

Integrated Pest Management on My Farm

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Over the past twenty five years our farm, located in the Melfort area, has undergone numerous changes. One of the most significant changes in that period was the transformation from conventional till to zero till. With this transformation came the very heavy reliance on our sprayer to control weeds, insects and diseases. I believe that our sprayer is one of the most important pieces of equipment on our farm.

The sprayer is only as good as the job it does. There is as most of you know a very narrow window for most spray applications. We cover the same ground two and three times per spray season. So there is very little room for error.

One year ago we purchased an Apache AS710 sprayer. We had the auto boom height control added which I believe is a must. This allows me to spray with controlled precision at any desired height off the ground with no added pressure or stress. We are currently adding an Accutrac Auto steer system to our existing light bar to improve overlap and reduce fatigue.

This spring we made what I feel is the most significant improvement to our sprayer. We had Moker and Thompson in Melfort add the Capstan Sharpshooter System to our Sprayer. This system allows the limiting factors to be field conditions. This system is important because for the first time it allows me to spray at a controlled pressure and droplet size independent of speed and rate. With this system I select the nozzle tips for droplet size.

For instance certain broadleaf herbicides work best if the average droplet size is between or around 280 microns. For this droplet size I would select an SR 80-03. This tip allows me to get my desired rate of 4.8us gal. With an average droplet size of 289 microns at a pressure of 50 psi. It allows me to travel between 6miles per hour and 20miles per hour holding everything else constant.

This system also allows me to change the pressure and droplet size from in the cab at any time on the go with a simple turn of a dial. This is extremely important while spraying adjacent to sensitive fields. For instance if I turn the dial to 20 psi I will increase my droplet size to 400 microns. My rate will remain constant at 4.8 US gal within my speed range of 4 to 13 miles per hour. This will drastically reduce my drift and when safely away from the sensitive area I would turn the dial and increase my pressure back to 50psi.

This system is also designed for instantaneous On/Off spray control. Because the flow is controlled right at the valve assembly tip there is instant tip On/ Off across the whole boom. This allows for reduced overlap on the headlands.

Ultimately this system allows me to get more optimal chemical efficacy which translates to the best kill rate under a given set of conditions. It allows me to drive comfortably to field conditions maintaining consistent predetermined optimum droplet size and pressure while spraying at a constant rate. It allows me have less overlap on the headlands. It also allows me to

spray up to sensitive areas with the turn of a dial.

This system Capstan Sharpshooter can be added to most sprayers affordably and qualifies under the Environmental Farm Plan.

There are a few more things that we do on our farm to improve pest management. We start in the fall by using glyphosate on all our cereals including oats and we will spray our canola if necessary. We have crop dividers to minimize tramping losses. We effectively spread our chaff and straw with our rotary combines over the whole thirty foot swath width. This is crucial for seeding the following spring. We use three quarter inch knives with nine point eight inch row spacings on our 5710 Bourgault air drill to reduce soil disturbance. We preseed burn wherever necessary which reduces the density of weeds to spray in crop. We use the help of our local Agricore United field staff for crop scouting as well as our local chemical reps. This helps us determine the best way to control problematic pests. We will spray in split applications for broad leaf and or grassy weeds if beneficial.

Due to economics our crop rotation has become a cereal-oilseed rotation primarily. However we do have some seed alfalfa and alsike clover as well.

We have increased oats in our cereal rotation to half to try to reduce disease and midge pressure in our wheat. We are using Invigor canola because of its unique Group 10 chemical grouping. This will help us further reduce our instance of herbicide resistant weeds. We are likely looking at having to incorporate a fungicide into the budget if we continue with this rotation to control disease pressure.

We heavy harrow our cereal straw whenever possible in the fall and leave our canola stubble to the spring. If necessary we will do a post harvest burn with glyphosate at a litre an acre. In short this is how we control the pests on our farm.