

Many New Uses For Very Old Purple Corn

Purple corn has historic roots dating back thousands of years, and now it appears to have a very colorful future on American food shelves. A Minnesota company, Suntava, Inc., is capitalizing on both the color and nutritional benefits of Suntava Purple Corn to develop dozens of new snacks, cereals, baked goods, and nutraceutical products.

"This has gone in more directions than I could have ever imagined," says Bill Petrich, Suntava CEO.

The origins of purple corn can be traced back thousands of years to the production of

maize in Mexico and South America. Suntava founders and their team of corn breeders have studied ancient maize strains in search of genes that may improve insect, drought and disease resistance, as well as deliver added health benefits.

The company says Suntava Purple Corn is a significant source of natural dyes and three antioxidants: cyanidin-3-glucoside, pelargonidin and peonidin. Purple corn also has high concentrations of anthocyanins that act as an anti-cancer agent, an obesity and diabetes preventative and cure, and an anti-inflammatory. The company claims that one

cup of Suntava Purple Corn contains the same antioxidant value as 1½ cups of blueberries.

Suntava's purple corn is contract-grown on thousands of acres in southwestern Minnesota and in other parts of the country. Corn seed can also be purchased from Burpee.

Suntava purple corn is processed into 5 primary products: corn flour, corn meal, snack meal, kernels and grits. A natural color extracted from Suntava Purple Corn is being used to replace synthetic dye Red 40 in candies, beverages and other natural food applications.

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Suntava, Inc., turns Purple Corn into highly nutritious snacks, cereals, baked goods, and nutraceutical products.

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Fly Larvae Turned Into Fish Food

An Ohio company is turning black fly larvae into high quality feed for fish, reptiles and exotic birds. The black fly larvae convert waste food and meat byproducts into high protein feed. Initially marketed for specialty markets like zoos and exotic pet owners, the high protein feed will soon hit other markets.

"We are bringing in 6 tons of material a day to feed the flies and larvae," says Cheryl Preyer, EnviroFlight, LLC. "We are running at full commercial scale and trying various feedstocks. Our pilot plant can be expanded with modules, but our next plant will shoot for 40 tons of feedstock initially. Eventually, it will handle 100 tons of feedstock a day."

Preyer explains that while the output is a high protein food regardless of input, the fatty acid profile shifts depending on the source. She says the larvae can handle food waste that otherwise might go to the landfill.

"We had a trial using a batch of material that had sheared metal parts in it, and the

larvae just ate around the metal," says Preyer.

EnviroFlight has patented technology to breed black flies inside year round, hatching out eggs and harvesting larvae. Once collected, the larvae is dried and ground for use as feed. The larvae-based feed has more than 40 percent protein and 46 percent fat. The fat can be easily removed for other uses. When the oils are extracted, protein jumps to 70 percent.

Glenn Courtright says most of their inputs are free. The company plans to produce 1.2 million pounds of usable protein per acre per year. By comparison, an acre of high yielding soybeans produces only 500 lbs.

Demand is equally huge. Fish farms alone are estimated to need 158 million pounds of feed per day. Supplying that need has resulted in over fishing worldwide. Insect larvae are a natural diet for fish.

The larvae eat twice their body weight and expand about 5,000 times in 2 weeks. Larvae eat about 90 percent of the food provided to



By making use of waste food and meat byproducts, an Ohio company is turning black fly larvae (left) into high protein feed for fish, reptiles and exotic birds.



them, leaving behind a fiber byproduct called frass. It can be used as a low-fat feed or as a high quality 5-3-2 plant fertilizer.

The only thing holding back wide-scale production and use of the company's product is federal regulatory approval. Ironically, current feed rules are geared toward keeping bugs out of animal feed.

"We had considered licensing our

technology, but have taken that off the table," says Preyer. "We are now looking at strategic partnerships to expand, as we are selling our entire production."

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90-Year-Old Makes Spinning Wheels

Among the nearly 150 spinning wheels Willard Leinonen made in the past 30 years, one stands out. He put eight wheels together after an English woman told him there was a six-unit wheel in her country. The idea was based on centuries-old double spinning wheels called courting or gossip wheels. The unusual spinning wheel earned Leinonen some brief local fame, but most of the 90-year-old's spinning wheels have quietly left his home shop to go to spinners across the country and even to Africa and Mexico.

Leinonen got started making spinning wheels when he was close to retirement age and working at a pioneer park where there was a spinning wheel that didn't work.

"I took it home and made new parts, got it to work, and played with it until I learned how to spin," Leinonen says.

After he made a wheel for his wife, he continued making more, giving many away to family and friends and selling some.

He's added his own features and designs over the years and now builds a smaller version that takes about 20 hrs. vs. 40 hrs. for a traditional wheel.

The wheels are made of a variety of hardwood scraps Leinonen gets from cabinetmakers. Most wheels are stained or clear-coated, but he's also painted some red, white and blue.

Like the spinning wheels immigrants disassembled and packed in trunks, Leinonen's spinning wheels can also be taken apart.



Willard Leinonen got started making spinning wheels when he was close to retirement age. He's still at it 30 years later.

"It's just a hobby," Leinonen says, and he doesn't actively market his work. But FARM SHOW readers interested in purchasing one can contact him for more information.

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Suffolk Punch Draft Horses Becoming Even More Rare

Suffolk Punch draft horses are one of the most rare and endangered breeds in the country. There are only 1,500 registered animals in the U.S. and Canada, and the number is dropping. Pam Christoffersen and her husband Greg have been raising Suffolks for more than 10 years. They have more than 20 in their herd and have had as many as 35.

"We've always had horses and started breeding the Suffolks in part because they are endangered," says Christoffersen. "They like to work. They're a quiet gentle horse and about the perfect size. I can't believe how friendly they are."

The Suffolks average 16.1 hands tall, but can go to 17 or more. Most are full-grown at 5 years, but can mature to 7 or 8 years of age. Average weight is around 1,800 lbs., but a 17-hand stallion can reach a ton or more. The chestnut colored horses have white markings. The breed is known for its hardiness and longevity, and mares will foal into their 20's. Big horses take a lot of feed, and that has been hard on the breed. "Breed numbers have fallen due to the economy and the price of hay," says Christoffersen.

Suffolks are working animals, suggests Christoffersen. "We use them a lot for plowing, disking and dragging fields as well as in the woods," she says. Attitude may be one reason Christoffersen is starting to see a rebirth of interest in the Suffolks from market gardeners. "We are getting a lot of calls from



Pam and Greg Christoffersen have been raising Suffolk Punch draft horses for more than 10 years. There are only 1,500 in the U.S. and Canada.

market gardeners looking for a quiet and good all-around horse," she says. "They are looking for broke teams and young ones. I hope this turns the decline around."

Christoffersen says they have horses for sale that are priced from \$2,500 to \$7,000, depending on bloodlines and whether they are broke to drive or not.

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