The greatest service which can be rendered any country is to add a useful plant to its culture.

—Thomas Jefferson

There is a line down the middle of a field on Bob Quinn’s 3,900-acre farm in Big Sandy, Montana. Foot-tall stalks of durum wheat grow on one side, uniform and orderly like a stiff, tan buzz cut. On the other side of the line is Kamut. The waist-high Kamut plants are a pale sea-foam green. They tower over the wheat, swaying and bending in the morning breeze. Slit open with a thumbnail, the sweet, grassy Kamut tastes like a milky cross between raw sweet corn and a freshly cut lawn.

Kamut is a trademarked grain, an heirloom plant owned by one person. Beyond its intriguing history and the troubling question of whether a species can be owned, the story of Kamut brings into focus the identity crisis facing contemporary farmers, separating those who see themselves as marketers of niche branded products from those who see their role as producers of bulk commodities.

Although you might find Kamut listed as an ingredient on the label of some organic products, or sold as flour in health food stores, you’re not likely to encounter it every day. This oversized, humpbacked grain has been grown in earnest in the United States since only the late 1980s, when it was introduced to the market by an enterprising Montana farmer name Bob Quinn. According to Kamut International, the company Quinn founded to produce and promote the grain, over the last decade production of Kamut has multiplied ninefold, reaching an impressive 4,500 metric tons in 2003. Even though this number represents a scant .007 percent of total US wheat production, demand for the grain is growing for reasons of both health and economics alike.

Kamut is a very early and unhybridized variety of summer wheat, one that is still genetically pure. Its common name is “Khorasan wheat,” after the ancient Persian city. But there has been disagreement over its taxonomy. Until 1986 the grain was believed to be *Triticum polonicum*, or Polish wheat, but Dr. G. Allan Taylor, an associate professor of agronomy at Montana State University, noted that it should more properly be classified as *Triticum turgidium*. Dr. J.F. Carter, a North Dakota State University professor, disagreed; in a letter to Bob Quinn he wrote that he felt “sure that this ‘durum’ is *Triticum polonicum*” and that it had “no agronomic potential.” The record was set straight in 1994 when Harold Bockleman, the curator of the National Small Grains Collection at the US Department of Agriculture (USDA), politely observed it would be “more correct to classify it as *Triticum turanicum*,” which he called “a somewhat unique species” with “the long, hard, vitreous kernel like *T. polonicum*, but with a much shorter glume or chaff.”

Whatever its proper classification, Khorasan wheat most likely arrived in the United States in 1949 via Earl Dedman, a US Air Force pilot who had been given thirty-six kernels of an odd-looking grain while stationed in Portugal. Dedman, a native of Fort Benton, Montana, reportedly sent the kernels home to his father, Rube Dedman, who experimented with the crop and was about to sign a deal with the Pillsbury corporation to produce three thousand bushels for use in a new breakfast cereal when he got cold feet—there were too many risks with an unproven crop. So Khorasan wheat returned to obscurity.

In 1964 an article in a local Montana newspaper renewed public interest in the grain. “Four-thousand-year-old seeds” had apparently been found by a “Montana farm boy” in a tomb near the Nile River in Dahshur, five miles south of the pyramids of Saqqara. The thirty-six seeds were reportedly encased in a stone box that was sent home to the boy’s wheat-farming father in Montana, who planted them. Thirty-two of the thirty-six ancient kernels germinated, giving him enough seed stock that, within six years, he had fifteen hundred bushels of the mystery grain, which he dubbed “King Tut’s Wheat.” How the grain given to Earl Dedman in Portugal transmogrified into seeds from an ancient Egyptian tomb remains unclear.
This colorful tale becomes all the more unlikely when one considers the odds against seeds this old actually germinating. Harvard paleobotany expert Wilma Wetterstrom notes it is “very unlikely that four-thousand-year-old grain from a tomb would be viable,” citing several sources to support her view that, wherever the mystery seeds may have originated, they are likely to be “recent deposits.” She describes most true paleobotanical specimens as “charred and desiccated and darkened with age” and also points out that wheat became an important crop only during the Ptolemaic period, 332–330 B.C., making more ancient origins of King Tut’s Wheat even less plausible.

However, as with most legends, this story contains some grains of truth. Khorasan wheat did originate in Egypt—as Bob Quinn discovered years later. In E. A. Wallis Budge’s *Egyptian Hieroglyphic Dictionary* (the only Egyptology book Quinn could find at the Great Falls public library), the name “kamut” is listed under “wheat” (no matter that this 1920 volume is no longer considered reliable). Old-timers in the Great Falls region recall how King Tut’s Wheat was distributed in coffee cans at agricultural fairs in the mid-1960s, often by retired postman Neal Archer, who was apparently fascinated by the grain. Some farmers planted the seeds and found that the grain made excellent cattle feed. But the timing still wasn’t right, so Khorasan wheat once again nearly disappeared from the United States.

It was in the late 1970s that Bob Quinn entered the picture. While finishing his degree in plant science at the University of California at Davis, Quinn noticed the claim on a package of Corn Nuts that the snack was “Made with Giant Corn,” or something to that effect. His interest was sparked. He remembered the oversized King Tut’s Wheat from the county fairs of his youth (his hometown of Big Sandy, Montana, is only about forty miles north of Earl Dedman’s hometown of Fort Benton). So he called his father, Mack, and asked if there were still any jars of the curious grain remaining—perhaps the manufacturers of Corn Nuts would be interested in making Wheat Nuts from King Tut’s Wheat. Mack Quinn located a jar of grain in a friend’s basement and planted them in the garden. The mystery grain did so well that within a couple of years he had roughly one hundred pounds. Although Wheat Nuts were never produced—the company was nervous about its supply coming from just one farmer—the grain was poised to establish its presence in the agricultural marketplace.

In 1986, on a whim, Mack Quinn brought a jar of his grain to a California trade show and touted its healthful properties. Khorasan wheat is, in fact, superior to conventional wheat in many ways, containing up to 40 percent more protein, up to 65 percent more amino acids, and more lipids and fatty acids. A buyer interested in the emerging macrobiotic trend offered to buy as much as Quinn could supply, so Mack and Bob Quinn decided to begin growing...
the wheat commercially. They planted one and one-half acres the first year, twenty acres the next, and eighty acres the third. Unlike Earl Dedman in his negotiations with Pillsbury, Bob Quinn was a savvy businessman who understood the value of a branded product. On April 3, 1989, he filed a trademark request for the name “Kamut,” thereby legally branding their product. Just as important, in 1990 the Quinns received Plant Variety Certificate No. 8900108 for the wheat variety dubbed ũK-77 by the US Department of Agriculture. These two actions meant that the Quinns now “owned” and controlled Kamut—at least in the eyes of US intellectual property law and the US Department of Agriculture, as the official entity charged with protecting, marketing, and distributing Kamut worldwide.

Ownership of a species is a troubling concept, one that raises ethical issues. After all, the Quinns did not create this grain—they simply recognized its potential and created a market for it. They concede that it may be unnatural to claim ownership of a natural product but add that such ownership is no more odd than staking a claim on a mine. United States law makes a distinction between wheat variety ũK-77, the unhybridized variety of wheat, and Kamut, which is considered a product. Anyone who wants to buy, grow, harvest, or sell ũK-77 can do so, although they cannot sell the grain as seed to other farmers, a restriction that is in place for sixteen years (it will expire in 2006). However, in order to be called “Kamut,” the harvested ũK-77 must meet the very rigid standards set by Kamut International, Ltd., which include a stipulation that Kamut be grown organically. Methods like annual crop rotation to break cycles of pests and diseases and fertilization with green manure instead of chemicals are mandated. Such techniques contrast with the high-tech, high-volume agricultural, processing, and distribution methods deployed by the modern commodity-grain industry. Kamut International eschews genetically modified or hybridized seed, no-till cultivation, and chemical herbicides and fertilizers—practices designed to wring every element from the soil to maximize crop production while minimizing labor, all to the detriment of quality.

As long as the grain meets the company’s quality standards, Kamut International contracts to purchase the harvested grain back from its seed customers. It sends its own trucks to transport the grain to mills in Fort Benton, Montana, or Radville, Alberta. These “micronizer” mills are far from ordinary; they grind the grain at cooler temperatures, thereby lessening the aromatization of essential oils, which yields a better flour, just as a burr grinder yields better coffee than a blade grinder does. The flour produced at these facilities is 50 percent drier than that produced by standard grain mills, which means more flour per pound and a longer shelf life. As an added benefit, the bran particles are smaller, so the whole wheat end products have a finer texture.

These rigorous controls have helped to establish Kamut as a niche product, one that is admittedly more expensive. Certified organic, unhybridized, and grown and processed under strict guidelines, Kamut guarantees high nutritional standards. For one thing, Kamut International mandates that the protein content for acceptable grain be between 12 and 18 percent (as opposed to the 1991–2000 average of 9.9 percent for soft winter wheat recorded by the Canadian Grain Commission), and the selenium content must range between 400 and 1000 parts per million. The grain itself must be 98 percent disease-free. Any product listing Kamut as an ingredient must also be made from at least 50 percent of flour derived from Kamut grain. Other qualities that set Kamut apart are its sweet, nutty flavor (making it ideal for quick breads and pancakes) and its hypoallergenic properties, which allow many who suffer from celiac disease to consume it without ill effect. For Bob Quinn, Kamut is very much a food, not a commodity.

Kamut has certain distinctive agricultural traits. For one thing, it thrives in harsh climates. In North America Kamut is currently grown in northeastern and north-central Montana and northwestern North Dakota, as well as in Alberta and Saskatchewan, Canada. Farming conditions in these regions are difficult by any measure, but even in the notoriously severe 2003 season in Saskatchewan—which saw fourteen inches of snow on May 10, no rain at all after June 10, and temperatures above 95 degrees for forty days, as local farmers described to me—the Kamut did fine, yielding fifteen bushels per acre. Kamut International continues to seek new areas for cultivation; successful experiments have been carried out in Queensland and New South Wales, Australia.

Kamut crop yields are significantly less than those of commodity wheat. In Montana, for instance, Kamut farmers report harvests of fifteen to thirty bushels per acre, while the 2004 Montana average for winter wheat was forty-one bushels per acre, according to the USDA National Agricultural Statistics Service. What, then, draws farmers to this crop? Terri and Ben Gagnon first planted Kamut in 1998. Their Flyin’ Dust Ranch in Shaunavon, southern Saskatchewan, has been in Ben’s family since 1907; of the original settlers in the area, they are the last family remaining. The closest house is now eight miles away, across fields of canola and alfalfa. Saskatchewan has suffered drought for the past few
years, and if it weren’t for organic crops like Kamut, the Gagnons would have been forced off the land, as most of their neighbors were. But they have tried to change with the times, seeking to grow new crops to meet shifting demand. Because of their remote location, the Gagnons need to grow a crop that will store well. Even if they could sell directly to consumers, there is no profitable market within hundreds of miles. Yet they persevere. As Ben explains, “We love this place. After a hundred years, you don’t want to drop the ball.”

Of the Gagnons’ 2,720 acres (small-to-medium by local standards), two-thirds is planted in grass and alfalfa for their 120 Black Angus cows. The remaining acreage consists of thirteen fields in which they organically grow cereal crops like lentils, barley, and Kamut. The Gagnons first heard about Kamut from a neighbor. They initially planted two hundred acres on land that hadn’t been plowed for fifteen years. The crop did so well that they have been growing it ever since, selling the grain back to Kamut International at the end of each season.

Although the yield per acre for Kamut is less than that for conventional wheat, the price per bushel is much higher. “Larger farms produce incredible volume at thin margins,” Ben says. “It’s not viable for us to go conventional.” For the Gagnons, the necessary capital expenditure and lower sale price of commodity grain would outweigh the increased yields. Furthermore, the agreement with Kamut International provides them with a known purchase price at the end of the year, unlike the fluctuating prices of commodity crops. Ben sums up the situation: “We like the stable market, and the price.”

Organizations like the Montana Grain Growers Association continue to embrace conventional farming methods using genetically modified grains, chemical fertilizers, and no-till farming. But thanks to Bob Quinn and his vision, around ten thousand acres of Kamut are under cultivation, and between sixty and seventy farmers like the Gagnons are growing this ancient grain organically. The thorny question of ownership aside, it’s beautiful to see Kamut thrive in harsh regions. The success of Kamut in the marketplace as well as in the field is testimony to a farmer who not only transcended his role as a commodity producer but preserved a forgotten species in the process.

NOTES
1. Letter from J.F. Carter to Bob Quinn, 22 August 1988, courtesy of Bob Quinn.

Kamut whole grain and flour are available by mail order from www.montanaflour.com or by calling 406.622.5436.