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Environmental food crop Kernza on the menu at Dundas gathering

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Burnsville-based Perennial Pantry owner Christopher Abbott addresses farmers and community members at a meeting (Clean River Partners)

The University of Minnesota's Forever Green Initiative, the Perennial Promise Growers Cooperative and Clean River Partners co-hosted a gathering for Kernza growers and other interested persons in Dundas on Monday, March 7.

Kernza is the trademarked name of perennial Intermediate wheatgrass developed by the Land Institute of Kansas in 2003. Perennial means that the plant regrows year after year, instead of having to be seeded annually.

As the first commercially available perennial grain crop in the United States, Kernza has the potential to change agricultural landscapes. The Forever Green Initiative and Clean River Partners are advancing its production to create economic opportunities for Minnesota farmers, provide a new, healthy grain product, and improve the environmental benefits of farming.

The Minnesota Department of Agriculture provides funding to advance groundwater protection through Kernza adoption.

Benefits of growing Kernza

Perennial crops, like Kernza, are better for soil health. Plant roots extend downward for 10 feet or more, which improves soil aeration. Because of its deep root structure, Kernza sequesters more carbon and reduces more greenhouse gasses than non-perennial wheat crops.

University of Minnesota research shows that Kernza reduces nitrogen and phosphorus contamination of water. Because it is a perennial crop, there is less tillage and herbicide application to fields; Kernza's drought tolerance is also high. With the continuous soil cover it provides, farmers minimize soil erosion.

In the last 10 years, Kernza research and propagation has resulted in increased seed size, and seed yields have grown significantly larger than those of original seed populations. An additional benefit of perennial wheatgrass is that the whole plant can be cut and harvested for cattle (or grazed by cattle) before and after mid-summer grain harvest..

Soil carbon sequestration

Sequestration is the process by which plants pull carbon out of the earth's atmosphere, and put it into soil, much of it being stored in soil organic matter. Each individual Kernza plant can only sequester a small amount of carbon, but with improved practices at a landscape scale, soil carbon sequestration could draw down more than an eighth of current global carbon emissions each year (2021 International Governmental Panel on Climate Change).

The landscape used to function as a huge carbon sink, but as humans required more and more resources to for food production, deep rooted grasslands and forests around the world were converted to grow commodity crops like corn, soybeans and wheat.

Today, our streamlined food systems often function without regard for the greenhouse gas emissions of food production and transportation, fertilizer application, and chemical toxicity.

How is Kernza used?

Milled Kernza is a wheat flour substitute in breads and other baked goods; it can be cooked whole and incorporated into salads, or used in brewing and distilling. It is high in protein and antioxidants, and has eight times more insoluble fiber than wheat.

At the gathering, Kernza was served in wide variety of foods on the menu. Ruth Bolstad, owner and chef at Ruth's on Stafford prepared quiches using Kernza flour in the crust.

She also prepared a wild rice, sweet potato, hazelnut and whole grain Kernza salad, a Kernza pasta salad, Kernza dinner buns, beef burgundy using Angus beef that grazed Kernza forage and finally, Kernza chocolate chip cookies. Attendants were also treated to Kernza scones provided by Martha Schuetzle owner of Martha's Eats and

Treats in Dundas, and to Kernza pita snacks. Area farmers grew the Kernza and Burnsville based Perennial Pantry milled the Kernza grain used for the delicious foods.

Madison farmer Carmen Fernholz chairs the steering committee for the Perennial Promise Growers Cooperative. With all the research that has been done on the benefits of Kernza, he believes the next challenge is just getting the word out.

He said, "If consumers get excited about this, Kernza could easily become a mainstream crop. Cost is always an issue when a new product emerges, but this product is unique because of its significant environmental benefits."

Burnsville-based Perennial Pantry mills Kernza and maintains an online store that, presently, is the best source for Kernza flour, whole seeds and a Kernza Pancake and Waffle mix (www.perennial-pantry.com). Food co-ops in St. Peter, the Lakewinds Co-ops in Minnetonka, Richfield and Chanhassen, and both Seward Co-op locations in Minneapolis stock Kernza flour and grains from Perennial Pantry.

Perennial Pantry president Christopher Abbott, said, "In Minnesota, Kernza can fit easily into grower rotations. Of the 4,000 acres currently under cultivation in this country, 1,300 acres are in our state. Kernza is a profitable crop for farmers, and it improves their soil. It's a win-win situation."

To learn more about Kernza, visit kernza.org.

PRODUCTS AVAILABLE

Ruth's On Stafford in Dundas has begun selling Kernza products on its Friday Eats menu, including Kernza Philly, Chicken Kernza Wrap, Gyro Kernza Sandwich, Tofu Kernza Wrap.

Go to ruthsonstafford.com to find out more.