

News Column

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K-State makes move to developing canola hybrids

New varieties will be suited to the southern Great Plains

Kansas State University is hoping to give a boost to growing canola in the southern Great Plains as it embarks on developing hybrid varieties that are specific for the region.

“We’ve traditionally developed open pollinated varieties,” said K-State Research and Extension canola breeder Mike Stamm. “Those varieties are developed similarly to how we’ve developed wheat varieties in the sense that you’re selecting lines over many years until you get to what is called a pure line.”

Open pollination relies on varieties that self-seed or receive pollen from nearby plants. “A hybrid takes two distinct parents, crosses them together and takes the best traits of both,” Stamm said.

Regardless of the crop grown, hybrids are known to be more vigorous with traits desired for specific growing conditions. K-State’s breeding program, Stamm said, has routinely developed varieties that survive harsh winter conditions well.

Recent K-State trials also indicate that new canola hybrids will have greater lodging tolerance, or able to stand upright in saturated soils.

“Developing hybrids for the southern plains is the next step for our breeding program,” Stamm said. “Hybrids are not new to growers, but developing ones that are adapted to our environmental conditions is something that is new.”

Canola is an alternative winter crop in Kansas and other areas of the southern Great Plains. It is most commonly grown in rotation with wheat, though some growers also rotate the crop with soybean, corn or sorghum.

“Growers know the benefits of crop rotation, especially those who have rotated continuously,” Stamm said. “Wheat growers, in particular, have seen an immediate impact in their yields and quality following canola. The subsequent wheat was 10% to 40% better following canola their first year, especially if that farm had been in continuous wheat for decades.”

As a cooking oil, canola has a good reputation, including a qualified health claim to helping reduce cardiovascular disease. It is the second-most consumed cooking oil in the United States, behind soybean. Canola also has a variety of non-edible uses, such as biodiesel, cosmetics and lubricants.

The majority of U.S. canola is grown in the northern Great Plains, including North Dakota and Minnesota. In 2014, about 400,000 acres in the southern Great Plains – Kansas and Oklahoma, especially – were dedicated to canola.

But inconsistent weather conditions and lower commodity prices for canola have contributed to farmers in the southern Great Plains moving away from growing the crop.

“We’re hoping that our transition to developing more advanced hybrids will produce a step change in the consistency of the crop in the plains,” Stamm said. “Farmers are always clamoring for canola to be as consistent as wheat. By developing hybrids that are adapted to our conditions, we think we can make that next step for the industry.”

Stamm estimated a five to 10-year timeframe for new hybrids to be available publicly from the K-State program, though he and others will be growing and testing new hybrids this fall.

“This is probably the most exciting thing that I’ve worked on in 15 years working with canola,” he said. “This is the thing I hope gets us over the hump.”

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