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REV2009-06

Re-evaluation Note

# Ethephon Mitigation Measures

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Publications  
Pest Management Regulatory Agency  
Health Canada  
2720 Riverside Drive  
A.L. 6605C  
Ottawa, Ontario  
K1A 0K9

Internet: [pmra\\_publications@hc-sc.gc.ca](mailto:pmra_publications@hc-sc.gc.ca)  
[healthcanada.gc.ca/pmra](http://healthcanada.gc.ca/pmra)  
Facsimile: 613-736-3758  
Information Service:  
1-800-267-6315 or 613-736-3799  
[pmra\\_infoserv@hc-sc.gc.ca](mailto:pmra_infoserv@hc-sc.gc.ca)

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Ethephon is one of the active ingredients under re-evaluation by Health Canada's Pest Management Regulatory Agency (PMRA). The purpose of this Re-evaluation Note is to notify registrants, pesticide regulatory officials and the Canadian public of interim label amendments to be implemented for ethephon products. Appendix I lists currently registered products containing ethephon.

The PMRA's re-evaluation of ethephon is ongoing. At present, the PMRA is requiring the registrant of ethephon products to make changes to product labels to limit exposure for users and the environment. The implementation of these label improvements is considered a first step in the re-evaluation process for ethephon.

These changes are intended to:

- increase consistency between all end-use product labels with respect to the directions for use and precautions;
- adopt the most restrictive personal protective equipment requirements across the three end-use products;
- clarify personal protective equipment label statements; and
- adopt environmental protection requirements for all end-use product labels.



**Appendix I Registered Ethephon Products as of 22 April, 2009**

<b>Product Name</b>	<b>Registration Number</b>	<b>Marketing Type</b>	<b>Use-site Category: Uses</b>
Ethrel Liquid Plant Growth Regulator	11580	Commercial	Terrestrial Feed Crops: apples, spring barley, spring wheat, winter wheat  Terrestrial Food Crops: apples, high bush blueberries, low bush blueberries, cherries, tomatoes, tobacco
Ethrel Liquid Plant Growth Regulator	16155	Commercial	Terrestrial Food Crops: tobacco
Cerone Plant Growth Regulator Lodging Control for Cereals	18685	Commercial	Terrestrial Feed and Food Crops: spring barley, spring wheat, winter wheat



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## Appendix II Interim Label Amendments for Products Containing Ethephon

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on labels of currently registered products should not be removed unless it contradicts the label statements below.

The labels of Canadian end-use products must be amended to include the following statements to further protect workers and the environment.

- I) For all commercial end-use products containing ethephon the following statements must be included in a section entitled “**PRECAUTIONS**”:

Wear a long-sleeved shirt, long pants, goggles or faceshield and chemical resistant gloves during mixing, loading, application, clean up and repair. Mixer/loaders must wear either a respirator with a NIOSH/MSHA/BHSE approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE approved canister approved for pesticides. Avoid contact with skin and clothing and do not inhale vapours as this product will irritate skin and mucous membranes.

- II) For all commercial end-use products containing ethephon the following statements must be included in a section entitled “**DIRECTIONS FOR USE**”:

“DO NOT re-enter or allow re-entry into treated areas until 48 hours after application.”

“DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only handlers wearing personal protective equipment may be in the area during application.”

For products used only on spring barley, spring wheat and winter wheat:

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) coarse 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) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

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For products used on other crops:

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) 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) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

#### **Buffer zones:**

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

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:		Terrestrial habitat
			Less than 1 m	Greater than 1 m	
Field sprayer	Lowbush blueberries and tomatoes		1	1	1
	Tobacco and winter wheat		1	0	1
	Spring barley and spring wheat		0	0	1
Airblast	Sweet cherries, sour cherries, apples (to promote early red colouring and apple ripening and to loosen processing apples for easier harvesting)	Late growth stage	1	0	3
		Highbush blueberries	Early growth stage	3	1
	Late growth stage		2	1	5
	Apples (to increase the flowering of young apple trees)	Early growth stage	5	2	15
		Late growth stage	3	1	10
	Aerial	Spring barley, and winter wheat	Fixed and rotary wing	1	0
Spring wheat			Fixed wing	1	0
		Rotary wing	1	0	10
Tomatoes		Fixed and rotary wing	1	1	20
Lowbush blueberries		Fixed and rotary wing	1	1	25

III) For all commercial end-use products containing ethephon the following statements must be included in a section entitled “**ENVIRONMENTAL HAZARDS**”:

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