Pastured Poultry as an Alternative and Enhancement to a Traditional Livestock Agricultural System

Tony Daranyi (Colorado – *Farmer/Rancher Grant)*

Project Number: FW03-201

Title: Pastured Poultry as an Alternative and Enhancement to a Traditional Livestock Agricultural System

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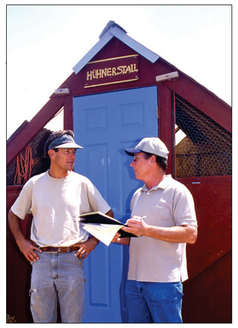

Tony Daranyi and Gary Rushing, former county extension director, at Indian Ridge Farm & Bakery.

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SARE Grant: $6,500

Daranyi inspects chickens in one of the moveable pens.

Situation:

On Wright's Mesa, just outside Norwood in southwest Colorado, Tony and Barclay Daranyi operate the 100-acre Indian Ridge Farm & Bakery. They applied for their Western SARE Farmer/Rancher Grant with the idea of rotating poultry through pastures being hayed and grazed by cattle.

They would rotate the poultry through the pasture twice in a growing season, once in the spring when the grass is coming up and when chemical fertilizers are traditionally applied, and again in the fall between cuttings of hay and before cattle are brought down from the high country to graze.

Their intention with the pastured poultry research:

- Demonstrate economic diversification of a ranching operation, which could strengthen the viability of farming and ranching lands threatened by development
- Provide natural fertilizer from rotating chickens – at a lower, more sustainable cost – on pastures typically treated with chemical fertilizers, mainly nitrogen

Objectives:

1. Assess the effects of a pastured poultry production system on a traditional haying and grazing operation
2. Determine whether the two production systems are complementary
3. Assess whether soil properties and forage production are influenced by the pastured poultry system
4. Expose traditional livestock ranchers to new marketing opportunities while fertilizing pastures naturally and sustainably

The moveable pens in lush pasture.

Actions:

The experiment began June 1, 2002, with 75 Cornish cross chickens placed on pasture in a 10-foot by 12-foot pen moved daily and rotated through ½ acre every six weeks. In August, 75 more Cornish cross chickens were placed on the same pasture and rotated under the same grazing regime.

Baseline soil data were collected ahead of the first chicken release, with the pasture divided into two plots, one grazed and one not grazed. The soils were sampled for pH, salts, lime, organic matter and several nutrients as well as bulk density, water infiltration rate and water-holding capacity.

Drought and lack of irrigation water precluded the collection of forage data as planned. Cattle and horses grazed the pastures through winter 2002, and no chemical fertilizers were applied in 2002 or 2003.

The farm has added free-range turkeys.

Eggs are produced from 350 layer hens split into four mobile chicken coops rotated through pastures on the farm.

Chicks mature in the brood house.

Results:

The baseline data showed significantly higher organic matter, higher bulk density and a slower water infiltration rate in the plot planned for grazing by poultry, even though both plots had uniform clay loam soil texture.

After the poultry grazed, the differences in organic matter and water infiltration rates between the two plots were nullified, while bulk density increased, possibly from cattle or horse grazing.

In both plots, all measured soil nutrients except iron increased the second year after grazing.

In addition to its own beef cows, Indian Ridge brokers grass-fed beef and lambs for neighboring ranchers.

Potential Benefits:

The two-year soil study showed clear benefits from rotationally grazing poultry on irrigated grass and legume pasture:

- The deposition and distribution of manure increased soil organic matter.
- The increased organic matter increased the water infiltration rate.

In the 2008 season, Indian Ridge Farm and Bakery will pasture nearly 2,500 chickens through a 2-acre pasture. Two beef cattle rotated through the pasture graze down grasses to a manageable level for the chickens. A flock of 100 layer hens follow the cows. By mid summer the same pasture accommodates 150 free-range turkeys. At any given time during the season, 900 chickens are split among 12 pens.

The grazing scheme has increased forage and improved water retention and infiltration, which has reduced the need for irrigation.

The chickens are dressed at an average of 4 pounds following six weeks on pasture and four weeks in the brooder. Along with pastured eggs, turkeys, beef and lamb, the chickens are marketed on-farm, at local farmers markets, through the farm's CSA and in local restaurants.

Also included in the marketing mix are organic breads, granola and other goods that Barclay bakes on the farm and vegetables from the farm's greenhouse and garden.

Other activities at Indian Ridge Farm & Bakery:

- Landscape improvements to include a small orchard
- The purchase of two pregnant Saanen goats to start a goat dairy for milk, cheese and yogurt and to manage weeds
- Offering of an apprenticeship program for aspiring farmers
- Development of a website, www.indianridgefarm.org