

Date: For the week of June 28, 2009

Soil Structure

By Mark Watson, Panhandle No Till Educator

For the past several years I have talked to no till producers from eastern Nebraska where they were getting 30 to 40 inches of precipitation for the year. They always talked about soil structure and how they were able to plant and harvest their fields while the neighbors who used conventional tillage would have to sit and wait for the soil to dry out before they could get into their fields. The rainfall we have had this June has allowed me to witness on our own farm the benefits of no till farming when there is heavy rainfall over an extended period of time.

On our farm we have had 6.9 inches of rainfall in June with more rain in the forecast and another week of June still left to add to the monthly total. Many areas of the Panhandle have experienced much more rainfall, along with hail, than what we've seen on our farm. It has been a real challenge to get the crops planted timely and keep up with weed control in the fields.

Our water infiltration has been surprisingly good throughout these rainfall events. With the heavy residue on the soil surface still attached and the good soil structure we have had very little runoff in the fields. We also have minimal amounts of water standing in the low areas of the fields. The benefits of no till and water management are definitely showing through this year.

We have also been able to get our edible bean crop planted timely even with the regular rainfall. I was surprised that we were able to plant even when the soil was damp on the surface without leaving any tracks in the field. My eastern Nebraska friends have told me you can plant in long term no till fields even under wet conditions and we saw that this year on our farm. I feel like we created very little soil compaction even though we were planting in some wet fields.

The same has held true for being able to run our sprayer through the fields with very little soil compaction. On one particular field where we have our heavier soils we planted the edible beans and our plan was to spray the field with glyphosphate before the beans emerged. I always like to start off with a clean field when the crop emerges and give the edible beans a head start on the weeds. The day after we finished planting we received an inch of rain. The next day produced another ½ inch of rain. The following day I was able to go out in the afternoon and apply the glyphosphate leaving minimal tracks in the field with the sprayer. I thought this was quite a testament to water infiltration and improved soil structure.

The benefits of leaving the residue on the soil surface along with the improved soil structure from no till crop production was evident on our farm this past month. I think we were able to get the crop planted timely and control the weeds because of the long term no till crop production practices we have been using. I also feel we have had very good water infiltration and little soil erosion all because of the benefits of no till crop production practices.

With all the rainfall we haven't irrigated again, so our yearly totals are 2.25 inches of irrigation on the winter wheat and no irrigation on the corn or beans.