



Colorado State Forest Service
5060 Campus Delivery
Colorado State University
Fort Collins, CO 80523-5060
970.491.6303; FAX 970.491.7736
<http://csfs.colostate.edu/>

NEWS

For Immediate Release

March 16, 2012

Contact for Reporters: Ryan Lockwood

970.491.8970

ryan.lockwood@colostate.edu

Growing Their Own: Salida couple uses permaculture to raise food, rehabilitate land

SALIDA, Colo. – Do beavers make great teachers?

According to high-altitude gardening guru Sandy Cruz, they certainly do. Not because they show others how to fell trees or build dams, but because they demonstrate a fundamental behavioral trait: they are driven to create an environment that is better for themselves and their neighbors.

On a two-acre site a few miles northwest of Salida, Colo., Cruz and her partner, Gene Tkatschenko, have spent the past year working their land using the principles of an increasingly popular practice called permaculture design. Their ultimate goals include providing sustainable food and shade, and conserving water for the benefit of themselves, their neighbors and the arid local environment.

“We’re looking to regenerate a disturbed area so that it’s healthy and thriving,” Cruz said.

The Art and Science of Permaculture

Cruz and Tkatschenko readily compare permaculture practitioners to beavers because of the mammals’ vital role in streamside ecosystems. When beavers chomp down trees and dam up streams, their efforts benefit themselves and the many other organisms around them through habitat alteration and increased food availability. Cruz says that the beaver’s role demonstrates that co-existence and cooperation are more important in a natural setting than Darwinian competition.

“Permaculture design shows us how we can put together communities where everyone is cooperating, not competing,” Cruz said. She explains that with permaculture, various plants, animals, fungi and other organisms are encouraged to work together with humans for the mutual benefit of all.

Permaculture originated in Australia in the 1970s. The word is derived from blending “permanent” and “agriculture,” though Cruz says “perennial agriculture” is a more apt description. The practice requires imitating nature to achieve a level of sustainable self-reliance. Specific principles guide the permaculture process, such as producing no waste, using renewable resources, minimizing water loss and obtaining a crop yield. Cruz says that the no-till, eco-friendly system is gaining ground not only in Colorado, but throughout the world.

-more-

“The practice applies larger ecosystem concepts and processes to small-scale food production, which can be a great tool for educating the public about how interrelated our actions are with changes in our environment,” said Megan Sweeney, forester at the Colorado State Forest Service Salida District.

Over the past year, Sweeney has helped Cruz select and purchase more than 300 CSFS seedling trees and shrubs for use in her permaculture garden. Planted between two parallel fencerows surrounding Cruz’s property are CSFS trees and shrubs that grow well at 7,200 feet. In addition to providing food, the eventual living fence will block wind and enhance wildlife habitat.

Cruz has spent the last four decades learning firsthand about strategies for high-elevation permaculture. Before moving to Salida in 2011, she rebuilt a cabin west of Boulder and created the original demonstration site for High Altitude Permaculture – an organization she founded to teach courses on the practice. That site, located 2,000 feet higher in elevation than Salida, has thrived over the past few decades. Despite several years of neglect, it recently has been yielding what Cruz calls “bumper crops” of Nanking cherries and chokecherries. Her new Salida property will now serve as a second demonstration site for teaching others about permaculture.

Building Soil, Planting Trees the First Goals

Before achieving sustainability, Tkatschenko says their first goal is to regenerate the surrounding ecosystem by building up the soil and planting seedling trees and shrubs. To build up the soil, they created islands covered with heavy layers of mulch – an organic lasagna comprised of rotten hay, straw, leaves and manure. The mulch, in turn, absorbs and retains moisture for seedlings planted in the islands – a *lot* of seedlings.

An effective permaculture project may require a significant amount of planting. To make their project affordable, Cruz and Tkatschenko obtained most of their seedling trees and shrubs from the Colorado State Forest Service Nursery in Fort Collins. The nursery provides low-cost seedling trees and shrubs to landowners who agree to use them for conservation purposes, and delivers the orders throughout Colorado each spring. The CSFS has even prepared a cookbook with recipes to utilize the fruits of nursery-grown shrubs. CSFS foresters usually help landowners with tree species selection, planting techniques and layout plans, but Sweeney said that Cruz and Tkatschenko already had the knowledge necessary to create a successful, productive planting.

“I toured their garden last year and was fascinated with the concept and what they were able to grow,” said Sweeney. She, Cruz and Tkatschenko all agree the couple has had tremendous success with seedling survival rates; they estimate that 95 percent of their plantings survived the first year.

This year, Tkatschenko said they will plant cover crops – perennial plants that handle poor soil conditions well, such as blue grama grass and milk vetch – between the mulched islands. These crops will increase the biomass that supports healthier soils; as the plants mature, dead plant matter gradually blends into the soil, improving the growing environment.

They also will soon plant 30 piñon pines to block wind and serve as a future source of pine nuts. The nuts will supplement yields from the hundreds of other fruit- or nut-bearing CSFS seedlings they have already planted, including Nanking cherry, buffaloberry, golden currant and caragana – a drought-tolerant, edible legume that doubles as a nitrogen fixer. They have even planted food crops from other nurseries, including plums, chokecherries and apricots, which for now are dwarfed by stacks of straw bales that shelter them from the elements.

Non-fruiting trees also are pivotal to the success of their site. On the west side of the property, to help an existing stand of Siberian elms block out the prevailing wind and afternoon sun, the couple has planted ponderosa pine seedlings from the CSFS Nursery that eventually will enhance the natural windbreak. Additionally, trees planted around most of the property are intended to create a “shelter belt” – a microclimate more moderate and moist than outside weather conditions. Cruz hopes to inspire landowners throughout the Upper Arkansas Valley to plant windbreaks, potentially mitigating the local climate of sparse moisture and harsh winds.

Adding Chickens and Bees to the Mix

Cruz said their current focus is to build the soil and care for the recently planted trees and shrubs until they are established. Once the CSFS shrubs are large enough, the couple plans to introduce chickens into the outer fence run. This “chicken moat” will help prevent the infiltration of grasshoppers and other destructive insects into the garden, while the chickens produce manure to fertilize the surrounding shrubs. An added bonus is that the hens will provide an ongoing supply of fresh eggs. Cruz and Tkatschenko also plan to build solar greenhouses for four-season growing, and to establish bee colonies to provide honey and encourage pollination.

Although starting up a permaculture project may seem daunting, many resources are available for assistance. Cruz teaches workshops and eight-month design courses in Boulder and Salida, and a good website for information specifically about high-altitude permaculture is available at <http://hialtpc.org>.

###

SIDEBAR

Still Time to Purchase Seedlings for 2012

The CSFS seedling tree program is designed to encourage Colorado farmers, ranchers and rural landowners to plant seedling trees for conservation purposes. Approximately 5,000 Coloradans plant CSFS seedling trees each year to create windbreaks, reforest after wildfire, enhance wildlife habitat, protect livestock and achieve other conservation goals. The CSFS Nursery, located in Fort Collins, currently sells more than 40 species of tree and shrub seedlings.

Colorado landowners may still have time to purchase seedlings before the CSFS makes springtime deliveries to 17 districts around the state, but deadlines vary by district. Seedling orders also are available for pick-up year-round at the Fort Collins Nursery. Landowners interested in purchasing the seedlings should contact their local CSFS district office or the CSFS Nursery at 970-491-8429.

###