



Respecting Preharvest and Restricted Entry Intervals— A Question of Common Sense!

Maximum Residue Limit

Health Canada's Pest Management Regulatory Agency (PMRA) is responsible for deciding if a pest control product can be used in the production of various food crops and for determining the acceptable levels of pesticide residues on the crops. These acceptable levels, the **maximum residue limits (MRLs)**, are established to ensure that the total amount of pesticide residues absorbed through food consumption will not exceed the **acceptable daily intake** (quantity of a pesticide humans can ingest in one day without any harmful effects) for a pesticide, whichever it may be.

MRLs are based on the maximum amount of residues that could be on the crop at harvest after a pesticide was applied in accordance with the use instructions found on the product's label. These limits are included in the Food and Drug Regulations and must not be exceeded.

Preharvest Interval

The **preharvest interval (PHI)** is a function of a pesticide's use pattern and of the amount of pesticide residues allowed on the crop at harvest. Residue levels on a crop are affected by the crop's growth, by environmental conditions (such as rain or UV radiation) and by the microorganisms on the plants and in the soil. The PHI must therefore be long enough to allow for the pesticide residues in the harvested crop to degrade to a level that is acceptable.

It is important to respect the PHI so that the MRL for a given crop is not exceeded. Residues found in excess of the MRL on food would constitute a violation of the Food and Drug Regulations and could also pose a risk to consumers' health. In such situations, the harvested crop could be seized, destroyed or forbidden for export. Use pesticides only for the crops and pests listed on the product's label and make sure to follow the application rates, number of applications and PHI stated on the label.

Restricted Entry Interval

A **restricted entry interval (REI)** is the amount of time after a pesticide is applied during which access to a treated area must be restricted. This time allows for the degradation of pesticide residues to levels that do not pose a risk to the health of workers going back into the treated area.

An REI is required when the potential daily exposure to pesticide residues is expected to be above the levels deemed as safe. The potential daily exposure is calculated from the amount of residue that can be removed from the foliage of the plant (dislodgeable foliar residues), the amount of treated plant surface in contact with workers' skin and the duration of the exposure. An REI can range from several hours to a few days.

Growers are responsible for informing farm workers and other people who may be on the site after a pesticide is used (inspectors, agronomists, scouts, public, etc.) of pesticide applications and the REI in effect for a field or orchard. The labels of registered pesticides contain all the information on REIs and on the personal protective equipment (PPE) required to limit pesticide exposure.



Questions and answers

If the use instructions on a pesticide label do not include a restricted entry interval (REI) or preharvest interval (PHI), what do I do?

If the use instructions on a pesticide label do not have an REI or a PHI, you should wait for the product to dry completely before entering a treated area or harvesting a crop. As it may be difficult to assess when residues have dried, for example in periods of high humidity, the PMRA **strongly** recommends that you wait 12 hours before entering a treated area or harvesting a crop. These recommendations are being added to pesticide labels as products are reviewed in the re-evaluation process.

What can I do if I have to go back in a treated field before the restricted entry interval has passed?

A restricted entry interval is established when worker exposure to pesticide residues is expected to be unacceptable. Therefore, the PMRA does not make specific recommendations for entering a treated area before the restricted entry interval has lapsed. Read the use instructions on the product label carefully because the REI could vary depending on the task to be performed.

If it starts raining following a pesticide application, can I reduce the preharvest interval (PHI) or the restricted entry interval (REI)? And what if I use application rates below those found on the products' label, or apply pesticides in bands?

Any situation that would allow you to reduce the PHI or REI will be identified on the product label. For example, the label will tell you if a lower application rate can support a decreased PHI. If a specified REI need not apply to all re-entry activities, the label will identify different REIs for different tasks. Not respecting the stated intervals on pest control product labels could constitute a health risk and is, therefore, prohibited.

If I apply more than one pesticides that have different preharvest or restricted entry intervals at the same time (in a tank mix), which interval do I choose?

To observe the established MRLs for pesticides in your crop and to avoid contact with harmful levels of pesticide residues while working in a treated field, you must always choose the longest PHI and REI found on the labels of **all** the pesticides that were used in the tank mix.

If my crop is going to be stored for a long time or if it is destined for processing, do I still need to respect the preharvest intervals (PHI)?

Preharvest intervals must **always** be respected. When a pesticide is registered, the PMRA considers the various factors that cause the residues on treated crops to decrease over time. These factors include plant growth, weather conditions (rain, UV radiation), microorganisms in the soil or on the plant, etc. All of these factors are absent when the crop is in storage or sent to be processed.

Maximum residue limits are established for harvested and processed crops; they are set according to the residue level that is expected to be found on the crop after the PHI. Not respecting the PHI could lead to a crop having residues in violation of MRLs. This could constitute an unacceptable health risk to consumers and a potential financial loss for the grower.

More questions? Call us!

Pest Management Information Service

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