Rademacher Farms Newsletter

Newsletter 10 - Corn Harvest Update November 19, 2019

Corn harvest wrapped up on Friday the 25th. We had two fields of corn and their approximate yields were 135 bushels/acre and 115 bushels/acre. Both were about 70 bushels off from our goal for each respective field. Based on talking to neighbors, our "better" field underperformed, while the historically "worse" field overperformed by the same amount. Unfortunately there are 100's of variables that could explain this. Similar to our soybeans, planting late, in mud, followed by a drought, is hardly a recipe for success. Despite the disappointment that comes from a difficult year, we're overall very happy. We were able to try several different things this year, and learned a lot.

White Corn

As I mentioned in previous newsletters, we grew a small amount of Non-GMO white corn. This ultimately goes to make white corn flour products, such as tortillas and tortilla chips. In addition to the usual cheaper Non-GMO seed, white corn is sold at a premium of about 10% above yellow corn price. The end users have higher standards that need to be met for the full premium. Factors like broken kernels will reduce the quality rating. Also, if pollen from yellow corn fertilizes the silks of the white corn plant...it makes a yellow kernel. Pollen travels long distances, so it's very common to see yellow kernels on a white corn ear. The grain facility we deliver to has an optical sorter that can separate yellow kernels. The more yellow, the lower the quality score and potentially lower premiums.

The silk is the female part of the plant.

Each silk represents one kernel. 1 grain of pollen needs to land on each silk for every kernel to develop.

Pollen from a yellow corn plant makes a yellow kernel

White corn and yellow corn yield the same, so the 10% premium can add a lot of profit. There is some extra work involved like cleaning bins and the combine to remove yellow corn and soybeans, but the extra profit potential far outweighs the extra labor. Non-GMO yellow corn can also be sold for the same 10% premium, but compared to white corn, it is difficult to get into a Non-GMO yellow program. We've been selling our non-GMO yellow corn without that premium. Thankfully, next year we got into a Non-GMO yellow corn program. It should be much less labor than white corn but should further increase our profit by ~$70/acre. A big deal! So no more white corn, but it was a fun test this year!

Seed Treatment Trial

As we talked in the last newsletter, a majority of seed planted in the US receives a fungicide and insecticide seed covering. These chemicals are used as a cheap insurance and, while they can benefit the crop, are not without environmental effects. A recent South Dakota study (link in email) found that wild deer had the same insecticide residues in their bodies and may have been linked to serious birth defects in the wild deer populations. Several countries have banned the use of these chemicals out of similar concerns. Rather than be caught flat footed, I'd like to continue testing how eliminating these same chemicals would impact our operation.

In addition to potential regulation in the future, and the handling/health concerns, we depend on beneficial insects and fungi to provide balance and a healthy ecosystem on our land. The more we can avoid harmful chemicals, the better. As previously stated, our goal this year was to begin looking at the effects of planting without these seed treatments. **Similar to what we saw in soybeans, there was no yield benefit to planting treated corn in our trials this year.** We'll be doing more testing on corn and soybean treatments in future years. Unfortunately, it is incredibly hard to find untreated corn, but I was lucky enough to scrape up a few bags of corn without treatment for next year. We've seen the effects in a terrible year, hopefully we get to see the effects of treatment vs. no treatment under normal conditions next year.

Future Directions

It's difficult to make decisions based on this year. As grandpa said several times, on top of the late, wet spring, it was the worst drought he's seen in 30 years. In a year like this, it is easy to say "Well, we're never doing XYZ again because it didn't work this year!" Making any serious decisions based on the results of this year would be a purely emotional decision. Like every year, there will be minor tweaks to almost everything we do, but broad changes based on this year, or trying to plan for the possibility of another year like this, would be a poor business decision. Here's what next year looks like:

Non-GMO yellow corn, planted without tillage, into a large cover crop that will be rolled over into a weed suppressing, moisture conserving mat. We will try 13 acres of new corn varieties to help us choose seed for 2021. We will also have 10 acres split between treated and untreated corn. Based on successful trials this year, we will **PLAN** on herbicide reductions, but will ultimately depend on the seasonal conditions. At corn harvest, we'll be able to sell our corn for an extra $0.35/bushel, which should increase our profit per acre by $70+ with minimal extra work. This 70$ will be added to the 30$ in seed savings we already get, and to 10$/acre in potential herbicide savings.

This will most likely wrap up our 2019 newsletter season! Not much to write about over the winter, unless someone finds a topic they want covered. If someone thinks of a topic or an article they want a newsletter on, please feel free to reach out and I'll do my best! Otherwise, we'll probably start up again in mid-March. I want to again thank all of you for your support of our newsletters and what we do. It wouldn't be possible without all of you, so thank you!

Frank