



The *New* American Farmer

Dosi and Norma Alvarez

La Union, New Mexico

Summary of Operation

- 400 acres of American Pima (extra-long staple) cotton
- Six varieties of chilies on 80 acres
- Alfalfa on 350 acres

Problem Addressed

Discontent with Agri-Chemicals. When Dosi Alvarez and his wife, Norma, were expecting their first child, it reinforced Alvarez' feeling that the agri-chemicals he used to produce Pima cotton were potentially harmful, especially to young children. It was time, he decided, to make a change. Moreover, low commodity prices for his conventional cotton resulted in little or no profit, and the pesticide bill furthered that trend.

Background

Alvarez did not always want to farm. After receiving a degree in animal science, he became a buyer for Swift packing company and, later, a beef selector, where he graded carcasses by quality and yield. When his father tired of farming in 1974 and invited him home to run the farm, however, Alvarez jumped at the chance.

"I had to get away for a while, but once I left I realized how much I love the farm," he said. "I have never regretted returning to it." Alvarez is now a third-generation farmer who works land cleared by his grandfather with horses in 1910. His farm is on the border between New Mexico and Texas.

About the time he was expecting his son, a Swiss spinning mill approached Alvarez's co-op, the Southwest Irrigated Growers (SWIG), looking for organic cotton. In response, Dosi planted 25 acres of organic Pima cotton in 1995, and found it to be extremely well suited to his valley's climate. The next year, he increased to 50 acres. Finally, in 1997, he decided that cleaning his equipment between organic and conventional fields was too time consuming and transitioned his entire 900 acres to organic production.

Alvarez's wife, Norma, plays a key role on the farm. In addition to acting as bookkeeper, full-time farmer and mother of two, she also runs a profitable horse breeding business on the property. There are 14 brood mares and 80 head of horses year round, some their own, some boarders. All of the horses are grazed on alfalfa pastures. "As far as making decisions, my wife is certainly part of team," Dosi Alvarez said.

Focal Point of Operation – Organic cotton production

American Pima cotton comprises most of Alvarez's operation. He grows three different varieties known as the S6, White and Sea Island, and calls organic Pima a "double-niche" because it is so well-adapted for his New Mexico climate.

“Pima cannot be grown [just] anywhere,” he told NewFarm.org, an electronic magazine. “We have hot days and cool nights, which Pima likes. And it drops its leaves naturally as it matures, so it sort of defoliates itself for harvest. Then we just wait for the killing frosts to take care of the rest.”

In an ideal year, Alvarez plants alfalfa in the fall, chilies in late March, and cotton on April 1. Weed management is his biggest concern, and he combines hand labor with an eight-row Sukup cultivator to tackle it. To the cultivator he attaches V-shaped blades when the cotton is small, and X-shaped wire weeders once the cotton matures. These are run against the cotton plant and underneath the row, inhibiting the growth of new weed seedlings.

In addition to four full-time employees, Alvarez hires a seasonal crew of about 25 for hoeing, hand weeding and harvesting.

Alvarez employs flood irrigation, using water from the Rio Grande. During droughts, he supplements the fields with well water.

Cotton is harvested using a mechanical cotton picker. Pima cotton plants drop their leaves, so Alvarez does not need to defoliate. The chilies are harvested by hand.

Alvarez sells his cotton through the SWIG co-op, primarily to Bühler, a Swiss mill that spins organic fibers for clothing companies, specifically Patagonia of California. According to NewFarm.org, Bühler buys 10,000 to 15,000 bales of extra long staple Pima cotton from American growers each year to spin into premium yarn in Winterthur, Switzerland. The 300 of those bales that are organic Pima come from Alvarez.

Patagonia approached the Alvarez farm in 2004 for a photo shoot to feature the transition of their cotton clothing to organic. Patagonia’s interest extends beyond the clothing to how it is produced. “They have a nice article about the farm to give customers an idea of where their clothing came from,” Alvarez said.

The Alvarez family also grows six or seven varieties of chilies, including cayenne, paprika, jalapeños, habañeros and sandia. The root systems of the chili crops are fibrous, effectively loosening the soil and working out clumps. Companies such as Frontier Natural products in Iowa and Desert Herb in New Mexico buy most of his 80 acres of chilies to dry and grind into spices. This year he is growing 20 acres of green chilies as well.

The third crop in Alvarez’s rotation is about 350 acres of alfalfa. He and his employees bale most of it into hay, and while he sells a small amount to organic ranchers, he moves much more as conventional horse feed. The alfalfa also provides pasture for Norma’s horses.

His simple, yet effective crop rotation includes three to four years of alfalfa, then three to four years of alternating cotton and chilies.

Economics and Profitability

The SWIG marketing co-op in which Alvarez participates was first established in 2000. It connects Southwestern farmers with contacts across the world, with Pima and acala (longer staple) cotton the major market base.

“Co-ops are the way to go for a farmer, because they are one of the few ways to get a fair return for your product,” Alvarez said. With that return, the Alvarez family is able

to support itself exclusively by farming. In fact, SWIG has connected Alvarez to nearly all of his buyers.

His Pima cotton fetches a premium that makes up for the higher costs of managing production organically. In 2004, he earned a 50-cent per-pound premium over conventional cotton. Raising about 1,000 pounds per acre, Alvarez is able to sell approximately 400,000 pounds of cotton each season.

His chilies, sold organically, bring in approximately 90 cents a pound. Companies such as Frontier Natural products in Iowa and Desert Herb in New Mexico purchase nearly all of Alvarez’s 300,000 pounds of chilies each season.

Most of Alvarez’s alfalfa is marketed conventionally, but “it is such a great soil-building crop that we don’t really feel the loss of profit,” he said.

The farms’ biggest weed troubles are Johnson grass and bindweed, Alvarez told The New Farm. Hand-hoeing and weeding costs can run from \$30 to \$100 an acre, making it Alvarez’ biggest farm expense. He hires a combination of locals and residents of nearby Mexico, supplied through a labor contractor.

Environmental Benefits

In 1999, New Mexico issued an eradication referendum for the boll weevil that required intense spraying in the Mesilla Valley. The Alvarez family and other organic farmers vehemently protested, asking how organic cotton farming would survive.

After much debate, the legislation was changed with an amendment for the organic farmer. On any field where even one weevil was found, cotton could not be planted



Daniel E. Brannen Jr.

Dosi and Norma Alvarez raise Pima cotton, which thrives on New Mexico's hot days and cool nights, and seven types of chilies.

in the following year. "It didn't bother us at all, since we had to rotate anyway," recalls Alvarez. "The valley is now weevil free."

Alvarez is pleased to see abundant beneficial insects on the farm, something he attributes to spraying on surrounding farms that drives them away. The beneficials help to kill off the bollworm and other pests on the farm. The absence of pesticides also allows a healthy population of soil microbes, contributing to good nutrient cycling and improving soil tilth.

Since going organic, Alvarez has experienced a tremendous improvement in his land. "The [cotton] yields were low at first, but then the soil got healthy, and we are producing as much or more per acre than our conventional neighbors," he said.

He has switched from synthetic fertilizers to aged cow manure, which he gets for free from a local dairy. He applies 20 tons per acre for his cotton and 30 tons per acre for chilies, raising his soil organic matter 1 to 1 1/2 percent higher than the average in his valley.

His crop rotation of alfalfa followed by alter-

nating cotton and chilies promotes soil fertility. As a legume, alfalfa fixes nitrogen in the soil and provides fertility for his cotton and chilies. Alfalfa also builds the soil and prevents erosion with a year-round dense cover.

Community and Quality of Life Benefits

With organic farming Alvarez has found a similar amount of work with much higher economic and personal rewards. "At the end of the year, it was disheartening to have so little to show for all the hard work we put in. Growing organically is much more satisfying, and it is something my employees really appreciate. I have no regrets."

He and his wife network throughout the community. For example, Dosi and Norma host tours for New Mexico State University about three times a year. And through SWIG, they have formed lasting relationships with other farmers. "Whenever I have a question, there is always an answer somewhere," Alvarez said.

Managing an organic farm is easier than conventional, according to Alvarez. "There are a lot of things that you just leave to

Mother Nature, because she'll take care of them, and you don't worry about them," he said. No longer does he have to clean nozzles, set up spray rigs and deal with other "headaches," he said.

Transition Advice

Establishing relationships with product manufacturers to attract mill customers is a valuable strategy. Alvarez found that end buyers are looking for a farm story to tell when they market their products.

Dosi also urges the planting of alfalfa as a transition crop. Not only will it improve the soil, but it also adds organic matter, helping to prepare the land for organic production. Moreover, alfalfa can provide income until the land is certified organic.

The Future

Alvarez hopes to continue managing the farm the way they have been, for the benefit of his family and the land. He would love to grow along with the expanding organic markets. At the same time, however, housing developments are creeping into his valley. "They aren't making any more land. I would love for my boy to farm, but I just don't know what the situation will be like."

Alvarez has no plans to expand to other crops, but remains open to new ideas. "Right now I'm at the point where there is just too much on my plate to add anything else."

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