

## 2019 Fungicide Selection Guide

Disease	Active Ingredient	Product	Product Rate		PHI (days)	Comments (see label for additional information and precautions)
			kg or L per ha	kg or L per ac		
<b>Sprout Year</b>						
Septoria leaf spot	azoxystrobin + propiconazole	Quilt	1.0	0.4	30	Make 1 application in June after shoots have emerged
	boscalid + pyraclostrobin	Pristine	1.3 - 1.6	0.53 - 0.65	0	Apply prior to disease development and continue on a 7 to 14-day schedule. Max 4 applications.
	chlorothalonil	Bravo 500	7.2	2.9	54	First application in early to mid-June and a second application in early August. Max 2 applications
	chlorothalonil	Bravo ZN	7.2	2.9	54	
	prothioconazole	Proline	0.315	0.128	7	First application at first sign of disease. Additional application may be made 10-14 days later.
Leaf rust	azoxystrobin + propiconazole	Quilt	1.0	0.4	30	Apply at first sign of disease. Second application may be made 10-14 days later.
	chlorothalonil	Bravo 500	7.2	2.9	54	First application in early to mid-June and a second application in early August. Max 2 applications
	chlorothalonil	Bravo ZN	7.2	2.9	54	
	prothioconazole	Proline	0.4	0.16	7	First application at first sign of disease. Additional application may be made 10-14 days later.
	benzobindiflupyr	Aprovia	0.5-0.75	0.2-0.3	365	First application at first sign of disease. Additional application may be made 10-14 days later.
Valdensinia leaf spot	azoxystrobin + propiconazole	Quilt	1.0	0.4	30	Apply at first sign of disease. Second application may be made 10-14 days later.
	boscalid + pyraclostrobin	Pristine	1.3 - 1.6	0.53 - 0.65	0	Apply prior to disease development and continue on a 7 to 14-day schedule. Max 4 applications.
	fluazinam	Allegro	0.4 - 0.8	0.16 - 0.32	30	Apply prior to disease development. Max 4 applications.
	prothioconazole	Proline	0.4			First application at first sign of disease. Additional application may be made 10-14 days later.
	benzobindiflupyr	Aprovia	0.5-0.75	0.2-0.3	365	First application at first sign of disease. Additional application may be made 10-14 days later.

## 2019 Fungicide Selection Guide

Disease	Active Ingredient	Product	Product Rate		PHI (days)	Comments (see label for additional information and precautions)
			kg or L/ha	kg or L/ac		
<b>Crop Year</b>						
Mummy berry	azoxystrobin + propiconazole	Quilt	1.0	0.4	30	First application when flower bud scales first appear (40-50% F2 stage) and a second application 10 days later. Maximum of 2 applications.
	fluazinam	Allegro	2.24	0.91	30	Begin applications at bud break (40-50% F2 stage) and repeat on a 7 to 10 day interval to petal fall. Max 4 applications per season.
	metconazole	Quash	0.18	0.07	7	Apply prior to infection at the green tip stage (40-50% F2 stage). Make repeat applications on a 7 day intervals. Max 3 applications per season. No more than 2 sequential applications.
	penthiopyrad	Fontelis	1.75	0.71	0	Begin applications prior to disease development and continue on a 7 to 14 -day interval. No more than 2 sequential applications.
	propiconazole	Bumper	0.3	0.13	60	First application when flower bud scales first appear and 2 <sup>nd</sup> application 10 days later. Apply late April to mid to late May. 40-50% F2 stage. Maximum of 2 applications.
	propiconazole	Mission	0.3	0.12	60	
	propiconazole	Tilt	0.5	0.2	60	
	propiconazole	Topas	0.5	0.20	60	
		prothioconazole	Proline	0.4	0.16	7
	triforine	Funginex	1.7	0.69	60	Apply late April to mid to late May. 40-50% F2 stage. Maximum 2 applications. Do not use Funginex if exporting blueberries to the USA.
Botrytis blight	boscalid	Cantus	0.56	0.23	0	Apply prior to disease development and continue on a 7 to 14-day schedule. Max 4 applications.
	boscalid + pyraclostrobin	Pristine	1.3 - 1.6	0.53 - 0.65	0	Apply prior to disease development and continue on a 7 to 14-day schedule. Max 2 applications.
	cyprodinil + fludioxonil	Switch	0.78-0.98	0.32 - 0.40	1	First application during early bloom. A second application may be made 7 to 10 days later. Max 3 applications
	fenhexamid	Elevate	1.7	0.69	1	First application during pre-bloom to early bloom. Make no more than 2 sequential application.
	Fluopyram + Pyrimethanil	Luna Tranquility	1.2	0.49	1	First application at early flowering and repeat applications as required at 7-10-day interval. Maximum 2 applications per season.
	isofetamid	Kenja	0.98-1.24	0.39-0.49	0	First application prior to disease development. Maximum 5 applications/season. Do not make more than 2 sequential applications.
	pyrimethanil	Scala	2.0	0.8	1	First application during pre-bloom and repeat at 7-10 day intervals. Max 3 application.
Septoria leaf spot	phosphites	Phostrol	2.9-5.8	1.2-2.3	0	Apply at pre-bloom stage and continue on a 14-day interval. Maximum 4 applications/season
	boscalid + pyraclostrobin	Pristine	1.3 - 1.6	0.53 - 0.65	0	Apply prior to disease development and continue on a 7 to 14-day schedule. Maximum 2 applications/season.
Valdensinia leaf spot	boscalid + pyraclostrobin	Pristine	1.3 - 1.6	0.53 - 0.65	0	Apply at early bloom or at first disease appearance.
	fluazinam	Allegro	0.4 - 0.8	0.16 - 0.32	30	

**Label Information:** Information listed in this guide is provided to growers as a convenience. Pesticides must be applied according to label directions. Please refer to the product label before application and for more information on each product. Label information overrides any discrepancies between information presented in this guide and the label. Label information can be found at the Health Canada Pesticide Label Search, available on-line at <http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php>.

**Pre Harvest Interval (PHI):** The minimum number of days between the last application of the pesticide and harvest.

Additional Information for Fungicides											
Active Ingredient	Product	Group	Hazard	Protective Equipment	Buffer Zone (meter)		Restrictions (hours)		Leaching Potential	Bee Toxicity	Winter Storage
					Aquatic habitat <1m depth	Terrestrial habitat	Rain-Free Period	Re-Entry Interval			
azoxystrobin+propiconazole	Quilt	11 + 3	Warning	a e f h	1	1	1	12	moderate	low	A
benzovindiflupyr	Aprovia	7	Danger	a e h	15	1		12	moderate	low	C
boscalid	Cantus WDG	7	Caution	a e f	1	1	1	12	moderate	low	C
boscalid + pyraclostrobin	Pristine 38 WG	7 + 11	Caution	a e f	10	1	1	24	moderate	low	C
chlorothalonil	Bravo 500/Bravo ZN	M	Caution	a e f h	15	-	1	48	low	low	B
cyprodinil + fludioxonil	Switch 62.5 WG	9 + 12	Caution	a e f	2	-	6	12	low	low	C
fenhexamid	Elevate 50 WDG	17	Caution	a e f j	7	-	6	4	low	low	C
fluazinam	Allegro 500 F	29	Caution	c e g	40	1	6	24	low	low	A
fluopyram + pyrimethanil	Luna Tranquility	7 + 9	Caution	a e f	1	-	48	12	high	low	A
isofentamid	Kenja 400SC	7	Caution	a e f	1	-		12	moderate	low	C
metconazole	Quash	3	Caution	a e f	3	1	2	12	moderate	low	C
phosphites	Phostrol	33	Caution	a e f h	-	-		12	moderate	low	C
pentthiopyrad	Fontelis	7	Caution	a e f	4	-		12	low	low	C
propiconazole	Bumper	3	Warning	a e g h	4	3	1	24	moderate	low	A
propiconazole	Mission 418 EC	3	Warning	c e g h j	4	-	1	24	moderate	low	A
propiconazole	Tilt 250 E	3	Warning	a e f h	4	5	1	24	moderate	low	A
propiconazole	Topas 250 EC	3	Warning	c e g h j	4	-	1	24	moderate	low	A
prothioconazole	Proline 480 SC	3	Caution	a e g h	2	1	6	24	moderate	low	A
pyrimethanil	Scala SC	9	Danger	a e f h	1			12	moderate	low	C
triforine	Funginex 190 DC	3	Danger	c e g h j	-	-	6	24	low	low	A

**Group:** To slow the development of resistance alternate sprays using pesticides from different groups.

**Hazard:** The signal words Danger, Warning and Caution appear on the pesticide label and indicate the level of hazard associated with handling or using the product. Products bearing the signal word **Danger** have an extreme or high hazard rating. Products labeled **Warning** have a moderate hazard rating and a **Caution** warning is associated with a low level of hazard. The degree of hazard may be due to toxicity, flammability, explosiveness or corrosiveness.

**Protection Equipment:** **a** - long-sleeved shirt and long pants, **b** - coveralls or disposable spray suit, **c** - coveralls or disposable spray suit over long sleeved shirt and pants, **d** - waterproof gloves, **e** - chemically-resistant gloves, **f** - shoes plus socks, **g** - chemically resistant footwear plus socks, **h** - protective eye wear, **i** - chemically resistant head gear for overhead application, **j** - approved respirator, **k** - chemical-resistant spray suit.

**Buffer Zones:** Distance between the closest point of direct pesticide application and the nearest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, creeks, marshes, streams, reservoirs and wetlands). Water < 1 m refers to wet areas with less than 1 meter of water depth. All buffer zones are for boom sprayers unless indicated. <sup>1</sup>Suggested minimum buffer zone. <sup>2</sup> Airblast sprayer.

**Rain-free Period:** The recommended minimum time in hours between pesticide application and rain.

**Restricted-Entry Interval (REI):** The minimum time in hours before you can enter a field that has been treated with the pesticide without wearing appropriate protective equipment.

**Leaching Potential:** The potential for a pesticide to be leached or carried by surface run-off is determined by characteristics of both the pesticide and the field. Surface slope, proximity to surface water, low organic matter content, depth to aquifer and heavy rainfall are some of the factors which lead to run-off and leaching problems when combined with pesticides of a moderate to high leaching potential.

**Bee Toxicity:** Degree of toxicity to honey bees. If possible, all pesticide applications should be avoided during times of bee activity within fields, such as mid-day during bloom periods.

**Winter Storage:** Winter storage requirement codes are: **A** - Do not allow to freeze, **B** - Preferably should not freeze. If frozen, return to original state by allowing product to warm to 10-20°C and agitate thoroughly before use, **C** - Not usually damaged by freezing. Store in cool dry place.

Pesticide Emergency Information	
Poison Control Centres	
New Brunswick	Dial 911, ask for Poison Information
Newfoundland	Dr. Charles A. Janeway Child Healthcare Centre, St. John's (709) 722-1110
Nova Scotia Prince Edward Island	The Izaak Walton Killam Hospital for Children, Halifax 1-800-565-8161
Environmental Pesticide Spill	
New Brunswick Prince Edward Island Nova Scotia	1-800-565-1633
Newfoundland	1-800-563-9089
PMRA Websites	
Pesticide Label Search	
<a href="http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php">http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php</a>	
Drift Mitigation	
<a href="#">Buffer Zone Calculator Link</a>	

Helpful Conversions
Units
kPa x 0.14 = pounds per square inch
hectares x 2.47 = acres
kilograms x 2.2 = pounds
1000 grams (g) = 1 kilogram (kg)
millilitres x 0.035 = fluid ounces
litres x 35 = fluid ounces
litres x 0.22 = imperial gallons
1000 millilitres (mL) = 1 Litre (L)
°F = (°C x 9/5) + 32
°C = (°F-32) x 5/9
miles per hour x 1.61 = km per
5 mL = 1 tsp
Volume per Area
kg per ha x 0.89 = pounds per ac
kg per ha x 0.40 = kilograms per ac
g per ha x 0.015 = ounces per ac
tonnes per ha x 0.45 = tons per ac
L per ha x 0.40 = litres per ac
L per ha x 0.09 = gallons per ac
L per ha x 14.17 = fluid ounces per ac
L per ha x 0.71 = pints per acre
mL per ha x 0.015 = fl. ounces per ac
L per ha x 0.11 = US gallons per ac
L per ha x 0.86 = US pints per ac

Abbreviations	
Formulation	Measurements
DF Dry flowable	ac acre
EC,E Emulsifiable	g gram
F Flowable	g.a.e. grams acid equivalent
G Granular	ha hectare
L Liquid	kg kilogram
LV Low Volatile	kPa kilopascal
SC Suspension	L litre
Sn Solution	m metre
SP Soluble Powder	mL millilitre
WDG Water Dispersible	psi pounds per square
WP,W Wettable Powder	% v/v percent volume to
WSP Water Soluble	volume
Personal Protection Equipment	
Gloves	
<b>d</b> - waterproof gloves <b>e</b> - chemical resistant gloves	
Head and Lung	
<b>h</b> - eye protection, application <b>m</b> - approved respirator	
<b>i</b> - chemically resistant headgear for overhead application	
Clothes	
<b>a</b> - long-sleeved shirt/pants <b>b</b> - coveralls or disposable spray	
<b>c</b> - coveralls or disposable spray suit over long sleeved	
<b>k</b> - chemical-resistant spray suit	
Footwear	
<b>f</b> - shoes plus socks <b>g</b> - chemically resistant footwear plus	