

2022



EXTENSION AND ADVISORY TEAM

GUIDE TO WEED MANAGEMENT IN STRAWBERRY

Nova Scotia Guide to Pest Management in Strawberry 2022
[Straw1-22]



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LIABILITY STATEMENT

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CONTENTS

LIABILITY STATEMENT.....	Error! Bookmark not defined.
PESTICIDE EMERGENCY CONTACT INFORMATION	3
ABBREVIATIONS AND CONVERSIONS	3
PLANTING YEAR PRODUCTS.....	4
FRUITING YEAR APPLICATIONS.....	11
RENOVATION PRODUCTS	14
LATE FALL APPLICATION PRODUCTS.....	17
RUNNER SUPPRESSION PRODUCTS	20
PRODUCT TOXICITY.....	21

PESTICIDE EMERGENCY CONTACT INFORMATION

Poison Control Centres		
Nova Scotia	800.565.8161 or 902.470.8161	IWK, Halifax, NS
New Brunswick	911	Ask for Poison Information
Prince Edward Island	800.565.8161 or 902.470.8161	IWK, Halifax, NS
Newfoundland	709.722.1110	Dr. Charles A. Janeway Child Health Care Centre, St. John's, NF

Environmental Emergencies (Pesticide Spills)	
Transport Canada Regional Operations Centre (24 hours)	
Nova Scotia	800.565.1633
New Brunswick	800.565.1633
Prince Edward Island	800.565.1633
Newfoundland	800.563.9089

ABBREVIATIONS & CONVERSIONS

Formulation and Measurement Abbreviations			
FORMULATIONS		MEASUREMENTS	
DF	Dry flowable	mL	millilitre
EC, E	Emulsifiable concentrate	kPa	kilopascal
L	Liquid	kg	kilogram
Sn / Su	Suspension	g	gram
WP/W	Wettable powder	L	litre
		BIU	Billions of International Units
		ppm	parts per million (1000 ppb)
		ppb	parts per billion (1/1000 ppm)

Helpful Conversions ¹	
kPa X 0.14 = pounds per square inch (psi)	millilitres X 0.035 = fluid ounces
hectares X 2.47 = acres	litres X 35 = fluid ounces
kilograms X 2.2 = pounds	litres X 0.22 = imperial gallons
kilograms per hectare X 0.89 = pounds per acre	litres per hectare X 14.17 = fluid ounces per acre
kilograms per hectare X 0.40 = kilograms per acre	litres per hectare X 0.40 = litres per acre
	degree-days C X 1.8 = degree-days F

¹ Pesticide Units of Measurement

It is not recommended to convert label rates to imperial units because there is a high probability of mathematical and rounding errors. Present day pesticides are formulated to be more effective in smaller amounts. Therefore, even small conversion errors can lead to the use of incorrect rates (either too high or too low). Use metric – you will be glad you did!

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
PLANTING YEAR							
Soil Applied: <i>Before Planting</i>	3	trifluralin	Treflan Liquid EC	1.25-2.3 L/ha	12 hours	-	Apply and incorporate in two directions 1-3 weeks before transplanting. May delay establishment in stressful conditions.
			Rival EC	1.2-2.2 L/ha			
	15	s-metolachlor / r-enantiomer	Dual II Magnum or Komodo	1.25-1.75 L/ha	12 hours	30	Apply only once per year. Apply and incorporate or apply post-transplant after weeds emerge. Do not apply to variety Joliette. Do not apply if varieties are being harvested in the planting year.
Soil Applied: <i>2-4 Weeks After Planting</i>	3	chlorthal dimethyl	Dacthal W-75	13.5 kg/ha	12 hours	-	Apply before weed emergence. Shallow cultivation may improve weed control.
	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once per season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Inhibition of daughter plant rooting can occur when soil moisture is low. Do not apply from bloom to harvest.
Soil Applied: <i>4-6 weeks after planting</i>	5	simazine	Princep Nine-T	0.56 kg/ha	12 hours	-	Use only on soils with a pH of 5.6 or lower and more than 2% organic matter. Make this application 4-6 weeks after transplanting, following cultivation. Two applications can be made during the planting year.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Soil Applied: <i>4-6 weeks after planting (cont.)</i>	5	terbacil	Sinbar WDG	0.28-0.55 kg/ha	12 hours	-	Apply when mother plants are well established but before weeds have emerged or are very small. Apply in a minimum of 200 L of water/ha. Moisture required within 2 weeks of application. Use lower rate on sandy soils and on varieties (Kent, Bounty, Micmac, Annapolis, Glooscap and Cavendish). Do not apply to weak or stressed plants. If low rate is applied, booster application of 275 kg/ha may be applied in later summer/early fall.
Applied at planting to dormant plants Broadleaf Weeds	14	flumioxazin	Chateau EZ	224 mL/ha	12 hours	-	Crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions. Severe crop injury will occur when soils are flooded following applications of Chateau EZ. Do not make more than 1 application per growing season. Do not apply through irrigation system, do not allow spray drift to come into contact with fruit or foliage. Application after fruit set may result in spotting of fruit and should be avoided.
	14	flumioxazin	Flumioxazin EZ	224 mL/ha	12 hours	-	Crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions. Severe crop injury will occur when soils are flooded following applications of Chateau EZ. Do not make more than 1 application per growing season. Do not apply through irrigation system, do not allow spray drift to come into contact with fruit or foliage. Application after fruit set may result in spotting of fruit and should be avoided.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Applied at planting to dormant plants Broadleaf Weeds (cont.)	14	Flumioxazin	Chateau WDG	197 grams/ha	12 hours		-same as above
Post Emergence: Grasses 2-4 Weeks After Planting	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Treat in the spring before bloom or after renovation. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 0.5-2 L/ha	12 hours	25	Apply to actively growing grasses before tillering. Apply in 100-200 L of water /ha.
Post Emergence: Broadleaf weeds 2-4 Weeks After Planting	4	2,4-D	2,4-D (470 g/L)	1.0 L/ha	12 hours	-	Use the amine formulation. Apply 2-4 weeks after planting but before the runners root in June. Apply one per season in 100-200 L/ha of water.
	5	phenmedipham and desmedipham	Betamix β EC	1.15 to 1.75 L/ha	24 hours	See remarks	Apply as broadcast spray in 100-200 L of water. Apply when earliest weeds have reached cotyledon stage. Repeat applications at 5-7 day intervals after 1 st application or when next flush of weeds germinates. Max 3 applications per season. Do not spray in excess of 5.25L/ha of Betamix per season. Do not apply to strawberries that bear fruit during the planting year. Do not harvest berries that may develop in the year of planting.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Post Emergence: <i>Non-selective</i> <i>2-4 Weeks After Planting (cont.)</i>	9	glyphosate	Roundup Transorb or Weathermax, Glyfos, Credit etc.	Spot: 1-2% solution Wick wiping: 33% solution (1 part product to 2 parts water)	12 hours	30	Avoid contact with strawberry plants. Maximum one application per year. Apply when weeds are at susceptible growth stage, see label for details.
	14	carfentrazone-ethyl	Aim EC plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Do not apply to strawberry foliage. Shielded inter-row or hooded sprayer applications only. Apply only once per year.
Late Summer/ Early Fall (Labour Day) Soil Applied: <i>Broadleaf and grass weeds</i>	3	chlorthal dimethyl	Dacthal W-75	9-13.5 kg/ha	12 hours	-	Apply before weed emergence. Shallow cultivation may improve weed control.
	5	simazine	Princep Nine-T	0.56 kg/ha	12 hours	-	Use only on soils with a pH of 5.6 or lower and more than 2% organic matter. Make this application after following cultivation, 4-6 weeks after transplanting Two applications can be made during the planting year.
	5	terbacil	Sinbar WDG	0.28-0.55 kg/ha	12 hours	-	Apply before weeds have emerged or when they are very small. Apply in a minimum of 200 L of water/ha Use lower rate on sandy soils and on varieties (Kent, Bounty, Micmac, Annapolis, Glooscap and Cavendish). Do not apply to weak or stressed plants. If low rate has been used a booster application of 275 g/ha may be applied in late summer/early fall. Maximum of 3 applications throughout planting year.
	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once pre season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Inhibition of daughter plant rooting can occur when soil moisture is low.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Post Emergence: <i>Grasses</i>	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	-	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.
Late Fall Soil Applied: <i>Broadleaf and grass weeds</i>	5	terbacil	Sinbar WDG	0.85-1 kg/ha	12 hours	-	Apply before weeds have emerged or when they are very small. To extend weed control through harvest of the following year, apply 0.85-1 kg/ha just before late fall mulching. Apply in a minimum of 200 L of water /ha. Maximum 3 applications throughout planting year. Use lower rate on sandy soils and on varieties (Kent, Bounty, Micmac, Annapolis, Glooscap and Cavendish). Do not apply to weak or stressed plants.
	14	flumioxazin	Chateau	0.197 g/ha	12 hours	7	Apply late fall to dormant plants before mulching.
	14	flumioxazin	Chateau EZ	224 mL/ha	12 hours	7	Broadcast applications can be made to dormant strawberries. Do not make more than one application per growing season.
	14	flumioxazin	Flumioxazin EZ	224 mL/ha	12 hours	-	Apply prior to weed emergence. Broadcast applications may be made to dormant strawberries.
	14	oxyflyorfen	Goal 2XL	1.0 L/ha	24 hours	150	Apply in 500 L of water /ha. Apply to dormant plants before applying mulch in fall. Apply before weeds emerge. Maximum of one application per year.
	14	sulfentrazone	Authority	220-280 ml/ha	12 hours	70	Apply late fall to dormant plants before mulching. Do not apply before a heavy rainfall.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Late Fall Soil Applied: <i>Broadleaf and grass weeds (cont.)</i>	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once per season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Inhibition of daughter plant rooting can occur when soil moisture is low.
Post Emergence: <i>Grasses</i>	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	12 hours	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.
Post Emergence: <i>Non-selective</i>	9	glyphosate	Roundup Transorb or Weathermax, Glyfos, Credit etc.	Spot: 1-2% solution Wick wiping: 33% solution (1 part product to 2 parts water)	12 hours	30	Avoid contact with the strawberry plants. Maximum one application per year. Apply when weeds are at susceptible growth stage, see label for details.
	14	carfentrazone-ethyl	Aim plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Must be applied with a hooded sprayer to control weeds between rows. Apply only once per year. Must be applied in a minimum of 100 L of water/ha. Crop injury will occur if spray is allowed to come in contact with the any part of the crop.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Pre & Post emergence <i>broadleaf weeds</i>	14	Fomesafen	Reflex	1.0 L/ha	12 hours	77	If target weeds have emerged, Reflex must be used with a non-ionic adjuvant or Turbocharge at 0.25 %v/v. For a non-ionic adjuvant use Agral 90 or Citowett at 0.1% v/v of spray solution. Apply in a minimum of 200 L of water per hectare and at a pressure of 245 kPa. Apply during dormancy in the fall or early winter (prior to snowfall). Do not apply to any field more often than once every two years. Do not apply to annual strawberries.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
FRUITING YEAR							
Spring after Mulch Removal Soil Applied: <i>Broadleaf and grass weeds</i>	3	chlorthal dimethyl	Dacthal W-75	13.5 kg/ha	12 hours	-	Apply before weed emergence. Shallow cultivation may improve weed control. Do not apply from first bloom to harvest.
	5	terbacil	Sinbar WDG	0.28-0.350 kg/ha	12 hours	-	Apply when mother plants are well established but before weeds have emerged or when they are very small. Use low rate when Sinbar was used in the fall. Apply in a minimum of 200 L of water/ha. Maximum 2 applications per year. Plants that have had weak growth are subject to serious injury. Use lower rate on sandy soils and on varieties (Kent, Bounty, Micmac, Annapolis, Glooscap and Cavendish). Do not apply to weak or stressed plants.
	14	flumioxazin	Chateau	210 g/ha	12 hours	-	Apply to dormant plants only, immediately after mulch removal. If plants are actively growing crop damage may occur. Otherwise use with a shielded sprayer between rows. Apply only once per growing season. (Pigweeds, ragweed, Lamb's quarters, and dandelion).
	14	sulfentrazone	Authority	220-280 ml/ha	12 hours	70	Apply late fall to dormant plants before mulching. Do not apply before a heavy rainfall.
	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once per season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Do not apply from bloom to harvest.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Spring after Mulch Removal Soil Applied: <i>Broadleaf and grass weeds (cont.)</i>	15	s-metolachlor	Dual II Magnum or Komodo	1.25-1.75 L/ha	12 hours	30	Apply in 150 L/ha of water Strawberry cultivars may vary in their tolerance to Dual II Magnum. Do not apply to the cultivar Joliette. One application per season after mulch removal but before weed emergence.
Post Emergence: <i>Grasses</i>	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	-	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Post Emergence: <i>Non-selective</i>	9	glyphosate	Roundup Transorb or Weathermax Glyfos, Credit etc.	Spot: 1-2% solution Wick wiping: 33% solution (1 part product to 2 parts water)	12 hours	30	Avoid contact with the strawberry plants.
	10	glufosinate ammonium	Ignite SN	<u>2.7 – 4 L/ha</u> (Common Chickweed, Green Foxtail, Lamb's-quarters, Stinkweed, Wild Mustard, Redroot Pigweed) <u>4 – 5 L/ha</u> (Dandelion, Oak-leaved Goosefoot, Wild Buckwheat)	12 hours	1	Apply as a banded application to row middles only, using a hooded or shielded sprayer. Repeat treatments may be necessary to control new germination of annual weeds. Do not make more than 2 applications per year. For best results, apply to emerged, young actively growing weeds. Weeds that emerge after application will not be controlled. Apply before weeds reach a height of 30 cm.
	14	carfentrazone-ethyl	Aim plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Must be applied with a hooded sprayer to control weeds between rows. Apply only once per year. Must be applied in a minimum of 100 L of water/ha. Crop injury will occur if spray is allowed to come in contact with the any part of the crop.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
RENOVATION PRODUCTS							
Post Emergence: <i>Grasses</i>	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	-	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.
Post Emergence: <i>Broadleaf weeds</i>	4	2,4-D	2,4-D (470 g/L)	2.2 L/ha	12 hours	-	Use amine formulation. Apply after harvest but before mowing. Delay mowing for a few days after application. Do not use between mid-August and fall dormancy.
	4	clopyralid	Lontrel 360	0.56-0.83 L/ha	12 hours	200	Apply immediately after harvest and wait 7-10 days before mowing. Apply once per year as a single treatment. (Vetch, Canada Thistle, sheep sorrel, groundsel)
	4	Clopyralid	Pyralid	0.672 L/ha (vetch) 0.996 L/ha (sheep sorrel & ox-eye daisy)	12 hours	-	For control of tufted vetch and Canada thistle and suppression of sheep sorrel and ox-eye daisy. Apply as a broadcast application with a boom sprayer calibrated to deliver a total volume of 150 to 200 L/ha. Summer renovation treatment. Wait 7 to 10 days after application before mowing.
Post Emergence: <i>Non-selective</i>	9	glyphosate	Roundup Transorb or Weathermax, Credit, Glyfos, etc.	Spot: 1-2% solution	12 hours	30	Avoid contact with the strawberry plants.
				Wick wiping: 33% solution (1 part product to 2 parts water)			

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Post Emergence: <i>Non-selective (cont.)</i>	14	carfentrazone-ethyl	Aim plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Must be applied with a hooded sprayer to control weeds between rows. Apply only once per year. Must be applied in a minimum of 100 L of water/ha. Crop injury will occur if spray comes in contact with the any part of the crop.
	26	Pelargonic acid	Beloukha	12-20 L/ha Application volumen 200-300L/ha	When dry	1 day	Use shielded or direct spray to avoid spraying desired vegetation. Use the minimum effective rate for weed control.
Late Summer/ Early Fall (Labour Day) Soil Applied: <i>Broadleaf and grass weeds</i>	5	simazine	Princep Nine-T	0.89-1.12 kg/ha	12 hours	-	Use only on soils with a pH of 5.6 or lower and more than 2% organic matter. Apply after renovation, following cultivation. Use higher rate on heavy weed problems.
	5	terbacil	Sinbar WDG	0.70-0.85 kg/ha	12 hours	-	Apply following renovation, before weeds have emerged or when they are very small. Apply in a minimum of 300 L of water/ha. Use lower rate on sandy soils and on varieties (Annapolis, Bounty, Kent, Micmac, Glooscap and Cavendish). Do not apply to weak or stressed plants.
	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once per season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Inhibition of daughter plant rooting can occur when soil moisture is low.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Post Emergence: <i>Grasses</i>	1	fluazifop-p-butyl	Venture L	0.6-2.0 L/ha	12 hours	30	Use one application per season. Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar.
	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	-	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.
Post Emergence: <i>Non-selective</i>	9	glyphosate	Roundup Transorb or Weathermax, Credit, Glyfos, etc.	Spot: 1-2% solution Wick wiping: 33% solution (1 part product to 2 parts water)	12 hours	30	Avoid contact with the strawberry plants.
	14	carfentrazone-ethyl	Aim plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Must be applied with a hooded sprayer to control weeds between rows. Apply only once per year. Must be applied in a minimum of 100 L of water/ha. Crop injury will occur if spray is allowed to come in contact with the any part of the crop.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
LATE FALL APPLICATION PRODUCTS							
Soil Applied: <i>Broadleaf and grass weeds</i>	3	chlorthal dimethyl	Dacthal W-75	9-13.5 kg/ha	12 hours	-	Apply before weed emergence. Shallow cultivation may improve weed control. Rainfall or irrigation after application is important.
	5	simazine	Princep Nine-T	0.89-1.12 kg/ha	12 hours	-	Use only on soils with a pH of 5.6 or lower and more than 2% organic matter. Make this application following cultivation.
	5	terbacil	Sinbar WDG	0.7-0.85 kg/ha kg/ha	12 hours	-	Apply before weeds have emerged or when they are very small. Apply in a minimum of 200 L of water /ha. Apply before mulching in the late fall. In areas of periodic winter injury, reduce late fall application to 550-700 g/ha. Maximum of two applications per year following rototilling or renovation. Use lower rate on sandy soils and on varieties (Bounty, Micmac, Annapolis, Glooscap, Kent and Cavendish). Do not apply to weak or stressed plants.
	14	flumioxazin	Chateau	210 g/ha	12 hours	-	Apply to dormant plants only, just prior to mulching. Otherwise use with a shielded sprayer between rows. Make only one application per growing season. (Pigweeds, ragweed, Lamb's quarters, and dandelion).
	14	oxyflyorfen	Goal 2XL	1.0 L/ha	24 hours	150	Apply in 500L water /ha. Apply to dormant plants before applying fall mulch. Apply before weeds emerge.
	15	napropamide	Devrinol 50-DF	9 kg/ha	12 hours	-	Apply once per season before weeds emerge or following cultivation. Incorporation by rainfall, irrigation or cultivation is essential. Inhibition of daughter plant rooting can occur when soil moisture is low.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Soil Applied: <i>Broadleaf and grass weeds (cont.)</i>	15	propyzamide	Kerb SC	2.8 l/ha	24 hours	55	To control annual grasses and chickweed, apply Kerb SC Herbicide from late September to early November at a rate of 2.8 L per hectare.
	15	propyzamide	Kerb 50 WP	2.25 kg/ha	24 hours	-	Apply Kerb in 300-500 L of water/ha. Apply in late fall prior to mulching and freeze-up. (buttercup, chickweed, stitchwort and sheep sorrel)
Post Emergence: <i>Grasses</i>	1	sethoxydim	Poast Ultra plus Merge	0.32-1.1 L/ha plus 1-2 L/ha	-	25	Apply to actively growing grasses before tillering. Wait at least 14 days after application before applying Sinbar. Apply in 100-200 L of water /ha.
Post Emergence: <i>Non-selective</i>	9	glyphosate	Roundup Transorb or Weather, Credit, Glyfos, etc.	Spot: 1-2% solution Wick wiping: 33% solution (1 part product to 2 parts water)	12 hours	30	Avoid contact with the strawberry plants.
	14	carfentrazone-ethyl	Aim plus Agral 90	37-117 ml/ha plus 0.25% v/v	12 hours	1	Must be applied with a hooded sprayer to control weeds between rows. Apply only once per year. Must be applied in a minimum of 100 L of water/ha. Crop injury will occur if spray is allowed to come in contact with the any part of the crop.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
Pre & Post emergence <i>broadleaf weeds</i>	14	Fomesafen	Reflex	1.0 L/ha	12 hours	77	If target weeds have emerged, Reflex must be used with a non-ionic adjuvant or Turbocharge at 0.25 %v/v. For a non-ionic adjuvant use Agral 90 or Citowett at 0.1% v/v of spray solution. Apply Reflex in a minimum of 200 L of water per hectare and at a pressure of 245 kPa. Apply during dormancy in the fall or early winter (prior to snowfall). Do not apply to any field more often than once every two years. Do not rotate to another crop in the same season.

Pest	Group	Active Ingredient	Pesticide Product Name	Rate	Restricted Entry Interval (REI)	Pre-harvest Interval (days)	Remarks
<i>RUNNER SUPPRESSION PRODUCTS</i>							
	Plant Growth Regulator	Prohexadione calcium	Apogee	135 g/ha	12 hours	21 days	<p>Apply prior to the beginning of runner initiation for June-bearing and Day-neutral strawberries. The use of a non-ionic surfactant and ammonium sulphate conditioner is recommended. Make subsequent applications at 14–21 day intervals, up to a maximum of 3 applications per season, if required.</p> <p><i>Apogee has been evaluated for phytotoxicity on a wide range of conditions; however, it has not been possible to evaluate all commercially important varieties under every possible condition. Apply Apogee to a small area and evaluate crop safety for 3–5 days before trying a large-scale spray to make certain that no phytotoxicity occurs.</i></p>

For more detailed information on weed management refer to the “Strawberry IPM Weed Management Guide” from the New Brunswick Department of Agriculture, Fisheries and Aquaculture:

<https://www.gnb.ca/0171/20/StrawberryIPM.pdf>

Use the following web link to search for any pesticide label mentioned in this guide, or any other pesticide registered in Canada: <http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php>

Product Toxicity

COMMON NAME	TRADE NAMES	TOXICITY		
		TO BEES	TO APPLICATOR	
			ORAL	DERMAL
2,4-D	2,4-D Amine 500	low	mod	mod
carfentrazone-ethyl	Aim EC	low	low	low
clopyralid	Lontrel	low	low	low
chlorthal dimethyl	Dacthal W-75	low	low	low
fluazifop-p-butyl	Venture	low	low	low
flumioxazin	Chateau	low	low	low
flumioxazin	Flumioxazin	Low	Low	low
fomesafen	Reflex	low	low	low
glyphosate	Roundup, Touchdown, Glyfos	low	low	low
napropamide	Devrinol DF	low	low	low
oxyflyorfen	Goal 2XL	low	low	low
paraquat	Gramoxone	low	high	mod
Pelargonic acid	Beloukha	high	mod	mod
Phenmedipham, desmedipham	Betamix β EC	low	low	low
prohexadione calcium	Apogee	low	low	low
propyzamide	Kerb	low	low	low
simazine	Simazine, Princep Nine-p	low	low	low
sethoxydim	Poast Ultra	low	low	low
s-metolachlor / benoxacor	Dual II Magnum	low	low	low
terbacil	Sinbar	low	low	low
trifluralin	Treflan EC, Rival	low	low	low

References: EXTOKNET (<http://extoxnet.orst.edu/pips/ghindex.html>) and
Individual Product MSDS sheet.