



GUIDE TO WEED MANAGEMENT IN WILD BLUEBERRY

Nova Scotia Guide to Pest Management in Wild Blueberry 2011
[WBLUE2-11]

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IMPORTANT

This publication was compiled by representatives from AgraPoint using information from the Pest Management Regulatory Agency of Health Canada, and specific pesticide labels. **This information is continuously changing and therefore it can cease to be current and accurate. Pesticide labels are the best source of information and should always be consulted prior to using a product.** The label is the best source of information on: registered crop uses, rates, days to harvest, compatibility with other pesticides, toxicity and other special information on its effective and safe use.

By printing this publication, AgraPoint does not offer any warranty or guarantee, nor do they assume any liability for any crop loss, animal loss, health, safety or environmental hazard caused by the use of a pesticide mentioned in this publication.

WARNINGS

This publication is meant to be used as a reference for possible pest control options. Where there are multiple brand names of a specific active ingredient registered in Canada, AgraPoint has only listed a few for reference purposes and as such does not endorse one brand over another. If you have purchased a generic product not specifically in this guide but has your crop and pest on the label, always follow that product label.

If any information in this or any other publication conflicts with the information on the label, always use the label recommendation. If you have an old label, your pesticide supplier should be able to give you the newest label. You are legally responsible for the safe use of pesticides you purchase. This means the safe transport and storage of these materials, the label rates used on crops, and the safe disposal of containers.

Pest	Pesticide Common Name	Pesticide Product Name	Rate	Days to Harvest	Remarks
WEEDS:					
Pre Emergence <i>Broadleaf and Grass weeds</i> <i>(Some tolerance issue have occurred in some fields)</i>	hexazinone	Velpar 75 DF (Sprout year)	1.92-2.56 kg/ha	-	Should be applied in 200 L of water per ha. Apply high rate on heavy and fine textured soils. Apply low rate on sandy and gravelly soils. Apply before the crop emerges from the ground or crop damage may occur. Some weed species have shown tolerance to Velpar in recent years.
		Pronone 10G	14-20 kg/ha	-	Must be applied evenly over an area with a properly calibrated granular applicator. Applications can be made until late June as long as foliage is not wet during application. Water is required to activate the herbicide. Long periods of no rain following treatment can lead to crop damage. Also heavy rains after application can lead to pooling and crop damage.
		Velpar 75 DF (Crop year)	1.3 kg/ha	-	Apply in early spring of fruiting year. Do not apply after buds have begun to break or crop damage may occur. Generally not recommended unless severe weed pressure may limit harvest ability.
<i>Broadleaf weeds and Suppression of Moss</i>	flumioxazin Added September 21st 2011	Chateau WDG	140-210 g/ha (labeled broadleaf weeds) 280-420 g/ha (moss)	-	Only apply Chateau to dormant plants in the sprout year (spring or fall) or as a dormant post harvest application (fall). Unacceptable crop injury and yield loss may occur if product comes into contact with non-

					dormant structures. Make sure spray tank is cleaned according to label recommendations before applying a foliar pesticide. Do not make more than two applications in a growing season. Use low rate in coarse textured soils, high rate in medium textured soils.
<i>Mainly Grasses</i>	terbacil	Sinbar 80 WP	1.5-2.5 kg/ha	-	This product controls mainly grasses and a few broadleaf species. This product needs to be applied in 200 L of water /ha and before the blueberry crop emerges in the spring.
	propyzamide	Kerb 50 WP	3.25-4.5 kg/ha	-	Needs to be applied in the late fall of the crop or sprout year when plants are dormant. Controls mainly grasses and a few broadleaf weeds including sheep sorrel. This product is temperature and moisture dependant, and needs to be applied before the ground is frozen, but when daytime air temperatures are low. (late November). Apply in 300-500 L of water/ha.
	simazine	Simazine 80 WP	1.7-2.5 kg/ha	60	Apply in 300 L/ha. Controls a few grasses and some broadleaf weeds.
		Princep-Nine-T	1.5-2.0 kg/ha	60	
Post Emergence <i>Grasses</i>	fluazifop-p-butyl	Venture L	1.0-2.0 L/ha	60	Can be applied in the cropping or sprouting years. Apply post emergently on actively growing grasses. Max 1 application per year. This herbicide will not control fescue grasses. Although the low rate will control some species it is recommended to use the high rate in most cases.

	sethoxydim	Poast Ultra plus Assist or Merge	1.1 L/ha plus 1% v/v	15	Can be applied in the cropping or sprouting years. Apply post emergently on actively growing grasses. Max 1 application per year. This product is ideal for the control of late emerging grasses like Witchgrass due to the shorter pre-harvest interval.
<i>Broadleaf weeds</i>	mesotrione	Callisto 480 SC plus Agral 90	0.3 L/ha plus 200 ml/100 L of water	60	Make only one application per year. Apply either pre-emergent or post emergent to weeds. Apply in 100-200 L of water/ha. Apply up to the 8 leaf stage of weeds and prebloom to crop.
	tribenuron-methyl	Spartan 75 DF plus Agral 90	0.04 kg/ha plus 200 ml/100 L of water	-	To control Bunchberry. Apply in 150-250 L of water/ha. -Can be applied in early spring of sprout year when bunchberry leaves emerge from ground. -Can also be applied as soon after harvest as possible (within 3-4 weeks) in the cropping year.
Selective Herbicide Treatments <i>Broadleaf weeds – Spot treatments</i>	clopyralid	Lontrel 360 EC	Spot: 42 ml in 200 L/1000m ²	-	Apply in June of sprout year. Later applications may cause damage. Do not treat whole fields with this product as it is registered for spot and small section applications. For small sections apply in a spray volume of 200 L/ha. Will control Vetch spp.
			Small Sections: 420 ml/ha	-	
	nicosulfuron / rimsulfuron	Ultim 75 DF plus Agral 90	4.2 g in 100 L of water plus 200 ml/100 L of water	-	Apply in early summer of sprout year (June-early July). Avoid spraying large areas as some stunting will occur. This product is currently registered for spot treatments of black bulrush.

	tribenuron-methyl	Spartan 75 DF plus Agral 90	2.5g in 10 L of water plus 20 ml/10 L of water	-	Apply as spot treatments in summer and early fall of sprout year. Will control bunchberry, yellow loosestrife, bracken fern, wild rose and others. Some stunting will occur to blueberry plants that were contacted with Spartan.
Non-Selective Herbicide Treatments Spot and wiper treatments	dicamba	Banvel II	2.1 L/1000 L water	-	Mainly used for site preparation. Do not spray blueberry foliage as it will kill the blueberry plant.
	glyphosate	Roundup Original, Roundup Transorb, Glyfos, Touchdown etc.	Spot: 1-2% solution	-	To be used in developing fields, in sprouting year, or in the fall after harvest. Do not spray or touch blueberry foliage as it will kill the blueberry plant.
			Wick wiping: 33% solution (1 part product to 2 parts water)		
	2,4-D	Various products	Consult labels	-	To be used in developing fields, in sprouting year, or in the fall after harvest. Do not spray or touch blueberry foliage as it will kill the blueberry plant.
	triclopyr	Garlon 4	Bark treatment: 1-5 % in oil	-	Can be applied at any time of year and should only be used in developing fields. Do not spray or touch blueberry foliage as it will kill the blueberry plant.
Stump treatment: 20-30% in oil					

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

<http://www.gnb.ca/0171/10/017110020-e.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
clopyralid	Lontrel	low	low	low
dicamba	Banvell II	low	low	low
fluazifop-p-butyl	Venture	low	low	low
glyphosate	Roundup, Touchdown, Glyphos	low	low	low
hexazinone	Velpar, Pronone	low	low	low
mesotrione	Callisto	low	low	low
Nicosulfuron/rimsulfuron	Ultim	low	low	low
propyzamide	Kerb	low	low	low
sethoxydim	Poast Ultra	low	low	low
simazine	Simazine	low	low	low
terbacil	Sinbar	low	low	low
tribenuron-methyl	Spartan	low	low	low
triclopyr	Garlon	low	mod	mod

References: EXTOWNET (<http://extownet.orst.edu/pips/ghindex.html>) and Individual Product MSDS sheets

PESTICIDE EMERGENCY CONTACT INFORMATION

Poison Control Centres		
Nova Scotia	800.565.8161 or 902.428.8161	IWK, Halifax, NS
New Brunswick	911	Ask for Poison Information
Prince Edward Island	800.565.8161 or 902.428.8161	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
F	Flowable	kg	kilogram
G	Granular	g	gram
L	Liquid	L	litre
WDG	Wettable dry granule	BIU	Billions of International Units
WP,W	Wettable powder	ppm	parts per million
SC	Suspension concentrate		
Sn	Solution		
SP	Soluble powder		

Helpful Conversions*	
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

* 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 have greater toxic effects in smaller amounts. Therefore, even small conversion errors can lead to the use of incorrect dosages (either too high or too low). Use metric – you will be glad you did!