

## Couple engineers a natural farm

### Decade of engineering work, century-old texts guide holistic farming operation

By Dan Wheat

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WINTHROP, Wash. -- A solar-powered chicken train moves itself slowly two times a day, allowing broiler chickens to continually feed on fresh grass.

"I don't think anyone else has one that's automated," said Jennifer Argraves, co-owner of Crown S Ranch, near the town of Winthrop in Washington's picturesque Methow Valley.

The train of two 8-by-18-foot, floorless mesh houses, each filled with approximately 100 chickens, has supplemental organic feed and automated water and an exterior electrical wire to keep predators at bay. Power for the wire, water and movement of the train comes from a battery fed by a solar panel.

The chickens eat grass, bugs and grubs and fertilize the grass, contributing to a healthy environment for the cattle, pigs and laying hens that eat there on separate rotations.

The train is just one of the innovations of Jennifer Argraves and Louis Sukovaty, who operate the farm where he grew up.

Using his background in electrical and mechanical engineering and her background in civil engineering, they combine new technology with traditional animal husbandry to make their 120-



acre farm sustainable and organic-certified. It's free of hormones, steroids, genetically modified feeds, herbicides, pesticides and fossil-fuel fertilizers.

Their motto is: "Better for the animals. Better for the environment. Better for you."

"Pesticides eradicate. Our thought is not eradication but to gently push it into balance," Argraves said.

They sell meat and vegetables to some 600 customers in the Methow Valley, Chelan, Wenatchee and Seattle. This year they will sell 24,000 pounds of beef, 12,900 pounds of pork, 6,000 pounds of chicken, 5,000 pounds of turkey, 4,500 dozen eggs, 320 pounds of lamb and they will make 200 tons of hay and grow 20 tons of grain to feed their livestock.

Despite the recession, they say, they have seen 150 percent growth in gross receipts in each of the past eight years.

They poured a lot of money saved from their engineering careers into the operation, but it is now financing its own growth, they say.

They have several interns and part-time workers. Their son, Geza, 12, works on the farm's irrigation system and at farmers' markets. Their daughter, Icel, 9, incubates eggs to supply laying hens.

Sukovaty and Argraves met as students at the University of Idaho in the late 1980s. Both grew up on hobby farms, she on one in northern Idaho. After graduation, they moved to Seattle, where he designed and worked on boiler and power plant projects and she designed and worked on utility, storm drainage, road and site-development projects.

"Our plan was to spend 10 years as engineers to build our knowledge base and save. Farming is hugely capital intensive and we wanted to save enough to set up," Argraves said.

They also wanted to raise their children on a farm.

They moved to Sukovaty's home farm in 1999 and began raising cattle. Initially, they continued with engineering work and didn't intend to become full-time farmers.

The idea of raising multiple species, each contributing to a never-ending ecological cycle, developed over time.

In the beginning, when their cattle developed pink eye and hoof rot, they wanted to understand and solve the problem rather than turn to antibiotics. They turned to his parents' animal husbandry books of the 1920s and the Internet and found an old Washington State University study showing Methow Valley soils are low in copper. They added a trace of copper to the salt lick for their cattle and the pink eye and hoof rot went away.

Rather than use a pesticide to combat the horn fly on their cattle, they built a pre-World War II fly trap that kills flies by trapping them passively in mesh baffles as the cattle walk through it. The dead flies become compost or chicken food.

Pigs are rotated on different sections of pasture grazing from their pig house. The house is moved annually, keeping the pigs in a relatively clean environment so they're free of worms and the need for chemical dewormers.

Last year's pig house spot become this year's garden for sweet corn and pumpkins.

The chickens, pigs and cattle each graze differently, which controls weeds. Each one adds different manure to the grass, building soil and sod. Each controls pests and parasites in different ways.

It's a building or layering, they say, of ecological cycles, of seeking to link all the loops so there are no dead ends. It's enhanced by their engineering backgrounds and, they say, it wouldn't work without multiple species.

They buy six-month old steers, born and raised nearby on similar grasses. They are entirely finished on natural grasses and hay. Sukovaty plants a mixture of barley, oats, wheat and field peas as supplemental feed for the chickens, turkeys and pigs.

They believe their model is sustainable, not just for them, but as a healthier way to feed the world. They believe small farms could feed the world and that the federal government should support such farms.

Louis Sukovaty, 42 & Jennifer Argraves, 44

Occupation: Owners, Crown S Ranch, LLC.

Location: Winthrop, Wash.

Education: Sukovaty, bachelor of science degree in electrical engineering, University of Idaho, 1989; Argraves, bachelor of science degree in civil engineering, University of Idaho, 1988. Both are licensed engineers.

Distinction: 2008 runner-up of the Vim Wright Stewardship Award, Farming and the Environment, Seattle.

Quote: "We are becoming a fragile society where people have lost the knowledge of how to raise their own food."