

4. Tree fruit, tree nuts and grapes

TABLE 4-1

Tree fruit, tree nut and grape 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
 ✓ = can be used on this crop X = not indicated for use on this crop
 - = insufficient information available to make a rating

NOTE: Not all herbicides registered for use on peaches are registered on nectarines. Make sure nectarine or crop group 12 is listed on the label before applying the product.

TRADE NAME	Crop Registrations							Grasses						Annual Broadleaves						
	apples	apricots	cherries/plums	grapes	nectarines	peaches	pears	barnyard grass	crabgrass	fall panicum	foxtails	witchgrass	sandbur	chickweed, common	fleabane, Canada	lady's-thumb	lamb's-quarters	mustards	pigweeds	ragweed
SOIL-APPLIED BROADLEAF HERBICIDES																				
SANDEA	✓	X	X	X	X	X	X	N	N	N	N	N	N	G	E	G	G	G	G	G ¹
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES																				
ALION	✓	✓	✓	✓	✓	✓	✓	E	E	-	E	E	-	-	E	E	E	E	F	-
AUTHORITY 480	✓	X	X	✓	X	X	X	-	G	-	-	-	-	-	G	-	G	-	G	P
CASORON G-4	✓	X	✓	✓	✓	✓	✓	F	F	F	F	F	-	G	-	F	G	P	G	P
CHATEAU	✓	✓	✓	✓	✓	✓	✓	P	P	P	P	P	-	-	E	F	E	-	E	F
CHIKARA	X	X	X	✓	X	X	X	-	F	-	E	F	E	E	F	-	E	E	E	E
DEVRIROL 2-XT	X	X	X	✓	X	X	X	G	E	G	G	G	G	F	-	F	G	P	G	F
DUAL II MAGNUM or KOMODO HERBICIDE	✓	✓	✓	X	X	✓	✓	E	E	G	E	E	-	F	-	P	F	P	G	P

continued

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

² For cherries only.

³ Non-bearing trees only.

⁴ Hooded sprayer application only.

⁵ Weeds cannot be emerged at time of application to achieve this level of control.

⁶ Not all formulations are registered on all crops. See label for specific uses and rates.

⁷ Top growth only; regrowth can be expected.

⁸ Use higher rates when larger than 10 cm (4 in.) tall or across.

TABLE 4-1

Tree fruit, tree nut and grape herbicide weed control ratings *continued*

TRADE NAME	Perennials																	
	bindweed, field	chickweed, mouse-eared	dandelion	goldenrod	grape, wild	ground-ivy (creeping charlie)	mallow	milkweed	nightshade, climbing	nutsedge	plantains	poison-ivy	quackgrass	sow-thistle	stinging nettle	thistle, Canada	vetches	virginia creeper
SOIL-APPLIED BROADLEAF HERBICIDES																		
SANDEA	F	-	-	-	-	-	G	-	-	F	G	-	-	-	-	-	-	-
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES																		
ALION	E	E	F	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AUTHORITY 480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CASORON G-4	F	F	F	-	P	F	-	-	-	F	F	P	F	F	-	F	F	-
CHATEAU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CHIKARA	-	E	E	-	-	-	E	-	-	G	-	-	-	F	-	-	-	-
DEVRINOL 2-XT	-	-	P	-	-	-	-	P	-	P	P	P	P	P	-	P	P	-
DUAL II MAGNUM or KOMODO HERBICIDE	N	-	P	-	-	-	-	N	-	G	P	-	N	N	N	N	N	N

continued

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LEGEND: N = No Control **P** = Poor Control **F** = Fair Control **G** = Good Control **E** = Excellent Control
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TRADE NAME	Crop Registrations							Grasses						Annual Broadleaves						
	apples	apricots	cherries/plums	grapes	nectarines	peaches	pears	barnyard grass	crabgrass	fall panicum	foxtails	witchgrass	sandbur	chickweed, common	fleabane, Canada	lady's-thumb	lamb's-quarters	mustards	pigweeds	ragweed
FRONTIER MAX	X	X	X	✓	X	X	X	E	E	G	E	E	P	-	-	P	F	P	G	P
KARMEX	X	X	X	✓	X	X	X	E	P	P	P	G	-	E	-	E	E	E	G	E
KERB SC	✓	X	X	X	X	X	✓	G	F	G	G	E	G	E	-	F	E	G	E	F
LEXONE DF	✓	✓	✓ ²	X	X	✓	✓	G	G	E	E	E	-	E	-	E	E	E	G	G
LOROX L	✓	X	✓	X	X	✓	✓	F	F	P	G	E	-	E	-	F	E	F	G	G
PRINCEP NINE-T or SIMADEX or SIMAZINE 480	✓	✓	X	✓	X	✓	✓	G	G	F	G	G	-	G	-	E	E	E	E	G
SENCOR or SQUADRON	✓	✓	✓ ²	X	X	✓	✓	F	G	E	G	E	-	E	-	E	E	E	G	G
SINBAR WDG	✓	✓ ³	✓ ³	X	✓	✓	✓ ³	G	F	G	G	G	P	E	-	F	G	G	F	F
TREFLAN	✓ ³	✓ ³	✓ ³	X	X	✓ ³	✓ ³	E	E	G	G	G	-	F	-	F	G	P	G	P
SOIL-APPLIED GRASS AND BROADLEAF TANK-MIXES																				
DUAL II MAGNUM or KOMODO HERBICIDE + LEXONE DF	✓	✓	✓	X	X	✓	✓	E	E	E	E	E	-	E	-	E	E	E	G	G
DUAL II MAGNUM or KOMODO HERBICIDE + PRINCEP NINE-T	✓	✓	✓	X	X	✓	✓	E	E	E	E	E	-	E	-	E	E	E	G	G
SENCOR + TREFLAN	✓ ³	✓ ³	✓ ³	X	X	✓ ³	✓ ³	G	G	E	E	E	-	E	-	E	E	E	G	G
POST-EMERGENCE GRASS HERBICIDES																				
POAST ULTRA	✓	✓	✓	✓	X	✓	✓	G	G	E	G	E	-	N	N	N	N	N	N	N
VENTURE L	✓	✓	✓	✓	X	✓	✓	E	E	E	E	E	-	P	N	P	P	P	P	P
SELECT or CENTURION + AMIGO	X	X	✓ ²	X	X	X	X	E	G	E	G	E	-	-	N	N	N	N	N	N

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⁶ Not all formulations are registered on all crops. See label for specific uses and rates.

⁷ Top growth only; regrowth can be expected.

⁸ Use higher rates when larger than 10 cm (4 in.) tall or across.

continued

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Tree fruit, tree nut and grape herbicide weed control ratings *continued*

TRADE NAME	Perennials																	
	bindweed, field	chickweed, mouse-eared	dandelion	goldenrod	grape, wild	ground-ivy (creeping charlie)	mallow	milkweed	nightshade, climbing	nutsedge	plantains	poison-ivy	quackgrass	sow-thistle	stinging nettle	thistle, Canada	vetches	virginia creeper
FRONTIER MAX	N	-	-	-	-	-	-	N	-	G	-	-	N	N	N	N	N	N
KARMEX	-	-	P	-	-	-	-	P	-	P	-	-	P	P	-	P	-	-
KERB SC	-	-	-	-	-	-	-	F	-	F	-	-	F	F	-	-	-	-
LEXONE DF	-	G	F	P	P	P	P	F	P	F	G	P	F	P	P	F	P	N
LOROX L	P	G	-	-	-	-	-	P	-	G	-	-	F	G	-	F	-	-
PRINCEP NINE-T or SIMADEX or SIMAZINE 480	P	-	P	-	-	-	-	N	-	P	-	-	F	P	-	P	N	-
SENCOR or SQUADRON	P	-	-	-	-	-	-	P	P	P	-	-	P	P	-	P	P	N
SINBAR WDG	F	G	F	-	-	-	-	F	-	F	G	-	F	P	-	F	P	-
TREFLAN	P	-	P	P	P	P	N	P	P	-	P	N	P	P	P	P	P	N
SOIL-APPLIED GRASS AND BROADLEAF TANK-MIXES																		
DUAL II MAGNUM or KOMODO HERBICIDE + LEXONE DF	P	-	P	-	-	-	-	P	P	G	-	-	P	P	P	P	P	N
DUAL II MAGNUM or KOMODO HERBICIDE + PRINCEP NINE-T	P	-	P	-	-	-	-	N	-	G	-	-	F	P	-	P	N	-
SENCOR + TREFLAN	P	-	P	P	P	P	N	P	P	P	P	N	P	P	P	P	P	N
POST-EMERGENCE GRASS HERBICIDES																		
POAST ULTRA	N	N	N	N	N	N	N	N	N	N	N	N	F	N	N	N	N	N
VENTURE L	N	N	N	N	N	N	N	N	N	N	N	N	F	N	N	N	N	N
SELECT or CENTURION + AMIGO	N	-	-	-	-	-	-	N	-	N	-	-	F	N	-	N	-	-

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POST-EMERGENCE BROADLEAF HERBICIDES																				
AIM EC	✓ ⁴	✓ ⁴	✓ ⁴	✓ ⁴	✓ ⁴	✓ ⁴	✓ ⁴	-	-	-	-	-	-	-	-	-	G	G	G	-
BASAGRAN	✓ ³	✓ ³	✓ ³	X	✓ ³	✓ ³	✓ ³	N	N	N	N	N	N	G	-	E	F	G	G	G
LONTREL XC or PYRALID HERBICIDE	✓	✓	✓	X	✓	✓	✓	N	N	N	N	N	N	-	-	-	-	-	-	G
PRISM	X	✓	✓	X	✓	✓	X	E	G	E	G	E	E	-	-	F	F	E	E	P
SANDEA	✓	X	X	X	X	X	X	N	N	N	N	N	N	G	N	G ⁵	G ⁵	G	G	G
2,4-D ⁶	✓	✓	✓	X	X	✓	✓	N	N	N	N	N	-	F	-	P	G	E	E	G
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES																				
CHIKARA	X	X	X	✓	X	X	X	E	-	E	E	E	E	-	E	E	E	-	-	-
GLYPHOSATE ⁶	✓	✓	✓	✓	✓ ⁶	✓	✓	E	E	E	E	E	-	E	E ⁶	E	E	E	E	E
IGNITE SN	✓	✓	✓	✓	✓	✓	✓	E	E	E	E	E	-	E	G ⁷	E	E	G	E	E
OTHER TANK-MIX OPTIONS																				
ALION + GLYPHOSATE ⁶	✓	✓	✓	✓	X	✓	✓	E	E	E	E	E	-	E	E	E	E	E	E	E
ALION + IGNITE SN	✓	✓	✓	✓	X	✓	✓	E	E	-	E	E	-	-	E	E	E	E	F	-

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POST-EMERGENCE BROADLEAF HERBICIDES																		
AIM EC	-	-	-	-	-	-	G	-	G	-	-	-	-	-	-	-	-	-
BASAGRAN	F	-	-	-	-	-	-	P	P	G ⁷	P	-	P	P	G ⁷	F	P	-
LONTREL XC or PYRALID HERBICIDE	-	-	-	-	-	-	-	-	-	-	-	-	-	G ⁷	-	G ⁷	E	-
PRISM	-	-	-	-	-	-	-	-	-	-	-	-	F	-	-	-	-	-
SANDEA	F	-	-	-	-	-	G	F	-	E	G	-	-	-	-	-	-	-
2,4-D ⁶	P	P	G	P	P	P	P	P	-	P	G	-	P	F	-	G	P	-
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES																		
CHIKARA	-	E	E	-	-	-	E	-	-	G	-	-	-	F	-	-	-	-
GLYPHOSATE ⁶	G	E	E ⁸	-	G	P	P	E	-	P	E	E	E	E	P	E	P ⁷	G ⁷
IGNITE SN	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	P	E	G ⁷	G ⁷	G ⁷	G ⁷
OTHER TANK-MIX OPTIONS																		
ALION + GLYPHOSATE ⁶	G	E	E ⁸	F	G	P	P	E	-	P	E	E	E	E	P	E	P ⁷	G ⁷
ALION + IGNITE SN	E	E	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	G ⁷	P	E	G ⁷	G ⁷	G ⁷	G ⁷

Cultural weed control in tree fruit, tree nuts and grapes

A successful weed control program must integrate cultural and chemical weed control practices. Growers cannot depend entirely on chemical weed control in fruit, vine crops, and tree nuts since there is a limited spectrum of herbicides registered for these crops.

PERENNIAL WEED CONTROL

It is important to identify and control perennial weeds in the pre-planting year. It is very difficult to control perennial weeds once a planting is established because of crop sensitivity to some herbicides and since it is not possible to clean cultivate in established orchards or vineyards. Quackgrass, bindweed, vetch, wild grape, perennial nightshade, thistles, ground-ivy (creeping charlie) and burdock are perennial weeds that present serious problems in these crops. Systemic herbicides such as glyphosate should be applied to perennial weeds in the preplanting year. Consult the product label and be sure to use the recommended rate for the weed in question. Apply the herbicide at the proper stage of growth of the weed, otherwise only temporary control will be achieved. Repeated cultivations of some perennial weeds such as bindweed will also provide control.

SITE PREPARATION

A green manure crop such as perennial rye-grass or Sudan grass should be established in the pre-planting year following or in conjunction with measures to control perennial weeds. This crop will provide competition to reduce weed growth as well as improving the soil structure. Non-selective herbicides can be applied before planting the green manure crop and before plowing it under. Short residual selective herbicides, such as 2,4-D, may be used with the green manure crop, but avoid using herbicides that leave a soil residue that will carry over into the planting year.

MULCHING

A biodegradable plastic mulch could be used for weed control in the planting strip. Mulch will also assist in weed control beneath the trees or vines in the planting strip if it is applied early in the season before the weed seeds germinate. Use mulch that is free of weed seeds and ensure that enough nitrogen is provided for the plants. The mulch should be pulled away from around the tree bases for winter rodent protection. Peastone gravel is another option that can be applied around the base of the trees. The gravel will provide weed control, as well as, improve drainage, encourage deeper rooting and discourage rodents.

REDUCING WEED PRESSURE

Cultivation can provide weed control between the rows. Alternatively, a vigorous sod between the rows will prevent weeds from becoming established. It is better to seed a fescue sod rather than rely on a natural sod composed of weed and grass species because the weeds will seed into the orchard or vine row. Prevent weeds from setting seed in adjacent uncropped areas by using cultural or chemical weed control measures. Mowing at regular intervals will prevent many weeds from flowering. Try to control weeds that escape before they set seed by cultural removal or chemical mowing. In some situations, tools such as a weed whip may be of use. Mowers are available which will cut close to the trees without injury. Mowing, however, will not eliminate weed competition.

ROTATING HERBICIDE FAMILIES

(See Table 1-5. *Counties with confirmed resistant weed populations*).

In perennial crops, rotation of herbicide families is important to minimize the build up of seed from weed escapes, including triazine tolerant weeds. Rotation will also help avoid an accumulation of herbicide residues in the soil that may result in crop injury over a period of years and may hinder replanting.

Herbicide application timings

PRE-PLANT (PP) TREATMENTS

Pre-plant treatments are applied before the orchard or vineyard is 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. Check the label.

PRE-PLANT (PP) WEED AND COVER CROP CONTROL

Control cover crops and emerged weeds before planting orchards or vineyards.

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. Special attention should be directed toward 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 improve 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 orchard or vineyard is planted. 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 pesticide 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 product label for more details. Always use appropriate drift management technology.

INTER-ROW WEEDING

The herbicide is directed between the orchard and/or vineyard 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.

WIPER APPLICATORS FOR SELECTIVE WEED CONTROL

Wiper applicators (rope-wick, roller applicator or similar device) have been extensively used with glyphosate. Check product 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.

CAUTION: SIMAZINE, KARMEK, DEVRINOL, and SINBAR residues high enough to harm many crops may persist for several years after removal of orchards and vineyards.

Rates per hectare (per acre) refer to area actually treated with herbicide.

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes

APPLES		
TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
SOIL-APPLIED BROADLEAF HERBICIDES		
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 (0.2% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 14 days Rainfast: 4 hours Max. Applications: 2
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 2
Trade Name: ALION 200 SC (200 g/L) + SENCOR 480F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.375 L/ha + 1.5 L/ha Product Rate/acre: 0.152 L/acre + 0.606 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 75 DF (75 %) Product Rate/ha: 0.375 L/ha + 1 kg/ha Product Rate/acre: 0.152 L/acre + 0.404 kg/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 17242	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
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: 14 days Rainfast: moisture required for activation Max. Applications: 2

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***APPLES****PRECAUTIONS - For more information, see the label.****SOIL-APPLIED BROADLEAF HERBICIDE**

- New, 1 year or more and established plantings.
- 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** contact green tissue such as foliage, fruit or green bark.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Established plantings of at least three full growing seasons **ONLY**.
- PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions).
- May be applied at anytime throughout the growing season when the ground is not frozen or snow covered.
- Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.

- Established plantings of at least 3 years **ONLY**.
- PRE - Weed control plus residual control of annual broadleaf weeds.

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- Avoid spraying the green bark of trunks by wrapping the trunk with a nonporous wrap, grow tubes or wax containers. Also avoid spraying crop foliage and fruit.
- Best results obtained when the soil is moist at the time of application and followed by at least 1.25 cm (0.5 in.) of rainfall or sprinkler irrigation 2 weeks after application.
- **Do NOT** apply heavy irrigation immediately after application.
- **Do NOT** apply using airblast sprayers or by air or using a mechanically pressurized handgun.
- **Do NOT** tank mix with flumioxazin (CHATEAU) or other products containing sulfentrazone.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: CASORON G-4 (4%) Product Rate/ha: 110-175 kg/ha Product Rate/acre: 44-70 kg/acre Active Ingredient(s): dichlobenil (4.4-7.0 kg/ha)	Group #: 20 PCP #: 12533	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
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 (1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 1.25-1.75 L/ha + 1.1-5 L/ha Product Rate/acre: 0.5-0.7 L/acre + 0.44-2.0 kg/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + simazine (0.99-4.5 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 16370	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) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 1.75 L/ha + 1 kg/ha Product Rate/acre: 0.7 L/acre + 0.4 kg/acre Active Ingredient(s): s-metolachlor (1.6 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: KERB SC (400 g/L) Product Rate/ha: 5.6 L/ha Product Rate/acre: 2.24 L/acre Active Ingredient(s): propyzamide (2.24 kg/ha)	Group #: 3 PCP #: 30264	REI: 24 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: LEXONE DF (75 DF) or SQUADRON (75%) Product Rate/ha: 0.5-1 kg/ha Product Rate/acre: 0.2-0.4 kg/acre Active Ingredient(s): metribuzin (0.38-0.75 kg/ha)	Group #: 5 PCP #: 15959 or 32081	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
 - PRE – Apply to cool, moist soil in spring before weeds emerge or after cultivation.
 - **Do NOT** apply if air temperatures are above 10°C-15°C to avoid injury from volatilization.
 - **Do NOT** apply until 4 weeks after transplanting.
 - **Do NOT** use on light sandy soils.
 - 70 g applied to an area 2 × 2 m is equivalent to 175 kg/ha (70 kg/acre).
- Established plantings **ONLY**.
 - Apply the lower rate to coarse textured soil with less than 5% organic matter and apply the higher rate to medium textured soil with less than 5% organic matter.
 - **Do NOT** apply within 100 m of non-dormant pears.
 - **Do NOT** apply after bud break unless using hooded or shielded equipment.
 - Please review label for more detailed instructions.
- New and established plantings.
 - PRE – Apply once per year as a band treatment under the trees before weeds emerge.
 - Avoid contact with trunk and leaves of trees.
 - **Do NOT** use on sandy soil with less than 2% organic matter.
- New and established plantings.
 - PRE – Apply post-planting, once per year as a band treatment before weeds emerge, preferably after rain has settled the soil around the trees.
 - **Do NOT** use on sandy soils with less than 2% organic matter.
 - Avoid contact with tree trunks and leaves.
 - For established plantings use higher rates.
- Established plantings.
 - PRE – Apply once per year as a band treatment under the trees before weeds emerge.
 - Avoid contact with trunk and leaves of trees.
 - **Do NOT** use on sandy soil with less than 3% organic matter.
- Established plantings **ONLY**.
 - PRE – Apply from late September to early November when soil is cool and moist but not frozen.
 - Use **ONLY** under apple trees established at least 1 year.
 - 5.6 L/ha (2.24 L/acre) is equivalent to 56 mL/100 m².
- New and established plantings.
 - PPI – Before planting trees.
 - PRE – Apply once per year as a band treatment under the trees before weeds emerge.
 - Avoid contact with tree trunks and leaves.
 - Use high rate on established plantings.
 - **Do NOT** use on soils that are coarser than sandy loams with less than 3% organic matter.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 1.1-2.2 kg/ha Product Rate/acre: 0.44-0.88 kg/acre Active Ingredient(s): simazine (1-2 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 2.5-5 kg/ha Product Rate/acre: 1.0-2.0 kg/acre Active Ingredient(s): simazine (1-2 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75%) Product Rate/ha: 1 kg/ha Product Rate/acre: 0.4 kg/acre Active Ingredient(s): metribuzin (0.75 kg/ha)	Group #: 5 PCP #: 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation. Max Applications: 1
Trade Name: SENCOR 75 DF (75 %) + TREFLAN EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 0.55-0.75 kg/ha + 1.25-2.4 L/ha Product Rate/acre: 0.22-0.30 kg/acre + 0.50-0.96 L/acre Active Ingredient(s): metribuzin (0.41-0.56 kg/ha) + trifluralin (0.6-1.15 kg/ha)	Group #: 5 + 3 PCP #: 17242 + 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SIMADEX (500 g/L) Product Rate/ha: 4.5-9 L/ha Product Rate/acre: 1.8-3.6 L/acre Active Ingredient(s): simazine (1-2 kg/ha)	Group #: 5 PCP #: 15902	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SIMAZINE (480 g/L) Product Rate/ha: 4.7-9.4 L/ha Product Rate/acre: 1.88-3.76 L/acre Active Ingredient(s): simazine (1-2 kg/ha)	Group #: 5 PCP #: 23181	REI: 12 h PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 1.25 kg/ha Product Rate/acre: 0.5 kg/acre Active Ingredient(s): terbacil (1 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 2.25-4.5 kg/ha Product Rate/acre: 0.9-1.8 kg/acre Active Ingredient(s): terbacil (1.8-3.6 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Planting year. • PRE – Apply post planting, preemergent to weeds, preferably after rain has settled the soil around the trees. • Avoid contact with trunk and leaves of trees. • Do NOT use on sandy soils with less than 2% organic matter.
<ul style="list-style-type: none"> • Established plantings ONLY. • Use higher rate on perennial weeds such as quackgrass. • May be combined with glyphosate.
<ul style="list-style-type: none"> • Established (bearing) trees ONLY. • PRE – Apply as a band application under the trees in at least 150-300 L water/ha (60-120 L water/acre).
<ul style="list-style-type: none"> • PPI – Before planting trees as an orchard floor or planting row treatment. • Use higher rates on clay soils.
<ul style="list-style-type: none"> • Established plantings ONLY. • Use higher rate on perennial weeds such as quackgrass. • May be combined with glyphosate.
<ul style="list-style-type: none"> • Established plantings ONLY. • Use higher rate on perennial weeds such as quackgrass. • May be combined with glyphosate.
<ul style="list-style-type: none"> • Planting year. • PRE – Apply after planting trees, before weeds emerge. • Do NOT use on soils with less than 3% organic matter. • Avoid contact with tree trunks and leaves.
<ul style="list-style-type: none"> • PRE – Established plantings of at least three years ONLY. • Avoid contact with foliage. • Use 2.25 kg/ha (0.9 kg/acre) on soils with < 2% organic matter. • Use 3.25-4.5 kg/ha (1.30-1.80 kg/acre) on soils with > 2% organic matter.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SINBAR WDG (80 WDG) + SENCOR 75 DF (75%) Product Rate/ha: 0.63 kg/ha + 1 kg/ha Product Rate/acre: 0.25 kg/acre + 0.4 kg/acre Active Ingredient(s): terbacil (0.5 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 5 + 5 PCP #: 30082 + 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN 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 (0.60-1.15 kg/ha)	Group #: 3 PCP #: 23933 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/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: not stated
Trade Name: REGLONE DESSICANT (240 g/L) Product Rate/ha: 4.5 L/ha Product Rate/acre: 1.8 L/acre Active Ingredient(s): diquat (1.1 kg/ha)	Group #: 22 PCP #: 26396	REI: 24 hours PHI: not stated Rainfast: 0-15 minutes 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 (0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: not stated 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: 2 L/ha, 1.68 L/ha, 1.44 L/ha Product Rate/acre: 0.8 L/acre, 0.67 L/acre, 0.58 L/acre Active Ingredient(s): 2,4-D (0.95 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 80 days Rainfast: 1 day Max. Applications: 1
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-60.0 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max. Applications: 2

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Established plantings ONLY. • PRE – Apply as a band under trees before weeds emerge. • Do NOT use on soil coarser than sandy loam with less than 3% organic matter. • Treatment usually provides partial control of quackgrass, horsenettle and yellow nutsedge.
<ul style="list-style-type: none"> • Planting year ONLY. • PPI – Apply and incorporate before planting trees. • Use higher rates on clay soils.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • New and established plantings. • For annual grass, use 0.32 L/ha (0.13 L/ac) 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.
<ul style="list-style-type: none"> • For perennial grass suppression under apple trees.
<ul style="list-style-type: none"> • New and established plantings. • Apply post to actively growing grasses before tillering in a band under the trees. • 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.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Established plantings ONLY. • For broadleaf weeds, including dandelion, seedling Canada thistle and sow-thistle. • Apply in early spring after weeds emerge or postharvest to actively growing weeds. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • New and established plantings. • Apply post at a rate of 36.5-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows. • Apply to basal shoots (suckers) before they have hardened bark. • Use the higher rate of 150 mL/ha (60 mL/acre) for control of suckers. • Apply to actively growing weeds up to 10 cm (4 in.) tall. • Severe injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *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) + ASSIST Product Rate/ha: 1.75-2.25 L/ha + 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + oil concentrate (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 25 days Rainfast: 8 hours Max. Applications: 2
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
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 35-140 g/ha + 2.5 L/1,000 L Product Rate/acre: 14-56 g/acre + 2.5 L/1,000 L Active Ingredient(s): halosulfuron (25-102 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 14 days Rainfast: 4 hours Max. Applications: 2
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 9 L/ha Product Rate/acre: 3.6 L/acre Active Ingredient(s): linuron (4.3 kg/ha)	Group #: 7 PCP #: 16279	REI: 12 hours PHI: not stated Rainfast: 8 hours Max Applications: not stated
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25-12 L/ha, 1.67-8.9 L/ha, 1.6-8.54 L/ha, 1.78-7.9 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Active Ingredient(s): glyphosate (0.36 kg/2 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- New plantings.
- Directed spray **ONLY**. **Do NOT** overspray.
- Avoid tree leaves.
- Use lower rate of assist under hot, humid conditions.
- During the planting year, make a maximum of two applications per season, 10 days apart and at the low rate only.

- Bearing and non-bearing trees. Non-bearing trees should be established and over 1 year or older.
- For best results apply in the spring as a spot treatment at a rate of 34 mL/1000 m² in 200 L of water for control of perennial vetch species and labelled weeds.
- Avoid contact with tree limbs.

- New, 1 year or more and established plantings.
- Apply as a single or sequential application of 35-70 g/ha (14-28 g/acre), allow a minimum of 21 days between applications.
- Use a higher rate of 52.5-140 g/ha (21-56 g/acre) for nutsedge control when fully emerged. If applying twice, apply first application at 3-5-leaf stage.
- **Do NOT** apply more than 140 g/ha (56 g/acre) per season.
- Avoid spray contact with foliage and fruit.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE

- Established plantings of at least 10 years **ONLY**.
- Apply as a directed spray before weeds are 10 cm (4 in.) high.
- Apply in 400-600 L/ha (160-240 L/acre) water with a surfactant.
- Avoid contact with fruit, foliage or tree bark with spray or drift.

NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS

- Established plantings **ONLY**.
- For actively growing weeds.
- Remove all suckers from base of trunks two weeks before application.
- **Do NOT** apply to trees with green bark in the area of application.
- **Do NOT** mow or till weeds for at least 5-7 days after application. Wait longer if cool.
- Repeat application to regrowth may be necessary for complete control.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings **ONLY**.
- Apply with a rope wick or other similar device when weeds are at the optimum stage.
- Avoid contact with the leaves, trunks and suckers.
- **Do NOT** apply when weeds are wet.
- Not all formulations are registered on all crops. See label for specific uses and rates.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 2
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 9 + 29 PCP #: see label + 30451	REI: 12 hours PHI: 30 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 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: not stated
Trade Name: IGNITE SN (150 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.7-5 L/ha + 0.375 L/ha Product Rate/acre: 1.08-2 L/acre + 0.152 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 10 + 29 PCP #: 28532 + 30451	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1
Trade Name: IGNITE SN (150 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 2.7-5 L/ha + 2.5-5 kg/ha Product Rate/acre: 1.08-2 L/acre + 1-2 kg/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (2.25-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 16370	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1
Trade Name: IGNITE SN (150 g/L) + SIMADDEX (500 g/L) Product Rate/ha: 2.7-5 L/ha + 4.5-9 L/ha Product Rate/acre: 1.08-2 L/acre + 1.8-3.6 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (2.25-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 15902	REI: 12 hours Rainfast: 4 hours PHI: 40 days Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
- Use hand held sprayers as a spot treatment if wiper equipment is not available.
- Avoid contact with leaves, trunks and suckers.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- **Do NOT** apply to trees with green bark in the area of application.
- Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings **ONLY**.
- Apply as a directed spray before weeds are 30 cm (12 in.) high.
- **Do NOT** apply more than 6.7 L/ha (2.7 L/acre) in 1 year.

- Established plantings of at least 3 years **ONLY**.
- Apply as a directed spray before weeds are 30 cm (12 in.) high, when the ground is not frozen or snow covered.
- Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.

- Established plantings **ONLY**.
- To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
- Use as a directed spray around the bases of established trees.

- Established plantings **ONLY**.
- To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
- Use as a directed spray around the bases of established trees.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: PRINCEP NINE-T (90 WG) + GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.5-5 kg/ha + 2.25-12 L/ha, 1.67-8.9 L/ha, 1.6-8.54 L/ha, 1.48-7.9 L/ha Product Rate/acre: 1-2 kg/acre + 0.9-4.8 L/acre, 0.67-3.56 L/acre, 0.64-3.41 L/acre, 0.59-3.16 L/acre Active Ingredient(s): simazine (2.25-4.5 kg/ha) + glyphosate (0.8-4.27 kg/ha)	Group #: 5 + 9 PCP #: 16370 + see label	REI: 12 hours PHI: not stated Rainfast: 1 hour Max. Applications: 1
APRICOTS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 480F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.375 L/ha + 1.5 L/ha Product Rate/acre: 0.152 L/acre + 0.606 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 75 DF (75 %) Product Rate/ha: 0.375 L/ha + 1 L/ha Product Rate/acre: 0.152 L/acre + 0.404 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 17242	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
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 (1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued***PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
- To control actively growing weeds, with residual control of germinating weeds.
- Remove all suckers from base of trunks two weeks before application.
- **Do NOT** apply to trees with green bark in the area of application.
- Not all formulations are registered on all crops. See label for specific uses and rates.

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

- Established plantings of at least 3 years **ONLY**.
- PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions).
- May be applied at anytime throughout the growing season when the ground is not frozen or snow covered.
- Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.

- Established plantings of at least 3 years **ONLY**.
- PRE – weed control plus residual control of annual broadleaf weeds.

- Established plantings of at least 3 years **ONLY**.
- PRE – weed control plus residual control of annual broadleaf weeds.

- Established plantings **ONLY**.
- **Do NOT** apply within 100 m of non-dormant pears.
- Apply the lower rate to coarse textured soils with less than 5% organic matter and apply the higher rate to medium textured soils with less than 5% organic matter.
- **Do NOT** apply during the period after flowering through leaf drop unless using hooded or shielded equipment.
- Please review label for more detailed instructions.

- New and established plantings.
- PRE – Apply as a band treatment under the trees before weeds emerge.
- Avoid contact with trunk and leaves of trees.
- **Do NOT** use on sandy soil with less than 2% organic matter.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 1.75 L/ha + 1 kg/ha Product Rate/acre: 0.7 L/acre + 0.4 kg/acre Active Ingredient(s): s-metolachlor (1.6 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 15959 or 17242	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) + PRINCEP NINE-T (90 WG) Product Rate/ha: 1.25-1.75 L/ha + 1.1-2.5 kg/ha Product Rate/acre: 0.5-0.7 L/acre + 0.44-1.0 kg/acre Active Ingredient(s): s-metolachlor/benoxacor (1.14-1.60 kg/ha) + simazine (1.0-2.25 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: LEXONE DF (75 DF) Product Rate/ha: 0.5-1 kg/ha Product Rate/acre: 0.2-0.4 kg/acre Active Ingredient(s): metribuzin (0.38-0.75 kg/ha)	Group #: 5 PCP #: 15959	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 1.1-2.2 kg/ha Product Rate/acre: 0.44-0.88 kg/acre Active Ingredient(s): simazine (1-2 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75%) Product Rate/ha: 1 kg/ha Product Rate/acre: 0.4 kg/acre Active Ingredient(s): metribuzin (0.75 kg/ha)	Group #: 5 PCP #: 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation. Max Applications: 1
Trade Name: SENCOR 75 DF (75 %) + TREFLAN EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 0.55-0.75 kg/ha + 1.2-2.4 L/ha Product Rate/acre: 0.22-0.30 kg/acre + 0.50-0.92 L/acre Active Ingredient(s): metribuzin (0.41-0.56 kg/ha) + trifluralin (0.60-1.15 kg/ha)	Group #: 5 + 3 PCP #: 17242 + 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) + LEXONE DF (75 DF) Product Rate/ha: 0.63 kg/ha + 1 kg/ha Product Rate/acre: 0.25 kg/acre + 0.4 kg/acre Active Ingredient(s): terbacil (0.5 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 5 + 5 PCP #: 30082 + 15959	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Established plantings ONLY. • PRE – Apply once per year as a band treatment under the trees before weeds emerge. • Avoid contact with trunk and leaves of trees. • Do NOT use on sandy soil with less than 3% organic matter.
<ul style="list-style-type: none"> • New and established plantings. • PRE – Apply after planting, before weeds emerge, preferably after rain has settled the soil around the trees. • Do NOT use on sandy soils with less than 2% organic matter. • Avoid contact with tree trunks and leaves. • Apply high rate on established plantings.
<ul style="list-style-type: none"> • New and established plantings. • PPI – Apply before planting trees in the year of planting. • PRE – Apply as a band treatment under the trees before weeds emerge. • Avoid contact with tree trunks and leaves.
<ul style="list-style-type: none"> • Planting year ONLY. • PRE – Apply after planting, before weeds emerge, preferably after rain has settled the soil around the trees. • Avoid contact with trunk and leaves of trees. • Do NOT use on sandy soils with less than 2% organic matter.
<ul style="list-style-type: none"> • Established (bearing) trees ONLY. • PRE – Apply as a band application under the trees in at least 150-300 L water/ha (60-120 L water/acre).
<ul style="list-style-type: none"> • Planting year ONLY. • PPI – Apply and incorporate before planting trees. • Apply as an orchard floor or planting row treatment. • Apply higher rates to clay soils.
<ul style="list-style-type: none"> • Established plantings ONLY. • PRE – Apply as a band under trees before weeds emerge. • Do NOT use on soil coarser than sandy loam with less than 3% organic matter.

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: TREFLAN EC (480 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 (0.6-1.15 kg/ha)	Group #: 3 PCP #: 23933 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 (0.14-0.5 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
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 (0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: not stated 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: 2 L/ha, 1.68 L/ha, 1.44 L/ha Product Rate/acre: 0.8 L/acre, 0.67 L/acre, 0.58 L/acre Active Ingredient(s): 2,4-D (0.95 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 80 days Rainfast: 1 day Max. Applications: 1
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.8-60 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max. Applications: 2
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + MERGE Product Rate/ha: 1.75-2.25 L/ha + 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + surfactant/solvent (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 25 days Rainfast: 8 hours Max. Applications: 2
Trade Name: LONTREL XC (600 g/L) Product Rate/ha: 0.25-0.5 L/ha Product Rate/acre: 0.1-0.2 L/acre Active Ingredient(s): clopyralid (0.15-0.30 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: not stated

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Planting year ONLY. • PPI – Apply and incorporate before planting trees. • Apply higher rates on clay soils.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • New 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). • For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage.
<ul style="list-style-type: none"> • Established plantings ONLY. • 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.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Established plantings ONLY. • For broadleaf weeds, including dandelion, seedling Canada thistle and sow-thistle. • Apply in early spring after weeds emerge or postharvest to actively growing weeds. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • New and established plantings. • Apply post with a hooded sprayer between the rows. • Apply to actively growing weeds up to 10 cm (4 in.) tall. Apply to basal shoots (suckers) before they have a hardened bark. • Use a higher rate of 150 mL/ha (60 mL/acre) for control of suckers. • Severe crop injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.
<ul style="list-style-type: none"> • Planting year ONLY. • Directed spray only. Do NOT overspray. • Use lower rate of MERGE under hot, humid conditions. • Apply 10 days apart at 1.75 L/ha (0.7 L/acre).
<ul style="list-style-type: none"> • New and established plantings. • For control of broadleaf weeds including vetch at the early flowering stage. • For best results apply in the spring as a spot treatment when apricots are flowering. • Apply 25-50 mL/1000 m² in 300 L of water when using a hand gun or back pack sprayer. • Avoid contact with tree limbs.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: PRISM (25 SG) + 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 #: 30057	REI: 12 hours PHI: 14 days Rainfast: 4 hours Max Applications: 1
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1 L/ 2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Active Ingredient(s): glyphosate (0.36 kg/2 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 9 + 29 PCP #: see label + 30451	REI: 12 hours PHI: 30 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 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max Applications: not stated

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> • Use a directed spray application adjusted to provide complete coverage of the weeds under the crop canopy. • Do NOT apply more than 60 g/ha (24 g/acre) on a broadcast application basis per year. • Apply when quackgrass is at 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses at 1-6-leaf stage and redroot pigweed is in the 4-6-leaf stage.
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS
<ul style="list-style-type: none"> • Established plantings ONLY. • For actively growing weeds. • Remove all suckers from base of trunks two weeks before application. • Do NOT apply to trees with green bark in the area of application. • Do NOT mow or till weeds for at least 5-7 days after application. Wait longer if cool. • Repeat application to regrowth may be necessary for complete control. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • Established plantings ONLY. • Apply with a rope wick or other similar device when weeds are at the optimum stage. • Avoid contact with the leaves, trunks and suckers. • Do NOT apply when weeds are wet. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • Established plantings ONLY. • Use hand held sprayers as a spot treatment if wiper equipment is not available. • Avoid contact with leaves, trunks and suckers. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • Do NOT apply to trees with green bark in the area of application. • Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions. • Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> • Established plantings ONLY. • Apply as a directed spray before weeds are 30 cm (12 in.) high. • Do NOT apply more than 6.7 L/ha (2.7 L/acre) in 1 year.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
CHERRIES AND PLUMS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CASORON G-4 (4%) Product Rate/ha: 110-175 kg/ha Product Rate/acre: 44-70 kg/acre Active Ingredient(s): dichlobenil (4.4-7.0 kg/ha)	Group #: 20 PCP #: 12533	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
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 (1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) + or KOMODO HERBICIDE (915 g/L) PRINCEP NINE-T (90 WG) Product Rate/ha: 1.25-1.75 L/ha + 1.1-2.5 kg/ha Product Rate/acre: 0.5-0.7 L/acre + 0.44-2.0 kg/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + simazine (0.99-4.5 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 16370 or 17242	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) LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 1.75 L/ha + 1 kg/ha Product Rate/acre: 0.7 L/acre + 0.4 kg/acre Active Ingredient(s): s-metolachlor (1.6 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 15959	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***PRECAUTIONS - For more information, see the label.****CHERRIES AND PLUMS****SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES**

- Established plantings of at least 3 years **ONLY**.
 - PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions).
 - May be applied at anytime throughout the growing season when the ground is not frozen or snow covered.
 - Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.
-
- New and established plantings.
 - PRE – Apply to cool, moist soil in spring before weeds emerge or after cultivation.
 - **Do NOT** apply if air temperatures are above 10-15°C to avoid injury from volatilization.
 - **Do NOT** apply until 4 weeks after transplanting.
 - **Do NOT** use on light sandy soils.
 - 70 g applied to an area 2 × 2 m is equivalent to 175 kg/ha (70 kg/acre).
-
- Established plantings of at least 2 years **ONLY**.
 - Apply the lower rate to coarse textured soils with less than 5% organic matter and apply the higher rate to medium textured soils with less than 5% organic matter.
 - **Do NOT** apply within 100 m of non-dormant pears.
 - **Do NOT** apply during the period after flowering through leaf drop unless using hooded or shielded equipment.
 - Please review label for more detailed instructions.
-
- Established plantings **ONLY**.
 - PRE – Apply once per year as a band treatment under the trees before weeds emerge.
 - Avoid contact with trunk and leaves of trees.
 - **Do NOT** use on sandy soil with less than 3% organic matter.
-
- New and established non-bearing plantings.
 - PRE – Apply as a band treatment under the trees before weeds emerge, preferably after rain has settled the soil around the trees.
 - **Do NOT** use on sandy soils with less than 2% organic matter.
 - Avoid contact with tree trunks and leaves.
 - Use the high rate on established plantings.
-
- New plantings.
 - PRE – Apply after planting, before weeds emerge, preferably after rain has settled the soil around the trees.
 - **Do NOT** use on sandy soils with less than 2% organic matter.
 - Avoid contact with tree trunks and leaves.
 - Late-season crabgrass and fall panicum may escape this treatment.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: LEXONE DF (75 DF) or SQUADRON (75%) Product Rate/ha: 0.5-1 kg/ha Product Rate/acre: 0.2-0.4 kg/acre Active Ingredient(s): metribuzin (0.38-0.75 kg/ha)	Group #: 5 PCP #: 15959 or 32081	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75%) Product Rate/ha: 1 kg/ha Product Rate/acre: 0.4 kg/acre Active Ingredient(s): metribuzin (0.75 kg/ha)	Group #: 5 PCP #: 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation. Max Applications: 1
Trade Name: SENCOR 75 DF (75 %) + TREFLAN EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 0.55-0.75 kg/ha + 1.2-2.4 L/ha Product Rate/acre: 0.22-0.30 kg/acre + 0.50-0.96 L/acre Active Ingredient(s): metribuzin (0.41-0.56 kg/ha) + trifluralin (0.6-1.15 kg/ha)	Group #: 5 + 3 PCP #: 17242 + 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 1.25 kg/ha Product Rate/acre: 0.5 kg/acre Active Ingredient(s): terbacil (1 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 0.63 kg/ha + 1 kg/ha Product Rate/acre: 0.25 kg/acre + 0.4 kg/acre Active Ingredient(s): terbacil (0.5 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 5 + 5 PCP #: 30082 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN 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 (0.60-1.15 kg/ha)	Group #: 3 PCP #: 23933 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 (0.14-0.50 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

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued***PRECAUTIONS - For more information, see the label.**

- New and established plantings.
 - PPI – Before planting trees.
 - PRE – Apply as a band treatment under the trees before weeds emerge.
 - Avoid contact with tree trunks and leaves.
 - Use high rate on established plantings.
 - **Do NOT** use on soils that are coarser than sandy loams with less than 3% organic matter.
- Established (bearing) trees **ONLY**.
 - PRE – Apply as a band application under the trees in at least 150-300 L water/ha (60-120 L water/acre).

- Planting year **ONLY**.
- PPI – Apply and incorporate before planting trees.
- Apply higher rates to clay soils.

- Planting year.
- PRE – Apply after planting trees, before weeds emerge.
- **Do NOT** use on soils with less than 3% organic matter.
- Avoid contact with tree trunks and leaves.

- Established plantings.
- Registered on cherries **ONLY**.
- PRE – Apply as a band under trees before weeds emerge.
- Treatment usually provides partial control of quackgrass, horsetail and yellow nutsedge.
- **Do NOT** use on soil coarser than sandy loam with less than 3% organic matter.

- Planting year **ONLY**.
- PPI – Apply and incorporate before planting trees.
- Apply the higher rate on clay soils.

POST-EMERGENCE GRASS HERBICIDES

- New 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).
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage.

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SELECT (240 g/L) or CENTURION (240 g/L) Product Rate/ha: 0.2-0.375 L/ha Product Rate/acre: 0.08-0.15 L/acre Active Ingredient(s): clethodim (45.6-91.2 g/ha)	Group #: 1 PCP #: 22625 or 27598	REI: 12 hours PHI: 14 days Rainfast: 1 hour Max. Applications: 1
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 (0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: not stated 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: 2 L/ha, 1.68 L/ha, 1.44 L/ha Product Rate/acre: 0.8 L/acre, 0.67 L/acre, 0.58 L/acre Active Ingredient(s): 2,4-D (0.95 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 80 days Rainfast: 1 day Max. Applications: 1
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-60.0 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max. Applications: 2
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + ASSIST Product Rate/ha: 1.75-2.25 L/ha + 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + oil concentrate (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 25 days Rainfast: 8 hours Max. Applications: 2
Trade Name: LONTREL XC (600 g/L) Product Rate/ha: 0.25-0.5 L/ha Product Rate/acre: 0.1-0.2 L/acre Active Ingredient(s): clopyralid (0.15-0.30 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: not stated
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 9 L/ha Product Rate/acre: 3.6 L/acre Active Ingredient(s): linuron (4.3 kg/ha)	Group #: 7 PCP #: 16279	REI: 12 hours PHI: not stated Rainfast: 8 hours Max Applications: not stated

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established cherry **ONLY** spray directly at the base.
- **Do NOT** apply directly over the top or crop injury can occur.
- Use high rate with 1% v/v surfactant for quackgrass control at the 2-6-leaf stage. Use the low rate with 0.5% v/v surfactant for all other labelled grassy weeds at the 2-6-leaf stage.

- Established plantings **ONLY**.
- 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.

POST-EMERGENCE BROADLEAF HERBICIDES

- Established plantings.
- For broadleaf weeds, including dandelion, seedling Canada thistle and sow-thistle.
- Apply in early spring after weeds emerge or postharvest to actively growing weeds.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- New and established plantings.
- Apply POST at rates between 36.5-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.
- Apply to basal shoots (suckers) before they have a hardened bark.
- Use a higher rate of 150 mL/ha (60 mL/acre) for control of suckers.
- Severe crop injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.

- Planting year **ONLY** on cherries.
- Tolerant as a directed spray only. **Do NOT** overspray.
- Avoid tree leaves.
- Use lower rate of assist under hot, humid conditions.
- During the planting year apply 10 days apart and at the low rate only.

- New and established plantings.
- For control of broadleaf weeds including vetch at the early flowering stage.
- For best results apply in the spring as a spot treatment when cherries and plums are flowering.
- Apply 25-50 mL/1,000 m² in 300 L of water when using a hand gun or back pack sprayer.
- Avoid contact with tree limbs.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES

- Established plantings of at least 10 years **ONLY**.
- Apply as a directed spray before weeds are 10 cm high.
- Apply in 400-600 L water/ha (160-240 L water/acre) water with a surfactant.
- Avoid contact with fruit, foliage or tree bark with spray or drift.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: PRISM (25 SG) + 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 #: 30057	REI: 12 hours PHI: 14 days Rainfast: 4 hours Max Applications: 1
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Active Ingredient(s): glyphosate (0.36 kg/2 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 9 + 29 PCP #: see label + 30451	REI: 12 hours PHI: 30 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 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.7-5 L/ha + 0.375 L/ha Product Rate/acre: 1.08-2 L/acre + 0.152 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 10 + 29 PCP #: 28532 + 30451	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued***PRECAUTIONS - For more information, see the label.**

- Use a directed spray application adjusted to provide complete coverage of the weeds under the crop canopy.
- **Do NOT** apply more than 60 g/ha (24 g/acre) on a broadcast application basis per year.
- Apply when quackgrass is at 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses at 1-6-leaf stage and redroot pigweed is in the 4-6-leaf stage.

NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS

- Established plantings **ONLY**.
 - Remove all suckers from base of trunks two weeks before application.
 - **Do NOT** apply to trees with green bark in the area of application.
 - **Do NOT** mow or till weeds for at least 5-7 days after application. Wait longer if cool.
 - Repeat application to regrowth may be necessary for complete control.
 - Not all formulations are registered on all crops. See label for specific uses and rates.
- Established plantings **ONLY**.
 - Apply with a rope wick or other similar device when weeds are at the optimum stage.
 - Avoid contact with leaves, trunks and suckers.
 - **Do NOT** apply when weeds are wet.
 - Not all formulations are registered on all crops. See label for specific uses and rates.
- Established plantings **ONLY**.
 - Use hand held sprayers as a spot treatment if wiper equipment is not available.
 - Avoid contact with leaves, trunks and suckers.
 - Not all formulations are registered on all crops. See label for specific uses and rates.
- Established plantings of at least 3 years **ONLY**.
 - **Do NOT** apply to trees with green bark in the area of application.
 - Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.
 - Not all formulations are registered on all crops. See label for specific uses and rates.
- Established plantings of at least 1 year **ONLY**.
 - Apply as a directed spray before weeds are 30 cm (12 in.) high.
 - **Do NOT** apply more than 6.7 L/ha (2.7 L/acre) of IGNITE SN in a year.
- Established plantings of at least 3 years **ONLY**.
 - Apply as a directed spray before weeds are 30 cm (12 in.) high, when the ground is not frozen or snow covered.
 - Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
GRAPES		
Hilling the vines at regular intervals throughout the year will aid in weed control. Be aware that this disruption of the soil will also disturb any residual herbicides. The use of cultivation, mulch or rye cover crops between the rows will provide better water penetration as well as aid in weed control.		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
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: 3 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CASORON G-4 (4%) Product Rate/ha: 110-225 kg/ha Product Rate/acre: 44-90 kg/acre Active Ingredient(s): dichlobenil (4.4-9.0 kg/ha)	Group #: 20 PCP #: 12533	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
Trade Name: CHIKARA (25 WG) Product Rate/ha: 150-200 g/ha Product Rate/acre: 60-80 g/acre Active Ingredient(s): flazasulfuron (37.5-50 g/ha)	Group #: 2 PCP #: 33130	REI: 12 hours PHI: 75 days Rainfast: moisture required for activation Max Applications: 1

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***PRECAUTIONS - For more information, see the label.****GRAPES**

Cultivation after planting is needed to level the soil, and early establishment on trellises or stakes will minimize damage from cultivation. Hilling for winter protection can be started in late summer, and will control late germinating weeds. Removing of hills each spring will also aid in weed control.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Established plantings of at least 5 years **ONLY**.
 - **Do NOT** apply prior to any type of soil disturbance, including hilling/dehilling.
 - Ensure that grapes have been planted at least 30 cm (12 in.) deep or that there is 30 cm (12 in.) of soil barrier between the soil surface and the major portion of the root system.
 - Excessive crop or weed debris present on soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.
-
- Avoid spraying the green bark of young vines by wrapping them with a non-porous wrap, grow tubes or wax containers. Also avoid spraying crop foliage and fruit.
 - Best results obtained when the soil is moist at the time of application and followed by at least 1.25 cm (0.5 in.) of rainfall or sprinkler irrigation 2 weeks after application.
 - **Do NOT** apply heavy irrigation immediately after application.
 - **Do NOT** apply using airblast sprayers or by air or using a mechanically pressurized handgun.
 - **Do NOT** tank mix with flumioxazin (CHATEAU) or other products containing sulfentrazone.
-
- Established plantings of at least 2 years **ONLY**.
 - PRE – Apply to cool moist but unfrozen soil in late fall or spring before weeds emerge.
 - **Do NOT** apply if air temperatures are above 10°C-15°C to avoid injury from volatilization.
 - Apply to dormant healthy vines only.
 - For annual weeds, use 110-175 kg/ha (44-70 kg/acre).
 - For quackgrass, and broadleaf perennial weeds, use 175-225 kg/ha (70-90 kg/acre).
 - Use the higher rate of 225 kg/ha (90 kg/acre) only every other year.
-
- Established plantings of at least 2 years **ONLY**.
 - Apply the lower rate to coarse textured soils with less than 5% organic matter and apply the higher rate to medium textured soils with less than 5% organic matter.
 - **Do NOT** apply within 100 m of non-dormant pears.
 - **Do NOT** apply after bud break unless using hooded or shielded equipment.
 - Please review label for more detailed instructions.
-
- Established plantings of at least 3 years **ONLY**.
 - Make a uniform application to the soil surface in 150 to 450 L water/ha (60-180 L water/acre).
 - Soil surfaces should be clean from crop residue and weed-free at the time of application. If weeds, weed residue or crop residue is present, these should be removed by light mechanical incorporation or other means.
 - **Do NOT** disturb the soil after application.
 - If rainfall does not occur within 2 weeks after the preemergence application, then 0.5-1.25 cm (0.2-0.5 in.) of irrigation water should be applied. **Do NOT** apply more than 2.5 cm (1 in.) of irrigation water.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *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: 18.75 L/ha Product Rate/acre: 7.5 L/acre Active Ingredient(s): napropamide (4.5 kg/ha)	Group #: 15 PCP #: 31688	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 L/ha Product Rate/acre: 0.39 L/acre Active Ingredient(s): (dimethenamid 0.69 kg/ha)	Group #: 15 PCP #: 29194	REI: 24 hours PHI: 30 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: KARMEX (80 DF) Product Rate/ha: 2.25-6.7 kg/ha Product Rate/acre: 0.9-2.68 kg/acre Active Ingredient(s): diuron (1.8-5.36 kg/ha)	Group #: 7 PCP #: 28543	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 2
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 4-5 kg/ha Product Rate/acre: 1.6-2 kg/acre Active Ingredient(s): simazine (3.6-4.5 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 2
Trade Name: SIMADEx (500 g/L) Product Rate/ha: 7.2-9 L/ha Product Rate/acre: 2.9-3.6 L/acre Active Ingredient(s): simazine (3.6-4.5 kg/ha)	Group #: 5 PCP #: 15902	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 2
Trade Name: SIMAZINE (480 g/L) Product Rate/ha: 7.5-9.4 L/ha Product Rate/acre: 3.0-3.76 L/acre Active Ingredient(s): simazine (3.6-4.5 kg/ha)	Group #: 5 PCP #: 23181	REI: 12 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: 30 days Rainfast: 1 hour Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Established plantings ONLY. • PRE – Apply ONLY once per season, either in the fall or spring, before weeds emerge. • Incorporation by rainfall or irrigation is essential • Do NOT apply to frozen ground. • Avoid contact with fruit or foliage.
<ul style="list-style-type: none"> • New and established plantings. • PRE – Rainfall is required within 7-10 days of application to achieve sufficient herbicide activation. • Single application directed under the vines. • Do NOT apply during bud swell, bud break or first flush of new growth.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE – Apply as a directed spray to a 1 m strip under vines before weeds emerge. • On soils low in clay or organic matter (1-2%), use 2.25-3.25 kg/ha (0.9-1.3 kg/acre) of area actually sprayed and on soil high in clay or organic matter use 3.25-6.75 kg/ha (1.30-2.70 kg/acre). • Apply just prior to germination and growth of annual weeds, usually in the spring. • It may be desirable to make a fall treatment or divide applications equally between fall and spring treatments. Do not exceed the above rates per year as injury may result. • When a second application is performed, observe a minimum interval of 90 days between the first application and retreatment.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE – Apply after hills are removed, but before weeds emerge. • May be tank-mixed with IGNITE SN and glyphosate. • After harvest, a second application may be made.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE – Apply after hills are removed, but before weeds emerge. • May be tank-mixed with IGNITE SN and glyphosate. • After harvest, a second application may be made.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE – Apply after hills are removed, but before weeds emerge. • May be tank-mixed with IGNITE SN and glyphosate. • After harvest, a second application may be made.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none"> • New 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). • For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage. • Apply as a banded application to the base of grape vines.

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *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: 0.24-0.80 L/acre Active Ingredient(s): fluazifop-p-butyl (0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: 30 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: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-60.0 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max Applications: 2
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: CHIKARA (25 WG) + non-ionic surfactant Product Rate/ha: 150-200 g/ha + 2.5 L/1,000 L Product Rate/acre: 60-80 g/acre + 2.5 L/1,000 L Active Ingredient(s): flazasulfuron (37.5-50 g/ha) + non-ionic surfactant (0.25% v/v)	Group #: 2 PCP #: 33130	REI: 12 hours PHI: 75 days Rainfast: not specified Max Applications: 1
Trade Name: PRISM (25 SG) + 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 #: 30057	REI: 12 hours PHI: 21 days Rainfast: 4 hours Max Applications: 2
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: ALION 200 SC (200 g/L) + IGNITE SN (150 g/L) Product Rate/ha: 0.375 L/ha + 2.7-5 L/ha Product Rate/acre: 0.152 L/acre + 1.08-2 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 29 + 10 PCP #: 30451 + 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- New and established plantings.
- Apply as banded application to the base of the grape vine.
- 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.
- **Do NOT** use this product on grapes for export to the U.S.

POST-EMERGENCE BROADLEAF HERBICIDES

- New and established plantings.
- Apply post at a rate of 36.5-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows.
- Apply to actively growing weeds up to 10 cm (4 in.) tall.
- Apply to basal shoots (suckers) before they have hardened bark.
- Apply the higher rate of 150 mL/ha (60 mL/acre) to control suckers.
- Severe crop injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES

- Established plantings of at least 3 years **ONLY**.
- Apply only as a directed spray to the soil beneath the vines to prevent injury to the foliage and bark of young vines. Use of a protective sleeve is required for third year vines to minimize injury potential.
- **Do NOT** apply to areas where roots are exposed or suckers are actively growing and have not hardened off.
- **Do NOT** disturb the soil after application.
- Rates listed are for broadcast application. If making a banded application, see the product information section of the label.
- Higher rate is for larger weeds and heavier infestations.
- This product can be tank-mixed with contact burndown herbicides, as well as, triazine herbicides that are labelled for the same use pattern.
- Established plantings of 1 year or more **ONLY** that are in good health and vigor.
- May be applied twice per year when applied as a banded treatment (50% band or less). However, **Do NOT** apply more than 60 g/ha (24 g/acre) on a broadcast application basis per year.
- Apply as and early post-emergence application when quackgrass is at 3-6-leaf stage, annual grasses at 1-6-leaf stage and redroot pigweed in the 4-6-leaf stage.
- Use a directed spray application to completely cover weeds, while minimizing amount of spray on grape plants.

NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS

- Established plantings of at least 5 years **ONLY**.
- Ensure that grapes have been planted at least 30 cm (12 in.) deep or that there is 30 cm (12 in.) of soil barrier between the soil surface and the major portion of the root system.
- Excessive crop or weed debris present on soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L)</p> <p>Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha</p> <p>Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre</p> <p>Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)</p>	<p>Group #: 9 + 29</p> <p>PCP #: see label + 30451</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max Applications: 1</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L)</p> <p>Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha</p> <p>Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre</p> <p>Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)</p>	<p>Group #: 9</p> <p>PCP #: see label</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: 3</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L)</p> <p>Product Rate/ha: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water</p> <p>Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water</p> <p>Active Ingredient(s): glyphosate (0.36 kg/2 L)</p>	<p>Group #: 9</p> <p>PCP #: see label</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: 3</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L)</p> <p>Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water</p> <p>Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water</p> <p>Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)</p>	<p>Group #: 9</p> <p>PCP #: see label</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: 3</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + PRINCEP NINE-T (90 WG)</p> <p>Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 2.5-5 kg/ha</p> <p>Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.64 L/acre, 0.66-3.5 L/acre, 0.61-3.24 L/acre + 1-2 kg/acre</p> <p>Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + simazine (2.25-4.5 kg/ha)</p>	<p>Group #: 9 + 5</p> <p>PCP #: see label + 16370</p>	<p>REI: 12 hours</p> <p>PHI: 40 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: 1</p>

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings of at least 5 years **ONLY**.
- **Do NOT** apply prior to any type of soil disturbance, including hilling/dehilling.
- Ensure that grapes have been planted at least 30 cm (12 in.) deep or that there is 30 cm (12 in.) of soil barrier between the soil surface and the major portion of the root system.
- Excessive crop or weed debris present on soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.

- Established plantings of at least 3 years **ONLY**.
- Direct spray to avoid leaves and green stems of grapevines.
- **Do NOT** mow or till weeds for at least 5-7 days after application. Wait longer if the weather is cool.
- Repeat application to regrowth may be necessary for complete control.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- Apply with a rope wick or other similar device when weeds are at the optimum stage.
- Direct spray to avoid leaves and green stems of grapevines.
- **Do NOT** apply when weeds are wet.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- Use hand held sprayers as a spot treatment if wiper equipment is not available.
- Direct spray to avoid leaves and green stems of grapevines.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- Use as a directed spray avoiding leaves, suckers and green bark on vines.
- Use higher rates for perennial weeds and heavy weed infestations.
- To control emerged weeds with residual control of germinating annual weeds.
- See precautions for glyphosate and simazine.
- Not all formulations are registered on all crops. See label for specific uses and rates.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + PRINCEP NINE-T (90 WG) or SIMADEX (500 g/L) Product Rate/ha: 2.7-5 L/ha + 4-5 kg/ha or 7.2-9 L/ha Product Rate/acre: 1.08-2 L/acre + 1.6-2.0 kg/acre or 2.88-3.6 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (3.6-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 16370 or 15902	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
PEACHES		
Note: Not all herbicides registered for use on peaches are registered on nectarines. Make sure nectarine or crop group 12 is listed on the label before applying the product.		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 480 F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.375 L/ha + 1.5 L/ha Product Rate/acre: 0.152 L/acre + 0.606 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 75 DF (75 %) Product Rate/ha: 0.375 L/ha + 1 kg/ha Product Rate/acre: 0.152 L/acre + 0.404 kg/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 17242	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

<p>PRECAUTIONS - For more information, see the label.</p>
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • Apply as a directed spray before annual weeds are 30 cm (12 in.) high. • Avoid suckers and green bark. • Do NOT apply more than 6.7 L/ha (2.7 L/acre) of product a year.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • Use as a directed spray avoiding leaves, suckers and green bark on vines. • To control emerged weeds with residual control of germinating annual weeds. • See precautions for IGNITE SN and simazine.
<p>PEACHES</p>
<p>SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES</p>
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions). • May be applied at anytime throughout the growing season when the ground is not frozen or snow covered. • Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • Pre-emergence weeds control plus residual control of annual broadleaf weeds.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • Pre-emergence weeds control plus residual control of annual broadleaf weeds.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: CASORON G-4 (4%) Product Rate/ha: 110-175 kg/ha Product Rate/acre: 44-70 kg/acre Active Ingredient(s): dichlobenil (4.4-7 kg/ha)	Group #: 20 PCP #: 12533	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
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 (1.6 kg/ha)	Group #: 15 PCP #: 25729 or 33599	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 1.25-1.75 L/ha + 1.1-2.5 kg/ha Product Rate/acre: 0.5-0.7 L/acre + 0.44-1.0 kg/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + simazine (0.99-4.5 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 16370	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) + LEXONE DF (75%) or SENCOR 75 DF (75%) Product Rate/ha: 1.75 L/ha + 1 kg/ha Product Rate/acre: 0.7 L/acre + 0.4 kg/acre Active Ingredient(s): s-metolachlor (1.6 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: LEXONE DF (75 DF) or SQUADRON (75%) Product Rate/ha: 0.5-1 kg/ha Product Rate/acre: 0.2-0.4 kg/acre Active Ingredient(s): metribuzin (0.38-0.75 kg/ha)	Group #: 5 PCP #: 15959 or 32081	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued***PRECAUTIONS - For more information, see the label.**

- New and established plantings.
 - PRE – Apply to cool, moist soil in spring before weeds emerge or after cultivation.
 - **Do NOT** apply if air temperatures are above 10-15°C to avoid injury from volatilization.
 - **Do NOT** apply until 4 weeks after transplanting.
 - **Do NOT** use on light sandy soils.
 - 70 g applied to an area 2 × 2 m is equivalent to 175 kg/ha (70 kg/acre).
-
- Established plantings of at least 2 years **ONLY**.
 - **Do NOT** apply within 100 m of non-dormant pears.
 - **Do NOT** apply during the period after flowering through leaf drop unless using hooded or shielded equipment.
 - Please review label for more detailed instructions.
-
- Established plantings **ONLY**.
 - PRE – Apply as a band treatment under the trees before weeds emerge.
 - Avoid contact with trunk and leaves of trees.
 - **Do NOT** use on sandy soil with less than 3% organic matter.
-
- New and established non-bearing plantings.
 - PRE – Apply as a band treatment under the trees before weeds emerge, preferably after rain has settled the soil around the trees.
 - **Do NOT** use on sandy soils with less than 2% organic matter.
 - Avoid contact with tree trunks and leaves.
 - Use the high rate on established plantings.
-
- New and established plantings.
 - PRE – Apply post planting, before weeds emerge, preferably after rain has settled the soil around the trees.
 - **Do NOT** use on sandy soils with less than 2% organic matter.
 - Avoid contact with tree trunks and leaves.
 - Use high rate on established plantings.
-
- New and established plantings.
 - PPI – Apply and incorporate before planting trees. Make a single application as a broadcast treatment or within the planting row.
 - PRE – Apply once per year as a band treatment under the trees before weeds emerge.
 - Avoid contact with tree trunks and leaves.
 - Use the higher rate on established plantings.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 1.1-2.2 kg/ha Product Rate/acre: 0.44-0.88 kg/acre Active Ingredient(s): simazine (1.0-2.0 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75%) Product Rate/ha: 1 kg/ha Product Rate/acre: 0.4 kg/acre Active Ingredient(s): metribuzin (0.75 kg/ha)	Group #: 5 PCP #: 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation. Max Applications: 1
Trade Name: SENCOR 75 DF (75 %) + TREFLAN EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 0.55-0.75 kg/ha + 1.2-2.4 L/ha Product Rate/acre: 0.22-0.30 kg/acre + 0.50-0.96 L/acre Active Ingredient(s): metribuzin (0.41-0.56 kg/ha) + trifluralin (0.6-1.15 kg/ha)	Group #: 5 + 3 PCP #: 17242 + 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 1.25 kg/ha Product Rate/acre: 0.5 kg/acre Active Ingredient(s): terbacil (1 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 2.25-4.5 kg/ha Product Rate/acre: 0.9-1.8 kg/acre Active Ingredient(s): terbacil (1.8-3.6 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SINBAR WDG (80 WDG) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 0.63 kg/ha + 1 kg/ha Product Rate/acre: 0.25 kg/acre + 0.4 kg/acre Active Ingredient(s): terbacil (0.5 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 5 + 5 PCP #: 30082 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN 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 (0.60-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: not stated Max. Applications: 1

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

PRECAUTIONS - For more information, see the label.
<ul style="list-style-type: none"> • Planting year ONLY. • PRE – Apply post planting, before weeds emerge, preferably after rain has settled the soil around the trees. • Do NOT use on sandy soils with less than 2% organic matter. • Avoid contact with tree trunks and leaves.
<ul style="list-style-type: none"> • Established (bearing) trees ONLY. • PRE – Apply as a band application under the trees in at least 150-300 L water/ha (60-120 L water/acre).
<ul style="list-style-type: none"> • Planting year ONLY. • PRE – Apply and incorporate before planting trees. • Apply as a broadcast treatment or within the planting row. • Apply higher rates to clay soils.
<ul style="list-style-type: none"> • Planting year. • PRE – Apply after planting trees, before weeds emerge. • Do NOT use on soils with less than 3% organic matter. • Avoid contact with tree trunks and leaves.
<ul style="list-style-type: none"> • Established plantings of at least 3 years ONLY. • PRE – Apply as a band under the trees before weeds emerge. • Do NOT use on soils with less than 3% organic matter.
<ul style="list-style-type: none"> • Established plantings. • PRE – Apply as a band under trees before weeds emerge. • Treatment usually provides partial control of quackgrass, horsenettle and yellow nutsedge. • Do NOT use on soils with less than 3% organic matter.
<ul style="list-style-type: none"> • Planting year ONLY. • PPI – Apply and incorporate before planting trees. • Use at least 100 L water/ha (40 L water/acre). • Apply the higher rate to clay soils.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *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/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 (0.25-2L/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: 0.6-2 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: not stated 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: 2 L/ha, 1.68 L/ha, 1.44 L/ha Product Rate/acre: 0.8 L/acre, 0.67 L/acre, 0.58 L/acre Active Ingredient(s): 2,4-D (0.95 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 80 days Rainfast: 1 day Max. Applications: 1
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-60.0 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max. Applications: 2
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + ASSIST Product Rate/ha: 1.75-2.25 L/ha + 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + oil concentrate (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 25 days Rainfast: 8 hours Max. Applications: 2
Trade Name: LONTREL XC (600 g/L) Product Rate/ha: 0.25-0.5 L/ha Product Rate/acre: 0.1-0.2 L/acre Active Ingredient(s): clopyralid (0.15-0.30 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max. Applications: not stated

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes** *continued*

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE GRASS HERBICIDES
<ul style="list-style-type: none">• New 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).• For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage.
<ul style="list-style-type: none">• Established plantings ONLY.• Apply at 1 L/ha (0.4 L/acre) at 2-5-leaf stage of annual grasses, 2-leaf for foxtails.• Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.
POST-EMERGENCE BROADLEAF HERBICIDES
<ul style="list-style-type: none">• Established plantings ONLY.• For broadleaf weeds, including dandelion, seedling Canada thistle and sow-thistle.• Apply in early spring after weeds emerge or postharvest to actively growing weeds.• Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none">• New and established plantings.• Apply post at a rate of 36.5-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows.• Apply to actively growing weeds up to 10 cm (4 in.) tall.• Apply to basal shoots (suckers) before they have a hardened bark.• Use the higher rate of 150 mL/ha (60 mL/acre) for control of suckers.• Severe crop injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.
<ul style="list-style-type: none">• Planting year ONLY.• Directed spray ONLY. Do NOT overspray.• Avoid tree leaves.• Use lower rate of assist under hot, humid conditions.• During the planting year apply 10 days apart and at the low rate only.
<ul style="list-style-type: none">• New and established plantings.• For control of broadleaf weeds including vetch at the early flowering stage.• For best results apply in the spring as a spot treatment when peaches are flowering.• Apply 25-50 mL/1000 m² in 300 L of water when using a hand gun or back pack sprayer.• Avoid contact with tree limbs.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 9 L/ha Product Rate/acre: 3.6 L/acre Active Ingredient(s): linuron (4.3 kg/ha)	Group #: 7 PCP #: 16279	REI: 12 hours PHI: not stated Rainfast: 8 hours Max Applications: not stated
Trade Name: PRISM (25 SG) + 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 #: 30057	REI: 12 hours PHI: 14 days Rainfast: 4 hours Max Applications: 1
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Active Ingredient(s): glyphosate (0.36 kg/2 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 9 + 29 PCP #: see label + 30451	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 1

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

PRECAUTIONS - For more information, see the label.
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDES
<ul style="list-style-type: none"> Established plantings of at least 1 year ONLY. Apply as a directed spray before weeds are 10 cm high. Apply in 400-600 L water/ha (160-240 L water/acre) with a surfactant. Avoid contact with fruit, foliage or tree bark with spray or drift.
<ul style="list-style-type: none"> Use a directed spray application adjusted to provide complete coverage of the weeds under the crop canopy. Do NOT apply more than 60 g/ha (24 g/acre) on a broadcast application basis per year. Apply when quackgrass is at 3-6-leaf stage (less than 10 cm or 4 in. tall), annual grasses at 1-6-leaf stage and redroot pigweed is in the 4-6-leaf stage.
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS
<ul style="list-style-type: none"> Established plantings ONLY. Remove all suckers from base of trunks two weeks before application. Do NOT apply to trees with green bark in the area of application. Do NOT mow or till weeds for at least 5-7 days after application. Wait longer if cool. Repeat application to regrowth may be necessary for complete control. Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> Established plantings ONLY. Apply with a rope wick or other similar device when weeds are at the optimum stage. Avoid contact with the leaves, trunks and suckers. Do NOT apply when weeds are wet. Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> Established plantings ONLY. Use hand held sprayers as a spot treatment if wiper equipment is not available. Avoid contact with leaves, trunks and suckers. Not all formulations are registered on all crops. See label for specific uses and rates.
<ul style="list-style-type: none"> Established plantings of at least 3 years ONLY. Do NOT apply to trees with green bark in the area of application. Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions. Not all formulations are registered on all crops. See label for specific uses and rates.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.7-5 L/ha + 0.375 L/ha Product Rate/acre: 1.08-2 L/acre + 0.152 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 10 + 29 PCP #: 28532 + 30451	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1
PEARS		
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 480F or METRIX SC HERBICIDE (480 g/L) Product Rate/ha: 0.375 L/ha + 1.5 L/ha Product Rate/acre: 0.152 L/acre + 0.606 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 26280 or 32876	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: ALION 200 SC (200 g/L) + SENCOR 75 DF (75 %) Product Rate/ha: 0.375 L/ha + 1 L/ha Product Rate/acre: 0.152 L/acre + 0.404 L/acre Active Ingredient(s): indaziflam (0.0758 kg/ha) + metribuzin (0.72 kg/ha)	Group #: 29 + 5 PCP #: 30451 + 17242	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 1
Trade Name: CASORON G-4 (4%) Product Rate/ha: 110-175 kg/ha Product Rate/acre: 44-70 kg/acre Active Ingredient(s): dichlobenil (4.4-7.0 kg/ha)	Group #: 20 PCP #: 12533	REI: 24 hours PHI: not stated Rainfast: not stated Max. Applications: 1
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
 - Apply as a directed spray before weeds are 30 cm (12 in.) high.
 - **Do NOT** apply more than 6.7 L/ha (2.7 L/acre) of product a year.
 - Avoid contact with foliage and green bark.
- Established plantings of at least 3 years **ONLY**.
 - Apply as a directed spray before weeds are 30 cm (12 in.) high, when the ground is not frozen or snow covered.
 - Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.

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

- Established plantings of at least 3 years **ONLY**.
 - PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions).
 - May be applied at anytime throughout the growing season when the ground is not frozen or snow covered.
 - Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and reduced weed control.
- Established plantings of at least 3 years **ONLY**.
 - PRE weed control plus residual control of annual broadleaf weeds.
- Established plantings of at least 3 years **ONLY**.
 - PRE weed control plus residual control of annual broadleaf weeds.
- New and established plantings.
 - PRE – Apply to cool, moist soil in spring before weeds emerge or after cultivation.
 - **Do NOT** apply if air temperatures are above 10-15°C to avoid injury from volatilization.
 - **Do NOT** apply until 4 weeks after transplanting.
 - **Do NOT** use on light sandy soils.
 - 70 g applied to an area 2 × 2 m is equivalent to 175 kg/ha (70 kg/acre).
- Established plantings of at least 1 year **ONLY**.
 - Apply to dormant pears **ONLY**.
 - Please review label for more detailed instructions.

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *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: 1.75 L/ha Product Rate/acre: 0.7 L/acre Active Ingredient(s): s-metolachlor (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: DUAL II MAGNUM (915 g/L) or KOMODO HERBICIDE (915 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 1.25-1.75 L/ha + 1.1-2.5 kg/ha Product Rate/acre: 0.5-0.7 L/acre + 0.44-1 kg/acre Active Ingredient(s): s-metolachlor (1.14-1.6 kg/ha) + simazine (1-2-25 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 16370	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) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 1.75 L/ha + 1 kg/ha Product Rate/acre: 0.7 L/acre + 0.4 kg/acre Active Ingredient(s): s-metolachlor (1.6 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 15 + 5 PCP #: 25729 or 33599 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: KERB SC (400 g/L) Product Rate/ha: 5.6 L/ha Product Rate/acre: 2.24 L/acre Active Ingredient(s): propyzamide (2.24 kg/ha)	Group #: 15 PCP #: 30264	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1
Trade Name: LEXONE DF (75 DF) or SQUADRON (75%) Product Rate/ha: 0.5-1 kg/ha Product Rate/acre: 0.2-0.4 kg/acre Active Ingredient(s): metribuzin (0.38-0.75 kg/ha)	Group #: 5 PCP #: 15959 or 32081	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 2.5-5 kg/ha Product Rate/acre: 1-2 kg/acre Active Ingredient(s): simazine (2.25-4.5 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75%) Product Rate/ha: 1 kg/ha Product Rate/acre: 0.4 kg/acre Active Ingredient(s): metribuzin (0.75 kg/ha)	Group #: 5 PCP #: 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation. Max Applications: 1
Trade Name: SIMADEX (500 g/L) Product Rate/ha: 4.5-9 L/ha Product Rate/acre: 1.8-3.6 L/acre Active Ingredient(s): simazine (2.25-4.5 kg/ha)	Group #: 5 PCP #: 15902	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
- PRE – Apply as a band treatment under the trees before weeds emerge.
- Avoid contact with trunk and leaves of trees.
- **Do NOT** use on sandy soil with less than 2% organic matter.

- New and established non-bearing plantings.
- PRE – Apply as a band treatment under the trees before weeds emerge, preferably after rain has settled the soil around the trees.
- **Do NOT** use on sandy soils with less than 2% organic matter.
- Avoid contact with tree trunks and leaves.
- Use the high rate on established plantings.

- Established plantings **ONLY**.
- PRE – Apply as a band treatment under the trees before weeds emerge.
- Avoid contact with trunk and leaves of trees.
- **Do NOT** use on sandy soil with less than 3% organic matter.

- Established plantings of at least 1 year **ONLY**.
- PRE – Apply from late September to early November when soil is cool and moist but not frozen.
- 5.6 L/ha (2.24 L/acre) is equivalent to 56 mL/100 m².

- New and established plantings.
- PPI – Before planting trees.
- PRE – Apply as a band treatment under the trees before weeds emerge.
- Avoid contact with tree trunks and leaves.
- Use high rate on established plantings.
- **Do NOT** use on soils that are coarser than sandy loams with less than 3% organic matter.

- Established plantings of at least 1 year **ONLY**.
- Use the higher rate on perennial weeds such as quackgrass.
- If weeds are emerged before application they can be controlled by either cultivating prior to application or combining simazine with glyphosate.

- Established (bearing) trees **ONLY**.
- PRE – Apply as a band application under the trees in at least 150-300 L water/ha (60-120 L water/acre).

- Established plantings of at least 1 year **ONLY**.
- Use the higher rate on perennial weeds such as quackgrass.
- If weeds are emerged before application they can be controlled by either cultivating prior to application or combining simazine with glyphosate.

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: SIMAZINE (480 g/L) Product Rate/ha: 4.7-9.4 L/ha Product Rate/acre: 1.88-3.76 L/acre Active Ingredient(s): simazine (2.25-4.5 kg/ha)	Group #: 5 PCP #: 23181	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: SENCOR 75 DF (75 %) + TREFLAN EC (480 g/L) or BONANZA 480 (480 g/L) Product Rate/ha: 0.55-0.75 kg/ha + 1.2-2.4 L/ha Product Rate/acre: 0.22-0.30 kg/acre + 0.50-0.96 L/acre Active Ingredient(s): metribuzin (0.41-0.56 kg/ha) + trifluralin (0.6-1.15 kg/ha)	Group #: 5 + 3 PCP #: 17242 + 23933 or 28289	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1
Trade Name: SINBAR WDG (80 WDG) Product Rate/ha: 1.25 kg/ha Product Rate/acre: 0.5 kg/acre Active Ingredient(s): terbacil (1 kg/ha)	Group #: 5 PCP #: 30082	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max Applications: 1
Trade Name: SINBAR WDG (80 WDG) + LEXONE DF (75 DF) or SENCOR 75 DF (75%) Product Rate/ha: 0.63 kg/ha + 1 kg/ha Product Rate/acre: 0.25 kg/acre + 0.4 kg/acre Active Ingredient(s): terbacil (0.5 kg/ha) + metribuzin (0.75 kg/ha)	Group #: 5 + 5 PCP #: 30082 + 15959 or 17242	REI: 12 hours PHI: not stated Rainfast: moisture required for activation Max. Applications: 1
Trade Name: TREFLAN 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 (0.60-1.15 kg/ha)	Group #: 3 PCP #: 23933 or 28289	REI: 12 hours Rainfast: not stated PHI: 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 (0.14-0.50 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
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): fluzafop-p-butyl (0.075-0.25 kg/ha)	Group #: 1 PCP #: 21209	REI: 12 hours PHI: not stated Rainfast: 2 hours Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings of at least 1 year **ONLY**.
- Use the higher rate on perennial weeds such as quackgrass.
- If weeds are emerged before application they can be controlled by either cultivating prior to application or combining simazine with glyphosate.

- Planting year **ONLY**.
- PPI – Before planting trees as an orchard floor or planting row treatment.
- Apply higher rates to clay soils.

- Planting year.
- PRE – Apply after planting trees, before weeds emerge.
- **Do NOT** use on soils with less than 3% organic matter.
- Avoid contact with tree trunks and leaves.

- Established plantings.
- PRE – Apply as a band under trees before weeds emerge.
- Treatment usually provides partial control of quackgrass, horsenettle and yellow nutsedge.
- **Do NOT** use on soil coarser than sandy loam with less than 3% organic matter.

- Planting year **ONLY**.
- PPI – Apply and incorporate before planting trees.
- Apply as a broadcast treatment or within the planting row.
- Apply higher rates to clay soils.

POST-EMERGENCE GRASS HERBICIDES

- New 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).
- For quackgrass, use 1.1 L/ha (0.44 L/acre) up to the 3-leaf stage.

- New and established plantings.
- 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-leaf for foxtails.
- Apply at 2 L/ha (0.8 L/acre) at 3-5-leaf stage of quackgrass and wirestem muhly.

continued

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
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: 2 L/ha, 1.68 L/ha, 1.44 L/ha Product Rate/acre: 0.8 L/acre, 0.67 L/acre, 0.58 L/acre Active Ingredient(s): 2,4-D (0.95 kg/ha)	Group #: 4 PCP #: see label	REI: 12 hours PHI: 80 days Rainfast: 1 day Max. Applications: 1
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 36.5-150 mL/ha + 2.5 L/1,000 L or 1 L/1,000 L Product Rate/acre: 14.6-60.0 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36.0 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max. Applications: 2
Trade Name: BASAGRAN or BENTA SUPER or BROADLOOM (480 g/L) + ASSIST Product Rate/ha: 1.75-2.25 L/ha + 1-2 L/ha Product Rate/acre: 0.7-0.9 L/acre + 0.4-0.8 L/acre Active Ingredient(s): bentazon (0.84-1.08 kg/ha) + oil concentrate (1-2 L/ha)	Group #: 6 PCP #: 12221 or 32827 or 32661	REI: 12 hours PHI: 25 days Rainfast: 8 hours Max. Applications: 2
Trade Name: LONTREL XC (600 g/L) Product Rate/ha: 0.35 L/ha Product Rate/acre: 0.14 L/acre Active Ingredient(s): clopyralid (0.20 kg/ha)	Group #: 4 PCP #: 32795	REI: 12 hours PHI: 30 days Rainfast: 4 hours Max Applications: 1
POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE		
Trade Name: LOROX L (480 g/L) Product Rate/ha: 9 L/ha Product Rate/acre: 3.6 L/acre Active Ingredient(s): linuron (4.3 kg/ha)	Group #: 7 PCP #: 16279	REI: 12 hours PHI: not stated Rainfast: 8 hours Max Applications: not stated
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.****POST-EMERGENCE BROADLEAF HERBICIDES**

- Established plantings **ONLY**.
 - For broadleaf weeds, including dandelion, seedling Canada thistle and sow-thistle.
 - Apply in early spring after weeds emerge or postharvest to actively growing weeds.
 - Not all formulations are registered on all crops. See label for specific uses and rates.
- New and established plantings.
 - Apply post at a rate of 36.5-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows.
 - Apply to actively growing weeds up to 10 cm (4 in.) tall.
 - Apply to basal shoots (suckers) before the bark hardens.
 - To control basal suckers apply at the higher label rate of 150 mL/ha (60 mL/acre).
 - Severe crop injury may result if the spray is allowed to come in contact with the green bark, leaves, bloom or fruit.
- Planting year **ONLY**.
 - Directed spray **ONLY**. **Do NOT** overspray.
 - Avoid tree leaves.
 - Use lower rate of assist under hot, humid conditions.
 - During the planting year, make a maximum of two applications per season, 10 days apart and at the low rate only.
- Bearing and non-bearing trees. Non-bearing trees should be established and over 1 year or older.
 - For best results apply in the spring as a spot treatment at a rate of 56 mL/1000 m² in 200 L of water for control of perennial vetch species and labelled weeds.
 - Avoid contact with tree limbs.

POST-EMERGENCE GRASS AND BROADLEAF HERBICIDE

- Established plantings of at least 10 years **ONLY**.
- Apply as a directed spray before weeds are 10 cm high.
- Apply in 400-600 L water/ha (160-240 L water/acre) with a surfactant.
- Avoid contact with fruit, foliage or tree bark with spray or drift.

NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS

- Established plantings **ONLY**.
- Remove all suckers from base of trunks before application.
- **Do NOT** apply to trees with green bark in the area of application.
- **Do NOT** mow or till weeds for at least 5-7 days after application. Wait longer if cool.
- Repeat application to regrowth may be necessary for complete control.
- Not all formulations are registered on all crops. See label for specific uses and rates.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1 L/2 L water, 0.75 L/ 2 L water, 0.72 L/2 L water, 0.67 L/2 L water Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water Active Ingredient(s): glyphosate (0.36 kg/2 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 30 days Rainfast: 1 hour Max. Applications: 3
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 9 + 29 PCP #: see label + 30451	REI: 12 hours PHI: 30 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 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + ALION 200 SC (200 g/L) Product Rate/ha: 2.7-5 L/ha + 0.375 L/ha Product Rate/acre: 1.08-2 L/acre + 0.152 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + indaziflam (0.075 kg/ha)	Group #: 10 + 29 PCP #: 28532 + 30451	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
- Apply with a rope wick or other similar device when weeds are at the optimum stage.
- Avoid contact with the leaves, trunks and suckers.
- **Do NOT** apply when weeds are wet.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings **ONLY**.
- Use hand held sprayers as a spot treatment if wiper equipment is not available.
- Avoid contact with leaves, trunks and suckers.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- **Do NOT** apply to trees with green bark in the area of application.
- Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 1 year **ONLY**.
- Apply as a directed spray before weeds are 30 cm (12 in.) high.

- Established plantings of at least 3 years **ONLY**.
- Apply as a directed spray before weeds are 30 cm (12 in.) high, when the ground is not frozen or snow covered.
- Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFAST/MAX. APPLICATIONS
Trade Name: IGNITE SN (150 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 2.7-5 L/ha + 2-5 kg/ha Product Rate/acre: 1.08-2 L/acre + 0.8-2 kg/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (1.8-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 16370	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + SIMADDEX (500 g/L) Product Rate/ha: 2.7-5 L/ha + 4.5-9 L/ha Product Rate/acre: 1.08-2 L/acre + 1.8-3.6 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (1.8-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 15902	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
TREE NUTS (CHESTNUT, HAZELNUT, JAPANESE HEARTNUT, PECAN AND WALNUT)		
SOIL-APPLIED BROADLEAF HERBICIDES		
Trade Name: SANDEA (72.6 WG) Product Rate/ha: 47-93 g/ha Product Rate/acre: 19-38 g/acre Active Ingredient(s): halosulfuron (34-68 g/ha)	Group #: 2 PCP #: 31209	REI: 12 hours PHI: 1 day Rainfast: 4 hours Max. Applications: 2–minimum 21 days apart
SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES		
Trade Name: ALION 200 SC (200 g/L) Product Rate/ha: 0.375 L/ha Product Rate/acre: 0.152 L/acre Active Ingredient(s): indaziflam (0.075 kg/ha)	Group #: 29 PCP #: 30451	REI: 12 hours PHI: 14 days Rainfast: moisture required for activation Max. Applications: 1
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: 3 days Rainfast: moisture required for activation Max. Applications: 1

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
- To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
- Use as a directed spray around the bases of trees established at least 1 year.

- Established plantings **ONLY**.
- To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
- Use as a directed spray around the bases of trees established at least 1 year.

TREE NUTS (CHESTNUT, HAZELNUT, JAPANESE HEARTNUT, PECAN AND WALNUT)**SOIL-APPLIED BROADLEAF HERBICIDES**

- Established plantings of 1 or more years **ONLY**.
- Use on chestnuts, hazelnuts, pecans, walnuts, beechnuts and butternuts **ONLY**.
- Use as a directed spray avoiding contact with trunk, stems, roots or foliage or severe damage or death may occur.
- **Do NOT** exceed 186 g/ha (75 g/acre) per season. On coarse textured soils classified as sand, loamy sand, and sandy loam with less than 18% clay and more than 65% sand, or on soils with less than 1% organic matter, **Do NOT** exceed 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** contact green tissue such as foliage, fruit or green bark.
- **Do NOT** apply to gravelly soils.

SOIL-APPLIED GRASS AND BROADLEAF HERBICIDES

- Established plantings of at least 3 years **ONLY**.
- PRE to weeds. Apply to soil before weeds germinate. If weeds have emerged, this product may be tank-mixed with a burndown herbicide (consult label for further instructions).
- May be applied at anytime throughout the growing season when the ground is not frozen or snow covered.
- Excessive crop or weed debris present on the soil surface at time of application may prevent uniform product distribution reaching the soil and result in reduced weed control.
- Avoid spraying the green bark of trunks by wrapping the trunk with a nonporous wrap, grow tubes or wax containers. Also avoid spraying crop foliage and fruit.
- Best results obtained when the soil is moist at the time of application and followed by at least 1.25 cm (0.5 in.) of rainfall or sprinkler irrigation 2 weeks after application.
- **Do NOT** apply heavy irrigation immediately after application.
- **Do NOT** apply using airblast sprayers or by air or using a mechanically pressurized handgun.
- **Do NOT** tank mix with flumioxazin (CHATEAU) or other products containing sulfentrazone.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: CHATEAU WDG (51.1%) Product Rate/ha: 0.28-0.42 kg/ha Product Rate/acre: 0.11-0.17 kg/acre Active Ingredient(s): flumioxazin (0.14-0.21 kg/ha)	Group #: 14 PCP #: 29231	REI: 12 hours PHI: 60 days Rainfast: moisture required for activation Max. Applications: 2
Trade Name: PRINCEP NINE-T (90 WG) Product Rate/ha: 2-2.5 kg/ha Product Rate/acre: 0.8-1.0 kg/acre Active Ingredient(s): simazine (1.80-2.25 kg/ha)	Group #: 5 PCP #: 16370	REI: 12 hours Rainfast: moisture required for activation PHI: not stated Max. Applications: 1
POST-EMERGENCE BROADLEAF HERBICIDES		
Trade Name: AIM EC (240 g/L) + AGRAL 90 or AG-SURF or + MERGE Product Rate/ha: 37-150 mL/ha + 2.5 L/1,000 L or + 1 L/1,000 L Product Rate/acre: 14.6-60 mL/acre + 2.5 L/1,000 L or + 1 L/1,000 L Active Ingredient(s): carfentrazone-ethyl (8.8-36 g/ha) + non-ionic surfactant (0.25% v/v) or + surfactant/solvent (0.1% v/v)	Group #: 14 PCP #: 28573	REI: 12 hours PHI: 3 days weeds; 30 days suckers Rainfast: 8 hours Max Applications: 2
Trade Name: SANDEA (72.6 WG) + non-ionic surfactant Product Rate/ha: 47-93 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 #: 31209	REI: 12 hours PHI: 1 day Rainfast: 4 hours Max. Applications: 2
NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS		
Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) Product Rate/ha: 2.25- 12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre Active Ingredient(s): glyphosate (0.81-4.32 kg/ha)	Group #: 9 PCP #: see label	REI: 12 hours PHI: 14 days Rainfast: 1 hour Max. Applications: not stated for hazelnuts / 2 for walnut, chestnut, Japanese chestnut

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings of at least 1 year **ONLY**.
- Apply the lower rate to coarse textured soil with less than 5% organic matter and apply the higher rate to medium textured soil with less than 5% organic matter.
- **Do NOT** apply within 100 m of non-dormant pears.
- Apply using ground application only.
- **Do NOT** apply after bud break unless using hooded or shielded equipment.
- Please review label for more detailed instructions.

- PRE - 1 application per year in the spring prior to weed emergence.
- Use **ONLY** on established trees of 2 years or more.
- Limited overhead irrigation to 1.25 cm (0.5 in.) after application.
- Use the low rate on sandy soil and the high rate on loam or clay soil or where grass weeds dominate.

POST-EMERGENCE BROADLEAF HERBICIDES

- **New and established plantings.**
- **Maximum 2 applications per year.**
- **Allow 14 days between applications.**
- **Apply POST at a rate of 37-117 mL/ha (14.6-46.8 mL/acre) with a hooded sprayer between the rows to control weeds.**
- **Apply to basal shoots (suckers) before they have hardened bark.**
- **Use the higher rate of 150 mL/ha (60mL/acre) or 75 mL of product per 100 L of water for control of suckers.**
- **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.**
- **Severe injury may result if the spray comes in contact with the green bark, leaves, bloom or fruit.**

- Established plantings of at least 1 year **ONLY**.
- Apply as a single or sequential application, 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** contact green tissue such as foliage, fruit or green bark.

NON-SELECTIVE HERBICIDES AND TANK-MIX OPTIONS

- Established plantings **ONLY**. See labels for registered nut trees.
- Use on actively growing weeds.
- Remove all suckers from base of trunks two weeks before application.
- **Do NOT** apply to trees with green bark in the area of application.
- **Do NOT** mow or till weeds for at least 5-7 days after application. Wait longer if cool.
- Repeat application to regrowth may be necessary for complete control.
- Not all formulations are registered on all crops. See label for specific uses and rates.

TABLE 4-2

Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L)</p> <p>Product Rate/ha: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water</p> <p>Product Rate/acre: 1 L/2 L water, 0.75 L/2 L water, 0.72 L/2 L water, 0.67 L/2 L water</p> <p>Active Ingredient(s): glyphosate (0.36 kg/2 L)</p>	<p>Group #: 9</p> <p>PCP #: see label</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: not stated for hazelnuts / 2 for walnut, chestnut, Japanese chestnut</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L)</p> <p>Product Rate/ha: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water</p> <p>Product Rate/acre: 1-2 L/100 L water, 0.75-1.5 L/100 L water, 0.72-1.44 L/100 L water, 0.67-1.34 L/100 L water</p> <p>Active Ingredient(s): glyphosate (0.36-0.72 kg/100 L)</p>	<p>Group #: 9</p> <p>PCP #: see label</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: not stated for hazelnuts / 2 for walnut, chestnut, Japanese chestnut</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + ALION 200 SC (200 g/L)</p> <p>Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 0.375 L/ha</p> <p>Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 0.152 L/acre</p> <p>Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + indaziflam (0.075 kg/ha)</p>	<p>Group #: 9 + 29</p> <p>PCP #: see label + 30451</p>	<p>REI: 12 hours</p> <p>PHI: 30 days</p> <p>Rainfast: 1 hour</p> <p>Max. Applications: 1</p>
<p>Trade Name: GLYPHOSATE (360 g/L), GLYPHOSATE (480 g/L), GLYPHOSATE (500 g/L), GLYPHOSATE (540 g/L) + SANDEA (72.6 WG) + non-ionic surfactant</p> <p>Product Rate/ha: 2.25-12 L/ha, 1.69-9 L/ha, 1.62-8.64 L/ha, 1.5-8 L/ha + 47-93 g/ha + 2.5 L/1,000 L</p> <p>Product Rate/acre: 0.9-4.8 L/acre, 0.68-3.6 L/acre, 0.65-3.5 L/acre, 0.6-3.2 L/acre + 19-38 g/acre + 2.5 L/1,000 L</p> <p>Active Ingredient(s): glyphosate (0.81-4.32 kg/ha) + halosulfuron (34-68 g/ha) + non-ionic surfactant (0.25% v/v)</p>	<p>Group #: 9 + 2</p> <p>PCP #: see label + 31209</p>	<p>REI: 12 hours</p> <p>PHI: 14 days</p> <p>Rainfast: 4 hours</p> <p>Max. Applications: 1</p>

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**. See labels for registered nut trees.
- Apply with a rope wick or other similar device when weeds are at the optimum stage.
- Avoid contact with the leaves, trunks and suckers.
- **Do NOT** apply when weeds are wet.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings **ONLY**. See labels for registered nut trees.
- Use hand held sprayers as a spot treatment if wiper equipment is not available.
- Avoid contact with leaves, trunks and suckers.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings of at least 3 years **ONLY**.
- Apply **ONLY** to crops of hazelnuts, chestnuts, walnuts and Japanese heartnuts.
- **Do NOT** apply to trees with green bark in the area of application.
- Consult the label of the tank mix partner(s) for further instructions regarding product rates, directions for use, restrictions, personal protective equipment and precautions.
- Not all formulations are registered on all crops. See label for specific uses and rates.

- Established plantings **ONLY**.
- Use on chestnuts, hazelnuts, pecans, walnuts, beechnuts and butternuts **ONLY**.
- Use as a directed spray avoiding contact with trunk, stems, roots or foliage or severe damage or death may occur.
- 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** contact green tissue such as foliage, fruit or green bark.
- **Do NOT** mow or till weeds for at least 5-7 days after application.
- **Do NOT** apply to gravelly soils.
- Not all formulations are registered on all crops. See label for specific uses, rates, and further details.

continued

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued***

TRADE NAME/PRODUCT RATE/ACTIVE INGREDIENT(S)	GROUP/PCP #	REI/PHI/RAINFEST/MAX. APPLICATIONS
Trade Name: IGNITE SN (150 g/L) Product Rate/ha: 2.7-5 L/ha Product Rate/acre: 1.08-2 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha)	Group #: 10 PCP #: 28532	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + PRINCEP NINE-T (90 WG) Product Rate/ha: 2.7-5 L/ha + 2.5-5 kg/ha Product Rate/acre: 1.08-2 L/acre + 1-2 kg/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (2.25-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 16370	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2
Trade Name: IGNITE SN (150 g/L) + SIMADDEX (500 g/L) Product Rate/ha: 2.7-5 L/ha + 4.5-9 L/ha Product Rate/acre: 1.08-2 L/acre + 1.8-3.6 L/acre Active Ingredient(s): glufosinate ammonium (0.405-0.75 kg/ha) + simazine (2.25-4.5 kg/ha)	Group #: 10 + 5 PCP #: 28532 + 15902	REI: 12 hours PHI: 40 days Rainfast: 4 hours Max. Applications: 2

TABLE 4-2**Herbicide treatment rates for tree fruit, tree nuts and grapes *continued*****PRECAUTIONS - For more information, see the label.**

- Established plantings **ONLY**.
 - **Do NOT** apply more than 6.7 L/ha (2.7 L/acre) in one season.
 - Avoid contact of IGNITE SN with green bark, stems or foliage as injury may occur to trees.
 - Only trunks with callused, mature brown bark should be sprayed unless protected from spray contact by nonporous wraps, tree/bark guards, grow tubes or waxed containers.
 - Apply before weeds reach a height of 30 cm (12 in.).
-
- Established plantings of hazelnuts and walnuts **ONLY**.
 - To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
 - Use as a directed spray around the bases of established trees once a year.
-
- Established plantings of hazelnuts and walnuts **ONLY**.
 - To control emerged weeds plus residual control of annual grasses and broadleaf weeds.
 - Use as a directed spray around the bases of established trees once a year.

