



The *New* American Farmer

Allen Matthews and Family

Scenery Hill, Pennsylvania

Summary of Operation

■ *Peppers, sweet corn, tomatoes, pumpkins, gourds and other specialty crops on 158 acres*

■ *Greenhouse bedding plants*

■ *Direct sales to Pittsburgh grocery stores and restaurants*

Problem Addressed

Severe erosion. With a farm located in the hills of western Pennsylvania, Allen Matthews did not like the prospect of farming by a recipe dictated by regulations made far away. His USDA-approved soil conservation plan called for a seven-year rotation — vegetables followed by two years of corn, a small grain and three years of hay. With vegetables more profitable, Matthews was reluctant to devote only one-seventh of his acreage to them each year.

Background

Matthews shares the management of the farm with his extended family. He grows peppers, sweet corn, pumpkins and gourds with his brother, John, his father, Harvey, mother, Betty, and all of the grandchildren. They also raise specialty crops, including various greens for fresh markets and many types of perennials and herbs for spring sales in their greenhouse.

With support from a Northeast SARE grant in 1992, Matthews began comparing the seven-year rotation with an alternative system — peppers, followed by pumpkins, sweet corn, and then clover. The new four-year rotation that included three years of vegetables, followed by a year of cover crops, yielded bountiful results. Matthews found he could reduce erosion and make more money.

Matthews and his family have created an alternative, proactive and productive farming operation that focuses on retailing their products to specialty markets.

Focal Point of Operation — Direct marketing

With help from USDA's Natural Resources Conservation Service and his local soil conservation district, Matthews created a five-acre, hillside test plot. He cultivated half using a moldboard plow; the other half he designed in a "sustainable" construct to grow vegetables in narrow rows, inter-seeded with three types of clover.

In the alternative rotation, Matthews employed mulch-till, strip-till and no-till planting instead of moldboard plowing. He used more integrated pest management techniques and "biorational" pest controls instead of synthetic pesticides. Finally, he seeded in narrow — instead of broad — contours, planting hay and cover crops to block weeds between rows.

To measure erosion, Matthews and the NRCS scientists dug diversion ditches midway down the slope and at the bottom. These channels caught soil and measured runoff from the 15-percent grade. Results were impressive. The sustainable plot lost soil at a rate 90 percent below what the NRCS deemed

allowable. The “conventional” plot also saw low erosion rates of less than 1 ton per year, but Matthews measured a big difference in profits.

“We made \$848 an acre more for the sustainable versus the conventional rotation,” he says.

Today, Matthews regularly plants peppers in narrow double rows, then seeds clover between as a living mulch. Not only does the clover blanket the soil and reduce erosion, but it also shades out weeds and fixes nitrogen. After harvesting, Matthews over-seeds clover, then allows the field to remain in the cover crop for the subsequent year.

In 1997, Matthews further increased income by shifting from selling vegetables at wholesale and farmers markets to marketing products directly to grocery stores, chefs and restaurants. The family’s opening of these new marketing channels contributed to the formation of The Penn’s Corner Farmer’s Alliance, a cooperative of 21 growers working with consumers and chefs to explore the possibilities of food choices, the impact of selling local food and a vision for the future local food system.

The Matthews family’s production and marketing practices are models for the dynamic face of alternative marketing. “Dad’s on the phone with the grocery stores most days asking exactly what they would like for their shelf space that day,” he says. “Small farms cannot compete unless they have something different to offer.”

Thanks in part to Allen’s work with the Pennsylvania Association for Sustainable Agriculture, a permanent farmers market opened in McKees Rocks in early 2000. In conjunction with Focus on Renewal, a non-profit, community-based Pennsylvania social service agency, the market brings high-quality



Rich Rev/Successful Farming

Adding value to specialty crops prized by chefs and grocery stores in Pittsburgh contributes greatly to the Matthews family’s bottom line.

ity food to the area and jobs for local residents. Matthews also worked with the Southwestern Pennsylvania Commission and PASA to kick off a similar site in Pittsburgh’s South Side.

Economics and Profitability

Matthews was happy to find that the 2.5-acre “sustainable” rotation he designed to reduce erosion was also much more profitable than the conventional comparison plot. By keeping records of labor and input costs, Matthews discovered he earned much more per acre in the sustainable plots, totaling \$10,000 when he multiplied 2.5 acres over five seasons.

Contrary to conventional thinking, close evaluation of hours of labor and other inputs revealed pumpkins and peppers were much better money-makers than sweet corn. “Our work with SARE taught us to keep good records,” he says. “We have doubled our pumpkins and gourd production

in the last 10 years.”

Meeting the needs of specialty markets with crops like hot peppers and Indian corn helps the Matthews family increase sales from the farm. “We sell sweet corn at \$2.50 a dozen and get the same price for 12 corn stalks,” he says. In a conventional rotation, those stalks are ground up in the harvester.

Environmental Benefits

Conventional farming using a moldboard plow, or a regular, four-bottom plow, works the soil at a repetitive depth of 8 to 10 inches. This results in soil compaction, called a hard pan, Matthews says.

By re-working the same 8 to 10 inches, farmers create a tougher layer of soil that does not breathe as well, roots and water cannot penetrate and earthworms cannot aerate. Such soil often needs more off-farm inputs, like commercial nitrogen.

Instead, Matthews uses a chisel plow that doesn't disturb the soil as much. The plow drags through the soil at a depth of 18 inches, which breaks up plow pans yet leaves residue on the surface. Matthews also uses a variety of cover crops to good effect. The cover crops help by adding organic matter back to the medium. "We are not afraid to fool around with different cover crops; we're also trying buckwheat, rye, oats and hairy vetch," he says.

Using techniques like integrated pest management, or IPM, the family has reduced its use of pesticides by 60 percent, especially with sweet corn. Growing sweet corn means grappling with worms, like the European corn borer and fall army worm. These pests come at different times and a traditional approach to treating for them may mean spraying every four or five days.

"We walk the rows," Matthews says. "We don't spray when there are no bugs."

Community and Quality of Life Benefits

Farmers like Matthews are working to establish and maintain an urban-to-rural connection and increase awareness of how food is produced. For a time, Matthews sold products from six farmers to the region's Community Food Bank, which was then marketed at individual community farm stands. The Penn's Corner Farm Cooperative now handles all sales.

As a member of PASA, Matthews has become very involved in food systems issues in his area. PASA formed an agricultural committee that coordinates county planning staff, agricultural extension offices, conservation districts and, of course, farmers; meetings are quarterly and highlight farming's contribution to the area's economy. "The farmers have a voice in the planning process now," he says. "It's interesting to see how people value our input. We've

Matthews' goal is to plant one third less and double profit.

gone from being out of the loop, to being part of the food system."

Matthews was buoyed when the Pennsylvania Department of Agriculture began issuing coupons exclusive to local farmers markets. Another program brings farm stands to poor neighborhoods. The two work in concert for a mutually supportive system.

Transition Advice

Matthews says direct-market farmers should start small, then find other farmers doing something similar who will share their knowledge and experience. "When I get a chance to sit down and talk to anyone, especially farmer to farmer, I usually learn something," he says.

Information from farmers and ranchers will nearly always prove valuable, he says. "Someone, maybe yourself, may be thinking of doing something similar. We all share excitement about what we are doing, and what we can learn from each other."

The Future

Matthews is witnessing tremendous demand for direct-marketed specialty vegetables produced with an eye to conservation, but few farmers to supply it. He is equally spirited about creating opportunities and the power of sharing.

"It will be nice when we can get people to understand, as the years go by and we

increase the amount of money we receive for our goods and services, that farmers are also increasing the time they spend on networking and marketing," he says.

Much of the Pittsburgh-area work is in its infancy, but the groundwork has been laid to build support while increasing sales and planning for the long term. "A year ago, the alliance sold \$40 worth of strawberries. At the end of this year, it was \$40,000," he says.

As for the Matthews family, profitable farming doesn't just mean produce more. "Our goal is to plant one third less and double our profit," he says.

Matthews also emphasizes the importance of making opportunities for future generations to farm. "The Matthews family supports the preservation of farms," he says. "We want to provide opportunities for our kids, nieces and nephews to farm if they so choose. If that opportunity is not there, then this farm may be split up like many of the rest."

■ John Flaim

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Editor's note: By 2004, when this profile was updated, Matthews' father and brother were managing most of the farm production while Matthews was "on leave" as research coordinator at the Center for Sustainable Agriculture at the University of Vermont. In that role, he advises farmers about starting alternative enterprises.