
From: Brent Bean <brentb@sorghumcheckoff.com>

Date: Monday, June 5, 2017 at 9:05 AM

Subject: Sorghum Replanting Decision, SCA Update,

All,

This spring has certainly been a trying time for many growers with the weather being as unpredictable and strange as ever. One of the issues this year seems to be when replanting of crops should be considered. Sometimes the decision to replant is easy, but more times than not it is very much a judgment call. With corn and sorghum, the decision is usually easier when poor stand establishment is the issue rather than damage from hail. Hail damage often requires an assessment of stalk damage, which can sometimes be a challenge. Sorghum has the ability to compensate for stand reduction by tillering, increasing the number of seed per head, and increasing seed weight.

A very informative study on sorghum's ability to compensate for stand reduction was conducted by Dr. Erick Larson, who is currently the Mississippi State Corn and Sorghum Specialist, when he was a graduate student at Kansas State University. Dryland studies were conducted over two years at two locations with historically different rainfall amounts. Two hybrids were examined, one with a high tillering ability and one considered to be low-tillering. The control plant populations were 32,000 and 50,000 plants per acre depending on the location, planted on 30-inch rows. Plants were then thinned to create treatments of within row skips of 3 feet and 9 feet with the adjacent rows remaining unharmed, with 36 percent uniform plant reduction in a single row with adjacent rows unaffected and a 36 percent uniform stand reduction of all rows. A final treatment was made of 3 foot skips scattered in adjacent rows. More details of the study design and results can be found in *Agronomy Journal* Vol. 86, pg 474-477.

Interestingly, there was no difference between the high-tillering and low-tillering hybrids in their ability to compensate for yield. Both tillering and the ability to increase the number of seed per head were important in compensating for yield. As long as the adjacent rows remained intact it took a 9 foot skip within a row to significantly reduce yield (5.1 percent). A 36 percent uniform plant reduction reduced yield only 6.9 percent. The most severe reduction in yield in this study was 10.9 percent when 3 foot skips were present in adjacent rows. **In summary, yield reduction in sorghum is likely only where plant stand reduction is severe resulting in long, in-row skips or when many adjacent rows are affected with moderate skips. A 36 percent uniform reduction of plants did not significantly reduce yield.**

A recent [news release](#) by Josh Lofton at Oklahoma State provides some additional insight on sorghum replant decision making.

For those of you who may be considering double cropping behind wheat, KSU addressed this topic in their most recent K-State Agronomy [eUpdates](#).

Tolerant on Left, Susceptible on Right

