



## Oklahoma State University is developing higher quality wheat

**W**heat harvest is underway in Oklahoma, and as an appropriate

prelude, members of the OSU Wheat Improvement Team are working on stronger, higher quality wheat varieties.

Oklahoma State University wheat genetics chair Brett Carver shared with wheat producers at the recent Lahoma Field Day that his team of OSU wheat researchers have been breeding wheat varieties with exceptionally high gluten quality, excellent yield and reliable disease resistance.

“With wheat, we can look at a lot of different quality factors, but the one that probably stands out the most is the gluten quality,” Mr Carver says. “The better the gluten quality, the better we can make a loaf of bread. That’s not to discount yield. We’re always going to be thinking about yield, but let’s bring quality into the conversation.”

Higher gluten quality could mean more profitability for producers by increasing a wheat crop’s value, and when that trait is combined with high disease-resistance, producers could also see an increase in yields.

“These new lines were bred for the purpose of maximising the strength of the gluten. To do this, we had to use genetics we had never used before with the hard red winter wheat class,” Mr Carver says of OSU’s new line of wheat varieties with a Gallagher lineage.

A variety currently called ‘OK15MASBx7 ARS 8-29’ was Mr Carver’s primary focus for the day’s presentation. It was created by cross breeding Gallagher and a Colorado State University variety called Snowmass.

OSU agronomists have created this

new calibre of Gallagher to use a specific naturally occurring gluten protein that does not exist in other OSU wheat varieties.

The 8-29 variety would serve as an ingredient in bread rather than as a stand-alone crop because its gluten is incredibly strong.

It also has a strength equivalent to or better than hard red spring varieties from the northern US and Canada, and it averages two bushels more per acre than Gallagher.

“Adoption of the 8-29 variety would change what goes on the ingredient label for bread,” Mr Carver says. “Vital wheat gluten is being added to bread to bolster the strength to allow for the modern-day, high-speed processing that occurs. We think we can do that naturally in our wheat varieties themselves.”

### Maintaining the high quality

Mr Carver says OSU researchers have started experimenting with four other derivatives of 8-29 that also have a Gallagher background, with the hope of creating an even better yield while maintaining the high quality.

“This is kind of a monumental moment for us. I had no idea in 2012 when we started this cross-breeding program that this is where we’d end up – in a uniquely functional class of wheat,” Mr Carver says.

“I want to make sure that producers have something they can grow and capture value from, not only just in the baking industry but at the producer level as well. We’re trying to figure it out as quickly as we can.”

He expects OSU will release the new Gallagher wheat varieties over the next two years.