Winter Annual Weeds in Winter Wheat

The presence of weeds in wheat will reduce yields. There are two major classes of weeds in wheat: winter annuals and summer annuals. Winter annuals emerge in fall, winter, or early spring and compete with wheat for moisture, light, and nutrients. Given the current drought conditions we’re dealing with, any competition for moisture is going to hurt yields. Summer annuals emerge in the spring when soils reach a certain temperature. They can compete with wheat for moisture, light, and nutrients but also interfere with wheat harvest and the next crop planted after wheat. Even so, it is the winter annuals that have the greatest effect on wheat yields.

It is estimated that winter annual weeds reduce wheat yields by an estimated 10% each year. When wheat prices are low it can be difficult to justify the cost of spraying. As of late wheat prices have been above average and, given the slow start many wheat fields have had due to a lack of moisture, it certainly makes sense to spray. Weeds that germinate in the fall have the greatest impact on yield. Many are aware of this and sprayed their wheat fields in the fall. I’ve recently scouted many fields that were sprayed in the field and found them to be almost completely weed-free. This allows greater tillering of the wheat and this is important because good tillering generally equals good yields.

Most fields, however, were not sprayed in the fall. Recent scouting of these fields has generally found them to be full of both henbit and chickweed. In many of these fields, you can’t even see bare ground. Where there’s not wheat, there are weeds. We often say that most weeds should be sprayed when they are small and actively growing. Henbit and chickweed are small and actively growing right now. They are two of the earliest growing weeds that we have. Many don’t even notice them until they begin to bloom a couple of months from now. By then, they’re more difficult to kill and have already done most of the damage they’re going to do. Right now is the time to start looking at wheat fields and thinking about spraying.

By far the most common product used to control broadleaves in winter wheat is Harmony Extra. Harmony has proven to be an effective product and, when used properly, doesn’t cause problems for double-crop soybeans. It is important, however, to not rely on just one product every year. Producers should rotate to herbicides with different modes of action whenever possible. Other herbicides that are effective on henbit and chickweed that can be applied in the spring include Finesse, Osprey, Banvel, and Buctril. These will have different timing and plant-back restrictions so be sure to read the label before use. The 2013 Missouri Pest Management Guide has more information and can be obtained from your county extension office.

2, 4-D is a popular herbicide used for broadleaf control in wheat primarily because it is generally effective and it is cheap compared to many other herbicides. 2, 4-D is typically only effective on chickweed and henbit when these weeds are very small. This presents a problem because 2, 4-D can only be applied to wheat after it has fully tillered but before jointing. Spraying 2, 4-D outside of this “safe window” will cause damage and yield loss to wheat. So by the time you can safely spray 2, 4-D, it probably won’t provide complete control of chickweed and henbit.
There are a couple more things to keep in mind when considering spraying for weeds in wheat. Many wheat producers like to seed red clover into wheat so they can cut it for hay after wheat harvest. There may be even more of this happening this year due to the difficult hay season we had last year. Nearly all herbicides that control chickweed and henbit will also severely damage emerged red cover. In addition, the residual activity of many herbicides may prevent clover seed from ever germinating. The other thing to consider is applying the herbicide as a tank mix partner with liquid nitrogen. This is possible with many herbicides and can be very effective. The main issue is that this practice will often yellow and stunt the wheat, sometimes resulting in yield loss. The other issue is that herbicides are often needed before it is the ideal time to apply nitrogen to wheat. For more information on winter annual weed control in wheat, contact your county extension office.