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Re-evaluation Decision

RVD2022-05

Difenoconazole and Its Associated End-use Products

Final Decision

(publié aussi en français)

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Re-evaluation decision for difenoconazole and associated end-use products

Under the authority of the *Pest Control Products Act*, all registered pesticides must be re-evaluated by Health Canada's Pest Management Regulatory Agency (PMRA) to ensure that they continue to meet current health and environmental standards and continue to have value. The re-evaluation considers data and information from pesticide manufacturers, published scientific reports and other regulatory agencies, as well as comments received during public consultations. Health Canada applies internationally accepted risk assessment methods as well as current risk management approaches and policies.

Difenoconazole is a systemic fungicide registered for the control of a wide range of fungal diseases on diverse field crops, fruits and vegetables, and turf. Currently registered products containing difenoconazole can be found in the Pesticide Product Information Database and in Appendix I. The Proposed Re-evaluation Decision, PRVD2021-06 Difenoconazole and Its Associated End-use Products,¹ containing the evaluation of difenoconazole and proposed decision, underwent a 90 day consultation period ending on 26 August 2021. PRVD2021-06 proposed that products containing difenoconazole are acceptable for continued registration in Canada, provided that the additional proposed risk mitigation measures are in place. The proposed risk mitigation measures included updated engineering controls, personal protective equipment, statements reducing potential drift, hazard statements on seed tags, environmental precautionary label statements, and spray buffer zones.

Health Canada received comments relating to the health and environmental assessments. Commenters are listed in Appendix II. These comments are summarized in Appendix III along with the responses by Health Canada. These comments did not result in revisions to the health risk assessments; however, they did result in revisions to the freshwater and terrestrial spray buffer zones for aerial application to potatoes. There are no other changes to the proposed risk mitigation measures as described in PRVD2021-06.

A reference list of information used as the basis for the proposed re-evaluation decision is included in PRVD2021-06: no further information was used in the final re-evaluation decision. Therefore, the complete reference list of all information used is set out in PRVD2021-06.

This document presents the final re-evaluation decision² for the re-evaluation of difenoconazole, including the required amendments (risk mitigation measures) to protect human health and the environment, as well as label amendments required to bring labels to current standards. All products containing difenoconazole that are registered in Canada are subject to this re-evaluation decision.

¹ "Consultation statement" as required by subsection 28(2) of the *Pest Control Products Act*.

² "Decision statement" as required by subsection 28(5) of the *Pest Control Products Act*.

Re-evaluation decision for difenoconazole

Health Canada has completed the re-evaluation of difenoconazole. Under the authority of the *Pest Control Products Act*, Health Canada has determined that continued registration of products containing difenoconazole is acceptable. An evaluation of available scientific information found that the uses of difenoconazole products meets current standards for protection of human health and the environment and has acceptable value when used according to conditions of registration, which includes additional mitigation measures. Label amendments, as summarized below and listed in Appendix IV, are required.

Risk mitigation measures

Registered pesticide product labels include specific directions for use. Directions include risk mitigation measures to protect human health and the environment and must be followed by law. The required amendments, including any revised/updated label statements and/or mitigation measures, as a result of the re-evaluation of difenoconazole, are summarized below. Refer to Appendix IV for details.

Human health

Risk mitigation:

To protect workers, the general population and animals, the following risk-reduction measures are required for continued registration of difenoconazole in Canada:

- Corn, canola, rapeseed, mustard seed treatment
 - Closed transfer systems for commercial treatment
- Cereal seed treatment
 - Chemical-resistant coveralls for cleaners for commercial treatment
 - Closed cab planters
 - Coveralls when loading seed for planting
- Add statements to labels and seed tags to keep products out of reach of children and animals.
- Add statements to promote best management practices to minimize human exposure from spray drift or spray residues resulting from drift.

Environment

Risk mitigation:

To protect the environment, the following risk-reduction measures are required:

- Precautionary label statements to inform users of the potential hazard to beneficial arthropods, non-target terrestrial plants and aquatic organisms.
- Add label statement to inform users of the potential hazard to birds and small wild mammals where spilled or exposed treated seed must be incorporated into the soil or removed.
- Update terrestrial and aquatic spray drift buffer zones to protect non-target terrestrial plants and aquatic organisms.
- Add label statement to indicate the potential for carryover.

Next steps

To comply with this decision, the required amendments (mitigation measures and label updates) must be implemented on all product labels no later than 24 months after the publication date of this decision document. Accordingly, both registrants and retailers will have up to 24 months from the date of this decision document to transition to selling the product with the newly amended labels. Similarly, users will also have the same 24-month period from the date of this decision document to transition to using the newly amended labels, which will be available on the Public Registry.

Refer to Appendix I for details on specific products impacted by this decision.

Other information

Any person may file a notice of objection³ regarding this decision on difenoconazole and its associated end-use products within 60 days from the date of publication of this Re-evaluation Decision. For more information regarding the basis for objecting (which must be based on scientific grounds), please refer to the Pesticides section of the Canada.ca website (Request a Reconsideration of Decision) or contact Health Canada's [Pest Management Information Service](#).

The relevant confidential test data on which the decision is based (as referenced in PRVD2021-06) are available for public inspection, upon application, in Health Canada's Reading Room. For more information, please contact Health Canada's [Pest Management Information Service](#).

³ As per subsection 35(1) of the *Pest Control Products Act*

Science evaluation update

1.0 Revised health risk assessment

1.1 Toxicology summary

The toxicology assessment for difenoconazole was previously conducted and summarized in PRVD2021-06. No comments specific to the toxicology assessment were received. There were no changes to the toxicology hazard assessment.

1.2 Dietary exposure and risk assessment

The dietary assessment for difenoconazole was previously conducted and summarized in PRVD2021-06. One comment was received from a member of the public. The review of the comment received did not change the outcome of the conducted dietary assessment and a response is provided in Appendix III.

1.3 Occupational and non-occupational exposure and risk assessment

The occupational assessment for difenoconazole was previously conducted and summarized in PRVD2021-06. One comment was received from the technical registrant concerning a typographical error in one of the result tables. The review of the comment received did not change the outcome of the occupational assessment and the correction is noted in Appendix III.

2.0 Revised environmental risk assessment

The environmental assessment for difenoconazole was previously conducted and summarized in PRVD2021-06. One comment was received from the technical registrant requesting a review of the aerial spray buffer zones for a specific end-use product. The review of the comment received resulted in revised buffer zones for that end-use product and is noted in Appendix III.

3.0 Value assessment

The value assessment for difenoconazole was previously conducted and summarized in PRVD2021-06. No comments specific to the value assessment were received. There were no changes to the value assessment.

Appendix I Registered products containing difenoconazole in Canada¹

Table 1 Products containing difenoconazole requiring (label) amendments

Registration Number	Marketing Class ²	Registrant	Product Name	Formulation Type ³	Active ingredient (% , g/L)
25776	M	Syngenta Canada Inc.	Dividend MG for use in Manufacturing	SU	Difenoconazole 32.8%
25777	C		Dividend XL RTA Fungicide	SU	Metalaxyl-M and S-Isomer 0.27%, Difenoconazole 3.37%
26637	C		Helix Liquid Seed Treatment	SU	Thiamethoxam 10.3%; Metalaxyl-M and S-Isomer 0.39%; Fludioxonil 0.13%; Difenoconazole 1.24%
29490	C		Dividend Extreme Fungicide	SU	Metalaxyl-M and S-Isomer 1.93%; Difenoconazole 7.73%
30004	C		Inspire Fungicide	EC	Difenoconazole 250 g/L
30436	C		Cruiser Maxx® Vibrance™ Cereal Seed Treatment	SU	Thiamethoxam 30.7 g/L; Sedaxane 8.0 g/L; Metalaxyl-M and S-Isomer 9.5 g/L; Difenoconazole 36.9 g/L
30437	C		Vibrance XL Seed Treatment	SU	Sedaxane 13.8 g/L; Metalaxyl-M and S-Isomer 16.5 g/L; Difenoconazole 66.2 g/L
30518	C		Quadris Top	SU	Difenoconazole 125 g/L; Azoxystrobin 200 g/L
30599	C		Maxim D	SU	Fludioxonil 19.4 g/L; Difenoconazole 19.4 g/L
30827	C		Inspire Super Fungicide	EC	Difenoconazole 86 g/L; Cyprodinil 249 g/L
31024	C		Cruiser Maxx Potato Extreme	SU	Thiamethoxam 250 g/L; Fludioxonil 62.5 g/L; Difenoconazole 123g/L
31050	C		Stadium Fungicide	SU	Fludioxonil 142 g/L; Difenoconazole 112 g/L; Azoxystrobin 142 g/L

Registration Number	Marketing Class ²	Registrant	Product Name	Formulation Type ³	Active ingredient (% , g/L)
31408	C		Vibrance Quattro	SU	Sedaxane 15.4 g/L; Metalaxyl-M and S-Isomer 9.2 g/L; Fludioxonil 7.6 g/L; Difenoconazole 36.8 g/L
31453	C		Cruiser Vibrance Quattro	SU	Thiamethoxam 61.5 g/L; Sedaxane 15.4 g/L; Metalaxyl-M and S-Isomer 9.2 g/L; Fludioxonil 7.7g/L; Difenoconazole 36.9 g/L
31454	C		Helix Vibrance	SU	Thiamethoxam 269 g/L; Sedaxane 3.4 g/L; Metalaxyl-M and S-Isomer 5 g/L; Fludioxonil 1.7g/L; Difenoconazole 16 g/L
31526	C		Aprovia Top	EC	Difenoconazole 117 g/L; Benzovindiflupyr 78 g/L
31527	C		Ascernity Fungicide	EC	Difenoconazole 79 g/L; Benzovindiflupyr 24 g/L
31537	C		Bravo Top Fungicide	SU	Chlorothalonil 500 g/L; Difenoconazole 50 g/L
31564	C		Academy Fungicide	SU	Fludioxonil 147 g/L; Difenoconazole 247 g/L
32015	C		Exempla Fungicide	SU	Difenoconazole 225 g/L; Azoxystrobin 225 g/L
32624	C		Vibrance Flexi Canola	SU	Sedaxane 8.4 g/L; Metalaxyl-M and S-Isomer 12.5 g/L; Fludioxonil 4.2g/L; Difenoconazole 40 g/L
32625	C		Vibrance Flexi Cereals	SU	Sedaxane 8.4 g/L; Metalaxyl-M and S-Isomer 12.5 g/L; Fludioxonil 4.2g/L; Difenoconazole 40 g/L
33020	C		A20259 Fungicide	SU	Pydiflumetofen 75 g/L; Difenoconazole 125 g/L

Registration Number	Marketing Class ²	Registrant	Product Name	Formulation Type ³	Active ingredient (% , g/L)
33171	C		Vibrance Ultra Potato	SU	Sedaxane 77.2 g/L; Mandipropamid 154.3 g/L; Difenoconazole 77.2 g/L
33206	C		Miravis Duo Fungicide	SU	Pydiflumetofen 75 g/L; Difenoconazole 125 g/L
33489	C		Bravo Top 550 Fungicide	SU	Chlorothalonil 500 g/L; Difenoconazole 50 g/L
34228	C	NewAgco Inc.	Revenue Fungicide	EC	Difenoconazole 250 g/L
34196	C	Sharda CropChem Limited	Interest Forte	SU	Metalaxyl-M and S-Isomer 0.27%; Difenoconazole 3.37%

¹ as of 17 December 2021, excluding discontinued products or products with a submission for discontinuation

² T = Technical Active, M= Manufacturing concentrate, C= Commercial

³ SO= Solid, SU= Suspension, EC= Emulsifiable concentrate or emulsion

Table 2 Products containing difenoconazole not requiring (label) amendments

Registration Number	Marketing Class ²	Registrant	Product Name	Formulation Type ³	Active ingredient (% , g/L)
25631	T	Syngenta Canada Inc.	Difenoconazole Technical Fungicide	SO	Difenoconazole 95%
34191	T	NewAgco Inc.	NewAgco Difenoconazole Technical	SO	Difenoconazole 97.46%
34193	T	Sharda CropChem Limited	Sharda Difenoconazole Technical	SO	Difenoconazole 97.84%

¹ as of 17 December 2021, excluding discontinued products or products with a submission for discontinuation

² T = Technical Active

³ SO= Solid

Appendix II List of commenters to PRVD2021-06

List of commenters' affiliations for comments submitted in response to PRVD2021-06

Category	Commenter
Registrant	Syngenta Canada Inc.
General Public	Member of the Public

Appendix III Comments and responses

Health Canada received three written comments during the public consultation for the difenoconazole proposed re-evaluation decision. Commenters' affiliations are listed in Appendix II. These comments were considered during the final decision phase of this re-evaluation. Summarized comments and Health Canada's responses to them are provided below.

1.0 Comments related to the health risk assessment

1.1 Dietary exposure

1.1.1 Comment

A member of the public expressed strong opposition to any increase in the concentrations of difenoconazole in foods and products that are farmed in Canada (or that are produced outside the country and distributed in Canada).

Health Canada response:

For re-evaluations, including the re-evaluation of difenoconazole, the dietary risk assessment is based on the currently registered use pattern. As such, the re-evaluation does not result in regulatory changes that would result in increased concentrations in foods produced in Canada or imported into Canada.

1.2 Occupational exposure

1.2.1 Comment

The technical registrant indicated that there was a minor typographical error in PRVD2021-06, Appendix IV, Table 1 Commercial seed treatment exposure and risk assessment for difenoconazole. Under "closed M/L, single layer plus jacket, CR gloves" the combined MOE is reported as "2,90".

Health Canada response:

This value is a typographical error. The correct value is confirmed to be "2,900".

2.0 Comment related to the environmental risk assessment

2.1 Comment

During the consultation period following the publication of PRVD2021-06, Syngenta Canada Inc. requested a review of the aerial spray buffer zones for potatoes for Reg. No. 31526 (Aprovia Top) to confirm they reflect the registered use pattern.

Health Canada response:

Health Canada confirmed that the aerial spray buffer zones for potatoes in PRVD2021-06 were based on four applications, whereas the label clearly indicates only two applications by air are allowed. Although up to four ground applications can be made for potatoes, applicators cannot switch between application methods during the same season. Freshwater and terrestrial spray buffer zones have been updated (note that marine buffer zones were already based on a single application only, so no adjustment was required). Please see the revised buffer zone table for PCP# 31526 below and under Appendix IV.

Revised buffer zone table for PCP# 31526.

Method of application	Crop		Buffer Zones (metres) Required for the Protection of:				
			Freshwater Habitat of Depths:		Estuarine/Marine Habitat of Depths:		Terrestrial Habitat:
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Canola (Crop Subgroup 20A)		5	1	1	1	0
	Fruiting vegetables (Crop Group 8), tuberous and corm vegetables (Crop Subgroup 1C), cucurbit vegetables (Crop Group 9), small fruit vine climbing subgroup (Crop Subgroup 13-07F)		15	2	1	1	1
Airblast	Pome fruits (Crop Group 11)	Early season	45	20	2	0	2
		Late season	35	10	1	0	1
	Small fruit vine climbing subgroup (Crop Subgroup 13-07F)	Early season	50	25	2	0	3
		Late season	40	15	1	0	2
Aerial	Canola	Fixed wing	175	10	1	1	0
		Rotary wing	150	10	1	1	0
	Potato	Fixed wing	600	15	1	1	15
		Rotary wing	325	15	1	1	10

Bolded entries have been modified from PRVD2021-06.

Appendix IV Label amendments for products containing difenoconazole

Information on approved labels of currently registered products should not be removed unless it contradicts the label statements provided below.

1.0 Label amendments relating to the health risk assessment

Label amendments for commercial class products containing difenoconazole

1. General label improvements

Add to PRECAUTIONS:

Replace:

...NIOSH/MSHA-approved dust mask...
...suitable dust mask...
...dust mask...
...half-mask respirator with suitable dust filter...

With:

...NIOSH-approved N95 filtering facepiece respirator (dust mask) that is properly fit tested...

Replace:

...quarter- or half-mask respirator...

With:

...respirator with a NIOSH approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH approved canister approved for pesticides...

2. Label amendments for end-use product with post-harvest uses

Add to PRECAUTIONS:

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

Add to STORAGE:

Store this product away from food or feed.

3. Label amendments for end-use products for seed treatment

Personal protective equipment (PPE) and engineering controls are specified below for seed treatment uses. Some labels may have one or more of these seed types registered (NB: corn only appears on labels with cereals as well). The label statements for all registered uses must be added to the label, unless the current mitigation is more restrictive.

Add to PRECAUTIONS:

Apply only in a way that this product will not contact workers or other persons, either directly or through drift. Only workers wearing personal protective equipment may be in the area when seed is being treated or bagged.

Add to STORAGE:

Store this product away from food or feed.

Add to Seed Tags:

All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows, unless the current label mitigation is more restrictive:

Keep treated seeds out of reach of children and animals.

Store this product away from food or feed.

3a. Corn (sweet, seed, pop, field)

For commercial-class liquid seed treatment products registered for use on corn, label statements must be amended (or added) to include the following:

Add to PRIMARY PANEL:

When treating corn, for use in commercial seed treatment (facilities and mobile treaters) with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment only. No open transfer of corn in commercial facilities is permitted. Open transfer is permitted for on-farm treatment of corn.

Add to PRECAUTIONS:

Use closed transfer for commercial seed treatment (facilities and mobile treaters). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. No open transfer is permitted for commercial seed treatment of corn.

When treating, handling, or planting treated seed, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves.

Add to seed tags:

All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows, unless the current label mitigation is more restrictive:

When handling and planting treated seeds, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves

3b. Canola, rapeseed, mustard

For commercial-class liquid seed treatment products registered for use on canola, rapeseed, and mustard, label statements must be amended (or added) to include the following:

Add to PRIMARY PANEL:

For use in commercial seed treatment (facilities and mobile treaters) with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment only. No open transfer is permitted.

Add to PRECAUTIONS:

Use closed transfer for commercial seed treatment (facilities and mobile treaters). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. No open transfer is permitted.

For all activities when treating, handling treated seed, cleaning or contacting contaminated equipment during commercial treatment, wear coveralls over a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves.

Add to Seed Tags:

All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows, unless the current label mitigation is more restrictive:

When handling and planting treated seeds, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves

3c. Cereals (wheat, barley, oats, rye, triticale, sorghum, buckwheat, millet)

For commercial-class liquid seed treatment products registered for use on cereals, label statements must be amended (or added) to include the following:

Add to PRECAUTIONS:

When cleaning seed treatment equipment, wear chemical-resistant coveralls over long-sleeved shirt, long pants, chemical-resistant footwear, socks, and chemical-resistant gloves.

When treating, bagging, sewing, stacking and when handling treated seed during commercial and on-farm treatment, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves.

When loading treated seeds into a planter, wear coveralls over a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves. For all other planting activities and when handling treated seed, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves. Use only closed cab planting equipment. Chemical-resistant gloves do not need to be worn when inside the closed cab.

Add to seed tags:

All bags containing treated seed for sale or use in Canada must be labelled or tagged as follows, unless the current label mitigation is more restrictive:

When loading treated seeds into a planter, wear coveralls over a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves. For all other planting activities and when handling treated seed, wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves. Use only closed cab planting equipment. Chemical-resistant gloves do not need to be worn when inside the closed cab.

4. Label amendments for end-use products with foliar application**Add to STORAGE:**

Store this product away from food or feed.

4a. For labels related to agricultural uses:**Add to PRECAUTIONS:**

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.

4b. For labels related to use on turf:**Add to PRECAUTIONS:**

Apply only when the potential for drift to areas of human habitation or other areas of human activity (other than golf courses), such as parks, school grounds, and playing fields, is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

5. Label amendments for end-use products with airblast application to pome fruit**Under DIRECTIONS FOR USE for POME FRUIT:****Add to SPECIFIC USE RESTRICTIONS or APPLICATION TIMING/INSTRUCTIONS:**

DO NOT enter or allow entry into treated areas until sprays have dried.

2.0. Label amendments relating to the environmental risk assessment**1. Label amendments for technical grade active ingredient and manufacturing concentrates****Add to ENVIRONMENTAL PRECAUTIONS:**

TOXIC to aquatic organisms.

DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters.

Add to DISPOSAL:

Canadian manufacturers should dispose of unwanted active ingredients and containers in accordance with municipal or provincial regulations. For additional details and clean up of spills, contact the manufacturer or the provincial regulatory agency

2. Label amendments for end-use products for seed treatment

Add to ENVIRONMENTAL PRECAUTIONS:

TOXIC to aquatic organisms.

Toxic to birds and small wild mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

3. Label amendments for end-use products with foliar uses

Add to ENVIRONMENTAL PRECAUTIONS:

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

Difenoconazole is persistent and may carryover. It is recommended that this product not be used in areas treated with any products containing difenoconazole during the previous season.

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 when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

Add to DIRECTIONS FOR USE:

As this pesticide 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.

4. Label amendments for specific end-use products related to spray buffer zone requirements

Buffer zone requirements for difenoconazole-based end use products were based on the risk profile identified during the environmental risk assessment for the active ingredient difenoconazole and the associated co-formulation active ingredients benzovindiflupyr, chlorothalonil, cyprodinil, azoxystrobin and pydiflumetofen. Product-specific buffer zones were determined due to the complexity of matching existing buffer zones for other technical grade active ingredients with the multiple difenoconazole end-use products. While some end-use products require ASAE medium spray quality for field sprayers, while others require ASAE fine; all aerial applications require ASAE medium.

4a. Label amendments for products containing difenoconazole only, PCP Reg. No. 30004

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) fine classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **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.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop		Buffer Zones (metres) Required for the Protection of:		
			Freshwater Habitat of Depths:		Terrestrial Habitat:
			Less than 1 m	Greater than 1 m	
Field sprayer	Canola and Crop Subgroup 20A		2	1	0
	Brassica (cole) leafy vegetables, bulb vegetables, curcubit vegetables, fruiting vegetables, artichoke (Chinese, Jerusalem), edible canna, chufa, potato, sweet potato, sugar beets		5	1	1
Airblast	Pome Fruit: apple, crab apple, Oriental pear, quince	Early growth stage	20	3	2
		Late growth stage	10	2	1
	Grapes (except Concord and some non-vinifera hybrids)	Early growth stage	25	4	3
		Late growth stage	15	2	2
Aerial	Canola	Fixed wing	10	1	0
		Rotary wing	5	1	0
	Potato	Fixed wing	30	1	15
		Rotary wing	25	1	15

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4b. Label amendments for co-formulated products containing difenoconazole and pydiflumetofen, PCP Reg. No. 33020 and 33206

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) fine classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop	Buffer Zones (metres) required for the protection of:			
		Freshwater habitat of depths:		Terrestrial habitat:	
		Less than 1 m	Greater than 1 m		
Field sprayer	Fruiting vegetables, cucurbit vegetables	4	1	1	
	Potato, tuberous and corm vegetables	5	1	1	
Aerial	Potato	Fixed wing	20	1	15
		Rotary wing	15	1	15

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4c. Label amendments for co-formulated product containing difenoconazole and azoxystrobin, PCP Reg. No. 30518

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Chemigation: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Applications **MUST** be conducted **WITHOUT** the use of end guns.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop		Buffer Zones (metres) required for the protection of:		
			Freshwater habitat of depths:		Terrestrial habitat:
			Less than 1 m	Greater than 1 m	
Field sprayer	Lowbush cranberries*, potato, sweet potato, carrot, bulb vegetables-green onion, fruiting vegetables, dried shelled pea and beans		1	1	1
	Brassica leafy vegetables, bulb vegetables-dry bulb onion, cucurbit vegetables		2	1	1
Aerial	Potato	Fixed wing	20	1	15
		Rotary wing	15	1	15

*Includes application by chemigation sprayer.

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4d. Label amendments for co-formulated product containing difenoconazole and azoxystrobin, PCP Reg. No. 32015

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop		Buffer Zones (metres) required for the protection of:		
			Freshwater habitat of depths:		Terrestrial habitat:
			Less than 1 m	Greater than 1 m	
Field sprayer	Soybean (hay), canola and Crop Subgroup 20A		1	1	0
	Potato, soybean, Crop Subgroup 6C (pulses)		1	1	1
Aerial	Soybean (hay), canola and Crop Subgroup 20A	Fixed wing	10	1	0
		Rotary wing	10	1	0
	Soybean, Crop Subgroup 6C (pulses)	Fixed wing	15	1	15
		Rotary wing	15	1	15
	Potato	Fixed wing	20	1	15
		Rotary wing	15	1	15

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4e. Label amendments for co-formulated product containing difenoconazole and benzovindiflupyr, PCP Reg. No. 31526

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **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.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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.

Method of application	Crop		Buffer Zones (metres) required for the protection of:				
			Freshwater habitat of depths:		Estuarine/Marine habitat of depths:		Terrestrial habitat:
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Canola (Crop Subgroup 20A)		5	1	1	1	0
	Fruiting vegetables (Crop Group 8), tuberous and corm vegetables (Crop Subgroup 1C), cucurbit vegetables (Crop Group 9), small fruit vine climbing subgroup (Crop Subgroup 13-07F)		15	2	1	1	1
Airblast	Pome fruits (Crop Group 11)	Early season	45	20	2	0	2
		Late season	35	10	1	0	1
	Small fruit vine climbing subgroup (Crop Subgroup 13-07F)	Early season	50	25	2	0	3
		Late season	40	15	1	0	2
Aerial	Canola	Fixed wing	175	10	1	1	0
		Rotary wing	150	10	1	1	0
	Potato	Fixed wing	600	15	1	1	15
		Rotary wing	325	15	1	1	10

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4f. Label amendments for co-formulated product containing difenoconazole and benzovindiflupyr, PCP Reg. 31527

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

DO NOT apply using aerial application equipment.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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.

Method of application	Crop	Buffer Zones (metres) required for the protection of:				
		Freshwater habitat of depths:		Estuarine/Marine habitat of depths:		Terrestrial habitat:
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Turf	25	3	1	1	1

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4g. Label amendments for co-formulated product containing difenoconazole and cyprodinil, PCP Reg. No. 30827

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) fine classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **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.

DO NOT apply using aerial application equipment.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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.

Method of application	Crop		Buffer Zones (metres) required for the protection of:				
			Freshwater habitat of depths:		Estuarine/Marine habitat of depths:		Terrestrial habitat:
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Blueberry (lowbush, highbush), Currant, Elderberry, Gooseberry, Huckleberry, Highbush Cranberry		10	4	3	1	1
Airblast	Grape, Amur river grape	Early season	20	10	10	4	1
		Late season	10	5	5	2	1
	Pome fruit (Apple; Crab apple; Pear; Pear, Oriental; Quince)	Early season	25	15	5	2	2
		Late season	15	5	3	1	1
	Blueberry (lowbush, highbush), Currant, Elderberry, Gooseberry, Huckleberry, Highbush Cranberry	Early season	30	20	10	4	3
		Late season	20	10	5	2	2

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

4h. Label amendments for co-formulated product containing difenoconazole and chlorothalonil, PCP Reg. No. 31537

Add to DIRECTIONS FOR USE:

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **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.

Aerial application: **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 16 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 classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Add to BUFFER ZONES:

A spray buffer zone is NOT required for:

- Uses with hand-held application equipment permitted on this label,
- Low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

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.

Method of application	Crop		Buffer Zones (metres) required for the protection of:				Terrestrial habitat:
			Freshwater habitat of depths:		Estuarine/Marine habitat of depths:		
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Carrot, potato, tomato, cabbage, bulb onion, green onion, broccoli, Brussels sprouts, cabbage, cauliflower		2	1	2	1	1
Aerial	Potato	Fixed wing	70	4	70	20	15
		Rotary wing	55	1	55	15	15

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 can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

3.0. Label amendments relating to the value assessment

1. Label amendments for commercial class products

General label statement revisions:

- Tank mix partners must be registered and clearly indicated by product name on difenoconazole product labels. Tank mix partners that are not currently registered for specified uses must be removed from product labels.

The Minor Use Liability statement must be updated to the currently approved wording:

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than [registrant name] under the User Requested Minor Use Label Expansion program.

For these uses, [Registrant name] 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.