

GROUP

22

HERBICIDE

DRYQUAT

SOLUTION

PULL HERE TO OPEN ▼

WARNING



POISON

EYE AND SKIN IRRITANT

**DESICCATION OF PULSE, OILSEED AND
LEGUME FORAGE SEED CROPS**

COMMERCIAL (AGRICULTURAL)

ACTIVE INGREDIENT:

Diquat ion 200 g per litre
(Present as dibromide)

REGISTRATION NO. 35944

PEST CONTROL PRODUCTS ACT**READ THE LABEL AND BOOKLET BEFORE USING****KEEP OUT OF REACH OF CHILDREN**

NET CONTENTS

1000L

Life Scientific (Canada) Inc.
525-8th Avenue S.W., 43rd Floor, Eighth Avenue Place East,
Calgary, Alberta T2P 1G1, Canada - 403-498-6623

life scientific

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WARNING!

***HARMFUL OR FATAL IF SWALLOWED.**

***CAUSES SUBSTANTIAL EYE INJURY AND SKIN IRRITATION. PROTECTIVE EYEWEAR AND CLOTHING ARE REQUIRED.**

***DO NOT GET IN EYES, ON SKIN OR ON CLOTHING.**

HARMFUL IF INHALED, AVOID INHALING/BREATHING DUST, SPRAYS, ETC.

***NEVER TRANSFER TO OTHER CONTAINERS.**

*** KEEP OUT OF REACH OF CHILDREN AND ANIMALS. FULL DETAILS OF THESE HAZARDS ARE IN LABEL BELOW.**

1.0 NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

2.0 FIRST AID

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If **swallowed**, call a poison control centre or doctor **IMMEDIATELY** for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

If **in eyes**, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

If **on skin or clothing**, take off contaminated clothing. Rinse skin **IMMEDIATELY** with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If **inhaled**, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

3.0 TOXICOLOGICAL INFORMATION

To be effective, treatment for ingestion of the product must begin IMMEDIATELY. If swallowed, give adsorbent suspension, for example either activated charcoal (100g for adults or 2 g/kg body weight for children) or bentonite clay (100 to 150 g for adults or 2 g/kg body weight for children), mixed with a purgative (MgSO₄, Na₂SO₄ or mannitol). Maintain and monitor electrolyte and fluid status daily. Consider haemodialysis or haemoperfusion using charcoal column.

If **in eyes** treat symptomatically, using antibiotics and steroids as necessary. Symptoms may develop gradually. Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.

The use of supplemental oxygen is contraindicated. Do not administer supplemental oxygen unless the patient develops severe hypoxemia.

4.0 PRECAUTIONS

EXCESSIVE EXPOSURE TO DIQUAT MAY CAUSE A HEALTH HAZARD. FOLLOWING THE DIRECTIONS AND PRECAUTIONS WILL REDUCE EXPOSURE.

DO NOT get on skin or clothing. DO NOT get in eyes.

Do not contaminate food, feed, domestic or irrigation water supplies, lakes, streams and ponds.

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. The pilot is allowed to load premixed chemicals with a closed system.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

RESTRICTED ENTRY INTERVAL (REI): DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

If this pest control product is to be used on a commodity that may be exported to other countries in the world and you require information on acceptable residue levels in these countries, please contact Life Scientific (Canada) Inc. at 403-498-6623.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear chemical-resistant coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, socks, chemical-resistant footwear, goggles and a respirator or a full-face respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides, or a NIOSH-approved canister approved for pesticides during mixing, loading and application, clean-up and repair. Chemical-resistant headgear must be worn for overhead applications. Gloves are not required during application within a closed cab and/or cockpit.

Most exposure to pesticides is by absorption through skin, especially from concentrated material handled at the time of mixing and loading. Rolling down the sleeve end of the glove will prevent drips of liquid from running down the glove onto your arm.

Users should remove personal protective equipment immediately after handling this product. Wash the outside of the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. **REMOVE CONTAMINATED CLOTHING IMMEDIATELY.**

Laundry contaminated clothing prior to reuse and separate from household laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Store and wash PPE separately from other laundry.

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

Do not eat, drink, handle or use tobacco, or apply cosmetics in areas where there is potential for exposure to this product. Users should wash hands and face before eating, drinking, chewing gum, handling tobacco or using the toilet.

6.0 ENVIRONMENTAL PRECAUTIONS

ANY DRIFT OF THIS PRODUCT OUTSIDE THE IMMEDIATE FIELD AREA MAY RESULT IN DAMAGE TO CROPS, SHELTERBELTS, ORNAMENTAL PLANTS, LAWNS, GRAZING AREAS, WILDLIFE COVER, WETLANDS, AND OTHER DESIRABLE GROWTH.

TOXIC to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas into aquatic habitats, avoid applications to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

7.0 STORAGE

Keep in original container, tightly closed, in a safe place away from children. Store this product away from food and feed.

Store above 0°C. If crystallization occurs because of storage below this temperature, allow the product to warm to room temperature and agitate gently until reconstituted.

8.0 DISPOSAL

Recyclable Containers:

Disposal of container: DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial or territorial requirements.

Refillable containers:

Disposal of container: For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. DO NOT reuse this container for any other purpose.

Disposal of unused, unwanted product: For information on disposal of unused, unwanted product, contact the registrant or the provincial or territorial regulatory agency. Contact the registrant and the provincial or territorial regulatory agency in case of a spill, and for cleanup of spills.

In case of spills, poisoning or fire, telephone emergency response number: 1-800-424-9300 (North America) or 1-703-527-3887 (International) (24 hours a day).

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TABLE OF CONTENTS

	<u>Section Number</u>
NOTICE TO USER	1.0
FIRST AID	2.0
TOXICOLOGICAL INFORMATION	3.0
PRECAUTIONS	4.0
PERSONAL PROTECTIVE EQUIPMENT (PPE)	5.0
ENVIRONMENTAL PRECAUTIONS	6.0
STORAGE	7.0
DISPOSAL	8.0
PRODUCT INFORMATION	9.0
General Information	9.1
Harvesting	9.2
Cleaning Sprayer After Use	9.3
DIRECTIONS FOR USE	10.0
General Information	10.1
Ground Application	10.2
General Information	10.2.1
Mixing Instructions	10.2.2
Spraying Instructions	10.2.3
Equipment Clean-Up	10.2.4
Aerial Application	10.3
General Information	10.3.1
Use Precautions	10.3.2
Product Specific Precautions	10.3.3
Mixing Instructions	10.3.4
Spraying Instructions	10.3.5
Equipment Clean-Up	10.3.6
Spray Buffer Zones	10.4
CROP USE DIRECTIONS	11.0
Crop Subgroup 6C - Peas	11.1
Crop Subgroup 6C - Lentils	11.2
Crop Subgroup 6C - Chickpeas	11.3
Canola	11.4
Soybeans	11.5
Crop Subgroup 6C - Beans	11.6
Crop Subgroup 6C – Sweet White Lupins	11.7
Flax	11.8
Mustard	11.9
Sunflowers	11.10
Legumes	11.11
MINOR USES	12.0
Faba (Fava) Broad Beans	12.1
RESISTANCE MANAGEMENT RECOMMENDATIONS	13.0

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9.0 PRODUCT INFORMATION

9.1 General Information

DryQuat is a non-volatile, fast acting desiccant. It is inactivated on contact with the soil and therefore, has no residual effect.

Germination of seed is not affected by DryQuat for all crops which could go for seed sale.

DryQuat is easily applied in high or low volume sprayers. Very low volume or ultra low volume equipment for aerial application, e.g. rotary atomizer nozzles, are not recommended. Always use recommended water volume. Complete coverage is essential. DO NOT USE MIST BLOWERS.

DryQuat is rapidly absorbed by plants, and effectiveness is not reduced by rain falling shortly after treatment. EFFECTIVENESS OF THE TREATMENT MAY BE ENHANCED WHEN APPLICATION IS MADE ON CLOUDY DAYS OR PRIOR TO PERIODS OF DARKNESS.

Use clean (non-turbid) water for spraying DryQuat. Muddy water will reduce the effectiveness of DryQuat.

THE USER MUST BE AWARE THAT THIS PRODUCT ACCELERATES THE NATURAL PROCESS OF CROP DRY DOWN. IN CASES OF ADVERSE WEATHER CONDITIONS SUCH AS HEAVY RAIN, HAIL OR STRONG WIND, THE RESULTANT DAMAGE TO YOUR CROP MAY BE ENHANCED. TAKE NOTE THAT CERTAIN CROPS ARE MORE FRAGILE THAN OTHERS.

Crop waste remaining after harvest (e.g. pea vines, alfalfa stems) may be used as a feed supplement for livestock.

9.2 Harvesting

The use of DryQuat facilitates direct combining of many field crops such as lentils, peas, canola, mustard or legumes. Growers who wish to swath desiccated crops should wait until the crop has dried down sufficiently to allow the desiccated crop to be picked up and threshed immediately after swathing. Delaying threshing after swathing desiccated crops will increase shattering and seed loss.

For most crops, harvest can normally commence within 4-10 days after desiccation. However, late fall applications and adverse weather conditions such as rainfall, cool temperatures and high humidity will slow plant desiccation and keep seed moisture levels high which can delay commencement of harvest beyond 10 days after application. When those conditions prevail after DryQuat desiccation, commence harvest when plant material is dry and seed moisture level allows efficient harvesting. To minimize seed loss and to maintain seed quality, harvest of desiccated crops should commence as soon as seed moisture reaches the level for normal harvest.

9.3 Cleaning Sprayer After Use

It is important to thoroughly wash equipment after spraying - use a wetting agent (e.g. Non-ionic surfactant (NIS) at 60 mL per 100 L of water), flush and spray out, then thoroughly rinse with clean water. When possible, the equipment should be filled with clean water and left overnight. Spray out before storing equipment or using for other materials.

10.0 DIRECTIONS FOR USE

10.1 General Information

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

This product may be tank mixed with (a fertilizer, a supplement, or with) registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Life Scientific (Canada) Inc. at 403-498-6623 for information before applying any tank mix that is not specifically recommended on this label.

Life Scientific (Canada) Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) of all potential tank-mixes under all environmental conditions or for all crop varieties. Tank mixes that are not specifically listed on this label should be tested on a small area first, under local conditions and using standard practices, to confirm the tank mix is suitable for widespread application.

Always read and follow label directions including WALES mixing order.

Mixers and loaders supporting aerial applications are required to use closed systems.

Refer to the SPRAY BUFFER ZONES Section for more information on specific spray buffer zones requirement.

10.2 Ground Application

10.2.1 General Information

Field sprayer application: DO NOT apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. DO NOT apply with sprays finer than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) medium classification. Boom height must be 60 cm or less above the crop or ground.

Refer to the Spray Buffer Zones Section for more information on specific spray buffer zones requirement.

Ground spraying may be done with any standard boom sprayer. The use of an adjuvant is not required.

AGITATE WELL BEFORE USE.

10.2.2 Mixing Instructions

1. Ensure that the sprayer interior is clean, then fill the spray tank with ½ the required amount of carrier and engage gentle agitation. Good agitation is indicated by a rippling or rolling action on the surface of the water.
2. Add any WG or DF formulation mix partners and agitate to ensure complete mixing.
3. Add any SE or SC formulation mix partners and agitate to ensure complete mixing.
4. Add any EC formulation mix partners and agitate to ensure complete mixing.
5. Fill the tank to ¾ the required amount of water.
6. Add DryQuat and agitate to ensure complete mixing.
7. Add any solution (SN or SL) formulation mix partners and agitate to ensure complete mixing.
8. Finish filling the sprayer with carrier, maintaining good agitation.
9. Always ensure that agitation is maintained until spraying is completed. After any break in spraying operations, agitate thoroughly before spraying again. Reduce agitation once tank volume is reduced to about one third of capacity.
10. Do not mix, load or clean spray equipment where there is a potential to contaminate wells or aquatic systems.

When using chemical handling equipment to fill the sprayer, the following additional recommendations apply:

- WG and DF formulations are preferentially batch mixed.
- SC, SN, and SL formulations may be inducted or batch mixed.
- EC formulations are preferentially batch mixed.

10.2.3 Spraying Instructions

1. Carrier Volume: Apply in a minimum spray volume of 225 L/ha OR the volume given in the crop and pest specific instructions tabulated below, whichever is LARGER.
2. Sprayer Agitation: Use a jet agitator or liquid sparge tube which recirculates 7-10% of the tank per minute. DO NOT use an air sparger.
3. Pump: Screens should be used to protect the pump and prevent clogging. Use 16 mesh or coarser screens on the suction side of the pump. DO NOT place a screen in the recirculation line. Use 50 mesh or coarser screens between the pump and boom unless directed otherwise by the sprayer manufacturer.
4. Spray Nozzles: 80° or 110° drift reducing flat fan (e.g. those with a pre-orifice or turbulence chamber) or air induction nozzles are recommended. Use 50 mesh or coarser nozzle screens or as recommended by the nozzle manufacturer. DO NOT use flood type nozzles, controlled droplet application equipment, spray foils or hollow cone nozzles.
5. Pressure: As recommended by the nozzle manufacturer to achieve no finer than ASAE S572.1 medium sized droplets.
6. Apply at uniform speed and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to avoid potential crop injury from over application.

10.2.4 Equipment Clean-Up

To avoid subsequent injury to other crops, thoroughly clean application equipment immediately after spraying each day. Ensure that all traces of the product are removed. Do not allow residue to dry in spray tank. Do not allow solution to remain in lines or tank overnight.

When using tank mixes, consult the tank-mix partner label for additional clean-up instructions. The following recommendations are provided:

1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean application equipment near desirable vegetation, wells or other water sources.
2. Remove all nozzles and screens and wash separately.
3. Dispose of all rinseate in accordance with provincial regulations.

10.3 Aerial Application

10.3.1 General Information

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with sprays finer than the American Society of Agricultural and Biological Engineers (ASABE S572.1) medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate specified for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Refer to the SPRAY BUFFER ZONES Section for more information for on specific spray buffer zones requirement.

10.3.2 Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified spray buffer zones should be observed.

Aerial application is not recommended where wetlands or wildlife cover might be oversprayed. Avoid spray drift onto adjacent crops, shelter belts and wildlife cover. Avoid overspraying or drift onto sloughs.

Since herbicide application may damage the habitat of migratory birds and other wildlife species, do not use aerial application in fields where wetlands or other good wildlife cover might be oversprayed; this includes sloughs and dry slough margins in western Canada. Use ground sprayers and leave an unsprayed margin of 15 m around the border of all sloughs.

10.3.3 Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the registrant at 403-498-6623 or obtain technical advice from the distributor or your provincial or territorial agricultural representative.

10.3.4 Mixing Instructions

Mixing this product directly in the aircraft hopper **IS NOT** recommended. The use of chemical handling or managing equipment to load the hopper **IS** recommended. This product **MAY BE** inducted into a hopper which is pre-filled with water or when the product and water are mixed prior to entering the hopper. This product **MAY BE** batch mixed and pumped into the hopper. In all cases the chemical handling equipment and hopper interior must be clean prior to use

NOTE: DryQuat may be inducted or batch mixed. Follow the mixing order outlined below:

1. Pump water into the hopper to at least $\frac{1}{4}$ to $\frac{1}{2}$ of the desired spray volume. Engage hopper circulation, if possible.
2. Induct or thoroughly batch mix DryQuat.
3. Pump batch mixed into the hopper.
4. Finish filling the hopper with water.
5. If it was not possible to engage hopper agitation in Step 1, do so as soon as possible once airborne.
6. Spray the pesticide suspension the same day as mixing.
7. Do not mix, load or clean equipment where there is a potential to contaminate wells or aquatic systems.

10.3.5 Spraying Instructions

1. Water Volume: Apply in a minimum spray volume of 45 L/ha OR the volume given in the crop and pest specific instructions tabulated below, whichever is LARGER.
2. Spray Nozzles: Use only ASAE S572.1 medium or coarser nozzles
3. Pressure: As recommended by the nozzle manufacturer to achieve ASAE S572.1 medium or coarse sized droplets.
4. Ensure hopper agitation is engaged whenever possible during flight.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in overly fine particles (mist). **DO NOT** apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. **DO NOT** spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

10.3.6 Equipment Clean-Up

Before Spraying:

- Prior to using DryQuat, ensure that the hopper, chemical handling equipment, lines and filter are thoroughly cleaned.

After Spraying:

- Thoroughly clean application equipment immediately after spraying. **DO NOT** allow DryQuat residue to dry within application equipment.
- The following recommendations are provided:
 1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **DO NOT** clean application equipment near desirable vegetation, wells or other water sources.
 2. Remove all nozzles and screens and wash separately.
 3. Dispose of all rinseate in accordance with provincial regulations.

10.4 Spray Buffer zones

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Crop		Spray Buffer Zones (metres) Required for the Protection of:		
			Aquatic Habitat of Depths:		Terrestrial Habitat
			Less than 1 m	Greater than 1 m	
Field sprayer	Crop Subgroup 6C [bean (<i>Lupinus</i> spp.) includes grain lupin, sweet lupin, white lupin and white sweet lupin]; [bean (<i>Phaseolus</i> spp.) includes field bean, kidney bean (red & white), lima bean (dry), navy bean, pinto bean, tepary bean)]; and [bean (<i>Vigna</i> spp.) includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean]], broad (fava) bean (<i>Vicia faba</i>), chickpea (<i>Cicer arietinum</i>), guar (<i>Cyamopsis tetragonoloba</i>), lablab bean (<i>Lablab purpureus</i>), lentil (<i>Lens esculenta</i>), pea (<i>Pisum</i> spp.) (includes field pea), and pigeon pea (<i>Cajanus cajan</i>), canola, flax (including low linolenic acid varieties), mustard (condiment type only), sunflower, legume seed crops (alfalfa, birdsfoot trefoil, red clover and white clover)		5	3	3
Aerial	Crop Subgroup 6C [bean (<i>Phaseolus</i> spp.) includes field bean, kidney bean (red & white), lima bean (dry), navy bean, pinto bean, tepary bean)] and [bean (<i>Vigna</i> spp.) includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean]], broad (fava) bean (<i>Vicia faba</i>), chickpea (<i>Cicer arietinum</i>), guar (<i>Cyamopsis tetragonoloba</i>), lablab bean (<i>Lablab purpureus</i>), lentil (<i>Lens esculenta</i>), pea (<i>Pisum</i> spp.) (includes field pea), and pigeon pea (<i>Cajanus cajan</i>), canola, flax (including low linolenic acid varieties), mustard (condiment type only), sunflower, legume seed crops (alfalfa, birdsfoot trefoil, red clover and white clover)	Fixed wing	150	80	90
		Rotary wing	100	55	70

When tank mixes are permitted, consult the labels of the tank mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASABE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product for conventional application equipment can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Drift Mitigation portion of the Canada.ca website.

11.0 CROP USE DIRECTIONS

11.1 Crop Subgroup 6C - Peas

CROPS	Peas - field (dry), Pigeon pea
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply DryQuat when bottom pods of the majority of the plants are ripe & dry with the seeds detached from the pods. Seed in less mature pods will split when squeezed. This treatment does not mature peas. Because pea swaths are at considerable risk to wind losses, straight cutting is preferred. Timing is vital as premature desiccation will result in yield loss: crops should be closely monitored. Commence combining when the peas test 'dry'. DryQuat applied to peas under prolonged drought stress will provide slower and less effective desiccation compared to applications made under normal growing conditions. If prolonged drought stress conditions exist prior to application, use the highest registered rate of DryQuat for peas as well as the highest registered water volume to obtain the best activity. With indeterminate varieties, apply DryQuat when the lower pods of most plants are ripe, dry, translucent and shrunken, with enclosed seeds detached from the pods. Middle pods will be somewhat shrunken and leathery, and the seed will split when squeezed. Desiccation will dry out upper pods and green plant growth, leaving bottom and middle pods with the highest quality seed. With determinate varieties, DryQuat should be applied when the top and upper middle pods are somewhat shrunken and leathery and seeds in these pods split when squeezed. The lower middle and bottom pods are ripe and dry, translucent and shrunken, with seeds enclosed in these pods detached. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too dense or the ground too soft for ground rigs. Ensure aircraft is fitted to apply uniform spray coverage.

11.2 Crop Subgroup 6C - Lentils

CROPS	Lentils
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply DryQuat at the time swathing would normally commence. This is when the lowermost pods are yellow-brown and seeds rattle. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too dense or the ground too soft for ground rigs. DryQuat applied to lentils under prolonged drought stress, rainfall, cool temperatures and high humidity will provide slower and less effective desiccation compared to applications made under normal growing conditions. If these conditions exist prior to application, use the highest registered rate of DryQuat for lentils as well as the highest registered water volume to obtain the best activity. Harvest delays should be expected.

11.3 Crop Subgroup 6C - Chickpeas

CROPS	Chickpeas
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Heavy crop stand and/or weedy crop and/or heavy vine regrowth
RATE	Ground: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha
NOTES	This treatment does not mature chickpeas. Chickpea swaths are at risk to wind loss, and straight cutting is preferred. Timing is vital as premature desiccation will result in yield and quality loss. Crops should be closely monitored for correct stage of application. Application of DryQuat may cause the small stem attaching the pod to the chickpea plant to become brittle and lead to increased pod loss. Wait 4 to 7 days before combining the crop. It may be advantageous to harvest, and bin separately, chickpea grain from late maturing areas of the field. For Desi type, apply at the time swathing would normally commence, when the majority of plants are yellow and most pods are mature and seeds have turned from green to yellow or brown. Upper part of plant may still be green. For Kabuli type, apply when the majority of plants and pods are ripe and dry with seeds turned from green to white or tan, and detached from the pods. Dry down is less complete in Kabuli type due to its thick pod wall. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used with aircraft fitted to apply uniform spray coverage. Germination of seed is not affected by DryQuat desiccation.

11.4 Canola

CROPS	Canola
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply when 90% or more of the seed has turned brown; application of DryQuat prior to this stage can result in high levels of green seed in the sample. Combine no later than 14 days after application. This treatment does not mature canola. DryQuat is an effective desiccant aiding in the harvest of canola. Speed of pod and stem dry down will vary depending on spray coverage, environmental conditions and plant growth stage at application; however pod and stem kill will take place 7-10 days after application. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used with aircraft fitted to apply uniform spray coverage. Commence harvest as soon as the crop can be combined since significant yield loss in standing desiccated canola crops can occur due to pod drop and pod shattering. This yield loss can be greater if harvest of the standing desiccated crop is delayed or when unfavourable weather conditions including high winds and heavy rainfall occur. Germination of seed is not affected by DryQuat desiccation.

11.5 Soybeans

CROPS	Soybeans
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha – 2.52 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Heavy crop stand and/or weedy crop and/or heavy vine regrowth
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply at 80-90% natural leaf defoliation and at least 80% of the pods have turned yellow. Consider pod colour only when determining application time in years when heavy vine growth is anticipated. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used with aircraft fitted to apply uniform spray coverage. Desiccation of weeds is completed in a week. THIS TREATMENT DOES NOT MATURE SOYBEANS NOR DOES IT LOWER MOISTURE CONTENT OF SOYBEANS. Direct combine or pull soybeans when they are considered ready. DryQuat applied to soybeans under prolonged drought stress will provide slower and less effective desiccation compared to applications made under normal growing conditions. If prolonged drought stress conditions exist prior to application, use the highest registered rate of DryQuat for soybeans as well as the highest registered water volume to obtain the best activity.

11.6 Crop Subgroup 6C - Beans

CROPS	Bean (<i>Phaseolus</i> spp.) (includes field bean, kidney bean (red & white), lima bean (dry), navy bean, pinto bean, tepary bean), Bean (<i>Vigna</i> spp.) (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean), Lablab bean, Guar
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha – 2.52 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Heavy crop stand and/or weedy crop and/or heavy vine regrowth
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply at 80-90% natural leaf defoliation and at least 80% of the pods have turned yellow. Consider pod colour only when determining application time in years when heavy vine growth is anticipated. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used with aircraft fitted to apply uniform spray coverage. Desiccation of weeds is completed in a week. THIS TREATMENT DOES NOT MATURE BEANS NOR DOES IT LOWER MOISTURE CONTENT OF BEANS. Direct combine or pull beans when they are considered ready. Combining of dry beans and Adzuki beans can often be done the day of pulling; however, this is dependent on the condition of the beans. DryQuat applied to beans under prolonged drought stress will provide slower and less effective desiccation compared to applications made under normal growing conditions. If prolonged drought stress conditions exist prior to application, use the highest registered rate of DryQuat for beans as well as the highest registered water volume to obtain the best activity.

11.7 Crop Subgroup 6C - Sweet White Lupins

CROPS	Sweet White Lupins, Bean (<i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin and white sweet lupin)
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha
NOTES	Apply when the pods are brown and the internal seed (endosperm) is yellow when cut. DO NOT APPLY BY AIR. Apply DryQuat once per season for pre-harvest desiccation. Wait at least 7 days before harvesting. Do not add wetters, spreaders or stickers to the spray solution. Ground rig application only. Ground spraying may be done with any standard boom sprayer.

11.8 Flax

CROPS	Flax (including low linolenic acid varieties)
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply when crop is at 75% boll turn stage (normal swathing time) and NOT before 75% boll turn. Harvest when flaxseed tests 'dry'. DryQuat is an effective desiccant aiding in the harvest of flax (including low linolenic acid varieties). Desiccation reduces the period of time from maturity to harvest, reduces wear and tear on harvesting equipment, reduces harvest time, decreases the moisture content of the seed and eliminates the need for swathing. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too dense or the ground too soft for ground rigs. Ensure aircraft is fitted to apply uniform spray coverage. Germination of seed is not affected by DryQuat desiccation of the crop.

11.9 Mustard

CROPS	Mustard (condiment type only)
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply when crop is at 75% seed turn (to mainly brown) stage. Combine no later than 14 days after application. Do not apply when the crop is immature or past the recommended stage of maturity. Commence combining no later than 14 days after application. NOTE: Pod drop and some shattering can occur in high winds in the standing crop. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too dense or the ground too soft for ground rigs. Apply by means of an aircraft fitted to apply uniform spray coverage.

11.10 Sunflowers

CROPS	Sunflowers
CROP CONDITION	Full canopy, few weeds (normal crop)
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop
RATE	Ground: 2.04 L/ha Aerial: 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply when seeds reach maturity (20-50% moisture in the seed and hull). DryQuat is an effective desiccant aiding in the harvest of sunflower seed for seed, oil production and confectionery use. If specialized high clearance equipment is available, ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too tall or the ground too soft for ground rigs. Do not apply when the crop is immature. Combine 15-20 days after spraying.

11.11 Legumes

CROPS	Legumes (alfalfa, birdsfoot trefoil, red clover, white clover, and alsike clover) Seed Crops
CROP CONDITION	Full canopy and/or weedy crop
RATE	Ground: 2.04 L/ha – 3.24 L/ha Aerial: 2.04 L/ha – 3.24 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
CROP CONDITION	Very dense canopy and/or weedy crop and/or secondary regrowth
RATE	Ground: 3.24 L/ha Aerial: 3.24 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Seed crops only. Apply when the majority of the pods of individual plants are ripe but before they shatter. To prevent pod shattering and loss of seed the interval between spraying and harvest should not exceed 7 days. Birdsfoot trefoil plants under drought or disease stress may be subject to damage when desiccated with DryQuat. Do not use DryQuat if a residual herbicide has been used on the legumes within the past 12 months. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used where the crop is too dense or the ground too soft for ground rigs. Ensure aircraft is fitted to apply uniform spray coverage.

12.0 MINOR USES

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Life Scientific (Canada) Inc. under the User Requested Minor Use Label Expansion program. For these uses, Life Scientific (Canada) Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

CROPS	Faba (Fava) Broad Beans
CROP CONDITION	Use higher spray rates for dense canopies and/or weedy crops
RATE	Ground: 1.50 L/ha – 2.04 L/ha Aerial: 2.04 – 2.76 L/ha
APPLICATION VOLUME	Ground: 225 L/ha – 550 L/ha Aerial: at least 45 L/ha
NOTES	Apply 1 application only for crop desiccation. Apply when the majority of the plants are ripe and dry. Pods will be fully filled and the bottom pods will be tan or black in colour. Observe a 4 – 10 day pre-harvest interval (PHI). Spray pressure should be increased with high clearance sprayers (90 – 100 psi) to ensure adequate coverage of DryQuat in the lower stem area. Ground sprayer application will facilitate use of higher water volumes and provide more complete coverage. Aerial application may be used with aircraft fitted to apply uniform spray coverage. Desiccation of weeds is completed in a week. THIS TREATMENT DOES NOT MATURE BEANS NOR DOES IT LOWER MOISTURE CONTENT OF BEANS. DryQuat applied to beans under prolonged drought stress will provide slower and less effective desiccation compared to applications made under normal growing conditions. If prolonged drought stress conditions exist prior to application, use the highest registered rate of DryQuat for beans as well as the highest registered water volume to obtain the best activity. Timing is vital as premature desiccation will result in yield loss: crops should be closely monitored.

13.0 RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, DryQuat is a Group 22 herbicide. Any weed population may contain or develop plants naturally resistant to DryQuat and other Group 22 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance- management strategies should be followed.

To delay herbicide resistance:

Where possible, rotate the use of DryQuat or other Group 22 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.

Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.

Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

For further information or to report suspected resistance, contact company representatives at 403-498-6623 or at www.lifescientific.ca.