



September 7, 2018

WHEAT UPDATE FOR SE NEBRASKA

Soil health (biological, physical, and chemical) has been a popular focus over the past decade with emphasis on utilizing no-till farming and cover crops in southeast and eastern Nebraska. However, a more diverse crop rotation is often left out of the discussion as a way to improve soil health. Despite the potential benefits adding a third or fourth crop to the corn-soybean rotation to improve soil health, few farmers in eastern Nebraska have done that to date and adoption barriers are mentioned.

Two long-term (14 & 15 years) crop rotation studies in the Midwest have shown that including winter wheat into the corn-soybean rotation results in the following improvement in soil health: 1) Increase in water stable aggregates (most sensitive and best single indicator of soil physical health); 2) Higher total nitrogen; 3) Higher potentially mineralizable nitrogen.

These aspects of soil health were increased by adding wheat into the rotation regardless of the tillage system, conventional and no-till. The dense fibrous root system of wheat and nitrogen derived from wheat root deposits is likely the cause of these measurable differences. These long-term crop rotations studies did not include cover crops (which is now a no-brainer for SE Nebraska) following wheat. Breaking weed cycles by planting wheat is becoming a more urgent issue to achieve better control of palmar amaranth and marestail.

I mentioned barriers why wheat acres have dropped. The top reason producers usually say are economics of producing wheat or the one year cash flow projections. Wheat grain yield/input cost compared to corn and soybeans has been the main driver for the decrease in acres. Some growers have been interested in poultry, beef or swine manure applications after wheat harvest but logistics of planting and harvesting only 1 or 2 fields is not easy. For others, it's about the learning curve and growing a new crop.

Growers are reporting improved economics by seeking out the best wheat basis/bids, selling straw, growing forage crops after wheat and higher corn or soybean yields following wheat. Wheat also works well in conservation compliance plans on HEL ground. Custom drilling or harvesting can become new business opportunities in certain neighborhoods. Extension is certainly geared to continue to help with the learning curves.

Now is the time to take stock of which wheat varieties you want to grow next year. The Nebraska Winter Wheat Variety Trials are the best place to start; however, take the 2018 data with a grain of salt as this was an unusual year. We had a lot of heat during flowering and were too dry in many areas that effected yields. Hence consider 3 year averages when looking at the UNL data at: <https://cropwatch.unl.edu/winter-wheat-variety-test-results>



For Southeast Nebraska look at the following varieties closely: WB (Westbred)-Grainfield, SY (Syngenta) Wolf, WB-4721, Zenda, and WB-4303 and NE12561 (tied). NE12561 was recently recommended for release as Seige. When considering the 2017 and 2018 data for the Nebraska-developed varieties, Ruth continues to be a line to watch. In the future, Dr. Stephen Baenziger, UNL Professor, says Seige will do very well in the east and the new two-gene Clearfield wheat will add choice to growers' options. Ruth has many qualities besides high yield potential. It generally has good test weight and in comparison to other varieties is higher in protein. Hence it has what the market wants.

Extension Educator Nathan Mueller has developed a new wheat variety selection tool for Eastern Nebraska and compares a lot of key wheat characteristics. It's worth a look too. Go to: <https://go.unl.edu/easternnewwinterwheatvarietyselectiontool>

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