

General Mills boosts eco-friendly grain Kernza

March 7 2017, by Steve Karnowski



In this undated photo provided by The Land Institute of Salina, Kan., technician John Mai checks wheat crosses in the institute's greenhouse. On Tuesday, March 7, 2017, General Mills announced partnerships with The Land Institute and the University of Minnesota to help commercialize Kernza, a wild relative of wheat, and to incorporate the grain into cereals and snacks under its Cascadian Farm organic brand. (The Land Institute via AP)

A sweet, nutty-tasting new grain called Kernza is getting a big boost from food giant General Mills, which is intrigued by the potentially big

environmental benefits of the drought-resistant crop with long roots that doesn't need to be replanted every year.

General Mills on Tuesday announced partnerships with The Land Institute and the University of Minnesota to help commercialize Kernza, a wild relative of wheat, and to incorporate the grain into cereals and snacks under its Cascadian Farm organic brand. The company hopes to put those products on grocery store shelves early next year. It's also urging other food companies to help create a market for Kernza.

"It's rare that you find something like this that, if you work at it, has so many environmental benefits associated with it. So that's one of the reasons we're excited about this," Jerry Lynch, chief sustainability officer for Golden Valley-based General Mills, told The Associated Press ahead of the announcement.

Kernza is the trademark for the grain, which comes from the perennial intermediate wheatgrass plant. Its dense roots extend over 10 feet—twice as deep as conventional annual wheat. Unlike conventional wheat, farmers who grow it don't need to till the soil and replant it every year.

The long roots benefit the soil by helping store nutrients and water, while preventing erosion and reducing the leaching of nitrogen into ground and surface waters. Kernza's developers also think it could reduce greenhouse gases from food production by trapping significant amounts of carbon in the soil. It even provides good habitat for pollinators.



In this undated photo provided by The Land Institute of Salina, Kan., the top of a wheat floret is cut off, giving a technician access to the reproductive parts of the plant. On Tuesday, March 7, 2017, General Mills announced partnerships with The Land Institute and the University of Minnesota to help commercialize Kernza, a wild relative of wheat, and to incorporate the grain into cereals and snacks under its Cascadian Farm organic brand. (The Land Institute via AP)

General Mills said it plans to buy a significant amount of Kernza via The Land Institute, though it doesn't want to specify how much for competitive reasons. It will also donate \$500,000 to the University of Minnesota's Forever Green Initiative to support advanced research into breeding to increase yields and into how best to grow, mill and market the grain so that it succeeds in the long term, Lynch said.

Kernza was domesticated at the Land Institute, based in Salina, Kansas, which has been working for decades to develop a more natural, sustainable agricultural system. Intermediate wheatgrass, which had been

used as cattle feed, was one of the first perennials to show promise for feeding humans, said Lee DeHaan, a lead scientist there.

The institute has been collaborating for several years with the University of Minnesota, where agronomy professor Donald Wyse also tackles the challenges of developing perennials into food crops.

"All grain production in the world is produced by annual plants that are only on the landscape for a short time," Wyse said. "Intermediate wheatgrass—Kernza—represents a big breakthrough in the design of new agricultural systems for the future."

Researchers have been experimenting with intermediate wheatgrass since the 1980s. It has taken time to domesticate it into a crop and breed varieties that are productive enough for commercial use. Because it has been grown only on test plots until recently, there still isn't much of it to go around.



In this undated photo provided by The Land Institute of Salina, Kan., strands of

intermediate wheatgrass, trademarked as Kernza, grow on a 72-acre plot owned by The Land Institute. On Tuesday, March 7, 2017, General Mills announced partnerships with The Land Institute and the University of Minnesota to help commercialize Kernza, a wild relative of wheat, and to incorporate the grain into cereals and snacks under its Cascadian Farm organic brand. (The Land Institute via AP)

And there are challenges that the researchers and General Mills are still addressing. Yields are still much lower than conventional wheat, though improving. The [grains](#) are tiny, more like grass seeds than conventional wheat, which makes milling more complicated. But it has some advantages in addition to its environmental benefits, including higher protein levels. The nutty flavor comes from its high bran content.

DeHaan and Wyse agreed that General Mills is making a huge contribution to their work by creating a market for the new grain so farmers will grow it, and by supporting the development of crops that provide ecological benefits while feeding people on a large scale.

"We're looking at a company that has the capacity to produce products on a larger scale and market them on a large scale," DeHaan said. "That's where we see these perennial crops having to go, not just low-volume specialty producers but large-scale production that is going to be producing change in agriculture."

This represents the second but largest major move so far to commercialize Kernza, though some artisanal bakeries and restaurants have experimented with it. Patagonia Provisions last fall teamed up with Hopworks Urban Brewery of Portland, Oregon, to roll out Long Root Ale, which is sold primarily at Whole Foods stores in California, Oregon and Washington state. The Kernza in the beer is grown in Minnesota.

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