



CropLinks May 2, 2019

Winter Wheat: Weed Control

By now, hopefully, wheat growers have made the decision on which fields they are keeping, patching with spring wheat or taking out entirely. It hasn't been an easy decision on most fields, made worse by the cool, damp weather this April. Spring tillering is definitely lacking. But on the early soils, the spring annual weeds are up and Mother Nature is moving on! Time for making weed control decisions.

Wheat is an excellent crop to have in the rotation in order break up the cycle of summer annual weeds and rotate to some different chemical groups. There are many products/tank mixes to choose from.

It is important to note that weed control should be done in wheat fairly early. The critical weed free period for winter wheat, from research completed in Wisconsin, is from the middle of tillering until growth stage 31 (initiation of stem elongation). We don't often talk about critical weed free periods for wheat because wheat is a fairly competitive crop. Research from Dr. Peter Sikkama at Ridgeway College supports that early weed control is critical in maintaining yields. Applying weed control late can actually cost yield. As the wheat plant moves past growth stage 31 applying herbicide can actually cost yield. In Dr. Sikkama's trials applying herbicide to wheat after growth stage 31 decreased yield by .3 mt/ac, compared to the check which did not receive a herbicide at all. When compared to the plots sprayed at the correct timing there was a 0.46 mt/ac yield difference. The third reason to correctly time the herbicide is that weeds are much easier to kill when they are small.

So now it comes down to selection of the correct product. In order to make the proper selection it is important to know the weed species present in the field and which herbicide either controls or does not control them.

If you do not have a large population of over-wintering weeds your product choice usually comes down to MCPA and 2,4-D which will take care of most of the spring annuals. Crop safety is good for both of these products, MCPA being slightly better. MCPA is great on mustards, but better on hempnettle, and horsetail than 2,4-D. While 2,4-D is slightly better on wild buckwheat and lady's thumb. Both of these products are weak on cleavers, chickweed, wild carrot, fleabane, and shepherd's purse. If shepherd's purse is the major weed present Buctril M is a very good

choice. Buctril M is also very good on lady's thumb and wild buckwheat as well as most annual broadleaf weeds. Crop safety for Buctril M is excellent. Buctril M tends to be weak on chickweed, cleavers, dandelions, fleabane and Canada thistle.

The go to product for the last decade has been Refine M or Boost M (mix of Refine and MCPA). This has been mainly for control of chickweed and annual broadleaf weeds. But Refine M also has much better activity on wild carrot, hempnettle, and some activity on field violet and chamomile.

The last five years has seen the adoption and proliferation of products containing fluroxypyr. These products include Trophy, Barricade M, Enforcer M, Pixxaro, Infinity FX etc. These should be your go to for cleavers control. But will also give adequate control of the previous mentioned weeds.

The other troublesome weed I see out there is chamomile. At early seedling stages both Buctril M and refine will have some activity on it, but Lontrel or a 2x rate of Refine are effective at controlling this weed.

Hopefully that helps make your selection process a little easier. If you are looking for more help have a look at [OMAFRA's Publication 75A Guide to Weed Control: Field Crops](#) or get in touch with me. With our thin stands and need for good clean straw, weed control in wheat may be more challenging than ever this year.



Shepherd's Purse seedling



Cleavers seedling



Mouse-ear Chickweed seedling



Common Chickweed seedlings

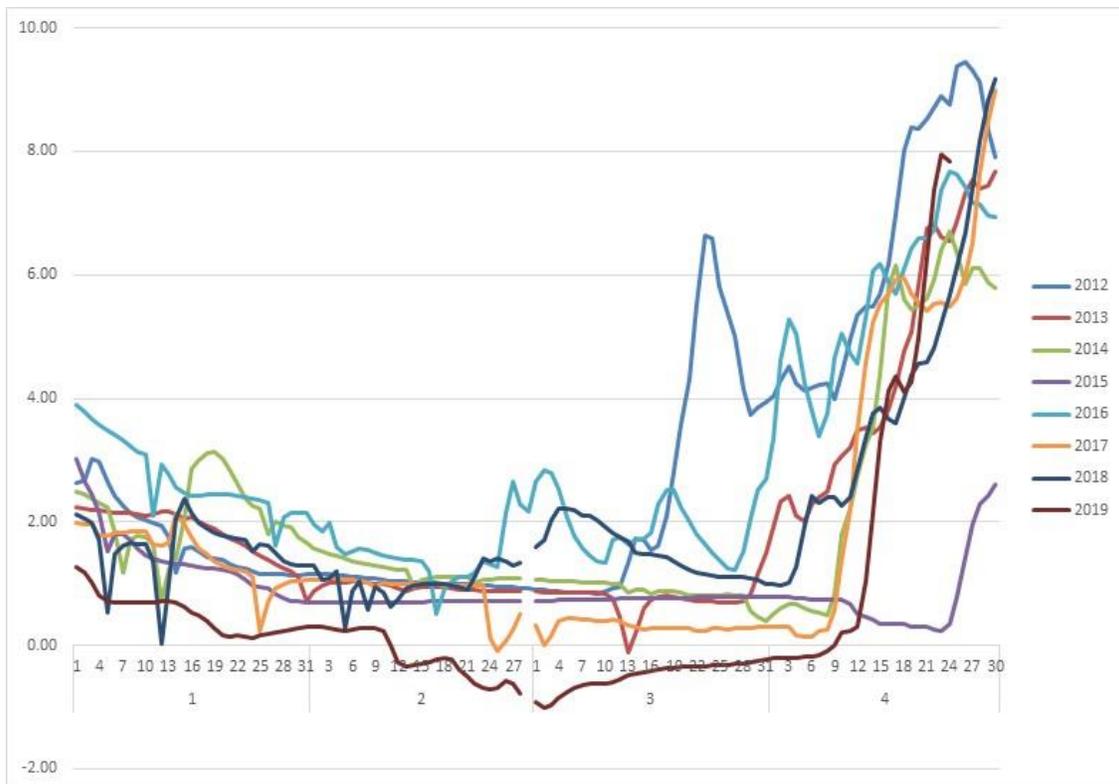


Chamomile seedlings

Forage: Winter damaged stands

Forage stands are starting to show the effects of the hard winter this past week. As far as alfalfa goes, I think I have seen it all - disease, mushy stems, heaving and straight up winter kill. Grasses are also showing quite a bit of injury. Damage tends to be very spotty from field to field and within fields depending on drainage and exposure. Freezing, thawing, minimal snow pack, and ice sheeting have taken their toll this winter. Growers will get a good look as they get out there with their fertilizer.

The graph below shows the average daily soil temperatures ($^{\circ}\text{C}$) for the years 2012 to 2019 at 50 cm, taken at the Kentville Research Station. The graph shows that in most years, we do not see frost at this depth or if we do, it is transient. It appears from this data that we had frost at 50 cm from mid-February to early April. This year definitely stands out!



So what to do...largely comes down to the degree of damage and your forage needs.

If there is only slight winter injury you should consider nursing it back to health by allowing the crop to mature to the bloom stage during this year's cuttings. This will allow the plant opportunity to produce and transfer energy to replenish reserves in the root. You can also raise the cut high to allow new shoots to develop. Consider taking fewer cuts on these fields.

If there is a good stand of grass in the winter killed legumes, (depending on the species of grass) a good application of nitrogen fertilizer will encourage the grass to fill in the bare areas.

If you have winter kill but have a decent stock pile of forage you may want to consider no-tilling in some legumes and either orchard grass or tall fescue. It is important to note that alfalfa should not be replanted into winter killed alfalfa stands due to the auto toxicity (Allelopathic effect) from the previous crop of alfalfa. In this case inter-seeding with a clover is a better choice. Inter-seeding with these species will not increase yields for the first cut but should establish in time to contribute for later cuttings. It is important to look at the weed situation while you are making your assessment. You do not want a large number of established weeds competing against your newly establishing seedlings.

If the stand was heavy on legumes and you have had a lot of winter kill, and you are desperate for forage consider no-tilling either a spring cereal or ryegrass into the stand. These are considered a

short term fix but will give you some quick tonnage this year. If you are going to do this it should be done as soon as possible. Delaying the decision will only make the situation worse, giving you fewer options to grow forages through the heat of the summer.

In the worst cases (heavy winter kill and weeds present) growers should look at taking the stands out entirely and consider annual forages or corn silage.

Dialing in the Corn Planter in the Field

I spent a lot of time last fall talking to growers about corn planter maintenance to achieve the perfect corn stand. We all know how important it is to achieve that corn stand and how missing plants and uneven stands can affect yield and quality of the corn crop. In years like last year with heavy insect and disease pressure it is important that the crops uniformly and quickly move through vulnerable growth stages like tassel and silking. Uneven stands have a wider window where the crop is open to infection and more attractive to insects. It is often later emerging and stressed plants that cause growers the quality problems.

So we are ready to plant with our tuned up planter, where do we start?

First make sure the planter is running level, take the planter into the main part of a level field. Place the level on the planter's frame. Note the position of the parallel arms, these should also be running almost parallel.

From here we can adjust the down force. Run the planter a little farther after leveling. Stop the planter and see if you can just barely turn your depth wheel on each planter unit. If the depth wheels are digging a trench, then you have too much down pressure or an over worked fluffy seed bed. If the wheels are turning with little effort you do not have enough down pressure to maintain a consistent seeding depth. It is important to make these adjustments when the planter is $\frac{1}{4}$ to $\frac{1}{2}$ full of seed and fertilizer. If you run too much down pressure you can restrict root growth on the young plants by compacting the seed trench wall and the seed zone in general. Another symptom of too much down pressure is a seed trench that is too hard to close.

Now you can look for seed depth. Pull the machine ahead again after making these adjustments. Proper depth for corn seed should be 1.5 to 2 inches. This is very important as the moisture and temperature at this depth tends to be more consistent, but also we want the nodal roots to properly form at the $\frac{3}{4}$ inch depth.

The next thing I would urge growers to do is release the pressure on their closing wheels and strap them up. Now you can see if the planter is making a true “v” trench. A “w” trench indicates that the opening discs are worn or not shimmed correctly. Is every seed deposited firmly in the bottom of the trench? Is the seed wall collapsing prematurely? Does the trench contain dry dirt? Having every seed at the same depth surrounded by moist soil will lead to an even emergence.

While you have the trench open it may be a good time to measure off 17.5 feet and check your planting population.

The next thing to pay attention to is the closing wheels. Dig a cross-section of the closed seed trench. The seed should be enclosed in soil with no seam or a smear where the trench closed. This will ensure even and steady germination of the seed with consistent moisture moving towards it. If sunlight is allowed in the trench it can also affect root formation. Proper alignment of the closing wheels, pressure adjustment and the type of closing wheel will have to be determined to ensure adequate closing.

I really like trash whippers or row cleaners. When properly setup they move trash out of the way, allowing the planting unit to operate smoother, giving you a finer dirt to deposit the seed into, removing residue which may end up in the seed trench or on the surface in the seed row, cooling the soil. They can be quite troublesome to setup. In general if they are digging you a trench they are set too deep. If a trench is being formed, the warm dry soil is being moved to the side and your planter unit is working in sticky, wet, cold, soil. Also these trenches can fill up with water or create ruts if the weather turns wet. If you have a fixed mount attaching the row cleaner to the seed unit they should be adjusted up. If you have a floating mount consider putting a pin below the mount to limit the range of downward movement. These row cleaners should not be running in the soil all of the time and turn occasionally when properly set.

Speed is the last adjustment. If your planter units are hopping then you are operating too fast for field conditions. These units should be traveling through the field quite smoothly. In tough field conditions consider slowing down, to limit seed bounce.

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