Corn: Let it dry out in the field or pay for drying in the bin?

Every year in October, this becomes a popular question. Especially in years when the price per bushel is depressed. I was talking to a customer in early October who had started harvesting his corn at 26% moisture and it was yielding 203 bushels per acre, adjusted down to dry bushels. When he returned later to harvest the second half of the corn field, it was down to 16% moisture and only yielded 189 bushels per acre. Hummmmm! What's going on here?

Since the price of corn is lower, it's very tempting to let the corn stay in the field and dry down to save on drying cost. Yet, I want to give you three reasons to continue harvesting your corn between 20 and 25% moisture: phantom yield loss, harvest loss, and fall operation. Let's explore each of those categories in more depth.

Phantom Yield Loss: This is the phrase given for the dry matter loss from the corn kernels. Seeds are living and "breathing" organisms that respire and use energy reserves overtime. High humidity and temperatures cause seed to respire at higher rate. As the seed is on the ear drying down it is in a very humid environment within the husk. Open ended husks help, but still don't allow for a lot of respiration. Phantom yield loss is worse if the corn dries down, is rewetted by rain and humid weather, and then has to dry down again. In this case, it can start sprouting kernels on the cob. As you can imagine, this hurts grain quality, test weight, and yield. A Purdue University article cited that yield losses of 0.6% to 1.6% per point of moisture can occur from leaving corn to dry in the field. Although phantom yield loss is hard to measure, from plot trials to farmer experiences, my experience makes me believe phantom yield loss contributes greatly to overall yield reductions.

Harvest Loss: When corn continues to dry and die in the field there is increased butt shelling at the stripper bar and ear losses at the corn head. Stalk integrity it is weakening over time, so there can be additional stalk and root lodging. This leads to increased number of ears dropped. When the ear hits the ground at harvest – it is gone! This all adds up to less yielded bushels per acre. Combine header loss can increase 6% in dry corn over harvesting corn when it is at a higher moisture. Timely corn harvest can also mean less ear rot development, because ear molds enter the plant at pollination and increase in humid dry down conditions.

Fall Operation Management: Finally, a timely corn harvest may even mean shorter lines at the elevators and quicker harvest. Plus, finishing harvest earlier potentially gives you more time for post-harvest tillage and more through out clean up before the snow flies. You also have more time to plant cover crops, apply fall herbicides, and spreading manure. Finally, consider this: you can normally dry corn cheaper in October than in later months because it takes less fuel to warm up the temperature of the dryer. To warm the incoming air 20 degrees takes about 1% more energy. That doesn't sound like a lot, but in 200-bushel corn, it can end up averaging out to about an extra cost of 1.5 bushels – because the

drying is taking place at a cooler temperature. Think of it like this: it's less cost of propane per moisture removed.

Here's an example:

- If the elevator gets $.03 per point of moisture per bushel, plus shrink. It will cost about $.21 cents per bushel to dry corn down from 22% to 15%. This is a cost of $42/acre on 200-bushel corn.
- With corn prices at about $3.25 per bushel, it takes roughly 13 bushels to pay for the drying cost.
- Yet, it's very likely that in this example you would lose more than 10+ bushel to the acre by letting the corn dry out in the field.

Yes, in this example 10 and 13 are different numbers. That's why you must take into consideration all the factors I mentioned – weather, additional time for other fall operational work, faster grain lines, and less overall loss in the field through better plant health. These factors count when considering whether to let your corn dry down out in the field or pay for drying in the bin. My experience tells me, 20-25% moisture is ideal!

References

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