Racing to the Finish – Soybean Maturity

K-State Cropping Systems Specialist Dr. Ignacio Ciampitti recently shared research on the effects of stress conditions during soybean seed fill and final soybean yield. In it, he outlines how stresses like defoliation, disease, heat/moisture, etc. can reduce the duration of seed fill. In this study, a seven-day reduction in seed fill reduced yields by almost ten bushels per acre. It’s a good reminder that there’s a lot of yield to be determined as the growing season winds down, even if we may not be able to do much to affect it.

One facet of yield we can still affect, however, is harvest moisture. Soybean moisture often drops more quickly than we think (Ciampitti’s work suggests in the neighborhood of three percent per day once beans reach 50-60 percent moisture), with harvest often occurring after the crop has dried to a moisture level two to four points lower than the ‘optimum’ 13 percent. It doesn’t seem like much, but the loss of “water” ultimately ends up as a loss of harvested bushels. Work done at the University of Nebraska (https://cropwatch.unl.edu/harvest-soybeans-13-moisture) illustrates this loss comparing a 60 bushel per acre yielding soybean crop at 13 percent (no pounds lost due to moisture correction) versus a 60 bushel per acre soybean crop at 10 percent – essentially giving up two pounds per acre. Different yields and prices change the numbers, but the bottom line is: losing moisture in the standing crop equals lost bushels.

To get ahead of moisture loss, consider harvesting at higher moisture levels, even though the crop may not look dry from the road (soybeans are fully mature when 95 percent of the pods are at their mature tan color). Moisture increases with dew and higher humidities. Harvest in less dry conditions can help retain moisture plus reduce harvest losses, too (four to five beans per square foot is approximately one bushel per acre). If storage and drying is an option, consider harvest at a higher moisture and aerating down to 13 percent.

Longer-term, run some numbers using the link above. It might surprise you how much yield is lost due to moisture and may help guide maturity and planting decisions for 2021.

Preparing the Vegetable Garden for Next Year

Some of your gardens may be done producing – and some of it you might have just given up on. If that’s the case, now is a good time to start preparations for next year.

Begin by chopping/shredding residue in advance of tillage. If soils allow, perform tillage now to allow plant material to decompose, potentially reducing future insect/disease problems.

If increasing organic matter is a goal, consider a cover crop. Small gains like wheat should be seeded at one pound of seed per 1,000 square feet from mid-September to late October. Want something that will winter kill on its own? Spring oats can be seeded at a rate of two to four pounds per 1000 square feet. If you want a nitrogen-fixing crop, seed a legume like alfalfa through mid-September at one quarter to one-half pound per 1000 square feet.

It’s never too early to start preparation for 2021. Use this fall window to get a head start.