

2017-3550  
2018-04-04

GROUP	<b>9</b>	HERBICIDE
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(LABEL)

## **RACKETEER**

### HERBICIDE SOLUTION

Water soluble herbicide for non-selective weed control  
in cropland systems and non-cropland areas

### AGRICULTURAL AND INDUSTRIAL

ACTIVE INGREDIENT: Glyphosate present as the isopropylamine salt 360 g/L

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

REGISTRATION NO. **31314** PEST CONTROL PRODUCTS ACT

WARNING EYE AND SKIN IRRITANT

Rack Petroleum Ltd.  
Hwy. 4  
Biggar, Saskatchewan S0K 0M0  
1-866-721-1800

### **EMERGENCY TELEPHONE NUMBER**

IN CASE OF A MEDICAL EMERGENCY, CALL TOLL FREE, DAY OR NIGHT  
1-800-327-8633 (FASTMED)

RACKETEER is a registered trademark of  
Rack Petroleum Ltd.

NET CONTENTS: 2 × 9.5 L, 30 L, 113 L, 940 L, 1040 L, BULK

### **READ ENTIRE LABEL CAREFULLY BEFORE USE**

RACKETEER is a non-selective, non-residual herbicide containing 360 g/L glyphosate as isopropylamine salt, formulated as a water soluble liquid. It is used for the control of most herbaceous weeds in agricultural and industrial sites. The product is absorbed through the foliage and translocated throughout the plant down to the root system. Visible symptoms, such as gradual wilting and yellowing, are usually obvious within 2 to 4 days of application to annual weeds and may not be apparent for 7 to 10 days on perennial weeds.

### **PRECAUTIONS**

- KEEP OUT OF REACH OF CHILDREN.

- CAUSES EYE AND SKIN IRRITATION.
- HARMFUL IF SWALLOWED.
- DO NOT GET IN EYES. AVOID CONTACT WITH SKIN.
- WASH HANDS AND EXPOSED SKIN BEFORE EATING, DRINKING OR SMOKING AND AFTER WORK.
- FOR GOOD AGRICULTURAL PRACTICE: For good hygiene practice, wear a long-sleeved shirt, long pants, coverall and chemical resistant gloves during mixing, loading, clean-up and repair activities. Wear goggles or face shield during mixing/loading.
- WASH SPLASHES FROM SKIN AND EYES IMMEDIATELY.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at: [www.croplife.ca](http://www.croplife.ca).

### **FIRST AID**

**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.

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

### **TOXICOLOGICAL INFORMATION**

Treat symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

### **ENVIRONMENTAL HAZARDS**

Toxic to aquatic organisms and non-target plants. Avoid direct applications to any body of water. Do not contaminate water by disposal of waste or cleaning of equipment. Observe buffer zones specified under DIRECTION FOR USES.

Avoid direct application to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely. Do not contaminate water by disposal of waste or cleaning of equipment. Avoid all drift or contact with vegetation for which treatment is not intended as damage or destruction may occur.

- To reduce runoff from treated areas into aquatic habitats, avoid application 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 strip between the treated area and the edge of the water body.

## **PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fibreglass, plastic and plastic-lined containers. **DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.**

This product or the spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## **STORAGE**

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEED STUFFS.  
KEEP ONLY IN ORIGINAL CONTAINER, TIGHTLY CLOSED.

Pesticide Storage: Store above -12°C (10°F) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 20°C (68°F) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

## **DISPOSAL**

### **RECYCLABLE CONTAINERS**

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:

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## **RETURNABLE-REFILLABLE CONTAINERS**

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(BOOKLET)

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### **PRECAUTIONS FOR USE**

Avoid contact with desirable vegetation by direct application or spray drift as severe injury or destruction may result. Avoid drift or overspray to non-target vegetation and wildlife habitats. **DO NOT USE IN GREENHOUSES.** Drain and clean sprayer and parts immediately after using this product.

Glyphosate is not to be applied using hand-wicking or hand-daubing methods. The restricted entry interval is 12 hours after application for all agricultural uses.

Do not contaminate water sources by disposal of wastes or cleaning of equipment.

Reduced results may occur if water containing soil is used such as water from ponds and ditches. Poor control may also occur when treating weeds heavily covered with dust.

### **GENERAL PRODUCT INFORMATION**

RACKETEER is a water soluble herbicide for non-selective weed control.

RACKETEER is applied as a foliar spray for the control of most herbaceous plants. It may be applied through most standard industrial or field type sprayers after dilution and thorough mixing with water in accordance with the booklet instructions.

RACKETEER moves through the plant from the point of foliage contact into the root system. Visible effects on most annual weeds occur within 2 to 4 days but on most perennial weeds may not occur until 7 to 10 days.

Extremely cool or cloudy weather at treatment time may slow down the activity of this product and delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of above ground growth and deterioration of

underground plant parts.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

**RACKETEER does not provide residual weed control.**

For subsequent residual weed control apply a registered residual herbicide. Read and carefully observe cautionary statements and all other information appearing on the labels of all herbicides used.

Heavy rainfall immediately after application may wash the chemical off the foliage and a repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, RACKETEER is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to RACKETEER (glyphosate) and other Group 9 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 the 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 RACKETEER or other Group 9 herbicides 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 Rack Petroleum Ltd. at 1-866-721-1800.

## GENERAL APPLICATION NOTES

Results are best when weeds are actively growing. If weeds have been mowed, allow to return to recommended growth stage.

Delay application until vegetation has emerged to the stage described for control of such vegetation under the Annual and Perennial Weed Control tables of this booklet to provide adequate leaf surface to receive the spray. Unemerged plants arising from underground rhizomes or root stocks of perennials will not be affected by the spray and will continue to grow. For this reason best control of most perennial weeds is obtained when the treatment is made at the late growth stages approaching maturity.

Always use the higher rates of RACKETEER per hectare within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Weed control may not be satisfactory if this product is applied to weeds growing under poor growing conditions such as drought, flooding, frost, high temperatures, disease or insect damage.

Reduced results may also occur when treating weeds heavily covered with dust.

Heavy rainfall immediately after application may wash the product off the foliage and a repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

**RACKETEER should only be mixed with products recommended in this label. Do not mix with any surfactant, pesticide, herbicide oils or any other product other than water unless specified.**

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

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.

## TANK MIXES

See charts on Annual and Perennial Weed Control Tank Mixes.

RACKETEER may be used with the following herbicides: Pursuit 70 DG, Pursuit Commercial(Agricultural), PARDNER EMULSIFIABLE SELECTIVE WEEDKILLER, Banvel



II, 2,4-D low volatile ester or amine formulations: See section on Minimum and Zero Tillage Tank Mixtures. RACKETEER may be used with the following surfactants: AGRAL 90 NON-IONIC LIQUID WETTING & SPREADING AGENT, AgSurf, Companion Agricultural Adjuvant.

Princep Nine-T Herbicide, Simadex Simazine Flowable: See section on Tree, Vine and Berry Crops.

Vanquish Herbicide, Simadex Simazine Flowable, 2,4-D amine: See section on Non-cropland and Industrial Uses.

Always refer to the herbicide labels for specific instructions regarding the use of that product.

Trade name	Trademark of
Banvel II, Pursuit 70 DG, Pursuit Commercial (Agricultural)	BASF
Vanquish Herbicide, Princep Nine-T Herbicide	Syngenta
Pardner Emulsifiable Selective Weedkiller, Simadex Simazine Flowable	Bayer

## VEGETATION CONTROLLED

RACKETEER controls many annual and perennial grasses, broadleaf weeds and woody brush and trees when applied as recommended and under the conditions described.

For information on how to control specific weeds, including herbicide rate, refer to the Annual Weed Control and Perennial Weed Control sections of this label. The following is a partial list of the weeds controlled:

## WEEDS CONTROLLED

### ANNUAL WEEDS

(in alphabetical order)

Annual blue grass	<i>Poa annua</i>	Narrow-leaved vetch	<i>Vicia angustifolia</i>
Annual sow-thistle	<i>Sonchus oleraceus</i>	Night-flowering catchfly	<i>Silene noctiflora</i>
Barnyard grass	<i>Echinochloa crusgalli</i>	Pennsylvania smartweed	<i>Polygonum pennsylvanicum</i>
Chickweed	<i>Stellaria media</i>	Persian darnel	<i>Lolium persicum</i>
Cleavers	<i>Galium aparine</i>	Prickly lettuce	<i>Lactuca serriola</i>
Cocklebur	<i>Xanthium strumarium</i>	Proso millet	<i>Panicum miliaceum</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>	Redroot pigweed	<i>Amaranthus retroflexus</i>
Corn spurry	<i>Spergula arvensis</i>		
Cow cockle	<i>Saponaria vaccaria</i>	Russian thistle	<i>Salsola pestifer</i>
Crab grass (large)	<i>Digitaria sanguinalis</i>	Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Crab grass (smooth)	<i>Digitaria ischaemum</i>	Smooth pigweed	<i>Amaranthus hybridus</i>
Dodder	<i>Cuscuta spp.</i>	Stinkweed	<i>Thlaspi arvense</i>
Downy brome	<i>Bromus tectorum</i>	Stork's bill	<i>Erodium cicutarium</i>
Eastern black nightshade	<i>Solanum ptycanthum</i>	Velvetleaf	<i>Abutilon theophrasti</i>
Fall panicum	<i>Panicum dichotomiflorum</i>	Volunteer barley	<i>Hordeum spp.</i>
Fleabane (Canada)	<i>Erigeron canadensis</i>	Volunteer canola	<i>Brassica spp.</i>
Flixweed	<i>Descurainia sophia</i>	Volunteer corn	<i>Zea mays</i>
Giant foxtail	<i>Setaria faberii</i>	Volunteer flax	<i>Linum spp.</i>

Green foxtail	<i>Setaria viridis</i>	Volunteer wheat	<i>Triticum spp.</i>
Green smartweed	<i>Polygonum scabrum</i>	Wild buckwheat	<i>Polygonum convolvulus</i>
Hemp-nettle	<i>Galeopsis tetrahit</i>	Wild mustard	<i>Sinapis arvensis</i>
Kochia	<i>Kochia scoparia</i>	Wild oats	<i>Avena fatua</i>
Lady's-thumb	<i>Polygonum persicaria</i>	Wild tomato	<i>Solanum triflorum</i>
Lamb's-quarters	<i>Chenopodium album</i>	Yellow foxtail	<i>Setaria glauca</i>
Narrow-leaved hawk's-beard	<i>Crepis tectorum</i>		

## PERENNIAL WEEDS

(in alphabetical order)

Absinth (wormwood)	<i>Artemisia absinthium</i>	Foxtail barley	<i>Hordeum jubatum</i>
Alfalfa	<i>Medicago sativa</i>	Heart-podded hoary cress	<i>Cardaria draba</i>
Blue grass (Canada)	<i>Poa compressa</i>	Hemp dogbane	<i>Apocynum cannabinum</i>
Blue grass (Kentucky)	<i>Poa pratensis</i>	Japanese knotweed	<i>Polygonum cuspidatum</i>
Brome (smooth)	<i>Bromus inermis</i>	Perennial sow-thistle	<i>Sonchus arvensis</i>
Canada thistle	<i>Cirsium arvense</i>	Poison-ivy	<i>Rhus radicans</i>
Cattail	<i>Typha latifolia</i>	Purple loosestrife	<i>Lythrum salicaria</i>
Common milkweed	<i>Asclepias syriaca</i>	Quack grass	<i>Agropyron repens</i>
Cottontop	<i>Eriophorum chamissonis</i>	Wire stemmed muhly	<i>Muhlenbergia frondosa</i>
Curled dock	<i>Rumex crispus</i>	Yellow nutsedge	<i>Cyperus esculentus</i>
Dandelion	<i>Taraxacum officinale</i>	Yellow toadflax	<i>Linaria vulgaris</i>
Field bindweed	<i>Convolvulus arvensis</i>		

## WOODY WEEDS AND BRUSH

(in alphabetical order)

Alder	<i>Alnus spp.</i>	Pine	<i>Pinus spp.</i>
Birch	<i>Betula spp.</i>	Poplar	<i>Populus spp.</i>
Broadleaf meadowsweet	<i>Spiraea latifolia</i>	Raspberry	<i>Rubus spp.</i>
Canadian rhododendron	<i>Rhododendron canadense</i>	Salmonberry	<i>Rubus spp.</i>
Cedar	<i>Thuja spp.</i>	Sheep -laurel	<i>Kalmia angustifolia</i>
Cherry	<i>Prunus spp.</i>	Snowberry (western)	<i>Symphoricarpos occidentalis</i>
Douglas fir	<i>Pseudotsuga spp.</i>	Sweet-fern	<i>Comptonia peregrina</i>
Hemlock	<i>Tsuga spp.</i>	Willow	<i>Salix spp.</i>
Maple	<i>Acer spp.</i>	Withrod	<i>Viburnum cassinoides</i>
Mountain Fly-honeysuckle	<i>Lonicera villosa</i>		

## APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS

### GROUND BOOM AND BOOMLESS SPRAYERS

#### Mixing:

For field or industrial type sprayers, fill the spray tank with one half the required amount of water. Add the proper amount of RACKETEER (see appropriate table) and mix well before adding the remaining portion of water.

Placing the filling hose below the surface of the liquid solution will prevent any excessive foaming.

Remove the hose from the tank immediately after filling to avoid back siphoning into water source. (A one-way valve should be installed to prevent back siphoning.) Use of mechanical agitators may cause excessive foaming. By-pass lines should terminate at the bottom of the tank.

**Application:**

Use flat fan nozzles in boom sprayers. To control perennial weeds, and woody brush and trees as listed, apply RACKETEER in 50 to 300 L of water per hectare as a broadcast spray. Use no more than 275 kPa pressure.

To control annual weeds as listed, apply RACKETEER in 50 L to 100 L of water per hectare as a broadcast spray. Use no more than 275 kPa pressure.

**KNAPSACK SPRAYERS, HAND-HELD AND HIGH VOLUME EQUIPMENT**

High volume spraying utilizes handguns or other suitable nozzle arrangements to apply a directed spray to weeds, woody brush and trees. Use coarse sprays only.

**Mixing:**

Mix the proper amount of RACKETEER with water in a large container.

Fill the sprayer with the mixed solution.

Unless otherwise stated, make a 1% solution of RACKETEER in water (1 L of RACKETEER in 100 L of water). A 2% solution (2 L of RACKETEER per 100 L of water) should be used on harder to control perennials.

**Application:**

Spray coverage should be uniform and complete. Apply on a spray-to-wet basis. Do not spray to the point of runoff.

Hand gun application should be properly directed to avoid spraying desirable plants.

**MIST BLOWERS**

For control of woody weeds, brush and trees listed in the Vegetation Controlled lists, use the recommended rate of RACKETEER in at least 200 L of water per hectare.

Airblast or mist blower application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side. For airblast applications, turn off outward pointing nozzles at row ends and outer rows.

**WIPER, WICK AND ROLLER EQUIPMENT**

These applicators apply RACKETEER solution directly onto the weeds by contacting the weed

with an absorbent material containing the herbicide solution. Weeds should be a minimum 15 cm above the desired vegetation to prevent contact of RACKETEER with the desired vegetation.

**Mixing:**

Mix the proper amount of RACKETEER with water in a large container. Use this mixed solution in the wiper, wick or roller equipment.

**Application:**

These applicators can be used to control weeds in:

- industrial sites, tree plantings and non-crop sites as specified;
- the following agricultural crops: apple, cherry, peach, pear and plum orchards, grape vineyards, soybeans, dry beans, strawberries and cranberries. (Note: applications must be made before initial pod set in soybeans and dry beans.)

The applicator should be adjusted so that the contact point of the wiper, roller or wick is at least 5 cm above the desirable vegetation. Droplets or foam of the RACKETEER solution settling on desirable vegetation may result in discolouration, stunting or destruction.

Best results may be obtained when more of the weed is exposed to the herbicide solution. It is recommended that two applications be made in opposite directions, if possible.

Weeds not contacted will not be affected. This may occur in dense clumps, severe infestation, or when the height of the weeds varies so that not all weeds are contacted. In these instances, a repeat treatment may be necessary.

**AVOID CONTACT WITH DESIRABLE VEGETATION.**

**Wiper, wick, roller application notes:**

Maintain wiper equipment in good operating condition. Care must be taken with all types of wipers to ensure that the absorbent material does not become over saturated, causing the herbicide to drip onto desirable vegetation.

Avoid leakage or dripping onto desirable vegetation.

Adjust height or wiper applicator to ensure proper contact with weeds.

Keep wiping surfaces clean.

Maintain recommended roller speed on roller applicators while in use.

DO NOT use wiper equipment when weeds are wet.

DO NOT operate equipment at ground speeds less than 4 or greater than 10 km/h. Weed control may be affected by speed of application equipment. As weed density increases, reduce equipment ground speed to ensure good coverage of weeds.

Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the

lower end and drying on the upper end of the wiper applicator.

Variation in equipment design may affect weed control. With wiper applicators, the wiping material and its orientation must allow delivery of sufficient quantities of the recommended RACKETEER solution directly to the weed.

Mix only the amount of solution to be used during a one day period, as reduced activity may result from use of leftover solution. Thoroughly drain and clean all equipment immediately after use.

## **AERIAL APPLICATION**

### **Directions for Use (for additional information see section on aerial application on Industrial Sites Rights-of-Way ONLY)**

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.

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 recommended 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. The use of a spotter plane is recommended.

## **AERIAL USE PRECAUTIONS**

### **BUFFER ZONES**

Aerial Applications: 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 (pre-harvest) or 8 km/h (rights-of-way) at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASAE S572.1) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Buffer Zones:

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment, inter-row hooded sprayer, low-clearance hooded or shielded sprayers that ensure spray drift does not come in contact with orchard crop fruit or foliage, soil drench and soil incorporation.

For application to rights-of-way and for forestry uses, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies which minimize off-site drift, including meteorological conditions (for example, wind direction, low wind speed) and spray equipment (for example, coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats.

The 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 and shrublands) and sensitive aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, wetlands and estuarine/marine water bodies). Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

Agricultural, forestry and non-cropland systems	Maximum number of applications	Buffer Zones (metres) Required for the Protection of:	
		Aquatic habitats	Terrestrial habitats
<b>Agricultural crop system and ground boom application method</b>			
Pre-seeding applications for rye, cranberry, filberts, hazelnut and all other crops. Established pasture and summer fallow.	1	1	1
Canola – Roundup Ready hybrid for seed production	2	1	1
Filberts or hazelnut, sugar beets (glyphosate tolerant varieties)	4	1	1
Corn (glyphosate non-tolerant varieties including grain, silage and ornamental types), sugar beet (glyphosate non-tolerant varieties), strawberry, blueberry highbush and lowbush, walnut, chestnut, Japanese heartnut, Turf grass (prior to establishment or renovation)	2	1	2
Wheat, barley, oats, soybean (glyphosate non-tolerant varieties), corn-sweet (glyphosate tolerant varieties), canola (glyphosate non-tolerant varieties), peas, dry beans, flax (including low linoleic acid varieties), lentils, chickpea, corn (glyphosate tolerant varieties), forage grasses and legume including seed production	3	1	2
Canola (glyphosate tolerant varieties), soybean (glyphosate tolerant varieties)	4	1	2
Apple, apricot, cherry (sweet/sour), peaches, pears, plums, grapes	3	1	3
<b>Agricultural crop system and airblast application method (including mist blower)</b>			
Pasture	1	20	30
Turfgrass (Prior to establishment or renovation)	2	25	35
<b>Forest plant system and ground boom application method</b>			
Forest and woodlands > 500 ha Site preparation	2	1	NR
<b>Forest plant system and airblast application method (including mist blower)</b>			
Forest and woodlands > 500 ha Site preparation	2	1	NR
<b>Non-cropland system and ground boom application method</b>			
Non-crop land and industrial uses: Industrial and rights of way areas, Recreational and public areas	3	1	3*
<b>Non-cropland system and airblast application method (including mist blower)</b>			

Agricultural, forestry and non-cropland systems		Maximum number of applications	Buffer Zones (metres) Required for the Protection of:	
			Aquatic habitats	Terrestrial habitats
Non-crop land and industrial uses: Industrial and rights of way areas, Recreational and public areas		3	1	30*
<b>Agricultural crop system and aerial application method</b>				
<b>Wing type</b>				
Rye, corn (glyphosate non-tolerant varieties), corn-sweet (glyphosate tolerant varieties), chickpea, sugar beet (glyphosate non-tolerant varieties), all other crops for pre-seeding treatments only	Fixed and rotary wing	1	15	20
Canola (glyphosate tolerant varieties)	Fixed and rotary wing	3	20	40
Sugar beets (glyphosate tolerant varieties)	Fixed wing	2	20	30
	Rotary wing	2	15	30
Wheat, barley, oats, soybean (glyphosate non-tolerant varieties), canola (glyphosate non-tolerant varieties), peas, dry beans, flax (including low linoleic acid varieties), lentils	Fixed wing	2	20	35
	Rotary wing	2	20	30
Forage grasses and legume including seed production	Fixed and rotary wing	1	20	40
Soybean (glyphosate tolerant varieties)	Fixed wing	3	20	45
	Rotary wing	3	20	40
Summer fallow	Fixed wing	1	20	45
	Rotary wing	1	20	40
Corn (glyphosate tolerant varieties)	Fixed wing	2	20	50
	Rotary wing	2	20	45
Pasture	Fixed wing	1	30	70
	Rotary wing	1	30	55
<b>Forestry system and aerial application method</b>				
<i>Forest and woodlands &gt;500 ha</i> Site preparation	Fixed wing	2	10	NR
	Rotary wing	2	1	NR
<i>Forest and woodlands &gt;500 ha</i> Site preparation	Fixed wing	2	5	NR
	Rotary wing	2	1	NR
<b>Non-cropland system and aerial application method</b>				
Non-crop land and industrial uses: rights-of way areas only	Fixed wing	3	100	NR
	Rotary wing	3	60	NR

\* Buffer zones for the protection of terrestrial habitats are not required for forestry uses or for use on rights-of-way including railroad ballast, rail and hydro rights-of-way, utility easements and roads.

Agricultural, forestry and non-cropland systems	Maximum number of applications	Buffer Zones (metres) Required for the Protection of:	
		Aquatic habitats	Terrestrial habitats

**NR = Not Required**

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

The buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

Apply only when weather 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 buffer zones should be observed.

Do not angle nozzles forward into the airstream, and do not increase spray volume by increasing nozzle pressure.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in 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.

## **OPERATOR PRECAUTIONS**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

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

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.



## **PRODUCT SPECIFIC PRECAUTIONS**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-247-8013, or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of 30-100 L/ha.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of RACKETEER accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38412 may prevent corrosion.

## **AGRICULTURAL AND CROPLAND USES**

The following are use situations for RACKETEER Herbicide. The type of vegetation present and the use situation will dictate the choice of application equipment. Information on the equipment selected to apply RACKETEER can be found in the Application Equipment and Mixing Instructions section. Use rates can then be selected from the Annual and Perennial Weed Control charts.

## **PRE-PLANT TREATMENT**

RACKETEER can be applied prior to planting of all crops for control of emerged weeds listed on the label. Ensure weeds are at the recommended growth stage at the time of application. Apply **BEFORE** seeding or transplanting crop.

## **SUMMER FALLOW**

RACKETEER may be applied in summer fallow to control weeds listed on the label. Ensure weeds are at the recommended growth stage and actively growing at the time of application. Reduced control may result if weeds are drought stressed. Repeat treatments may be necessary to control later germinating weeds.

## **MINIMUM AND ZERO TILLAGE SYSTEMS**

**(All field crops including cereals, oilseeds, pulses, forages and corn)**

RACKETEER may be applied before or after seeding but before crop emerges for control of emerged weeds in minimum and zero tillage cropping systems for all field crops. Weeds should be treated at the growth stage according to the Annual and Perennial Weed Control charts.

## **DO NOT APPLY AFTER CROP EMERGENCE.**

Since RACKETEER does not provide residual control, application too far in advance of seeding may allow weeds to germinate between application and crop emergence.

## MINIMUM AND ZERO TILLAGE TANK MIXES

RACKETEER plus Pardner (bromoxynil), can be applied prior to seeding or after seeding, but before crop emergence in wheat, barley and oats. See chart on Tank Mixes for Annual Weed Control.

RACKETEER plus Pursuit can be applied before or after seeding, but prior to crop emergence in soybeans. RACKETEER will control emerged weeds listed on this label when applied as directed (see Weeds Controlled lists). Pursuit will control weeds germinating from seed. Add the recommended rates of products in 100 L of water/ha following the instructions on the RACKETEER and Pursuit herbicide label.

Refer to the Pursuit label for further information on weeds controlled, application directions and use precautions.

Only SOYBEANS, FIELD CORN, SPRING BARLEY, SPRING WHEAT and WINTER WHEAT may be planted the season following a Pursuit application. Winter wheat may be planted the same year as a Pursuit application to soybeans, but not earlier than 120 days after the application.

**DO NOT APPLY AFTER CROP EMERGENCE.**

## RACKETEER TANK MIXES FOR ANNUAL WEED CONTROL

### SUMMER FALLOW AND MINIMUM TILLAGE SYSTEMS

<b>Tank mixtures</b>	<b>Rate (L/ha)</b>	<b>Weeds controlled</b>	<b>Comments</b> (apply in 50-100 L/ha water) 350 mL surfactant (see note below)
RACKETEER + BANVEL II	0.75-1.0 + 0.29	Volunteer cereal, wild oats, green foxtail, wild mustard, flixweed*, lamb's-quarters, lady's-thumb, stinkweed, kochia, Russian thistle, cow cockle, redroot pigweed**, wild buckwheat**	This tank mix for summer fallow use only. Weeds should be less than 15 cm tall and actively growing. Use higher rate if weeds taller than 8 cm  *RACKETEER applied at 1 L/ha rate only.  **Suppression only. See other tank mixtures for control options.
RACKETEER + PARDNER	0.75-1.0 + 1.25	Volunteer cereals, green foxtail, wild mustard, lady's-thumb, stinkweed, wild buckwheat*, redroot pigweed**,	This tank mix for summer fallow use only; and prior to planting wheat, oats and barley in minimum tillage systems. Weeds should be less than 15 cm and actively growing. Use higher rate if weeds

Tank mixtures	Rate (L/ha)	Weeds controlled	Comments (apply in 50-100 L/ha water) 350 mL surfactant (see note below)
		kochia**, wild oats**	are taller than 8 cm.  *Use RACKETEER at 1 L/ha rate only for wild buckwheat control.  **1 L rate, suppression only. See other tank mixtures for control options.

RACKETEER + 2,4-D <sup>A</sup>	1.25-1.9 + 0.6-0.9 <sup>4</sup> or 1.2-1.5 <sup>5</sup>	<p>Volunteer cereals, wild oats, green foxtail, downy brome giant foxtail, and Persian darnel.</p> <p>Volunteer canola, (rapeseed) (non-Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's-thumb, stinkweed, kochia, lamb's-quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow-leaved hawk's beard***</p> <p>Volunteer Roundup Ready canola (1-4 leaf stage)<sup>4</sup>, blubur<sup>4</sup>, burdock<sup>4</sup>, cocklebur<sup>4</sup>, common plantain<sup>4</sup>, daisy fleabane<sup>4</sup>, false flax<sup>4</sup>, false ragweed<sup>4</sup>, goat's beard<sup>4</sup>, mustards<sup>4</sup> (except dog and tansy), prickly lettuce<sup>4</sup>, ragweeds<sup>4</sup>, Russian pigweed<sup>4</sup>, shepherd's</p>	<p>Weeds should be less than 15 cm tall and actively growing for best results.</p> <p>Use higher rate if weeds are beyond 8 cm in height.</p> <p>* DO NOT use these rates on plants greater than 8 cm in height.</p> <p>** For 3-4 leaf stage use 1.9 L/ha rate.</p> <p>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</p> <p><sup>4</sup> 2,4-D at 0.6-0.9 L/ha (280-420 g ai/ha).</p> <p><sup>5</sup> 2,4-D at 1.2-1.5 L/ha (560-700 g ai/ha).</p> <p>Use this tank mix prior to seeding or after seeding but before crop emergence in wheat, winter wheat, barley and rye.</p> <p>No surfactant required.</p>
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		<p>purse<sup>4</sup>, stinging nettle<sup>4</sup>, sweet clover<sup>4</sup>, thyme-leaved spurge<sup>4</sup>, wild radish<sup>4</sup>, wild sunflower<sup>4</sup></p> <p>Volunteer Roundup Ready canola (4-6 leaf stage)<sup>5</sup>, annual sow thistle<sup>5</sup>, common chickweed<sup>5</sup>, common purslane<sup>5</sup>, dog and tansy mustard<sup>5</sup>, oak-leaved goosefoot<sup>5</sup>, common groundsel<sup>5</sup>, hairy galinsoga<sup>5</sup>, hawkweed<sup>5</sup>, heal-all<sup>5</sup>, knotweed<sup>5</sup>, peppergrass<sup>5</sup>, pineapple weed<sup>5</sup>, prostrate pigweed<sup>5</sup>, purslane<sup>5</sup>, sheep sorrel<sup>5</sup>, green smartweed<sup>5</sup>, tumble pigweed<sup>5</sup>, velvetleaf<sup>5</sup>, volunteer canola (rapeseed)<sup>5</sup></p>	
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<p>RACKETEER + 2,4-D<sup>1</sup></p>	<p>0.75-1.0 + 1.2</p>	<p>Volunteer cereals, wild oats*, green foxtail*, volunteer canola (rapeseed), wild mustard, flixweed, redroot pigweed, lady's-thumb, stinkweed, kochia, lamb's-quarters**, Russian thistle**</p>	<p><b>This tank mix for summer fallow use only.</b> Weeds should be less than 15 cm tall and actively growing. Use higher rate if weeds are taller than 8 cm.</p> <p>*Use RACKETEER at 1.0 L/ha rate only for wild oats and green foxtail control.</p> <p>**Suppression only. See other tank mixtures for control options.</p>
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<p>RACKETEER + MCPA<sup>C</sup> 500 g/L formulation, if another formulation is used, adjust rate accordingly</p>	<p>1.25-1.9 + 0.5-0.7<sup>1</sup> OR 0.5-1.0<sup>2</sup></p>	<p>Volunteer cereals, wild oats, green foxtail, and Persian darnel.</p> <p>Volunteer canola (rapeseed) (non- Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's thumb, stinkweed, kochia, lamb's quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow- leaved hawk's beard***</p> <p>Volunteer Roundup Ready canola (1-4 leaf stage)<sup>1,2</sup>, bluebur<sup>3</sup>, burdock<sup>3</sup> (before 4 leaf stage), false flax<sup>3</sup>, flixweed<sup>3</sup>, lamb's quarters<sup>3</sup>, mustards<sup>3</sup> (except dog and tansy), prickly lettuce<sup>3</sup>, ragweeds<sup>3</sup>, redroot pigweed<sup>3</sup>, Russian pigweed<sup>3</sup>, shepherd's purse<sup>3</sup>, stinkweed (field pennycress)<sup>3</sup>, vetch<sup>3</sup>, wild radish<sup>3</sup>, wild sunflower<sup>3</sup></p>	<p>Weeds should be less than 15 cm tall and actively growing for best results.</p> <p>Use higher rate if weeds are beyond 8 cm in height.</p> <p>* DO NOT use these rates on plants greater than 8 cm in height.</p> <p>** For 3-4 leaf stage use 1.9 L/ha rate.</p> <p>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</p> <p><sup>1</sup> MCPA amine at 0.5-0.7 L/ha (250- 350 g ai/ha) prior to peas.</p> <p><sup>2</sup> MCPA at 0.5-1.0 L/ha (250-500 g ai/ha) prior to wheat, barley, oats, corn (field and sweet MCPA<sup>C</sup> rye and flax.)</p> <p><sup>3</sup> MCPA at 0.7-1.0 L/ha (350-500 g ai/ha) only.</p> <p>Use this tank mix prior to seeding in wheat, barley, rye, oats, corn (field and sweet) MCPA<sup>C</sup>, flax, and field peas MCPA<sup>C</sup></p> <p>No surfactant required.</p>
<p>RACKETEER + BUCTRIL M Herbicide</p>	<p>1.25-1.9 + 0.5-1.0<sup>1</sup></p>	<p>Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail and Persian darnel.</p> <p>Volunteer canola (rapeseed) (non- Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's thumb, stinkweed,</p>	<p>Weeds should be less than 15 cm tall and actively growing for best results.</p> <p>Use higher rate if weeds are beyond 8 cm in height.</p> <p>* DO NOT use these rates on plants greater than 8 cm in height.</p> <p>** For 3-4 leaf stage use 1.9 L/ha rate.</p>

		<p>kochia, lamb's quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow-leaved hawk's beard***</p> <p>Volunteer Roundup Ready Canola (1-4 leaf stage)<sup>1,2</sup></p> <p>Seedlings up to the 4-leaf stage<sup>2</sup>: green smartweed, pale smartweed, lady's thumb, cow cockle, redroot pigweed, flixweed, bluebur shepherd's purse, kochia<sup>3</sup>, Russia thistle<sup>3</sup>, scentless chamomile<sup>4</sup>, volunteer sunflower, night flowering catchfly, cocklebur, velvetleaf<sup>5</sup>, ball mustard, American nightshade</p> <p>Seedlings up to the 6-leaf stage<sup>2</sup>: wild tomato</p> <p>Seedlings up to the 8-leaf stage<sup>2</sup>: wild buckwheat, tatar buckwheat, common buckwheat, stinkweed, wild mustard, wormseed mustard, lamb's quarters, common ragweed, common groundsel</p> <p>Perennials (top growth)<sup>2</sup>: Canada thistle, perennial</p>	<p>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</p> <p><sup>1</sup> Buctril M at 0.5-1.0 L/ha (280-560 g ai/ha) for all crops listed.</p> <p><sup>2</sup> Buctril M at 1.0 L/ha (560 g ai/ha only).</p> <p><sup>3</sup> Spray before plants are 5 cm high.</p> <p><sup>4</sup> Spring annuals only.</p> <p><sup>5</sup> Spray before plants are 8 cm high.</p> <p>Use this tank mix prior to seeding in wheat, barley, rye, oats, corn, flax, canary seed and seedling grasses (including brome grass, crested wheatgrass, intermediate wheat grass, slender wheatgrass, tall wheatgrass, Russian wild rye, timothy, orchard grass, creeping red fescue, meadow fescue, meadow foxtail, seedling tall fescue, seedling meadow brome grass, seedling streambank wheatgrass and reed canary grass.</p> <p>No surfactant required</p>
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<p>RACKETEER + MCPA amine (500 g/L formulation; if another formulation is used adjust rate accordingly)</p>	<p>1.25-1.9  + 0.5-0.7</p>	<p>Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail, and Persian darnel.</p> <p>Volunteer canola (rapeseed) (non Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's thumb, stinkweed, kochia, lamb's quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, Wild buckwheat**, narrow- leaved hawk's beard***</p> <p>Volunteer Roundup Ready canola (1-4 leaf stage)<sup>3</sup>, bluebur<sup>4</sup>, burdock<sup>4</sup> (before 4 leaf stage), false flax<sup>4</sup>, flixweed<sup>4</sup>, lamb's quarters<sup>4</sup>, mustards<sup>4</sup> (except dog and tansy), prickly lettuce<sup>4</sup>, ragweeds<sup>4</sup>, redroot pigweed<sup>4</sup>, shepherd's purse<sup>4</sup>, stinkweed<sup>4</sup> (field pennycress), vetch<sup>4</sup>, wild radish<sup>4</sup>, wild sunflower<sup>4</sup></p>	<p>Weeds should be less than 15 cm tall and actively growing for best results.</p> <p>Use higher rate if weeds are beyond 8 cm in height.</p> <p>* DO NOT use these rates on plants greater than 8 cm in height.</p> <p>** For 3-4 leaf stage use 1.9 L/ha rate.</p> <p>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</p> <p><sup>3</sup> MCPA amine at 0.5-0.7 L/ha (250- 350 g ai/ha) prior to lentils and chickpeas.</p> <p><sup>4</sup> MCPA amine at 0.7 L/ha (350 g ai/ha) only.</p> <p>Use this tank mix prior to seeding in lentil and chickpea. Under drought conditions, deep seeding and/or brief rain showers after seeding may cause injury to emerging seedlings in sprayer overlaps.</p> <p>No surfactant required.</p>
<p>RACKETEER + EXPRESS Toss-N-Go Herbicide or EXPRESS Toss-N-Go Dry Flowable 75%</p>	<p>1.27-1.93  + 10 g/ha (7.5 g ai/ha)</p>	<p>Volunteer cereals, Canada thistle (suppression), cow cockle, wild buckwheat, Canada fleabane, common ragweed, narrow-leaved hawk's beard, dandelion, downy brome, flixweed, giant foxtail, green foxtail, hempnettle, kochia,</p>	<p>Use this tank mix in summerfallow or prior to seeding wheat and barley.</p> <p>Refer to Express Toss-N-Go label for the appropriate weed growth stage.</p>

Herbicide		lady's thumb, lamb's quarters, Persian darnel, redroot pigweed, Russian thistle, stinkweed, volunteer canola, volunteer flax, wild mustard, wild oats	
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<sup>1</sup>0.56 kg a.i./ha of 2,4-D. <sup>A</sup>Adjust rates accordingly for other 2,4-D formulations. Use only low volatile ester or amine formulations of 2,4-D.

\*For foxtail barley suppression, refer to chart on Perennial Weed Control.

c Use only amine formulations of MCPA prior to seeding in corn and field peas

NOTE: All RACKETEER tank mixtures for annual weed control require the addition of a non-ionic surfactant registered for this use, such as Agral 90, AgSurf and Companion. Surfactant should be added at a rate of 350 mL/ha in 50-100 L of clean water.

### **RACKETEER TANK MIXES FOR PERENNIAL WEED CONTROL**

#### **SUMMER FALLOW OR FALL STUBBLE**

<b>Tank mixtures</b>	<b>Rate (L/ha)</b>	<b>Weeds controlled</b>	<b>Comments</b> (apply in 100-200 L/ha water) 350 mL surfactant (see note below)
RACKETEER + BANVEL II	1.7 + 1.25	Canada thistle, perennial sow-thistle	Summer fallow: cultivate in the spring and apply when the majority of thistles are 15 to 25 cm tall and before the bud stage.  Cultivate 3 weeks after application.  Fall Stubble: apply to actively growing thistles at least 2 weeks prior to a killing frost.

**NOTE: All RACKETEER tank mixtures for perennial weed control require the addition of a non-ionic surfactant registered for this use, such as Agral 90, AgSurf or Companion.**

Grow only cereals, canola (including rapeseed), soybeans, field corn, sweet corn, or white beans after application of this tank-mix.



If application is made after September 1st, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

### **FALL STUBBLE**

Apply in the fall as a post-harvest stubble treatment for control of perennial weeds including quack grass and Canada thistle. Allow the Canada thistle and quack grass to regrow to 20-25 cm tall. Straw should be removed or evenly spread to allow for proper regrowth and spray coverage. Heavy frost prior to treatment may decrease control.

### **SPOT TREATMENT (IN CROP)**

RACKETEER may be applied for the control of Canada thistle, quack grass and other perennial weeds in forage crops, barley, wheat, oats, soybeans and legumes including seed production. Treatments may be made up to heading of small grain, initial pod set on soybeans and legumes, silking of corn and emergence of seed heads. Avoid drift beyond the treated area.

Application can be made using a boom sprayer, knapsack or high volume equipment. (See Application Equipment and Mixing Instruction section.)

Applications should be made using the same growth stages as listed in the Annual and Perennial Weed Control charts. Or use a 1% solution for annual weeds and quack grass and a 2% solution for other perennial weeds (a 1% solution equals 1 L of RACKETEER in 100 L of spray solution). The 1 and 2 per cent solutions should be applied to wet, but not to run off.

NOTE: The crop in the treated area will be killed by the treatment.

DO NOT APPLY IF CROP GROWTH HAS ADVANCED BEYOND SEED SET. ALLOW 3 TO 5 DAYS BEFORE GRAZING IN, OR HARVESTING TREATED AREAS AS FORAGES.

### **FORAGE GRASSES AND LEGUMES**

Use RACKETEER to control or suppress existing vegetation prior to emergence of legumes and grasses. If legumes and grasses are underseeded with a cover crop, RACKETEER must be applied prior to planting any cover crop.

### **PASTURE RENOVATION**

RACKETEER may be used to control or suppress existing vegetation for zero tillage seeding of legume or grass pasture into established sod for renovation. Weed growth should be at least 20 cm high and most weed seeds should have germinated at the time of spraying.

### **FORAGE SEED PRODUCTION (FOR SPOT TREATMENT)**

RACKETEER may be applied as a spot treatment for control of perennial weeds such as quack grass and Canada thistle in seed fields. Apply to weeds at least 20-25 cm in height but before emergence of seed head.

The crop in the treated area will be killed. For this reason, take particular care to avoid drift outside the treated area.

## WEED CONTROL IN GLYPHOSATE TOLERANT CANOLA

**WARNING: APPLY RACKETEER ON GLYPHOSATE TOLERANT CANOLA VARIETIES ONLY.**

**NOTE: ALWAYS USE PEDIGREED (I.E. CERTIFIED) GLYPHOSATE TOLERANT CANOLA SEED. CANOLA WHICH IS NOT DESIGNATED AS GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT.**

- For additional information and precautions refer to the General Product Information, General Application Notes and Application Equipment and Mixing Instructions sections of the RACKETEER label.
- Apply RACKETEER in glyphosate tolerant canola only as directed in the following weed control table.
- Some short-term, visual yellowing may occur when RACKETEER is applied at the late application (4 to 6 leaf stage) of the crop. This effect is temporary and will not influence crop growth, maturity or yield.

**DO NOT APPLY BY AIR.**

The following table describes the rate and specific application instructions for control of annual and perennial weeds in glyphosate tolerant canola varieties.

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled</b>	<b>Comments</b> (apply in 50-100 L/ha water)
0.825-1.875	0 to 6 leaf	<i>Annual grasses</i> Wild oats, green foxtail, volunteer barley, volunteer wheat, barnyard grass  <i>Annual broadleaves</i> Stinkweed, redroot pigweed, wild mustard, Russian thistle, lamb's-quarters, non- glyphosate tolerant volunteer canola (rapeseed), hemp- nettle, lady's-thumb, kochia, chickweed, corn spurry, wild tomato, cleavers*, wild buckwheat*, shepherd's- purse*, cow cockle*, night-	No additional surfactant is required.  Repeat applications may be required if a second flush of weeds germinates prior to canopy closure.  Ensure the crop has not advanced beyond the recommended growth stage.  *Use the 1.25 L/ha rate for control of these weeds at all crop growth stages.  The lower rate can be used for control of shepherd's purse,

Rate (L/ha)	Growth stage of crop	Weeds controlled	Comments (apply in 50-100 L/ha water)
		flowering catchfly*, smartweed* <i>Perennials (suppression) **</i> Canada thistle, perennial sow-thistle, dandelion <i>Perennials (season long control)</i> Quack grass**, Canada thistle***, perennial sow-thistle***	cow cockle and night-flowering catchfly at the 1-3 leaf stage of the crop, or for the control of smartweed at the 4-6 leaf stage. ** A single application at the 1.25 L/ha rate is required. *** Sequential applications at the 1.25 L/ha rate are required. For sequential applications, ensure the crop has not advanced beyond the recommended growth stage. Maximum 2.5 L/ha is allowed for postemergence use.

### WEED CONTROL IN GLYPHOSATE TOLERANT SOYBEANS

**WARNING: APPLY RACKETEER ON GLYPHOSATE TOLERANT SOYBEAN VARIETIES ONLY.**

**NOTE: ALWAYS USE PEDIGREED (CERTIFIED) SOYBEAN SEED DESIGNATED AS GLYPHOSATE TOLERANT. SOYBEANS WHICH ARE NOT DESIGNATED AS GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT.**

**DO NOT APPLY BY AIR.**

Rate (L/ha)	Growth stage of crop	Weeds controlled*	Comments (use 100-200 L/ha water volumes)
2.5	First trifoliolate leaf stage through flowering	Velvetleaf, common ragweed, lamb's-quarters, redroot pigweed, smooth pigweed, cocklebur, green smartweed, lady's-thumb, Pennsylvania smartweed,	A second 2.5 L/ha application may be used for late weed flushes emerging after the initial treatment. This second application must be made not later than the flowering stage of

Rate (L/ha)	Growth stage of crop	Weeds controlled*	Comments  (use 100-200 L/ha water volumes)
		eastern black nightshade, wild mustard, wild buckwheat, foxtail (green, yellow, giant), barnyard grass, crabgrass (smooth, large), quack grass	the soybean.
2.5-5.0	First trifoliolate through to flowering	Perennial sow-thistle, Canada thistle, wire stemmed muhly	A single application at the higher rate or a second (sequential) application of 2.5 L/ha will improve control in heavy weed infestations. If sequential applications of 2.5 L/ha are used they should be at least 2 weeks apart for best results on perennial weeds. This second application must be made no later than the flowering stage of the soybean. Perennial sow-thistle and Canada thistle should be from the rosette stage to 50 cm in height and actively growing. Wire stemmed muhly should be 10-20 cm in height and actively growing. Plants not fully emerged at time of application will escape the treatment.
5.0	First trifoliolate leaf stage through flowering	All weeds listed above plus common milkweed** and yellow nutsedge**	Use a maximum of 5.0 L/ha per season.  **Will also be controlled by sequential applications of 2.5 L/ha. Applications should be at least 2 weeks apart for optimum control. This second application must be made no later than the flowering stage of the soybean. Common milkweed should be at least 15-60 cm in height and actively growing.

Rate (L/ha)	Growth stage of crop	Weeds controlled*	Comments (use 100-200 L/ha water volumes)
			Yellow nutsedge should be 5-15 cm in height and actively growing. Plants not fully emerged at the time of treatment will not be controlled.

\*Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

## TANK MIXTURES

### RACKETEER PLUS PURSUIT HERBICIDE

For added residual control of late germinating eastern black nightshade, common lamb's quarters, redroot pigweed, velvetleaf, fall panicum and wild proso millet, Pursuit herbicide may be tank mixed with RACKETEER at a rate of 2.5 L/ha. Use 0.16 to 0.21 L/ha of Pursuit Herbicide and apply up to and including the 3<sup>rd</sup> trifoliolate leaf stage of the Roundup Ready soybeans in 100-200 L/ha of clean water. The higher rate is recommended for heavier infestations. This tank mix is recommended primarily for soybean systems with row spacings of 50 cm (20 inches) or more where a single application timing is desired.

Mixing: Add and mix Pursuit Herbicide as per instructions on the Pursuit Herbicide label and then add RACKETEER as per instructions on this label.

A PHI of 100 days is required for the tank mix of RACKETEER and Pursuit herbicide on glyphosate tolerant soybeans.

Only one application per season of RACKETEER at 2.5 L/ha tank mixed with Pursuit herbicide at 0.16 to 0.21 L/ha is permitted.

Refer to the Pursuit herbicide label for further safety precautions and handling instructions.

Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of annual weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

Pursuit is a registered trademark of BASF Agrochemical Products B.V. Netherlands.

## **VOLUNTEER ROUNDUP READY CORN CONTROL**

For control of volunteer Roundup Ready Corn, Assure II Herbicide may be tank mixed with RACKETEER . Use 2.5-5.0 L/ha RACKETEER and 0.25-0.38 L/ha of Assure II Herbicide.

The higher rate of Assure II may be required when there are high populations of volunteer Roundup Ready corn, other grass weeds are present or when conditions at application are not favourable for weed growth.

Apply in 100-300 L/ha of clean water.

Mixing: Add and mix Assure II Herbicide as per instructions on the Assure II Herbicide label and then add RACKETEER as per instructions on this label.

This tank mix is to be applied when the crop is from the first trifoliolate leaf stage through flowering and when the volunteer Roundup Ready Corn is at the 2-6 leaf stage.

A PHI (preharvest interval) of 80 days is required for the tank mix of RACKETEER and Assure II Herbicide on Roundup Ready (glyphosate tolerant) soybeans.

Refer to Assure II Herbicide label for further safety precautions and handling instructions.

## **TANK MIXTURES**

### **RACKETEER PLUS ASSURE II HERBICIDE**

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled*</b>	<b>Comments</b> (use 100-300 L/ha water volumes)
2.5-5.0 L/ha RACKETEER  + 0.25-0.38 L/ha ASSURE II Herbicide	First trifoliolate leaf stage through flowering	Volunteer Roundup Ready Corn  Apply at the 2-6 stage of the weed.	See additional information following the table.

\*Sure Mix may or may not be added to this tank mix.

### **RACKETEER AND CLASSIC 25 DF HERBICIDE\***

For season-long control of dandelion, annual sow thistle, and yellow nutsedge, apply Classic 25 DF Herbicide at 36 g/ha plus RACKETEER at 2.5 L/ha\*. Add a non-ionic surfactant such as Agral 90, Citowett Plus, or Ag-Surf at 0.2% v/v. Apply when soybeans are in the 1-3 trifoliolate stage; dandelions and annual sow thistle less than 15 cm tall and across; and up to the

8 leaf stage for yellow nutsedge. USE THIS TANK MIXTURE ONLY ON SOYBEANS WITH THE ROUNDUP READY® TRAIT.

Consult the Classic 25 DF Herbicide label for tank mixing instructions and use precautions including instructions on replanting to other crops.

\*Use this tank mix only in cases of heavy infestation of yellow nutsedge.

Assure II and Classic are registered trademarks of E.I. DuPont Canada Company.

### **WEED CONTROL IN GLYPHOSATE TOLERANT CORN**

**WARNING: APPLY RACKETEER ON GLYPHOSATE TOLERANT CORN VARIETIES ONLY.**

**NOTE: ALWAYS USE PEDIGREED (CERTIFIED) CORN SEED DESIGNATED AS GLYPHOSATE TOLERANT. CORN WHICH IS NOT DESIGNATED AS GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT**

**DO NOT APPLY BY AIR.**

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled*</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
2.5	Up to and including 8 leaf stage	Velvetleaf, common ragweed, common lamb's-quarters, redroot pigweed, smooth pigweed, cocklebur, green smartweed, lady's-thumb, Pennsylvania smartweed, eastern black nightshade, wild mustard, wild buckwheat, foxtail (green, yellow, giant), barnyard grass, crabgrass (smooth, large), quack grass, fall panicum, wild proso millet, wild oats, volunteer barley, volunteer wheat, stinkweed, Russian thistle, non-glyphosate	A second application of 2.5 L may be used for late weed flushes emerging after the initial treatment.  This second application must be made no later than the 8 leaf stage of the corn.  Use no more than 5.0 L/ha (applied as 2 sequential applications).

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled*</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
		tolerant canola (rapeseed), hemp nettle, kochia, chickweed, corn spurry, wild tomato, cleavers, shepherd's purse, cow cockle, night-flowering catchfly, stork's bill, flixweed, narrow-leaved hawk's-beard	
2.5	Up to and including 8 leaf stage	Common milkweed, yellow nutsedge, round-leaved mallow, field bindweed	<p>For control of common milkweed, yellow nutsedge, round-leaved mallow and field bindweed use two applications of 2.5 L/ha. This second application must be made no later than the 8 leaf stage of the corn. Common milkweed should be 15-60 cm in height and actively growing.</p> <p>Yellow nutsedge should be 5-15 cm in height and actively growing.</p>
2.5	Up to and including 8 leaf stage	Perennial sow-thistle, Canada thistle, wire stemmed muhly	<p>A second (sequential) application of 2.5 L/ha will improve control in heavy weed infestations.</p> <p>If sequential applications are used, they should be at least 2 weeks apart for best results on perennial weeds. This second application must be made no later than the 8 leaf stage of the corn.</p> <p>Perennial sow-thistle and Canada thistle should be from the rosette stage to 50 cm in height and actively growing. Wire stemmed muhly should be 10-20 cm in height and actively growing. Plants not fully emerged at the time of</p>



<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled*</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
			application will escape treatment.

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled*</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
5.0	Up to and including 6 leaf stage	All weeds listed above	Only one application per season at 5.0 L/ha.  Common milkweed should be 15-60 cm in height and actively growing.  Yellow nutsedge should be 5-15 cm in height and actively growing.  Plants not fully emerged at the time of application will escape treatment.

\*Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

### **TANK MIXTURES**

For tank mixtures, add either atrazine or Marksman Herbicide according to instructions on the product label, and then add RACKETEER according to instructions on this label (section 5). Refer to the atrazine and Marksman Herbicide product labels for further safety precautions and product handling instructions.

### **DO NOT APPLY BY AIR.**

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled♦</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
2.5 RACKETEER + 0.75-1.0 kg	Up to and including the 5 <sup>th</sup> leaf stage	Residual control of lamb's-quarters, redroot pigweed, common ragweed	Tank mix should be used when only a single application timing is desired. Use the higher rate of atrazine for heavier weed infestations.

<b>Rate (L/ha)</b>	<b>Growth stage of crop</b>	<b>Weeds controlled♦</b>	<b>Comments</b> (use 100-200 L/ha water volumes)
ai/ha atrazine*			
2.5 L/ha RACKETEER + 2.5-3.7 Marksman Herbicide	Up to and including the 5 <sup>th</sup> leaf stage	Residual control of lamb's-quarters, redroot pigweed, common ragweed, velvetleaf	Tank mix should be used when only a single application timing is desired. Use the higher rate of Marksman Herbicide for heavier weed infestations.

\* 0.75-1.0 kg ai atrazine/ha is equivalent to 1.56-2.08 L/ha Aatrex Liquid 480 Herbicide,

Aatrex is a registered trademark of Syngenta group company.  
Marksman is a registered trademark of BASF AG.

♦ Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

### **PERENNIAL WEED CONTROL WITH RACKETEER**

**DO NOT APPLY BY AIR.**

<b>Weed</b>	<b>Application</b>			<b>Comments</b>
	<b>Growth Stage</b>	<b>Rate (L/ha)</b>	<b>Water Volume (L/ha)</b>	
Quackgrass (control, light to moderate infestations)	3 to 4 green leaves or more	2.5	50-300	Dilute in clean water using flat fan nozzles.  Allow 3 or more days after treatment before tillage.  Refer to "Quackgrass" notes for more information.  For higher water volumes (i.e., 150-300 L/ha) an approved surfactant must be added at 0.5 L per 100 L of clean water

				(0.5% v/v). See also below.
Quackgrass (long term control, heavy infestations, high water volumes)	3 to 4 green leaves or more	2.5-7.0	50-300	Allow 3 or more days after treatment before tillage.  Rates higher than 2.5 L/ha will provide more consistent, longer term control, especially with heavier infestations and/or higher water volumes (i.e., 150-300 L/ha).  Refer to “Quackgrass” notes for more information.
Canada Thistle	Rosette stage (summerfallow)	2.5	50-100	Dilute in clean water using flat fan nozzles.  Allow 10 or more days after treatment before tillage.  Refer to “Canada Thistle” notes for more information.
Canada Thistle	Bud stage or beyond	4.75-7.0	100-300	Allow 5 or more days after treatment before tillage.
Field Bindweed	Full bloom or beyond	7-12	100-300	Allow 7 or more days after treatment before tillage.
Common Milkweed*	Bud to full bloom (preharvest)	2.5	50-100	See “Preharvest Treatment” for more information  Allow 7 or more days after treatment before tillage.
	Bud to full bloom	12	100-300	Reduced control may occur after full bloom.  Milkweed may not all be in the correct stage, therefore, repeat treatments may be required.
Toadflax	Vegetative Stage (summerfallow)	2.5	50-100	Dilute in clean water using flat fan nozzles.
	Bud to full			Allow 7 or more days after

	bloom (preharvest)			treatment before tillage in summerfallow.  For more information, see “Toadflax Control” or “Preharvest Treatment”.
Alfalfa	Early bud to full bloom stage  Fall applications only	3.7-5.0	50-300	Allow 5 or more days after treatment before tillage. Use the higher rates when alfalfa populations are high or when heavy grass infestations are also present.  For spring applications and control in minimum tillage systems using a 2,4-D tank mix
Dandelion	< 15 cm	2.5	50-100	Allow 3 or more days after treatment before tillage for all rates.
	> 15 cm	3.7-5.0	50-300	Use the higher rate when infestations are heavy.
	Rosette to full bloom (preharvest)	2.5	50-100	Refer to “Dandelion” notes for more information.  Allow 7 or more days after treatment before tillage. For more information, see “Preharvest Treatment”.
Foxtail Barley	Seeding to heading	2.5-5.0	50-100	Allow a minimum of 1 day after treatment before tillage or seeding.  Use higher rates for larger, more established plants, heavy infestations or if plants are stressed.
Other Perennials  (see listing section – “weeds	Early heading or early bud stage	7-12	100-300	Allow 7 or more days after treatment before tillage.

controlled”				
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\*NOTE: For spot treatment, mix 120 mL of product in 5 L clean water per 100 m<sup>2</sup> (2.5-12 L/ha is approximately equivalent to 25-120 mL/100 m<sup>2</sup>, respectively).

## **SPECIAL NOTES FOR PERENNIAL WEED CONTROL**

### **QUACKGRASS**

For season-long control on fall tilled ground: Apply 2.5 L/ha of this product in spring prior to seeding. Apply in 50-100 L/ha of clean water as described in the preceding table. Delay application until the majority of quackgrass plants have 4 to 5 green leaves. This stage usually occurs 1 to 4 weeks later on fall tilled ground than on undisturbed ground. Reduced control may result on ground tilled deeper than 15 cm.

NOTE: This treatment will provide season-long control of quackgrass on fall tilled ground. Reduced control will be experience versus this product on non-fall tilled ground. Repeat treatments may be necessary.

**Applications on forages** should be followed by tillage 3 days or later and should be made when good growing conditions exist.

**If a frost has occurred**, wait several days to determine if the quackgrass has recovered. Quackgrass can be treated after a mild frost provided there are 3 to 4 green leaves actively growing at the time of application. Do not apply after the first damaging frost in the fall.

### **SURFACTANTS**

The following is a list of approved surfactants for use with RACKETEER for control of quackgrass:

Agral 90  
Ag Surf

Companion

Always refer to surfactant label for specific instructions regarding use of that product.

### **CANADA THISTLE**

Control of Canada Thistle at the rosette stage: to ensure the proper timing of application the following steps must be followed:

1. Conduct summerfallow tillage as usual and perform the last tillage operation between July 15<sup>th</sup> and August 1<sup>st</sup>.
2. Allow the thistles to regrow for a minimum of 5 weeks until they are a minimum of 15 cm in diameter and in the rosette stage of growth.

NOTE: Canada thistle can be treated after a mild frost provided the leaves are still green and actively growing at the time of application. Do not apply after the first damaging frost in the fall.

## **TANK MIXTURES**

### **RACKETEER PLUS BANVEL**

For control of Canada thistle (and perennial sow thistle) in summerfallow or in postharvest stubble, apply 1.7 L/ha RACKETEER plus 1.25 L/ha Banvel in 100-200 L/ha of clean water. In addition, add 350 mL/ha of a non-ionic surfactant registered for use with this product, such as Agral 90, Ag Surf or Companion.

For best results in summer fallow, cultivate in the spring and apply when the majority of thistles are 15 cm to 25 cm tall and before the bud stage. Cultivate 3 weeks after application.

In postharvest stubble, apply this tank mixture to actively growing thistles at least 2 weeks prior to a killing frost.

NOTE: Grow only cereals, canola (including rapeseed), soybeans, field corn, sweet corn, or white beans after application of this tank mixture.

If application is made after September 1<sup>st</sup>, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

### **TOADFLAX**

#### **Control of Toadflax in a Summer Fallow Vegetative Stage**

To ensure the proper timing of application, the following steps must be followed:

1. Conduct summer fallow tillage as usual and perform the last tillage operation between July 10<sup>th</sup> and July 21<sup>st</sup>.
2. Allow toadflax to regrow for a minimum of 4 to 5 weeks until they are a minimum of 15 cm tall and at a lush green vegetative stage.

NOTE: Toadflax can be treated after a mild frost provided the leaves are still green and actively growing at the time of application. Do not apply after the first damaging frost.

### **DANDELION**

Applications should be made up to and including bloom for best results. Follow-up control measures should be used to manage new dandelions germinating from seed to maintain control throughout the season.

## **ALFALFA CONTROL WITH 2,4-D TANK MIX**

The addition of 2,4-D may improved alfalfa control in situations where control may be more difficult to obtain, such as in minimum tillage systems where populations are heavy, and with spring applications.

For fall control of established stands of alfalfa, apply 2.5 to 5.0 L/ha RACKETEER and 1.2 to 2.4 L/ha of any 500 grams per litre 2,4-D amine or low volatile ester formulation in 100-200 L of water per hectare. (Adjust product rates accordingly for other 2,4-D formulations.)

For spring applications, use only the low rate of 2,4-D (i.e, 1.2 L/ha) and 2.5 to 5.0 L/ha RACKETEER . Only cereal crops not underseeded to legumes may be planted following spring applications of this tank mix, and a 14 day interval between application and planting is required.

Use the higher RACKETEER rates when perennial grasses are prevalent.

## **ALL PERENNIALS WEEDS**

Weeds Stages: Weeds must be at the proper stage for effective control . Refer to “Perennial Weed Control with RACKETEER ” .

Nozzle Type: For best results with conventional boom equipment apply this product with 50 to 300 L/ha of clean water using flat fan nozzles and no more pressure than 275 kPa.

Rhizome Dormancy: Reduced control may result if rhizomes have become dormant. Dormancy may occur if soil fertility is low and/or the land has not been tilled for several years.

Mowing Effects: Mowing prior to application will reduce effectiveness unless weeds are allowed to regrow to the proper stage before application.

Tillage Effects: Fall or spring tillage prior to spring applications and tillage between harvesting and fall applications will reduce the effectiveness on perennial weeds. Follow-up tillage after application should be delayed 5 to 7 days for best results. See “Weed Control” sections for specific tillage interval for each weed.

Rainfall Effects: Heavy rainfall immediately after application may wash the chemical off the foliage and repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

Regrowth from Germinating Seeds: This product only controls emerged plants. Repeat treatments or other weed control measures may be required to control weeds regenerating from seeds or other underground parts.

Frost Effects: Heavy frost prior to application may reduce control. Do not apply after the first damaging frost in the fall.

## **CROPLAND SITUATIONS**

ALWAYS READ PRECAUTIONS, GENERAL INFORMATION AND MIXING AND APPLICATION SECTIONS PRIOR TO SPECIFIC APPLICATION INFORMATION IN ANY LABEL SECTION.

DO NOT APPLY BY AIR EXCEPT FOR PREHARVEST AERIAL APPLICATION

FOLLOW THE MORE RESTRICTIVE LABEL FOR THE APPLICATION OF THESE TANK MIXES.

This product can be applied as a broadcast spray or spot treatment prior to planting all crops, postharvest to annual crops, preharvest in wheat, barley, oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, soybeans, dry beans and forages, and in summerfallow. It may also be applied as a broadcast spray in glyphosate tolerant corn, soybean or canola, i.e., varieties with the Roundup Ready gene. It may be applied as a directed spray in orchards, vineyards, blueberries and strawberry, and using selective equipment in soy and dry beans, orchards, vineyards, cranberries and strawberry (refer to specific sections below for more information). For specific instructions on weed control in the following cropping situations, always refer to “Annual and Perennial Weed Control” for more information.

### **PRIOR TO PLANTING – ALL CROPS**

This product may be applied prior to planting all crops for control of emerged weeds listed on this label. Ensure weeds are at the desired stage at the time of application. This product does not provide preemergent weed control and newly germinating weeds may be a problem in the crop. APPLY BEFORE SEEDING OR TRANSPLANTING.

### **PRIOR TO PLANTING – TANK MIXES\* - SOYBEANS**

\*TANKS MIXES – REFER TO THE RESPECTIVE PRODUCT LABELS WHEN TANK MIXING FOR USE RATES, CAUTIONS/WARNING, MIXING INSTRUCTIONS, RE-CROPPING RECOMMENDATIONS AND OTHER DETAILS.

### **RACKETEER PLUS PURSUIT HERBICIDE**

RACKETEER plus Pursuit Herbicide can be applied prior to or after seeding, but before crop emergence. RACKETEER will control emerged weeds listed on this label when applied as directed (refer to Annual and Perennial Weed control sections in the RACKETEER product label). Pursuit Herbicide will control weeds germinating from seed.

ONLY SOYBEANS, WHITE BEANS, KIDNEY BEANS, PROCESSING PEAS, FIELD CORN, SPRING BARLEY, SPRING WHEAT AND WINTER WHEAT MAY BE PLANTED THE SEASON FOLLOWING A PURSUIT APPLICATION. WINTER WHEAT MAY BE PLANTED THE SAME YEAR AS A PURSUIT APPLICATION TO SOYBEANS, BUT NOT EARLIER THAN 100 DAYS AFTER THE APPLICATION.

DO NOT APPLY AFTER CROP EMERGENCE.



**RACKETEER PLUS METRIBUZIN (SENCOR 75 DF HERBICIDE, SENCOR 500 FLOWABLE HERBICIDE, SENCOR 480F FLOWABLE HERBICIDE, SENCOR SOYBEAN FLOWABLE HERBICIDE, OR LEXONE DF HERBICIDE)**

For burndown and residual control of selected annual weeds taller than 4 cm in soybeans, apply RACKETEER in tank mix with Sencor 75 DF Herbicide, Sencor 500 Flowable Herbicide, Sencor 480F Flowable Herbicide, Sencor 480 Soybean Flowable Herbicide or Lexone DF Herbicide as a preplant surface or pre-emergence application before crop emergence.

**RACKETEER PLUS DUAL MAGNUM HERBICIDE OR DUAL II MAGNUM HERBICIDE**

For burndown and residual control of selected annual weeds in soybeans, apply RACKETEER in tank with Dual Magnum Herbicide or Dual II Magnum Herbicide at 1.15-1.75 L/ha as a preplant surface (up to 30 days before planting) or pre-emergence application before crop emergence.

Perennial weeds such as quack grass may not be controlled with lower rates of RACKETEER . Use higher rates of RACKETEER if perennial weeds are present.

**RACKETEER PLUS DUAL MAGNUM HERBICIDE OR DUAL II MAGNUM HERBICIDE PLUS METRIBUZIN (SENCOR 75DF HERBICIDE, SENCOR 500 FLOWABLE HERBICIDE, SENCOR 480F FLOWABLE HERBICIDE, SENCOR SOYBEAN FLOWABLE HERBICIDE OR LEXONE DF HERBICIDE)**

For burndown and residual control of selected annual weeds in soybeans, apply as a preplant surface (up to 30 days before planting) or pre-emergence application before crop emergence. Perennial weeds such as quack grass may not be controlled with lower rates of RACKETEER .

**RACKETEER PLUS BROADSTRIKE DUAL MAGNUM SOYBEAN HERBICIDE**

Broadstrike Dual Magnum Soybean Herbicide at 1.56 L/ha may be tank mixed with RACKETEER at 2.6 L/ha for control of existing annual weeds and certain perennial weeds including quack grass. This tank mix may be applied preplant surface or pre-emergence in minimum till or no-till conditions. When mixing, add the Broadstrike Dual Magnum Soybean Herbicide component first.

**RACKETEER PLUS FRONTIER HERBICIDE**

For burndown and residual control of selected annual weeds apply RACKETEER plus Frontier Herbicide preplant surface or pre-emergence.

**RACKETEER PLUS LINURON**

For burndown and residual control of selected annual weeds apply RACKETEER plus linuron after seeding but before crop emergence.

**RACKETEER PLUS AXIOM DF HERBICIDE**

**Preplant Surface:**

For use in conservation tillage, minimum-tillage or no-tillage crop production systems, when weeds are present at the time of application, apply the Axiom DF Herbicide treatment in tank mixture with RACKETEER . Apply Axiom DF Herbicide in a minimum of 200 L/ha of total volume.

**Preemergence:**

RACKETEER plus Axiom DF Herbicide may be applied to the soil surface as a broadcast spray after planting of the crop, but prior to weed or crop emergence.

For conservation tillage systems: Apply this tank mixture in a minimum of 200 L/ha of total volume.

**PRIOR TO PLANTING – TANK MIXES\* – CORN**

\* TANK MIXES – REFER TO THE REPECTIVE PRODUCT LABELS WHEN TANK MIXING FOR USE RATES, CAUTIONS/WARNING, MIXING INSTRUCTIONS, RE-CROPPING RECOMMENDATIONS AND OTHER DETAILS.

**RACKETEER PLUS DUAL MAGNUM HERBICIDE OR DUAL II MAGNUM HERBICIDE**

For burndown and residual control of selected annual weeds in corn apply RACKETEER in tank mix with Dual Magnum or Dual II Magnum at 1.25 to 1.75 L/ha as a preplant surface (up to 30 days before planting) or pre-emergence application before crop emergence.

NOTE: The use on corn is for EASTERN CANADA ONLY.

Perennial weeds such as quack grass may not be controlled with lower rates of RACKETEER . Use higher rates of RACKETEER if perennial weeds are present.

**RACKETEER PLUS DUAL MAGNUM HERBICIDE AND DUAL II MAGNUM HERBICIDE PLUS AATREX LIQUID 480 HERBICIDE**

For burndown and residual control of selected annual weeds in corn apply RACKETEER in tank mix with Dual Magnum Herbicide or Dual II Magnum Herbicide at 1.25-1.75 L/ha plus Aatrex Liquid 480 Herbicide at 2.1-3.1 L/ha as a preplant surface (up to 30 days before planting) or pre-emergence application before crop emergence.

NOTE: The use on corn is for EASTERN CANADA ONLY.

Perennial weeds such as quack grass may not be controlled with lower rates of RACKETEER . Use higher rates of RACKETEER if perennial weeds are present.

**RACKETEER PLUS PRIMEXTRA II MAGNUM HERBICIDE**

For burndown and residual control of selected annual weeds in corn apply RACKETEER plus Primextra II Magnum preplant surface or pre-emergence application before crop emergence. This tank mixture requires the use of a surfactant, either Agral 90 or Ag-Surf. See mixing instructions for more information.

Perennial weeds such as quack grass may not be controlled with lower rates of RACKETEER . Use higher rates of RACKETEER if perennial weeds are present.

### **RACKETEER PLUS FIELDSTAR WDG HERBICIDE**

For burndown and residual control of selected annual weeds apply RACKETEER plus Fieldstar WDG Herbicide as a preplant surface or pre-emergence application before crop emergence.

### **RACKETEER PLUS FRONTIER HERBICIDE**

For burndown and residual control of selected annual weeds apply RACKETEER plus Frontier Herbicide as a preplant surface or pre-emergence application before crop emergence.

### **RACKETEER PLUS PROWL 400 EC HERBICIDE**

For burndown and residual control of selected annual weeds apply RACKETEER plus Prowl 400 EC Herbicide after seeding but before crop emergence.

### **RACKETEER PLUS LINURON HERBICIDE**

For burndown and residual control of selected annual weeds apply RACKETEER plus linuron herbicide after seeding but before crop emergence.

### **RACKETEER PLUS CONVERGE PRO HERBICIDE OR CONVERGE 75 WGD HERBICIDE**

#### **Surface Preplant:**

CONVERGE 75 WGD Herbicide can be applied to the soil surface up to 14 days prior to planting. CONVERGE 75 WGD Herbicide must be tankmixed with atrazine when applied as a surface preplant application. When weed growth is present at the time of application, RACKETEER can be added to the Converge Pro Herbicide or Converge 75 WGD Herbicide + atrazine treatment for burndown control of these weeds. Do not incorporate.

#### **Preemergence:**

Converge Pro Herbicide or Converge 75 WGD Herbicide can also be applied after planting to just prior to crop emergence. Atrazine and/or RACKETEER can be tank mixed with pre-emergent applications of Converge Pro Herbicide or Converge 75 WGD Herbicide.

Apply Converge Pro Herbicide at 165-220 mL/ha, or Converge 75 WGD Herbicide at 105-140 g/ha, tankmixed with RACKETEER at 2.5 L/ha for burndown control of emerged weeds in all tillage management systems and improved control of established dandelion in zero-tillage management systems. A three-way tankmix of Converge Pro Herbicide or Converge 75 WGD herbicide + atrazine + RACKETEER can be used to provide residual control of the weeds listed in the Converge Pro Herbicide or Converge 75 WGD Herbicide + atrazine section.

### **RACKETEER PLUS AXIOM DF HERBICIDE**

#### **Preplant Surface:**

For use in conservation tillage, minimum-tillage or no-tillage crop production systems, when weeds are present at the time of application, apply the Axiom DF Herbicide treatment in tank

mixture with RACKETEER . Apply Axiom DF Herbicide in a minimum of 200 L/ha of total volume.

**Preemergence:**

RACKETEER plus Axiom DF herbicide may be applied to the soil surface as a broadcast spray after planting of the crop, but prior to weed or crop emergence.

For conservation tillage systems:

Apply this tankmix in a minimum of 200 L/ha of total volume.

Sencor and Axiom are registered trademarks of Bayer.

Lexone is a registered trademark of E.I. DuPont Canada Company.

Dual, Magnum and Primextra are registered trademarks of Syngenta group company.

Broadstrike and Fieldstar are trademarks of Dow Agrosciences LLC.

Frontier is a registered trademark of BASF Corporation.

**POSTHARVEST STUBBLE TREATMENT**

This product may be applied in the fall as a postharvest stubble treatment for control of perennial weeds such as quackgrass and Canada thistle. Allow weeds to regrow to the desired stage (20 to 25 cm tall for quackgrass and Canada thistle) before application and ensure they have a high proportion of green colouration. Straw should be removed or evenly spread to allow for proper regrowth and spray coverage. Heavy frost prior to application may decrease control.

**PRE-HARVEST CONTROL OF QUACK GRASS, CANADA THISTLE AND COMMON MILKWEED**

**SEASON-LONG CONTROL OF PERENNIAL SOW-THISTLE AND HARVEST MANAGEMENT**

For control of quack grass, Canada thistle and common milkweed, and season-long control of perennial sow-thistle, RACKETEER can be applied prior to harvest of wheat, barley (including malting barley), canola (rapeseed, including glyphosate tolerant varieties), flax (including low linolenic acid varieties), lentils, peas, dry beans and soybeans. DO NOT apply to crops grown for seed production.

This treatment may also provide harvest management benefits, by drying down crop and weed vegetative growth, for example, where late flushes of annual weeds, green vegetative crop growth, or late tillering may interfere with harvest operations.

**EXTREMELY COOL, WET AND/OR CLOUDY WEATHER CONDITIONS BETWEEN THE TIME OF APPLICATION AND THE ANTICIPATED HARVEST DATE MAY SLOW THE ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE.**

RACKETEER should be applied pre-harvest at 2.5 L/ha in 50 to 100 L/ha of clean water, by ground application only.

When to apply: Apply only when the crop has 30% or less grain moisture content. This stage typically occurs 7 to 14 days before harvest. Consult the table Guidelines for Timing of Pre-harvest Applications for visual indicators of this stage in each crop. For the best weed control results, quack grass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow-thistle should be actively growing and at or beyond the bud stage for best results. Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth.

Apply only during the period 7-14 days before harvest to ensure best weed control and to maximize harvest management benefits. Earlier application may reduce crop yield and/or quality, and may lead to excess glyphosate residues in the crop.

Use Precautions: Overspray or drift to important wildlife habitats such as bodies of water, wetlands (e.g. sloughs), shelterbelts, woodlots and other cover on the edges of fields frequented by wildlife, should be avoided. Leave a 15 meter buffer zone between the last spray swath and the edge of any of these habitats.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Do not expose or contaminate any body of water or non-target vegetation by direct application, spray drift, or when cleaning and rinsing spray equipment.

**DO NOT APPLY BY AIR.**

**GUIDELINES FOR TIMING OF PRE-HARVEST APPLICATIONS**

Crop(s)	Percent grain moisture	Visual symptoms
WHEAT/BARLEY/OATS	Less than 30	Hard dough stage; a thumbnail impression remains in seed
CANOLA	Less than 30	Pods are green to yellow; most seeds are yellow to brown
FLAX (including low linolenic acid varieties)	Less than 30	Majority (75%-80%) of bolls are brown
PEAS	Less than 30	Majority (75%-80%) of pods are brown
LENTILS	Less than 30	Lowermost pods (bottom 15%) are brown and seed rattles

Crop(s)	Percent grain moisture	Visual symptoms
DRY BEANS	Less than 30	Stems are green to brown in colour; pods are mature (yellow to brown in color); 80%-90% leaf drop (original leaves)
SOYBEANS	Less than 30	Stems are green to brown in color; pod tissue is dry and brown in appearance; 80%-90% leaf drop

### **RESTRICTED USE**

#### **AERIAL PREHARVEST APPLICATION**

#### **FOR PRAIRIE PROVINCES ONLY (Including PEACE RIVER REGION OF B.C.)**

#### **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. The user assumes the risk to persons or property that arises from any such use of this product.

**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized. For use only by aerial applicators and aerial application services approved by the provincial regulatory agency to apply this product with aerial application equipment. To qualify for consideration of provincial approval, the following requirements must be demonstrated to the provincial regulatory agency:

1. Aircraft used in the application of this product must have been configured and calibrated to acceptable standards at a recognized calibration (patternation) clinic within 20 months of the date of application. The spray system must not have been subjected to major changes (new nozzles, booms or configurations) since the calibration, and must meet critical drift management standards e.g. maximum boom width 65% of wing span; nozzle type, size and orientation to minimize drift and deliver droplet size VMD in the coarse (400 - 600 microns) or very coarse (600 - 1000 microns) range.
2. Aircraft used in the application of this product must carry a minimum of \$25,000 drift insurance in addition to any provincial requirements for general comprehensive insurance coverage.
3. Applicators using this product must have successfully completed a glyphosate aerial application training course (Aerial Module - Basic Knowledge Requirements for Pesticide Education in Canada).
4. Aerial application services applying this product must employ on staff at least one pilot applicator with at least 250 hours of actual aerial application time and a minimum of 100 hours within the last 24 month period. All pilots who do not meet the minimum experience standard must work under the direct daily supervision of a qualified pilot.

#### **DIRECTIONS FOR USE**

RACKETEER may be applied with aerial application equipment for control of quackgrass, Canada thistle, common milkweed, toadflax and dandelion, and season-long control of perennial

sow thistle. RACKETEER can be applied prior to harvest of wheat, barley (including malting barley), oats, canola (rapeseed), flax (including low-linoleic acid varieties), lentils, peas, dry beans, and soybeans. **DO NOT apply to any crops if grown for seed production.** This treatment may also provide harvest management benefits, by drying down crop and weed vegetative growth, for example, where late flushes of annual weeds, green vegetative crop growth, or late tillering may interfere with harvest operations.

EXTREMELY COOL, WET AND/OR CLOUDY WEATHER CONDITIONS BETWEEN THE TIME OF APPLICATION AND THE ANTICIPATED HARVEST DATE MAY SLOW DOWN ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE. RACKETEER should be applied at 2.5 L/ha in 20 - 50 L/ha of clean water with aerial application equipment. Apply only when the crop has 30% or less grain moisture content. This stage typically occurs 7 to 14 days before harvest. Consult the table

**GUIDELINES FOR TIMING OF PREHARVEST APPLICATIONS** for visible indicators of this stage in each crop. For the best weed control results quackgrass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow thistle should be actively growing and at or beyond the bud stage for best results. Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth. Apply only during the period 7 - 14 days before harvest to ensure best weed control and to maximize harvest management benefits. Earlier application may reduce crop yield and/or quality, and may lead to excess glyphosate residues in the crop.

### **TREE, VINE AND BERRY CROPS**

RACKETEER controls annual and perennial weeds in established vineyards or orchards, in blueberry, cranberry and strawberry, sugar beets or for site preparation prior to transplanting tree or vine crops.

See table on Weed Control in Tree, Berry and Vine Crops for rate and time of application information.

This product does not provide residual or pre-emergent weed control. Repeat applications may be necessary to control weeds originating from underground parts of treated weeds or from seeds. For subsequent weed control, follow a program using residual herbicides or use repeated applications of RACKETEER .

**DO NOT APPLY MORE THAN 35 L/HA OF RACKETEER PER YEAR.**

**EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF THE HERBICIDE SOLUTION, SPRAY DRIFT, OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT, CANES OF BLUEBERRY BUSHES OR OTHER PARTS OF TREES OR VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURE BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.**

Allow annual and perennial weeds that have been mowed, grazed or cut time to regrow to recommended growth stage for treatment.

Applications may be made with boom sprayer, shielded sprayers, hand held and high volume orchard gun or with wiper, wick or roller equipment (orchards, dry beans, cranberry and strawberry only).

### **TREE PLANTING**

(shelterbelts, nursery stock, woody ornamentals)

RACKETEER may be applied to control annual and perennial weeds listed on this label. This may be used for site preparation prior to establishing plantations, or as a post-directed spray in established plantations of the following species:

<b>DECIDUOUS</b>	<b>CONIFEROUS</b>
Ash – <i>Fraxinus</i> spp. Caragana – <i>Caragana</i> spp. Cherry – <i>Prunus</i> spp. Elm – <i>Ulmus</i> spp. Lilac – <i>Syringa</i> spp. Maple – <i>Acer</i> spp. Mountain Ash – <i>Sorbus</i> spp. Poplar – <i>Populus</i> spp. Russian Olive – <i>Elaeagnus</i> spp. Willow – <i>Salix</i> spp.	Fir – <i>Abies</i> spp. Juniper – <i>Juniperus</i> spp. Pine – <i>Pinus</i> spp. Spruce – <i>Picea</i> spp. Yew – <i>Taxus</i> spp.

SPRAY MAY CONTACT MATURE BROWN BARK ONLY. Avoid contact with non-target plants, foliage, suckers of established plantations.

NOTE: This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Application in such sites should be limited to directed sprays. DO NOT treat Christmas tree plantations in the year of anticipated harvest.

### **NON-CROPLAND AND INDUSTRIAL USES**

When applied as recommended under the conditions described, RACKETEER will control weeds in the non-cropland and industrial uses as listed in the Weed Control in Non-Cropland, Industrial Uses chart.

### **TURFGRASS**

RACKETEER may be applied to control existing vegetation prior to turfgrass establishment or renovation. DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT.

Where existing vegetation is growing under field or unmowed conditions, apply RACKETEER



to actively growing weeds at the growth stages given in the tables Annual and Perennial Weed Control. Where the vegetation is growing under mowed turfgrass management, apply RACKETEER after omitting at least one regular mowing to allow sufficient growth for good spray interception and translocation into underground plant parts.

Tillage or renovation techniques, such as vertical mowing, coring or slicing, should be delayed for 7 days after application to allow proper translocation into the underground plant parts. Delay establishment of the turfgrass to determine if regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient weed regrowth must be attained prior to application.

**AVOID ALL CONTACT WITH DESIRABLE VEGETATION IN THE VICINITY OF THE RENOVATION OR ESTABLISHMENT AREA.**

### **TREE INJECTION APPLICATIONS**

See VEGETATION CONTROLLED lists for species controlled.

Trees may be controlled if RACKETEER is injected directly into the trunk using suitable equipment which penetrates into the living tissue.

RACKETEER is to be used at a rate of 1 mL (undiluted product) per 10 cm of trunk diameter at chest height. The injections should be spaced evenly around the tree and below any major branches. Application may be done during periods of active growth and full leaf expansion.

Control of trees greater than 20 cm may not be acceptable. Total control may not be evident for 1-2 years following treatment. This treatment will only provide suppression of big leaf maple; late fall application will provide optimum suppression of big leaf maple.

### **CUT STUMP APPLICATION**

See Vegetation Controlled lists for species controlled.

Woody vegetation may be controlled by the application of this product to freshly cut stumps to prevent regrowth. Application must be made using low-pressure equipment, (i.e. squirt bottle).

Apply RACKETEER immediately to the surface of the freshly cut stump (i.e. within 5 minutes), at a rate of 0.5 mL RACKETEER for every 5 cm of trunk diameter at chest height. Treat only the cambial tissues (outer edge) of the cut surface. Do not treat the central area, exposed roots or bark.

This treatment may be made at any time of year, except during heavy sap flow or when freezing temperatures prevent application of RACKETEER. A water soluble dye added to the solution may be used as a treatment indicator. Total control may not be apparent until 1-2 years after treatment.

### **WOODY BRUSH AND TREES (FOLIAR APPLICATIONS)**

Spray coverage should be uniform and complete. Do not spray to the point of run off.

Do not allow spray drift to contact desirable vegetation as severe injury or destruction may occur. For woody brush and trees, early season applications may take 30-45 days for symptoms to develop on the target species. Late season application may be made to species that have some autumn colours provided no major leaf drop has occurred. Control will be observed the following spring.

**EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE OF DESIRABLE TURFGRASSES, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.**

For woody brush and trees, apply 3 to 6 L of RACKETEER per hectare. Use ground boom or boomless equipment or apply as a 1% to 2% solution using hand held high volume equipment. Use the 6 L/ha rate for maple, alder and willow\* species, as well as hard to control perennial weed species (\*suppression only).

#### **INDUSTRIAL, RIGHTS-OF WAY, RECREATIONAL AND PUBLIC AREAS**

RACKETEER may be applied to control brush, trees and annual and perennial weeds listed on this label in industrial and rights-of-way areas such as: Railways, pipelines, pumping station, forest roadsides, highways, petroleum tank farms, telephone and power rights-of-way, etc. and in recreational and public areas, such as: Parks, golf courses, schoolyards, airports and other public areas.

NOTE: for all industrial sites, rights-of-way, recreational and public areas, repeat treatments may be necessary to control regeneration of new growth.

**EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE OF DESIRABLE TURFGRASS, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.**

**Ground Application** for all non-cropland uses: For woody brush and trees, apply RACKETEER at 3 to 6 L/ha using ground boom or boomless or mist blower equipment. Or, apply as a 1 to 2% solution using handheld high volume equipment. Use the higher rate for maple, alder and willow\* species, and for hard to control perennial weeds (\*suppression only).

Apply as directed to foliage of actively growing vegetation. Spray coverage should be uniform and complete. Do not spray to the point of runoff, or allow spray drift to contact desirable vegetation as severe injury or destruction may occur.

Mowed or tilled weeds should be allowed to reach optimum growth stage at time of application.

Repeat treatment may be necessary to control regeneration or new growth.

**DO NOT APPLY UNDER WIND OR OTHER CONDITIONS THAT ALLOW DRIFT.**

**Aerial Application** for industrial rights-of-way ONLY:

Refer to the general guidelines for aerial application as well as specific application instructions and buffer zones in this section.

For applications to right-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however the best available application strategies will minimize offsite drift, including meteorological conditions (e.g. wind direction, low wind speed) and spray equipment (e.g. coarse droplets size, minimizing height above canopy) should be used. Application must, however, observe specified the buffer zones for protection of sensitive aquatic habitat.

For woody brush and trees, apply 3-6 L/ha RACKETEER in 30 to 100 L of water. Use 6 L/ha for maple, alder and willow\* species, and for hard to control perennial weed species (\*suppression only). As density of vegetation increases, spray volume should be increased within the allowed range to ensure complete coverage.

Apply only in wind conditions in compliance with local and/or provincial regulations. Do not apply when other climatic conditions, including lesser wind velocities, will allow significant drift to occur.

**PURPLE LOOSESTRIFE CONTROL**

DO NOT TREAT PLANTS OVER OPEN WATER. RACKETEER is not registered for direct application to bodies of water.

Treat when plants are actively growing at or beyond the bloom stage. If using hand held equipment, spray to wet. For wiper applications, see Wiper, Wick and Roller Equipment section.

Where feasible, remove flower heads before treatment to ensure prevention of seed set.

For large (> 1.6 ha) monocultures of purple loosestrife, work from the periphery inward in successive years to allow competing vegetation to invade the treated area.

A long-term control strategy should include measures to control both established plants and seedlings. Sprayed areas should be monitored to determine the appropriate follow-up management. Early detection and treatment of second and third generation seedlings is important to prevent re-infestation of purple loosestrife. Desirable native plant communities will then have a chance to become re-established.

**WEED CONTROL IN NON-CROPLAND, INDUSTRIAL USES**

Weeds	Ground application◆	Comments
	Boom application	

	<b>Rate (L/ha)</b>	<b>Water volume (L/ha)</b>	<b>Hand held high volume application (% solution)</b>	
Annual grasses and broad leaves	2.25-3.5	50-100	1	Actively growing weeds
Perennial Weeds	2.5	50-300	1	Actively growing weeds. Add 0.5% v/v of a recommended surfactant when using more than 150 mL of water. (See Minimum and Zero Tillage Tank Mixes.)  Use higher rate for heavy infestations and long term control.  See purple loosestrife control section for instructions on application.  Summer through fall; fall is best.
Quack grass	4.75-7.0	50-300	2	
Canada thistle (bud stage)	4.75-7.0	100-300	2	
Purple loosestrife	6.0	300-600	1-2 (or 33% for wiper application)	
Other perennials	7.0-12.0	100-300	2	
Brush and Trees	3.0-6.0	100-300	1%-2%	Summer through early fall.
Birch, cherry, poplar, Western snowberry, willow				Late summer through early fall, fall is best.
Maple, raspberry, salmonberry, alder	6.0	100-300	2%	
Turfgrass: Annual and perennial weeds	2.5-12.0	100-300	1%-2%	Use higher rates for perennials.
Roadside vegetation  (1-2 m wide along shoulder)	(a) 0.75-1.0 +	25-150		Refer to tank mix section on product labels for specific weeds controlled. Refer to chart on annual weed control for rates for specific weeds.

Weeds	Ground application♦			Comments
	Boom application			
	Rate (L/ha)	Water volume (L/ha)	Hand held high volume application (% solution)	
	1.25-2.5 L Vanquish Herbicide  (b) 0.75-1.0 + 0.3 L Vanquish Herbicide + 1.2 L 2,4-D amine 500	50-150		For different 2,4-D formulations, adjust the rate accordingly. Do not apply to standing water.
Residual Control Annual and perennial weeds	2.5-12.0 + 4.0-9.0 L Simadex Simazine Flowable	200-400		<p>The Simazine part of this tank mix will provide season-long control of most broadleaf weeds and grasses, and may provide post emergent control of certain annual weeds. Do not apply to coarse, sandy or gravelly soil.</p> <p>One application per year. Use the most restrictive label directions for each product in the mix. For other simazine products registered for this use,</p>

Weeds	Ground application♦			Comments
	Boom application			
	Rate (L/ha)	Water volume (L/ha)	Hand held high volume application (% solution)	
				use rates equivalent to 2.0-4.5 kg/ha

♦ Aerial application may be used for brush and tree control in industrial rights-of-way only. See Section on aerial application.

### WEED CONTROL IN TREE, VINE AND BERRY CROPS

Crop	Rate L/ha	Pre-harvest interval (days)	Max. app. per year	Weed controlled	Comments
Apples, apricot, cherry (sweet/sour), peaches, pears, plums	2.25-12.0 directed spray	30	3	Annual and perennial weeds	Apply as directed spray with no more than 275 kPa pressure.
Apples, grapes	Tank Mix 2.25-12.0 + Simazine 2.0-4.5 kg/ha	-	1	Annual and perennial weeds	Will provide season-long pre-emergent control. Do not apply to coarse, sandy or gravelly soil.  Use the more restrictive label direction for each product in the mix.  Do not apply to orchards established less than 1 year or vineyards established less than 3 years. Simazine rate is equivalent to 2.25-5.0 kg/ha Princep Nine T or 4.0-9.0 kg/ha Simadex.

<b>Crop</b>	<b>Rate L/ha</b>	<b>Pre- harvest interval (days)</b>	<b>Max. app. per year</b>	<b>Weed controlled</b>	<b>Comments</b>
Grapes	2.25-12.0 Directed spray	14	3	Annual and perennial Weeds	Remove all sucker growth from the spray zone before spraying, except for the Concord variety of grape. Suckering should be conducted within 2 weeks prior to application. Do not apply to vines which have been established less than 3 years.
Highbush (cultivated) blueberry	2.8-5.6 directed spray	30	1	Quack grass	Use as a directed spray with no more than 275 kPa pressure.
Lowbush blueberry	1% - 2% solution (spot treatment)	Apply in non- bearing year only	1	Wood brush	Apply as directed spray in mid-summer of the vegetative (non-bearing) year. See Agricultural and Cropland Use section for instructions on spot treatments.
Filberts, hazelnut  (established plantations)	2.25-3.5 directed spray	14	-	Annual weeds	Use as a directed spray with no more than 275 kPa pressure.
Walnut, chestnut, Japanese chestnut	2.25-12.0 directed spray	-	2	Annual and Perennial Weeds	Apply late spring and fall, post harvest but prior to a killing frost.  Apply in 200-300 L water as a directed spray using no more than 275 kPa pressure. Apply alternatively as a 2% wiper solution. See Application Equipment and Mixing Instructions section for instructions on wiper

<b>Crop</b>	<b>Rate L/ha</b>	<b>Pre-harvest interval (days)</b>	<b>Max. app. per year</b>	<b>Weed controlled</b>	<b>Comments</b>
					applications.
Cranberry	20% solution (1 L RACKETEER + 4 L water)	30	1	Annual and perennial weeds	Apply using wick or wiper applicators. See Application equipment and mixing instruction section for instructions on wiper applicators.
Strawberry	1%-2% solution (spot treatment) 33% solution, wiper application	30	1	Emerged perennial weeds	Apply when the weeds are at a susceptible growth stage. See Agricultural and Cropland Use section for instructions on spot treatments. See Application Equipment and Mixing Instructions section for instructions on wiper applications.
Sugar Beets	1%-2% solution (spot treatment)	Treated crop must not be harvested	1	Dodder species	Apply when Dodder is growing vigorously but before flowering. See Agricultural and Cropland Use section for instructions on spot treatments.

### ANNUAL WEED CONTROL

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
Boom or boomless sprayers	Wild oats, green foxtail, volunteer barley, volunteer wheat, wild mustard, lady's-thumb, stinkweed	Weeds up to 8 cm in height	0.75	50-100	For wild oats apply at 1-3 leaf stage. For heavy wild oat infestations use 1 L/ha. Add 350 mL of a surfactant registered for



<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
					use such as Agral 90, AgSurf, Companion.
Boom or Boomless Sprayers	All annual grasses listed above plus foxtail barley* (suppression only)  All annual broadleaf weeds listed above plus flixweed** and kochia**	Weeds 8 cm to 15 cm	1.0	50-100	*Apply before initiation of seed-head or senescence of the lower leaves.  **Suppression only. Refer to higher rates of this table.  Add 350 mL of a surfactant registered for use as listed above.
Boom or boomless sprayers	All annual grasses listed above plus downy brome, giant foxtail and Persian darnel  All annual broadleaf weeds listed above plus lamb's-quarters, redroot pigweed, hemp-nettle, flixweed, Russian thistle, volunteer flax, common ragweed*, Canada fleabane*, wild buckwheat**, narrow-leaved hawk's-beard***	Weeds up to 15 cm in height	1.25-1.9	50-100	No additional surfactant required.  DO NOT use these rates on plants greater than 8 cm in height.  **For 3-4 leaf stage use 1.9 L/ha.  ***For weeds 8 cm to 15 cm in height use 1.9 L/ha.
Boom or Boomless	All annual grasses listed	Weeds up to 15 cm in	2.25	50-100	

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
Sprayers	above plus crabgrass and annual bluegrass. All annual broadleaf weeds listed above plus kochia, prickly lettuce, shepherd's purse, annual sow-thistle and narrow-leaved vetch	height			
Boom or Boomless Sprayers	All annual grasses and broadleaf weeds listed above	Weeds over 15 cm in height	3.5	50-100	
Wipers and Wicks	Annual weeds	Weeds to be at least 15 cm above desirable vegetation	1	2	This mixture is a 33% solution.  Contact point for wiper or wick must be a least 5 cm above desirable vegetation.  In severe weed infestations, reduce ground speed to ensure adequate control. See Application Equipment and mixing instruction section and mixing instruction sections for instructions on wiper and wick application.
Rollers	Annual weeds	Weeds to be at least 15 cm above	0.5-1.0	10	This mixture is a 5%-10% solution.  Roller speed 50-150

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
		desirable vegetation			rpm. See Application Equipment and mixing instruction section for instructions on roller application.

### PERENNIAL WEED CONTROL

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
Boom or boomless sprayers	Fall application (after harvest)	3-5 green leaves (approx. 20 cm height)	2.5	50-300	For season long control the following year. Do not till between harvest and application. Allow 5 days or more after application before tillage.
			2.5-7.0	50-300	Long Term Control. Reduced control may result if rhizomes have become dormant due to poor sod or land has not been tilled for several years. Treatment after a mild frost is possible if 3-4 leaves are still green and actively growing but not after a heavy frost. Straw should be evenly spread to allow regrowth and adequate coverage.

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
Boom or boomless sprayers	Canada thistle	Bud stage or beyond	4.75-7.0	100-300	Allow 5 days after application before tillage.  Heavy frost prior to application may decrease control.
		Rosette stage (summer fallow)	2.5	50-100	Ensure proper growth stage by performing last summer fallow tillage between July 5 and August 1 <sup>st</sup> . Allow regrowth for a minimum of 5 weeks to reach rosette stage and a minimum of 15 cm in diameter.  Allow 10 days after application before tillage.  Treatment after mild frost is possible if leaves are still green and actively growing but not after heavy damaging frost.
Boom or boomless sprayers	Other perennial weeds	Early heading or early bud stage (see Weed Controlled section)	7.0-12.0	100-300	Use higher rate for weeds beyond 8 cm in height or in heavy weed infestation.  Allow 7 days after application before tillage. RACKETEER rate is equivalent to 70-120 mL/100 m <sup>2</sup> .
Boom or boomless	Field bindweed	Full bloom or beyond	7.0-12.0	100-300	Allow 7 days or more after application before

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
sprayers					tillage.
Boom or boomless sprayers	Common milkweed	Bud to full bloom for most shoots	12.0	100-300	Spot treatment rate is 120 mL per 5 L water/100 m <sup>2</sup> and spray to wet. Not runoff.  Reduced results may occur if sprayed after full bloom.  Repeat treatment may be required.  Allow 7 days or more after application before tillage.
Boom or boomless sprayers	Quack grass spring application (no fall tillage)	3 to 4 green leaves (approx. 20 cm high)	2.5	50-300	Season long control.  At higher water volumes use approved surfactant at 0.5% v/v (0.5 L per 100 L of water).  Allow 3 days after application before tillage.
Boom or boomless sprayers	Quack grass spring application (fall-tilled land)	4 to 5 green leaves (approx 20 cm high)	2.5	50-100	Season long control.  Apply in spring prior to seeding. Growth stage usually reached 1 to 4 weeks later on land that has been fall-tilled.  Reduced control may result on land tilled deeper than 15 cm.
Boom or boomless	Woody brush and trees	Actively growing	3.0-6.0	100-300	Use higher rate for maple, alder, rubus

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
sprayers		from June through August			species and willow*. Spray to wet.
High volume or knapsack	Woody brush and trees	Actively growing from June through August	1%-2%	100	This mixture is 1% to 2% solution.  Use higher rate for maple, alder, rubus species and willows*. Spray to wet. See application and mixing section for instructions on high volume or knapsack applications
Wipers and wicks	Perennial weeds	Weeds to be at least 15 cm above desirable vegetation	1	2	See Application Equipment and Mixing Instructions section for instructions on Wiper and Wick Applications.
Rollers	Annual and perennial weeds	Weeds to be at least 15 cm above desirable vegetation	0.5-1.0	10	THIS MIXTURE IS A 5-10% SOLUTION. See Application Equipment and Mixing Instructions section for instructions on Roller Application.  This treatment will only suppress perennial weeds contacted.  Roller speed 50-150 rpm.
Tree Injection	Trees*	During periods of active growth and	1 mL per 10 cm of trunk	None	Suitable equipment must be used to penetrate to living tissue. Space

<b>Equipment</b>	<b>Weeds controlled</b>	<b>Growth stage</b>	<b>Rate L/ha</b>	<b>Water volume L/ha</b>	<b>Comments</b>
		full leaf expansion except during periods of heavy sap flow	diameter at chest height		<p>applications evenly around the circumference of the trunk below major branches.</p> <p>Control of trees with trunk diameters greater than 20 cm may not be acceptable.</p> <p>See Application and Mixing Instruction section for instructions on tree injection applications.</p>

\*Suppression only for willow.

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