



Re-evaluation Note

REV2002-02

Update on the Special Review of Lindane and the Status of Lindane Registrations

The principal purpose of this document is to update registrants, regulatory officials and other interested parties on the status of lindane registrations and on the outcome of the special review of pest control products containing the active ingredient lindane, which was carried out under Section 19 of the Pest Control Products Regulations and is now complete.

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1.0 Previously discontinued uses of Lindane

In 1999, registrants of lindane seed-treatment products for canola/rapeseed applied to amend registrations, or provided notices of discontinuation of sale that resulted in the termination of these registered uses by July 1, 2001. In accordance with the terms of a voluntary withdrawal agreement between the registrants and canola growers, all sale of lindane products for use on canola/rapeseed, and all use of lindane-treated canola seed were to cease July 1, 2001. The Pest Management Regulatory Agency (PMRA) has agreed to a request by the Canola Council of Canada that will see existing carry-over lindane-treated seed planted for the spring 2002 planting season only. This is the final use season for lindane-treated canola seed.

Sales of all products registered for use on livestock (cattle, horse, sheep, goats, swine) and on tobacco were discontinued by registrants at the end of 2000. Those registrations will expire at the end of 2004. This date coincides with the final date for cancellation of all remaining lindane uses.

Other uses of lindane were discontinued earlier and their registrations have now expired.

2.0 Special review

As a result of the special review, all remaining uses of lindane that are subject to the *Pest Control Products Act* and Regulations are to be phased out according to the following schedule:

2.1 Lindane end-use products registered for use as seed treatment on wheat, barley, oats, rye, flax, corn, beans, soybeans and peas for control of wireworms:

The PMRA accepted voluntary discontinuation of lindane products registered for use on wheat, barley, oats, rye, flax, corn, beans, soybeans and peas, along a time frame that considers the identified needs of users of lindane for control of wireworms and the time frame for the introduction of alternative products. The time frame accepted for phase-out of sale and use of these lindane products is as follows:

- Last date for sale of product by registrants: December 31, 2002.
- Last date for sale of product by distributors or retailers: December 31, 2003.
- Last date for use of product and treated seed by users and growers: December 31, 2004.

Registrants are permitted to manufacture and sell lindane end-use products for these uses in 2002. Sales of each end-use product by registrants in 2002 are restricted to amounts comparable to average annual sales for that product in 1997–2001. Retail sale and use of product in 2003 and use in 2004 allows for an orderly phase-out, and there will, in fact, be significantly less use of lindane in those years compared with 2002 and earlier. The end result will be that all lindane registrations will be cancelled on December 31, 2004. All use

of these lindane seed-treatment products and planting of lindane-treated seed will be prohibited after this date.

Disposal of any product or treated seed that still remains following cancellation of the registrations will be at the expense of the owner.

2.2 Lindane end-use products registered for use as seed treatment on mustard, cabbage, broccoli, Brussels sprouts, cauliflower and rutabaga for control of flea beetles:

Information available to the PMRA indicates that there are effective alternatives to lindane for management of flea beetles on mustard, cabbage, broccoli, Brussels sprouts, cauliflower and rutabaga. The PMRA, therefore, has accepted voluntary discontinuation of lindane products registered for these uses, but along a shorter time frame than that for products registered for wireworm control where available pest-management alternatives to lindane are limited.

The PMRA notified registrants that these end-use products may be sold by registrants, distributors and retailers until April 1, 2002, and existing stocks and treated seed may be used until October 1, 2002, at which time the registrations will be cancelled. All use of these lindane seed-treatment products and planting of lindane-treated seed will be prohibited after this date. Disposal of any product or treated seed that still remains following cancellation of the registrations would be at the expense of the owner.

2.3 Suspension of registrations

Most registrants have taken advantage of this voluntary program. The PMRA, however, has now suspended the registration of the products of one registrant under Section 20 of the Pest Control Products Regulations.

3.0 Lindane maximum residue limits

The following are the current Canadian maximum residue limits (MRLs) for lindane in parts per million (ppm):

3.0 ppm	apples, apricots, asparagus, avocados, broccoli, Brussels sprouts, cabbage, cauliflower, celery, cherries, collards, cucumbers, eggplants, grapes, guavas, kale, kohlrabi, lettuce, mangoes, melons, mushrooms, mustard greens, nectarines, okra, onions, peaches, pears, peppers, pineapple, plums, pumpkins, quinces, spinach, squashes, strawberries, Swiss chard, tomatoes
2.0 ppm	meat, meat by-products and fat of cattle, goats, hogs and sheep
0.7 ppm	meat and meat by-products of poultry
0.2 ppm	butter, cheese, milk and other dairy products

The *Food and Drugs Act* prohibits the sale of food containing pesticide residues at levels in excess of the MRLs established in the Food and Drug Regulations under the Act.

The PMRA will recommend the revocation of all lindane MRLs established in Table II, Division 15 of the Food and Drug Regulations, including those that were originally established to cover both uses in Canada and imports of treated commodities and those that were established to cover imports only.

The PMRA will consider requests to modify or maintain the MRLs established for lindane to cover imports from other countries. Interested parties should petition the PMRA for the establishment of MRLs to cover lindane residues in treated imported raw agricultural commodities and their processed products. An interested party may identify or provide existing Canadian or foreign data and the PMRA will determine whether they are sufficient.

In cases such as this, where there is no remaining Canadian use for the product and there is interest in import MRLs, any necessary use information and chemistry and residue data would be reviewed. The PMRA may request additional data. Data requirements would be similar to those required for establishing an MRL to cover use of the pesticide in Canada (see Regulatory Directive DIR98-02, *Residue Chemistry Guidelines*).

The decisions and actions outlined in this Re-evaluation Document conclude the special review of lindane by the PMRA. Publication of the PMRA's reviews of the data on lindane and the rationale for this regulatory action is targeted for summer, 2002.