
I-29 SOYBEAN RESEARCH

Have you ever noticed the fenced in crop area on the east side of I-29 south of Rockport Missouri when you head out to St Joe or Kansas City. That is the Graves Chapple Research Center run by J. W. Crawford, of University of Missouri Extension. I love the eighth generation electrified fence to keep the deer along the river bluffs from destroying the research plots. The Chapple research center is a joint effort of farmers in that area and the University of Missouri in finding credible agronomy solutions to solve problems and increase yields. A recent study on narrow row soybeans is an example.

The use of 15-inch soybean row spacing has decreased in northwest Missouri and more growers are adopting 30-inch row spacing. University of Missouri Extension recommends using narrow row spacing when soybean planting is delayed. The objective of these experiments was to demonstrate soybean yield response of 15-inch row spacing compared to 30-inch when soybean planting was delayed from the optimum planting date. Group III indeterminate soybeans were planted as single experiments in a complete randomized block design. In 2011, five varieties were planted in 30-inch and 15-inch rows on June 5. In 2010, ten varieties were planted May 25. Soybeans planted in 15-inch rows mean yields were greater than those planted in 30-inch rows across all varieties in both years. In 2011, the average yield increase of using 15-inch row spacing compared to 30-inch row spacing resulted in a 15 percent yield increase averaged across the five varieties. In 2010, the average yield increase of 15-inch rows increased yields by 28 percent compared to 30-inch rows. Consideration should be given to narrow row spacing when soybean planting is delayed.

When soybean planting is delayed past the optimum planting date, yields can be improved by using 15-inch rows compared to 30-inch rows. The narrow row spacing allows the plants to form a canopy earlier compared to 30-inch rows. Full crop canopy captures sunlight which is critical at the start of pod set (Soybean Production, Ohio). Research by MU indicates that yields can be reduced after May 1 planting date in north Missouri. Narrow rows will canopy with 10-inch rows in 35 days and will take more than 55 days in 30-inch rows. Iowa State University research found canopy closure of 15-inch rows was generally 15 days earlier than 30-inch rows by the start of pod set. University of Illinois researchers found 15-inch rows canopied within a couple days of drilled soybeans. The use of narrow row spacing compensates canopy closure which is critical for sunlight capture.

The study was conducted 2011 and 2010 on a Dockery silt loam soil located at the Graves Chapple Research Center, University of Missouri, Corning, Mo. Soybean seeding rates were 180,000 seeds per acre no-tilled into corn residue. There were ten commercial varieties in the study in 2010 and five in 2011.

As anyone who has been around farming for a while knows there are no sure things in crop production other than land taxes. This year our delayed planting dates may or may not limit yields. It is likely they will be at least as good if not better than if we were not delayed by some very needed moisture. Machinery and seed expense are also considerations in row spacing decisions. In dry years Kansas State research has shown 30 inch rows to have a yield advantage.

For more information e-mail Paul C Hay at phay1@unl.edu or call 402-223-1384

Paul C Hay, Extension Educator

University of Nebraska-Lincoln Extension in Gage County • 1115 West Scott Street, Beatrice NE 68310
(402) 223-1384 • FAX: (402) 223-1370 • email: phay1@unl.edu

