

## Variety in Seed Size May Affect Fall Planting Rates

As farmers prepare to begin wheat planting across the state, seed size is a vital variable to take into consideration. Seed size traditionally varies with variety and type of seed but this year the range is wider. Producers will have to plant with extra care as the varying seed size and other issues can impact the average seeds per acre in planting rate calculations.

Jim Shroyer, extension agronomist at Kansas State University said, "Seed size depends on variety and where producers are located. There is a wide range in seed size this year and producers will have to know the number of seeds per pound that they have when planting."

Shroyer encourages producers to pay attention to seed counts and adjust rates accordingly. He advises farmers to not adjust too heavily in either direction especially if the number of seeds per pound is close to the average when planting.

On average, the number of seeds per pound is about 15,000 seeds. If planting 60 pounds per acre, producers can often assume that they are planting around 900,000 seeds per acre. However, Shroyer cautions producers to not automatically adjust seed volume as the excess seeds may be necessary and helpful in producing a good stand.

"You have to know the seeds per pound of the variety that you are planting. This year we had a lot of wheat with many more seeds per pound," Shroyer said.

Seeding rates will also vary depending on the type of operation. For a no-till operation Shroyer recommends increasing the seeding rate to get better seed soil contact especially in the first few years of no-till. In a recent article about planting rates, Shroyer suggests that no-till producers should increase their seeding rate by about 15 pounds per acre.

If planting wheat in a rotation after corn or beans it is suggested to bump up the seeding rate as the crop may not have enough time to tiller. Producers can compensate for lower expected yields derived from late planting and less tillers by raising their seeding rate. K-State agronomy extension data recommends that seeding rates be increased by up to 50 percent if planting on or after November 1.

Rainfall determines seeding rates for different areas of the state. Regions that receive heavy rainfall will plant more volume per acre because the extra moisture will sustain more plants. Areas that get less rainfall will have lower volume seeding rates as there is less moisture for the plants to utilize.

When multiple factors occur that call for adjusting seeding rates, continually increasing the rate for each issue will not result in the desired outcome. The maximum seeding rate that Shroyer suggests under all conditions requiring increased seeding is 120 pounds per acre.

Shroyer also believes that planting with certified seed can reduce some of the risk of seed size variety this year as certified seed will have any smaller seeds removed.

Daryl Strouts, President of the Kansas Wheat Alliance believes that seed uniformity and cleaned seed is more important than seed size. He suggests farmers look at seed test weight as it is a good

indicator of quality.

"By planting a certified seed variety a producer can have confidence that seed will be more uniform as it has been cleaned and smaller seeds will not be present. If using bin-run seed it is very important that the seed has been cleaned or it can lead to a lower quality stand establishment," Strouts said.

In order to calculate the most accurate and specific rates producers can consult the Kansas Crop Planting guide available on the Kansas State University extension agronomy website. Extension agronomist Shroyer is also available as a resource for any producer in need of assistance deciding on planting rates.

Shroyer recommended several other planting techniques to use in addition to calculating proper seeding rates. Other planting advice includes; using the proper tractor speed, planting at a uniform depth, planting into a firm seedbed, planting during optimum times and ensuring adequate soil fertility.