Organic Production

Feature Farm

Provident Farm

By Dave Johnson, NODPA Vice President, Liberty, PA

My wife Maggie and I and our four children own and operate Provident Farms in Liberty PA, a spring seasonal grassed based dairy. While I am the primary farm worker, the kids help with calf care and the meadow hens and Maggie is gainfully employed in home-schooling and homemaking.

The farm is located in what is known as the northern tier of PA, a topography of rolling hills with elevations varying from 1500-2000 feet, with most of the tillable fields on the hilltops, resulting in a climate more akin to northern New England. This is grass and clover country, not corn and soybean heaven. The heavy clay soils support 130 acres of pasture, wetlands and hay fields with another 120 acres rented. Grazing usually begins by mid April and in a moist, warm fall ends in December.

From L to R: Caleb, Hannah, Naomi, Beth, Dave and Maggie in back. Dave reports that the picture is dated and they have all "matured" a bit since it was taken.

This is my second career, having spent 20 years in academia as a professor in Electronics and Telecommunications. A combination of burn-out and a re-kindling of the values of family, community, and creation work with real value led me to explore the feasibility of a grass based farm, direct marking meats to a consumer network. Neither Maggie nor I grew up on a farm, so our complete ignorance of how things are supposed to be done has enabled us to try things without the baggage or tradition that can hinder multi-generational farmers. After 5 years of struggling to grow the direct market meats while still teaching, we concluded my time and energy would run out before the customer base would grow enough to support our family. The huge plunge to start a dairy was made in 1998 with the construction of an open-air swing 8 parabone parlor and converting the 29 tie stall bank barn into a holding/feeding area. The first milk left the farm in March of 1999.

Organic practices were a given from the start, so the farm 30 miles north of Williamsport we found that was in CRP for 10 years was ideal. Initially there was no market for a seasonal organic producer until CROPP offered to let us join the mid-PA pool in 2002.

The major premise that guides the work at Provident Farms, is that the more we cooperate with the way God designed us, the land and animals to function, the better the system works, the less problems and stress we experience, and the more profitable (monetarily, socially, environmentally, spiritually) we are. Growing what thrives here, cows nursing calves, animals outside, cows feeding themselves on pasture or from round bales and fencing everything are ways this philosophy works out. Holistic management also aids in making decisions that improve the quality of life and addressing the real needs of the farm. Milking year round and multiple age groups always fails the testing guidelines.

Almost all calves are born outside on pasture or an open bedded pack starting in March. The main challenge with being seasonal is that my milk check needs to start before spring weather starts. March and April mud can be de-moralizing and exhausting on top of 4 and 5 calves in a day. We cull the cows that don't breed back in 11-14 months, so most of the pure Holsteins we had are gone and the herd is now a colored mix of Holstein, Jersey, Dutch belted, Normandie, Ayrshire and lineback. Apart from a year when bull power was lacking in breeding heifers, we always have more replacement heifers than cull cows. While some AI has been used, bulls (and lots of them) are what gets the job

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done in a seasonal herd. From a genetics standpoint, the line-breeding and cross-breeding that excels in fertility does not usually excel in milk production, but these animals that fit the system and thrive and last on the farm are still profitable. Maybe with better genetics the profit would improve.

10 pounds/head/day of straight corn or barley (and sometimes about 20% oats) are fed in a fine grind with minerals for the milk cows, fed in a free-for-all-stall type of system in the old barn holding area before morning and evening milking. Some cows pig out, some don't want any. Protein from roasted beans is only used for calves, poultry and hogs. Calves receive a 16% corn/oats/RSB/minerals grain mix from 6 weeks until late fall, up to 5#/head/day. Calves have been group raised in movable 3 sided sheds or a portable hoop house in a calf-proof yard with milk, usually 2+ gallons/day fed in milk bar and barrel feeders - giving the needed energy and protein for a fast growth start in cold weather. Calves are on pasture from birth or weaning till death.

Winter feeding at Provident Farm.

All grains are purchased (from area farmers if possible) by semi-loads and stored in bins, with grinding and mixing done on the farm. While we would rather buy ready mixed and delivered, the distance and cost from organic mills are prohibitive. The long term goal is to eliminate grain for the milk cows and raise small grains for calf rations only. Dry hay or baleage is available in the barnyard after milking but not much is consumed unless pasture allocation was underestimated. In the spring flush it is even hard to get the cows to eat their grain ration. All excess forage and hay is round baled dry or as baleage, including new seeding nurse crops of oats, peas and barley. Some sorghum-sudan has been used to offset the summer slump but lately the wet summers have made harvesting difficult. With cool nights and very few days over ninety, there is seldom enough heat to provide a good second grazing or cutting.

Winter feeding (January – March 15) for dry cows and bred heifers (now grouped together) is done in a sacrificed paddock in need of fertility, smoothing, and renovation, with hundreds of dry round bales placed 30 feet apart in 5-8 acres. Poly wire supported by wheelposts™ or fiber posts in the bales is moved to provide access to 8-10 bales (about 2 days worth), and light duty bale rings are moved by hand to the next group. The bale maze helps to break the wind, and the waste hay provides bedding, along with some junk hay unrolled in an open "bedding pack" area. Why drive a tractor in winter when you can ski there to feed cows? Sometimes round silage bales are unrolled in the field for feeding, but most baleage is reserved for late lactation or spring freshening. All this makes the field look like a war zone by the end of March, but adds a real boost in fertility and organic matter. The down side is wet weather compaction, as winter frequently sees its share of freeze/thaw cycles.

The marginal soil drainage, combined with cattle always outside somewhere on some paddock has made cattle movement, mud, pugging and compaction a major challenge. Ideally a large reinforced gravel pad deep bedded pack covered by a hoop structure would be the best solution for wet weather and winter feeding; both from a soil health and fertility capture standpoint, but the startup budget has yet to fund this one. Plans for the coming year include a major investment with some cost share through an AMA/organic producer

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grant for cattle lanes. With half of the farm's acreage separated by 20 acres of hemlock swamp, these lanes will go a long ways towards improving cow cleanliness and health.

Our strategy for herd health is two-fold, first building immunity, and secondly, not pushing for high performance. Liberal use of kelp, trace minerals and vitamin E/selenium have kept health problems to a minimum, with pinkeye, heal warts, pneumonia rare. With dry cows on dry hay and lots of free choice minerals but no grain, and low levels of grain feeding for milk cows, DA's, acidosis, Ketosis and milk fever are rare. Only occasionally does a calving receive assistance or attention.

The biggest challenge comes from high SCC (strep Ag common) cows not showing clinical mastitis, and counts climbing towards the end of lactation. (In spite of cows outside sometimes in deep mud, environmental mastitis is uncommon.) The best explanation can be traced to a milking system design flaw that was undetected for over 2 years, and a "radiation sensitivity" to fluorescent lights mounted within 1 foot of the cow's tail in the parlor that contributed to poor milk letdown, finally identified after 4 years of milking. This past year we finally parted with some old (8-12 years) cows with high SCCs. SCC problems don't go away overnight, but I think we are on our way to a low count. The major treatment strategies for mastitis include homeopathy, Mu-Se shots, Mastoblast at dry off, and selective use of whey injections in keeping with the philosophy to encourage the immune system to function well.

I think organic production is more challenging, partly because one must be an aggressive self taught, flexible learner, a keen observer, willing to experiment. The rules aren't cut and dry and the recipe book can't be written. For us, it also requires the added work of producing all our own forage (risky to count on purchasing quality forage) which means renting land, and storing and grinding feed. With 70 cows next year it looks like some part-time help is needed. But we wouldn't think of farming differently. For us, shipping conventional milk at $13/cwt was also profitable, and maybe with less work, but the stable, organic price bonus for a superior product we would produce anyway is a blessing. We support the family, sometimes a bit lean on 40-60 cows, but have been able to start-up, buy equipment, improve facilities and build equity with a dairy run by one family. Bringing life back to dying farms and farmland, seeing living creatures thrive on loving husbandry, and the reward of knowing you are faithful stewards of your heavenly father's creation, producing healthy food for others is more valuable than what money, fame or power could give. ■