

S & S HOMESTEAD FARM BIODYNAMIC FARMING STUDY- SHEEP FLOCK STATUS

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S & S Homestead Farm is a diversified farm that is located on Lopez Island, San Juan County, Washington State, USA. It is the site of an ongoing study of the Biodynamic Method of farming and its comparative qualitative & quantitative values of production, management, and produce/products that come from this farm as compared with conventional farming methods employed on surrounding area farms in northwestern Washington State.

The purpose of this particular piece of the study is to evaluate the sheep flock that is an integral part of this farm- its history, development, current status, and its place in the biodynamic farming system on S & S Homestead Farm.

I visited the farm on 6/22/09 & on 9/23/09, to observe the sheep flock, to interview the owner, Dr. Henning Sehmsdorf, and to compare the early and late summer condition of the flock- spanning the complete summer season of 2009.

Currently, the sheep flock is raised for market lamb sales and on-farm consumption, and for tanned hide sales, and to be a part of the overall biodynamic closed-circle of life forms on the farm through grazing and fertilizing.

In a discussion with Henning, I learned that the flock was established in 1994. It began with 3 Suffolk ewes- purebred and pregnant. Six lambs were born to them but the ewes were poor mothers. The lambs also carried entropion (inverted eyelids). A purebred Romney ram was added to the flock, which resulted in the disappearance of entropion in the subsequent sets of lambs. One ewe from this first set of Suffolks was killed by a dog. After several seasons, the Romney ram was later traded for a Polypay ram, in order to increase the genetic diversity of the flock and to increase market lamb size. The sheep flock became stronger, more self-sufficient, durable in subsequent years. Henning said he then replaced the Polypay ram after several years, with a Churro ram, which he said was a mistake. The ram sired lambs that were flighty and rough-fleeced. In addition, the lambs were not of desirable finish and frame for several years. He then replaced this ram with another that was a Romney/Cheviot or Romney/Rambouillet crossbred. This ram currently has sired the flock for the past 2 years. The flock consists currently of 8 ewes with a genetic makeup of the past 15 years of crossbreeding and keeping ewe lambs for flock replacement. Six of the ewes twinned, one singled, and one was barren in April of this year. There are currently 9 lambs out of 11 born in late April 2009. Two lambs were attacked and eaten by ravens this past spring, which is highly unusual for this part of the continent. Four of these lambs are ram lambs and are currently separated from the flock. The ram lambs are were castrated by banding. The remaining 5 ewe lambs are being monitored for their possible future role(s) as ewe replacements since several existing

ewes may be ready for replacing. Those not chosen for ewe replacements will be slaughtered. These decisions had not yet been made as of the date of the last visit to the farm.

The key here is to note that unlike other conventional sheep production models, the flock is of a stable number- from 6-8 ewes and one ram, each year. This has been determined by Henning to be sustainable, given the forage availability of the farm, the niche filled by the flock in the whole-farm biodynamic system, the current customer base, and the labor required for this flock.

The 2009 lamb crop was observed and evaluated for health, growth rate and frame condition during the two visits- also in a comparative manner, through a 95-day period during the summer of 2009. The condition of the ewes was also observed during these visits. It is important to note that this flock is closely monitored by Henning daily. This is in contrast to the conventional farming model of leaving the flock to fend for itself through the summer. Other differential points include the fact that the lambs are not ever weaned- they stay on their dams until they are almost ready for slaughter. There have been over the years, two major slaughter times- spring and fall. The lambs are slaughtered on the farm using either a state- or USDA-inspected a mobile unit (depending on requirements) and processed at an off-island site.

In my observations regarding the conditioning of the lambs, including the comparisons I made in June with those in September, all of the lambs, ewe lambs and ram lambs, were growing at reasonable rates- averaging 0.3 pounds to 0.5 pounds per day. This is an acceptable rate of growth, even in a conventional sheep enterprise, and granting that these lambs are not of large frame size. It is also to be noted here that the customer base requests, and is satisfied with, the size of these market lambs, which may average from 85-100 pounds at slaughter. Henning simply is satisfying his customer base. Singles are slaughtered in the fall of the year they were born, and twins are slaughtered as yearlings the following spring. It is important to note that the customer base continues to be willing to pay a premium for these lambs, due, in their words, to continual/consistent superior taste and tenderness. Another product that comes from this flock is tanned hides. The quality of the hides was observed to be superior to those which would have come from conventional sheep-raising systems regarding intact hides (no holes, tears, scarring).

The sheep have year-round access to pasture. This pasture base, several fields involving a considerable number of paddocks, is more than sufficient nutrition for a flock of this size and scale. In addition, this flock is observed to thrive on this forage base.

Note that the forage is sprayed with a biodynamic preparation and that forage testing has been conducted and found to be deficient in several nutrients. However, these results are held up to a standard, conventional model based on North American forage values that are strived for in a maximum-production system that is reductionist in its logic, and not applicable in this biodynamic farming system, wherein it is observed that that sheep that are grazing on it and growing satisfactorily from it, which in my opinion, is acceptable. The sheep, including the ewes and the lambs, are in top condition, both in body condition

scoring, through palpation and other measurements. This logic model suggests that, given the forage base, the forage palatability and readily apparent nutritional sufficiency to sustain this flock, it is an acceptable and even desirable situation that does not render the farmer to have to supply expensive, non-sustainable inputs such as fertilizers and other soil amendments in order to meet a conventional forage-base standard, which is measured solely on quantity of production. Further, this conventional benchmark would also assume that the forage field would be one, two or perhaps only a few species of grasses and/or legumes. In the case of the fields on this farm, they are populated with a multitude of species of legumes, grasses, and forbs. If maximum forage production was the goal, the farm could likely produce many times the forage it presently produces, with the recommended inputs/amendments/new plantings that the forage testing results and recommendations convey. Then, however, this would result in more labor, more equipment use, more forage storage, which is not the goal of this farming system.

This system strives for stasis- a balanced, sustainable, interdependent, living organism. While this item is not directly connected to the sheep flock enterprise itself, it is nonetheless important to have discussed it. In another part of this overall study, it is addressed in a more detailed fashion. However, it reinforces the mission and the role of the sheep flock in this biodynamic system of integrated organisms. The farm benefits from this part of its biodynamic system (sheep) through a consciously-measured appropriate flock size, borne from 15 years of observation/experience, which utilizes the planned portion of the forage base satisfactorily, and keeps the fields healthy through even distribution of the manure from the roving flock which is managed through effective electronic fencing and informed, experienced observations by the farm staff as to managed grazing schedules that are based on forage growth, weather conditions, and flock behavior- and not simply by a set of pre-arranged dates for moving the animals to different paddocks. The actual grazing behavior is also monitored and although grazed forage height is a widely-accepted indicator of when to move animals, Henning and I observed that the seasonal, even monthly, forage palatability and nutritional content of forage may be of even greater importance than the height of the grazed forage before moving the flock to another paddock.

It is also important to note that the flock is not wormed, nor vaccinated, nor have there been any illnesses for a number of years- only ravens have been responsible for reductions in the crop of lambs this year. Regarding lambing percentage as compared with that of conventional commercial flocks, it is similar- at about 140%.

Regarding other feedstuffs in the sheep flock nutritional profile, a cup of barley per ewe per day is given in the early lactation, along with year-round access to loose trace minerals, due mainly to the soil being naturally low in Selenium. In addition, the lambs at 4-6 weeks of age are given molasses for an energy boost if needed due to some cold and/or unusually wet spring seasons over the years.

Final observations/conclusion- my task was to observe and evaluate the S &S Homestead sheep flock in several areas as a small part of an overall study of the biodynamic farming system that sustains this farm.

1. The sheep flock is healthy and productive. This includes the ewes, the ram, and the current crop of lambs.
2. This model of sheep production for meat and for tanned hides is appropriate and fitting for this farm and its dedication to biodynamic farming principles.
3. The forage base on this farm is sufficient for this flock to be sustained.
4. The flock currently produces lambs that are of ideal frame size and finish to meet the desires of the customer base which readily pays a premium for these lambs.
5. This model cannot be compared fairly and impartially with that of a conventional farm sheep model. It is evaluated on its own, and it was evaluated as such, and it is found to be satisfactory.

Respectfully submitted- Michael Hackett, Washington State University Professor Emeritus. 10/25/09.