spray interval is 14 days.
- **DO NOT** apply more than 24 gals. of this product (88.80 lbs. diquat dibromide) per surface acre per year.

Submersed Weeds including:Bladderwort, *Utricularia* spp.Hydrilla, *Hydrilla verticillata*Watermilfoils (including Eurasian), *Myriophyllum* spp.Pondweeds¹, *Potamogeton* spp.Coontail, *Ceratophyllum demersum*Elodea, *Elodea* spp.Brazilian Elodea, *Egeria densa*Naiad, *Najas* spp.Algae², *Spirogyra* spp. and *Pithophora* spp.¹ **DIQUAT 4SL** controls Potamogeton species except Richardson's pondweed, *P. richardonii*.² Suppression only. For control of *Spirogyra* and/or *Pithophora*, use **DIQUAT 4SL** in a tank mix with an approved algaecide.

For severe weed or algae infestations, the use of an approved algaecide either as a pretreatment to the **DIQUAT 4SL** or this product's application or in a tank mix, may result in enhanced weed control.

To control submersed weeds, apply **DIQUAT 4SL** in water at 0.5-2.0 gallons (1.85 to 7.40 lbs. diquat dibromide) per surface acre (per 4 foot water depth). For severe weed infestations, use the 2.0 gallon (7.40 lbs. diquat dibromide) per surface acre rate. For best results, re-treat as necessary on 14-21 day intervals. The table below shows how many gallons of **DIQUAT 4SL** to apply per surface acre based on water depth.

	GALLONS OF DIQUAT 4SL PER SURFACE ACRE AVERAGE WATER DEPTH			
	1 FOOT	2 FEET	3 FEET	4 FEET
1 gal./surface acre rate	0.25 gal. (0.93 lb. diquat dibromide)	0.50 gal. (1.85 lbs. diquat dibromide)	0.75 gal. (2.78 lbs. diquat dibromide)	1.0 gal. (3.70 lbs. diquat dibromide)
2 gal./surface acre rate	0.50 gal. (1.85 lbs. diquat dibromide)	1.0 gal. (3.70 lbs. diquat dibromide)	1.50 gals. (5.55 lbs. diquat dibromide)	2.0 gals. (7.40 lbs. diquat dibromide)

Subsurface Applications: Where the submersed weed growth, especially Hydrilla, has reached the water surface, apply either in a water carrier or an invert emulsion through boom trailing hoses carrying nozzle tips to apply the dilute spray below the water surface to insure adequate coverage.

Bottom Placement: Water submersed weeds including Hydrilla, Bladderwort, or Coontail have reached the water surface and/or where the water is slowly moving through the weed growth, the use of an invert emulsion carrier injected diluted **DIQUAT 4SL** near the bottom with weighted hoses may improve control. The addition of a copper based algaecide may improve control. If algae are present along with the submersed weeds, a pretreatment with a copper based algaecide may improve overall control.

Surface Application for Submersed Aquatic Weeds: Apply the use rate of **DIQUAT 4SL** as a spray in sufficient carrier to fully cover the target area. Apply in a manner to ensure complete coverage of the weed areas. In mixed weed populations, use the high rate of application as indicated by weeds present. For dense submersed weeds or water over 2 feet deep, a surface spray is to be avoided. In these situations, use **DIQUAT 4SL** in a subsurface application.

Restrictions:

- **DO NOT** apply more than 2.0 gals. of this product (7.40 lbs. diquat dibromide) per surface acre (per 4 foot water depth) per application.
- For water depths of 2 feet or less including shorelines, **DO NOT** exceed 1 gal. of this product (3.70 lbs. diquat dibromide) per surface acre per application.
- **DO NOT** make more than 12 applications per year.
- The minimum spray interval is 14 days.
- **DO NOT** apply more than 24.0 gals. of this product (88.80 lbs. diquat dibromide) per surface acre (per 4 foot water depth) per year.

If posting is required by your state or tribe – consult the agency responsible for pesticide regulations for specific details.

Use of DIQUAT 4SL for Submersed Weeds* at Water Depths Greater than 4 feet (For Use in AL, CA, FL, ID & SC Only)**Water Use Restrictions Relative to Operating Potable Water Intakes (FL, ID & SC)**

Flowing Water (e.g. rivers, streams, canals): **DO NOT** apply within 1600 feet upstream or within 400 feet downstream of operating potable water intake sites.

Standing Water (e.g. lakes, reservoirs) **DO NOT** apply within 1400 feet for rates at 2 gallons/ surface acre, or within 700 feet for rates at 1 gallon/surface acre, or within 350 feet for rates equal to or less than 0.5 gallon/surface acre of potable water intake sites. For rates between 1 and 2 gallons/surface acre, distance may be adjusted (e.g. $1 \frac{3}{4} - 1225$, $1 \frac{1}{2} = 1050$ $1 \frac{1}{4} = 875$ feet).

To make applications within these restricted areas, the intake must be turned off for the time period specified in the Water Use Restrictions section.

DIQUAT 4SL is labeled for use at rates up to 2 gallons/surface acre. These rates are based on a maximum water depth of 4 feet. If water depth exceeds 4 feet, higher rates per surface acre may be required for submersed weeds to obtain control.

Application Rates for Submersed Weeds

*Includes Egeria Densa in CA

*Includes Hydrilla in AL

WATER DEPTH	RATE OF DIQUAT 4SL PER TREATED SURFACE AREA
< 2 feet	0.5 – 1.0 gallon
2 – 4 feet	1.0 – 2.0 gallons
5 feet	1.0 – 2.5 gallons
6 feet	1.0 – 3.0 gallons
7 feet	1.0 – 3.5 gallons
8 feet	1.0 – 4.0 gallons
9 feet	1.0 – 4.5 gallons
10 feet	1.0 – 5.0 gallons
11 feet	1.0 – 5.5 gallons
12 feet	1.0 – 6.0 gallons

Restrictions:

- **DO NOT** apply more than 2.0 gals. of this product (7.40 lbs. diquat dibromide) per surface acre (per 4 foot water depth) per application.
- For water depths of 2 feet or less including shorelines, **DO NOT** exceed 1 gal. of this product (3.70 lbs. diquat dibromide) per surface acre per application.
- **DO NOT** make more than 12 applications per year.
- The minimum spray interval is 14 days.
- **DO NOT** apply more than 24.0 gals. of this product (88.80 lbs. diquat dibromide) per surface acre (per 4 foot water depth) per year.

CROP-SPECIFIC USE DIRECTIONS

The following table indicates use pattern, rates, minimum spray volumes, and pre-harvest interval for specific uses.

CROP	USE PATTERN	DIQUAT 4SL RATE PER ACRE	APPLICATION INSTRUCTIONS
Alfalfa (seed crop only)	Pre-harvest desiccation broadcast	1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide) (see Application Instructions for additional rate)	<ul style="list-style-type: none"> • Apply a minimum of 15 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • On thin stands of seed alfalfa use 1 pt. per acre. • Desiccation is complete in 3-10 days. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (2 crop cycles per year) and 4 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 8 pts. of this product (3.70 lbs. diquat dibromide) per acre per year. • Minimum post-harvest interval (PHI) is 3 days. • DO NOT graze or feed treated forage to livestock. • DO NOT use seed from treated plants for food, feed, or oil purposes. • DO NOT apply products containing diquat dibromide more than twice per year for crop burndown on alfalfa.
Canola	Pre-harvest desiccation broadcast	1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)	<ul style="list-style-type: none"> • Apply a minimum of 15 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 1 application per year. • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per year. • Minimum post-harvest interval (PHI) is 7 days. • Harvest must be completed no more than 10 days after application. • DO NOT apply products containing diquat dibromide more than once per year for crop burndown in canola.

<p>Carrots, Cilantro, Radish, Turnips Grown for Seed Only (ID and WA only)</p>	<p>Pre-harvest desiccation broadcast</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply 15 – 30 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • Apply 3 to 10 days before harvest prior to swathing when the majority of the seed is harvest-ripe. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 1 application per year. • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per year. • No portion of the seed carrot, cilantro, radish or turnip, including but not limited to seed screening, green chop, hay, chaff, combined tailings, pellets, meal, whole seed and cracked seed, may be grazed, used, or distributed for food or feed purposes. • Apply only to crops grown for seed production for preharvest desiccation. • DO NOT use on Daikon varieties of radishes.
<p>Spinach & Table Beets Grown for Seed Only (WA only)</p>	<p>Pre-harvest desiccation broadcast</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply 15 – 30 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • Apply 3 to 10 days before harvest prior to swathing when the majority of the seed is harvest-ripe. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 1 application per crop cycle (2 crop cycles per year) and 2 applications per year. • DO NOT apply more than 4 pts. of this product (1.85 lbs. diquat dibromide) per acre per year. • No portion of the spinach or table beets including but not limited to seed screening, green chop, hay, chaff, combined tailings, pellets, meal, whole seed and cracked seed, may be grazed, used, or distributed for food or feed purposes. • Apply only to crops grown for seed production for preharvest desiccation.
<p>Sugar Beets Grown for Seed Only (OR & WA only)</p>	<p>Pre-harvest desiccation broadcast</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply 15 – 30 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • Apply 3 to 10 days before harvest prior to swathing when the majority of the seed is harvest-ripe. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 1 application per year. • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per year. • No portion of the sugar beets including but not limited to seed screening, green chop, hay, chaff, combined tailings, pellets, meal, whole seed and cracked seed, may be grazed, used, or distributed for food or feed purposes. • Apply only to crops grown for seed production for preharvest desiccation.

Clover (seed crop only)	Pre-harvest desiccation broadcast	1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)	<ul style="list-style-type: none"> • Apply a minimum of 15 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • Desiccation is complete in 3-10 days. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (2 crop cycles per year) and 4 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 8 pts. of this product (1.85 lbs. diquat dibromide) per acre per year. • Minimum post-harvest interval (PHI) is 3 days. • DO NOT graze or feed treated forage to livestock. • DO NOT use seed from treated plants for food, feed, or oil purposes. • DO NOT apply products containing diquat dibromide more than twice per year for crop burndown on clover grown for seed.
Potato	Pre-harvest desiccation broadcast	1 - 2 pts. (0.70 - 0.93 lb. diquat dibromide)	<ul style="list-style-type: none"> • Apply in a minimum 20 gallons of spray per acre by ground. • Apply a minimum of 5 gallons of spray per acre by air. • For improved vine coverage, make a second application if necessary to obtain additional desiccation where vine growth is dense. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per year. • DO NOT apply more than 4 pts. of this product (1.85 lbs. diquat dibromide) per acre per year. • The minimum spray interval is 5 days. • DO NOT apply to drought stressed potatoes. • Minimum post-harvest interval (PHI) is 7 days. • DO NOT apply products containing diquat dibromide more than 1 lb. a.i./A/per year for crop burndown in potatoes.
Potato (ID, NV & WA only)	Pre-harvest desiccation broadcast plus Late Blight Fungicide Tank Mixtures	1 - 2 pts. (0.46 – 0.93 lb. diquat dibromide)	<ul style="list-style-type: none"> • Apply in a minimum 20 gallons of spray per acre by ground. • For improved vine coverage, make a second application if necessary to obtain additional desiccation where vine growth is dense. • Use one of the fungicides at label use rate: Champ® Formula 2 Flowable (copper hydroxide), EPA Reg. No. 55146-64, Kocide® 101 (copper hydroxide), EPA Reg. No. 91411-3, Dithane® DF (mancozeb), EPA Reg. No. 62719-402 & Bravo Weather Stik® (chlorothalonil), EPA Reg. No. 50534-188-100. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per year. • DO NOT apply more than 4 pts. of this product (1.85 lbs. diquat dibromide) per acre per year. • The minimum spray interval is 5 days. • DO NOT apply to drought stressed potatoes. • Minimum post-harvest interval (PHI) is 7 days.

<p>Tomato, Eggplant & Green Peppers (FL only)</p>	<p>Directed spray in row middles</p>	<p>2 pts. (0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply in 20 - 50 gallons of spray per acre by ground. • Add ½ - 1 pt. NIS per 100 gallons of spray. • Use when weeds are 2 – 4 inches in height. Weed control will decrease when treatment is made to weeds larger than 4 inch growth stage. • This product maybe tank mixed with paraquat for this use for crops listed on the paraquat label. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (3 crop cycles per year) and 6 applications per year. • The minimum spray interval is 5 days. • Minimum post-harvest interval (PHI) is 30 days. • DO NOT apply more than 12 pts. of this product (5.55 lbs. diquat dibromide) per acre per year. • DO NOT allow spray to contact crop foliage or treat under conditions which will cause spray drift, as phytotoxicity to crop plants will occur. • DO NOT apply when wind speed exceeds 5 mph. • DO NOT exceed 25 psi spray pressure.
<p>Tomato – After Final Harvest (FL & SC only)</p>	<p>Burndown after final harvest</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply in 60 – 120 gallons of spray per acre by ground. • Add ½ - 1 pt. NIS per 100 gallons of spray. • Though coverage is required to ensure maximum burndown. • Use of dirty or muddy water may result in reduced herbicidal activity. • To aid in the removal of sweet potato whitelly, burn dried tomato vines as soon as possible with propane burners. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (3 crop cycles per year) and 6 applications per year. • The minimum spray interval is 1 day. • DO NOT apply more than 12 pts. of this product (5.55 lbs. diquat dibromide) per acre per year.
<p>Cantaloupe – After Final Harvest (FL only)</p>	<p>Burndown after final harvest</p>	<p>1 pt. (0.46 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply a minimum of 35 gallons of spray per acre by ground. • Add 1 - 2 pts. NIS per 100 gallons of spray. • Though coverage is required to ensure maximum burndown. • Use of dirty or muddy water may result in reduced herbicidal activity. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 1 pt. of this product (0.46 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (3 crop cycles per year) and 6 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 6 pts. of this product (2.78 lbs. diquat dibromide) per acre per year.

<p>Cucumbers, Squash (except Acorn) & Watermelon – After Final Harvest (FL only)</p>	<p>Burndown after final harvest</p>	<p>1 ½ pts. (0.70 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply a minimum of 35 gallons of spray per acre by ground. • Add 1 - 2 pts. NIS per 100 gallons of spray. • Though coverage is required to ensure maximum burndown. • Use of dirty or muddy water may result in reduced herbicidal activity. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 1 ½ pts. of this product (0.70 lb. diquat dibromide) per acre per application. • DO NOT make more than 2 applications per crop cycle (3 crop cycles per year) and 6 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 9 pts. of this product (4.16 lbs. diquat dibromide) per acre per year.
<p>Peppers & Acorn Squash – After Final Harvest (FL only)</p>	<p>Burndown after final harvest</p>	<p>2 pts. (0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply a minimum of 35 gallons of spray per acre by ground. • Add 1 - 2 pts. NIS per 100 gallons of spray. • Though coverage is required to ensure maximum burndown. • Use of dirty or muddy water may result in reduced herbicidal activity. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93lb. diquat dibromide) per application. • DO NOT make more than 2 applications per crop cycle, (3 crop cycles per year) and 6 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 12 pts. of this product (5.55 lbs. diquat dibromide) per acre per year.

<p>Tree, Vine, Small Fruit, Vegetables Crops Non-bearing: Acerola (West Indian Cherry) Almonds Apple Apricots Avocados Bananas Blackberry Blueberry Boysenberry Cherries Coffee Crabapple Dates Dewberry Elderberry Figs Filberts Ginseng Gooseberry Grapes Grapefruit Guava Huckleberry Jojoba Kiwi Lemons Limes Loganberry Macadamia Mango Nectarines Olives Oranges Papayas Passion Fruit Peaches Pears Pecans Persimmons Pistachios Plantains Plum Pomegranates Prunes Raspberry Tangelos Tangerines Walnuts</p>	<p>Directed spray</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply a minimum of 15 gallons of spray per acre by ground. • Use a shield or wrap when spraying around young trees and vines. • Retreatment may be necessary for complete control of grasses and older established weeds. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 1 application per year. • DO NOT apply more than 2 pts of this product (0.93 lb. diquat dibromide) per acre per year. • DO NOT use for food or feed for one year after application. • This product can be used during site preparation prior to planting and up to one year of harvest. • DO NOT allow spray to contact green stems, foliage, or fruit as injury can occur. • DO NOT graze treated areas.
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<p>Tree, Vegetables Crops Non-bearing: Artichoke Asparagus Conifers Cranberry</p>	<p>Directed spray</p>	<p>1 ½ - 2 pts. (0.70 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply a minimum of 15 gallons of spray per acre by ground. • Use a shield or wrap when spraying around young trees and vines. • Retreatment may be necessary for complete control of grasses and older established weeds. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 3 applications per year. • The minimum spray interval is 5 days. • DO NOT apply more than 6 pts. of this product (2.78 lbs. diquat dibromide) per acre per year. • DO NOT use for food or feed for one year after application. • This product can be used during site preparation prior to planting and up to one year of harvest. • DO NOT allow spray to contact green stems, foliage, or fruit as injury can occur. • DO NOT graze treated areas.
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NON-CROP AND NON-PLANTED AREAS – USE PATTERN AND RATES

OTHER USES	USE PATTERN	DIQUAT 4SL RATE PER ACRE	APPLICATION INSTRUCTIONS
<p>Non-crop or Non-planted Areas on Farms including: Fence Lines, Farmyards, Farm Buildings, Fuel Storage Areas, Barrier Strips, Equipment Areas, and Dry (non-flooded) Areas around ponds, lakes, and drainage ditches on farms.</p>	<p>Broadcast</p>	<p>1 - 2 pts. (0.46 - 0.93 lb. diquat dibromide)</p>	<ul style="list-style-type: none"> • Apply for full coverage and thorough weed contact. • Apply in a minimum of 15 gallons water per acre • Retreatment may be necessary to control grasses and established weeds. • Avoid spray contact with foliage of food crops or ornamental plants or other desirable vegetation. • Add the labeled rate of 75% or greater nonionic surfactant to the finished spray volume.
<p>Rights-of-way including: Railroads, Highways, Roads, Dividers and Medians, Pipelines, Public Utility Lines, Pumping Stations, Transformer Stations and Substations; Around Electrical Utilities, Commercial Buildings, Manufacturing Plants, Storage Yards, Rail Yards, Fence Lines and Parkways</p>	<p>Spot Treatment</p>	<p>2 - 4 pts. (0.93 – 1.85 lbs. diquat dibromide)</p>	<ul style="list-style-type: none"> • For spot treatment, the labeled rate of a 75% or greater nonionic surfactant per 100 gals. water or 0.75 oz. (22 ml) DIQUAT 4SL plus the labeled rate of a 75% or greater nonionic surfactant per 1 gal. of water. <p>Restrictions:</p> <ul style="list-style-type: none"> • DO NOT apply more than 2 pts. of this product (0.93 lb. diquat dibromide) per acre per application. • DO NOT make more than 10 applications per year at 2 pts./acre or 5 applications at 4 pts./acre. • The minimum spray interval is 5 days. • DO NOT apply more than 20 pts. of this product (9.25 lbs. diquat dibromide) per acre per year.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE:

Store in original container only. Store in a cool, dry, and well-ventilated place. Protect from excessive heat. Keep container closed when not in use. **DO NOT** store near food or feed.

PESTICIDE DISPOSAL:

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal Law. If these wastes cannot be used 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 in proper disposal methods.

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): 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 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, incineration, or by other procedures allowed by State and local authorities.

Nonrefillable Container (greater than five gallons): 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. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, incineration, or by other procedures allowed by State and local authorities.

Refillable Container (greater than five gallons): Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn-out threads, and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with State and local regulations.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

WARRANTY AND DISCLAIMER STATEMENT

NOTICE: 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 RedEagle International LLC. To the extent allowable under State law, all such risks shall be assumed by the user or buyer.

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