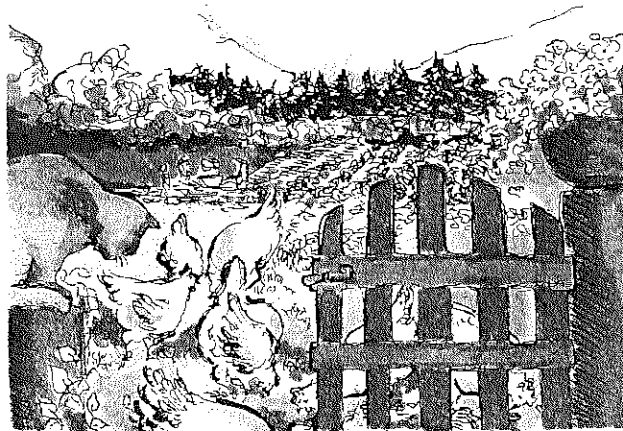


The Economics of the Small-Scale, Self-Sufficient Farm, Part 1 – By Henning Sehmsdorf

Ever since I started farming in the early 1970s I have been concerned with the economic viability of the family enterprise. But how do you think about economics when your farm is not primarily commercial, and the profit motive is not what makes you get up in the morning to work? Over the years I have come to understand that the concept of economics means something different to a biodynamic farmer than what it means to a conventional agricultural producer. The term *economy* came from the Greek word *oikonomos*, meaning “household steward,” and from it are derived the whole range of related terms such as economics, economist, economic, and economize. Ironically, today the conventional use of economics has less to do with stewardship than with the goal of maximizing personal profit. This distinction was made clear by the ancient philosopher Aristotle (384–322 B.C.), who considered stewardship of the farm household a “natural” enterprise because it mimics “the business of nature (which) is to furnish food for that which is born.... Wherefore getting wealth out of fruits and animals is always natural” (*Politics*, Book 1: Ch. 10). Money figures in this stewardship as a means of exchange. However, when the getting of money becomes an end in itself, it is no longer considered natural, and for this “unnatural” sort of profit-getting Aristotle invented another term, *chrematistica* (*chremata*=money). When Aristotle speaks of “getting wealth,” through household stewardship he means what today would be referred to as building natural or social capital rather than farming for monetary gain. The husbandry of soil, animals and plants to supply the needs of households and communities has long seemed to me a sensible and compelling basis for farm economics, especially in the context of Rudolf Steiner’s dual vision of associative economics and of agriculture as the means by which to heal the earth.

Steiner’s vision of achieving social and ecological health through agriculture is different from an industrial paradigm, which reduces cost through mechanization and specialization. Industrial farms treat food and fiber production as a manufacturing process that converts purchased inputs into marketable outputs. They tend to be linked to global supply chains and their programs are dictated by market demands. Environmental impacts are typically externalized, and farm self-sufficiency is rarely, if ever, a primary objective. By contrast, pastoral farms follow a biological paradigm, functioning like organisms converting solar energy into food and fiber, with a focus on human and environmental health. Their markets tend to be local. Environmental impacts are internalized and mitigated through biodiversity and resource cycling. Hence self-sufficiency is a primary objective of pastoral farms.

S&S Homestead Farm on Lopez Island, Washington State arose from the desire to feed the family with nutritionally whole, pure and



tasty food. In economically distressed post-war Germany my family survived by growing food in a sizable home garden and by gleaning surrounding fields in exchange for vegetables. I learned early to prize good food. The neighboring farmer who let us help him with the manual harvest of potatoes or grain, would at lunch time unhitch the cow pulling the wagon and give us milk to drink, still warm from the udder. His farm was self-sufficient; it produced its own inputs and fed his family as well as the surrounding community. Newly arrived in the US in the mid-fifties, I experienced a food system in transition from the pastoral to the industrial paradigm. Large, mechanized farms heavily dependent on chemical and fossil fuel inputs increasingly replaced the community-based farms that had for generations acted as natural stewards of soil, water, farm animals, wildlife, and communities. The personal experience of working for a year in a large meat plant in Indiana convinced me of the need to grow my own food as an act of ecological stewardship.

Over forty years ago, our farm started on ten acres, growing a wide variety of vegetables, fruits, chickens, eggs, and rabbits for meat. We also ran a cow and calf with a neighbor’s herd in exchange for helping him to put up hay in the summer. This continued well over two decades while my wife and I both held off-farm jobs until the youngest child had graduated from school, at which time I quit being a teacher to take up full time farming. Farm production grew to include one to two dozen beef cattle, a dairy cow, sheep, pigs and chickens, all of the livestock (except the pigs) being bred on the farm. To feed the animals we purchased a neighboring 15 acres and leased an additional 25 acres. We built two barns to house hay storage, a processing kitchen, a milking parlor, and machine storage. We fenced and electrified paddocks and placed waterlines underground to allow for rotational grazing. A five-year rotation of barley, rye, oats, winter and spring wheat, interspersed with legumes direct-harvested by the animals who leave behind their excrements to feed the next year’s crop, provides feed grain as well as

the flour for home-baked bread. Our small forest supplies firewood and lumber for on-farm construction and woodworking projects carried out in the workshop built by a son who trained as a cabinetmaker. A rainwater catchment system gravity feeds a large pond supplying all the irrigation needs of the farm, while a well provides water for household needs. At the end of last year we reached another milestone in our fifty-year farm plan by installing solar panels to supply most of the energy we use. The farm is now mostly self-sufficient. We grow the food we eat, and all the forages, hay, grain and other feed for the animals. We provide for soil fertility by composting manures and other offal, and by the use of cover crops and biodynamic preparations. A resilient farm organism integrating plants and animals maximizes solar harvests for health and efficiency. Is this self-sufficient farm economically viable? Is it profitable? As I have suggested, these are two different questions. Profit refers to the rate of return for a given year to the amount of capital invested. Aristotle, however, would argue that focusing on profit in managing the farm household is “unnatural,” because the focus ought to be on the providing for the necessities of the farm organism. Let me give two practical examples out of many:

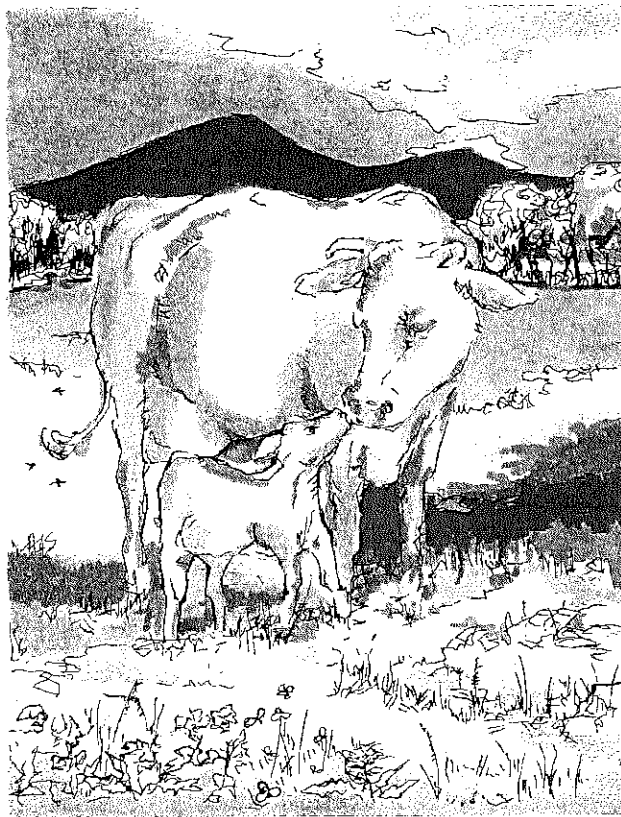
We produce all the green forage, hay and grain required to feed the beef and dairy cows, sheep, pigs, and chickens. Based on market values, the feed is worth a multiple of the returns received for the animals slaughtered and sold each year. So why not eliminate the animals and just harvest the crops and sell them for profit on the open market? The answer to this question is as simple as it is far-reaching: The animals are co-workers whose manures and hoof action and pecking and scratching and rooting provide the fertility that sustains the life of the farm. Actually, the N, P, and K levels in the pastures and fields are relatively low when compared to conventionally fertilized sites, but quite sufficient to produce the crops needed to maintain the livestock in healthy and productive condition, without purchased inputs or veterinary interventions. Furthermore, the systematic applications of fresh and composted manures, supplemented with regular spraying of biodynamic preparations, have resulted in dramatically increased soil humus levels (8–9% in pastures, up to 12% in vegetable plots). This means that the soil is alive with microorganisms; beetles and earthworms tunnel through the earth to increase water and air holding capacity, and they leave behind perfectly balanced plant nourishment in their castings. Isn’t this precisely what Steiner urged farmers in Germany to do when in 1924 they turned to him for answers to remedy the drastic reductions in soil and animal fertility due to chemical farming? Chemical farming, he said, while no doubt profitable, had reduced soil life, and farmers had lost the traditional understanding of what life is. Steiner urged farmers to restore humus levels through compost and stimulate soil organic life through the biodynamic preparations.

The Economics of the Small-Scale, Self-Sufficient Farm, Part 2 – By Henning Sehmsdorf

The second example of how our farm provides for itself describes our dairy practice. When we bought our first dairy cow from a farmer on a neighboring island, my wife insisted that we choose an animal she “could put her arms around,” which meant a small and gentle type like a Jersey, not a large-framed Holstein. The Jersey produced less milk with higher fat content. Since our goal was to produce fresh, unpasteurized milk mostly for on-farm consumption and to process a substantial portion into butter, soft and hard cheeses, yoghurt, sour cream, and other products, rather than maximize the production of low-fat milk preferred by commercial outlets, the choice was easy. We named the cow Loveday after a character in a book my wife read in childhood and, like the fictional character, Loveday was utterly beautiful and gentle. She responded to being groomed every day and milked by hand with infinite patience and generosity in giving up that life-giving substance flowing from her heart in a great vein to the udder, where her blood is mysteriously converted into milk through the alveoli glands. When I drank the first glass of incredibly sweet milk still warm from the udder, it was like returning to childhood.

Since we feed the cow on fresh pasture in summer and hay in winter, her production varies from two to four gallons during the growing season to half that during the dormant season. We also make sure that we dry off the cow at least two months before she gives birth to the next calf in order for her energies to flow entirely to the growing fetus. During the periods of lesser or no milk production, we eat the aged cheeses instead of drinking fresh milk. Also, we share the milk with the newborn calves instead of raising them on milk replacer. Market pressures force commercial producers to keep milk production at steady levels, irrespective of seasonal forage availability and the natural rhythms of gestation. Commercial producers routinely inject the cows with bovine growth hormones (rBGH), and instead of a grass-based diet they feed corn-based concentrates that stress the digestive systems of the animals, cause explosive levels of deadly e-coli bacteria in their guts and manure, and produce milk proteins that are high in omega-6 instead of omega-3 acids, which in turn have deleterious effects on the health of the consumer.

When news got out on the island that we had a dairy cow, the first in several decades after the near-collapse of small-scale agriculture in the county after WW II, we were besieged by families with small children wanting a share of this good, clean food, and for several years we supplied some twenty households with weekly quantities of milk. Eventually, however, the state legislature criminalized the sale of raw milk without the farm's meeting regulatory requirements that were financially impossible to implement for a one-cow dairy. Consequently we stopped selling raw milk and instead trained several households to



maintain their own cows, so that an informal network supplying grass-fed, unpasteurized milk continues to thrive.

A pastoral farm like S&S Homestead is less concerned with profit making than it is with economic viability in providing for the needs of the farm and the people living here. Currently the farm provides housing and food for an average of twelve people. Some pay rent, providing the farm with needed cash; others trade rent for work on the farm; others are interns and apprentices who receive housing and food as an integral part of learning how our farm economy functions. Besides rent and production for on-farm use of food, feed, fertility, wood products, water and energy, the farm also has income from educational programs and services. The farm owners do not take a salary or extract profits from the enterprise; instead we return the annual surplus to capitalize infrastructure improvements. Expressed as percentages of total income for 2011, the various farm enterprises contributed the following: meat sales 4.5%; production for on-farm use 45%; rent (cash) 4.5%; rent (non-cash) 9%; educational programs 16%; and social services (eldercare) 21%. Not included here are potential

earnings from the vegetable CSA to be run by qualified trainees for their own account. The program is intended to provide trainees already experienced in growing vegetables the opportunity to implement a biodynamic CSA enterprise without having to make initial investments in land, fencing, water systems and basic infrastructure. There will be a small CSA in 2012 supplying a limited number of community folks with a whole diet including not only fresh seasonal vegetables and fruit but also eggs, meat, grains, bread, fermented, canned and dried foods, and perhaps cheese (if we can get past the regulatory hurdles!)

On the expense side of the 2011 ledger, 51% of production was consumed on the farm, 11% of income was spent for labor, 6% percent for taxes and insurance, 9% on set-asides for amortization, 11% for supplies and services, and 12% for infrastructure improvements, for a total of 86% of farm income spent on expenses, leaving a surplus of 14%.

My wife and I consider S&S Homestead economically viable because the farm organism is healthy and to a large degree self-sufficient. Financially it is solvent and carries no debt. The farm was initially capitalized from the owners' off-farm income until we left our full-time jobs, and since then the farm has mostly capitalized itself from its current income. My wife's part time position as a teacher in the local school makes it possible for us not to draw a salary from the farm and to return the surplus farm income for land purchases and developing a solid and efficient infrastructure. More important for the long term economic viability of the farm, however, is the building of natural and social capital. By natural capital we mean that the farm has the capacity to renew its resources from within, is populated by healthy plants, livestock and wildlife. By social capital we mean that everybody's labor on the farm benefits the whole farm community, providing secure livelihood in terms of housing, food, meaningful work and personal satisfaction. Needless to say, this is one of the most difficult lessons for a learner of biodynamics. Our culture inculcates the notion that the value of our labor is measured by the financial compensation and equity earned. Land, animals and other material goods are seen as commodities. Steiner, however, taught that the most important farm product is not what is sold. As described in a recent publication of the National Research Council, “More than a production system, biodynamic agriculture is a practice of living and relating to nature in a way that focuses on the health of the bioregion, landscape, soil, and animal, plant and human life, and promotes the inner development of each practitioner (*Toward Sustainable Agricultural Systems in the 21st Century*, 2010, p. 21). We consider the farm economically viable when our trainees leave the farm as practiced “household stewards.”

As we get older, we hope to hand the farm over to the community and to trainees who will carry our work into the future.