

GROUP 3 INSECTICIDE

# Decis® 100 EC INSECTICIDE

**EMULSIFIABLE CONCENTRATE** 

COMMERCIAL

ACTIVE INGREDIENT: Deltamethrin......100 grams per liter

**REGISTRATION NO. 33700 PEST CONTROL PRODUCTS ACT** 



DANGER

**POISON** 

**CORROSIVE TO EYES. SKIN IRRITANT** 

READ THE LABEL AND BOOKLET BEFORE USING

**KEEP OUT OF REACH OF CHILDREN** 

NET CONTENTS: 0.25 L to Bulk

Product Information: 1-(888) 283-6847
<a href="https://www.cropscience.bayer.ca">www.cropscience.bayer.ca</a>
Bayer Cropscience Inc.

200 - 160 Quarry Park Blvd. S.E. Calgary, Alberta T2C 3G3

In case of spills, poisoning or fire, telephone emergency response number 1-800-334-7577 (24 hours a day)

PMRA Approved Label 2018-3459 2020-03-03 SM

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.

Decis 100 EC Insecticide is not a systemic product. It controls insects through contact and/or ingestion. For maximum efficacy, it is necessary to consider the following:

- Application timing: With many insect pests, best results will be obtained when insect populations
  begin to build and before a damaging population becomes established. Ensure that insects are
  contacted during spraying, especially if they are found on the underside of leaves or if the foliage is
  very dense. Repeat applications as required to maintain control.
- Application rate: Rates lower than those recommended are likely to result in poorer performance. The high rates should be used for severe insect pressure.
- Weather conditions: Decis 100 EC should not be applied when temperature inversions are
  prevailing or during periods of excess heat (for example, daytime temperatures greater than 25°C)
  as a reduction in control will result. Best control will be achieved when Decis 100 EC is applied
  during the cooler portions of the day (for example early morning or at dusk).
- Coverage: Sufficient water must be used to ensure thorough, uniform coverage over the entire
  plant surface for optimum insect control. More water may be required when dense foliage is
  present and depending on the type of spray equipment used. Thorough wetting of all plants is
  essential for good results. Raindrop nozzles must not be used. When applying Decis 100 EC
  Insecticide by aircraft, uniform spray coverage is essential. For best results, use sufficient water to
  ensure complete coverage.

Visit us at <u>www.cropscience.bayer.ca</u> or phone 1-888-283-6847 for information on recent additional registrations for Decis 100 EC Insecticide.

#### **PRECAUTIONS**

## KEEP OUT OF REACH OF CHILDREN.

Corrosive to the eyes. DO NOT get in eyes. Wear face shield or goggles. Harmful or fatal if swallowed. Harmful if inhaled. May irritate the skin. Avoid contact with skin and clothing and avoid inhaling/breathing dusts, spray, etc. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

## PROTECTIVE CLOTHING AND EQUIPMENT:

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during mixing, loading and application. Gloves and protective eyewear are not required during application within a closed-cab or cockpit.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings. Note: If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact Bayer CropScience Inc. at 1-888-283-6847 or www.cropscience.bayer.ca.

## **FIRST AID**

PMRA Approved Label 2018-3459 2020-03-03 SM

Take container, label or product name and Pest Control Product registration number with you when seeking medical attention.

IF SWALLOWED	Call a poison control centre or doctor immediately for treatment advice. Do not induce	
	vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid	
	to the person. Do not give anything by mouth to an unconscious person.	
IF ON SKIN OR	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20	
CLOTHING	minutes. Call a poison control centre or doctor for treatment advice.	
IF INHALED	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give	
	artificial respiration, preferably by mouth-to mouth, if possible. Call a poison control	
	centre or doctor for further treatment advice.	
IF IN EYES	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove	
	contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a	
	poison control centre or doctor for treatment advice.	

#### **TOXICOLOGICAL INFORMATION**

Medical personnel should contact the Bayer CropScience medical information services toll-free 1-800-334-7577. Treat symptomatically. Skin exposure may cause transient sensations (tingling, burning, itching, numbness). This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

#### **ENVIRONMENTAL PRECAUTIONS**

TOXIC TO aquatic organisms and non-target terrestrial plants. This product contains an active ingredient and aromatic petroleum distillates, which are toxic to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to small wild mammals.

TOXIC to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying – Best Management Practices" on the Health Canada website (www.canada.ca/pollinators).

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland. Deltamethrin may impact predatory and parasitic arthropod species used in IPM programs within the treatment area. Unsprayed refugia for beneficial species of at least 1 metre from treatment area will help maintain beneficial arthropod populations.

May harm bees and other beneficial insects used in greenhouse production. Avoid application when bees or other beneficial insects are actively foraging in the treatment area.

PMRA Approved Label 2018-3459 2020-03-03 SM

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application of this product when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

#### **STORAGE**

Store this product away from food or feed.

Decis 100 EC Insecticide may solidify at temperatures below -20° C but will become usable at temperatures above 0° C. Keep away from fire, open flame, or other sources of heat. Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination.

## **DISPOSAL**

#### FOR RECYCLABLE CONTAINERS:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank.
- 2. Make the empty container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

## FOR RETURNABLE CONTAINERS:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

## FOR REFILLABLE CONTAINERS:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not use this container for any other purpose.

## DISPOSAL OF UNUSED, UNWANTED PRODUCT:

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill and for cleanup of spills.

GROUP 3 INSECTICIDE



# **Decis® 100 EC INSECTICIDE**

**EMULSIFIABLE CONCENTRATE** 

COMMERCIAL

ACTIVE INGREDIENT: Deltamethrin......100 grams per liter

**REGISTRATION NO. 33700 PEST CONTROL PRODUCTS ACT** 



DANGER

POISON

**CORROSIVE TO EYES. SKIN IRRITANT** 

**READ THE LABEL BEFORE USING** 

**KEEP OUT OF REACH OF CHILDREN** 

NET CONTENTS: 0.25 L to Bulk

Product Information: 1-(888) 283-6847
<a href="https://www.cropscience.bayer.ca">www.cropscience.bayer.ca</a>
Bayer Cropscience Inc.

200 - 160 Quarry Park Blvd. S.E. Calgary, Alberta T2C 3G3

In case of spills, poisoning or fire, telephone emergency response number 1-800-334-7577 (24 hours a day)

# **TABLE OF CONTENTS Section Number GENERAL INFORMATION Notices** 1 The Product 2 **SAFETY AND HANDLING** Precautions, Protective Clothing and 3 Equipment First Aid and Toxicological Information 4 **Environmental Precautions and Information** 5 Storage 6 7 Disposal **DIRECTIONS FOR USE** Crops, Pests, Application Rates and Methods 8 Application Instructions and Use Limitations 9 **Mixing Instructions** 10 Pre-Harvest Interval 11 **Resistance Management Recommendations** 12

#### **GENERAL INFORMATION**

## Section 1: Notices

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.

## **Section 2:** The Product

Decis 100 EC Insecticide is not a systemic product. It controls insects through contact and/or ingestion. For maximum efficacy, it is necessary to consider the following:

- Application timing: With many insect pests, best results will be obtained when insect populations
  begin to build and before a damaging population becomes established. Ensure that insects are
  contacted during spraying, especially if they are found on the underside of leaves or if the foliage is
  very dense. Repeat applications as required to maintain control.
- Application rate: Rates lower than those recommended are likely to result in poorer performance. The high rates should be used for severe insect pressure.
- Weather conditions: Decis 100 EC should not be applied when temperature inversions are
  prevailing or during periods of excess heat (for example, daytime temperatures greater than 25°C)
  as a reduction in control will result. Best control will be achieved when Decis 100 EC is applied
  during the cooler portions of the day (for example early morning or at dusk).
- Coverage: Sufficient water must be used to ensure thorough, uniform coverage over the entire
  plant surface for optimum insect control. More water may be required when dense foliage is
  present and depending on the type of spray equipment used. Thorough wetting of all plants is
  essential for good results. Raindrop nozzles must not be used. When applying Decis 100 EC
  Insecticide by aircraft, uniform spray coverage is essential. For best results, use sufficient water to
  ensure complete coverage.

Visit us at <u>www.cropscience.bayer.ca</u> or phone 1-888-283-6847 for information on recent additional registrations for Decis 100 EC Insecticide.

## **SAFETY AND HANDLING**

## Section 3: Precautions, Protective Clothing and Equipment

## **PRECAUTIONS**

## KEEP OUT OF REACH OF CHILDREN.

Corrosive to the eyes. DO NOT get in eyes. Wear face shield or goggles. Harmful or fatal if swallowed. Harmful if inhaled. May irritate the skin. Avoid contact with skin and clothing and avoid inhaling/breathing dusts, spray, etc. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

## PROTECTIVE CLOTHING AND EQUIPMENT:

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during mixing, loading and application. Gloves and protective eyewear are not required during application within a closed-cab or cockpit.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

Note: If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact Bayer CropScience Inc. at 1-888-283-6847 or www.cropscience.bayer.ca.

Section 4:	First Aid and Toxicological Information	
------------	-----------------------------------------	--

## **FIRST AID**

Take container, label or product name and Pest Control Product registration number with you when seeking medical attention.

IF SWALLOWED	Call a poison control centre or doctor immediately for treatment advice. Do not induce
	vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid
	to the person. Do not give anything by mouth to an unconscious person.
IF IN EYES	Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove
	contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a
	poison control centre or doctor for treatment advice.
IF ON SKIN OR	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20
CLOTHING	minutes. Call a poison control centre or doctor for treatment advice.
IF INHALED	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give
	artificial respiration, preferably by mouth-to mouth, if possible. Call a poison control
	centre or doctor for further treatment advice.

## **TOXICOLOGICAL INFORMATION**

Medical personnel should contact the Bayer CropScience medical information services toll-free 1-800-334-7577. Treat symptomatically. Skin exposure may cause transient sensations (tingling, burning, itching, numbness). This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

Section 5:	Environmental Precautions and Information	
------------	-------------------------------------------	--

#### **ENVIRONMENTAL PRECAUTIONS**

TOXIC TO aquatic organisms and non-target terrestrial plants. This product contains an active ingredient and aromatic petroleum distillates, which are toxic to aquatic organisms. Observe buffer zones specified under DIRECTIONS FOR USE.

PMRA Approved Label 2018-3459 2020- SM Booklet label Toxic to small wild mammals.

TOXIC to bees. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to the evening when most bees are not foraging. Avoid applications when bees are foraging in the treatment area in ground cover containing blooming weeds. To further minimize exposure to pollinators, refer to the complete guidance "Protecting Pollinators during Pesticide Spraying – Best Management Practices" on the Health Canada website (www.canada.ca/pollinators).

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland. Deltamethrin may impact predatory and parasitic arthropod species used in IPM programs within the treatment area. Unsprayed refugia for beneficial species of at least 1 metre from treatment area will help maintain beneficial arthropod populations.

May harm bees and other beneficial insects used in greenhouse production. Avoid application when bees or other beneficial insects are actively foraging in the treatment area.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application of this product when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

## Section 6: Storage

Store this product away from food or feed.

Decis 100EC Insecticide may solidify at temperatures below -20° C but will become usable at temperatures above 0° C. Keep away from fire, open flame, or other sources of heat. Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination.

## Section 7: Disposal

## FOR RECYCLABLE CONTAINERS:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank.
- 2. Make the empty container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

## FOR RETURNABLE CONTAINERS:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

## FOR REFILLABLE CONTAINERS:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not use this container for any other purpose.

## DISPOSAL OF UNUSED, UNWANTED PRODUCT:

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill and for cleanup of spills.

## **DIRECTIONS FOR USE**

Section 8:	Crops, Pests, Application Rates and Methods	
300000000	crops, rests, replication nates and methods	

#### **ALFALFA FOR SEED PRODUCTION ONLY**

INSECTS	RATE (mL/ha)	RECOMMENDATIONS
Alfalfa Weevil	100-125	Apply when insects are present and spraying is recommended. Use the
Lygus Bugs		higher rate when the Alfalfa Weevil is present.
Grasshoppers	50-75	Apply when signs of insect damage are evident and grasshoppers are in the 2-4 nymphal stage. Best control will be achieved when application is made prior to wing development. The higher rate should be used when the proportion of mature and late nymphal stages in the population are high and/or spray penetration is inhibited by dense crop canopy. Under severe insect pressure, application should also be made to a 15-metre strip along fence rows around the field.
Application method	od: Ground ap	plication in 100 – 300 L of water per ha.
Pre-Harvest Inter	val (PHI): 20 da	ıys
DO NOT APPLY M	ORE THAN ON	CE PER YEAR.

## **APPLES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Apple Aphid	100 mL/ha (34 mL	GROUND
	/1000 L of water)	Apply according to provincial recommendations, usually
		17-21 days after petal fall (calyx).
Apple Brown Bug, Mullein Plant Bug	100 mL/ha (34 mL /1000 L of water)	Apply when bugs are present. Follow provincial recommendations

Apple Leaf Curling Midge	100-125 mL/ha (34-43 mL/1000 L of water)	Apply when first signs of damage are visible.
Codling Moth	100-125 mL/ha (34-43 mL/1000L of water)	Apply 7 to 10 days after petal fall (calyx). Repeat sprays at 10 day intervals to a maximum of 3 applications.
Tentiform Leaf Miner (adults only)	125 mL/ha (43 mL /1000 L of water)	Apply when adults are first visible. Thorough coverage on trunk and scaffold limbs is recommended. Decis 100 EC Insecticide is not effective in controlling eggs of mining larvae and should be used to prevent re-infestation of adult generations.
Winter Moth	75 mL/ha (25 mL /1000 L of water)	Apply when first signs of feeding are visible.
Fruit Tree Leafroller, Oblique Banded Leafroller, Pale Apple Leafroller, Eye Spotted Budmoth	100 mL/ha (34 mL /1000 L of water)	Apply when first signs of feeding are visible.
White Apple Leafhopper	100 mL/ha (34 mL/1000 L of water)	Spray when large numbers of adults are present.
Oriental Fruit Moth*	100-125 mL/ha in 3000 L of water	Begin applications when treatment threshold (peak egg hatch) has been reached as indicated by monitoring with pheromone traps in conjunction with degree days. Consult your local extension specialist for advice. Adequate spray coverage is essential for optimum control. The emergence of 3rd or 4th generation of OFM is less synchronized than the 1st or 2nd generations. Alternate with other insecticides for different generations of OFM to delay the insecticide resistance development in the pest populations.

Pre-Harvest Interval (PHI): 1 day

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

DO NOT apply when apple trees are in bloom.

Repeated applications are not advised when integrated pest management is in effect, because severe reductions of beneficial arthropods will result.

## **ASPARAGUS**

<sup>\*</sup>DO NOT apply more than once every 12 days.

<sup>\*</sup>Applications timed for other pests may reduce the number of applications required for this pest.

<sup>\*</sup>For use in Ontario only.

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Asparagus Beetle	100 mL/ha in	GROUND
	200-500 L/ha of	First application should be in spring prior to egg laying.
	water	Application must take place after the spears have been cut.
DO NOT APPLY MORE THAN 3 TIMES PER YEAR.		
DO NOT apply to asparagus prior to the cutting of spears.		

## **BLUEBERRIES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Leaf Tier	75 mL/ha	GROUND
		Apply in the bud cluster stage (just prior to leaf bud opening).
Bruce Spanworm	62.5 mL/ha	Apply when insects or damage first appears. Avoid spraying during flowering.
Pre-Harvest Interval (PHI): 14 days		

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

Apply to lowbush blueberries in 100-200 litres of water per hectare.

Apply to highbush blueberries in 1200-1500 litres of water per hectare.

Minimum interval between applications: 5 days.

## BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS	
Imported	75-100 mL/ha in	GROUND	
Cabbageworm,	350-550 L of water	Apply when insects are present or signs of insect feeding are	
Cabbage Looper,	per ha.	visible.	
Diamondback Moth			
Flea Beetle	75-100 mL/ha in	Apply when insects are present, and actively feeding. Under	
(Cabbage Only)	350-550 L of water	severe pressure, application should also be made to a 15-	
	per ha.	metre strip along fence rows around the field.	
Pre-Harvest Interval (PHI): 1 day (brussel sprouts), 3 days (broccoli, cabbage, cauliflower)			
Minimum interval bety	Minimum interval between applications: 10 days; DO NOT APPLY MORE THAN 8 TIMES PER YEAR		

## **CORN (FIELD AND SEED)**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
European Corn	125-150 mL/ha in at	GROUND
Borer	least 240 L of water per ha.	Apply when egg masses begin to hatch, but no later than when the first pinhole feeding is seen on the leaves. Direct spray into the whorl of the plant. Repeat at 5-8 day intervals. For control of second generation, direct spray at ear zone.

#### DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Bayer CropScience Inc. under the User Requested Minor Use Label Expansion

program. For these uses, Bayer CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS	
		GROUND	
Western Bean Cutworm	125-150 mL/ha in at	Application should be based on the presence of vulnerable	
	least 240 L of water	pest developmental stages and significant populations as	
	per ha.	determined by local monitoring.	
		Repeat at 5-8 day intervals.	
Due Hamiset Internal (DIII), 1 dec.			

Pre-Harvest Interval (PHI): 1 day

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

## **CORN (SWEET)**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Western Bean	125-150 mL/ha in at	GROUND
Cutworm	least 240 L of water per ha	Application should be based on the presence of vulnerable pest developmental stages and significant populations as determined by local monitoring.  Repeat at 5-8 day intervals
	125-150 mL/ha in 11-	AERIAL
	22 L/ha of water	Read instructions for Aerial Application in Section 9.
European Corn Borer	125-150 mL/ha in at least 240 L of water per ha	GROUND Apply when egg masses begin to hatch, but no later than when the first pinhole feeding is seen on the leaves. Direct spray into the whorl of the plant. For control of second generation, direct spray at ear zone. In situations where pest monitoring indicates repeat applications are required, it is recommended that Decis 100 EC Insecticide be alternated with other insecticides.
Corn Earworm	125-150 mL/ha in at least 240 L of water per ha	Apply when insects are present in the silks. Follow provincial spray calendar recommendations.
		AERIAL
European Corn	125-150 mL/ha in 11-	Read instructions for Aerial Application in Section 9.
Borer, Corn	22 L/ha of water.	
Earworm		
Pre-Harvest Interval (PHI): 5 days		

DO NOT APPLY MORE THAN 2 TIMES PER YEAR; only one of which may be by air.

## CROP SUBGROUP 6C DRIED SHELLED PEA AND BEAN (EXCEPT SOYBEAN):

Bean (includes grain lupin, sweet lupin, white lupin and white sweet lupin), bean (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean and wax bean), bean (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, yardlong bean), broad bean (fava bean), chickpea (garbanzo bean), guar, lablab bean (hyacinth bean), lentil, pea (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea), pigeon pea.

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Grasshopper	50-75 mL/ha	Apply when insects are present as young hoppers or signs of insect damage are evident. Apply when the Grasshoppers are in the 2-4 nymphal stage. Best control will be achieved when application is made prior to wing development.
Suppression of Pea Leaf Weevil	75 mL/ha	Make the first application after emergence but prior to the 5 to 6 node stage. Apply while the adults are still present on the plants, before egg laying begins.
Cutworms	100 mL/ha	Apply when larvae are present and feeding. Do not disturb the soil after application.
Lygus Bug	100 mL/ha	Apply when the insects are present at economic thresholds.

Pre-Harvest Interval (PHI): 7 days Maximum 3 applications per year.

Minimum interval between applications: 5-7 days by ground application.

Application method: Ground or aerial.

Ground application: 100 to 200 L of water per hectare

Aerial application: Apply in minimum spray volume of 22 L/ha. Read special instructions for aerial

application in Section 9.

Minimum interval between applications: 5-7 days.

## **CROP SUBGROUP 20A RAPESEEDS:**

Borage, Canola, Crambe, Cuphea, Echium, Flax seed, Gold of Pleasure, Hare's ear mustard, Lesquerella, Lunaria, Meadowfoam, Milkweed, Mustard seed, Oil radish, Poppy seed, Rapeseed, Sesame, Sweet rocket, Cultivars, varieties, and/or hybrids of these commodities

INSECTS	RATE	RECOMMENDATIONS
Beet Webworm	50-75 mL/ha	Apply by ground only when larvae are present and actively feeding. Use the higher rate when infestations are high or canopy is thick.
Bertha Armyworm	50-75 mL/ha	Apply by air only when larvae are present and actively feeding. Use the higher rate when infestations are high or canopy is thick.

Cabbage Seedpod Weevil	100 mL/ha	For control of adult weevil only. Apply when adults are seen on flower buds or developing pods. Must apply prior to egg laying. Consult extension experts for economic threshold.
Clover Cutworm	50-75 mL/ha	Apply when larvae are present and feeding. Do not disturb the soil after application. Apply in sufficient water to ensure thorough coverage.
Cutworms	100 mL/ha	Apply when larvae are present and feeding. Do not disturb the soil after application. Under severe insect pressure, application should also be made to a 15-metre strip along fence- rows around the field. Apply in sufficient water to ensure thorough coverage.
Diamondback Moth	50-75 mL/ha	Apply by air only when insects are actively feeding or when Provincial Letters recommend spraying.
Flea Beetles	50-75 mL/ha	Apply when insects are present. Decis 100 EC Insecticide controls only those insects present. Application should be made when the beetles are actively feeding. Under severe pressure, application should also be made to a 15- metre strip along fence rows around the field.
Grasshoppers	50-75 mL/ha	Apply when signs of insect damage are evident and grasshoppers are in the 2-4 nymphal stage. Best control will be achieved when application is made prior to wing development.  The higher rate should be used when the proportion of mature and late nymphal stages in the grasshopper population are high and spray penetration is inhibited by dense crop canopy. Under severe insect pressure application should also be made to a 15-metre strip along fence rows around the field.
Lygus Bugs	75 mL/ha	Apply when lygus bugs are seen feeding on the buds, flowers and developing pods. Consult extension experts for economic threshold.
Swede Midge	75-100 mL/ha	Begin applications when a significant population of adult midge are observed as determined by local monitoring. Under heavy pressure use the higher rate. Thorough coverage is important to obtain optimum efficacy.

Pre-Harvest Interval (PHI): 7 days

DO NOT APPLY MORE THAN 3 TIMES PER YEAR. If 3 applications are used, only the first or second application can be at 100 mL/ha.

DO NOT apply more than 250 mL/ha per year.

Minimum interval between applications: 5-7 days by ground application.

Application method: Ground or aerial.

Ground application in 100 L of water per hectare.

Aerial application in 20-45 L of water per hectare.

Read special instructions for aerial application in Section 9.

Minimum interval between applications: 5-7 days.

# KALE

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Cabbage Looper,	100 mL/ha in	GROUND
Diamondback Moth,	300-400 L of	Apply when insects are present or signs of insect feeding
Imported Cabbageworm,	water per ha	are visible. Minimum interval between applications: 10
Purplebacked		days. DO NOT APPLY MORE THAN 8 TIMES PER YEAR.
Cabbageworm		

# **ONIONS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Onion Thrip	100 mL/ha in	GROUND
	200-500 L/ha of water	Apply as foliar spray mid-season at proper thrip threshold.
Pre-Harvest Interval (PHI): 5 days		
DO NOT APPLY MORE THAN ONCE PER YEAR.		

# **PEACHES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Peach Twig Borer,	100 mL/ha (34mL	GROUND
Oriental Fruit Moth	/1000 L of water)	Application must occur when insect is visibly present.
Pre-Harvest Interval (PHI): 1 day		
DO NOT APPLY MORE THAN ONCE PER YEAR.		
DO NOT apply when peach trees are in bloom.		

# **PEARS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Pear Psylla	175 mL/ha	GROUND
(nymphs & adults)	(58mL/ 1000 L of water)	Apply when the nymphs and adults first appear. Follow calendar recommendations. Repeated applications are not advised where integrated pest management is in effect because severe reductions of beneficial arthropods will result.
Pear Psylla over wintering adults - B.C. only	100 mL/ha (34 mL/1000 L of water)	Apply when the insect first appears in the spring.
Oriental Fruit Moth	100-125 mL/ha in 3000 L of water	Begin applications when treatment threshold (peak egg hatch) has been reached as indicated by monitoring with pheromone traps in conjunction with degree days. Consult your local extension specialist for advice. Adequate spray coverage is essential for optimum control. The emergence of 3rd or 4th generation of OFM is less synchronized than the 1st or 2nd generations. Alternate with other insecticides for different

	generations of OFM to delay the insecticide resistance
	development in the pest populations.

Pre-Harvest Interval (PHI): 7 days

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

Decis 100 EC Insecticide does not control the hard shell of Pear Psylla.

- \* DO NOT apply more than once every 12 days.
- \* Applications timed for other pests may reduce the number of applications required for this pest.
- \* For use in Ontario only.

## **PEPPERS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
European Corn	125-150 mL/ha in	GROUND
Borer	200-500 L/ha of water	Apply when egg masses begin to hatch or when first signs
		of insect feeding are evident. Repeat at 5-7 day intervals.
Pre-Harvest Interval (PHI): 3 days		
DO NOT APPLY MORE THAN 3 TIMES PER YEAR.		

## **POTATOES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Colorado Potato Beetle, Tarnished Plant Bug, Leafhoppers	50-75 mL/ha in 200–500 L of water per ha	GROUND Apply when insects are present or signs of insect feeding are evident. Repeat as necessary to a maximum of 3 applications per year. Use the higher rate under severe infestations.
Potato Flea Beetle	50-75 mL/ha in 200–500 L of water per ha	Apply when first signs of insects appear and damage is visible.  Decis 100 EC Insecticide controls only those insects present.  Under severe Flea Beetle populations, application should also be made to a 15 metre strip along fence rows around the field.
Potato Aphid, Buckthorn Aphid	125 mL/ha in 300-400 L/ha of water	Apply when insects are present or signs of insect feeding are visible. Repeat if necessary to a maximum of 2 applications per year. Decis 100 EC Insecticide will NOT control Green Peach Aphid.
Tuber Flea Beetle	75-100 mL/ha in 600 L of water per ha	Apply to control first generation of adult flea beetle. Repeat if necessary.
European Corn Borer	75-125 mL/ha in 300-500 L/ha of water	Scout for European corn borer egg masses to determine when egg laying and egg hatch is occurring. Apply Decis 100 EC Insecticide to coincide with peak egg hatch. A second application 5-7 days later may be required during periods of extended egg-laying. Use the high rate to control heavy infestations.

		AERIAL
Colorado Potato	50-75 mL/ha	Apply a maximum of 2 times per year by air if required. Read
Beetle, Tarnished Plant	in 20 to 22 L of	special instructions for aerial application in section 9.
Bug, Leafhopper,	water per ha.	
Potato Flea Beetle		

Pre-Harvest Interval (PHI): 1 day

Minimum interval between applications: 5-7 days.

DO NOT apply to adjacent unregistered crops.

DO NOT APPLY MORE THAN 250 mL product/ha/year by ground, or 150 mL product/ha/year by air. RESISTANCE: Colorado Potato Beetle is known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. The use of Decis 100 EC Insecticide must be alternated with insecticides with a different mode of action. Consult your agricultural advisor for resistance management strategies and recommended pest management practices for your area.

## **RANGELAND, PASTURES\***

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Bayer CropScience Inc. under the User Requested Minor Use Label Expansion program. For these uses, Bayer CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

using standard prai	ctices, to commit the prod	act is suitable for widespread application.
INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Grasshoppers	50-75 mL/ha in 100-	GROUND
	200 L of water per ha.	Apply when insects are young or signs of insect damage are
		evident. Apply when the grasshoppers are in the 2-4
		nymphal stage. Best control will be achieved when
		application is made prior to wing development. DO NOT
		APPLY TO ADJACENT UNREGISTERED CROPS. The higher rate
		should be used when the proportion of mature and late
		nymphal stages in the population are high and/or spray
		penetration is inhibited by dense crop canopy.
		*Under severe insect pressure application should also be
		made to fence row and roadsides as a 15 metre strip.
	75 mL/ha in 11 – 22 L	AERIAL (Rangeland, Pastures)
	of water per ha.	Use as directed and follow special instructions for aerial
		application in Section 9.

DO NOT APPLY MORE THAN TWO TIMES PER YEAR BY AIR.

DO NOT APPLY DECIS 100 EC INSECTICIDE MORE THAN 3 TIMES PER YEAR.

For example, 3 ground applications or 2 ground/1 air or 2 air/1 ground.

Minimum interval between applications: 5-7 days.

## **ESTABLISHED RED CLOVER (for seed production only)**

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Bayer CropScience Inc. under the User Requested Minor Use Label Expansion program. For these uses, Bayer CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Suppression of	125 mL/ha in	GROUND
lesser clover leaf	100-300 L of water	Apply when insects are present. Apply 2 times at a 14 day
weevil	per ha.	interval, at early vegetative stage and when clover is
		budding. Use sufficient water to ensure thorough
		coverage. More water may be required when dense foliage
		is present and depending on the type of spray equipment
		used. Thorough wetting of all plants is essential for good
		results

DO NOT APPLY MORE THAN 2 TIMES PER YEAR. DO NOT use treated crop for feed or forage. DO NOT apply by aerial application equipment.

## **SASKATOON BERRY**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Sawfly, Lygus Bug	1 mL in 4.5 L	GROUND
(Tarnished Plant	water for 100	Apply three times per year, once prior to flowering, once at early
Bug), Hawthorn	m <sup>2</sup> of orchard	flowering, and once after petal drop, observing the pre-harvest
Weevil, Apple	face row.	interval of 21 days. The insect species controlled will appear at
Curculio, Leaf	(Apply mixture	different times of the growing season: Saskatoon Bud Moth &
Miner, Saskatoon	to both sides of	Lygus Bug at inflorescence bud bread (green tip) to tight bud
Bud Moth	each row.)	cluster; Sawfly at 25% bloom; Apple Curculio & Hawthorn Weevil at
		5-10 days after petal fall. Growers are encouraged to apply Decis
		100 EC Insecticide when the insect pest of concern first appears in
		sufficient numbers to cause economic damage.
Pre-Harvest Interval	(PHI): 21 days	

## **SHELTERBELTS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Caragana Aphid, Eastern Spruce Budworm, Spruce Coneworm, Spring Spruce Needle Moth, Spotted Poplar Aphid, Forest Tent Caterpillar, Prairie Tent Caterpillar	45 mL per 100 L of water applied until runoff.	GROUND Apply when insects are actively feeding for best results. Thorough coverage is critical for control.
Forest Tent Caterpillar	50-75 mL/ha in 11 – 22 L of	AERIAL Apply when larvae are actively feeding. Use the

DOURIEL TUDET				
	water per ha.	higher rate when there are large numbers of larvae present and/or heavy foliage which may prevent penetration.		
Blister Beetle, Grey Willow Leaf Beetle	15 mL per 100 L of water applied until runoff.	GROUND Apply when insects are actively feeding for best results. Thorough coverage is critical for control.		
Willow Sawfly	9 mL per 100 L of water applied until runoff.	GROUND Apply when larvae are actively feeding for best results. Thorough coverage is critical for control.		
DO NOT APPLY MORE THAN ONCE PER YEAR.				

# **CHOKECHERRY SHELTERBELTS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Prairie Tent	46 mL product/1000 L	Apply prior to flowering when tents are visible, generally mid
Caterpillar	water	to late May
Ugly Nest Caterpillar	46 mL product/1000 L	Apply after flowering when tents are visible, generally early to mid June
Caterpillal	Water	to find June
Fruittree Leafroller	46 mL product/1000 L	Apply after flowering when damage is first noted, generally
	water	early to mid June
DO NOT APPLY MORE THAN ONCE PER YEAR. Apply as a foliar spray; ground application only.		
Apply so leaves are wet but not dripping.		

## **STRAWBERRIES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Tarnished Plant	100 mL/ha (34	GROUND
Bug	mL/1000 L of water)	Apply when insects are present or when signs of insect
		feeding are visible. Repeat if necessary. Decis 100 EC
		Insecticide will NOT control Strawberry Weevil.
Pre-Harvest Interval (PHI): 14 days		
DO NOT APPLY MORE THAN 2 TIMES PER YEAR. Minimum interval between applications: 5 days.		

## **SUNFLOWERS**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Sunflower Beetle	50 mL/ha in 100 -200	GROUND
	L of water per ha.	ADULTS: Apply when the insect is present or signs of insect
		damage appear. Crops should be sprayed when in the
		cotyledon to 2-leaf stage.
	50 mL/ha in 11 - 22 L	AERIAL
	of water per ha.	ADULTS & LARVAE: Apply once per year when the insect is
		present or signs of insect damage appear. Heads should be
		carefully examined for larvae. Application at dusk when
		insects are actively feeding is preferable. Read instructions
		for Aerial Application in Section 9.
Pre-Harvest Interval	(PHI): 70 days	
DO NOT APPLY MOR	RE THAN ONCE PER YEAR	N FIELD.

## **TOBACCO**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Cutworm	2 mL in 15 L of water	GREENHOUSE
	per 100 m <sup>2</sup> of	Apply when damage first appears. Plants should be
	seedbed	sprayed in the evening. DO NOT APPLY MORE THAN 3

		TIMES PER YEAR IN GREENHOUSE
	50 mL/ha in 200- 500 L of water per ha	GROUND - RYE OR WHEAT COVER CROP Apply when insects are present and feeding. This is usually in the evening. Apply at least 5 days prior to plowing.
	100-200 mL/ha in 200-500 L of water per ha	PRE-PLANT SOIL TREATMENT Apply at least 5 days prior to transplanting. Do not disturb the soil before transplanting. Use the higher rate when soil conditions are dry.
į	100 mL/ha in 200- 500 L of water as a broadcast application	POST-PLANTING TREATMENT Apply when insects are present or there are signs of insect damage.

Pre-Harvest Interval (PHI): 45 days

DO NOT APPLY MORE THAN ONCE PER YEAR IN FIELD

Under severe insect pressure, application should also be made to fence-rows and a 15 metre strip into nearby cover crops.

## **TOMATOES**

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Colorado Potato	50-75 mL/ha in 200 -	GROUND
Beetle	500 L of water per ha.	Apply when insects are present or signs of insect feeding are
		evident. Use the higher rate under severe infestation.

Pre-Harvest Interval (PHI): 3 days

DO NOT APPLY MORE THAN 3 TIMES PER YEAR. Minimum interval between applications: 5 days. RESISTANCE: Colorado Potato Beetle is known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. The use of Decis 100 EC Insecticide must be alternated with insecticides with a different mode of action. Consult your agricultural advisor for resistance management strategies and recommended pest management practices for your area.

## WHEAT, BARLEY, OATS, SUGARBEETS

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Cutworm	100 mL/ha in 100 L of	GROUND OR AERIAL
	water per ha.	Apply when larvae are present and feeding. Do not disturb
		the soil after application. Under severe insect pressure,
		application should also be made to a 15-metre strip along
		fence- rows around the field.
		DO NOT APPLY TO ADJACENT CROPS.
		Follow special instructions for aerial application in Section 9.

Pre-Harvest Interval (PHI): 40 days (wheat, barley), 31 days (oats), 100 days (sugarbeets) DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

Decis 100 EC Insecticide may be used for a maximum of 2 aerial applications per year.

Minimum interval between applications: 5-7 days.

## WHEAT, BARLEY, OATS

INSECTS	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Grasshopper	50-75 mL/ha	GROUND
	in 100-200 L	Follow provincial forecast. Apply when insects are present as young
	of water per	hoppers or signs of insect damage are evident.
	ha.	Apply when the Grasshoppers are in the 2-4 nymphal stage. Best control
		will be achieved when application is made prior to wing development.
		Under severe insect pressure application should also be made to a 15-
		metre strip along fence rows around the field.
		DO NOT APPLY TO UNREGISTERED CROPS. The higher rate should be used
		when the proportion of mature and late nymphal stages in the population
		is high and spray penetration is inhibited by dense crop canopy.
	75 mL/ha in	AERIAL
	11 – 22 L of	Use as directed and follow special instructions for aerial application in
	water per ha.	Section 9. Do not make aerial application of tank-mix of Decis 100 EC
		Insecticide with Buctril M herbicide and Puma Advance herbicide.

Pre-Harvest Interval (PHI): 40 days (wheat, barley), 31 days (oats)

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

Decis 100 EC Insecticide may be used for a maximum of 2 aerial applications per year.

Minimum interval between applications: 5-7 days.

## **COMMERCIAL GREENHOUSE FLORICULTURE CROPS**

(Chrysanthemum, Cineraria, Easter Lilies, Geraniums)

INSECT	RATE	METHOD OF APPLICATION AND RECOMMENDATIONS
Western	17.5-25 mL per	Foliar Application: Apply as a high volume spray using a compressed air
Flower	100 L of water	sprayer. Spray to run-off to ensure complete coverage. Three (3)
Thrip		applications at 5-7 day intervals may be necessary to achieve control.
		Consult local greenhouse advisors for timing, identification of thrip species
		and information on rotation of materials to reduce resistance possibilities.
		PRECAUTION: All species and varieties have not been tested. When
		treating large numbers of plants of a single variety, treat a few plants and
		observe prior to full-scale application.
-		

Pre-Harvest Interval (PHI): 7 days

DO NOT APPLY MORE THAN 3 TIMES PER YEAR.

DO NOT apply Decis 100 EC Insecticide with fogging machines.

RE-ENTRY PERIOD: Allow 12 hours between application and re-entry into treated area. When working with treated foliage, workers should wear chemical resistant gloves.

Section 9:	<b>Application Instructions and Limitations</b>
------------	-------------------------------------------------

PMRA Approved Label 2018-3459 2020- SM

Booklet label

Where a rate range is given in the Directions For Use, the higher rate should be utilised:

- 1. when the crop canopy is dense and foliage is inhibiting spray penetration.
- 2. when a number of insect growth stages are present (for example 1st through 5th nymphal stages of grasshoppers OR larvae and adults of Colorado Potato Beetle).
- 3. when insect populations are very high.

Unless otherwise stated, apply Decis 100 EC Insecticide when insects first appear and repeat as required to maintain control. Use sufficient water to ensure thorough coverage. More water may be required when dense foliage is present and depending on the type of spray equipment used. Thorough wetting of all plants is essential for good results. It is suggested that provincial spray calendar recommendations be followed.

Refer to AERIAL APPLICATION section of this label for appropriate cautions when using aerial application equipment.

Use the rates listed above for both ground and aerial application. Decis 100 EC Insecticide may be applied by air only on crops specified for aerial use. See AERIAL APPLICATION section of this label for adjustment of water volumes.

Not for use by homeowners or other uncertified users.

Not permitted for application using handheld mistblower and/or fogger machine (handheld and automated) in greenhouses.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

To protect pollinators, follow the instructions regarding bes in the Environmental Precautions section.

## **AERIAL APPLICATION:**

Decis 100 EC Insecticide may be applied by aircraft to Wheat, Barley, Oats, Crop Subgroup 6C, Crop Subgroup 20A, Sunflowers, Sugarbeets, Shelterbelts (Forest Tent Caterpillar only), Potatoes, Corn (sweet), Range land, and Pastures.

<u>Field sprayer application</u>: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1)

medium classification. Air-induction nozzles must be used for the ground application of this product. Boom height must be 60 cm or less above the crop or ground.

<u>Airblast application</u>: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

<u>Aerial application</u>: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 8 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium-coarse classification. DO NOT apply under weather conditions of less than 50% relative humidity and temperatures greater than 20°C. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

## **USE PRECAUTIONS:**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides. Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed. Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

## **OPERATOR PRECAUTIONS:**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilot has communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

## **BUFFER ZONES:**

Use of the following spray methods or equipment DOT NOT require a buffer zone: hand-held or backpack sprayer and spot treatments.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats

(such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), and estuarine/marine habitats.

	Crop		Buffer Zones (metres) Required for the Protection of:					
Method of application			Freshwater Habitat of Depths:		Estuarine/Marine Habitat of Depths:		Terrestrial Habitat:	
				Greater than 1 m	Less than 1	Greater than 1		
	Alfalfa, red-clover established (for seed production only), Potato		1	1	35	15	1	
	Crop Subgroup 20	Asparagus, Crop Subgroup 6C, Crop Subgroup 20A, strawberries, wheat, barley, oat, sugarbeet		1	30	15	1	
	Blueberry, rangela tomato	ind, pasture,	1	1	25	10	0	
Field sprayer	Broccoli, Brussel s cabbage, cauliflow		2	1	30	15	1	
	Corn (field, seed a pepper	nd sweet),	1	1	45	20	1	
	Onion, tobacco (po	Onion, tobacco (post plant)		1	30	15	0	
	Shelterbelt	Shelterbelt		2	120	120	1	
	Chokecherry shelt	Chokecherry shelterbelt		1	40	20	1	
	Sunflower, tobacco (cover crop)		1	1	15	10	0	
	Tobacco (pre-plan	t)	1	1	55	25	1	
	Apple	Early Season	45	35	80	75	2	
		Late Season	35	25	70	65	2	
	Pear	Early Season	45	35	85	75	3	
		Late Season	35	25	75	65	2	
	Peach	Early Season	30	20	80	70	0	
Airblast		Late Season	20	10	70	60	0	
MIDIASI	Blueberry, Saskatoon Berry	Early Season	40	30	80	70	2	
		Late Season	30	20	70	60	1	
	Shelterbelt	Early Season	55	45	105	95	10	
		Late Season	45	35	95	85	5	
	Chokecherry shelterbelt	Early Season	35	25	85	75	1	
	SHEILEIDEIL	Late Season	25	15	75	65	1	
	Crop Subgroup	Fixed wing	80	25	800	800	10	
	6C	Rotary wing	65	20	800	800	10	
Aerial	Sweet corn	Fixed wing	40	15	800	800	1	
wilai	OWGGE COITI	Rotary wing	30	10	800	800	1	
	Crop Subgroup	Fixed wing	65	20	800	800	10	
	20A	Rotary wing	50	15	800	800	10	

	Potato,	Fixed wing	35	10	800	800	1
	rangeland, pasture	Rotary wing	25	10	800	800	1
-	Wheat, barley,	Fixed wing	50	15	800	800	10
	oats, sugarbeet	Rotary wing	45	10	800	800	10
	Shelterbelt	Fixed wing	15	10	800	800	0
	Shellerbeit	Rotary wing	10	5	800	800	0
	Sunflower	Fixed wing	10	5	800	800	0
	Surmower	Rotary wing	10	5	800	675	0

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The buffer zones for this product CANNOT be modified using the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

## **Section 10:** Mixing Instructions

The volumes of water may vary greatly, depending on the equipment, the crop, and cultural conditions. The volumes of water to be used will vary between 11 and 1,000 litres per hectare.

Ensure spray tank is thoroughly clean. Fill sprayer half-full with clean water. Add product while agitating. Add the remaining amount of water.

#### **TANK MIX COMBINATIONS**

Decis 100 EC Insecticide can be tank mixed with a number of herbicides for the control of insect pests (specified on this label) and annual grassy and broadleaf weeds (see list of susceptible weeds on the respective herbicide labels). Carefully read respective labels for proper use. The following herbicides are compatible:

PARDNER®	BANVEL®	2,4-D	BUCTRIL® M	MCPA	PUMA
ADVANCE®	PUMA ADVANCE® with E	BUCTRIL® M			

Decis 100 EC Insecticide can be tank mixed with Puma Advance for the control of grasshoppers and annual grassy weeds or with Puma Advance and Buctril M for the control of grasshoppers and annual grassy weeds and broadleaf weeds in SPRING WHEAT AND DURUM WHEAT ONLY. The durum wheat cultivar "Plenty" may sustain an elevated level of injury following application of Decis 100 EC Insecticide with Puma Advance and Buctril M.

Spray mixture must be constantly agitated throughout application. Do not allow the spray mixture to stand in the spray tank for more than 4 hours after mixing.

When applied as a tank-mix combination, read and observe all label directions, including rates, personal protective equipment, restrictions and precautions for each product used in the tank-mix. Always use in accordance with the most restrictive label restrictions and precautions.

## Section 11: Pre-Harvest Interval

Crop	Pre-harvest Interval (days)
Alfalfa	20
Apples	1
Barley	40
Blueberries	14
Broccoli	3
Brussels Sprouts	1
Cabbage	3
Crop Subgroup 20A	7
Crop Subgroup 6C	7
Cauliflower	3
Corn (field and seed)	1
Corn (sweet)	5
Floriculture	7
Kale	1
Mustard	14
Oats	31
Onions	5
Peaches	1
Pears	7
Peppers	3
Potatoes	1
Strawberries	14
Sunflowers	70
Tobacco	45
Tomatoes	3
Wheat	40

## **Section 12:** Resistance Management Recommendations

For resistance management, please note that Decis 100 EC Insecticide contains a Group 3 insecticide. Any insect population may contain individuals naturally resistant to Decis 100 EC Insecticide and other Group 3 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

## To delay insecticide resistance:

- Where possible, rotate the use of Decis 100 EC Insecticide or other Group 3 insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group that is effective on the target pest when such use is permitted.

- Insecticide use should be based on an integrated pest management (IPM) program that includes scouting and record keeping and considers cultural, biological, and other chemical control practices;
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

For further information or to report suspected resistance, contact Bayer CropScience at 1-888-283-6847.

FOR MORE INFORMATION CONTACT:
BAYER CROPSCIENCE INC.
200-160 Quarry Park Blvd. S.E.
Calgary, Alberta
T2C 3G3
1-(888) 283-6847

DISCLAIMER: The user assumes the risk to persons or property that arises from any use of this product in a way that is inconsistent with the directions on the label.

Decis, Buctril, Pardner, and Puma are trademarks of Bayer CropScience. Banvel is a registered trademark of BASF.