

Local jewels of the soil

Reflections on farming and synergy

By Mike Macdonald

This is a story about good food, good taste, and good health. The results of local organic growers' hard work is immediately apparent on a plate, but is a little harder to accurately describe. So like a photograph of a symphony, this account acknowledges its shortcomings, but hopes that readers will soon bring their other senses into play.

Before any crops are planted in the earth, a farmer must select and nurture a set of ideas and techniques that range from seeds to harvest.

Before there are vegetables, bright, fresh, and crisp, there must be a plan.

At Peter and Susan Corning's Synergy Farm, on San Juan Island's Beaverton Valley Road, good ideas, some new, some as old as family farming, bloom and mature among the chickens, tomatoes, and salad greens.

"Our farm is being reborn again. It is still a family farm, growing market crops on a small scale, but it involves a very different approach from traditional farming," Peter said.

"The biointensive system we utilize here is very sparing in the use of land, tools, water, and other resources. We use 40 per cent of the water used by a normal commercial farm. The only power tools we use are a weed eater and a lawn mower. We don't use any chemical fertilizers or pesticides. We hand scythe our grain crops, then hand thresh the grain from the stalks. It provides a model for young farmers on the island who don't need a lot of capital to get started," Peter said.



Photo by Mark B. Gardner

Susan and Peter are not life-long farmers, but retired academics who have expanded a hobby and avocation into a business.

In Palo Alto, where Peter was a professor at Stanford University's interdisciplinary Human Biology Program and Susan ran a health industry consulting firm, they grew vegetables for pleasure at a community garden.

After meeting and studying under biointensive organic gardening pioneer John Jeavons, the Cornings began thinking of a farm where they might put innovative food growing practices into a market farm setting. They began farming on the historic former Shull farm in 2004.

Biointensive defined

There are seven key factors to Jeavons' system, which he developed from the late English horticulturist Alan Chadwick, who studied traditional French gardening techniques that maximize quality and yield on small plots of land.

1. Double dug raised beds. (Earth turned 24 inches deep with special hand tools.)
2. Extensive green composting. (Adding humus to soil.)
3. Intensive planting. (At least twice as dense as seed catalog recommendations.)
4. Companion planting. (Plants compliment or protect one another, or repel pests or attract beneficial insects. Synergy.)
5. Carbon farming. (Grains that provide food for humans and compost for the soil.)
6. Calorie farming. (Potatoes, sweet potatoes, parsnips, turnips, and other high calorie food crops.)
7. Use only open pollinated or heirloom seeds to protect genetic diversity.

A more complete description can be found in Jeavons' book *How to Grow More Vegetables Than You Ever Thought Possible on Less Land Than You Can Imagine* (Ten Speed Press)

Jeavons' ideas have been embraced worldwide as an ecologically sane and economical way to increase food production while reversing soil loss.

"We have scaled up Jeavons' plan to market garden farm size. We have 168 raised beds and nine 12 by 20-foot mobile green houses that we move between summer and winter beds," Peter said.

These mobile plastic greenhouses, some electrically heated, are what enabled Synergy Farm to produce salad greens through the snow and ice of this winter.

The Cornings second great touchstone is veteran organic farmer and author Eliot Coleman. He and his partner Barbara Damrosch operate Four Season Farm, a market and research facility, in Harborside, Maine.

Coleman's techniques for 12-month production of vegetables have been documented in his books *Winter Harvest Manual* and *Four Season Harvest*.

Coleman and Damrosch hosted a natural gardening series on The Learning Channel, and Damrosch writes a weekly gardening column for *The Washington Post*.



Photos Courtesy of Synergy Farm



Lessons of winter

“We lost about half our winter salad greens plantings when snow collapsed the low tunnel plastic greenhouses designed to protect the plants from wind and weather,” Peter said.

An improved, strengthened design survived a second snowstorm.

“Our Northwest climate is so different than California or Maine,” Susan said. “For example, we are still experimenting with changes in plant spacing from the Four Seasons Farm model.”

Under construction on Synergy Farm in mid-winter was an electrically-heated flat house to start seedlings before they are transplanted to one of the heated mobile greenhouses.

Reborn farm

“The Shull family began their dairy farm in 1902,” Peter said, examining a Shull family portrait taken on the front porch of the house where we sat talking. Patriarch Daniel and wife Emma were surrounded by children and grandchildren in stiff collars and woolen clothing.

“They originally had 100 acres running dairy cattle. Today we farm 15 acres. Chickens are our only market animal, for both eggs and meat.”

According to Peter, both the beautifully restored house and the barn were ordered as kits from the Sears catalogue, then assembled by the Shull family with help from neighbors.

It seems innovative ways to get around the high cost of construction on San Juan Island date back at least 100 years.

The Shulls sold to the King family in 1928, then the farm had several alternate lives. “Our farm became a metaphor for the changes San Juan County went through,” Peter said. “It was a commune in the 1960’s, then the Moon and Sixpence bed and breakfast through the 80’s and 90’s. From a tourist retreat, we are in the process of bringing it back to a family farm.”

The Cornings have three children—Ann, Stephanie, and James. “In the end, we are doing this for our children and two grandchildren,” Susan said.

Time and the farmer

Too many jobs and not enough time have been the curse of the family farm since pre-history. If you ever wondered why farmers had so many children in most cultures, consider the extensive work list for almost any crop.

“One of our tactics is the efficient use of hand labor using simple but effective tools,” Peter said.

“We and other modern farmers have tried to reinvent organic farming. If you can save a little time, it helps make the whole process more doable.”

In the Synergy Farm chicken house, Road Island Red laying hens are fed from a side gallery using custom-made metal chutes. Eggs are easily obtained from a chicken

apartment house. The guillotine door that prevents fox, mink, and raccoon from raiding the hen house at night is operated remotely with a block and tackle system.

Peter estimates he spends only 20 minutes a day tending to his 50 laying chickens, which are free to forage outside during daylight hours.

The eggs produced here have rich orange yolks. They make superb scrambled eggs. Since the eggs cost much more to produce than supermarket eggs, the only way to determine if the added expense is justified is by taste. We cooked a Synergy Farm egg next to a supermarket egg. I’d always thought that an egg was an egg, even knowing the advantages of just-caught fish, or homegrown tomatoes. The taste difference between the two eggs was even greater than store-bought versus homegrown tomatoes.

If you don’t have time to care for your own laying hens, Susan and Peter will do the work for you.

Mobile plastic greenhouses make year-round fresh vegetables possible.

The Cornings have relied on the work of Joel Salatin, a pioneer in the art and science of pasture raised poultry. Free-range is a word, like organic, that has been co-opted into near

meaninglessness by advertising.

Disciples of Salatin get their chickens out of the coop onto natural pasture for a good part of their lives.

Here again, the proof of the difference is in the pan.

As an example of the energy-saving features on Synergy Farm, the many electric fences that protect chickens and

vegetables from wildlife predation are solar-charged battery powered.



Compost and sustainability

“John Jeavons says we’re in the business of growing soil and produce is the dividend,” Peter said.

There is nothing wasted on Synergy Farm. Forty composting piles covered in black plastic sit between the vegetable processing shed, where crops are cleaned and trimmed ready for market, and the growing fields. If the end products of the fields are bright vegetables, the end product of the compost piles is dark, rich, earthy humus loaded with earthworms.

“Humus has a catalyst role in the uptake of nutrients and minerals into the plants,” Peter said. “Healthy, productive soil features a symbiotic relationship between bacteria and fungi. Petrochemical fertilizers or herbicides kill the soil.”

Marketing local food

"Every thing we grow is marketed in four ways," Peter said. "We have a traditional farm store, and sell at the Friday Harbor farmers' market. In addition, we have an e-mail list where we inform customers what we will have available."

Before this winter's nasty weather, the Cornings operated a Community Assisted Agriculture program, where subscribers prepaid and received a share of the harvest every week. That program may resume in the spring.

Peter and Susan Corning did not just pick the name Synergy Farm out of a hat. Besides *Nature's*

Magic Peter's books represent a lifelong interest in the effects of synergy on humans and evolution. In the linked books *The Synergism Hypothesis* and his latest *Holistic Darwinism: Synergy, Cybernetics, and the Bioeconomics of Evolution* University of Chicago Press, 2006, Peter has posited that synergy is one of the governing principles of the natural world and has "played a key causal role in the evolutionary process."

Enjoying a salad of Synergy Farm's greens while contemplating Peter's exploration of a

new synergistic evolutionary paradigm is an experience that can only be enjoyed on San Juan Island.

As an editorial aside, I remember Jim Lawrence of Thirsty Goose Farm observing several years ago that most people

underestimated the amount of thought required for effective organic farming. It's been fashionable since Aristotle's time to mock farmers. Think of country cousins, clodhoppers, and Marie Antoinette and her court dressing up as milkmaids.

In a world where we increasingly honor good food and those who produce it, growers like Peter and Susan are helping put to rest that stereotype of dumb dirt farmers.

Susan estimates she spends 15 hours a week on the computer devising planting and harvesting schedules. She finds similarities with her health industry consulting business in the areas of strategic planning and scheduling.

Synergy Farm currently serves about 75 people per week, with a core of 30 prepaid customers that communicate with the growers via Internet.

"We hope and expect to eventually serve about 150 people with seven full-time

Producing quality compost is the most important job on the organic farm.

Eliot Coleman

What is Synergy?

From *Nature's Magic: Synergy in Evolution and the Fate of Humankind* by Peter Corning
Cambridge University Press, 2003

"How do I define synergy? Very broadly, the term refers to the combined, or cooperative, effects produced by the relationships among various forces, particles, elements, parts, or individuals in a given context—effects that are not otherwise possible. The term is derived from the Greek word *synergos*, meaning "working together" or, literally, "co-operating". Synergy is often associated with the cliché "the whole is greater than the sum of its parts" (which dates back to Aristotle in the *Metaphysics*) but this is actually a rather narrow and even misleading characterization. In fact, synergy comes in many different forms; sometimes wholes are not greater than the sum of their parts, just different."

employees," Peter said. "We don't plan to add more beds, but hope to increase our efficiency."

Both Peter and Susan have broad praise for the local organic farming community.

"Margaret and Joel Thorson have been mentors to every single new organic farmer in the San Juans," Peter said.

The Thorsons have operated their Thousand Flower Farm on Waldron Island for many years and regularly bring organic produce and wool products to market in Friday Harbor via small boat.

"We owe a debt to all the organic farmers in the San Juans," Susan said. "This is a co-operative venture with lots of room for growth as more people discover the benefits of local food.

"Most people who buy at local farms believe the food speaks for itself," Susan said.

Perhaps the best way to hear what locally grown food has to say is with a salad picked that morning by one of San Juan County's organic gardeners. There is no extra charge for the epiphany. ^{ah}



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Synergy Farm's

Delightful Winter Vegetable Recipes

Cream of Golden Beet Soup with Carmelized Onion and Orange Rind

Created by Robin Meyer for Synergy Farm

This is a beautiful soup to serve as a starter course – luxuriously smooth and golden, gilded with orange rind, made rich with heated cream and carmelized onion. (Serves 6)

1 1/2 quarts rich chicken stock (made from organic chicken)
4 medium golden beets, cooked, peeled and pureed (2 cups)
1 cup pureed roasted delicata, butternut or other squash
1/2 cup organic half and half
1/2 cup organic heavy cream
2 tsp. fresh grated orange rind
2 small onions, finely chopped & sautéed until golden in
1-2 tbsp. olive oil (reserve half for garnish)
1/2 cups walnuts, toasted and coarsely chopped
1-2 tbsp. cognac or calvados
seasonings to taste: nutmeg, cayenne, ground ginger,
white pepper and salt
horseradish cream: stir 1 tbsp. horseradish into 1/2 cup cream
fraiche or sour cream

Heat chicken stock in medium saucepan. Stir in pureed beets and squash and cook to blend flavors, about 8 minutes. Add half of the sautéed onion, pinches of spices and salt to taste. After about 5 minutes when flavor has built, add heated cream, half & half, and cognac. Bring up to temperature and adjust seasoning as necessary. Serve in bowls garnished with a dollop of horseradish cream, sautéed onion and toasted walnuts.

Braising Greens

Braising greens provide a wonderful example of nutritional synergy. According to the US Department of Agriculture, mixed greens like these may contain five times more calcium, four times more iron, twelve times more vitamin A and six times more vitamin C than a comparable single lettuce serving.

Wash the greens thoroughly, but leave them wet, and remove the tough stems from kale, chard and beet greens. Chop into strips 2-3 inches wide. Heat 1-2 tbsp. olive oil in a sauté pan

with 2 cloves of minced garlic. Add chopped greens, tossing them as you go. When they are wilted, remove from heat and add a tbsp. of balsamic vinegar. Serve immediately.

Mache, Beet and Goat Cheese Salad

Mache is European salad green that is as nutritious as it is delicious and beautiful. It can be used alone, in a salad with other greens, or combined with other vegetables and fruits. Its delicate, nutty flavor calls for a light dressing.

1 lb. red beets
4 cups mache
1/2 pound goat cheese
light vinaigrette dressing

Trim beets, leaving 1 inch of stems attached. Cover beets with cold water and boil, uncovered, until tender, 40 to 45 minutes (adding more water if necessary). Drain beets and let cool. Cut stems from beets with a small sharp knife, then peel and discard skin from beets. Cut beets into wedges.

Wash mache, spin dry and arrange on four individual salad plates. Place beet wedges on top of mache, and sprinkle both with light vinaigrette. Add 2 oz. of goat cheese to the top of each salad. (Serves 4)

Potato-Leek Soup

8 potatoes, peeled and cubed
1 lb. leeks (about 3 large), sliced
2 cloves garlic, minced
4 cups organic chicken broth
1/2 pound bacon, cut into 1 inch pieces
1 cup half & half

In a large saucepan or stockpot, bring potatoes and chicken broth to a boil. Cook until potatoes are tender. Meanwhile, cook bacon over medium high heat until evenly brown. Drain and set aside, reserving 2-3 tbsp. bacon fat. Sauté garlic and leeks in reserved bacon fat over medium heat. Add leeks, bacon and cream to potatoes, season as desired with salt and pepper, and blend as it heats. Serve hot.