

New wheat resists stripe rust, bakes well

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With the baking industry in mind, Oregon State University has developed a higher-yielding soft white winter wheat that's also resistant to the disease stripe rust.

The new cultivar is known as Kaseberg and is ideal for rain-fed and irrigated areas. In field trials, the variety thrived in a number of Pacific Northwest regions, including eastern and western Oregon, southern Idaho and south central Washington.

During two years of testing in Oregon, Kaseberg averaged 136 bushels an acre on land with high rainfall or irrigation – compared with 122 bushels for similar Oregon variety Stephens and 106 for the more recent release Tubbs 06. Under low rainfall conditions, Kaseberg averaged 91 bushels per acre versus 85 for Stephens and 81 for Tubbs 06.

The new variety also resists stripe rust, a [fungal disease](#) that can cut yields in half, said Bob Zemetra, OSU's [wheat](#) breeder.

"Stripe [rust resistance](#) was fairly stable from the 1970s to 1990s," he said. "Now the disease is changing more frequently, so breeders have to be upgrading resistance constantly."

Kaseberg is also mildly resistant to the disease Septoria, but the cultivar shows susceptibility to strawbreaker footrot, soilborne wheat mosaic virus and crown rot.

OSU researchers developed Kaseberg to appeal to millers and bakers.

For cookies and crackers, it's superior to Tubbs 06, Stephens and Madsen because it has weaker gluten and finer flour particles when milled.

"New releases need to equal and surpass the performance of previous varieties," Zemetra said. "The bar is set higher each time. In breeding we deal with three customers: the farmer, the miller and the baker. We aim to fit the needs of all three."

The new cultivar is named after the Kaseberg family, longtime eastern Oregon wheat growers who have been major contributors to the Oregon wheat industry, held leadership roles in the Agricultural Research Foundation and the Oregon Wheat League, and have allowed OSU to use their land to develop varieties for many years.

This year, OSU is also releasing another new cultivar known as Ladd. The new soft white [winter wheat](#) cultivar is the first produced in the Pacific Northwest resistant to soilborne wheat [mosaic virus](#).

The variety is targeted toward irrigated areas in Oregon and central Washington where the virus has recently been found to thrive. Ladd is also resistant to strawbreaker foot rot and is moderately resistant to [stripe rust](#).

The variety is named for Sheldon Ladd, the head of OSU's Department of Crop and Soil Science from 1985 to 2000.

Creating a new variety of wheat can take more than a decade. Even after that, breeders need an additional three years to generate enough seed for farmers.

Both new varieties are open cultivar releases from Oregon State University and the Oregon Agricultural Experiment Station. Registered

seed of both varieties and a small amount of certified seed of Kaseberg will be available this fall.

More than 980,000 acres of wheat were harvested in Oregon in 2011, with gross sales exceeding \$520 million, according to a report by OSU Extension.

Provided by Oregon State University

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