

## Non-Labeled Tank Mixes

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What is a non-labeled tank mix? This is when two or more registered pesticides are put in a sprayer tank together and applied at the same time. It is non-labeled if none of the product labels have that particular combination mentioned on the product label. In essence, none of the “registrants” (Chemical Companies) submitted that pesticide combination for registration to the PMRA.

There has always been a gray area around pesticide tank mixes that were not labeled. Technically, according to the Pest Control Products Act, tank mixes were only allowed if they were on one of the pesticide labels. This meant that the tank mixture was tested for efficacy, crop tolerance and residue concerns. As a result, a lot of data and time was required to add a tank mix to a product label of two products that were often already registered for that crop at that timing. From the producer’s perspective, a tank mix can reduce the number of trips across a field, improve the spectrum of control, and help limit resistance development.

This past fall, the PMRA released a memorandum, outlining the legal use of non-labeled tank mixes. In this memo, the PMRA clearly outlines where and when a non-labeled tank mix can be used. A tank mix is the simultaneous application of two or more pest control products from the same set of spray nozzles. Tank mixes may include tank mix partners of the same (ie., herbicide + herbicide) or different types (ie. herbicide + fungicide).

According to the PMRA when can a non-labeled tank mix be used?

1. Each tank mix partner is registered for use in Canada on the crop of interest, including genetically modified crops.
2. The tank mix only includes an adjuvant when specifically required by one of the tank mix partner labels. If an adjuvant is not required on the label of any tank mix partner, then no adjuvant may be added to the tank mix.
3. The application timings of all tank mix partners are compatible with regards to crop and pest staging. This means all the products are applied when they are meant to be applied according to the label.
4. Each tank mix partner is applied in accordance with its registered product label (for example, Directions for Use, Precautions, Buffer Zones, etc.). In cases where information on the tank mix partner labels differs between them, the most restrictive directions must be followed.
5. The tank mix is not specifically excluded or contraindicated on either tank mix partner label.

6. The use of the tank mix provides additional value to the user (for example, increased scope of pests controlled, contributes to resistance management or integrated pest management, cost- or time-savings).

Since this is a non-labeled tank mix, there are precautions and concerns growers need to take into account. Mixing two or more products together that have not been extensively tested can mean some risk for the grower. Not all pesticides mix well together, in some cases precipitates will form in the tank, which reduces efficacy and can clog up nozzles and screens. Also, unnoticed reactions can cause the mixture to become “hotter” on the crop you are intending to protect, can lead to crop loss. As well the mixture could result in poorer efficacy of the products in the tank, leading to reduced pest control (antagonism).

Because of all of these potentially negative reactions, **the PMRA memo indicates that the sole responsibility of any crop loss or reduction of pest control lies with the applicator or grower.** The grower needs to understand this risk and the potential consequences of a non-labeled tank mix before proceeding.

In practice, there are some non-labeled tank mixes that could provide additional value to the user (for example, increased scope of pests controlled, contributes to resistance management or integrated pest management, cost- or time-savings). Before any grower attempts a non-labeled tank mix consult a chemical company representative or local extension personnel for possible negative impacts. As well, it is always a good idea to try on new non-labeled tank mix on a small area first to determine its impact.

**For more information, please contact:**

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