


# GROWING GRAIN INNOVATION

Ardent Mills continues to fuel nourishing innovations

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# Introducing Great Plains Quinoa

Like many ancient grains, quinoa continues to grow its presence in the retail and foodservice industries as a result of its versatility and nutritional density. In fact, of all the ancient grains—a term applied to grains that have not been hybridized or modified—quinoa is the most-consumed ancient grain in the U.S.



The quinoa plant adapts to different ecological environments and climates and is resistant to drought, poor soils and high salinity. This flexibility is how quinoa is now being grown in North America.

"Ardent Mills is launching its identity-preserved Great Plains Quinoa with the largest quinoa growing network in North America," said Mrs. White. "Our growers

"As demand for quinoa grows, food manufacturers and food service operators are seeking out a stable, price-predictable and consistent year-round supply," said Shrene White, General Manager of Specialty, Ardent Mills, Denver. "To meet these needs, Ardent Mills has formed a partnership with North American growers to provide a reliable supply to the industry, one that is not dependent on the traditional and unpredictable supply chain starting with South American imports."

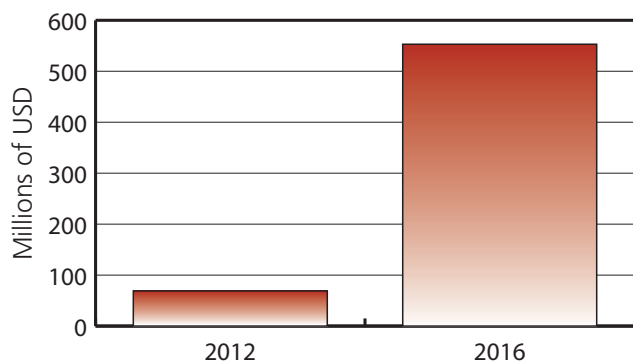
Quinoa is the common name for *Chenopodium quinoa*, which is a grain crop grown for its edible seeds. Its origins are the high-altitude region of the Andes on the western side of South America. Though quinoa has been consumed forever in South America, only in the past decade has it been embraced in the U.S.

Quinoa's popularity went mainstream in 2013 when the Food and Agriculture Organization of the United Nations (FAO) declared it to be the International Year of Quinoa. Because of its superior nutrition, the FAO believes that quinoa can play an important role in eradicating hunger, malnutrition and poverty.

Quinoa is comparable in energy to similarly eaten foods such as beans, maize, rice and wheat, according to FAO. In addition, quinoa is notable as a good source of quality protein, dietary fiber, polyunsaturated fats and minerals. It's also a gluten-free grain that has never been genetically modified and has a glycemic index of 53.

started with a white variety of quinoa that is a tan to creamy in color with an unmistakably nutty, earthy flavor, which grows on the high prairie and is traceable to the source."

## U.S. Sales of Quinoa Products



From 2012 to 2016, dollar sales of packaged foods with quinoa flagged on the package increased more than 700%, according to Nielsen data.

"There are currently over 100 family farms growing quinoa, with plans for red and black quinoa in the near future," she said. "Organic farms are also in development."

Ardent Mills Great Plains Quinoa™ is now available in various formats including whole seeds, flour, crisps and flakes. Ardent Mills also offers customized multi-grain blends and bakery and pizza crust mixes.

"Snack bars are currently the number-one application," said Laurie Scanlin, manager of research, quality and technical. "We are seeing more cereals, snacks, side dishes and entrees featuring quinoa. Innovative applications include flatbreads, tortillas and even sweet treats like confections, cakes and cookies."

This North American quinoa allows Ardent Mills to *Nourish what's next* by bringing consistent, year-round supply of cost-competitive quinoa to the market.



North American-grown Ardent Mills Great Plains Quinoa™ comes in a range of forms, including flour, flakes, seeds and crisps.

Watch this video to learn more about Ardent Mills Great Plains Quinoa™



# Boosting Fiber with Whole Grains

On May 20, 2016, the U.S. Food and Drug Administration (FDA) released mandatory nutrition labeling revisions, making changes to the content and format of the Nutrition Facts label as well as to the reference amounts that determine the serving sizes of conventional foods. Along with these changes came a definition for “dietary fiber,” a nutrient that now needs to be declared on the Nutrition Facts panel. Prior to the May 20 ruling, declaring dietary fiber was voluntary.

Fiber is a nutrient of concern in the diet. In other words, most people do not consume enough for overall wellbeing and longevity. Diets rich in fiber are associated with a number of positives ranging from improved gastrointestinal health to a possible reduction in the risk of developing chronic diseases, according to the FDA. Therefore, increased fiber intake may provide health and wellness benefits.



According to FDA’s definition, which is based on the definition developed by the Institute of Medicine in 2001, a product must meet one of two criteria to qualify as fiber. It can be either a non-digestible soluble or insoluble carbohydrate (with three or more monomeric units) or lignin that is intrinsic and intact in plants, or it can be an isolated or synthetic non-digestible carbohydrate (with three or more monomeric units) that has been determined by FDA to have physiological effects beneficial to human health.

“Our ingredients are only milled, rolled, chopped or crushed,” said Alison Watkins, senior regulatory scientist, Ardent Mills, Denver. “Therefore, our fiber-containing grains, including ancient grains, barley, rye and wheat are considered sources of fiber. The fiber is intrinsic and remains intact during processing.”

Beyond the health benefits, there are sensorial benefits of adding fiber-containing whole grains to food formulations. This includes the contribution of color, flavor, texture and overall culinary appeal. For example, Ardent Mills offers a number of blue, black and purple barleys that provide a unique burst of color to traditionally beige-colored baked goods.

“In cracked and flaked forms, whole grains can offer a toothy bite to any application, while at the same time deliver visual distinctiveness that many of today’s consumers find appealing,”

said Don Trouba, Go-To-Market Senior Director of Specialty at Ardent Mills. “Because they come from intact sources, fibers from grains can be tied back to the regions where the grains originated or to the particular growers who grew them. This is important in setting the backdrop for the ingredient story consumers are hungry for and marketers are happy to tell.”

## Sustagrain® High-Fiber Barley

Sustagrain® Barley is a proprietary identity-preserved barley variety that has a balanced blend of insoluble and soluble fibers, with the highest level of beta-glucan and the lowest glycemic index of any grain ingredient commercially available to food formulators. It is also the highest-fiber



whole grain ingredient commercially available to food formulators, with three times the fiber of oats and corn flour and 10 times the fiber of brown rice. A 100-gram serving provides 34 grams of total dietary fiber and 12 grams of beta-glucan soluble fiber.

The FDA approved a heart-health label claim for soluble fiber from barley foods. Therefore, foods made with Sustagrain® Barley may qualify for such claim. Whole grain and fiber content claims may also be possible. Food formulators should consult with their regulatory and legal personnel with respect to any claims.

Sustagrain® Barley is the ideal way to add whole grain nutrition and fiber to a variety of applications. It is available in fine flour, quick flake and steel-cut forms. Applications include all types of baked goods, cereals, energy bars, pastas, soups, tortillas and wraps, as well as extruded foods.



*Located at Ardent Mills’ headquarters in downtown Denver is a state-of-the-art customer support facility that features lab-sized flour mills, a wheat quality and bake lab, culinary test kitchen and chef’s demo kitchen.*



# Organic Initiative 2019 Continues to Grow

Since being the first in the industry to announce efforts to help U.S. wheat growers double organic wheat acres by 2019, Ardent Mills has expanded its producer program to a total of seven U.S. states and a Canadian province while adding more organic-certified milling, packaging and storage locations.

Ardent Mills is the premier North American flour-milling and ingredient company in the U.S., providing organic flour since 1996. The company saw that only a mere 0.63% of U.S. cropland was devoted to organic wheat in 2011, so the company developed a plan—Organic Initiative 2019—with the goal of doubling the farm land devoted to organic wheat by 2019.

This plan includes supporting family farms while they transition from conventional to organic production, which is a three-year commitment period when growers typically experience reduced yields because of the changes in farming tactics. As farmers join Ardent Mills' organic initiative, they will have access to direct support services, workshops and long-term contracts for transitional and organic wheat bushels. Such an initiative is unprecedented in agri-business, and is a real game changer for farmers.

"By planning and launching regional and national products, we can deliver supply assurance and scalability," said Shrene White, General Manager of Specialty. "Since 2015,



we've added organic durum, organic cracked wheat, organic triticale and organic spelt to our product mix, which also includes organic whole wheat flour, organic bread flour, organic all-purpose flour and organic pastry flour, various ancient grains and breads made at our Innovative Bakery Resources facility."

"This initiative started by listening to our customers," said Don Pearson, vice president-sales. "With the growing demand from consumers for organic flour products, it became clear that organic wheat acres in North America were not going to keep up. As a company dedicated to Nourishing what's next, we discussed options and decided we would be more proactive in creating a program to help farmers transition to organic wheat."



## Ancient and Heirloom Grains

Ancient grains, also known as heirloom grains, add culinary adventure and great-tasting whole grain nutrition to all types of foods, with each grain delivering unique flavors and textures. They also provide a back-to-basics approach to food preparation, a wholesomeness embraced by today's consumers.

All grains are pretty ancient. "The term is all about eating the oldest varieties, that haven't been bred and changed by humans over the thousands of years that we have been growing them," said Minneapolis-based Robin Asbell, chef and author of *The Whole Grain Promise*.

Suzu Badaracco, president, Culinary Tides Inc., San Francisco, said, "The term ancient grains is grounding, it lends an element of trust."

Ardent Mills is growing its range of ancient and heirloom grains, from amaranth, buckwheat, millet, quinoa, sorghum and teff, to now include spelt, triticale and more. Many ancient grains are gluten free, making them possible substitutes for wheat flours. Ancient and heirloom grains are an easy way to add value and premiumize foods. Applications extend beyond baked goods, and include batters and breadings, breakfast cereal, pasta and side dishes.

## About Ardent Mills

Ardent Mills is the premier flour-milling and ingredient company whose vision is to be the trusted partner in nurturing its customers, consumers and communities through innovative and nutritious grain-based solutions. Ardent Mills' operations and services are supported by more than 40 flour mills and bakery-mix facilities, along with a specialty bakery and Mobile Innovation Center, all located in the U.S., Canada and Puerto Rico. Deeply rooted in communities throughout North America, Ardent Mills is headquartered in Denver, and employs more than 100 certified millers, supporting thousands of local jobs and contributing billions of dollars to local economies. To learn more about Ardent Mills, visit [ardentmills.com](http://ardentmills.com).



*Nourishing what's next.™*

