K-STATE Research and Extension | Meadowlark District

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Soybean Drydown

One day they're all green – the next they're not. Your eyes aren't deceiving you: soybean drydown happens faster than you might think, often even faster than corn.

Depending on weather, we might see corn drydown rates ranging from one percent in late August to less than half a percent as we get into October. In contrast, soybean drydown rates can reach as much as three percent per day. Iowa State work noted almost flat moisture levels (60 percent during the de-greening period) that dropped rapidly as pods turned to a mature color at the beginning of R7 (full maturity). At this point, dry matter accumulation is complete, and seed moisture decreases rapidly – three plus percent per day in the first 12 days after maturity in the ISU study. Former KSU Agronomist Dr. Ignacio Ciampitti saw much the same with drydown starting at 58 percent moisture decreasing to 12 percent in just 15 days. There are obviously lots of variables at play, but the take home is: it happens faster than you might think.

What difference does it make? In many cases, maybe it doesn't. If moisture drops to 13 percent and stays there, maybe it's not worth thinking about, but what if it goes still lower?

Work from the University of Nebraska quantified the economic effect of moisture losses in a study where moisture samples were collected from 115 truckloads of soybeans at elevator delivery. Their work found close to 20 percent were below ten percent moisture and almost forty percent were below 11 percent. Two percentage points doesn't seem like much until you find out those two percentage points (11 vs. 13) represent a three plus percent yield loss.

While there *is* value in harvesting at higher moisture, it's impossible to harvest every acre at optimum moisture. That's when doing a few little things may help at least a little.

One might be to harvest at moisture levels. Soybeans are fully mature when 95 percent of the pods are at a mature tan color, likely with some leaves still left on the plant and maybe sitting at a 14/15 percent moisture level. It will require some harvest equipment adjustments (even throughout the day as conditions change) and slower harvest speeds, but if adjustments can be implemented without causing other economic losses, they could be a consideration.

We can also try to coordinate harvest efforts to capture overnight moisture. This can also help reduce the shattering losses we often see when warm windy afternoons drop soybean moisture levels to even to eight or nine percent. The losses *can* add up. Four to five beans on the ground per square foot equals almost a bushel per acre in losses.

There's a lot to think about during harvest. Soybean harvest moisture may not be high on your list, but if we can minimize moisture (and shattering) losses, it might deserve at least a little greater consideration.