

2. Vegetable crops

TABLE 2-1

Vegetable herbicide weed control ratings

NOTES: Ratings are subjective values based on best available information and give general comparisons based on use as described in this guide. Under unfavourable conditions (e.g., too dry, too wet, too cold, or poor application) the herbicides may not be as effective as indicated. Ratings may vary with weed and crop stage and with the timing and rates of the product(s) being used. Please refer to product label for more information on registered weed species, product uses and precautions.

LEGEND: N = No Control P = Poor Control F = Fair Control G = Good Control E = Excellent Control
- = insufficient information available to make a rating.

TRADE NAME	Grasses					Annual Broadleaves								Perennials						
	barnyard grass	crabgrass	fall panicum	foxtails	witchgrass	buckwheat, wild fleabane, Canada	lady's-thumb	lamb's-quarters	mustards	nightshades	pigweeds	ragweed	velvetleaf	bindweed, field	horsetail	milkweed	nutsedge	quackgrass	sow-thistle	thistle, Canada
SOIL-APPLIED GRASS HERBICIDES																				
PREFAR	E	E	-	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SOIL-APPLIED BROADLEAF HERBICIDES																				
AATREX LIQUID 480	P	P	P	P	P	E	-	E	E ^R	E	E	G ^R	F ^R	P	-	-	-	-	-	-
CALLISTO 480 SC or MESTER 480 SC HERBICIDE	G	P	P	P	P	G	-	E	E	E	E	E	F	E	P	N	N	N	N	N
GESAGARD 480SC	-	-	-	E	-	-	-	G	E	G	G	G ^R	F	-	-	-	-	-	-	-
LOROX L	F	P	P	F	F	G	-	E	E	E	G	E ^R	G	F	P	P	P	P	P	P
PYRAMIN	P	P	P	P	P	G	-	G	G	G	G	G	G	F	P	P	-	P	P	P
REFLEX	N	N	N	N	N	F	-	G	F	G	P	E	E	F	P	F	P	-	N	P
SANDEA	N	N	N	N	N	-	E	G	G	G	-	G	G ¹	G	F	N	N	F	-	-
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES																				
ACURON	E	G ²	G	E	E	G	E	E	E	E	E	E	E	E	-	-	-	-	-	-
AUTHORITY 480	-	G	-	-	-	G	-	-	G	-	G	G	P	-	-	-	-	-	-	-
CHATEAU	P	P	P	P	P	-	E	F	E	-	E	E	F	F	-	-	-	-	-	-

^R Populations of this weed exist in Ontario that are resistant to this treatment and will not be adequately controlled.

¹ Registered for pre-emergent activity on common ragweed only.

² The addition of Callisto or Callisto + Aatrex will improve control of this species.

³ The highest labeled rate is required to achieve this level of control.

⁴ Large crabgrass only.

⁵ Not all formulations are registered on all crops. See label for specific uses and rates.

⁶ Good control of these perennial weeds may require two applications, 7-10 days apart.

⁷ Yellow foxtail will only be suppressed.

⁸ Registered for control of hairy nightshade.

⁹ Weeds cannot be emerged at time of application to achieve this level of control.

¹⁰ Repeated IGNITE SN applications may be necessary if regrowth occurs.

¹¹ PPI application ONLY.

continued

TABLE 2-1
Vegetable herbicide weed control ratings *continued*

TRADE NAME	Grasses					Annual Broadleaves								Perennials								
	barnyard grass	crabgrass	fall panicum	foxtails	witchgrass	buckwheat, wild	fleabane, Canada	lady's-thumb	lamb's-quarters	mustards	nightsshades	pigweeds	ragweed	velvetleaf	bindweed, field	horsetail	milkweed	nutsedge	quackgrass	sow-thistle	thistle, Canada	
COMMAND 360 ME	E	E	-	E	-	-	-	-	E	-	E	F	E	E	-	-	-	-	-	-	-	-
DACTHAL W-75	F	G	G	G	G	N	-	N	G	N	N	F	N	N	-	-	-	-	N	N	N	N
DEVIRINOL 2-XT	G	E	G	G	G	P	-	F	G	P	P	G	F	P	P	P	P	F	P	P	P	P
DUAL II MAGNUM or KOMODO HERBICIDE	E	E	G	E	E	P	-	P	F	P	G	G	P	P	N	N	N	G	P	N	N	N
EPTAM	E	E	E	E	E	P	-	F	F	P	F	F	P	P	-	-	-	G	P	-	-	-
FRONTIER MAX	E	E	G	E	E	P	-	P	F	P	G	G	P	P	N	N	N	G	N	N	N	N
INTEGRITY	E	E	G	G	-	E	E	G	G	E	E¹¹	E	G	E	F	F	-	G¹¹	N	N	N	N
KARMAX or DIUREX 80WDG	E	G	F	G	-	G	-	G	E	G	F	G	E	-	-	P	-	P	P	P	P	P
KERB SC	G	G	G	G	G	-	-	F	F	F	F	N	N	N	N	N	N	N	N	N	N	N
LUMAX EZ	E	E	G ³	G	E	E	-	E	E	E	E	E	G	E	N	N	N	N	N	N	N	N
NORTRON FLOWABLE	F	F	F	F	F	G	-	G	G	G	F	G	G	F	P	P	P	F	P	P	P	P
PURSUIT or PHANTOM or NU-IMAGE	G	F	F	E	E	G	-	E	E	E	E	E	G	E	-	-	-	F	P	-	-	-
PRINCEP NINE-T or SIMAZINE 480 or SIMADEX	E	G	F	E	E	E	-	E	E ^R	E	E	E ^R	G	P	P	N	N	P	P	P	P	P
PRIMEXTRA II MAGNUM	E	G ²	G	E	E	E	-	E ^R	E ^R	E ^R	E	E ^R	F ^R	P	N	N	N	G	N	N	N	N
PROWL H2O	E	E	E	G	-	-	-	F	E	-	G	G	E	F	-	-	-	-	-	-	-	-
SENCOR or TRICOR or SQUADRON	F	F	F	G	G	F	-	E	E ^R	E	P	E ^R	G	G	P	P	P	P	P	P	P	P
SINBAR WDG	G	F	G	G	G	-	-	F	G ^R	G	F	F	F	F	-	P	F	F	F	-	F	F
TREFLAN or RIVAL or BONANZA	E	E	E	E	E	P	-	F	G	P	P	G	P	P	P	P	P	P	P	P	P	P
SOIL-APPLIED TANK-MIX OPTIONS																						
LOROX + DUAL II MAGNUM	E	E	G	G	E	E	E	E	E	E	E	E	E	F	N	N	-	G	N	N	N	N
PRIMEXTRA II MAGNUM + CALLISTO	E	E	G	G	E	E	G	E	E	E	E	E	E	E	P	-	-	G³	N	N	N	N
POST-EMERGENCE GRASS HERBICIDES																						
ACCENT 75 DF	E	F ⁴	E	E ^R	E	N	N	N	N	N	N	N	N	N	N	N	N	N	G	N	N	N
ASSURE II or ELEGANT 10 EC or YUMA GL	E	G ^R	E	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	E	N	N	N
POAST ULTRA	E	G ^R	E	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	F	N	N	N
SELECT or ARROW or CENTURION	E	G ^R	E	G	E	N	N	N	N	N	N	N	N	N	N	N	N	N	F	N	N	N
VENTURE L	G	G ^R	E	G	E	N	N	N	N	N	N	N	N	N	N	N	N	N	G	N	N	N

TABLE 2-1**Vegetable herbicide weed control ratings** *continued*

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TRADE NAME	Grasses					Annual Broadleaves									Perennials						
	barnyard grass	crabgrass	fall panicum	foxtails	witchgrass	buckwheat, wild	fleabane, Canada	lady's-thumb	lamb's-quarters	mustards	nightshades	pigweeds	ragweed	velvetleaf	bindweed, field	horsetail	milkweed	nutsedge	quackgrass	sow-thistle	thistle, Canada
POST-EMERGENCE BROADLEAF HERBICIDES																					
2,4-D ⁵	N	N	N	N	N	F	-	P	P	E	F	E	G	G	F	N	N	N	N	G	G
AATREX LIQUID 480	P	P	P	P	P	E	-	E	E ^R	E	E	G ^R	F ^R	P	-	-	-	-	-	-	-
AIM EC (Hooded Sprayer)	-	-	-	-	-	-	-	G	G	G	G	G	-	G	-	-	-	-	-	-	-
BASAGRAN FORTÉ	N	N	N	N	N	F	-	E	G	F	F	G	G	E	F ⁶	P	P	G ⁶	N	F ⁶	F ⁶
CALLISTO 480 SC or MESTER 480 SC HERBICIDE	G	P	P	P	P	G	-	E	E	E	E	F	E	P	N	N	N	N	N	N	
GOAL 2XL or BASKET 2XL	P	P	P	P	P	E	-	G	G	E	E	E	G	F	P	P	P	P	P	P	P
LONTREL XC or PYRALID HERBICIDE	P	P	P	P	P	-	-	F	P	-	P	P	G	P	P	-	-	P	P	F	F
MCPA ⁵	N	N	N	N	N	P	-	P	E	E	-	E	G	E	F	F	N	N	N	F	F
PARDNER or BROMOTRIL or BROTEX or KORIL or BROMAX or BROMOXYNIL	N	N	N	N	N	E	-	E	E	G	E	G	E	E	F	N	N	N	N	F	F
PINNACLE SG TOSS-N-GO	N	N	N	N	N	-	-	G	E	G	P	E	P	G	P	P	P	P	P	P	P
PYRAMIN	P	P	-	P	-	G	-	G	G	G	G	G	G	-	-	P	-	P	P	P	P
SANDEA or PERMIT	N	N	N	N	N	-	N	G ⁹	G ⁹	G	-	G	G	G	F	F	F	E	-	-	-
TROPOTOX PLUS or CLOVITOX PLUS or TOPSIDE	N	N	N	N	N	G	-	G	F	G	F	E	E	E	G	N	N	N	N	G	G

continued

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POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES																					
BETAMIX B	P	P	P	F	P	F	-	F	G	F	F	G	G	P	P	-	-	P	P	P	P
LOROX L	E	F	E	G	E	G	-	G	G	G	G	G	G	G	F	G	F	G	F	G	F
PRIMEXTRA II MAGNUM	E	G ²	G	E	E	E	-	E ^R	E ^R	E ^R	E	E ^R	F ^R	P	N	N	N	G	N	N	N
PRISM	E	F	E	G ⁷	E	-	-	F	F	E	P ⁸	E	P	F	-	-	-	-	F	-	-
SENCOR 75 DF	G	F	E	G	E	F	-	E	G	E	-	G	G	F	-	-	-	-	F	-	-
SHIELDX 400SC	F	E	-	G	-	-	G	F	G	-	-	G	F	-	-	-	-	-	-	-	-
TITUS PRO	E	G	E	G	E	F	-	E	G	E	P ⁸	E	G	F	-	-	-	-	F	-	-
POST-EMERGENCE TANK-MIX OPTIONS																					
ACCENT + CALLISTO + AATREX LIQUID 480	E	F	E	G ^R	E	G	F	E	E	E	E	E	G	E	P	-	-	-	E	-	-
IMPACT or ARMEZON + AATREX LIQUID 480	F	F ⁴	F	F	F	G	E	E	E	E	E	E	E	F	N	N	N	N	N	N	N
PARDNER or BROMOTRIL or BROTEX or KORIL or BROMAX + AATREX LIQUID 480	P	P	P	P	P	E	-	E	E ^R	E	E	G ^R	F ^R	P	-	-	-	-	-	-	-
PRISM + PINNACLE SG TOSS-N-GO	E	G	E	G ⁷	E	-	-	G	E	E	P ⁸	E	P	G	P	P	P	P	F	P	P
SHIELDX 400SC + AATREX 480	F	E	-	G	-	-	E	E	E	-	-	E	E	-	-	-	-	-	-	-	-
PRE-PLANT AND POST-HARVEST																					
GLYPHOSATE ⁵	E	E	E	E	E	E	E ^R	E	E	E	E	E	E ^R	E	G	F	G	G	G	G	G
IGNITE SN	E	E	E	E	E	-	G ¹⁰	E	E	E	-	E	E	E	G ¹⁰	F ¹⁰	F ¹⁰	N	G ¹⁰	-	-

Cultural weed control in vegetable crops

More than 50 vegetable crops are grown commercially in Ontario. Some are seeded, some transplanted, some are annuals, and other crops are perennial, presenting a very diverse group of situations to manage weeds. Weed management involves all aspects of weed control in vegetable crops including scouting, herbicides, cultivation, hoeing, mulches, etc. Perennial weeds are often a more severe problem in perennial horticultural crops, such as asparagus and need to be controlled prior to planting.

Treatments listed for horticultural crops in this publication are based on extensive research trials. Do NOT use herbicides in cold frames or greenhouses unless specifically stated on the pesticide label. Horticultural crops are often high value crops. Weed competition is costly. Improper application of herbicides can also be costly. Do not use sprayers for hormone type herbicides (2,4-D, etc.) to apply insecticides, fungicides or other herbicides on susceptible horticultural crops.

Herbicide application timings

PRE-PLANT (PP) TREATMENTS

Pre-plant treatments are applied before the crop is sown or planted. Some of these herbicides kill seedlings soon after germination while others also kill weed seeds. Most herbicides used for these treatments must be thoroughly incorporated into the soil by cultivation soon after application.

PRE-PLANT (PP) WEED AND COVER CROP CONTROL

Control cover crops and emerged weeds before seeding or transplanting vegetable crops. Alternatively, a grower may choose to kill the cover crop and/or emerged weeds just before planting the vegetable crop and either till the area or leave the seedbed untilled.

PRE-PLANT INCORPORATED (PPI)

Two incorporations at right angles operating at a depth of 10 cm (4 in.) using a double disk (7-10 km/h) or vibrating shank S-tine cultivator (10-13 km/h) are required unless otherwise stated. Cultivation-type equipment used for herbicide incorporation is known to spread perennial weeds to previously uninfested areas. Pay special attention to machinery cleanliness and/or treating fields with perennial weeds last.

PRE-EMERGENCE (PRE)

Rainfall at 1.5-2 cm (0.6-0.8 in.) within 7-10 days after application is necessary to activate pre-emergence treatments. Shallow cultivation, rotary hoeing or harrowing will control weed escapes and improves herbicide activity in the absence of rainfall. These materials prevent emergence of many weed seedlings without reducing crop stand. Apply immediately after seeding or at least before the emergence of the crop. If these materials are applied after weeds have emerged, kill is usually poor. Best results are obtained with this method when conditions for weed seed germination are good.

POST-EMERGENCE (POST)

These chemicals are applied after the crop plants have sprouted or after the crop has been transplanted. Applied as directed, the weeds can be killed without injury to the crop. Leaf stage of the weeds is critical for good weed control. Smaller weeds are generally easier to kill but there needs to be enough leaf surface to intercept the herbicide. Apply according to leaf stages specified on the label. Crop stage is important to optimize crop safety. Adjuvants will frequently improve the weed control when used as directed. Weather or other conditions may influence the optimum rate of adjuvant, see the label for more details. Always use appropriate drift management technology.

INTER-ROW WEEDING

The herbicide is directed between the crop rows onto the emerged weeds. The herbicide is used as a rescue operation where other methods of weed control have failed. Use special low pressure (7-15 kPa) applicators such as dribble bars or vibra jets equipped with shields to prevent wetting the crop.

STALE SEEDBED TECHNIQUE

The stale seedbed technique is useful when the soil can be worked well before planting and weeds are allowed to emerge for several weeks. Seeding or planting directly into the killed weeds with minimal soil disturbance will allow the crop to establish before the next flush of weeds emergence. Follow up with either cultivation, hoeing, post-emergence or directed herbicides to control later germinating weeds. Where registered, some herbicides can be applied after seeding but before crop emergence.

WIPER APPLICATORS FOR SELECTIVE WEED CONTROL

Wiper applicators (rope-wick, roller applicator or similar device) have been extensively used with glyphosate. Check labels for use of this application technique with other herbicides.

WATER VOLUMES

All herbicide treatments should be applied in a minimum of 150-300 L water/ha (60-120 L water/acre) unless otherwise specified on the label.

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

ASPARAGUS		
TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
PRE-PLANT (STALE SEEDBED TECHNIQUE)		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.55-1.75 L/ha Product Rate/acre: 0.6-0.7 L/acre Active Ingredient(s): s-metolachlor (1.42-1.60 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 16 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2.00 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.750 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: not stated
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1.25-2.5 L/ha, 0.94-1.875 L/ha, 0.9-1.8 L/ha, 0.83-1.67 L/ha Product Rate/acre: 0.5-1.0 L/acre, 0.38-0.75 L/acre, 0.36-0.72 L/acre, 0.33-0.67 L/acre Active Ingredient(s): glyphosate (0.45-0.90 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 7 days Rainfast: 1 hour Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: AUTHORITY 480 (480 g/L) Product Rate/ha: 219-292 mL/ha Product Rate/acre: 87.6-116.8 mL/acre Active Ingredient(s): sulfentrazone (0.105-0.140 kg/ha)	Group #: 14 PCP #: 29012	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CALLISTO 480 SC or MESTER 480 SC HERBICIDE (480 g/L) Product Rate/ha: 0.3 L/ha Product Rate/acre: 0.12 L/acre Active Ingredient(s): mesotrione (0.14 kg/ha)	Group #: 27 PCP #: 27833 or 33632	REI: 12 hours PHI: not stated Rainfast: 3 hours for emerged weeds Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.16 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

ASPARAGUS
PRECAUTIONS - For more information, see the label.
PRE-PLANT (STALE SEEDBED TECHNIQUE)
<ul style="list-style-type: none"> • Apply before direct seeded or established spears emerge. • Application may result in injury to the asparagus crop. • Do NOT apply to soil with less than 1% or more than 10% organic matter.
<ul style="list-style-type: none"> • Apply before direct seeded or established spears emerge. • Spray uniformly on emerged weeds prior to emergence of the crop.
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • For control of fall-seeded rye and emerged weeds. • Apply in the spring before spears emerge. • Not all formulations registered on all crops. See label for specific uses and rates.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • 1st year crown and established plantings ONLY. • Apply as a broadcast treatment in the spring before the crop and weeds emerge. • Do NOT use on sandy soils with less than 1% organic matter.
<ul style="list-style-type: none"> • Apply after fern mowing, disking, or other tillage operation but prior to spear emergence (PRE). • If weeds are emerged at the time of application add AGRAL 90 at a rate of 0.2% v/v. If weeds have not emerged, no adjuvant is needed.
<ul style="list-style-type: none"> • 1st year crown and established plantings ONLY. • Apply lower rate on sandy (coarse textured) soils with less than 5% organic matter and the higher rate on clay (medium textured) with less than 5% organic matter. • Injury may result if spears emerge before the application has been activated with water.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 1.55-2.35 L/ha Product Rate/acre: 0.62-0.94 L/acre Active Ingredient(s): clomazone (0.56-0.85 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 14 days Rainfast: not stated Max Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 9.38-18.75 L/ha Product Rate/acre: 3.75-7.5 L/acre Active Ingredient(s): napropamide (2.25-4.5 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: KARMEK (80 DF) or DIUREX 80 WDG Product Rate/ha: 1.1-4.5 kg/ha Product Rate/acre: 0.44-1.80 kg/acre Active Ingredient(s): diuron (3.6-8.8 kg/ha)	Group #: 7 PCP #: 28543 or 28107	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 2
Trade Name: LOROX L (480 g/L) Product Rate/ha: 3.3-4.3 L/ha Product Rate/acre: 1.32-1.72 L/acre Active Ingredient(s): linuron (1.60-2.15 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: not stated
Trade Name: PRINCEP NINE-T (90 WG) + DEVRINOL 2-XT (240 g/L) Product Rate/ha: 2.5-3.75 kg/ha + 18.75-27.92 L/ha Product Rate/acre: 1.0-1.5 kg/acre + 7.5-11.2 L/acre Active Ingredient(s): simazine (2.25-3.38 kg/ha) + napropamide (4.5-6.7 kg/ha)	Group #: 5 + 15 PCP #: 16370 + 31688	REI: 12 hours PHI: 6 days Rainfast: moisture required for activation Max. Applications: not stated
Trade Name: PRINCEP NINE-T (90 WG) or SIMADDEX (500 g/L) or SIMAZINE 480 (480 g/L) Product Rate/ha: 2.5-3.75 kg/ha, 4.5-6.7 L/ha, 4.7-7.0 L/ha Product Rate/acre: 1.0-1.5 kg/acre, 1.80-2.68 L/acre, 1.88-2.80 L/acre Active Ingredient(s): simazine (2.25-3.40 kg/ha)	Group #: 5 PCP #: 16370 or 15902 or 23181	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 2
Trade Name: SENCOR 75 DF (75%) or SQUADRON (75%) or TRICOR 75 (75%) Product Rate/ha: 1.5 kg/ha Product Rate/acre: 0.6 kg/acre Active Ingredient(s): metribuzin (1.125 kg/ha)	Group #: 5 PCP #: 25840 or 32081 or 30661	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 2

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • PRE - Apply as a broadcast application to the soil prior to spear emergence. If spears have emerged, make an application after a clean harvest. Cover exposed plants with soil prior to application. • Apply broadcast at 1.55-2.35 L/ha (0.62-0.94 L/acre). Use 1.55 L/ha (0.62 L/acre) on light (coarse) soils, 1.95 L/ha (0.78 L/acre) on medium soils and 2.35 L/ha (0.94 L/acre) on heavy (fine) soils. • Do NOT incorporate.
<ul style="list-style-type: none"> • Seedlings and new plantings ONLY. • PPI - Incorporation by irrigation or rainfall is essential. • Treat at planting time, or soon after planting before weed seedlings appear. • Use lower rate on sandy soils and the higher rate on clay soils.
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • PRE - Disk before any shoots appear in the spring on established plantings. • A second application may be made after the post-harvest disking. • Use lower rates for lighter soils. • If two applications are being made, Do NOT exceed 3.25 kg/ha (1.32 L/acre) on each application. • If using irrigation, only apply 1 application of 4.5 kg/ha (1.82 L/acre).
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • PRE - Disk before any shoots appear in the spring. • A second application may be made after the post-harvest disking. • Use lower rates for lighter soils.
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • PRE - Disk before any shoots and weeds appear in the spring. • Use lower rates for lighter soils. • Apply second application after post-harvest disking. • Do NOT apply during the cutting season. • Do NOT apply if heavy rain is expected.
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • PRE - Disk before any shoots appear in the spring. • A second application may be made after post-harvest disking. • Use lower rates for lighter soils.
<ul style="list-style-type: none"> • 2nd year and established plantings ONLY. • PRE - Disk before any shoots appear in the spring. • A second application may be made after post-harvest disking. • Use lower rates for lighter soils.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 2.25 L/ha Product Rate/acre: 0.9 L/acre Active Ingredient(s): metribuzin (1.08 kg/ha)	Group #: 5 PCP #: 26280 or 32876	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max Applications: 2
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 0.375 kg/ha Product Rate/acre: 0.15 kg/acre Active Ingredient(s): terbacil (0.3 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: 5 days Rainfast: moisture required for activation Max. Applications: not stated
Trade Name: TREFLAN EC (480 g/L), RIVAL EC (500 g/L), BONANZA 480 (480 g/L) Product Rate/ha: 2-4.2 L/ha Product Rate/acre: 0.80-1.68 L/acre Active Ingredient(s): trifluralin (1.0-2.0 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2.0 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2.00 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 40 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.80 L/acre Active Ingredient(s): fluzifop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 1 day Rainfast: 2 hours Max. Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: 2,4-D (470 g/L), 2,4-D (564 g/L), 2,4-D (660 g/L) Product Rate/ha: 3.5 L/ha, 1.7-2.25 L/ha, 1.96 L/ha Product Rate/acre: 1.4 L/acre, 0.68-0.90 L/acre, 0.78 L/acre Active Ingredient(s): 2,4-D (1.0-1.6 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 day Max. Applications: not stated

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- SENCOR 480 F Herbicide is recommended for use in ground spray equipment as a preemergence surface application to established asparagus in early spring before spears or ferns emerge and/or following last cutting.
- **Do NOT** use on newly seeded asparagus or on young plants during the first growing season after setting crowns.
- **Do NOT** apply to established crops after emergence of spears. If the field is to be disked, apply SENCOR 480 F after disking but before the crop emerges.
- 2nd year and established plantings **ONLY**.
- PRE – Apply before spears emerge, or immediately after clean cutting.
- Apply only once throughout the entire growing season.
- Apply before weeds emerge, or to small, actively growing weeds (up to 5 cm or 2 in.).
- **Do NOT** use on soils containing less than 1% organic matter, or where subsoil or roots are exposed.
- **Do NOT** plant any other crop for 2 years.
- Established plantings of 3 or more years **ONLY**.
- PPI – Incorporate within 24 hours of application. Application should occur early enough in the spring to ensure that spears are not injured by the required incorporation (5-10 cm or 2-4 in.) or apply after last cutting of spears (post-harvest disking) and incorporate.
- Apply the higher rates to heavy clay soils.

POST-EMERGENCE GRASS HERBICIDES

- Apply to direct seeded, 1st year crown, 2nd year and established plantings.
- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough preplant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- **Do NOT** use flood jet or hollow cone nozzles.
- Apply to direct seeded, 1st year crown and established plantings.
- Apply POST to actively growing grasses before tillering.
- Apply 0.8 L/ha (0.32 L/acre) at the 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at the 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply 2 L/ha (0.8 L/acre) at the 3-5-leaf stage of quackgrass and wirestem muhly.
- **Do NOT** cultivate between rows until 5 days after application.

POST-EMERGENCE BROADLEAF HERBICIDES

- 2nd year and established plantings **ONLY**.
- After last cutting immediately after harvest or 3 weeks after the post-cut disking. Direct spray to avoid wetting the asparagus fern.
- May be applied early in the season just after a cutting.
- Spray immediately after harvest to avoid injury.
- Emerging spears may be twisted and should be discarded. Later emerging spears will be normal.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-105 g/ha Product Rate/acre: 14-42.5 g/acre Active Ingredient(s): halosulfuron (25-76 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 1 day Rainfast: 4 hours Max. Applications: 2
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 0.38 kg/ha Product Rate/acre: 0.15 kg/acre Active Ingredient(s): terbacil (0.3 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: 5 days Rainfast: rainfall required for activation Max. Applications: not stated
POST-HARVEST HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.55-1.75 L/ha Product Rate/acre: 0.6-0.7 L/acre Active Ingredient(s): s-metolachlor (1.42-1.60 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 16 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1.25-2.5 L/ha, 0.94-1.875 L/ha, 0.9-1.8 L/ha, 0.83-1.67 L/ha Product Rate/acre: 0.5-1.0 L/acre, 0.38-0.75 L/acre, 0.36-0.72 L/acre, 0.33-0.67 L/acre Active Ingredient(s): glyphosate (0.45-0.90 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 7 days Rainfast: 1 hour Max. Applications: 1
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2.00 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.750 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: not stated
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-105 g/ha + 2 L/1,000 L Product Rate/acre: 14.0-42.5 g/acre + 2 L/1,000 L Active Ingredient(s): halosulfuron (25-76 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 1 day Rainfast: 4 hours Max. Applications: 2

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none">• Post transplant and established plantings.• For first year plantings, apply no sooner than six weeks after fern emergence.• Apply as a single or double application of 35-105 g/ha (14-42.5 g/acre), allow a minimum of 21 days between applications.• Split applications will provide better nutsedge control if weed pressure is heavy.• Do NOT apply more than 56 g/acre per season.• Do NOT spray over top of plastic mulch.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply before emergence of direct seeded asparagus ONLY.• PRE – Apply as a broadcast treatment within 2 days of seeding.• Plant asparagus seed to a depth of 4 cm (1.6 in.) in coarse (sandy) soils or 2.5 cm (1 in.) deep in fine (clay) soils into newly cultivated fields.
POST-HARVEST HERBICIDES
<ul style="list-style-type: none">• Apply after last cutting of established asparagus.• Application may result in injury to the asparagus crop, which may include potential stand loss, delayed maturity and even loss of yield.• Do NOT apply to soil with less than 1% or more than 10% organic matter.
<ul style="list-style-type: none">• Not all formulations registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none">• Apply after last cutting of established asparagus.
<ul style="list-style-type: none">• SANDEA may be applied at the end of the harvest season.• Under heavy nutsedge pressure, split applications are recommended.• Contact with the fern may cause temporary yellowing.• A non-ionic surfactant or crop oil concentrate should be used with post-harvest applications. Crop injury will be minimized and nutsedge and listed broadleaf weeds will be controlled more effectively when applications are made with drop nozzles to direct the spray below the fern to allow for more complete coverage of target weeds.• Do NOT apply more than 140 g/ha (56 g/acre) per season.• Split applications must be made 21 days apart.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
BEANS (EDAMAME)		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE		
Trade Name: DUAL II MAGNUM (915 g/L) Product Rate/ha: 1.15-1.75 L/ha Product Rate/acre: 0.46-0.7 L/acre Active Ingredient(s): s-metolachlor (1.05-1.6 kg/ha)	Group #: 15 PCP #: 25729	REI: 12 hours PHI: not stated Rainfast: requires rainfall for activation Max Applications: 1
POST - EMERGENCE GRASS HERBICIDES		
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.19 L/ha + 0.5% v/v Product Rate/acre: 0.076 L/acre + 0.5% v/v Active Ingredient(s): clethodim (0.045 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 21 days Rainfast: 1 hour Max Applications: 1
BEANS (LIMA AND SNAP)		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: PERMIT (72.6%) Product Rate/ha: 35.0-47.5 g/ha Product Rate/acre: 14-19 g/acre Active Ingredient(s): halosulfuron (26.25-35.25 g/ha)	Group #: 2 PCP #: 31210	REI: 12 hours PHI: not stated Rainfast: 4 hours Max Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.15-1.75 L/ha Product Rate/acre: 0.46-0.7 L/acre Active Ingredient(s): s-metolachlor (1.05-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: requires rainfall for activation Max Applications: 1
Trade Name: EPTAM (800 g/L) Product Rate/ha: 4.25-5.5 L/ha Product Rate/acre: 1.7-2.2 L/acre Active Ingredient(s): EPTC (3.4-4.4 kg/ha)	Group #: 8 PCP #: 29194	REI: 24 hours PHI: not stated Rainfast: not stated Max Applications: 2

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****BEANS (EDAMAME)****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE**

- Can be applied **PPI** or **PRE**.
- Ground application only.
- Use lower rate of DUAL II MAGNUM on coarse-textured soil and higher rates on fine-textured and muck soils, or for heavier weed infestations.
- **PPI** application and incorporation must occur within 14 days of planting.

POST - EMERGENCE GRASS HERBICIDES

- Apply in a minimum spray volume of 110 L/ha (44 L/acre).
- Ground application only.

BEANS (LIMA AND SNAP)**SOIL-APPLIED BROADLEAF HERBICIDE**

- For use on snap beans **ONLY**.
- Apply **PRE** after seeding but prior to soil cracking. Use the lower rate on lighter textured soils with low organic matter.
- Applications may cause temporary stunting and/or delayed maturity which may result in a delayed harvest.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- s-metolachlor must be applied **PPI** to snap and lima beans.
- Beans should be seeded at least 4 cm (1.6 in.) deep or crop injury may result.
- **Do NOT** use on muck, peat or high organic matter soils.
- Use the low rate on coarse-textured soils low in organic matter.
- Requires rainfall for activation. Rotary hoe if no rainfall occurs within 7 days.
- Use the high rate to control of heavier weed infestations.

- For use on snap beans **ONLY**.
- Apply **PPI**. Incorporate immediately.
- If dry weather has preceded the application of EPTAM, delay seeding 7-10 days.
- Under extreme weather conditions, such as cold temperatures and wet soils or higher temperatures and dry soils, stunting may occur.
- Use the high rate for nutsedge control.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: FRONTIER MAX (720g/L) Product Rate/ha: 756-963 mL/ha Product Rate/acre: 305-390 mL/acre Active Ingredient(s): dimethenamid-P (544-693 g/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.37 L/ha Product Rate/acre: 0.95 L/acre Active Ingredient(s): pendimethalin (1.08 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: Lima: 80 days Snap: 50 days Rainfast: moisture required for activation Max Applications: 1
Trade Name: PURSUIT (240 g/L) or PHANTOM (240 g/L) or NU-IMAGE (240 g/L) Product Rate/ha: 0.312 L/ha Product Rate/acre: 0.126 L/acre Active Ingredient(s): imazethapyr (0.075 kg/ha)	Group #: 2 PCP #: 21537 or 30017 or 30420	REI: 12 hours PHI: Lima: 90 days Snap: 40 days Rainfast: moisture required for activation Max Applications: 1
Trade Name: RIVAL (500 g/L) or TREFLAN EC (480 g/L) or BONANZA 480 (480g/L) Product Rate/ha: 1.2-2.3 L/ha, 1.25-2.4 L/ha, 1.25-2.4 L/ha Product Rate/acre: 0.48-0.92 L/acre, 0.5-0.96 L/acre, 0.5-0.96 L/acre Active Ingredient(s): trifluralin (0.6-1.155 kg/ha)	Group #: 3 PCP #: 18612 or 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max Applications: 1
SOIL-APPLIED TANK-MIX OPTIONS		
Trade Name: DUAL II MAGNUM (915 EC) + PURSUIT or PHANTOM or NU-IMAGE (240 g/L) Product Rate/ha: 1.15-1.75 L/ha + 0.312 L/ha Product Rate/acre: 0.46-0.7 L/acre + 0.126 L/acre Active Ingredient(s): s-metolachlor (1.05-1.60 kg/ha) + imazethapyr (0.075 kg/ha)	Group #: 15 + 2 PCP #: 25728 + 21537 or 30017 or 30420	REI: 12 hours PHI: 100 days Rainfast: moisture required for activation Max Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Snap beans **ONLY**.
- **PPI ONLY**.
- Minimum **PPI** rate is 860 mL/ha (348 mL/acre).
- Use the low rate on coarse-textured soils low in organic matter.
- Use the higher rate of FRONTIER MAX for the control of nightshade and pigweed.
- Rotary hoe if no rainfall occurs within 7 days.
- Early crop injury may be observed, but yield should not be reduced.
- Beans should be seeded at least 4 cm deep or crop injury may occur.

- **PPI ONLY**.
- **Do NOT** apply after planting snap and lima beans as crop injury may occur.

- Apply **PPI** or **PRE** to snap beans (*Phaseolus vulgaris*).
- Apply **PRE ONLY** to lima beans.
- Delayed maturity or stunting may occur if cold and/or wet conditions are experienced within the first week after application.
- If adequate moisture is not received within 7 to 10 days of application, perform a shallow inter-row cultivation.
- Some rotational cropping restrictions apply (see Table 1-4 Herbicide Crop Rotation and Soil pH Restrictions - Horticulture Crops).

- Apply **PPI**. Apply and incorporate immediately, within 24 hours, prior to or up to 3 weeks before planting.
- **Do NOT** exceed 1.2 L/ha (0.48 L/acre) in medium textured soils and 1.7 L/ha (0.68 L/acre) in heavy textured soils of TREFLAN for lima beans
- **Do NOT** apply to peat and muck soils, or soils which contain more than 15% organic matter.
- Refer to labels for exact product rates for lima and snap beans.

SOIL-APPLIED TANK-MIX OPTIONS

- Snap beans **ONLY**.
- **PPI ONLY**.
- **Do NOT** use on muck, peat or high organic matter soils.
- Use the low rate on coarse-textured soils low in organic matter.
- adequate moisture is not received within 7 to 10 days of application, perform a shallow inter-row cultivation.
- Some rotational cropping restrictions apply (see Table 1-4 Herbicide Crop Rotation and Soil pH Restrictions - Horticulture Crops).

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: FRONTIER MAX (720 g/L) + PURSUIT (240 g/L) Product Rate/ha: 756-963 mL/ha + 312 mL/ha Product Rate/acre: 305-390 mL/acre + 126 mL/acre Active Ingredient(s): dimethenamid-P (544-693 g/ha) + imazethapyr (0.075 kg/ha)	Group #: 15 + 2 PCP #: 29194 + 21537	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1
Trade Name: PERMIT (72.6%) + EPTAM (800 g/L) Product Rate/ha: 35-47 g/ha + 4.25-5.25 L/ha Product Rate/acre: 14-19 g/acre + 1.7-2.1 L/acre Active Ingredient(s): halosulfuron (26.25-35.25 g/ha) + EPTC (3.4-4.2 kg/ha)	Group #: 2 + 8 PCP #: 31210 + 11284	REI: 24 hours PHI: not stated Rainfast: 4 hours Max Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + SURE-MIX or YUMA GL (96 g/L) + XA Oil Concentrate Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.3 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + oil concentrate (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max Applications: 1
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 1-2 L/ha Product Rate/acre: 0.13-0.45 L/acre + 0.4-0.8 L/acre Active Ingredient(s): sethoxydim (0.15-0.5 kg/ha) + surfactant (1-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: Lima: 80 days Snap: 15 days Rainfast: 1 hour Max Applications: 1
Trade Name: SELECT (240 g/L) + AMIGO Product Rate/ha: 190 mL/ha + 5 L/1,000 L Product Rate/acre: 76 mL/acre + 5 L/1,000 L Active Ingredient(s): clethodim (45 g/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625	REI: 12 hours PHI: 21 days Rainfast: 1 hour Max Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Snap beans **ONLY**.
- **PPI ONLY**.
- **Do NOT** use on muck, peat or high organic matter soils.
- Use the low rate on coarse-textured soils low in organic matter.
- Rotary hoe if no rainfall occurs within 7 days.
- Some rotational cropping restrictions apply (see Table 1-4 Herbicide Crop Rotation and Soil pH Restrictions - Horticulture Crops).

- Snap beans **ONLY**.
- Apply **PPI** to a depth of approximately 5 cm just before planting.
- Use lower rate on lighter textured soils with low organic matter.
- Refer to EPTAM 8-E label for specific incorporation directions.
- Rotary hoe lightly during or shortly after emergence of the beans to break any crust which occurs.

POST-EMERGENCE GRASS HERBICIDES

- For use on lima and snap beans.
- Apply at the 2-5-leaf stage of the annual grasses and up to the 3-leaf stage of quackgrass.
- Use the 0.37 L/ha (0.15 L/acre) rate for control of volunteer corn, volunteer cereals and green foxtail.
- The 0.5 L/ha (0.2 L/acre) rate will suppress quackgrass and control barnyard grass.
- Use the 0.75 L/ha (0.3 L/acre) rate for control of quackgrass.

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6 leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre).
- For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- Maximum application rates: 1.1 L/ha (0.44 L/acre) for lima and 0.64 L/ha (0.26 L/acre) for snap beans.

- For the control of annual grasses and quackgrass in the 2-6 leaf stage.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + non-ionic surfactant Product Rate/ha: 73-117 mL/ha + 2.5 L/1,000 L Product Rate/acre: 30-47 mL/acre + 2.5 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (0.0175-0.028 kg/ha) + non-ionic surfactant (0.25% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 6-8 hours Max Applications: 1
Trade Name: BASAGRAN or BENTA SUPER (480 g/L) + ASSIST Product Rate/ha: 1.75-2.2 L/ha + 2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + oil concentrate (2 L/ha)	Group #: 6 PCP #: 12221 or 32827	REI: 12 hours PHI: not stated Rainfast: 6-8 hours Max Applications: 2
Trade Name: REFLEX (240 g/L) + AGRAL 90 Product Rate/ha: 1 L/ha + 2.5 L/1,000 L Product Rate/acre: 0.4 L/acre + 2.5 L/1,000 L Active Ingredient(s): fomesafen (0.24 kg/ha) + adjuvant (0.25% v/v)	Group #: 14 PCP #: 24779	REI: 12 hours PHI: Lima: 46 days Snap: 30 days Rainfast: 4 hours Max Applications: once every 2 years
POST-EMERGENCE GRASS AND BROADLEAF TANK-MIX OPTIONS		
Trade Name: REFLEX (240 g/L) + VENTURE L (125 g/L) + AGRAL 90 Product Rate/ha: 1 L/ha + 0.6-2.0 L/ha + 1-2.5 L/1,000 L Product Rate/acre: 0.4 L/acre + 0.243-0.8 L/acre + 1-2.5 L/1,000 L Active Ingredient(s): fomesafen (0.24 kg/ha) + fluazifop-p-butyl (0.075-0.25 kg/ha) + 0.1-0.25% v/v	Group #: 14 + 1 PCP #: 24779 + 21209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max Applications: once every 2 years

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Apply to actively growing weeds up to 10 cm (4 in.) tall. • Coverage of weed and crop foliage is essential for control.
<ul style="list-style-type: none"> • Apply POST when snap and lima beans are in the 1 to 3 trifoliolate leaf stage. Tolerant after 1st trifoliolate leaf has fully expanded. • Apply when weeds are small and actively growing. • Two applications of 1.75 L/ha (0.7 L/acre) 10 days apart may be required to control perennial weeds.
<ul style="list-style-type: none"> • Apply POST when beans are in the 1-2 trifoliolate leaf stage. Do NOT use before the 1st trifoliolate leaf stage or increased risk of crop injury may result. • Apply when weeds are small and actively growing. • Do NOT apply to crop under stress. • Some bronzing, crinkling or spotting of leaves may occur. • Some rotational cropping restrictions apply (see Table 1-4 Herbicide Crop Rotation and Soil pH Restrictions - Horticulture Crops).
POST-EMERGENCE GRASS AND BROADLEAF TANK-MIX OPTIONS
<ul style="list-style-type: none"> • Snap beans ONLY. • Apply POST when snap beans are in the 1-2 trifoliolate leaf stage. Do NOT use before the 1st trifoliolate leaf stage or increased risk of crop injury may result. • Do NOT apply REFLEX to any field more often than once every 2 years.

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

continued

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
BEETS (RED)		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: PYRAMIN FL (430 g/L) Product Rate/ha: 8.25-10.25 L/ha Product Rate/acre: 3.3-4.1 L/acre Active Ingredient(s): pyrazon (3.55-4.40 kg/ha)	Group #: 5 PCP #: 15857	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE		
Trade Name: DUAL II MAGNUM (915 g/L) Product Rate/ha: 1.25 L/ha Product Rate/acre: 0.5 L/acre Active Ingredient(s): s-metolachlor (1.14 kg/ha)	Group #: 15 PCP #: 25729	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.19-0.38 L/ha + 5-10 L/1,000 L Product Rate/acre: 0.08-0.15 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (46-91 g/ha) + surfactant (0.5-1.0 % v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: LONTREL 360 (360 g/L) Product Rate/ha: 0.42-0.57 L/ha Product Rate/acre: 0.17-0.23 L/acre Active Ingredient(s): clopyralid (0.15-0.20 kg/ha)	Group #: 4 PCP #: 23545	REI: 12 hours PHI: 30 days Rainfast: not stated Max Applications: 1
Trade Name: PYRAMIN FL (430 g/L) + CITOWETT PLUS Product Rate/ha: 8.25 L/ha + 2.5 L/1,000 L Product Rate/acre: 3.3 L/acre + 2.5 L/1,000 L Active Ingredient(s): pyrazon (3.54 kg/ha) + surfactant (0.25% v/v)	Group #: 5 PCP #: 15857	REI: 12 hours PHI: not stated Rainfast: 6 hours Max. Applications: not stated

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
BEETS (RED)
SOIL-APPLIED BROADLEAF HERBICIDE
<ul style="list-style-type: none"> • PPI or PRE. • PPI – Do NOT incorporate more than 5 cm (2 in). • Do NOT use on soils with less than 3% organic matter.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE
<ul style="list-style-type: none"> • PRE • Irrigate after application to activate the herbicide if rainfall is not expected, but use only 1.25 cm (0.5 in.) of water to incorporate the herbicide. Excessive irrigation will increase the risk of crop injury. Mechanical incorporation of DUAL II MAGNUM will increase the risk of crop injury.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • For the control of annual grasses and quackgrass. • Apply when grassy weeds are at 2-6-leaf stage.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Apply POST with a hooded sprayer between the rows or between the plastic mulch. • Apply to actively growing weeds up to 10 cm (4 in.) tall.
<ul style="list-style-type: none"> • Make one application per year to control labeled weeds. • Apply to beets in the 2-8 leaf stage. • Apply when weeds are actively growing. • Apply post planting as a ground application ONLY.
<ul style="list-style-type: none"> • For best results, apply before the third true leaf of crop and weeds. • Do NOT use any other oils or surfactants, including ASSIST or MERGE or crop injury may result.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: UPBEET (50 DF) + AGRAL 90 or AG-SURF or CITOWETT PLUS Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): triflurosulfuron-methyl (17.5-35.0 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 25813	REI: 12 hours PHI: 30 days Rainfast: 6 hours Max. Applications: 3
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: BETAMIX B EC (1:1) 153 g/L Product Rate/ha: 1.15-1.75 L/ha Product Rate/acre: 0.46-0.70 L/acre Active Ingredient(s): desmedipham/phenmedipham (0.18-0.28 kg/ha)	Group #: 5 PCP #: 28650	REI: 24 hours PHI: 30 days Rainfast: 6 hours Max. Applications: 3
CABBAGE, CAULIFLOWER, BROCCOLI, BRUSSELS SPROUTS		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: GOAL 2XL or BASKET 2XL (240 g/L) Product Rate/ha: 1.13-2 L/ha Product Rate/acre: 0.46-0.81 L/acre Active Ingredient(s): oxyfluorfen (271-480 g/ha)	Group #: 14 PCP #: 24913 or 33560	REI: 12 hours PHI: 60 days Rainfast: 3 hours Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: AUTHORITY 480 (480 g/L) Product Rate/ha: 216-288 mL/ha Product Rate/acre: 87.6-116.8 mL/acre Active Ingredient(s): sulfentrazone (0.105-0.140 kg/ha)	Group #: 14 PCP #: 29012	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.21 kg/ha Product Rate/acre: 0.084 kg/acre Active Ingredient(s): flumioxazin (107.31 g/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.63 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.**

- Apply at the 2-4, 4-6, and the 6-8-leaf stages. Use the higher rate for larger weeds and heavy weed populations.
- **Do NOT** use more than 107 g/ha (43.2 g/acre) of UPBEET in a season.
- **Do NOT** apply under extreme temperatures or drought conditions.
- Yellowing of the crop may occur, but beets will recover.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES

- The first application must be made when the weeds have reached the cotyledon stage.
- **Do NOT** spray more than 5.2 L/ha (2.1 L/acre) of BETAMIX per year.
- **Do NOT** spray under extreme temperature or drought conditions.
- **Do NOT** spray if dew is present.
- Temporary reduced growth and/or tip burn may occur. Beets will resume growth in 10 days.

CABBAGE, CAULIFLOWER, BROCCOLI, BRUSSELS SPROUTS**SOIL-APPLIED BROADLEAF HERBICIDES**

- Apply once after completion of soil preparation but prior to transplanting.
- Transplanting should be completed with minimal soil disturbance.
- Treated soil surfaces should be left undisturbed to obtain maximum control of broadleaf weeds. However, once weeds emerge, cultivation will help to control them.
- Leaf cupping or crinkling may result after transplanting, but the crops rapidly outgrow this and develop normally.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Apply as a broadcast or banded treatment to soil surface in the spring up to 72 hours prior to transplanting head and stem brassica (broccoli, Brussels sprouts, Chinese (napa) cabbage, cabbage, cauliflower).
- **Do NOT** mechanically incorporate after application.
- **Do NOT** apply to frozen soil.
- **Do NOT** use on sandy soils with less than 1% organic matter.
- Apply on broccoli **ONLY**.
- Apply as a hooded or shielded application to row middles prior to transplanting.
- **Do NOT** apply on soils with greater than 5% organic matter or on fine-textured soils.
- **Do NOT** apply more than 84 g/acre during a single growing season.
- PPI or PRE.
- Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils and at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils. **Do NOT** use on muck soils.
- Apply immediately after seeding or directly over transplants, pre-emergence to weeds. If weeds have emerged, cultivate the soil before application.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.69-9.38 L/ha Product Rate/acre: 1.88-3.75 L/acre Active Ingredient(s): napropamide (1.12-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 756-963 mL/ha Product Rate/acre: 305-390 mL/acre Active Ingredient(s): dimethenamid (544-693 g/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 60 days Rainfast: not stated Max. Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.46 L/ha Product Rate/acre: 1 L/acre Active Ingredient(s): pendimethalin (1.12 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: 60 days broccoli PHI: 70 days cabbage and cauliflower Rainfast: moisture required for activation Max Applications: 1
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.2-2.4 L/ha Product Rate/acre: 0.50-0.96 L/acre Active Ingredient(s): trifluralin (0.6-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.15-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 70 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.32-0.80 L/acre Active Ingredient(s): fluazifop-p-butyl (0.1-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 40 days Rainfast: 2 hours Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- PPI or PRE – Use **ONLY** on transplanted cabbage, cauliflower, and broccoli.
 - Use the lower rate on light soils (coarse textured sandy and sandy loam).
 - Apply to well worked soil that is dry enough to permit thorough incorporation to a depth of 2.5-5 cm (1-2 in.) Incorporate the same day as applied.
 - Damage to subsequent cover crops can be reduced by tillage across the rows after harvest. Small grains seeded in the fall may be stunted but not otherwise affected.
- PRE – Use **ONLY** on transplanted cabbage, cauliflower and broccoli. Apply within 2 days.
 - Use the higher rate for heavier weed pressure.
 - **Do NOT** incorporate and **Do NOT** use on seeded cole crops.
 - **Do NOT** apply to soil with less than 1% or more than 10% organic matter.
- For use on transplanted cabbage **ONLY**.
 - Apply to soil prior to transplant and before weed emergence.
- Apply once as a directed spray to soil surface between rows of cabbage, cauliflower or broccoli when the crop is at the 2-4 leaf stage for both direct seeded and transplanted crops. Be sure roots of transplants are established before application.
 - **Do NOT** apply as a broadcast spray over top of broccoli, cabbage or cauliflower or crop injury may result. Avoid direct spray contact with foliage or stems.
 - **Do NOT** apply PROWL H2O with liquid fertilizers.
- PPI – Incorporate within 24 hours of application.
 - Use **ONLY** on direct seeded cabbage or cauliflower or on transplants of cabbage, cauliflower, broccoli and Brussels sprouts.

POST-EMERGENCE GRASS HERBICIDES

- **Do NOT** exceed 0.45 L/ha (0.18 L/acre) on broccoli.
 - For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
 - For volunteer grains, use 0.47 L/ha (0.19 L/acre).
 - For quackgrass, use 1.1 L/ha (0.44 L/acre. Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
 - Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
 - Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
 - Thorough pre-plant tillage, fragmenting quackgrass rhizome improves control.
 - **Do NOT** cultivate between rows until 5 days after application.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 1-2.5 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: LONTREL XC (600 g/L) or PYRALID HERBICIDE (360 g/L) Product Rate/ha: 0.35 L/ha or 0.672 L/ha Product Rate/acre: 0.14 L/acre or 0.2 L/acre Active Ingredient(s): clopyralid (0.21 or 0.24 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 30 days Rainfast: not stated Max. Applications: 1
CARROTS		
SOIL-APPLIED FOLLOWED BY POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: GESAGARD 480 SC (480 g/L) followed by LOROX L (480 g/L) Product Rate/ha: 3.75-7.08 L/ha followed by 1.1-2.25 L/ha Product Rate/acre: 1.50-2.83 L/acre followed by 0.44-0.90 L/acre Active Ingredient(s): prometryne (1.8-3.4 kg/ha) followed by linuron (0.55-1.125 kg/ha)	Group #: 5 followed by 7 PCP #: 24771 followed by 16279	REI: 24 hours PHI: not stated Rainfast: 8 hours Max. Applications: 1 Gesagard
Trade Name: LOROX L (480 g/L) followed by LOROX L (480 g/L) Product Rate/ha: 1.1-2.25 L/ha followed by 2.25-4.5 L/ha Product Rate/acre: 0.44-0.90 L/acre followed by 0.9-1.8 L/acre Active Ingredient(s): linuron (0.55-1.125 kg/ha) followed by linuron (1.125-2.25 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: not stated Rainfast: PRE: moisture required for activation POST: 8 hours Max. Applications: 2

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

continued

PRECAUTIONS - For more information, see the label.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply to actively growing weeds up to 10 cm (4 in.) tall.
- Apply **ONLY** one POST application per growing season with a hooded sprayer between the rows.

- For use on transplanted cabbage, cauliflower, broccoli and Brussels sprouts.
- Make 1 application per year after planting to control ragweed, vetch, common groundsel, Canada thistle and for suppression of sheep sorrel.

CARROTS

SOIL-APPLIED FOLLOWED BY POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES

- PRE followed by POST – Use on muck soils **ONLY**.
- For POST – Spray when crop has 2 or more fully developed leaves (8-15 cm or 3.2-6 in. tall).
- Apply before annual grasses are 5 cm (2 in.) high and broadleaf weeds are 15 cm (6 in. high).
- Carrot leaves will become yellow or light green, but they will soon regain their normal colour.
- **Do NOT** apply during hot, dry weather (greater than 32°C) or when crop is under stress.
- **Do NOT** apply if heavy rains are expected.

- PRE followed by POST.
- **Do NOT** apply the 2nd treatment closer than 2 weeks after the first treatment.
- Spray POST when crop has 2 or more fully developed leaves (8-15 cm or 3.2-6 in. tall).
- Apply POST before annual grasses are 5 cm (2 in.) high and before broadleaf weeds are 15 cm (6 in.) high.
- Carrot leaves will become yellow or light green, but they soon recover.
- **Do NOT** apply during hot, dry weather (greater than 32°C) or when crop is under stress.
- **Do NOT** apply if heavy rains are expected.
- Use the lower rates on sandy soils and for smaller weeds.
- **Do NOT** use on coarse-textured soils low in organic matter.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: LOROX L (480 g/L) followed by SENCOR 75 DF (75%) Product Rate/ha: 2.25 L/ha followed by 0.19 kg/ha Product Rate/acre: 0.9 L/acre followed by 0.077 kg/acre Active Ingredient(s): linuron (1.125 kg/ha) followed by metribuzin (0.143 kg/ha)	Group #: 7 followed by 5 PCP #: 16279 followed by 17242	REI: 24 hours PHI: 60 days Rainfast: PRE: moisture required for activation POST: 8 hours Max. Applications: 2
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (480 g/L) or BONANZA 480 (480 g/L) followed by LOROX L (480 g/L) Product Rate/ha: 1.25-2.4 L/ha followed by 1.1-3.25 L/ha Product Rate/acre: 0.50-0.96 L/acre followed by 0.44-1.30 L/acre Active Ingredient(s): trifluralin (0.6-1.15 kg/ha) followed by linuron (0.55-1.625 kg/ha)	Group #: 3 followed by 7 PCP #: 23933 or 18612 or 28289 followed by 16279	REI: 24 hours PHI: not stated Rainfast: PRE: not stated POST: 8 hours Max. Applications: 1 Treflan
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.75-7.08 L/ha Product Rate/acre: 1.5-2.83 L/acre Active Ingredient(s): prometryne (1.8-3.4 kg/ha)	Group #: 5 PCP #: 24771	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: LOROX L (480 g/L) Product Rate/ha: 1.1-3.25 L/ha Product Rate/acre: 0.44-1.3 L/acre Active Ingredient(s): linuron (0.55-1.625 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: not stated Rainfast: 8 hours Max. Applications: 2
Trade Name: PARDNER (280 g/L) Product Rate/ha: 1-1.2 L/ha Product Rate/acre: 0.40-0.48 L/acre Active Ingredient(s): bromoxynil (0.280-0.336 kg/ha)	Group #: 6 PCP #: 18001	REI: 24 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- To be used only on carrots previously treated with a PRE application of linuron.
 - **Do NOT** tank-mix with liquid fertilizers, oils, oil concentrates, or surfactants when applying post-emergence because severe crop injury may occur.
 - On sunny days application should be made in the afternoon or early evening.
 - **Do NOT** apply on coarse soils with less than 2% organic matter.
-
- Apply trifluralin PPI followed by LOROX L POST on mineral soils. Trifluralin must be incorporated within 24 hours.
 - Spray linuron when crop has 2 or more fully developed leaves (8-15 cm or 3.2-6 in. tall).
 - Apply POST before annual grasses are 5 cm (2 in.) high and before broadleaf weeds are 15 cm (6 in.) high.
 - Carrot leaves will become yellow or light green, but they soon recover.
 - **Do NOT** apply linuron with herbicidal oil.
 - **Do NOT** apply linuron during hot, dry weather (greater than 32°C) or when crop is under stress.
 - **Do NOT** apply linuron if heavy rains are expected.
 - Use the lower rates on sandy soils and for smaller weeds.
 - **Do NOT** use on coarse-textured soils low in organic matter or on soils that contain more than 15% organic matter.

SOIL-APPLIED BROADLEAF HERBICIDES

- PRE – Apply soon after seeding.
 - Use the lower rate on sandy soils and the higher rate on muck soils.
 - **Do NOT** use at or near the time of emergence.
-
- PRE – Apply as a band or broadcast spray after planting but before carrots emerge.
 - Use the lower rate on sandy soils.
 - Carrots are very sensitive to this treatment at the time of emergence and severe injury can occur at this time if there is a heavy rain or if the area is irrigated.
-
- Apply **ONLY** to muck soils containing greater than 10% organic matter.
 - **Do NOT** irrigate carrots for at least 2 days following application or 3 days after crop emergence.
 - Use the higher rate on wild mustard, cow cockle, stinkweed and pigweed that are at the 4-leaf stage.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.2-1.75 L/ha Product Rate/acre: 0.48-0.60 L/acre Active Ingredient(s): s-metolachlor (1.098-1.601 kg/ha)	Group #: 15 PCP #: 25729	REI: 12 hours PHI: 30 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 3.7-6.6 L/ha Product Rate/acre: 1.5-2.67 L/acre Active Ingredient(s): pendimethalin (1.68-3.00 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: 90 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.2-2.4 L/ha Product Rate/acre: 0.48-0.96 L/acre Active Ingredient(s): trifluralin (0.576-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.15-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 50 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.19-0.38 L/ha + 5-10 L/1,000 L Product Rate/acre: 0.08-0.15 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (46-91 g/ha) + surfactant (0.5-1.0% v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• PRE, after planting, prior to crop and weed emergence.• Mineral soils – 1.2-1.5 L/ha (0.48-0.6 L/acre).• Muck soils (> 20% organic matter) – 1.5-1.75 L/ha (0.6-0.7 L/acre).• Do NOT follow a PRE application with a POST spray later in the season.• Reduced levels of weed control may be observed when weed densities are high.• NOTE: level and duration of weed suppression may be reduced in muck soils with higher organic matter content.• NOTE: applications may cause significant injury to carrots, resulting in reduced yields.
<ul style="list-style-type: none">• Apply 2 days after planting and before carrots and weeds have emerged.• Apply 3.7 L/ha (1.5 L/acre) on mineral soil and 6.6 L/ha (2.67 L/acre) on muck soil.• Do NOT apply PROWL H2O with liquid fertilizers.
<ul style="list-style-type: none">• PPI – Incorporate within 24 hours of application. Apply the higher rate to heavy clay soils.• Do NOT apply to soils with more than 15% organic matter.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none">• For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.• For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.• For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.• Do NOT use flood jet or hollow cone nozzles.
<ul style="list-style-type: none">• For the control of annual grasses and quackgrass in the 2-6-leaf stage.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.8-2 L/ha Product Rate/acre: 0.32-0.8 L/acre Active Ingredient(s): fluzazifop-p-butyl (0.1-0.25 kg/ha)	Group #: 1 Group #: 21209	REI: 12 hours PHI: 50 days Rainfast: 2 hours Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 1.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 Group #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.2-1.5 L/ha Product Rate/acre: 0.48-0.60 L/acre Active Ingredient(s): s-metolachlor (1.098-1.373 kg/ha)	Group #: 15 Group #: 25729 or 33599	REI: 12 hours PHI: 30 days Rainfast: not stated Max. Applications: 1
Trade Name: LOROX L (480 g/L) Product Rate/ha: 2.25-4.5 L/ha Product Rate/acre: 0.9-1.8 L/acre Active Ingredient(s): linuron (1.125-2.25 kg/ha)	Group #: 7 Group #: 16279	REI: 24 hours PHI: not stated Rainfast: 8 hours Max. Applications: 2
CELERY		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 140-210 g/ha Product Rate/acre: 56.7-85 g/acre Active Ingredient(s): flumioxazin (71.5-107.3 g/ha)	Group #: 14 Group #: 29231	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- Apply when the crop is 10 cm (4 in.) in height (2-5-leaf stage) or less.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Thorough pre-plant tillage, fragmenting quackgrass rhizomes improves control.
- **Do NOT** cultivate between rows until 5 days after application.
- Apply other post-emergence herbicides separately at least 3 days after VENTURE L.

POST-EMERGENCE GRASS HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES

- Apply during the crop's 3-5-leaf stage and before the weed's 2-leaf stage.
- Reduced levels of weed control may be observed when weed densities are high.
- NOTE: level and duration of weed suppression may be reduced in muck soils with higher organic matter content.
- NOTE: applications may cause significant injury to carrots, resulting in reduced yields.

- For carrots not treated with linuron PRE.
- Spray when the crop has 2 or more fully developed leaves (8-15 cm or 3.2-6 in. tall).
- Apply before annual grasses are 5 cm (2 in.) high and before broadleaf weeds are 15 cm (6 in.) high.
- Carrot leaves will become yellow or light green, but they will soon regain their normal colour.
- **Do NOT** apply with herbicidal oil.
- **Do NOT** apply during hot, dry weather (greater than 32°C) or when the crop is under stress.

CELERY**SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Apply as a hooded or shielded spray to row middles prior to transplanting celery for pre-emergence control of weeds.
- Rainfall or irrigation must occur between application and transplanting in order to activate the product.
- **Do NOT** apply more than 210 g/ha (85 g/acre) per season.
- Plants should be grown on raised or plastic mulched beds that are at least 10 cm (4 in.) higher than the treated row middle and the mulched bed must have a minimum of 60 cm (24 in.) bed width.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.2-1.5 L/ha mineral soil, 1.5-1.75 L/ha muck soil Product Rate/acre: 0.48-0.61 L/acre mineral soil, 0.61-0.71 L/acre muck soil Active Ingredient(s): s-metolachlor (1.14-1.60 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 62 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.37-6.6 L/ha Product Rate/acre: 0.96-2.67 L/acre Active Ingredient(s): pendimethalin (1.213 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: 60 days Rainfast: moisture required for activation Max Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.5-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + surfactant/solvent (0.1% v/v)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.75-4.58 L/ha Product Rate/acre: 1.5-1.83 L/acre Active Ingredient(s): prometryne (1.8-2.2 kg/ha)	Group #: 5 PCP #: 24771	REI: 24 hours PHI: 54 days Rainfast: not stated Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none">• Risk of crop injury is less with a directed spray than a broadcast spray.• Only suppression of listed weeds is achievable on muck soil.• For muck soils, irrigate IMMEDIATELY with 1.25 cm (0.5 in.) of water.• The use of a spray adjuvant or a registered herbicide tank mixture will increase the risk of crop injury.
<ul style="list-style-type: none">• Apply as a broadcast over the top application at least 21 days after transplanting and prior to the emergence weeds.• Mineral Soil - Maximum 1 application per year at 2.37 L/ha (0.96 L/acre).• Muck Soil - Maximum 1 applications per year at 6.6 L/ha (2.67 L/acre).• Use a minimum of 200 L water/ha (80 L water/acre).• Do NOT apply more than once in two consecutive years.• Do NOT plant any succeeding crops other than carrots or direct seeded lettuce within 12 months of the last PROWL H2O herbicide application.• ONLY onions may be planted in the year of PROWL H2O herbicide application.• Best results occur when rainfall or irrigation is received within 7 days after application.• Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none">• For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.• For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.• For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Do NOT apply until 21 days after transplanting the crop when the celery plants are established.• Apply before weeds reach 5 cm (2 in.) tall.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: LOROX L (480 g/L) Product Rate/ha: 1.82-4.51 L/ha Product Rate/acre: 0.73-1.8 L/acre Active Ingredient(s): linuron (0.91-2.26 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: not stated Rainfast: 8 hours Max. Applications: 2
CELERIAC, TRANSPLANTED		
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.75-4.58 L/ha Product Rate/acre: 1.44-1.85 L/acre Active Ingredient(s): prometryne (1.8-2.2 kg/ha)	Group #: 5 Group #: 24771	REI: 12 hours PHI: 54 days Rainfast: not stated Max. Applications: 1
CHICORY, ROOT		
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.45 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.15-0.5 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 Group #: 24835	REI: 12 hours PHI: 60 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: UPBEET (50 DF) + AGRAL 90 or AG-SURF or CITOWETT PLUS Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): triflusaluron-methyl (17.5-35 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 25813	REI: 12 hours PHI: 60 days Rainfast: 6 hours Max. Applications: not stated

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- Apply to transplants as soon as new growth has started. Some temporary discolouration may occur.
- All dosages are expressed as broadcast rates. For band treatment use proportionately less.
- **Do NOT** use on sandy or coarse-textured soils low in organic matter (less than 1%), as crop injury may result.

CELERIAC, TRANSPLANTED**POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES**

- Apply after the celeriac transplants are well established (21 days).
- Treatment may be pre or early post to the weeds, but before the weeds are 5 cm (2 in.) high.

CHICORY, ROOT**POST-EMERGENCE GRASS HERBICIDES**

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 2-6-leaf stage.
- For volunteer grass, apply at a rate of 0.47 L/ha (0.19 L/acre).
- For quackgrass, use 1.1 L/ha (0.44 L/acre) and the high rate of MERGE up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- For control of velvetleaf.
- Apply POST after emergence of chicory and velvetleaf, but prior to the 4-leaf stage of velvetleaf.
- **Do NOT** exceed 70 g/ha (28 g/acre) per season.
- If the lower rate has been used and velvetleaf continues to emerge, repeat application in 2-3 weeks.
- Temporary yellowing of the crop may occur.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
CUCUMBER		
PRE-PLANT (STALE SEEDBED TECHNIQUE)		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 0.75-3.5 L/ha, 0.56-2.6 L/ha, 0.53-2.5 L/ha, 0.5-2.3 L/ha Product Rate/acre: 0.3-1.4 L/acre, 0.23-1.05 L/acre, 0.21-1.01 L/acre, 0.2-0.94 L/acre Active Ingredient(s): glyphosate (0.267-1.246 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 7 days Rainfast: 1 hour Max. Applications: not stated
SOIL-APPLIED GRASS HERBICIDES		
Trade Name: PREFAR (480 g/L) Product Rate/ha: 12-14 L/ha Product Rate/acre: 4.8-5.6 L/acre Active Ingredient(s): bensulide (5.76-6.72 kg/ha)	Group #: 8 PCP #: 14113	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: REFLEX (240 g/L) + AGRAL 90 Product Rate/ha: 1 L/ha + 1 L/1,000 L Product Rate/acre: 0.4 L/acre + 1 L/1,000 L Active Ingredient(s): fomesafen (0.24 kg/ha) + adjuvant (0.1% v/v)	Group #: 14 PCP #: 24779	REI: 12 hours PHI: 42 days Rainfast: 4 hours Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 0.78-1.17 L/ha Product Rate/acre: 0.31-0.47 L/acre Active Ingredient(s): clomazone (0.28-0.42 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 30 days Rainfast: not stated Max. Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.625 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

CUCUMBER

PRE-PLANT (STALE SEEDBED TECHNIQUE)

- Till and fertilize soil in early spring, and then allow weeds to grow.
- Spray weeds just before seeding the crop.
- Use low rate for small weeds 8 cm (3.2 in.), medium rates for weeds 8-15 cm (3.2-6 in.) and higher rate for weeds over 15 cm (6 in.) tall.
- Apply appropriate PRE or POST herbicides to control new flushes of weeds or use mechanical means of control.
- Not all formulations registered on all crops. See label for specific uses and rates.

SOIL-APPLIED GRASS HERBICIDES

- PPI – For mineral soils **ONLY**.
- Incorporate thoroughly into the soil to a depth of 2.5-5 cm (1-2 in.).

SOIL-APPLIED BROADLEAF HERBICIDES

- PRE – banded to row middles.
- Apply just after seeding but prior to crop emergence, or just prior to transplanting cucumber plants.
- **Do NOT** rotate to another crop in the same season.
- **Do NOT** apply REFLEX to any field more often than once every 2 years.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Apply PRE, after seeding but before crop emergence. **Do NOT** incorporate.
- For light textured soils – Apply COMMAND 360 ME at 0.78 L/ha (0.31 L/acre). **Do NOT** apply to sandy soil.
- For heavy textured soils – Apply COMMAND 360 ME at 1.17 L/ha (0.47 L/acre).
- Some rotational cropping restrictions apply.
- Apply only when cucumber plants have 4-5 true leaves, are well established and growing conditions are favourable for good plant growth otherwise crop injury may result.
- Apply PRE prior to weed seed germination. If weeds have emerged, cultivate the soil before application.
- Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.
- Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.
- **Do NOT** use on muck soils.
- Rainfall or irrigation (about 1 cm or 0.4 in.) is necessary for activation.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.15 L/ha Product Rate/acre: 0.46 L/acre Active Ingredient(s): s-metolachlor (1.05 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 30 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (21-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 2
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + MERGE or SURE-MIX or YUMA GL (96 g/L) + surfactant Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.3 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 4 days PHI: 30 days Rainfast: 1 hour Max. Applications: 1
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.5 kg/ha) + surfactant/solvent (0.25-2.0 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.8-2 L/ha Product Rate/acre: 0.32-0.80 L/acre Active Ingredient(s): fluazifop-p-butyl (0.1-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 30 days Rainfast: 2 hours Max. Applications: 1

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- Apply prior to transplanting or within 48 hours after transplanting.
 - Apply PRE in direct seeded crops prior to weed emergence OR at the 1-2-leaf stage of the crop but still PRE to weed emergence.
 - Reduced control in heavy weed populations may occur.
 - Risk of crop injury increases with cool and wet conditions.
 - Foliar contact can increase the potential to cause crop injury. Avoid overspray.
- For use on direct seeded and transplanted cucumbers on bare soil or before installation of plastic mulch.
 - Apply after planting and before soil cracking on direct seeded plants.
 - **Do NOT** direct seed in plastic mulch or transplant sooner than 7 days after application.
 - **Do NOT** apply more than 140 g/ha (56 g/acre) per season.
 - Use a lower rate on lighter textured soils.
 - Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of crop.
 - **Do NOT** spray over top of plastic mulch.

POST-EMERGENCE GRASS HERBICIDES

- Apply when the crop is at the 2-6-leaf stage.
 - Apply at the labelled leaf stage of grassy weeds.
 - **Do NOT** enter or allow worker entry into treated areas during the restricted entry interval of 4 days for scouting, irrigation and hand weeding activities.
- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
 - For volunteer grains, use 0.47 L/ha (0.19 L/acre).
 - For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of merge for quackgrass.
 - **Do NOT** use flood jet or hollow cone nozzles.
- Apply POST to actively growing grasses before tillering.
 - Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
 - Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
 - Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
 - Thorough fragmentation of quackgrass rhizomes by pre-application tillage will improve control.
 - **Do NOT** cultivate between rows until 5 days after application.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): halosulfuron (25-51 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 2
EGGPLANT		
SOIL APPLIED BROADLEAF HERBICIDES		
Trade Name: SANDEA (72.6 WP) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max Applications: 2
SOIL APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.625 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: not stated
Trade Name: DUAL II MAGNUM (915 g/L) Product Rate/ha: 1.15-1.25 L/ha Product Rate/acre: 0.46-0.50 L/acre Active Ingredient(s): s-metolachlor (1.05-1.14 kg/ha)	Group #: 15 PCP #: 25729	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****POST-EMERGENCE BROADLEAF HERBICIDES**

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- Apply to direct seeded or actively growing transplanted cucumbers between 3-5-true-leaf stage or 14 days after transplanting and before the appearance of first female flower.
- Row middles can be sprayed at all crop stages.
- **Do NOT** apply more than 140 g/ha (56 g/acre) per season.
- **Do NOT** spray over top of plastic mulch.

EGGPLANT**SOIL APPLIED BROADLEAF HERBICIDES**

- Apply **ONLY** to row middles for direct seeded or transplanted eggplant for the control of nutsedge and labeled broadleaf weeds.
- Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
- Do not apply more than 140 g/ha (56 g/acre) of SANDEA WG herbicide per season.
- Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of the crop.

SOIL APPLIED GRASS AND BROADLEAF HERBICIDES

- PRE - if weeds have emerged, cultivate the soil before application.
 - Apply 4-6 weeks after transplanting or when direct seeded plants have reached a height of 10-15 cm (4-6 in.).
 - Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.
 - Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.
 - **Do NOT** use more than 15.5 kg/ha (6.2 kg/acre).
 - **Do NOT** use on muck soils.
 - Rainfall or irrigation of 1 cm (0.4 in.) is necessary for activation.
-
- Apply within 48 hours of transplanting eggplant and PRE to weeds.
 - Risk of crop injury increases with early transplanting and soil temperatures below 10°C.
 - Applications made more than 48 hours after transplanting may increase the risk of foliar injury.
 - **Do NOT** apply to soils that contain less than 1% or more than 10% organic matter.
 - **Do NOT** tank-mix with fluid fertilizers, oil, oil concentrates or surfactants.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 37-117 mL/ha + 2.5 L/1,000 L or + 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max Applications: 1
Trade Name: SANDEA (72.6 WP) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max Applications: 2
GARLIC		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.39 kg/ha Product Rate/acre: 0.112-0.156 kg/acre Active Ingredient(s): flumioxazin (0.07 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: not stated Rainfast: requires rainfall for activation Max Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-18 kg/ha Product Rate/acre: 3.6-7.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-13.5 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.69-9.38 L/ha Product Rate/acre: 1.88-3.75 L/acre Active Ingredient(s): napropamide (1.12-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.****POST-EMERGENCE BROADLEAF HERBICIDES**

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- Apply **ONLY** to row middles for direct seeded or transplanted eggplant for the control of nutsedge and labeled broadleaf weeds.
- Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.
- Do not apply more than 140 g/ha (56 g/acre) of SANDEA WG herbicide per season.
- Use a nonionic surfactant (NIS) with post-emergence applications.
- Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of the crop.

GARLIC**SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- **PRE** - Apply prior to weed and crop emergence and within 3 days of planting garlic.
- Apply to coarse 0.28 kg/ha (0.112 kg/acre) and medium 0.39 kg/ha (0.156 kg/acre) textured soils with less than 5% organic matter. **Do NOT** apply on soils with greater than 5% organic matter or fine-textured soils.
- **Do NOT** apply through irrigation equipment.
- Severe crop injury will result when soils are flooded or poorly drained following application and/or if applications are made under cool, wet conditions.

- **PRE** - Apply immediately after seeding or directly over transplants, pre-emergence to weeds.
- Apply 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.
- Apply 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.
- Apply 18 kg/ha (7.2 kg/acre) on heavy clay soils.
- **Do NOT** use on muck soils.
- If weeds have emerged, cultivate the soil before application.
- Rainfall or irrigation (1 cm or about 0.4 in.) is necessary for activation.

- **PRE** - prior to crop and weed emergence.
- Use the lower rate on light soils (coarse textured to sandy and sandy loam).
- Damage to subsequent crops and cover crops can be reduced by tillage across the rows after harvest. Small grains seeded in the fall may be stunted but not otherwise affected.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: PROWL H ₂ O (455 g/L) Product Rate/ha: 2.2-6.6 L/ha Product Rate/acre: 0.89-2.67 L/acre Active Ingredient(s): pendimethalin (1-3 kg/ha)	Group #: 3 PCP #: 29542	REI: 5 days for scouting and thinning all other activity 24 hours PHI: 45 days Rainfast: moisture required for activation Max Applications: Mineral: 1 Muck: 2
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 50 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) Product Rate/ha: 0.38 L/ha Product Rate/acre: 0.15 L/acre Active Ingredient(s): clethodim (91.2 g/ha)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 1-2 L/ha Product Rate/acre: 0.4-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.125-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 14 days Rainfast: 2 hours Max Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Apply after the crop has emerged, up to the 4-leaf stage, but prior to weed emergence.
- **EASTERN CANADA Mineral Soil** - Maximum 1 application per year at 2.2-3.3 L/ha (0.89-1.34 L/acre).
- **WESTERN CANADA Mineral Soil** - Maximum 1 application per year at 2.4 L/ha (0.98 L/acre).
- **Muck Soil** - Maximum 2 applications per year at 6.6 L/ha (2.67 L/acre) a minimum 3 week interval between applications.
- **Do NOT** plant any succeeding crops other than carrots or direct seeded lettuce within 12 months of the last **PROWL H₂O** herbicide application.
- **ONLY** onions may be planted in the year of **PROWL H₂O** herbicide application.
- Best results occur when rainfall or irrigation is received within 7 days after application.
- Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow.

POST-EMERGENCE GRASS HERBICIDES

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
 - For volunteer grains, use 0.47 L/ha (0.19 L/acre).
 - For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of **MERGE** for quackgrass.
 - **Do NOT** use flood jet or hollow cone nozzles.
- Post-emergence application when crop is in the 1-4-leaf stage.
• Control of listed grasses and suppression of annual bluegrass at the 2-6-leaf stage.

- Apply **POST** to actively growing grasses before tillering.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
- **Do NOT** make more than 2 applications per season at the 1 L/ha (0.4 L/acre) rate. A repeat application may be made after a minimum re-treatment interval of 14 days.
- **ONLY** 1 application is permitted per season at the 2 L/ha (0.8 L/acre) rate.
- **Do NOT** cultivate between rows until 5 days after application.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply **POST** with a hooded sprayer between the rows.
- Apply **POST** to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: PARDNER (280 g/L) Product Rate/ha: 1 L/ha Product Rate/acre: 0.4 L/acre Active Ingredient(s): bromoxynil (0.28 kg/ha)	Group #: 6 PCP #: 18001	REI: 24 hours PHI: 58 days Rainfast: 1 hour Max. Applications: 1
Trade Name: BROMOTRIL (240 g/L) or KORIL (235 g/L) or BROTEX (240 g/L) or BROMOXYNIL (240 g/L) Product Rate/ha: 1.2 L/ha Product Rate/acre: 0.48 L/acre Active Ingredient(s): bromoxynil (0.29 kg/ha)	Group #: 6 PCP #: 28276 or 25341 or 28519 or 32622	REI: Irrigation, handset: 2 days; All other activities: 24 hours PHI: 58 days Rainfast: 1 hour Max. Applications: 1
Trade Name: BROMAX (480 g/L) or BROTEX (480 g/L) Product Rate/ha: 0.6 L/ha Product Rate/acre: 0.24 L/acre Active Ingredient(s): bromoxynil (0.29 kg/ha)	Group #: 6 PCP #: 31431 or 31348	REI: 24 hours PHI: 58 days Rainfast: 1 hour Max. Applications: 1
GINSENG		
PRE-PLANT OR PRIOR TO CROP EMERGENCE (STALE SEEDBED TECHNIQUE)		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.1-2.5 L/ha, 1.56-1.88 L/ha, 1.5-1.8 L/ha, 1.39-1.67 L/ha Product Rate/acre: 0.85-1.0 L/acre, 0.63-0.76 L/acre, 0.61-0.73 L/acre, 0.56-0.68 L/acre Active Ingredient(s): glyphosate (0.75-0.9 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 7 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: Do NOT apply in year of harvest. Rainfast: 2 hours Max. Applications: 3
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Apply to actively growing broadleaf weeds in the 1-4-leaf stage.
- **Do NOT** use flood jet nozzles.
- **Do NOT** spray at temperatures above 25°C.

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- **Do NOT** use flood jet nozzles.
- **Do NOT** spray at temperatures above 25°C.

GINSENG

PRE-PLANT OR PRIOR TO CROP EMERGENCE (STALE SEEDBED TECHNIQUE)

- Apply POST to weeds once in the spring but before the crop has emerged above the soil.
- **Do NOT** exceed rate or spray volume as crop injury may result.
- **Do NOT** contact actively growing ginseng foliage.
- **Do NOT** use a fall application in existing/established gardens.
- Not all formulations registered on all crops. See label for specific uses and rates.

POST-EMERGENCE GRASS HERBICIDES

- Apply to actively growing grasses prior to tillering.
- Maximum of 3 applications per year. Apply in early May; late June; mid August.
- Ground application only.
- **Do NOT** exceed 2 L/ha (0.8 L/acre) at any application timing.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
HERBS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: AUTHORITY 480 (480 g/L) Product Rate/ha: 219-292 mL/ha Product Rate/acre: 87.6-116.8 mL/acre Active Ingredient(s): sulfentrazone (0.105-0.140 kg/ha)	Group #: 14 PCP #: 29012	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28 kg/ha Product Rate/acre: 0.113 kg/acre Active Ingredient(s): flumioxazin (0.14 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 80 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 0.8 L/ha Product Rate/acre: 0.32 L/acre Active Ingredient(s): clomazone (0.28 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 50 days Rainfast: not stated Max Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.58-9.17 L/ha Product Rate/acre: 1.83-3.67 L/acre Active Ingredient(s): napropamide (1.1-2.2 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.7-4.5 L/ha Product Rate/acre: 1.5-1.83 L/acre Active Ingredient(s): prometryne (1.8-2.2 kg/ha)	Group #: 5 PCP #: 24771	REI: 24 hours PHI: 30 days Rainfast: not stated Max Applications: 1
Trade Name: AFOLAN (450 g/L) or LOROX L (480 g/L) Product Rate/ha: 1.3-2.5 L/ha Product Rate/acre: 0.52-1.0 L/acre Active Ingredient(s): linuron (0.65-1.25 kg/ha)	Group #: 7 PCP #: 16363 or 16279	REI: 24 hours PHI: 60 days Rainfast: 8 hours Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****HERBS****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- For use on mint **ONLY**.
- May be applied to new and dormant plantings, pre-emergence to weeds and mint.
- Applications made to new plantings must be reduced to 25% of the rate listed for established plantings and for particular soil characteristics. See label for those restrictions.
- Applications to emerged mint will result in **SEVERE INJURY** to exposed plant tissue.
- Rainfall or overhead irrigation is **REQUIRED** after application.
- **Do NOT** use on sandy soils with less than 1% organic matter.

- Apply **ONLY** to peppermint and spearmint.
- Apply **ONLY** to established, dormant mint for pre-emergence control of weeds. Application to non-dormant mint may result in unacceptable crop injury.

- PRE - Use on cilantro **ONLY**
- Apply broadcast after seeding but prior to crop and weed emergence.
- **Do NOT** incorporate.
- **Do NOT** apply to sandy soil.

- PRE or PPI - Use on basil **ONLY**.
- **Do NOT** plant non-labeled crops until 12 months after application to avoid injury.
- High rates may result in temporary crop stunting. However, crops will outgrow the injury and yield is unaffected.

- Apply **ONLY** to parsley.
- Apply **PRE** or **EARLY POST** to parsley before weeds reach 5 cm (2 in.) high.
- **Do NOT** apply if parsley is under stress.
- **Do NOT** overlap application, as crop injury may occur.
- Application on sandy soils may result in injury to the crop. Always use the lower rate for sandy soils.
- For domestic use **ONLY**. **Do NOT** export parsley treated with GESAGARD 480 SC.

- Use on dill **ONLY**.
- Plant seed at least 1.25 cm (0.5 in.) deep.
- PRE apply as a band or broadcast application after planting, at a rate of 1.2-2 L/ha (0.5-0.8 L/acre) on loam or clay soil with low organic matter, or at a rate of 2-2.5 L/ha (0.8-1 L/acre) on muck or clay soil with medium organic matter.

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

continued

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 1.75 kg/ha Product Rate/acre: 0.7 kg/acre Active Ingredient(s): terbacil (1.4 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: rainfall required for activation Max. Applications: 1
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-0.65 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.26 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.29 kg/ha) + surfactant/solvent (0.25-2.0 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 70 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.125-0.38 L/ha + 5-10 L/1,000 L Product Rate/acre: 0.05-0.152 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (0.03-0.091 kg/ha) + surfactant (0.5%-1.0% v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 30 days (chives, cilantro and dill), 40 days (dill seed), 60 days (coriander seed) Rainfast: 1 hour Max. Applications: 1
SOIL-APPLIED FOLLOWED BY POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: AFOLAN (450 g/L) or LOROX L (480 g/L) Product Rate/ha: 1.3-2.5 L/ha Product Rate/acre: 0.52-1.0 L/acre Active Ingredient(s): linuron (0.65-1.25 kg/ha)	Group #: 7 PCP #: 16363 or 16279	REI: 24 hours PHI: 60 days Rainfast: PRE: moisture required for activation POST: 8 hours Max. Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 37-117 mL/ha + 2.5 L/1,000 L or + 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 5 days weeds; 91 days dormancy/ preplant application Rainfast: 8 hours Max Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: AFOLAN (450 g/L) or LOROX L (480 g/L) Product Rate/ha: 1.9-4.7 L/ha Product Rate/acre: 0.77-1.9 L/acre Active Ingredient(s): linuron (0.95-2.35 kg/ha)	Group #: 7 PCP #: 16363 or 16279	REI: 24 hours PHI: 60 days Rainfast: 8 hours Max. Applications: 2

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • PRE – Use on peppermint and spearmint ONLY. • Do NOT use on soils with less than 1% organic matter.
<ul style="list-style-type: none"> • Use on borage, spearmint and peppermint ONLY. • Use the minimum application rate for borage ONLY. • For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage. • For volunteer grains, use 0.47 L/ha (0.19 L/acre). • For quackgrass suppression, use 0.65 L/ha (0.26 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
<ul style="list-style-type: none"> • For use on fresh herbs such as cilantro, chives, dill and coriander (seed) ONLY. • Apply a post-emergence spray when coriander (cilantro) is in the 2-5-leaf stage and dill is in the 3-5-leaf stage.
SOIL-APPLIED FOLLOWED BY POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Use on dill ONLY. • Apply a maximum of 2 L/ha (0.8 L/acre) pre-emergence followed by a maximum of 2 L/ha (0.8 L/acre) post-emergence. • These treatments must be at LEAST two weeks apart or crop injury may result. NEVER apply more than these two applications per season and do NOT use higher rates. • Observe instructions for both pre-emergence and post-emergence use carefully before using.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Pre-plant burndown, dormancy or hooded sprayer application. Do NOT follow a pre-plant burndown with a dormancy or hooded sprayer application. • For optimum performance, make application to actively growing weeds up to 10 cm high (4 in.), or as specified. Coverage of the weeds is essential for good control.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Use on dill ONLY. • Apply when crop has 2 or more fully developed leaves. Use lower rates on small seedling weeds and the higher rates on established weeds. • Apply LOROX in a water volume of 220-400 L/ha (88-160 L/acre). • Apply before annual grasses exceed 5 cm (2 in.) in height and before broadleaf weeds exceed 15 cm (6 in.) During hot, dry weather, spray in cool part of the day to avoid injury. • Nozzle pressure must not exceed 275 kPa as crop injury may result.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
LEEKS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 0.960-1.29 L/ha Product Rate/acre: 0.39-0.52 L/acre Active Ingredient(s): dimethenamid (0.69-0.93 kg/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 30 days Rainfast: not stated Max Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.37-6.6 L/ha Product Rate/acre: 0.95-2.67 L/acre Active Ingredient(s): pendimethalin (1.08-3 kg/ha)	Group #: 3 PCP #: 29542	REI Leeks: 4 days for scouting 7 days for hand-set irrigation 15 days for hand weeding PHI: 30 days Rainfast: moisture required for activation Max Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES HEADING		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.75 L/ha Product Rate/acre: 1.5 L/acre Active Ingredient(s): prometryne (1.8 kg/ha)	Group #: 5 PCP #: 24771	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 2
LETTUCE		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: KERB SC (400 g/L) Product Rate/ha: 2.45 L/ha Product Rate/acre: 0.98 L/acre Active Ingredient(s): propyzamide (1.1 kg/ha)	Group #: 15 PCP #: 30264	REI: 24 hours PHI: 55 days Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.****LEEKS****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- **Mineral soil rate:** 0.963 L/ha (0.39 L/acre). FRONTIER MAX herbicide applied as directed will control redroot pigweed and eastern black nightshade in transplanted leeks grown on mineral soils.
- **Muck soil rate:** 1.29 L/ha (0.52 L/acre). FRONTIER MAX herbicide applied as directed will reduce competition from redroot pigweed and suppress yellow nutsedge transplanted leeks grown on muck soils.
- For transplanted leeks, apply a few days after transplanting when plants are established, and soil has settled around plants.
- Avoid application under cool conditions as stunting may result.
- Apply a single application after transplanting leeks, before weed emergence.
- Mineral soil rate for leeks: 2.37 L/ha (0.95 L/acre)
- Muck soil rate: 6.6 L/ha (2.67 L/acre).
- **Do NOT** apply PROWL H2O with liquid fertilizers.
- Best results occur when rainfall or irrigation is received within 7 days after application.

POST-EMERGENCE BROADLEAF HERBICIDES HEADING

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply two applications 10 days apart, before weeds are 5 cm (2 in.) high.
- Make the first application to well-established transplanted leeks that have produced 1 new fully expanded leaf.
- Can be used on either muck or mineral soils.
- Temporary injury can occur to the lower leaves in some cultivars of leek.

LETTUCE**SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Apply PPI, PRE or POST to direct seeded lettuce or 7 to 10 days after transplanting.
- All applications must be made to weed free soil.
- **Do NOT** replant lettuce in KERB treated fields in the same year.
- **Do NOT** use on muck soils.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/1,000 L Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.8-2 L/ha Product Rate/acre: 0.32-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.1-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 14 days Rainfast: 2 hours Max Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
MUSKMELON, WATERMELON, SQUASH AND PUMPKIN		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 57 days Rainfast: 4 hours Max. Applications: 2

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

continued

PRECAUTIONS - For more information, see the label.

POST-EMERGENCE GRASS HERBICIDES

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
 - For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage (2-5 is optimum).
 - For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
 - For transplanted lettuce, apply the first application between 1-6-leaf stage and the second application 14-21 days after thinning.
 - **Do NOT** exceed an application rate of 1.1 L/ha (0.44 L/acre) with direct seeded lettuce.
 - **Do NOT** use flood jet or hollow cone nozzles.
-
- Apply as a post-emergence broadcast application to actively growing grasses before tillering.
 - Apply **ONLY** 1 application per season.
 - Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
 - Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
 - Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
 - Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
 - **Do NOT** cultivate between rows until 5 days after application.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

MUSKMELON, WATERMELON, SQUASH AND PUMPKIN

SOIL-APPLIED BROADLEAF HERBICIDE

- For use on direct seeded and transplanted plants on bare soil.
- Apply after planting and before soil cracking on direct seeded plants.
- For use on muskmelon and watermelon before installation of plastic mulch. **Do NOT** direct seed in plastic mulch or transplant sooner than 7 days after application.
- Apply at a rate of 35-70 g/ha (14-28 g/acre) on muskmelon, direct seeded processing pumpkins and winter squash; 35-52.5 g/ha (14-21 g/acre) on watermelon, fresh market pumpkins and winter squash; and 47-70 g/ha (19-28 g/acre) on direct seeded processing summer squash.
- **Do NOT** apply more than 70 g/ha (28 g/acre) per season on watermelon, pumpkins and winter squash and 140 g/ha (56 g/acre) on muskmelon and summer squash. Minimum of 21 days between applications.
- Use a lower rate on lighter textured soils.
- Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of crop.
- **Do NOT** spray over top of plastic mulch.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 0.78-1.17 L/ha Product Rate/acre: 0.31-0.47 L/acre Active Ingredient(s): clomazone (0.28-0.42 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 60 days for muskmelon and watermelon, 30 days for squash and pumpkin Rainfast: not stated Max. Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.625 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.67-9.38 L/ha Product Rate/acre: 1.87-3.75 L/acre Active Ingredient(s): napropamide (1.12-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.15 L/ha Product Rate/acre: 0.47 L/acre Active Ingredient(s): s-metolachlor (1.05 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 30 days Rainfast: moisture required for activation Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + MERGE or SURE-MIX or + YUMA GL (96 g/L) + surfactant Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.30 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 4 days PHI: 30 days Rainfast: 1 hour Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply PRE, once per season. Do NOT incorporate. Apply after seeding but before emergence.• Apply the lower rate for melons.• Apply broadcast at 0.78 L/ha (0.31 L/acre) to squash and pumpkins on light soils.• Apply broadcast at 1.17 L/ha (0.47 L/acre) to squash and pumpkins on heavy soils.• Some rotational cropping restrictions apply.• Do NOT apply to Jack-O-Lantern pumpkins.• Do NOT apply to sandy soil.• Consult the product label for varieties sensitive to colouration after application.
<ul style="list-style-type: none">• PRE - apply prior to weed seed germination. If weeds have emerged, cultivate the soil before application.• Do NOT use on pumpkins.• Apply ONLY when plants have 4-5 true leaves, are well established and growing conditions are favourable for good plant growth otherwise crop injury may result.• Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.• Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.• Do NOT use on muck soils.• Rainfall or irrigation (about 1 cm or 0.4 in.) is necessary for activation.
<ul style="list-style-type: none">• Use on direct seeded pumpkin and squash ONLY.• Use the lower rate on light soils (coarse textured, sandy or sandy loam).• Apply before rainfall if irrigation is not available.• Damage to subsequent crops and cover crops can be reduced by tillage across the rows after harvest. Small grains seeded in the fall may be stunted but not otherwise affected.
<ul style="list-style-type: none">• Apply prior to transplanting or within 48 hours after transplanting.• Apply PRE in direct seeded crops prior to weed emergence OR at the 1-2-leaf stage of the crop but still PRE to weed emergence.• Risk of crop injury increases with cool and wet conditions.• Foliar contact can increase the potential to cause crop injury. Avoid overspray.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none">• Apply at the labelled leaf stage of grassy weeds.• Do NOT enter or allow worker entry into treated areas during the restricted entry interval of 4 days for scouting, irrigation and hand weeding activities.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.20 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): halosulfuron (25-51 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 57 days Rainfast: 4 hours Max. Applications: 2
ONIONS (DRY BULB)		
<p>Most experience with the herbicides below has been with the seeded crop. Experience with sets and limited experience with Spanish onions have been satisfactory.</p>		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.14 kg/ha Product Rate/acre: 0.056 kg/acre Active Ingredient(s): flumioxazin (0.07 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 45 days Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- For pumpkins and squash **ONLY**.
- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre).
- For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- Apply to row middles at all crop stages.
- Apply to direct seeded or actively growing transplanted muskmelons, pumpkins and winter squash **ONLY** between 3-5-true-leaf stage or 14 days after transplanting and before the appearance of first female flower.
- Apply at a rate of 35-70 g/ha (14-28 g/acre) on muskmelon, direct seeded processing pumpkins and winter squash; 35-52.5 g/ha (14-21 g/acre) on watermelon, fresh market pumpkins and winter squash; and 47-70 g/ha (19-28 g/acre) on direct seeded processing summer squash.
- Minimum of 21 days between applications.
- **Do NOT** apply more than 70 g/ha (28 g/acre) per season on watermelon, pumpkins and winter squash and 140 g/ha (56 g/acre) on muskmelon and summer squash.
- **Do NOT** spray over top of plastic mulch as significant injury may result.

ONIONS (DRY BULB)**SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Apply to transplanted onions between the 2-6-leaf stage and on direct seeded onions between the 3-6-leaf stage prior to weed emergence.
- Apply to coarse and medium textured soils with less than 5% organic matter and to muck soils.
- **Do NOT** apply through irrigation equipment.
- Severe crop injury will result when soils are flooded or poorly drained following application and/or if applications are made under cool, wet conditions.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-18 kg/ha Product Rate/acre: 3.6-7.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-13.5 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 0.963-1.29 L/ha Product Rate/acre: 0.39-0.52 L/acre Active Ingredient(s): dimethenamid (0.69-0.93 kg/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 60 days Rainfast: not stated Max. Applications: 1
Trade Name: PROWL H2O (455 g/L) Product Rate/ha: 2.2-3.3 L/ha and 6.6 L/ha Product Rate/acre: 0.89-1.34 L/ha and 2.67 L/acre Active Ingredient(s): pendimethalin (1.0-1.5 and 3 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 2
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 50 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO or CLETHODIM (240 g/L) + SURF-ACT Product Rate/ha: 0.38 L/ha + 5 L/1,000 L Product Rate/acre: 0.15 L/acre + 5 L/1,000 L Active Ingredient(s): clethodim (0.09 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598 or 32334	REI: 12 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- PRE – Apply immediately after seeding or directly over transplants.
 - Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.
 - Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.
 - Apply at a rate of 18 kg/ha (7.2 kg/acre) on heavy clay soils.
 - **Do NOT** use on muck soils.
 - Remove weeds by cultivating before application.
 - Rainfall or irrigation (about 1 cm or 0.4 in.) is necessary for activation.
-
- Apply **ONLY** at the loop stage of onion.
 - FRONTIER MAX will only suppress yellow nutsedge when applied prior to emergence on muck soils.

- **Mineral soil rate:** 2.2-3.3 L/ha (0.89-1.34 L/acre) applied at the 2-6 leaf stage of crop development for season long control.
- **Muck soil rate:** 6.6 L/ha (2.67 L/acre) applied at the loop and 2-leaf stage of crop development. Application at both growth stages is required for season long control.
- **Do NOT** apply PROWL H2O with liquid fertilizers.
- **Do NOT** use PROWL H2O on onions grown from sets on muck soil.
- Best results occur when rainfall or irrigation is received within 7 days after application.

POST-EMERGENCE GRASS HERBICIDES

- For dry bulb onions **ONLY**.
 - For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
 - For volunteer grains, use 0.47 L/ha (0.19 L/acre).
 - For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
-
- For suppression of annual bluegrass and the control of other annual grasses and quackgrass.
 - See label for detailed information on rates to control all annual grasses.
 - Apply using ground equipment.
 - Apply when the crop is in the 1-4-leaf stage and grassy weeds are in the 2-6-leaf stage.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 1-2 L/ha Product Rate/acre: 0.4-0.8 L/acre Active Ingredient(s): fluzazifop-p-butyl (0.125-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 0.4 L/acre-42 days; 0.8 L/acre-60 days Rainfast: 2 hours Max. Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: GOAL 2XL or BASKET 2XL (240 g/L) Product Rate/ha: 0.25-0.50 L/ha Product Rate/acre: 0.1-0.2 L/acre Active Ingredient(s): oxyfluorfen (0.12 kg/ha)	Group #: 14 PCP #: 24913 OR 33560	REI Dry Bulb Onions: 48 hours REI Shallots: 6 days for handweeding and scouting 12 hours for all other activities PHI Dry Bulb Onions and Shallots: 56 days Rainfast: 3 hours Max. Applications: 4
Trade Name: PARDNER (280 g/L) Product Rate/ha: 0.5 L/ha Product Rate/acre: 0.2 L/acre Active Ingredient(s): bromoxynil (0.14 kg/ha)	Group #: 6 PCP #: 18001	REI: 24 hours PHI: 75 days Rainfast: 1 hour Max. Applications: 2
Trade Name: BROMOTRIL (240 g/L) or KORIL (235 g/L) or BROTEX (240 g/L) or BROMOXYNIL (240 g/L) Product Rate/ha: 0.6 L/ha Product Rate/acre: 0.24 L/acre Active Ingredient(s): bromoxynil (0.14 kg/ha)	Group #: 6 PCP #: 28276 or 25341 or 28519 or 32622	REI: 24 hours PHI: 75 days Rainfast: 1 hour Max. Applications: 2
Trade Name: BROMAX (480 g/L) or BROTEX (480 g/L) Product Rate/ha: 0.3 L/ha Product Rate/acre: 0.12 L/acre Active Ingredient(s): bromoxynil (0.14 kg/ha)	Group #: 6 PCP #: 31431 or 31348	REI: 24 hours PHI: 75 days Rainfast: 1 hour Max. Applications: 2

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- Apply POST to actively growing grasses before tillering.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
- **Do NOT** cultivate between rows until 5 days after application.
- **Do NOT** make more than 2 applications per season at the 1 L/ha (0.4 L/acre) rate. A repeat application may be made after a minimum re-treatment interval of 14 days.
- **ONLY** 1 application is permitted per season at the 2 L/ha (0.8 L/acre) rate.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- For use on dry bulb onion and shallots.
- Apply after onions and shallots have 2 fully developed leaves and when weeds are in the 2-4-leaf stage.
- Use the lower rate at the 2-leaf stage of the crop. Repeat applications as required to control late germinating weeds. Retreatment interval is a minimum of 7 days.
- **Do NOT** exceed a total of 2 L/ha (0.8 L/acre) per year.
- **Do NOT** apply to sandy soil.
- **Do NOT** add oils or surfactants to the spray mixture.

- For use on dry bulb onions **ONLY**.
- Apply POST to actively growing weeds up to the 4-leaf stage.
- Apply when onions are at the 2-3-leaf stage, repeat application when onions are at the 4-5-leaf stage.
- Severe leaf burn may result in onions if weather conditions have not been conducive to the development of the outer waxy layer of the onion leaf.

- For use on dry bulb onions **ONLY**.
- Apply POST to actively growing weeds up to the 4-leaf stage.
- Apply when onions are at the 2-3-leaf stage, repeat application when onions are at the 4-5-leaf stage.
- Severe leaf burn may result in onions if weather conditions have not been conducive to the development of the outer waxy layer of the onion leaf.

- For use on dry bulb onions **ONLY**.
- Apply POST to actively growing weeds up to the 4-leaf stage.
- Apply when onions are at the 2-3-leaf stage, repeat application when onions are at the 4-5-leaf stage.
- Severe leaf burn may result in onions if weather conditions have not been conducive to the development of the outer waxy layer of the onion leaf.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
ONIONS (GREEN)		
On green bunching onions, the granular formulations (applied when the leaves are dry) help to avoid leaf injury.		
SOIL APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 0.960-1.29 L/ha Product Rate/acre: 0.39-0.52 L/acre Active Ingredient(s): dimethenamid (0.69-0.93 kg/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 30 days Rainfast: not stated Max Applications: 1
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.35 and 6.6 L/ha Product Rate/acre: 0.95 and 2.67 L/acre Active Ingredient(s): pendimethalin (1 and 3 kg/ha)	Group #: 3 PCP #: 29542	REI: Scouting: 4 days; Hand-Set Irrigation: 7 days; Hand Weeding: 15 days PHI: 30 days Rainfast: moisture required for activation Max Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 1.1 L/ha + 1-2 L/ha Product Rate/acre: 0.44 L/acre + 0.4-0.8 L/acre Active Ingredient(s): sethoxydim (0.50 kg/ha) + surfactant/solvent (1-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max Applications: 2
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 1-2 L/ha Product Rate/acre: 0.4-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.125-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 1 L/ha: 42 days; 2 L/ha: 60 days Rainfast: 2 hours Max Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 37-117 mL/ha + 2.5 L/1,000 L or + 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

ONIONS (GREEN)

SOIL APPLIED GRASS AND BROADLEAF HERBICIDES

- **Mineral soil rate:** 0.963 L/ha (0.39 L/acre).
- **Muck soil rate:** 1.29 L/ha (0.52 L/acre).
- Apply at the loop stage and before weed emergence.
- Application made prior to the loop stage of green onion may result in significant crop injury, including possible stand loss.
- Avoid application under cool conditions as stunting may result.

- **Mineral soil rate:** 2.35 L/ha (0.95 L/acre).
- **Muck soil rate:** 6.6 L/ha (2.67 L/acre).
- Apply at the 2-3-leaf stage and before weed emergence.
- Application made prior to green onion full emergence may result in significant crop injury.
- Best results occur when rainfall or irrigation is received within 7 days after application.
- **Do NOT** apply PROWL H20 with liquid fertilizers.
- **Do NOT** use PROWL H20 on onions grown from sets on muck soil.

POST-EMERGENCE GRASS HERBICIDES

- For annual grass, use 0.32 L/ha (0.13 L/acre) at 1-6-leaf stage.
- For volunteer grains, use 0.48 L/ha (0.19 L/acre).
- For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the at 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- Apply up to 2 applications per year not exceeding a total maximum application rate of 1.1 L/ha (0.44 L/acre) per season. Allow a minimum of 14 days between applications.

- Apply POST to actively growing grasses before tillering.
- Apply 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf stage for foxtails).
- Apply 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
- **Do NOT** cultivate between rows until 5 days after application.
- **Do NOT** make more than 2 applications per season at the 1 L/ha (0.4 L/acre) rate. A repeat application may be made after a minimum re-treatment interval of 14 days.
- **ONLY** 1 application is permitted per season at the 2 L/ha (0.8 L/acre) rate.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
ONIONS (SHALLOTS)		
SOIL APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: PROWL H20 (455 g/L) Product Rate/ha: 2.2-6.6 L/ha Product Rate/acre: 0.89-2.67 L/acre Active Ingredient(s): pendimethalin (1-3 kg/ha)	Group #: 3 PCP #: 29542	REI: Scouting: 5 days Thinning: 5 days All Other Activities: 24 hours PHI: 45 days Rainfast: moisture required for activation Max Applications: Mineral: 1 (Western Canada) Mineral: 2 (Eastern Canada) Muck: 2
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.37 L/ha + 5 L/1,000 L Product Rate/acre: 0.15 L/acre + 5 L/1,000 L Active Ingredient(s): clethodim (0.09 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598	REI: 12 hours PHI: 45 days Rainfast: 1 hours Max Applications: 1
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 1-2 L/ha Product Rate/acre: 0.4-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.125-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 1 L/ha:42 days; 2 L/ha:60 days Rainfast: 2 hours Max Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 37-117 mL/ha + 2.5 L/1,000 L or + 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1 % v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max Applications: 1

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.****ONIONS (SHALLOTS)****SOIL APPLIED GRASS AND BROADLEAF HERBICIDES**

- **Eastern Canada Mineral soil rate:** 2.2-6.6 L/ha (0.89-2.67 L/acre). Maximum 2 applications per year a minimum of 3 weeks apart. Apply at the 2-6-leaf stage, prior to weed emergence.
- **Western Canada Mineral soil rate:** 2.4 L/ha (0.98 L/acre). Maximum 1 application per year. Apply at the loop-2-leaf stage, prior to weed emergence.
- **Muck soil rate:** 6.6 L/ha (2.67 L/acre). Maximum 2 applications per year a minimum of 3 weeks apart. Apply at the loop-2-leaf stage.
- **Do NOT** plant any succeeding crops other than carrots or direct seeded lettuce within 12 months of the last PROWL H2O application.
- **ONLY** onions may be planted in the year of PROWL H2O application.
- Best results occur when rainfall or irrigation is received within 7 days after application.
- Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow.
- **Do NOT** apply PROWL H2O with liquid fertilizers.

POST-EMERGENCE GRASS HERBICIDES

- For suppression of annual bluegrass and the control of other annual grasses and quackgrass.
- Apply when the crop is in the 1-4-leaf stage and grassy weeds are in the 2-6-leaf stage.
- See label for detailed information on rates to control all annual grasses.
- Apply using ground equipment.

- Apply POST to actively growing grasses before tillering.
- Apply 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf stage for foxtails).
- Apply 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
- **Do NOT** cultivate between rows until 5 days after application.
- **Do NOT** make more than 2 applications per season at the 1 L/ha (0.4 L/acre) rate. A repeat application may be made after a minimum re-treatment interval of 14 days.
- **ONLY** 1 application is permitted per season at the 0.8 L/acre rate.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
PARSNIPS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.2-1.75 L/ha Product Rate/acre: 0.48-0.70 L/acre Active Ingredient(s): s-metolachlor (1.098-1.601 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: LOROX L (480 g/L) Product Rate/ha: 1.25-2.4 L/ha Product Rate/acre: 0.50-0.96 L/acre Active Ingredient(s): linuron (0.625-1.20 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: 60 days Rainfast: 8 hours Max. Applications: 2
Trade Name: LOROX L (480 g/L) followed by LOROX L (480 g/L) Product Rate/ha: 1.25-1.82 L/ha followed by 1.25-2.4 L/ha Product Rate/acre: 0.5-0.73 L/acre followed by 0.5-0.96 L/acre Active Ingredient(s): linuron (0.625-0.91 kg/ha) followed by linuron (0.625-1.2 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: 60 days Rainfast: PRE: moisture required for activation POST: 8 hours Max. Applications: 2
POST-EMERGENCE GRASS HERBICIDE		
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.19-0.38 L/ha + 5-10 L/1,000 L Product Rate/acre: 0.08-0.15 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (46-91 g/ha) + surfactant (0.5-1.0% v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****PARSNIPS****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Make a pre-emergence ground application after planting but before crop or weed emergence.
- **Do NOT** follow a pre-emergence application with a post-emergence spray later in the season.
- Muck soil: apply prior to weed emergence and irrigate with 1.25 cm (0.5 in.) of water **IMMEDIATELY** following application.
- **CAUTION:** Application may result in injury to the crop which may include stand loss, delayed maturity and even loss of yield.

- **PRE** – Apply soon after seeding, prior to crop emergence.
- Plant seed at least 1.25 cm (0.5 in.) deep.
- Use a rate of 1.3-1.9 L/ha (0.53-0.77 L/acre) on loam or clay soil with low organic matter.
- Use a rate of 1.9-2.4 L/ha (0.77-0.96 L/acre) on muck soil or clay soil with medium organic matter.
- Heavy rains or irrigation at time of emergence may cause injury.
- An additional post-emergence treatment may be needed.

- **PRE** maximum 1.9 L/ha (0.77 L/acre), followed by **POST** maximum 2.4 L/ha (0.96 L/acre).
- These treatments must be applied at least 2 weeks apart or crop injury may result.
- **Do NOT** apply more than these 2 applications per season and **Do NOT** use higher rates.
- Observe instructions for both **PRE** and **POST** use carefully before using.

POST-EMERGENCE GRASS HERBICIDE

- For the control of annual grasses and quackgrass.
- Apply when grassy weeds are at 2-6-leaf stage.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDE		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 1.82-4.51 L/ha Product Rate/acre: 0.73-1.8 L/acre Active Ingredient(s): linuron (0.91-2.26 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: 60 days Rainfast: 8 hours Max. Applications: 2
PEAS		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: GESAGARD 480 SC (480 g/L) Product Rate/ha: 3.75-4.58 L/ha Product Rate/acre: 1.5-1.83 L/acre Active Ingredient(s): prometryne (1.8-2.2 kg/ha)	Group #: 5 PCP #: 24771	REI: 12 hours PHI: 55 days Rainfast: not stated Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PURSUIT (240 g/L) or PHANTOM (240 g/L) or NU-IMAGE (240 g/L) Product Rate/ha: 1.312 L/ha Product Rate/acre: 0.125 L/acre Active Ingredient(s): imazethapyr (0.075 kg/ha)	Group #: 2 PCP #: 23844 or 30017 or 30420	REI: 12 hours PHI: 50 days Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE BROADLEAF HERBICIDE
<ul style="list-style-type: none"> • Apply POST with a hooded sprayer between the rows. • Apply to actively growing weeds up to 10 cm (4 in.) tall.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE
<ul style="list-style-type: none"> • Apply when the crop has 2 or more fully developed leaves. • Use lower rates on small seedling weeds and higher rates on established weeds. • On muck soils, parsnips must be more than 7.5 cm (3 in.) tall when spraying. • Do NOT mix with oil or other surfactants. • Apply before annual grasses exceed 5 cm (2 in.) and before broadleaf weeds exceed 15 cm (6 in.). • During hot, dry weather, spray in the cool part of the day to avoid crop injury. • If unusually heavy rains follow application, severe injury may result.
PEAS
SOIL-APPLIED BROADLEAF HERBICIDE
<ul style="list-style-type: none"> • PRE – Apply ONLY once per year before weeds emerge, including Eastern black nightshade. • Dry soil may need light incorporation. • Use lower rate on sandy soils.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • PRE • Do NOT use on muck, peat, high organic matter soils or soils with less than 1% organic matter.
<ul style="list-style-type: none"> • Allow at least 24 months between PPI applications.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: REFLEX (240 g/L) + AGRAL 90 Product Rate/ha: 1 L/ha + 1 L/1,000 L Product Rate/acre: 0.4 L/acre + 1 L/1,000 L Active Ingredient(s): fomesafen (0.24 kg/ha) + adjuvant (0.1% v/v)	Group #: 14 PCP #: 24779	REI: 12 hours PHI: 46 days Rainfast: 4 hours Max. Applications: 1
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.25-1.7 L/ha Product Rate/acre: 0.5-0.68 L/acre Active Ingredient(s): trifluralin (0.6-0.8 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + MERGE or SURE-MIX or YUMA GL (96 g/L) + surfactant Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.30 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 12 hours PHI: 65 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: fresh peas-30 days, dry peas-60 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO or CLETHODIM (240 g/L) + SURF-ACT Product Rate/ha: 0.38 L/ha + 5 L/1,000 L Product Rate/acre: 0.15 L/acre + 5 L/1,000 L Active Ingredient(s): clethodim (91.2 g/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598 or 32334	REI: 12 hours PHI: 21 days Rainfast: 1 hour Max Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- PRE – Apply just after seeding but prior to crop emergence.
- **Do NOT** rotate to another crop in the same season.
- **Do NOT** apply REFLEX to any field more often than once every 2 years.

- PPI – Incorporate within 24 hours of application.
- **Do NOT** exceed the low rate on medium textured soils.
- **Do NOT** exceed the high rate on heavy textured soils.
- **Do NOT** apply to peat or muck soils (greater than 15% organic matter).
- **Do NOT** apply to soils with less than 2% organic matter.
- **Do NOT** apply to fields spread with manure within the last 12 months.

POST-EMERGENCE GRASS HERBICIDES

- Apply to emerged annual grasses and volunteer cereals in the 2-leaf to tillering stage and volunteer corn and quackgrass in the 2-6-leaf stage.
- 0.38 L/ha (0.15 L/acre) will control volunteer corn, volunteer cereals and green foxtail.
- 0.5 L/ha (0.2 L/acre) will suppress quackgrass and also control barnyard grass.
- 0.75 L/ha (0.3 L/acre) will control quackgrass.

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence.
- Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- **Do NOT** apply herbicides other than MCPA SODIUM 300 or PURSUIT within 4 days of application.
- **Do NOT** graze treated crop.
- **Do NOT** use flood jet or hollow cone nozzles.
- Use **ONLY** on fresh or dry processing peas, not on fresh edible pod peas.

- Apply when the crop is in the 1-4-leaf stage and grassy weeds are in the 2-6-leaf stage.
- For suppression of annual bluegrass and the control of other annual grasses and quackgrass. See label for detailed information on rates to control all annual grasses.
- Apply using ground equipment.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + SUPER SPREADER or + ASSIST Product Rate/ha: 1.75-2.25 L/ha + 1.25-2.5 L/1,000 L or 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 1.25-2.5 L/1,000 L or + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + surfactant (0.125- 0.25% v/v) or + oil concentrate	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: not stated Rainfast: 6 hours Max. Applications: 2
Trade Name: MCPA SODIUM 300 (300 g/L) Product Rate/ha: 1-1.5 L/ha Product Rate/acre: 0.4-0.6 L/acre Active Ingredient(s): MCPA (0.3-0.45 kg/ha)	Group #: 4 PCP #: 9858	REI: 12 hours PHI: not stated Rainfast: 6 hours Max. Applications: not stated
Trade Name: MCPA AMINE (500 g/L) Product Rate/ha: 0.55-0.7 L/ha Product Rate/acre: 0.22-0.28 L/acre Active Ingredient(s): MCPA (0.275-0.35 kg/ha)	Group #: 4 PCP #: 9516	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: not stated
Trade Name: MCPA AMINE (600 g/L) Product Rate/ha: 0.28-0.46 L/ha Product Rate/acre: 0.112-0.186 L/acre Active Ingredient(s): MCPA (0.165-0.274 kg/ha)	Group #: 4 PCP #: 31432	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: not stated
Trade Name: TROPOTOX Plus (400 g/L) or CLOVITOX Plus (400 g/L) or TOPSIDE (400 g/L) Product Rate/ha: 2.75-4.25 L/ha Product Rate/acre: 1.1-1.7 L/acre Active Ingredient(s): MCPB/MCPA (1.1-1.7 kg/ha)	Group #: 4 PCP #: 8211 or 24336 or 22003	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: 1
PEPPERS		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 2

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- Apply POST when peas have at least 3 pairs of leaves, before flowering.
- Under hot, humid conditions reduce ASSIST oil concentrate to 1 L/ha (0.4 L/acre).
- Refer to the BASAGRAN label for information on specific weed stage and height. Two applications, 10 days apart, of 1.7 L/ha (0.7 L/acre) may be required for top growth control of nutsedge and Canada thistle, and suppression of field bindweed.
- Apply the higher rate of SUPER SPREADER if hard water is being used.

- Apply POST when peas are 10-20 cm (4-8 in.) high.
- **Do NOT** apply after flower buds have formed on peas.
- **Do NOT** apply when temperatures are over 27°C, high humidity, or under drought conditions.
- Not all formulations registered on all crops. See label for specific uses and rates.

- Apply POST when peas are 10-20 cm (4-8 in.) high.
- **Do NOT** apply after flower buds have formed on peas.
- **Do NOT** apply when temperatures are over 27°C, high humidity, or under drought conditions.
- Not all formulations registered on all crops. See label for specific uses and rates.

- Apply POST when peas are 10-20 cm (4-8 in.) high.
- **Do NOT** apply after flower buds have formed on peas.
- **Do NOT** apply when temperatures are over 27°C, high humidity, or under drought conditions.
- Not all formulations registered on all crops. See label for specific uses and rates.

- Apply POST when peas have 3-6 expanded leaves.
- **Do NOT** apply after the 6-leaf stage as damage may occur.
- **Do NOT** apply when temperatures are over 27°C, high humidity, or under drought conditions.
- **Do NOT** graze or cut treated crop for forage.
- Top growth only: Canada thistle, creeping buttercup, field bindweed, horsetail, perennial sow-thistle, tall buttercup.

PEPPERS**SOIL-APPLIED BROADLEAF HERBICIDES**

- For use on chile, bell and banana peppers.
- Apply **ONLY** to row middles for direct seeded or transplanted peppers.
- Apply as a single or split application of 35-70 g/ha (14-28 g/acre), allow a minimum of 21 days between applications.
- **Do NOT** apply more than 140 g/ha (56 g/acre) per season.
- Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of crop.
- **Do NOT** spray over top of plastic mulch.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.14-0.21 kg/ha Product Rate/acre: 0.056-0.084 kg/acre Active Ingredient(s): flumioxazin (0.071-0.107 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 1.55-2.35 L/ha Product Rate/acre: 0.62-0.95 L/acre Active Ingredient(s): clomazone (0.558-0.846 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 70 days Rainfast: not stated Max Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.625 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: not stated
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.67-9.38 L/ha Product Rate/acre: 1.87-3.75 L/acre Active Ingredient(s): napropamide (1.12-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.15-1.25 L/ha Product Rate/acre: 0.46-0.50 L/acre Active Ingredient(s): s-metolachlor (1.05-1.14 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 80 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.25-2.4 L/ha Product Rate/acre: 0.5-0.96 L/acre Active Ingredient(s): trifluralin (0.58-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Apply before transplanting field peppers.
 - Apply the higher rate to medium-textured soils and the lower rate to coarse-textured soils.
 - Apply product with a hooded or shielded sprayer to row middles.
 - **Do NOT** apply more than 0.21 kg/ha (0.084 kg/acre) a season.
 - Rainfall or irrigation is required after transplanting and before application.
 - **Do NOT** apply through irrigation equipment.
-
- **Do NOT** use on banana peppers.
 - Apply before transplant and prior to weed emergence. Place roots of the transplants below the chemical barrier when planting.
 - Use the lower labeled rate on coarse soils and the higher labeled rate on fine soils.
 - **Do NOT** incorporate.
 - **Do NOT** apply to sandy soil.
-
- PRE – if weeds have emerged, cultivate the soil before application.
 - Apply 4-6 weeks after transplanting or when direct seeded plants have reached a height of 10-15 cm (4-6 in.).
 - Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils.
 - Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils.
 - **Do NOT** use on muck soils.
 - Rainfall or irrigation (about 1 cm or 0.4 in.) is necessary for activation.
-
- PPI – Incorporate within 24 hours of application.
 - **Do NOT** apply to soils with over 10% organic matter.
 - Damage to subsequent cover crops can be reduced by tillage across the rows after harvest. Small grains seeded in the fall may be stunted but not otherwise affected.
-
- Apply within 48 hours of transplanting peppers and PRE to weeds.
 - Risk of crop injury increases with early transplanting and soil temperatures below 10°C.
 - Applications made more than 48 hours after transplanting may increase the risk of foliar injury.
 - **Do NOT** apply to soils that contain less than 1% or more than 10% organic matter.
 - **Do NOT** tank-mix with fluid fertilizers, oil, oil concentrates or surfactants.
-
- PPI – Incorporate within 24 hours of application.
 - **Do NOT** exceed the low rate on medium textured soils.
 - **Do NOT** apply to peat or muck soils (greater than 15% organic matter).
 - **Do NOT** apply to soils with less than 2% organic matter.
 - **Do NOT** apply to fields spread with manure within the last 12 months.
 - **Do NOT** apply on the same land for 2 consecutive years.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE GRASS HERBICIDE		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28753	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): halosulfuron (25-51 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 2
POTATOES		
<p>The best weed management system for potato uses a combination of chemical weed control with cultivation and other techniques. Cultivation prior to potato emergence using various kinds of cultivation equipment (light harrows, finger weeders, hillers, etc.) will control the early flush of weeds. Root pruning of the crop should be minimized. If the crop is hilled after application of herbicides, untreated soil will surface and another flush of weeds may result.</p>		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 2.2-4.3 L/ha Product Rate/acre: 0.88-1.72 L/acre Active Ingredient(s): linuron (1.1 -2.15 kg/ha)	Group #: 7 PCP #: 16279	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

<p>PRECAUTIONS - For more information, see the label.</p>
<p>POST-EMERGENCE GRASS HERBICIDE</p> <ul style="list-style-type: none"> • For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage. • For volunteer grains, use 0.47 L/ha (0.19 L/acre). • For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass. • Do NOT use flood jet or hollow cone nozzles.
<p>POST-EMERGENCE BROADLEAF HERBICIDES</p> <ul style="list-style-type: none"> • Apply POST with a hooded sprayer between the rows. • Apply to actively growing weeds up to 10 cm (4 in.) tall.
<ul style="list-style-type: none"> • For use on chile, bell and banana peppers. • Apply to row middle for direct seeded or transplanted peppers. • A directed spray can be applied at 21 days after transplanting or when plants have reached a height of 15 cm (6 in.), but before flowering. • Apply as a single or split application of 35-70 g/ha (14-28 g/acre), allow a minimum of 21 days between applications. • Do NOT apply more than 140 g/ha (56 g/acre) per season. • Do NOT spray over top of plastic mulch.
<p>POTATOES</p>
<p>POTATO VINE KILLING - For information on products and rates of application of vine killing, consult OMAFRA Publication 838, <i>Vegetable Crop Protection Guide</i>, and follow the product label.</p>
<p>SOIL-APPLIED BROADLEAF HERBICIDES</p> <ul style="list-style-type: none"> • PRE - Apply immediately after hilling. The potato tops must be covered with soil to avoid injury. • Use the lower rate on light sandy soils and the higher rate on muck or clay soils.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: REFLEX (240 g/L) Product Rate/ha: 1 L/ha Product Rate/acre: 0.4 L/acre Active Ingredient(s): fomesafen (0.24 kg/ha)	Group #: 14 PCP #: 24779	REI: 12 hours PHI: 70 days Rainfast: 4 hours Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: BOUNDARY LQD (628 g/L + 149 g/L) Product Rate/ha: 1.85-2.5 L/ha Product Rate/acre: 0.74-1.0 L/acre Active Ingredient(s): s-metolachlor/metribuzin (1443 g/ha-1943 g/ha)	Group #: 5 + 15 PCP #: 30812	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: EPTAM (800 g/L) Product Rate/ha: 4.25-8.5 L/ha Product Rate/acre: 1.7-3.4 L/acre Active Ingredient(s): EPTC (3.4-6.8 kg/ha)	Group #: 8 PCP #: 11284	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 756-963 mL/ha Product Rate/acre: 306-390 mL/acre Active Ingredient(s): dimethenamid-p (544-693 g/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 40 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PYROXASULFONE 85 WG (85 %) Product Rate/ha: 147-290 g/ha Product Rate/acre: 59-116 g/acre Active Ingredient(s): pyroxasulfone (125-246.5 g/ha)	Group #: 15 PCP #: 30572	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.**

- Apply PRE after planting but prior to potato emergence.
- If weeds are emerged at time of application, include a non-ionic adjuvant, such as AGRAL 90 at 0.1% v/v.
- **Do NOT** apply on soils with > 5% organic matter or fine textured soils.
- **Do NOT** cultivate for 7 days after application as effectiveness will be reduced.
- **Do NOT** apply REFLEX to any field more than once every two years.
- Some rotational cropping restrictions apply.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- **Do NOT** apply at ground crack or if potatoes have emerged.
- **Do NOT** apply to coarse textured soils with less than 1% organic matter.
- **Do NOT** apply to varieties Belleisle, Tobique or Superior.
- Apply after hilling. Hilling operations made after application will reduce weed control.

- PRE or PPI (for nutsedge control).
- **Do NOT** use on the variety Superior.
- **Do NOT** apply on sandy or coarse textured soils low in organic matter.
- **Do NOT** apply at ground crack or if potatoes have emerged.

- PPI – Apply to a dry soil surface before planting and incorporate immediately, at next to the last or last cultivation for grass escapes. Use at 4.25-5.5 L/ha (1.7-2.2 L/acre).
- Avoid wet soil conditions or weed control may be poor.
- Use 5.5-8.5 L/ha (2.2-3.4 L/acre) rates for heavy weed infestations and nutsedge control.

- Apply PRE before weeds emerge and after planting.
- **Do NOT** apply before planting or onto emerged potatoes as injury may result.
- **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) medium classification. Boom height must be 60 cm (24 in.) or less above the crop or ground.
- **Do NOT** graze or feed treated crop to livestock prior to 40 days after application.
- Rainfall is required within 7-10 days of treatment to activate and move FRONTIER MAX into the soil zone.
- In cold and wet growing conditions, delayed emergence or early season stunting of potatoes may result.

- **PRE** - after planting or immediately following drag-off or hilling, but before potato and weeds emerge.
- **Do NOT** apply **PYROXASULFONE 85 WG** prior to planting potato seed pieces.
- **Do NOT** apply **PYROXASULFONE 85 WG** if potato has emerged.
- **Do NOT** apply **PYROXASULFONE 85 WG** in soils classified as a Sand.
- Where “drag off” or “hilling” is practiced, **Do NOT** apply **PYROXASULFONE 85 WG** until the process is complete.
- **PYROXASULFONE 85 WG** selectivity on potato varieties must be confirmed with your local seed company or supplier to avoid potential injury to sensitive varieties. Crop seeds must be planted a minimum 5 cm (2 in.) deep.
- Temporary growth suppression may occur if extreme conditions of high rainfall and extended periods of water-saturated soil occur during potato germination or early seedling development. These suppressions have not resulted in reduced potato yield potential.
- Apply 147 g/ha (59 g/acre) on coarse soil, 195 g/ha (78 g/acre) on medium soils with < or equal to 3% organic matter, 245 g/ha (98 g/acre) on medium fine soils between 3 and 7% organic matter and 290 g/ha (116 g/acre) on fine soils.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.85-2.25 L/ha Product Rate/acre: 0.34-0.90 L/acre Active Ingredient(s): metribuzin (0.4-1.1 kg/ha)	Group #: 5 PCP #: 26280 or 32867	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: not stated
Trade Name: SQUADRON (75%) Product Rate/ha: 0.5-1.5 kg/ha Product Rate/acre: 0.202-0.607 kg/acre Active Ingredient(s): metribuzin (0.550-1.500 kg/ha)	Group #: 5 PCP #: 32081	REI: 12 hours PHI: 60 days Rainfast: not stated Max. Applications: not stated
SOIL-APPLIED TANK-MIX OPTIONS		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + LOROX L (480 g/L) Product Rate/ha: 1.25-1.75 L/ha + 1.75-2.25 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.7-0.9 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + linuron (0.88-1.13 kg/ha)	Group #: 15 + 7 PCP #: 25729 or 33599 + 16279	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 1.25-1.75 L/ha + 0.850-2.25 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.3-0.9 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + metribuzin (0.408-1.08 L/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 26280 or 32876	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: EPTAM (800 g/L) + SENCOR 480 F (480 g/L) Product Rate/ha: 4.25-5.5 L/ha + 1.1-1.75 L/ha Product Rate/acre: 1.7-2.2 L/acre + 0.44-0.7 L/acre Active Ingredient(s): EPTC (3.4-4.4 kg/ha) + metribuzin (0.53-0.84 kg/ha)	Group #: 8 + 5 PCP #: 11284 + 27091	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- PRE – Apply after hilling before emergence of crop or weeds, or POST before weeds are 4 cm (1.6 in.) tall.
- Use the lower rate on sandy soil.
- Apply higher rates to longer season potatoes, or when longer weed control is needed.
- **Do NOT** use on muck soils.
- **Do NOT** use on coarse soils that have less than 2% organic matter.
- **Do NOT** use on Belleisle and Tobique varieties.
- When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR and SQUADRON herbicide should be limited to a small test area to ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.

- PRE – Apply after hilling before emergence of crop or weeds, or POST before weeds are 4 cm (1.6 in.) tall.
- Use the lower rate on sandy soil.
- Apply higher rates to longer season potatoes, or when longer weed control is needed.
- **Do NOT** use on muck soils.
- **Do NOT** use on coarse soils that have less than 2% organic matter.
- **Do NOT** use on Belleisle and Tobique varieties.
- When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR and SQUADRON herbicide should be limited to a small test area to ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.

SOIL-APPLIED TANK-MIX OPTIONS

- PRE – Apply after the first hilling before emergence of the crop and weeds.
- See precautions for DUAL II MAGNUM/KOMODO HERBICIDE above.
- **Do NOT** use on the variety Superior.

- PPI or PRE – Apply after the first hilling before emergence of the crop and weeds.
- See precautions for DUAL II MAGNUM/KOMODO HERBICIDE above.
- **Do NOT** use on Superior, Belleisle, or Tobique potatoes.
- **Do NOT** apply on sandy or on coarse textured soils low in organic matter, or on muck soils.
- **Do NOT** apply at ground crack or if potatoes have emerged.

- PPI – Apply as a tank-mix and incorporate immediately.
- **Do NOT** use on muck soils.
- **Do NOT** use on Belleisle or Tobique varieties.
- When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR herbicide should be limited to a small test area to ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SENCOR 75 DF (75 %) + LOROX L (480 g/L) Product Rate/ha: 0.56-1.1 kg/ha + 1.6-3.75 L/ha Product Rate/acre: 0.23-0.44 kg/acre + 0.64-1.5 L/acre Active Ingredient(s): metribuzin (0.42-0.825 kg/ha) + linuron (0.768-1.8 kg/ha)	Group #: 5 + 7 PCP #: 17242 + 16279	REI: 24 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) + LOROX L (480 g/L) Product Rate/ha: 0.850-2.25 L/ha + 1.6-3.75 L/ha Product Rate/acre: 0.34-0.9 L/acre + 0.64-1.5 L/acre Active Ingredient(s): metribuzin (0.408-1.1 kg/ha) + linuron (0.768-1.8 kg/ha)	Group #: 5 + 7 PCP #: 26280 or 32876 + 16279	REI: 24 hours PHI: 60 days Rainfast: moisture required for activation Max Applications: 1
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) + LOROX L (480 g/L) + DUAL II MAGNUM (915 g/L) Product Rate/ha: 1-1.5 L/ha + 2-3 L/ha + 1.15-1.6 L/ha Product Rate/acre: 0.4-0.6 L/acre + 0.8-1.2 L/acre + 0.46-0.64 L/acre Active Ingredient(s): metribuzin (0.480-0.720 kg/ha) + linuron (0.960-1.44 kg/ha) + s-metolachlor (1.05-1.46 kg/ha)	Group #: 5 + 7 + 15 PCP #: 26280 or 32876 + 16279 + 25729	REI: 24 hours PHI: 60 days Rainfast: moisture required for activation Max Applications: 1
Trade Name: STZ (480 g/L) + SENCOR 75 DF (75 %) Product Rate/ha: 157-219 mL/ha + 0.6-0.8 kg/ha Product Rate/acre: 63.6-88.7 mL/acre + 0.24-0.32 kg/acre Active Ingredient(s): sulfentrazone (75.4-105.1 g/ha) + metribuzin (0.45-0.6 kg/ha)	Group #: 14 + 5 PCP #: 32621 + 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for application Max. Applications: 1

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- PRE – Apply after hilling and before emergence of the crop, or POST before weeds are 4 cm (1.6 in.) tall.
 - Use the lower rate on sandy soils.
 - Use the higher rate on late potatoes for season long control.
 - **Do NOT** use on muck soils.
 - **Do NOT** use on Belleisle and Tobique varieties.
 - When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR herbicide on a potato variety should be limited to a small test area to ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.
- PRE – Apply after hilling and before emergence of the crop, or POST before weeds are 4 cm (1.6 in.) tall.
 - **Do NOT** tank-mix with liquid fertilizers, oils, oil concentrates, or surfactants when applying postemergence because severe crop injury may occur.
 - Use the lower rate on sandy soils.
 - Use the higher rate on late potatoes for season long control.
 - **Do NOT** use on muck soils.
 - **Do NOT** use on Belleisle and Tobique varieties.
 - When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR herbicide on a potato variety should be limited to a small test area. This will ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.
- PRE – Apply after hilling and before emergence of the crop, or POST before weeds are 4 cm (1.6 in.) tall.
 - **Do NOT** tank-mix with liquid fertilizers, oils, oil concentrates, or surfactants when applying postemergence because severe crop injury may occur.
 - Use the lower rate on sandy soils.
 - Use the higher rate on late potatoes for season long control.
 - Use the higher rate for heavy infestations of annual grasses and nightshade.
 - **Do NOT** use on muck soils.
 - **Do NOT** use on Belleisle and Tobique varieties.
 - When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR herbicide on a potato variety should be limited to a small test area. This will ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.
- **Do NOT** apply to emerged potato shoots, injury will occur. A minimum of 2.5 cm (1 in.) of soil must cover emerging potato shoots at time of application. After a hilling event, allow the soil to settle or crust before application. Avoid soil incorporation after application.
 - **Do NOT** use on the varieties Belleisle or Tobique.
 - **Do NOT** use on soils with a pH of 7.8 or greater.
 - **Do NOT** use on soils with less than 1.5% or more than 6% organic matter.
 - Sulfentrazone is persistent and will last in soils (carryover) for 1-2 years.
 - **Do NOT** apply STZ to fields previously treated with STZ (wait a minimum of 2 years).

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2.0 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: not stated Rainfast: 4 hours Max. Applications: not stated
Trade Name: IGNITE SN (150 g/L) + SENCOR 480 F (480 g/L) Product Rate/ha: 2.7-5 L/ha + 1.1 L/ha Product Rate/acre: 1.08-2.0 L/acre + 0.44 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + metribuzin (0.55 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 27091	REI: 24 hours PHI: 9 days Rainfast: 4 hours Max. Applications: not stated
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 80 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO or CLETHODIM (240 g/L) + SURF-ACT Product Rate/ha: 0.125-0.38 L/ha + 5-10L/1,000 L Product Rate/acre: 0.05-0.15 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (0.03-0.09 kg/ha) + surfactant (0.5-1.0% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598 or 32334	REI: 12 hours PHI: 60 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.80 L/acre Active Ingredient(s): fluazifop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 45 days Rainfast: 2 hours Max. Applications: not stated

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS
<ul style="list-style-type: none"> • Apply no later than ground crack of the crop. • Only emerged weeds will be controlled.
<ul style="list-style-type: none"> • POST – Apply no later than ground crack of the crop. • Only emerged weeds will be controlled. • Do NOT use SENCOR on muck soils or on Belleisle or Tobique varieties.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • For annual grasses, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage. • For volunteer grains, use 0.47 L/ha (0.19 L/acre). • For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
<ul style="list-style-type: none"> • Potatoes are tolerant at any growth stage. • For annual grasses and volunteer cereals, apply at the 2-6-leaf stage. • For quackgrass, apply at the 2-5-leaf stage at the higher rate.
<ul style="list-style-type: none"> • Apply POST to actively growing grasses before tillering. • Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley. • Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails). • Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly. • Thorough preplant tillage, fragmenting quackgrass rhizomes improves control. • Do NOT cultivate between rows until 5 days after application. • May be tank-mixed with SENCOR or LEXONE formulations for early post-emergent application. • Add LEXONE or SENCOR formulation to spray tank and agitate for two minutes before adding VENTURE L.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDE		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 7 days Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: PRISM (25 DF) or PRISM (25 SG) or SHARDA RIMSULFURON (25 WDG) + AGRAL 90 or AG-SURF Product Rate/ha: 60 g/ha + 2 L/1,000 L Product Rate/acre: 24 g/acre + 2 L/1,000 L Active Ingredient(s): rimsulfuron (15 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 23983 or 30057 or 32932	REI: 12 hours PHI: 30 days Rainfast: 2-4 hours Max. Applications: not stated
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.85-2.25 L/ha Product Rate/acre: 0.34-0.9 L/acre Active Ingredient(s): metribuzin (0.4-1.1 kg/ha)	Group #: 5 PCP #: 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: not stated Max. Applications: not stated
Trade Name: TITUS PRO (sold as a co-pack): PRISM (25 SG) + TRICOR 75 + AGRAL 90 or AG-SURF Product Rate/ha: 60 g/ha + 280-375 g/ha + 2 L/1,000 L Product Rate/acre: 24 g/acre + 113-152 g/acre + 2 L/1,000 L Active Ingredient(s): rimsulfuron (15 g/ha) + metribuzin (210-281 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 + 5 PCP #: 30057 + 30661	REI: 12 hours PHI: 90 days Rainfast: 2-4 hours Max. Applications: not stated

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE BROADLEAF HERBICIDE
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply when quackgrass is at 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses are at 1-6-leaf stage and redroot pigweed is in the 4-6-leaf stage.• Apply before potatoes initiate flowering.• Do NOT cultivate within 7-10 days before and after applying.
<ul style="list-style-type: none">• Apply soon after potatoes emerge and before weeds are 4 cm (1.6 in.) high.• Apply in the afternoon or early evening on sunny days.• Do NOT use on Belleisle or Tobique varieties.• When growing new or potentially sensitive varieties (such as early maturing, red-skinned, Atlantic, Eramosa or Shepody) first use of SENCOR herbicide on a potato variety should be limited to a small test area to ensure risk or level of potential injury is acceptable to the grower prior to adoption as a general field practice.• Do NOT use on muck soil to avoid injury on subsequent crops.
<ul style="list-style-type: none">• Apply POST when potatoes are less than 10 cm (4 in.) high.• Do NOT apply after Atlantic, Eramosa, Shepody, red-skinned or any early maturing varieties have emerged.• Avoid application when the crop is under stress from poor growing conditions such as cool, wet and cloudy weather.• Spray before weeds are 4 cm (1.6 in.) high.• Use high rates of TRICOR for grasses and dense broadleaf weeds.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
PRE-HARVEST		
Trade Name: AIM EC (240 g/L) + non-ionic surfactant or MERGE Product Rate/ha: 233-350 mL/ha + 2.5 L/1,000 L or 10 L/1,000 L Product Rate/acre: 94-142 mL/acre + 2.5 L/1,000 L or + 10 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (56-84 g/ha) + non-ionic surfactant (0.25% v/v) or surfactant/solvent (1.0% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 7 days Rainfast: 8 hours Max. Applications: 1
Trade Name: REGLONE DESSICANT (240 g/L) Product Rate/ha: 1.25-3.5 L/ha Product Rate/acre: 0.5-1.4 L/acre Active Ingredient(s): diquat (0.3-0.84 kg/ha)	Group #: 22 PCP #: 26396	REI: 24 hours PHI: 1 day Rainfast: 0-15 minutes Max. Applications: 2
RHUBARB		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: CALLISTO 480 SC or MESTER 480 SC HERBICIDE (480 g/L) Product Rate/ha: 0.3 L/ha Product Rate/acre: 0.12 L/acre Active Ingredient(s): mesotrione (0.14 kg/ha)	Group #: 27 PCP #: 27833 or 33632	REI: 12 hours PHI: 42 days Rainfast: 3 hours for emerged weeds Max. Applications: 1
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 60 days Rainfast: 4 hours Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 14 days Rainfast: 2 hours Max Applications: 2

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****PRE-HARVEST**

- Coverage of weed and crop foliage is essential for control.
 - If a second burndown application is required, use REGLONE DESSICANT at the rates listed below.
-
- Use 0.125-3.5 L/ha (5-1.4 L/acre) by ground and 1.75-2.25 L/ha (0.7-0.9 L/acre) for aerial applications.
 - Use the higher rate for heavy canopy of crop and weeds.
 - A second application may be necessary 4-6 days after first application within the normal top killing time.
 - **Do NOT** apply to drought stressed potatoes or if soil is water logged.

RHUBARB**SOIL-APPLIED BROADLEAF HERBICIDES**

- Apply to dormant (prior to spring greenup) rhubarb. Applications to rhubarb that is not dormant will result in crop injury. Rainfall or irrigation after application may increase the risk of injury to emerging rhubarb.
 - Repeated use in low pH soils may cause injury to rhubarb plants.
 - Wait at least 18 months after the application in rhubarb before replanting rhubarb.
-
- Apply as a single application to dormant rhubarb.
 - Rains greater than 2.5 cm (1 in.) within 5-7 days of application may cause temporary yellowing and delay development of crop.
 - **Do NOT** spray over top of plastic mulch.

POST-EMERGENCE GRASS HERBICIDES

- Apply as a post-emergence broadcast application to actively growing grasses before tillering.
- **Do NOT** make more than 2 applications per season with a minimum re-treatment interval of 14 days.
- Apply in sufficient water volume for thorough coverage.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
- Fragmenting quackgrass rhizomes with thorough pre-plant tillage improves control.
- **Do NOT** cultivate between rows until 5 days after application.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
RUTABAGAS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.58-9.17 L/ha Product Rate/acre: 1.83-3.67 L/acre Active Ingredient(s): napropamide (1.1-2.2 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.2-2.4 L/ha Product Rate/acre: 0.48-0.96 L/acre Active Ingredient(s): trifluralin (0.6-1.155 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + MERGE or SURE-MIX or + YUMA GL (96 g/L) + surfactant Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.30 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 45 days Rainfast: 2 hours Max. Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****RUTABAGAS****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- PPI – Incorporate within 24 hours of application.
 - Use the lower rate on sandy soils.
 - **Do NOT** apply to soils with over 10% organic matter.
 - Damage to subsequent cover crops can be reduced by tillage across the rows after harvest.
- Apply PPI or PRE. PPI gives optimal control of yellow nutsedge; PRE gives optimal control of Eastern black nightshade.
 - **Do NOT** use on muck, peat and high organic matter soils.
 - **Do NOT** use on soils with less than 1% organic matter.
 - Use the higher rate for heavier weed populations.
 - Apply by ground application equipment **ONLY**.

- PPI – Incorporate within 24 hours of application.
- **Do NOT** apply to peat or muck soils (greater than 15% organic matter).
- **Do NOT** apply to soils with less than 2% organic matter.
- **Do NOT** apply to fields spread with manure within the last 12 months.
- **Do NOT** apply on the same land for 2 consecutive years.

POST-EMERGENCE GRASS HERBICIDES

- Apply to emerged annual grasses and volunteer cereals in the 2-leaf to tillering stage, and volunteer corn and quackgrass in the 2-6-leaf stage.
- Use the 0.38 L/ha (0.15 L/acre) for control of volunteer corn, volunteer cereals and green foxtail.
- Use 0.5 L/ha (0.2 L/acre) to suppress quackgrass and also control barnyard grass.
- Use the 0.75 L/ha (0.3 L/acre) rate for control of quackgrass.

- Apply POST to actively growing grasses before tillering.
- Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.
- Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly. Thorough preplant tillage will ensure more uniform emergence. Cultivate 5 days after treatment in wide row crops.
- **Do NOT** apply other herbicides within 3 days of application.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: LONTREL XC (600 g/L) or PYRALID HERBICIDE Product Rate/ha: 0.35 L/ha or 0.672 L/ha Product Rate/acre: 0.14 L/acre or 0.27 L/acre Active Ingredient(s): clopyralid (0.21 or 0.24 kg/ha)	Group #: 4 PCP #: 32795 or 32265	REI: 12 hours PHI: 83 days Rainfast: 4 hours Max. Applications: 1
Trade Name: MUSTER Toss-N-Go (75%) + AGRAL 90 or AG-SURF Product Rate/ha: 0.015 kg/ha + 2 L/1,000 L Product Rate/acre: 0.006 kg/acre + 2 L/1,000 L Active Ingredient(s): ethametsulfuron-methyl (0.011 kg/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 23569	REI: 12 hours PHI: 45 days Rainfast: 4 hours Max. Applications: 1
SPECIALTY VEGETABLES: CHINESE BROCCOLI, RADISH AND CABBAGE, KOHLRABI, MUSTARD CABBAGE, FUZZY SQUASH, SNOW PEAS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: AUTHORITY 480 (480 g/L) Product Rate/ha: 216-290 mL/ha Product Rate/acre: 87.6-116.8 mL/acre Active Ingredient(s): sulfentrazone (0.105-0.140 kg/ha)	Group #: 14 PCP #: 29012	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.69-9.38 L/ha Product Rate/acre: 1.88-3.75 L/acre Active Ingredient(s): napropamide (1.125-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 6.75 L/ha Product Rate/acre: 2.7 L/acre Active Ingredient(s): napropamide (1.5 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.2-1.5 L/ha Product Rate/acre: 0.48-0.70 L/acre Active Ingredient(s): s-metolachlor (1.098-1.601 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 30 days Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Apply POST when ragweed is 5-10 cm (2-4 in.) tall.
<ul style="list-style-type: none"> • MUSTER can be used for control of wild mustard on Laurentian rutabagas from the cotyledon to 6-leaf stage.
SPECIALTY VEGETABLES: CHINESE BROCCOLI, RADISH AND CABBAGE, KOHLRABI, MUSTARD CABBAGE, FUZZY SQUASH, SNOW PEAS
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Apply to soil surface as an early pre-plant/pre-emergence application in the spring up to 72 hours prior to planting leafy brassica (broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, rape greens, arugula, Chinese broccoli). • Do NOT mechanically incorporate after application. • Do NOT apply to frozen soil. • Do NOT use on sandy soils with less than 1% organic matter.
<ul style="list-style-type: none"> • PRE or PREPLANT – For use ONLY on seeded Chinese broccoli, mustard, cabbage, Chinese radish, Chinese mustard cabbage, Chinese cabbage, transplanted Chinese cabbage and kohlrabi. • Use the lower rate on light soils (coarse textured to sandy and sandy loam). • After harvest, soil should be worked (across rows if banded) to prevent injury to succeeding crops. • Small grains seeded in the fall may be stunted but not otherwise affected.
<ul style="list-style-type: none"> • PPI – For use on fuzzy squash transplants ONLY. • Requires rainfall or sufficient irrigation to wet the soil to a depth of 5-10 cm (2-4 in.) soon after application. • Some crop stunting may be observed but this should not affect yield.
<ul style="list-style-type: none"> • Apply to Asian radish and mustard green transplants ONLY. • For mustard green transplants, apply 1.2-1.5 L/ha (0.48-0.60 L/acre) PRE or POST (weeds at the 2-leaf stage or less). • Yield losses may occur when applied to transplanted mustard greens. • For Asian radish, apply 1.2-1.5 L/ha (0.48-0.60 L/acre) on mineral soil and 1.5-1.75 L/ha (0.60-0.70 L/acre) on muck soil, either PPI or PRE to crop and weeds. • Irrigate with 1.25 cm (0.5 in.) of water IMMEDIATELY if used on muck soil. Only suppression of listed weeds is achievable on muck soils. • For Asian radish, PRE treatments may give better control of nightshades whereas PPI treatments may give better control of nutsedge.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: PURSUIT (240 g/L) Product Rate/ha: 0.312 L/ha Product Rate/acre: 0.125 L/acre Active Ingredient(s): imazethapyr (0.075 kg/ha)	Group #: 2 PCP #: 23844	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.19-0.38 L/ha + 5-10 L/1,000 L Product Rate/acre: 0.08-0.15 L/acre + 5-10 L/1,000 L Active Ingredient(s): clethodim (46-91 g/ha) + surfactant (0.5%-1.0% v/v)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.2 L/ha + 5 L/1,000 L Product Rate/acre: 0.08 L/acre + 5 L/1,000 L Active Ingredient(s): clethodim (0.05 L/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598	REI: 12 hours PHI: 21 days Rainfast: 1 hour Max Applications: 1
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfacant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + ASSIST Product Rate/ha: 1.75 L/ha + 1-2 L/ha Product Rate/acre: 0.7 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84 kg/ha) + oil concentrate (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 30 days Rainfast: 6 hours Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none">• PRE and PPI – For use on snow peas ONLY.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none">• For the control of annual grasses and quackgrass.• Apply when grassy weeds are at 2-6-leaf stage.
<ul style="list-style-type: none">• For use on snow peas.• Apply when the crop is in the 1-4-leaf stage and grassy weeds are in the 2-6-leaf stage.• For suppression of annual bluegrass and the control of other annual grasses and quackgrass. See label for detailed information on rates to control all annual grasses.• Apply using ground equipment.
<ul style="list-style-type: none">• For use ONLY on Chinese broccoli, Chinese cabbage, kohlrabi, mustard cabbage and Chinese radish and snow peas.• For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.• For volunteer grains, use 0.47 L/ha (0.19 L/acre).• For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide-row crops. Use the high rate of MERGE for quackgrass.• Use the 0.32 L/ha (0.13 L/acre) rate ONLY for snow peas.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
<ul style="list-style-type: none">• For snow peas ONLY.• Apply after the crop is at the 3-leaf stage when weeds are small and actively growing.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: LONTREL XC (600 g/L) or PYRALID HERBICIDE (360 g/L) Product Rate/ha: 0.35 L/ha or 0.672 L/ha Product Rate/acre: 0.14 L/acre or 0.27 L/acre Active Ingredient(s): clopyralid (0.21 or 0.24 kg/ha)	Group #: 4 PCP #: 32795 or 32265	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 1
SPINACH		
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 15 days Rainfast: 1 hour Max. Applications: not stated
Trade Name: SELECT (240 g/L) or ARROW (240 g/L) or CENTURION (240 g/L) + AMIGO Product Rate/ha: 0.125-0.19 L/ha + 5 L/1,000 L Product Rate/acre: 0.05-0.08 L/acre + 5 L/1,000 L Active Ingredient(s): clethodim (0.03-0.046 L/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 22625 or 28224 or 27598	REI: 12 hours PHI: 14 days Rainfast: 1 hour Max. Applications: 2
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: LONTREL XC (600 g/L) Product Rate/ha: 0.175 L/ha Product Rate/acre: 0.07 L/acre Active Ingredient(s): clopyralid (0.10 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 21 days Rainfast: not stated Max Applications: 2

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.**

- For use **ONLY** on nappa cabbage (transplanted and seeded), Chinese radish, mustard cabbage and Chinese broccoli (all seeded).
- Treat when weeds are young and actively growing.

SPINACH**POST-EMERGENCE GRASS HERBICIDES**

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.
- For quackgrass, use 1.1 L/ha (0.44 L/acre). Apply up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of merge for quackgrass.
- **Do NOT** use flood jet or hollow cone nozzles.

- Apply when grassy weeds are in the 2-6-leaf stage.
- Allow for 14 days between applications.
- See label for detailed information on rates to control all annual grasses.

POST-EMERGENCE BROADLEAF HERBICIDES

- Apply POST with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.

- For the control of common ragweed and common groundsel.
- Maximum of 2 applications per year, a minimum 14 days apart.
- Apply to small actively growing weeds under good growing conditions.
- Apply to spinach in the 2-5 leaf stage.
- Crop injury may occur if application is made during times of less than favorable crop growing conditions. Some leaf curling may be observed on smaller spinach.
- Not all varieties have been tested for crop tolerance. Test a small area first. **Do NOT** apply to the entire field unless you are comfortable with the level of crop safety of the planted variety.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
SUGAR BEETS (PROCESSING)		
Caution about herbicide residues – sugar beets are one of the most sensitive crops to herbicide residues from the previous year's crop. They are particularly sensitive to residues from many of the Group 2 herbicides, including PURSUIT, BROADSTRIKE, CLASSIC and PEAK.		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: PYRAMIN FL (430 g/L) Product Rate/ha: 8.25-10.25 L/ha Product Rate/acre: 3.3-4.1 L/acre Active Ingredient(s): pyrazon (3.55-4.41 kg/ha)	Group #: 5 PCP #: 15857	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE		
Trade Name: NORTRON FLOWABLE (480 g/L) Product Rate/ha: 3.2-8.25 L/ha Product Rate/acre: 1.28-3.3 L/acre Active Ingredient(s): ethofumesate (1.54-3.96 kg/ha)	Group #: 16 PCP #: 17293	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
SOIL-APPLIED TANK-MIX OPTION		
Trade Name: PYRAMIN FL (430 g/L) + NORTRON FLOWABLE (480 g/L) Product Rate/ha: 5.25 L/ha + 3.65 L/ha Product Rate/acre: 2.1 L/acre + 1.46 L/acre Active Ingredient(s): pyrazon (2.26 kg/ha) + ethofumesate (1.75 kg/ha)	Group #: 5 + 16 PCP #: 15857 + 17293	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: ASSURE II or ELEGANT 10 EC (96 g/L) + MERGE or SURE-MIX or + YUMA GL (96 g/L) + surfactant Product Rate/ha: 0.375-0.75 L/ha + 5 L/1,000 L Product Rate/acre: 0.15-0.30 L/acre + 5 L/1,000 L Active Ingredient(s): quizalofop-p-ethyl (0.036-0.07 kg/ha) + surfactant (0.5% v/v)	Group #: 1 PCP #: 25462 or 33617 or 30100	REI: 12 hours PHI: 80 days Rainfast: 1 hour Max. Applications: 2
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 85 days Rainfast: 1 hour Max. Applications: not stated

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

SUGAR BEETS (PROCESSING)

Low soil pH (below 6.0) or high soil pH (above 7.5) can be a factor to delay the breakdown of these herbicides, increasing crop injury in rotational crops.

SOIL-APPLIED BROADLEAF HERBICIDES

- Apply PPI or PRE.
- **Do NOT** incorporate more than 5 cm (2 in.) deep.
- **Do NOT** apply to soils with less than 3% organic matter.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDE

- **Do NOT** incorporate more than 5 cm (2 in.) deep.
- Use **ONLY** on mineral soils.
- Use the lower rate on soils with less than 3% organic matter.
- **Do NOT** rotate to other crops for 12 months.

SOIL-APPLIED TANK-MIX OPTION

- PRE
- **Do NOT** apply to soil with less than 3% organic matter. **Do NOT** use on sandy soils.
- Use **ONLY** on mineral soils.
- **Do NOT** rotate to crops other than sugar beets for 12 months.

POST-EMERGENCE GRASS HERBICIDES

- Apply POST when annual grasses and volunteer cereals are in the 2-leaf to tillering stage and volunteer corn and quackgrass are in the 2-6-leaf stages.
- Apply before the crop canopy closes to maximize spray coverage.
- Use the 0.38 L/ha (0.15 L/acre) rate for annual grasses and volunteer cereals.
- Use the 0.75 L/ha (0.30 L/acre) rate for quackgrass.
- Use a second application of 0.38 L/ha (0.15 L/acre) to control late emerging weeds.
- **Do NOT** exceed an accumulative seasonal use rate of 0.75 L/ha (0.30 L/acre).
- **Do NOT** use flood jet nozzles.
- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage.
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- **Do NOT** graze treated crop.
- **Do NOT** use flood jet or hollow cone nozzles.
- **Do NOT** apply herbicides other than LONTREL XC within 4 days of application.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: LONTREL XC (600 g/L) or PYRALID HERBICIDE (360 g/L) Product Rate: consult label and your processor for application rates Active Ingredient(s): clopyralid	Group #: 4 PCP #: 32795 or 32265	REI: 12 hours PHI: 90 days Rainfast: 4 hours Max. Applications: 1
Trade Name: PYRAMIN FL (430 g/L) + CITOWETT PLUS Product Rate/ha: 8.25 L/ha + 2.5 L/1,000 L Product Rate/acre: 3.3 L/acre + 2.5 L/1,000 L Active Ingredient(s): pyrazon (3.55 kg/ha) + surfactant (0.25% v/v)	Group #: 5 PCP #: 15857	REI: 12 hours PHI: not stated Rainfast: 6 hours Max. Applications: not stated
Trade Name: UPBEET (50 DF) + AGRAL 90 or AG-SURF or CITOWETT PLUS or SURE-MIX Product Rate/ha: 35-70 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-28 g/acre + 2.5 L/1,000 L Active Ingredient(s): triflurosulfuron-methyl (17.5-35 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 25813	REI: 12 hours PHI: 60 days Rainfast: 6 hours Max. Applications: not stated
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: BETAMIX B EC ((1:1) 153 g/L) Product Rate/ha: 1.15-4.8 L/ha Product Rate/acre: 0.46-1.92 L/acre Active Ingredient(s): desmedipham/phenmedipham	Group #: 5 PCP #: 28650	REI: 24 hours PHI: 60 days Rainfast: 6 hours Max. Applications: not stated

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
<ul style="list-style-type: none">• Apply POST when sugar beets are in the cotyledon to 8-leaf stage.
<ul style="list-style-type: none">• Apply POST when first true leaf of sugar beets is at least 2.5 cm (1 in.) long.• Do NOT apply when beets are in the cotyledon stage.• Apply before the weeds have 3 true leaves.• Do NOT use on soils with less than 3% organic matter.• Avoid hot temperatures.• Do NOT use any other oils or surfactants.
<ul style="list-style-type: none">• Apply POST when sugar beets are actively growing.• Yellowing of the crop may occur, but sugar beets will recover.• Use the higher rate for larger weeds and heavy weed populations.• Do NOT use more than 100 g/ha (40 g/acre) in a season.• Do NOT apply under extreme temperatures or drought conditions.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply POST when sugar beets have at least 2 true leaves.• Apply before the weeds have 4 true leaves (before 2 true leaves is optimum).• Wait a minimum of 7 days before making a second full rate application.• Consult label for split (reduced rate) applications.• Do NOT spray in excess of 16.5 L/ha (6.7 L/acre) of BETAMIX B per year.• Do NOT spray under extreme temperature or drought conditions.• Do NOT spray if dew is present.• Yellowing of the crop may occur, but sugar beets will recover.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 120 days Rainfast: not stated Max. Applications: 1
POST-EMERGENCE TANK-MIX OPTION		
Trade Name: UPBEET (50 DF) + BETAMIX B ((1:1) 150 g/L) Product Rate: Consult label and your processor for application rates Active Ingredient(s): triflusaluron-methyl + desmedipham/phenmedipham	Group #: 2 + 5 PCP #: 25813 + 28650	REI: 24 hours PHI: 60 days Rainfast: 6 hours Max. Applications: not stated
GLYPHOSATE TOLERANT ("ROUNDUP READY") VARIETIES ONLY		
Trade Name: ROUNDUP ULTRA2 (540 g/L) or ROUNDUP WEATHERMAX (540 g/L) Product Rate/ha: 0.83-1.67 L/ha Product Rate/acre: 0.332-0.67 L/acre Active Ingredient(s): glyphosate (0.45-0.90 kg/ha)	Group #: 9 PCP #: 28486, 27487	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 4
SWEET CORN		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: AATREX 480 (480 g/L) Product Rate/ha: 3.1 L/ha Product Rate/acre: 1.24 L/acre Active Ingredient(s): atrazine (1.49 kg/ha)	Group #: 5 PCP #: 18450	REI: not stated PHI: 45 days Rainfast: not stated Max. Applications: 2

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Apply post-emergence to sugarbeets between cotyledon to the 4-leaf stage and before weed emergence. • Do NOT feed sugar beet tops to livestock.
POST-EMERGENCE TANK-MIX OPTION
<ul style="list-style-type: none"> • Apply POST when sugar beets are actively growing. • Yellowing of the crop may occur, but sugar beets will recover. • Make 2 applications 5-10 days apart, or as weeds emerge, to weeds with fewer than 4 true leaves. Best control is obtained if weeds have less than 2 leaves. • Use the higher rate for larger weeds and heavy weed populations. • Do NOT use an adjuvant with this tank-mix. • Do NOT use more than 100 g/ha (40 g/acre) in a season. • Do NOT apply under extreme temperature or drought conditions. • Do NOT spray if dew is present.
GLYPHOSATE TOLERANT ("ROUNDUP READY") VARIETIES ONLY
<ul style="list-style-type: none"> • Use ONLY on pedigree (certified) sugarbeet seed designated as glyphosate tolerant (i.e., "Roundup Ready"). • Apply to emerged weeds up to 15 cm (6 in.) in height. • Allow a minimum of 10 days between applications.
SWEET CORN
SOIL-APPLIED BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Apply PPI, PRE. • Weeds will normally emerge and die within a few days. • Atrazine can persist for varying lengths of time; longer under dry, cool weather and coarse textured soils.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: CALLISTO 480 SC (480 g/L) or MESTER 480 SC HERBICIDE Product Rate/ha: 0.3 L/ha Product Rate/acre: 0.12 L/acre Active Ingredient(s): mesotrione (144 g/ha)	Group #: 27 PCP #: 27833 or 33632	REI: 12 hours PHI: 50 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ERAGON (70%) or ERAGON LQ (342 g/L) Product Rate/ha: 71-143 g/ha or 146-292 mL/ha Product Rate/acre: 28.7-57.9 g/acre or 59.0-118.0 mL/acre Active Ingredient(s): saflufenacil (50-100 g/ha)	Group #: 14 PCP #: 29372 or 31469	REI: 12 hours PHI: 60 days Rainfast: not stated Max. Applications: 1
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ACURON Product Rate/ha: 4.91 L/ha Product Rate/acre: 1.96 L/acre Active Ingredient(s): bicyclopyrone (35 g/ha) + mesotrione (140 g/ha) + s-metolachlor (1.26 kg/ha) + atrazine (589 g/ha)	Group #: 27 + 15 + 5 PCP #: 31846	REI: 12 hours PHI: 50 days Rainfast: not stated Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.75 L/ha Product Rate/acre: 0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.60 kg/acre)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 45 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: FRONTIER MAX (720 g/L) Product Rate/ha: 756-963 mL/ha Product Rate/acre: 305-390 mL/acre Active Ingredient(s): dimethenamid-p (0.54-0.69 kg/acre)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.**

- Apply PRE.
- For annual grass control, tank-mix with DUAL II MAGNUM, PRIMEXTRA II MAGNUM or DUAL II MAGNUM + AATREX Liquid 480.
- **Do NOT** apply to soils that contain less than 1% or more than 10% organic matter.
- Sweet corn varieties vary in their tolerance to mesotrione, consult your seed supplier for more information.
- Although mesotrione has a flexible recropping profile, certain crops may be sensitive to low concentrations in the soil. Therefore, careful consideration should be given to crop rotation plans prior to using mesotrione herbicides.

- Apply PRE.
- The low rate will only provide short season weed control and should be used in a program where a later application of a herbicide is anticipated.
- An appropriate pre-emergence or post-emergence grass herbicide must be tank-mixed with ERAGON for broad spectrum weed control.
- Some sweet corn hybrids may be more sensitive to saflufenacil and injury might occur.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Apply PRE.
- No adjuvant required.
- **Do NOT** mix with ammonium sulphate (AMS).
- Apply in a minimum of 150 L water/ha (60 L water/ac).
- Will not control grassy weeds that are beyond the 2-leaf stage.

- Apply PPI, PRE.
- For PPI timing, set incorporation equipment to work soil no deeper than 10 cm (4 in.).
- Improved control of yellow nutsedge is obtained when s-metolachlor is applied PPI.
- Grassy weeds beyond the 2-leaf stage will not be controlled.
- Optimal control of nightshade is obtained when s-metolachlor is applied PRE.
- **Do NOT** use on muck, peat, high organic matter soils.
- This product controls a limited amount of broadleaf weeds and therefore should be tank-mixed with a broadleaf herbicide for broad spectrum weed control.

- Apply PPI, PRE.
- For PPI timing, set incorporation equipment to work soil no deeper than 10 cm (4 in.).
- Improved control of yellow nutsedge is obtained when applied PPI at the highest rate.
- Sensitive weeds beyond the 2-leaf stage will not be controlled.
- Apply higher rates on fine textured or high organic matter soils or when targeting nightshade, nutsedge and pigweed.
- **Do NOT** use on muck, peat, high organic matter soils.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: INTEGRITY (668 g/L) Product Rate/ha: 1.1 L/ha Product Rate/acre: 0.44 L/acre Active Ingredient(s): saflufenacil/dimethenamid-P (735 g/ha)	Group #: 14 + 15 PCP #: 29371	REI: 12 hours PHI: 60 days Rainfast: rainfall required for activation Max Applications: 1
Trade Name: LUMAX EZ (s-metolachlor 298 g/L + atrazine 112 g/L + mesotrione 30 g/L) Product Rate/ha: 4.75 L/ha Product Rate/acre: 1.9 L/acre Active Ingredient(s): s-metolachlor (1.4 kg/ha) + atrazine (0.53 kg/ha) + mesotrione (0.14 kg/ha)	Group #: 15 + 5 + 27 PCP #: 30864	REI: 12 hours PHI: 50 days Rainfast: rainfall required for activation Max. Applications: 1
Trade Name: PRIMEXTRA II MAGNUM (s-metolachlor 400 g/L + atrazine 320 g/L) Product Rate/ha: 3-4 L/ha Product Rate/acre: 1.2-1.6 L/acre Active Ingredient(s): s-metolachlor (1 kg/ha) + atrazine (0.8 kg/ha)	Group #: 15 + 5 PCP #: 29358	REI: 12 hours PHI: 45 days Rainfast: rainfall required for activation Max. Applications: 2 (1 PPI or PRE and 1 POST)
Trade Name: SIMAZINE (480 g/L) Product Rate/ha: 3.4-8.3 L/ha Product Rate/acre: 1.36-3.32 L/acre Active Ingredient(s): simazine (1.6-4 kg/ha)	Group #: 5 PCP #: 23181	REI: 12 hours PHI: not stated Rainfast: rainfall required for activation Max Applications: 1
SOIL-APPLIED TANK-MIX OPTIONS		
Trade Name: DUAL II MAGNUM 915 g/L) + AATREX LIQUID 480 (480 g/L) + CALLISTO 480 SC or MESTER 480 SC HERBICIDE (480 g/L) Product Rate/ha: 1.25-1.75 L/ha + 2.1-3.1 L/ha + 0.3 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.84-1.24 L/acre + 0.12 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + atrazine (0.1-0.15 kg/ha) + mesotrione (0.140 kg/ha)	Group #: 15 + 5 + 27 PCP #: 25729 + 18450 + 27833 or 33632	REI: 12 hours PHI: 50 days Rainfast: 3 hours for emerged weeds Max Applications: 1
Trade Name: DUAL II MAGNUM 915 g/L) + CALLISTO 480 SC or MESTER 480 SC HERBICIDE (480 g/L) Product Rate/ha: 1.25-1.75 L/ha + 0.3 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.12 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + mesotrione (0.140 kg/ha)	Group #: 15 + 27 PCP #: 25729 + 27833 or 33632	REI: 12 hours PHI: 50 days Rainfast: 3 hours for emerged weeds Max Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Apply PPI or PRE.
- A PPI application is required for the control of yellow nutsedge and Eastern black nightshade.
- Some sweet corn hybrids may be more sensitive to the combination of saflufenacil and dimethenamid-P and injury might occur.
- **Do NOT** incorporate greater than 3 cm (1.2 in.) deep or control will be reduced.
- **Do NOT** apply to sweet corn grown on coarse soils as injury may occur.
- INTEGRITY may be used with liquid fertilizer as a carrier. Conduct a liquid fertilizer compatibility test by mixing a small quantity of herbicide with a proportional quantity of liquid fertilizer in a jar prior to loading a spray tank.

- Apply PRE up to 7 days prior to planting.
- Grassy weeds beyond the 2-leaf stage will not be controlled.
- **Do NOT** apply to corn treated with an organophosphorous insecticide.
- **Do NOT** apply other mesotrione containing products to ground that has been treated with LUMAX EZ herbicide in the same season.
- **Do NOT** apply to soils that contain less than 1% or more than 10% organic matter.
- Temporary crop injury (bleaching) may occur under extreme weather conditions or when the crop is under stress.

- Apply PPI, PRE.
- Use the higher rate where annual grass build up or nutsedge infestation is evident.
- **Do NOT** plant any crop other than corn in the same year on land treated with PRIMEXTRA II MAGNUM as injury may occur. The following year there is virtually no hazard to soybeans, white beans, corn, oats or barley (not underseeded to a legume).

- Apply SIMAZINE immediately after seeding, prior to weed emergence and not later than 3-4 days after seeding. SIMAZINE may also be applied one week before seeding and incorporated to a depth of 2.5 cm (1 in.).
- Low rates should be used on sandy soils while the higher rates may be used on loams and clays.
- Full season annual weed control can be expected except for crabgrass or fall panicum where infestations have built up.
- Caution is advised when considering rates beyond 2 kg/ha (0.8 kg/acre) as high soil residues may be created and rotational crops may be affected.

SOIL-APPLIED TANK-MIX OPTIONS

- Apply PRE to sweet corn.
- Use high rates for heavy grass infestations.

- Apply PRE to sweet corn.
- Use high rates for heavy grass infestations.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: LOROX L (480 g/L) + DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 0.8-1.5 L/ha + 1.25 L/ha Product Rate/acre: 0.32-0.63 L/acre + 0.5 L/acre Active Ingredient(s): linuron (0.4 kg/ha - 0.75 kg/ha) + s-metolachlor (1.14 kg/acre)	Group #: 7 + 15 PCP #: 16279 + 25729 or 33599	REI: 12 hours PHI: 45 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PRIMEXTRA II MAGNUM ((1:0.8) 720 g/L) + CALLISTO 480 SC or MESTER 480 SC HERBICIDE (480 g/L) Product Rate/ha: 3-4 L/ha + 0.3 L/ha Product Rate/acre: 1.2-1.6 L/acre + 0.12 L/acre Active Ingredient(s): s-metolachlor/atrazine (2.16-2.88 kg/ha) + mesotrione (0.140 kg/ha)	Group #: (5+15) +27 PCP #: 29358 + 27833 or 33632	REI: 12 hours PHI: 50 days Rainfast: 3 hours for emerged weeds Max Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AATREX LIQUID 480 (480 g/L) + crop oil Product Rate/ha: 3 L/ha + 17 L/ha Product Rate/acre: 1.24 L/acre + 6.8 L/acre Active Ingredient(s): atrazine 1.49 kg/ha	Group #: 5 PCP #: 18450	REI: 12 hours PHI: 45 days Rainfast: 2 hours Max. Applications: 2
Trade Name: BASAGRAN FORTÉ or BENTA SUPER or BROADLOOM (480 g/L) Product Rate/ha: 2.25 L/ha Product Rate/acre: 0.9 L/acre Active Ingredient(s): bentazon (1.1 kg/ha)	Group #: 6 PCP #: 22006 or 32827 or 32661	REI: 12 hours PHI: not stated Rainfast: 6 hours Max. Applications: 2
Trade Name: BUSTRIL M ((1:1) 560 g/L) or BROMOXYNIL-MCPA ((1:1) 450 g/L) Product Rate/ha: 1 or 1.25 L/ha Product Rate/acre: 0.4 or 0.5 L/acre Active Ingredient(s): bromoxynil/MCPA (0.56 kg/ha)	Group #: 6, 4 PCP #: 18022 or 32472	REI: Irrigation, handset: 5 days Harvest, hand: 20 days All other activities: 24 hours PHI: 20 days Rainfast: 1 hour Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDE		
Trade Name: ACCENT 75 DF (75%) or NICOSH HERBICIDE (75%) + non-ionic surfactant Product Rate/ha: 33.4 g/ha + 2 L/1,000 L Product Rate/acre: 13.5 g/acre + 2 L/1,000 L Active Ingredient(s): nicosulfuron (25 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 25116 or 33227	REI: 12 hours PHI: 40 days Rainfast: 2 hours Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Apply PRE.
<ul style="list-style-type: none"> • Apply PRE to sweet corn. • Use high rates for heavy grass infestations.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • For increased activity and extended period of activity, apply in an oil water emulsion of 10-17 L/ha (4-6.8 L/ac) of emulsifiable light mineral oil and 150-200 L water/ha (60-80 L water/ac). • Apply when most weeds have emerged and less than 10 cm (4 in.) tall. The low rate can be used successfully if subsequent cultivation is planned. • Apply when corn is less than 30 cm (12 in.) tall.
<ul style="list-style-type: none"> • Apply at the 1-5-leaf stage of sweet corn. • Top growth of nutsedge and Canada thistle are controlled and field bindweed may be suppressed by 2 applications of 1.75 L/ha (0.7 L/acre) applied 10 days apart. • Cool weather or drought may reduce control.
<ul style="list-style-type: none"> • Apply at the 4-6-leaf stage of sweet corn. Damage to sweet corn will result if sprayed beyond the 6-leaf stage. • Temporary leaf scorching may occur in adverse growing conditions, especially if applied during or after periods of cool and wet, or hot and humid weather conditions. • Do NOT add oil or surfactant.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • Always add water soluble packages to clean water with the agitator running. Sweet corn should be within the 1-6-leaf stage of growth. Apply when annual grasses are in the 1-6-leaf stage and quackgrass is in the 3-6-leaf stage. • Weeds which emerge after application of will not be controlled. Application should be made when the majority of weeds have emerged. • For quackgrass control apply with a recommended surfactant post-emergence when the majority of the quackgrass shoots are actively growing and in the 3-6-leaf stage (10-20 cm or 4-8 in. in height - leaf extended). • For the control of yellow foxtail apply with 28% liquid urea ammonium nitrate (UAN) at 5 L/ha (2 L/acre) plus a recommended non-ionic surfactant (NIS) or apply with MERGE. Failure to use an NIS with UAN or MERGE as indicated above will result in suppression only of yellow foxtail.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.75 L/ha Product Rate/acre: 0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.60 kg/acre)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 45 days Rainfast: not stated Max. Applications: 1
Trade Name: PARDNER (280 g/L) Product Rate/ha: 1.0-1.2 L/ha Product Rate/acre: 0.4-0.5 L/acre Active Ingredient(s): bromoxynil (0.28-0.34 kg/ha)	Group #: 6 PCP #: 18001	REI: Irrigation, handset: 5 days; Harvest, hand: 20 days; All other activities: 24 hours PHI: 20 days Rainfast: 1 hour Max Applications: 2
Trade Name: PERMIT WG (72.6%) + non-ionic surfactant Product Rate/ha: 47-94 g/ha + 2.5 L/1,000 L Product Rate/acre: 19-38 g/acre + 2.5 L/1,000 L Active Ingredient(s): halosulfuron (34-68 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 31210	REI: 12 hours PHI: 30 days Rainfast: 2 hours for emerged weeds Max. Applications: 2
Trade Name: PRIMEXTRA II MAGNUM (s-metolachlor 400 g/L + atrazine 320 g/L) Product Rate/ha: 3-4 L/ha Product Rate/acre: 1.2-1.6 L/acre Active Ingredient(s): s-metolachlor (1 kg/ha) + atrazine (0.8 kg/ha)	Group #: 15 + 5 PCP #: 29358	REI: 12 hours PHI: 45 days Rainfast: rainfall required for activation Max. Applications: 2 (1 PPI or PRE and 1 POST)
Trade Name: SHIELDEX (400 g/L) Product Rate/ha: 75-100 mL/ha Product Rate/acre: 30-40 mL/acre Active Ingredient(s): tolpyralate (30-40 g/ha)	Group #: 27 PCP #: 32943	REI: 12 hours PHI: 35 days Rainfast: 1 hour Max Applications: not stated

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued***PRECAUTIONS - For more information, see the label.****POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES**

- Apply POST up to the 3-leaf stage of sweet corn.
 - Improved control of yellow nutsedge is obtained when s-metolachlor is applied PPI.
 - Grassy weeds beyond the 2-leaf stage will not be controlled.
 - Optimal control of nightshade is obtained when s-metolachlor is applied PRE.
 - **Do NOT** use on muck, peat, high-organic matter soils.
 - This product controls a limited amount of broadleaf weeds and therefore should be tank-mixed with a broadleaf herbicide for broad spectrum weed control.
- Corn may be treated with a broadcast post-emergence application at the recommended rate from the 4-leaf stage onward. To ensure adequate coverage of weeds, drop pipes should be used when corn is beyond the 8-leaf stage or for a second application for later germinating weeds such as cocklebur and velvetleaf.
 - Minimum re-treatment interval for the second application is 21 days.
 - Use of the higher rate will improve control when heavy infestations of weeds are present.
 - **Do NOT** add oil or surfactant.
- Apply when sweet corn is in the spike to 10-leaf stage.
 - The maximum use rate for sweet corn is 70 g/ha (28 g/acre).
 - The 47 g/ha (19 g/acre) rate will control labelled broadleaf weeds and nutsedge shorter than 30 cm (12 in.).
 - The 70-94 g/ha (28-38 g/acre) rate will control nutsedge that is 15-30 cm (6-12 in.) tall.
 - PERMIT WG can be applied up to twice per season, but **Do NOT** exceed a total of 140 g/ha (56 g/acre) in sweet corn.
- Apply POST up to the 3-leaf stage of corn.
 - Use the higher rate where annual grass build up or nutsedge infestation is evident.
 - Grassy weeds beyond the 2-leaf stage will not be controlled.
 - **Do NOT** plant any crop other than corn in the same year on land treated with PRIMEXTRA II MAGNUM as injury may occur. The following year there is virtually no hazard to soybeans, white beans, corn, oats or barley (not underseeded to a legume).
- Apply SHIELDEX 400SC Herbicide to sweet corn up to 50 cm (20 in.) tall or that is exhibiting up to and including 6-leaf collars (V6), whichever is more restrictive.
 - Apply in 140-470 L water/ha (56-188 L water/acre). Use the higher water volumes under heavy weed populations or adverse weather conditions.
 - Broadleaf weeds should be no larger than 10 cm (4 in.) and grasses should be no taller than 10 cm and prior to first tillering. Good coverage is essential to achieve optimum weed control.
 - Weed control may be improved by adding a nitrogen source. Use 12.5-25 L/1000 L spray solution of urea ammonium nitrate (UAN), such as 28% N or 32% N, or 8.4-20.4 kg/1000L of a spray grade ammonium sulfate (AMS).
 - Avoid disturbing treated areas for at least 7 days after application to allow maximum herbicide uptake and translocation.
 - Allow 14 days between applications.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE TANK-MIX OPTIONS		
Trade Name: IMPACT or ARMEZONE (336 g/L) + AATREX LIQUID 480 (480 g/L) + UAN (28%) Product Rate/ha: 37 mL/ha + 1.04 L/ha + 12.5 L/1,000 L Product Rate/acre: 15 mL/acre + 0.42 L/acre + 12.5 L/1,000 L Active Ingredient(s): topramezone (12.4 g/ha) + atrazine (480 g/ha) + liquid urea ammonium nitrate (UAN) (1.25 % v/v)	Group #: 27 + 5 PCP #: 28141 or 30131 + 18450	REI: 12 hours PHI: 45 days Rainfast: 2 hours for emerged weeds Max. Applications: 1
Trade Name: PARDNER (280 g/L) + AATREX LIQUID 480 (480 g/L) Product Rate/ha: 1 L/ha + 2.1-3.1 L/ha Product Rate/acre: 0.4 L/acre + 0.84-1.24 L/acre Active Ingredient(s): bromoxynil (0.29 kg/ha) + atrazine (1.01-1.49 kg/ha)	Group #: 6 + 5 PCP #: 18001 + 18450	REI: Irrigation, handset: 5 days; Harvest, hand: 20 days; All other activities: 24 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1
Trade Name: BROMOTRIL (240 g/L) or KORIL (235 g/L) or BROTEX (240 g/L) or BROMOXYNIL (240 g/L) + AATREX LIQUID 480 (480 g/L) Product Rate/ha: 1.2 L/ha + 2.1-3.1 L/ha Product Rate/acre: 0.48 L/acre + 0.84-1.24 L/acre Active Ingredient(s): bromoxynil (0.29 kg/ha) + atrazine (1.01-1.49 kg/ha)	Group #: 6 + 5 PCP #: 28276 or 25341 or 28519 or 32622 + 18450	REI: Irrigation, handset: 5 days; Harvest, hand: 20 days; All other activities: 24 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1
Trade Name: BROMAX (480 g/L) or BROTEX (480 g/L) + AATREX LIQUID 480 (480 g/L) Product Rate/ha: 0.6 L/ha + 2.1-3.1 L/ha Product Rate/acre: 0.24 L/acre + 0.84-1.24 L/acre Active Ingredient(s): bromoxynil (0.29 kg/ha) + atrazine (1.01-1.49 kg/ha)	Group #: 6 + 5 PCP #: 31431 or 31348 + 18450	REI: 24 hours PHI: 45 days Rainfast: 1 hour Max. Applications: 1
Trade Name: SHIELDEX (400 g/L) + AATREX 480 (480 g/L) Product Rate/ha: 75-100 mL/ha + 1.16 L/ha Product Rate/acre: 30-40 mL/acre + 466 mL/acre Active Ingredient(s): tolpyralate (30-40 g/ha + 0.56 kg/ha)	Group #: 27 + 5 PCP #: 32943 + 18450	REI: 12 hours PHI: 35 days Rainfast: 1 hour Max Applications: not stated

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE TANK-MIX OPTIONS
<ul style="list-style-type: none"> • Apply to emerged grassy (up to 4-leaf) and broadleaf (up to 8-leaf) weeds. • Apply between the spike and 7-leaf stage of sweet corn. • ASSIST + UAN must be used instead of MERGE at a rate of 12.5 L/1,000 L. The use of MERGE will increase the risk of crop injury to sweet corn.
<ul style="list-style-type: none"> • Apply from the 4-8-leaf stage of sweet corn. • Apply to actively growing broadleaf weeds in the 1-4-leaf stage. • Do NOT add oil or surfactant or use ATRAZINE formulations containing oil. • Add atrazine to the spray tank first, agitate well, and then add PARDNER herbicide.
<ul style="list-style-type: none"> • Apply from the 4-8-leaf stage of sweet corn. • Apply to actively growing broadleaf weeds in the 1-4-leaf stage. • Do NOT add oil or surfactant. • Do NOT use flood jet nozzles. • Do NOT spray at temperatures above 25°C.
<ul style="list-style-type: none"> • Apply from the 4-8-leaf stage of sweet corn. • Apply to actively growing broadleaf weeds in the 1-4-leaf stage. • Do NOT add oil or surfactant. • Do NOT use flood jet nozzles. • Do NOT spray at temperatures above 25°C.
<ul style="list-style-type: none"> • Apply SHIELDEX 400SC Herbicide to sweet corn up to 50 cm (20 in.) tall or that is exhibiting up to and including 6-leaf collars (V6), whichever is more restrictive. • Apply in 140-470 L water/ha (56-188 L water/acre). Use the higher water volumes under heavy weed populations or adverse weather conditions. • Broadleaf weeds should be no larger than 10 cm (4 in.) and grasses should be no taller than 10 cm and prior to first tillering. Good coverage is essential to achieve optimum weed control. • Weed control may be improved by adding a nitrogen source. Use 12.5-25 L/1000 L spray solution of urea ammonium nitrate (UAN), such as 28% N or 32% N, or 8.4-20.4 kg/1000 L of a spray grade ammonium sulfate (AMS). • Avoid disturbing treated areas for at least 7 days after application to allow maximum herbicide uptake and translocation. • Allow 14 days between applications.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
POST-EMERGENCE TREATMENT FOR "ROUNDUP READY" SWEET CORN HYBRIDS ONLY		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.5 L/ha or 1.85 L/ha or 1.78 L/ha or 1.65 L/ha Product Rate/acre: 1.0 L/acre or 0.75 L/acre or 0.72 L/acre or 0.67 L/acre Active Ingredient(s): glyphosate (0.9 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 7-14 days Rainfast: 1 hour Max. Applications: 2
SWEET POTATOES		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.105 kg/ha Product Rate/acre: 0.042 kg/acre Active Ingredient(s): flumioxazin (0.054 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: COMMAND 360 ME (360 g/L) Product Rate/ha: 1.55 L/ha Product Rate/acre: 0.62 L/acre Active Ingredient(s): clomazone (0.558 kg/ha)	Group #: 13 PCP #: 27827	REI: 12 hours PHI: 95 days Rainfast: not stated Max. Applications: 1
Trade Name: DACTHAL W-75 (75 WP) Product Rate/ha: 9-15.5 kg/ha Product Rate/acre: 3.6-6.2 kg/acre Active Ingredient(s): chlorthal dimethyl (6.75-11.625 kg/ha)	Group #: 3 PCP #: 8963	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25-2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25% v/v)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: not stated

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE TREATMENT FOR "ROUNDUP READY" SWEET CORN HYBRIDS ONLY
<ul style="list-style-type: none"> • Can ONLY be applied to glyphosate tolerant sweet corn hybrids. Applications made to non glyphosate tolerant corn will result in complete plant death. • Apply up to and including the 8-leaf stage of corn. • Applications should be timed to keep the corn crop weed-free from the 3-8-leaf stage of corn. • Not all formulations are registered on all crops. See label for specific uses and rates.
SWEET POTATOES
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Significant crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions. • Severe crop injury will result when soils are flooded following applications of CHATEAU WDG. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury. • Do NOT apply more than 105 g/ha (42 g/acre) during a single growing season. • Apply prior to transplanting. Do NOT apply after sweet potato slips have been transplanted. • Do NOT use on any sweet potato variety other than Beauregard, unless user has tested CHATEAU WDG on the other variety and has found crop tolerance acceptable. • Do NOT apply on soils with > 5% OM, or fine textured soils.
<ul style="list-style-type: none"> • Apply as a single application post transplant surface applied to the crop and prior to weed emergence. • Do NOT incorporate.
<ul style="list-style-type: none"> • Apply at a rate of 9-13.5 kg/ha (3.6-5.4 kg/acre) on light sand or sandy loam soils. • Apply at a rate of 11-15.5 kg/ha (4.4-6.2 kg/acre) on medium silt loam soils. • Do NOT use on muck soils. • Apply directly over transplants, pre-emergence to weeds. • If weeds have emerged, cleanly cultivate the soil before application. • Rainfall or irrigation (about 1 cm or 0.4 in.) is necessary for activation.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage. • For volunteer grains, use 0.47 L/ha (0.19 L/acre). • For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE BROADLEAF HERBICIDE		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 105 days Rainfast: not stated Max. Applications: 1
TOMATOES, TRANSPLANTED		
<p>Weed control in tomatoes usually consists of a combination of herbicide weed control and cultivation. Crop rotation is also beneficial in the control of weeds. Cultivation should be shallow to prevent bringing untreated soil to the surface, which may result in another flush of weeds. When tomatoes are grown on raised beds and beds are reshaped during the course of the season, it may be necessary or useful to apply another herbicide treatment to areas between the rows to prevent a new weed infestation from interfering with harvesting.</p>		
SOIL-APPLIED BROADLEAF HERBICIDE		
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 35-70 g/ha Product Rate/acre: 14-28 g/acre Active Ingredient(s): halosulfuron (25-51 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 60 days Rainfast: 4 hours Max. Applications: 2
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: AUTHORITY 480 (480 g/L) Product Rate/ha: 219-290 mL/ha Product Rate/acre: 87.6-116.8 mL/acre Active Ingredient(s): sulfentrazone (0.105-0.140 kg/ha)	Group #: 14 PCP #: 29012	REI: 12 hours PHI: 19 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: BOUNDARY LQD (628 g/L) Product Rate/ha: 1.85-2.5 L/ha Product Rate/acre: 0.74-1.0 L/acre Active Ingredient(s): s-metolachlor/metribuzin (1443-1943 g/ha)	Group #: 15 + 5 PCP #: 30812	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE BROADLEAF HERBICIDE
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE
<ul style="list-style-type: none">• Apply as an early post-emergence application 2-5 days after transplanting.• Varieties differ in their sensitivity.• Test DUAL II MAGNUM KOMODO HERBICIDE on a small area of all new varieties for acceptable tolerance.
TOMATOES, TRANSPLANTED
<p>Do NOT exceed the total label rate per season of any herbicide applied more than once per year. Band treatment of herbicides over the row will reduce the cost by one-half to two-thirds depending on the width of the band compared to the row spacing. Shallow inter-row cultivation will be required for weed control between the rows. Perennial weeds may be partially controlled by cultivation. Controlling perennial weeds in crops other than tomatoes when grown in rotation is the best approach to control. Perennials are easily spread with cultivators or tillage equipment. Till areas of perennial weeds last. Machinery sanitation is important when moving between fields.</p>
SOIL-APPLIED BROADLEAF HERBICIDE
<ul style="list-style-type: none">• Do NOT apply to direct seeded tomatoes.• Avoid application under stressful conditions.• Do NOT use on coarse soils.
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply as a pre-emergence broadcast or banded treatment prior to transplanting.• Early crop injury may be observed, but the final yield should not be affected.• Do NOT use on sandy soils with less than 1% organic matter.
<ul style="list-style-type: none">• Do NOT apply to direct seeded tomatoes.• Avoid application under stressful conditions.• Do NOT use on coarse soils.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: DEVRINOL 2-XT (240 g/L) Product Rate/ha: 4.69-9.38 L/ha Product Rate/acre: 1.88-3.75 L/acre Active Ingredient(s): napropamide (1.12-2.25 kg/ha)	Group #: 15 PCP #: 31688	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) Product Rate/ha: 1.25-1.75 L/ha Product Rate/acre: 0.5-0.7 L/acre Active Ingredient(s): s-metolachlor (1.14-1.60 kg/acre)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) followed by DUAL II MAGNUM (915 g/L) Product Rate/ha: 0.87 L/ha followed by 0.44-0.87 L/ha Product Rate/acre: 0.35 L/acre followed by 0.18-0.35 L/acre Active Ingredient(s): s-metolachlor (0.40-0.80 kg/acre)	Group #: 15 PCP #: 25729	REI: 12 hours PHI: 30 days Rainfast: moisture required for activation Max Applications: 2
Trade Name: PROWL H2O (455 g/L) Product Rate/ha: 2.25 L/ha Product Rate/acre: 0.9 L/acre Active Ingredient(s): pendimethalin (1 kg/ha)	Group #: 3 PCP #: 29542	REI: 24 hours PHI: 21 days Rainfast: moisture required for activation Max. Applications: 1

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

*continued***PRECAUTIONS - For more information, see the label.**

- Apply PPI. Incorporate within 24 hours of application. Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing transplant roots.
 - Registered for use on field-seeded and transplanted tomatoes.
 - Use the lower rates on light textured soils.
 - **Do NOT** apply to soils with over 10% organic matter.
 - Damage to subsequent cover crops can be reduced by tillage across the rows after harvest. Small grains seeded in the fall may be stunted but not otherwise affected.
- Apply PPI. Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing tomato roots.
 - **Do NOT** use on muck, peat, high organic matter soils.
 - **Do NOT** use on soils with less than 1% organic matter.
 - Use the higher rate for heavier weed populations, Eastern black nightshade and yellow nutsedge.
 - **Do NOT** apply on direct-seeded tomatoes.
 - DUAL II MAGNUM/KOMODO HERBICIDE may damage transplants that have been weakened by any cause. **Do NOT** plant when wet, cool or unfavourable growing conditions exist.
 - Not all tomato varieties have been tested for tolerance to DUAL II MAGNUM/KOMODO HERBICIDE, therefore, the first use should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice.
- PPI followed by POST.
 - PPI - Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing tomato roots.
 - POST- Make the second application within 7-14 days after transplanting. The interval between PPI and POST-transplant should be no longer than 14 days.
 - **Do NOT** apply DUAL II MAGNUM/KOMODO HERBICIDE within 7 days of transplanting.
 - **Do NOT** exceed 1.75 L/ha (0.7 L/acre) of DUAL II MAGNUM/KOMODO HERBICIDE on tomatoes per year.
 - **Do NOT** use on muck, peat, high organic matter soils.
 - **Do NOT** use on soils with less than 1% organic matter.
 - Use the higher rate for heavier weed populations, Eastern black nightshade and yellow nutsedge.
 - **Do NOT** apply on direct-seeded tomatoes.
 - DUAL II MAGNUM/KOMODO HERBICIDE may damage transplants that have been weakened by any cause. **Do NOT** plant when wet, cool or unfavourable growing conditions exist.
 - Not all tomato varieties have been tested for tolerance to DUAL II MAGNUM/KOMODO HERBICIDE, therefore, the first use should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice.
- Apply PROWL H2O as a broadcast surface application prior to transplanting tomatoes.
 - Prowl H2O will **NOT** control emerged weeds.
 - This treatment is most effective when adequate rainfall or irrigation is received with 7 days of application
 - Avoid root contact with treated soil when placing transplants into furrow or hole or injury may result.
 - **Do NOT** apply prior to direct-seeded tomatoes.
 - **Do NOT** apply post-emergence over the top of or to foliage of tomatoes because severe injury may occur.
 - **Do NOT** apply PROWL H2O with liquid fertilizers.
 - **Do NOT** apply PROWL H2O more than once in two consecutive years.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 1.2-2.4 L/ha Product Rate/acre: 0.48-0.96 L/acre Active Ingredient(s): trifluralin (0.6-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 18612 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1
SOIL-APPLIED TANK-MIX OPTIONS		
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 1.25-1.75 L/ha + 0.5-1.4 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.2-0.6 L/acre Active Ingredient(s): s-metolachlor (1.14-1.60 kg/ha) + metribuzin (0.24-0.7 kg/ha)	Group #: 5 + 15 PCP #: 25729 or 33599 + 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) + TREFLAN EC (480 g/L) or RIVAL EC (500 g/L) or BONANZA 480 (480 g/L) + SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) or SENCOR 75 DF (75%) Product Rate/ha: 1.25-1.75 L/ha + 1.2-2.4 L/ha + 0.5-1 L/ha or 326-652 g/ha Product Rate/acre: 0.5-0.7 L/acre + 0.48-0.96 L/acre + 0.2-0.4 L/acre or 132-264 g/acre Active Ingredient(s): s-metolachlor (1.14-1.60 kg/ha) + trifluralin (0.6-1.15 kg/ha) + metribuzin (0.24-0.48 kg/ha) or metribuzin (0.25-0.68 kg/ha)	Group #: 15 + 3 + 5 PCP #: 25729 + 23933 or 18612 or 28289 + 26280 or 32876 or 17242	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
POST-EMERGENCE GRASS HERBICIDES		
Trade Name: POAST ULTRA (450 g/L) + MERGE Product Rate/ha: 0.32-1.1 L/ha + 0.25- 2 L/ha Product Rate/acre: 0.13-0.44 L/acre + 0.1-0.8 L/acre Active Ingredient(s): sethoxydim (0.14-0.50 kg/ha) + surfactant/solvent (0.25-2.0 L/ha)	Group #: 1 PCP #: 24835	REI: 12 hours PHI: 60 days Rainfast: 1 hour Max. Applications: not stated

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.

- Use **ONLY** on transplant tomatoes grown for processing.
- PPI – Incorporate within 24 hours of application. Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing transplant roots.
- Cool, wet weather may delay transplant establishment but yield is not usually affected.
- **Do NOT** apply to peat or muck soils (greater than 15% organic matter).
- **Do NOT** apply to soils with less than 2% organic matter.
- **Do NOT** apply to fields spread with manure within the last 12 months.

SOIL-APPLIED TANK-MIX OPTIONS

- Apply PPI. Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing transplant roots.
- **Do NOT** use on muck, peat, or high organic matter soils.
- **Do NOT** use on soils with less than 2% organic matter.
- Use the higher rate of DUAL II MAGNUM/KOMODO HERBICIDE for heavier weed populations, Eastern black nightshade and yellow nutsedge.
- Use lower rate of metribuzin and repeat applications of metribuzin when the crop is established as described under post-emergence application of metribuzin.
- Refer to the product labels regarding application rates for different soil types.
- **Do NOT** exceed total maximum rate of metribuzin recommended on the label for your soil type.

- PPI – Incorporate within 24 hours of application. Incorporate shallowly to maintain spatial separation between herbicide-treated zone and developing transplant roots.
- Use **ONLY** on transplant tomatoes grown for processing.
- **Do NOT** apply to peat or muck soils (greater than 15% organic matter).
- **Do NOT** apply to soils with less than 2% organic matter.
- **Do NOT** apply to fields spread with manure within the last 12 months.
- Use lower rates on sandy soils or soils with low organic matter.
- Use the higher rate of DUAL II MAGNUM/KOMODO HERBICIDE for heavier weed populations, Eastern black nightshade and yellow nutsedge.
- Use lower rate of metribuzin and repeat applications of metribuzin when crop is established as described under post-emergence application of metribuzin.
- **Do NOT** exceed total maximum rate of metribuzin recommended on the label for your soil type.
- Cool, wet weather may delay establishment, but yield is not usually affected.

POST-EMERGENCE GRASS HERBICIDES

- For annual grass, use 0.32 L/ha (0.13 L/acre) at the 1-6-leaf stage.
- For volunteer grains, use 0.47 L/ha (0.19 L/acre) at the 1-6-leaf stage (2-5 is optimum).
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. Thorough pre-plant tillage will ensure more uniform quackgrass emergence. Cultivate after 7 days in wide row crops. Use the high rate of MERGE for quackgrass.
- **Do NOT** apply any other chemicals within 4 days of POAST ULTRA application.
- **Do NOT** use flood jet or hollow cone nozzles.

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops***continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: VENTURE L (125 g/L) Product Rate/ha: 0.6-2 L/ha Product Rate/acre: 0.24-0.8 L/acre Active Ingredient(s): fluazifop-p-butyl (0.24-0.250 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 60 days Rainfast: 2 hours Max. Applications: not stated
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-117 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-46.8 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-28.1 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 1 day Rainfast: 8 hours Max. Applications: 1
Trade Name: PINNACLE SG TOSS-N-GO (50%) + AGRAL 90 Product Rate/ha: 8.25-12 g/ha + 2 L/1,000 L Product Rate/acre: 3.3-4.8 g/acre + 2 L/1,000 L Active Ingredient(s): thifensulfuron methyl (4.1-6.0 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 30741	REI: 12 hours PHI: 45 days Rainfast: 4 hours Max. Applications: 1
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-70 g/ha + 2 L/1,000 L Product Rate/acre: 14-28 g/acre + 2 L/1,000 L Active Ingredient(s): halosulfuron (25-51 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: 2
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: PRISM (25 DF) or PRISM (25 SG) or SHARDA RIMSULFURON (25 WDG) + AGRAL 90 or AG-SURF Product Rate/ha: 60-140 g/ha + 2 L/1,000 L Product Rate/acre: 24-56 g/acre + 2 L/1,000 L Active Ingredient(s): rimsulfuron (15-35 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 PCP #: 23983 or 30057 or 32932	REI: 12 hours PHI: 30 days Rainfast: 2-4 hours Max. Applications: 1

continued

TABLE 2-2
Herbicide treatment rates and precautions for vegetable crops
continued

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none">• Apply POST to actively growing grasses before tillering.• Apply at 0.8 L/ha (0.32 L/acre) at 2-5-leaf stage of volunteer wheat and barley.• Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses (2-4-leaf for foxtails).• Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly. Thorough pre-plant tillage, fragmenting quackgrass rhizomes improves control.• Do NOT apply other herbicides within 3 days of application.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Apply POST with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.
<ul style="list-style-type: none">• Apply 3 weeks after transplanting to weeds less than 10 cm (4 in.) tall.• Add PINNACLE SG TOSS-N-GO to the spray tank and agitate, then add AGRAL 90.• Do NOT apply if rain is expected within several hours.• Do NOT apply to tomatoes that are stressed.
<ul style="list-style-type: none">• Apply POST to tomatoes 14 days after transplanting through to first bloom.• To maximize control of nutsedge, a second spot application on emerged nutsedge may be necessary.• Minimum of 21 days between applications. Do NOT apply more than 70 g/ha (28 g/acre) per season.• Spraying over top of plastic mulch may result in significant injury.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Use 140 g/ha (56 g/acre) for control of triazine-resistant lamb's-quarters, hairy nightshade plus other broadleaf weeds listed.• Apply POST when hairy nightshade is up to the 4-leaf stage, quackgrass is in the 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses are in the 1-6-leaf stage and redroot pigweed is at the 4-6-leaf stage.• May be used on processing and fresh-market tomatoes.• Apply at least 21 days after transplanting the crop.

continued

TABLE 2-2**Herbicide treatment rates and precautions for vegetable crops**

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SENCOR DF (75 DF) or TRICOR 75 DF (75%) or SQUADRON (75%) Product Rate/ha: 0.2-1.1 kg/ha Product Rate/acre: 0.08-0.44 kg/acre Active Ingredient(s): metribuzin (0.15-0.83 kg/ha)	Group #: 5 PCP #: 17242 or 30661 or 32081	REI: 12 hours PHI: multiple applications: 30 days single application: 60 days Rainfast: not stated Max. Applications: 4
Trade Name: SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.3 L/ha Product Rate/acre: 0.12 L/acre Active Ingredient(s): metribuzin (0.14 kg/ha)	Group #: 5 PCP #: 26280 or 32876	REI: 12 hours PHI: 30 days Rainfast: not stated Max. Applications: 4
POST-EMERGENCE TANK-MIX OPTION		
Trade Name: PRISM (25 DF) or PRISM (25 SG) or SHARDA RIMSULFURON (25 WDG) + PINNACLE SG TOSS-N-GO (50%) + AGRAL 90 Product Rate/ha: 60 g/ha + 12 g/ha + 2 L/1,000 L Product Rate/acre: 24 g/acre + 4.8 g/acre + 2 L/1,000 L Active Ingredient(s): rimsulfuron (15 g/ha) + thifensulfuron methyl (4.125-6.0 g/ha) + non-ionic surfactant (0.2% v/v)	Group #: 2 + 2 PCP #: 23983 or 30057 or 32932 + 30741	REI: 12 hours PHI: 45 days Rainfast: 2-4 hours Max. Applications: not stated

TABLE 2-2

Herbicide treatment rates and precautions for vegetable crops

PRECAUTIONS - For more information, see the label.

- May be used on processing and fresh market tomatoes.
- Apply POST at least 3 weeks after transplanting before weeds exceed 4 cm (1.6 in.) in height.
- When making multiple applications, apply at a rate of 0.2 kg/ha (0.08 kg/acre).
- Direct spray to bottom one-third of tomato plants to reduce risk of crop injury.
- **Do NOT** apply when crop is under stress due to cool, wet, cloudy weather or excessively hot temperatures.
- **Do NOT** use on muck soils.
- **Do NOT** use on soils with less than 2% organic matter.
- Use lower rates on sandy soils, higher rates on clay soils.

- May be used on processing and fresh-market tomatoes.
- Apply up to four POST applications per season.
- Apply before the weeds are 2.5 cm (1 in.) in height.
- BRAVO 500 fungicide may be tank-mixed with this treatment at 1-2 L/ha (0.4-0.8 L/acre). Control of annual grasses may be reduced.
- **Do NOT** apply when crop is under stress due to cool, wet, cloudy weather or excessively hot temperatures.
- **Do NOT** use on muck soils.
- **Do NOT** use on soils with less than 2% organic matter.
- **Do NOT** exceed the maximum total rate of SENCOR 480 F recommended on the label for your soil type.

POST-EMERGENCE TANK-MIX OPTION

- Use **ONLY** on transplant tomatoes grown for processing.
- Apply POST through ground application, when hairy nightshade is up to the 4-leaf stage, quackgrass is in the 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses are in the 1-6-leaf stage and redroot pigweed is at the 4-6-leaf stage.
- Apply to weeds 10-21 days after transplanting tomatoes.
- **Do NOT** apply if rain is expected within 2 hours of application.
- **Do NOT** apply to tomatoes that are stressed.

