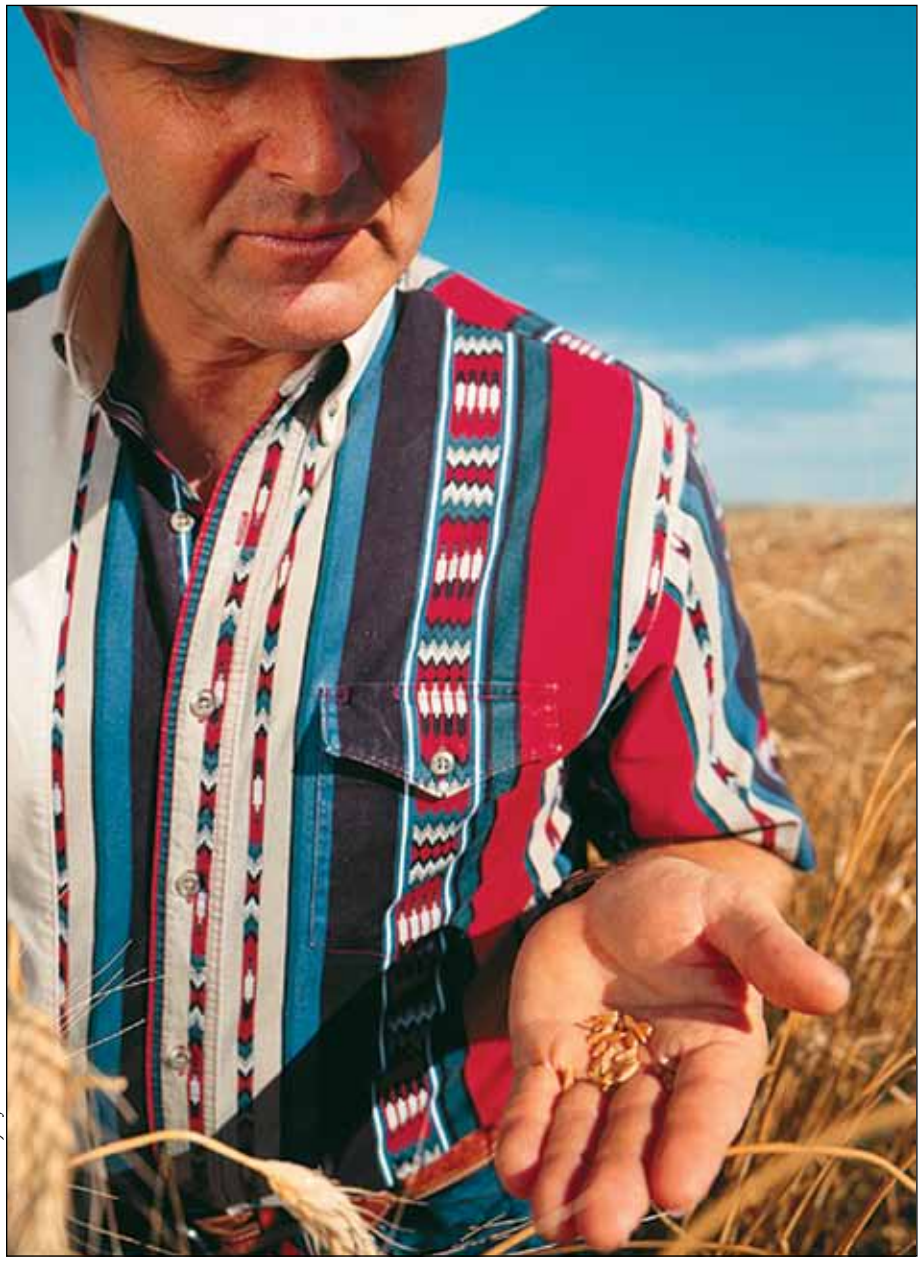
Nipping at the Heels of Industrial Ag

Montana Wheat Farmer Takes on the GMO Industry



Photos courtesy of Kamut International.

by Lisa Hare

The idea of "beyond organic" has been more than an abstract concept for Bob Quinn for more than two decades. It has truly been a way of life.

As a fourth-generation farmer in north-central Montana, Quinn's journey to total organic conversion led him through years of experimental crop rotations — barley, lentils, peas, alfalfa, spring and winter wheat, clover, buckwheat and safflower, to name a few — always with a focus on soil-building.

"In everything we do, we try to mimic the complexities of nature," Quinn explained. "We have found that diversity begets stability."

Looking for a way to reduce fertilizer expenses, Quinn sought ways to grow his own fertilizer — or, "green manure" — using certain plant rotations that add specific nutrients back to the soil and naturally promote healthy crop production through a robust soil profile. His current system utilizes a nine-year rotation schedule, out of which five years yield cash crops, and four years build back the soil.

"We strive to farm in a way that makes a profit without sacrificing the quality of the crops or the health of the land," Quinn said. He added that growing his own inputs rather than buying high-cost chemical inputs not only has reduced his costs by 75-85 percent, but the increased value of the output adds an additional 20-30 percent premium to the bottom line as well.

"Organic farming focuses on feeding the soil rather than feeding the plants. Chemicals are very hard on plants, animals and insects that serve necessary functions in healthy soil," he said.

Quinn added that legumes such as alfalfa, sweet clover and peas add enormous biological material to the soil and promote the population of microorganisms that break down the organic matter, feeding larger organisms.

"The end result is a field much higher in vitality," he said.

By nurturing and caring for the soil, the Quinn farm has established a base that naturally produces healthy and vigorous plants.

Quinn started the Montana Flour and Grain Company back in 1983, developing its own flour mill and cleaning plant, which by 1993 had converted to 100 percent organic.

Promoting organic farming all across the state, Quinn helped pass the first Montana organic labeling law, and then worked to help get organic standards in the 1990 Farm Bill. He served as one of the 14 original members of the National Organic Standards Board, and also helped form the Montana chapter of the Organic Crop Improvement Association (OCIA) — the organization that has certified his farm since 1997.

In 1999, Quinn sold the Montana Flour and Grain Company and turned his attention to his present-day pet project: the resurrection of khorasan wheat.

Marketed under the trademark name Kamut, khorasan is an ancient variety of wheat of which the origins remain debatable. Many stories abound, such as the grain was found in the tombs of the ancient Egyptian Pharaohs, which led to its oft-referred nickname King Tut's Wheat.

Another legend is that Noah used the grain on the ark resulting in the nickname Prophet's Wheat. Other stories surmise it was brought over by invading armies into Egypt. In Turkey, it has the nickname Camel's Tooth possibly due to the humpback shape of the grain.

Because Kamut has not been modified with biotech "improvements," it has many benefits that make it special in the whole grain market. First, the taste is different from conventional whole grain wheat. It's sweeter and milder with a slightly nutty flavor. Second, it has a higher nutritional profile, including antioxidants, vitamins, and essential amino acids. The grain itself is very high in its protein content and also contains a high mineral concentration, especially in selenium, zinc and magnesium. This grain variety is considered high-energy wheat, and provides the body with more energy in the form of complex carbohydrates. Because of its low oxidation levels it loses little nutritional content when being ground and processed.

Last, even though Kamut contains gluten, it has been found to be more easily digestible by people who may have slight allergic tendencies. Kamut is currently sold in North America, Europe, Australia and Asia. It can be found in products such as breads, breakfast cereals, pastas, a grain extract drink, beer, cookies and crackers. The grain can be cooked and eaten whole.

Initially following the advice of several different mentors when Quinn first decided to go organic back in 1988, through it all, Quinn stayed true to his first love and mainstay crop: wheat.

"I've always liked crop farming and this is wheat country," Quinn said.

Still, conventional wheat varieties that have been genetically altered are not what Quinn had in mind.

"Wheat was once known as the 'staff of life;' now we can't even eat it," Quinn said.

He added that he believes the genetic engineering of wheat for the sole purpose of higher yields has damaged much of the nutritional qualities of this dietary staple. Consequently, he has been instrumental in current studies taking place in Europe comparing khorasan wheat to its GM counterpart.

"I always thought that either something has been added (to GM wheat), something has been deleted, or something has been altered. We're finding out all three are true," he said.

Though khorasan wheat is lower producing — with typical yields of 15–19 bushels per acre — and is more susceptible to disease and mold from moisture than modern wheat varieties, its superior nutritional profile puts it into a different food paradigm.

"We've made these huge changes to make food cheap with no regard to nutrition," Quinn said. "People say it's a great advantage having cheap food in this country, but if we take into account the cost of medicine from poor health

which is a direct result from our inferior and often toxic diet, it's not cheap at all."

Quinn added that it's imperative people get back to viewing food as medicine.

"We need to grow food that preserves and protects our health, not just produces a high yield."

That's a tough sell to conventional farmers trying to make a living in the current model of production, and consumers too removed from food origins to know the difference.

"The problems with agriculture today are two-fold," Quinn explained. "We've got these two spiraling cycles that are squeezing farmers off the land: upward spiraling costs, and downward spiraling returns."

He added that most farmers don't consider organic production a viable option.

"This is what they are being told every day by chemical and seed companies," he said, adding that any question to this model is quickly dissuaded in the reassurance of the wizardry of biotechnology.

"They look to biotechnology to save agriculture with some chemical or genetic rescue remedy. So the cost spirals upward again, while farmers become more and more dependent on inputs from companies genetically engineering the seeds that require their chemicals to grow successfully."

Quinn said this is the crunch that most conventional farmers are in, but sustainable agriculture provides an alternative to those spiraling cycles.

"If we learn to farm in a way that reduces our inputs and increases the value of our outputs, we can survive without having to buy out our neighbor and constantly get bigger and bigger," he said.

Quinn said that recent discussions regarding potential damages to organic producers from GM crop contamination are also part of a larger problem.

"It's very frustrating," he said. "We're now being told that we need to 'co-exist,' yet we're dealing with an industry that claims full ownership without accepting any of the liability that comes with that."

Quinn said the biotech industry has a responsibility to be able to control what it produces, and at a minimum, four points need to be addressed by legislation.

Following Europe's example, the first step, Quinn said, is labeling.

"The consumers have a right to know what they're buying and eating, and it has to start by labeling foods that contain GM products."

Quinn added that in order to eliminate the risk of cross-pollination or contamination of non-GMO crops, the GMO plants should be made sterile.

"Their gene jockeys can do just about anything — at least that's what they sell themselves on. They have the capability of producing a male sterile (plant) to prevent out-crossing, or a sterile pollen," he said.

Next, Quinn suggested there be the requirement of a seed marker on all GMO seeds.

"We need an inexpensive, yet reliable way to distinguish GM seed from non-GM seed at any point in the handling system — a marker visible under a UV light or something similar, so as to prevent accidental contamination during handling."

And lastly, Quinn pointed out the absolute need for the biotech industry to be held accountable for the products they manufacture and the results they produce.

"These companies *must* be liable for what they're doing so we don't have farmers suing farmers when neither is technically at fault," Quinn said. "If we look back over the past several years, we could easily say that billions of dollars have been lost due to GM contamination, and that's just on the basis of market pricing. We haven't even begun to discuss how the environmental damages equate to dollars and cents."

Quinn speculated that if these companies were to start getting billed for the clean-up expenses incurred from damaging chemical run-off things might start to change.

"As far as I know, we haven't tried to put a price tag on the dead zones in the Gulf, and I don't know if that's even possible, but at the very least there needs to be some accountability."

These are some of the issues organic farmers are facing today, and though Quinn said he doesn't foresee the biotech industry fading away any time soon, he stressed the importance of sustainable and organic farmers to continue "nipping at the heels" of industrial agriculture.

"Industrial agriculture is like this enormous elephant. It's way too big to go at it head-on. But if we can get enough producers nipping at its heels, and enough consumer awareness to create a demand for quality over quantity, we might stand a chance at establishing more options for farmers, and better food for everyone."