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No Till Notes:Challenges

By Mark Watson, Panhandle No Till Educator

I thought I would give you a brief look at our farm and how the season has progressed since we're about halfway through the growing season. I wanted to visit with you about what has turned into another somewhat challenging year here in the Panhandle.

To start with, it rained this year which seems somewhat unusual given the long term drought we have been going through. It not only rained, but in some areas it just poured moisture. I've heard up to 15 inches in the month of June in some locations, over 20 inches from April to July. We've had 14.79 inches of precipitation in 2009, or a little over four inches above average. That's a lot of rain. Along with the rain came damaging hail in some locations. Our farm has been spared from the hail for the most part, with minor damage on a few fields.

With all the rain and cooler temperatures came a new set of challenges. Our irrigated corn crop is lagging behind this year. I always expect the corn crop planted into heavy winter wheat stubble to be slower to start with compared to conventional tilled corn. I've always felt the heavy residue helped the corn during the hot summer months and the no till corn always matured the same as the conventional corn by fall. This year may be different as we haven't had a lot of summerlike temperatures even in July. We've had some highs in the 70's and lows in the 40's in July. It will be interesting to see how the crop progresses through the rest of the growing season.

Another concern I have on our farm with the excess rain in our sandier soils is we may have leached away some of our nitrogen fertilizer. We chemigated extra nitrogen to see if the crop responds, but our corn in the sandier soils doesn't have the good dark green color I'd like to see this time of year. I've always been reluctant to chemigate through the center pivot because of groundwater contamination concerns, but I may have to rethink our fertilizer program for corn after this year's experience. We typically apply our nitrogen fertilizer before planting with our sprayer. This has worked well in the past but with the excessive rainfall this year; this application method may have hurt us.

To test our crop and soil for nitrogen deficiencies we sent soil and plant tissue samples in for analysis. As of this writing I haven't received the results of these tests. Once we get the results we'll make further fertilizer determinations for the crop from these results. We'll see if we can "rescue" the crop from our management mistakes.

As far as our irrigation management with the corn, we did apply $\frac{3}{4}$ of an inch to our corn after our soil moisture monitor had a reading of 85 centibars for the first foot and 35 centibars in the second foot in our silt loam soils. We probably jumped the gun and could have waited longer for our first irrigation. With the application of $\frac{3}{4}$ of an inch, the soil profile was again full with the first foot reading 34 centibars after the irrigation. It's hard to delay the first irrigation when the corn is shoulder high and it's the 20th of July. We just felt it was time to start irrigating the corn even though the sensors told us we could wait a little longer.

We also irrigated our edible beans for the first time this week. The soil sensors were reading the soil profile had good moisture, but we don't really start using them until the beans have reached a size where we feel they are starting to draw moisture below the first

foot sensor. When the crop is just getting going I irrigate as needed and will start using the sensor readings after the crop is big enough to have roots beyond the first-foot sensor.

One thing I've learned from my years of farming is that each year is different and presents different challenges. I've also learned that no one system works the best each year. Even with the challenges in our irrigated corn this year, I feel our no till farming system has worked well over the past several years. I also feel our no till production system has improved our soils and conserved our groundwater.