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No Till Notes:33.3% or Less

By Mark Watson, Panhandle No Till Educator

Having grown up on a wheat/fallow farm the desire to produce winter wheat as much as possible is always strong. Winter wheat has been the crop of choice here in the Panhandle on dry land acres for years. We also have entrenched in us the idea to plant wheat every other year since we all grew up in wheat/fallow cropping rotations. Winter wheat has been our main crop which over the years has performed quite well in our semi-arid environment.

Because of this I wasn't surprised when a producer told me he planned to plant field peas in winter wheat stubble, grow the peas, then plant the field back to wheat the next fall. The problems with this crop rotation are many. Let's examine some of the shortfalls of this wheat/pea/wheat rotation.

One of the biggest concerns is the lack of diversity in this rotation which will do little to break up persistent weed and disease cycles. In this wheat/pea/wheat rotation, we are simply substituting field peas for summer fallow. All of us who farmed conventional wheat/fallow always had a hard time controlling cheat grass, rye, and some jointed goatgrass in our fields. The reason for this is we never really broke up the weed cycle of these problem grasses in winter wheat production. We need 2 years of controlling problem weeds to get rid of 96% of the viable weed seed. Growing wheat every other year in a wheat/pea/wheat rotation will do little to control these problem weeds. Even in "clean" fields the cheat grass will eventually creep into the field and become a bigger problem.

Another problem with this rotation is building organic matter. Planting a legume 50% of the time will do nothing to increase, and probably will decrease the amount of organic matter in the field over time. A goal of every no till crop producer should be to increase organic matter in the field. Increasing organic matter will improve water infiltration, soil structure, microbial activity, water holding capacity, and nutrient availability of the soil. To increase organic matter in the field you want to plant high carbon to nitrogen ratio crops like wheat, corn, or millet at least 66.7% of the time. Legume crops such as field peas, chick peas, sunflowers and edible beans should be planted no more than 33.3% of the time in your cropping rotation.

Another drawback to this wheat/pea/wheat rotation is getting the peas planted timely. If we have a wet spring like we did this year it is difficult to get a wheat stubble field planted to field peas because of all the moisture in the wheat stubble early in the planting season. It is much easier to plant a field of corn stubble early in the year since there is generally less residue and moisture in corn stubble compared to winter wheat stubble.

The rain continues to fall this year. In the month of June we had 7.04 inches of rain. We have received 2.25 inches of rain the first week of July. A total of 9.29 inches of rain in the past 5 weeks and our farm hasn't been in on any of the heavy rains! With all this rain we haven't irrigated in the past 5 weeks, so our total irrigation this year has been 2.25 inches on the winter wheat, and none on the corn or edible beans.