New Crop Marketing Has Challenges

By Jim Ruen, Contributing Editor

Growing a new crop like Kernza can be challenging enough, but Kansas and Nebraska farmers Brandon Kaufman and Brandon Schlautman have learned that marketing is an even bigger challenge. Schlautman is also a perennial crop scientist who has studied the genetics and agronomics of perennial grain crops. While that helped him learn to grow the crop, it did nothing to help him sell his harvested grain.

"Brandon and I each planted Kernza in 2018, but we kept running into problems marketing it," says Schlautman. "We realized that if we wanted to keep producing it, we needed to turn the grain into ingredients and other products."

Over the past six years, the two have done just that with their company, Sustain-A-Grain. In addition to their own production, they work with Kernza growers in Kansas, Nebraska, Iowa, Colorado and Montana. Adding growers is important to meet the growing interest of food and beverage companies. It's also important to Kaufman and Schlautman because they believe in Kernza and the soil health benefits it provides.

However, increasing supply was only half the battle. The business had grown to 2,000 acres and was transitioning to organic production when a large buyer switched away.

Kernza sampler pack. Consumer purchases from the company's online store are only a fraction of the demand needed for Kernza acres to grow.

"We missed out on a huge market as a result," he says. "But it also helped us focus on developing new markets rather than focusing all our business on a single customer."

In addition to working with the food and beverage industry, they have an online store that sells a $30 sampler pack of rolled flakes, whole grain flour and egg noodles. They also sell whole Kernza grain in 25 and 50-lb. amounts, as well as larger quantities of the sampler pack items.

"Bakers really like the functionality Kernza brings to baked goods," says Schlautman. "It has three times the fiber of wheat, absorbs more moisture, has a nice texture, more protein (almost twice that of wheat), and almost a Christmassy aroma. It's also high in antioxidants."

While Kernza has gluten, it's a different kind from wheat. Researchers have found that a blend of 20 percent Kernza added to bread flour makes a good bread. It can also be used by itself in cookies, pastries and other baked goods.

This writer purchased the sampler pack. I used the flour at 100 percent in an old family muffin recipe, and the results were ideal. The flour had great flavor, formed a nice crumb and had a crispy, sweet exterior. The flakes, with their rich, nutty flavor, were a nice alternative to oatmeal.

However, consumer purchases from the company's online store are only a fraction of the demand needed for Kernza acres to grow.

"Growers are still trying to move inventory from 2022, and 2023 is sitting there, too," says Schlautman. "The reality is it's still just a small quantity of grain. A General Mills or a large distillery could use the existing inventory in the blink of an eye. We just need one or two large entities to buy into the vision, and the marketplace will blow wide open."

Schlautman suggests that one mistake made early on with Kernza was to market it as a perennial wheat. Instead, he offers, it needs to stand on its own like other specialty grains such as wild rice, quinoa and other amaranths.

"It has a great and unique flavor," says Schlautman. "We need to work on demand and why it's desirable in baked goods and distilled products. We also need people to understand that Kernza helps meet regenerative ag goals. It lives for years and has enormous roots that stop erosion, trap carbon and prevent runoff."

Most Kernza growers come out of the no-till movement. They often use a burndown on a field before no-tilling the Kernza into alfalfa or following soybeans. It's then relatively easy to transition to organic production.

"In years two and beyond, there's almost no weed pressure at all," says Schlautman. "Growers need a market for those first three years before they can certify organic."

Sustain-A-Grain is working to find markets for transitioning growers and established organic growers. In the past year, it has shipped Kernza to 11 countries, released new products, and sold it to a national brewer planning a major product launch this spring. It has also worked with a craft master to explore new uses.

"We get calls daily from people interested in growing Kernza," says Schlautman. "We are trying to support a larger number of growers, but we need the market to make it possible."

Contact: FARM SHOW Followup, Sustain-A-Grain (info@sustainagrain.com; www.sustainagrain.com).

Each independent tine's pressure can be toggled between two adjustable choices from the tractor's cab. A lower pressure can be used inside the plant row, while a higher pressure can be applied between the rows.

Air Harrows Equipped With Pressure-Adjustable Tines

Air Flow Harrows from Hatzenbichler Austrian-Agro-Technik have a patented harrow tine spring system that provides an extra smooth harrowing action.

"The Hatzenbichler harrow has been established since 1952," says a spokesperson. "The original harrow air-flow tine spring system is the best alternative to chemical weed control."

The equipment is either rigid with a 3-pt. hitch or hydraulically foldable in widths from 1.5 to 15 m (5 ft. to 49 ft.).

A tractor's central air brake system provides air through a pressure regulator, enabling pneumatic cylinders positioned above each tine to operate. The tine's spring action allows travel of only 30 mm (just over an inch), enabling a 45-degree spring path. This unique system makes it possible to continuously adjust the tine pressure from 2 lbs. up to 11 lbs. at the same angle while traveling up to 15 kph (9.3 mph).

Tines are made of oil-tempered, hardened spring wire, which ensures a long working life without worrying about breakage. They're specially shaped for arable cultivation.

Each independent tine's pressure can be toggled between two adjustable choices from the tractor's cab. A lower pressure can be used inside the plant row, while a higher pressure can be applied between the rows.

Optional monitors and direct controls via the tractor's ISOBUS terminal are available. The additional package allows the harrow to be folded in and out using the tractor's monitor.

The new harrow arrays, including pneumatic equipment, can be mounted to any of the Hatzenbichler harrow frames and deliver a wide range of working widths.

"We develop and build our products with the daily experiences of our Austrian customers in mind. The best engineering and highest manufacturing quality meet our perfect spare parts supply. Our machines are for professionals to use day after day."

Interested customers should contact Hatzenbichler directly through the website for pricing and availability.

Contact: FARM SHOW Followup, Bay Shore Sales, 4890 Bay Park Rd., Unionville, Mich. 48767 (ph 989-674-8429; www.bayshoresales.com) or Thomas Hatzenbichler Austrian-Agro-Technik GmbH, Fischering 2, 9433 St. Andrä, Austria (ph +43 4358/2287; agrotechnik@hatzenbichler.com; www.hatzenbichler.com).

"Something surprising was that it also enhanced root growth, adding a lot of root biomass and dense and long root hairs," Thilakarathna says.

Study Shows Soil Amendment Improves Soil Health

Humalite, an organic soil amendment, is produced from the decomposition and oxidation of plants and other vegetative tissues. When formed in a freshwater environment at a shallow depth, it easily oxidizes to contain up to 90% humic acid, which makes it low in heavy metal concentrations compared to humalite from saltwater environments.

Many farmers mix humalite with their synthetic fertilizers, and claim increased crop yields, but it's never been scientifically proven whether it benefits crop production. Producers aren't sure whether to use it, how much to apply, or what it's doing.

WestMet Ag, an Alberta manufacturer, and the Canadian provincial and federal governments are supplying research funding to identify and calibrate precisely what the material is and how it works.

Dr. Malinda Thilakarathna, an assistant professor in the Department of Agricultural, Food, and Nutritional Science at the University of Alberta, heads a team researching and studying the material. They're adding humalite to different fertilizers and growing wheat, canola and green pea plants under greenhouse conditions.

"Using different mixing rates in the soils we brought from the fields, we found the humalite increased plant growth and protein levels," Thilakarathna says. "Something surprising was that it also enhanced root growth, adding a lot of root biomass and dense and long root hairs."

They confirmed that applications combined with urea resulted in 14 to 19% higher grain yields.

The team completed gene expression work and found the substance also changed the internal hormone production of plants. An analysis of soil nitrogen availability discovered that, when mixed with urea, it helped reduce leaching during heavy rains. Nitrogen, phosphorus and potassium added to humalite remained available in the soil longer. This increased their efficiency and reduced the amounts of synthetic fertilizer required. Nitrogen use efficiency rose between 14 and 60%.

Some companies have already commercialized the commodity in granular or liquid form and are importing it to the U.S. for use in orchards and vegetable fields.

"We're continuing to trial the soil amendment to determine how and why it works," Thilakarathna says. "It's already on the market and being used, but we expect more appetite for humalite once we can provide more scientific evidence."

The freshwater product is found exclusively in large deposits near the small town of Hanna, Alberta. Larger-scale humalite field trials for wheat, canola and peas are also ongoing.

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