

## Practical Pesticide Application Considerations

Pesticide applicators understand the regulations and safety precautions related pesticide application. They know to read the pesticide label and follow application instructions for optimal pest control, environmental safety and exposure concerns. The challenge for most pesticide applicators and farmers is that, real life pest management does not occur on a pesticide label or in a text book. With increasing farm sizes and farm complexities, schedules and pesticide applications are often under time constraints. Weather and pest cycles combined with other things that need to be done, can lead to the erosion of pesticide application procedures.

Pushing the limits on wind speed to get that last tank load out, forgetting to put on personal safety equipment for that first load at 4:30 in the morning, and not letting the dry flowable pesticide agitate in tank long enough before spraying are all examples where time and conditions cause the applicator to take short cuts. The question we continually need to be reminding ourselves of is; Are the risks of taking a short cut worth it? Invariably the answer is no!

What are the direct and indirect costs of taking short cuts? To begin, all pesticides are not the same and should not be treated the same. Some products require workers stay out of the field for 48 hours after application, while other products only require the product to dry before workers can enter. Because of this, the implications need to be examined on a product by product basis. However, for the simplicity of this factsheet we will look at a couple of examples that clearly show the costs of taking short cuts.

- 1) **Worker safety:** This is a big concern, that often centers around the application of the product or the restricted entry interval (time after application when workers can safely re-enter the field). Acute and chronic toxicity can have subtle effects on the workers. Digestive issues, headaches, fatigue and dizziness can be difficult to differentiate from other symptoms related to working hard on a hot sunny day. The costs of potential loss of productivity and increased sick days are obvious, but the potential for long term health issues should be a farm managers primary concern. Application safety equipment and following re-entry intervals are small investments for the health and well being of your workers and short cuts should never be considered or permitted.
- 2) **Pest control:** It is easy to push the limits regarding the application of a particular pesticide. Be it applying in less than ideal environmental conditions or beyond the growth stage of a crop or pest. Pushing these limits puts a huge financial risk on the applicator. Pesticides cost money and not giving them the chance to perform as they were designed raises the risk that pest control will be compromised. Poor control combined with potentially increased environmental impact could make the costs to the grower very high. Delaying application or switching to a product that is more suitable for the situation that presents itself will benefit the applicator in the long run.

- 3) **Accountability:** Increasingly, growers will need to be more accountable on what and how they apply their pesticides. Accurate and comprehensive spray records will become a requirement to sell the crops you are growing. Buyers look at best management practices as basic requirements before considering the purchase of your products. In essence, following proper pesticide application procedures is quickly becoming a requirement for the sale of agricultural products. But more importantly, having those procedures properly recorded is a cost of doing business that will be a requirement for all sectors in the near future.

As applicators, how do we prioritize “doing things by the book” when things are hectic in real life? Below are some tips to help keep safety and proper application a priority throughout the year.

- 1) **Reading the Product label:** Reading the label right before application can be frustrating and often is over looked. The winter months are your friend. By and large most producers and pesticide applicators have some down time through the winter. Most producers know what products they are likely to use through the growing season. Take some time and review the products you are likely going to apply. Make notes on safety precautions and application restrictions for each product. Place these notes, with the label, in a place where you can easily reference them in the spring. This will allow you to become more familiar with the product, but also make it easier to remember simple things like specific mixing instructions.
- 2) **Keep safety equipment up to date and accessible:** Applicators make take personal safety short cuts because safety equipment isn’t kept up to date. Through the winter make sure there is an ample supply of chemical resistant gloves (Nitrile), respirators (with new carbon filter cartridges), and spray suits that fit your situation. Spray suits could mean full body Tyvek suits if you are spraying with an open cab or a spray apron to protect against splashing when mixing. Either way make sure there is plenty on hand and accessible when the season starts. Also remember to bring the safety equipment with you; if you are spraying in a field 20 km from your home farm, the safety equipment sitting in your barn is of not much use.
- 3) **Know your pests and know your pest control options:** Understanding the pest and how it affects your crop is important. It is also critical to understand how a particular pesticide controls that pest. Workshops, factsheets and discussions with specialist are key to understanding these relationships.

- 4) **Maintain and calibrate sprayers in the off season:** We often take short cuts when we are pressured by time constraints. Having a pump break or a hose give way in the middle of a load is not only a safety and environmental hazard, it can severely impact your ability to spray everything in a timely manner. Winter maintenance and early season calibration and equipment checks are very important to minimizing lost time when it matters the most.

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