



The *New* American Farmer

Tom Zimmer and Susan Willsrud, Calypso Farm & Ecology Center Ester, Alaska

Summary of Operation

- *Community supported agriculture (CSA) on 2.5 terraced acres*
- *Nonprofit Center for Environmental and Ecological Learning*

Problems Addressed

Challenging climate. Alaska itself is the problem for anyone hoping to establish a produce-oriented community-supported agriculture (CSA) project, as Zimmer and Willsrud set out to do. Winters are long, frigid and dark. Summers are short, subject to extreme temperature swings and long days of intense sunlight. Killing frosts can strike in each month of the growing season.

Poor soils. Soils aren't very fertile, and permafrost, just inches below the surface in many areas, inhibits root growth.

Background

Willsrud and Zimmer recognized growing interest among members of their community for locally produced foods. They felt they could tap that demand — and help it flower — by establishing an organic vegetable, herb and flower operation. They hoped to use it as a commercial venture as well as a way to educate others about ecology, environmental issues and the value of home-grown food.

Willsrud is a California native. She has a master's degree in botany from the University of Alaska at Fairbanks. Zimmer grew up in a nomadic military family. He has a graduate degree in soil science, and did a two-year stint in the Peace Corps, as an agricultural extension agent in West Africa. Zimmer accompanied Willsrud to Alaska in 1994, earning a living as a soil analyst and surveyor while she attended the university. They came to love Alaska, particularly the community in and around Fairbanks.

Willsrud and Zimmer kept a small garden beside the cabin they rented while she was in school, which introduced them to some of the demands of cultivating crops in Alaska's loess soils. Produced by the powerful rock-grinding action of retreating and advancing glaciers, loess can be mineral-rich, and it drains well. But in Fairbanks, as in much of the state, permafrost lies just below the surface, so plants can't sink their roots very deep. To compensate, the couple learned the arts of raised bed gardening and composting.

Their experience and ambitions pointed to farming, but they had to learn more about how to farm on a commercial scale. They returned to California, where they spent two years working at a farm with a 700-member CSA project. When they returned to Alaska in 1999, they spent months searching for the place to launch their CSA. Zimmer's surveying experience led him to look up, along the forested ridges surrounding the Tanana Valley, rather than on the valley floor where Fairbanks sits.

"I was looking for a microclimate," he said. "I knew if I went up, and found a south-facing slope, we might get better sunlight and milder temperatures."

A piece of property 10 miles west of Fairbanks met most of their requirements, including affordability. They had saved \$50,000 and were determined not to go into debt. The forested parcel wasn't for sale, but Zimmer and Willsrud, after weeks spent monitoring temperatures and rainfall, made an offer on the 30 acres. With the offer accepted, they set to work clearing the land they'd need for cultivation and constructing a home as well as a learning center and other outbuildings.

Focal Point of Operation – Community supported agriculture and education center

Named for an orchid that blooms wild each spring in the region's forests, Calypso is home to a fast-growing CSA operation. By its third season, the CSA provided a variety of organic produce including herbs, vegetables and cut flowers to 45 shareholders two times a week. The season lasts 16 to 20 weeks, depending on the timing of the first and last frosts.

All produce offered by the CSA is grown on 2.5 terraced acres that Willsrud and Zimmer amended with an estimated eight to 10 tons of composted leaves, untreated lawn clippings, young weeds, hay and manure from nearby horse stables, and coffee grounds from local shops.

The CSA operation acts as a laboratory of sorts for Calypso's nonprofit Center for Environmental and Ecological Learning. Zimmer and Willsrud routinely host field trips from local elementary and high schools as well as college classes and faculty. They encourage students to participate in cultivation, planting, soil-building and water harvesting projects. Their goal is to foster awareness — especially among young people — of where their food comes from

To that end, Zimmer and Willsrud also visit classrooms to talk about gardening, farming

and ecology. They launched a program aimed at helping local high schools and elementary schools establish on-site gardens.

Zimmer and Willsrud are alternately farmers, homesteaders, builders, educators, grant writers and marketers. But once the growing season swings into view each year, their roles become more sharply defined because the CSA operation commands most of their time and energy from March to October.

Zimmer is the farm manager, while Willsrud is the chief grower. He makes sure the soil is properly worked and ready for planting, manages composting and prepares volunteer and employee schedules. She handles the collection and sowing of seeds, transplanting, mulching and cultivation. Even with their considerable energies, the CSA also depends on the help of two full-time VISTA (Volunteers in Service to America) workers.

The couple also added an executive director's position to the ecological center.

Economics and Profitability:

As practiced Alaskan homesteaders, Willsrud and Zimmer insist they and their young daughters don't need much money or many off-farm luxuries. Still, things are easier now than during their first two years on the property, when they generated little income and lived on savings.

With their land and home paid for, they aim now to generate enough income for the CSA to support itself — paying for seeds and supplies as well as their salaries from March to October and that of at least another full-time CSA employee.

Their goal for the ecology center is economic sustainability as well, with enough income to pay their salaries as educators

and administrators during the months when the CSA operation is dormant, and to support other staff, as well as efforts like their satellite gardens at area schools.

Much of that activity is financed now through grants, and both expect the center will continue to seek them. A revolving five-year grant brings in \$11,000 each year from an Alaskan foundation, and they have also secured other grants totaling \$40,000 from agencies like the Environmental Protection Agency.

In 2004, CSA subscribers could choose one of two levels of participation; a small share (for at least two adults) for \$350, or a large share (for four or more adults) for \$450.

Their current 45 shareholders generate an annual CSA income of about \$16,500. If their projections of 100 shareholders by 2008 are met — and that seems likely with a waiting list already numbering 80 — the CSA may then generate closer to \$40,000 annually. The ecology center, with its mix of individual annual memberships, annual fund-raisers, and grants — along with income from workshops the couple conducts — takes in roughly \$60,000 annually.

Environmental Benefits

Willsrud and Zimmer admit that their 30 acres might better have been left undisturbed and forested. They also make a strong case that their activities haven't drastically disturbed or irrevocably altered the landscape, the microclimate or the habitat. They took care to use all the trees, mostly third-growth birch and aspen, as lumber. They replaced the leaf litter and other biomass that would have been crushed under the tracks of the earth-moving equipment brought in to terrace their 2.5 acres of cultivated land.

They're happy that their 30 acres won't

soon be clear-cut, as it was at least twice in the past century. “Trees grow very slowly around here,” Zimmer notes, “especially on the 10 acres we’ve got that tilt north. There’s permafrost year-round up there, and the trees are only about 10 feet tall after the last cutting 35 or 40 years ago.”

Slow-growth patterns mean soil stays bare a long time when the trees are removed, exposing it to wind and water erosion. Calypso’s acres are protected from those processes by the forested acres the couple have left undisturbed, and by their improvements to the land they cultivate.

Rather than drilling an expensive and potentially unreliable well, the couple instead chose to collect rainwater runoff, establishing troughs and trenches leading to a storage pond. They also collect rainwater from rooftops on each building, in barrels. The barrels are fitted with spigots, and hoses retired from the local volunteer fire department link them to the storage pond. Zimmer and Willsrud make their property available for firefighter training exercises, which often include tanker trucks full of water. The tankers are usually empty when the exercises are complete, and the water flows into Calypso’s collection system.

While they have altered the run-off pattern on their slope by diverting and capturing rainfall, they compensate by retaining only as much as the center needs. Zimmer is reassured by the improvement their composting efforts have made in the water-retention qualities of the soil in their terraced beds.

Community and Quality of Life Benefits:

With a CSA and education center, Willsrud and Zimmer say community comes to them. “There’s always somebody coming by to see if we’ve got produce for sale, to see what the ecology center’s all about, or just to visit and

help out any way they can,” Willsrud says. “It’s a busy place.”

Work on the CSA project is all consuming for about four months each year, the couple says, though enjoyable. For another three months on either side they work lots of hours on both the CSA and the education activities associated with the ecology center. That means hosting field trips, guest teaching appearances at local schools, managing garden projects at the schools, and conducting on-site workshops and field days.

Each year, the family takes off for California in the coldest and darkest two months of the Alaskan winter. Often, they use the time to attend organic farming conferences.

Transition Advice

“Pay attention and be patient,” says Zimmer about establishing a produce operation in an unlikely place. Microclimates are important, he said, and can be surprising. “A general area can seem really forbidding, but there are always little pockets where the temperatures and rainfall, the amount of sunlight, the winds, can be a lot more forgiving. Take the time to really monitor what happens and you might strike gold. And if not, add more compost.”

The Future

Zimmer and Wilsrud believe they can build up to 100 shareholders. They hope to reach that figure by 2008, then maintain it. To grow larger would mean bringing on more employees and clearing more land, when both Zimmer and Willsrud agree they want to apply more of their time and energy to education.

“The CSA is wonderful for everything it does,” says Willsrud. “It gets people here and makes money, and lets people know it’s



As part of their ag education efforts, Susan Willsrud and partner Tom Zimmer help teachers and students create school gardens.

possible to grow lots of great organic food right here in Alaska. We also enjoy teaching people, especially kids, about ecology and knowing where their food comes from and how it’s grown. We’re hoping to strike a better balance so we can do more of that kind of teaching but have a working, profitable CSA, too.”

■ *David Mudd*

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