RAISING CALVES THE OLD, MODERN WAY

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A new Association board member, Steffen Schneider illustrates how we can learn from from the "old" as we go into the future.

> *All boundaries are arbitrary. We invent them, and then ironically, we find ourselves trapped within them. (Peter Senge)*

For many years, visitors to Hawthorne Valley Farm have seen our bull and herd of sixty cows peacefully grazing or ruminating on one of the many pastures. Last summer, though, they also saw a number of little calves nursing and playing among the cows. The image was certainly idyllic, as visitors, residents, and customers acknowledged with their remarks and questions. But it belied a dramatic shift in our calf-rearing practices. For the first time in twenty years, we had decided to raise our calves on their mothers. I'd like to tell you why.

It is with a certain sense of trepidation that I record these thoughts and experiences. It is, well, a bit unpleasant to admit that we now regarded our calf-raising techniques of the past twenty-plus years as fundamentally flawed. And, honestly, it is a bit embarrassing that the "new" system we chose to adopt is as old as Nature herself. However, I'll let my pride take a back seat to the truth and to the enhanced quality of life for our animals this new practice has brought.

Under current and common practices, calves on most dairy farms are taken away from their mothers when they are very young, often at the age of just one day. This is generally true whether the farm is a biodynamic, organic, or conventional dairy system. The primary differences amongst the three are that biodynamic and organic calves are fed with organic milk, either fresh or in the form of organic milk replacer (conventional cows are fed non-organically), and pasture plays a much bigger role on biodynamic and organic farms once the calves reach a certain age. Still, despite the patently obvious fact that while cows produce milk for the same reason that humans do—to nourish their young—most calves in this country never actually enjoy that nourishment directly from their mothers.

The reasons are plentiful and are at once economic, logistical, and social. Economically, modern farmers face intense economic pressures, so they are reluctant to lose any of the milk produced by the lactating cow, since that is the saleable commodity. To put it bluntly, it makes economic sense to feed calves replacer instead of whole milk from their mothers. Logistically, cows on many modern farms are intensively confined in large numbers, leaving them unable to fulfill their most basic desires, such as caring for and nursing of their own calves. Further, there are certain widespread preconceptions that can discourage farmers from raising calves on their mother: that it will lead to chaotic scenes of calves running amok, cows not letting down their milk, and undue stress on the udder. Socially, it could be that most decision makers are men, who may not necessarily possess a strong intuitive understanding of or respect for the natural, maternal processes in nature. Still, while these are perfectly understandable reasons for separating calves from their mothers, they completely disregard the fact that the only reason the milk is produced in the first place is to feed the young calf.

Two researchers were instrumental in influencing our decision to raise our calves on their mother: Darrell Emmick (NYS Grazing Land Management Specialist, NRCS), who presented at a workshop I attended, and Fred Provenza, an animal behavior specialist at Utah State, where Emmick just finished his Ph.D. work. Provenza is a range scientist who has been researching and teaching animal behavior for a quarter of a century. (For more details on his work, please refer to www.behave.org).

What resonated most from Emmick's presentation was his conclusion that young ruminants' behavior is very much influenced by their experiences alongside their mothers, especially during the first six to eight weeks of their lives. This was of particular interest because, in an intensive grazing system like ours, the animals have much more freedom of choice. Many of our pastures are either natural landscapes or, at least, unique plant communities with a broad spectrum of plant matter. As such, they are simultaneously nutrition centers and pharmacies, with vast arrays of primary (nutrient) and secondary (pharmaceutical) compounds vital in the nutrition and health of plants, herbivores, and people. While all plants contain secondary compounds, such as alkaloids, glycosides, or phyto-estrogens, in a diverse environment like ours, it is more crucial for the animal to make the right choices about what they eat. Calves being with their mothers helps cultivate this, as they inherit this wisdom from the cows. As Paracelsus said, "*All substances are poisons: there is none which is not a poison. The right dose differentiates a poison and a remedy.*"

In addition to allowing our calves to receive the nourishment their mothers created for them, we also saw the obvious practical benefit of the calves being able to learn responsible and sound grazing habits directly from their mothers.

Heretofore, the mother and calf were left together for three days. After separation, the calves were put in groups of three or four and were fed whole milk twice daily, up to about one gallon per calf per feeding. Their diet also included hay and a bit of grain, as well as access to fresh water. The young stock were weaned at eight to ten weeks old.

Now let me describe the changes we implemented at Hawthorne Valley from a practical point of view. The new system that has been in place since May of 2007 looks as follows:

After the cow gives birth, the calf stays with her for the first five days. The pair spends the days on a specific "maternity pasture," alone or with other mother/calf pairs, and these pairs spend the nights together in a pen. The nursing cow enters the milking string as usual. Once calf and mother have bonded well (three to five days), the mothers and their babies join the rest of the herd when it is out in the day pasture. When the herd returns for the evening milking, the nursing calves are separated out (they learn amazingly quickly) and contentedly spend the night together in a bedded pen with hay and water. The cows, including all the new mothers, spend the night out to pasture (without the little ones) after the evening milking. After the subsequent morning milking, the babies rejoin their mothers and the herd and the cycle repeats itself. Calves are weaned between eight and ten weeks of age. We usually have between fifty-four and sixty

adult animals grazing, and so far the maximum number of calves has been eight. It is important to note here that our cows calve year round.

Cows, like all animals, have a strong social structure in which individual animals assume certain roles. There have been no problems with introducing the calves into this order. To the contrary, this is much more a natural social structure.

> *. . . [A]n animal that has never had the opportunity to be outdoors, will be very different from an animal that can roam freely and use its senses—its sense of smell for instance—to seek out the cosmic forces. (Rudolf Steiner Eighth lecture, Agriculture Course)*

Here now are our observations since we moved to the new system. By and large they have all been positive:

- The calves grow at an astonishing rate, seemingly twice as fast as in the old system. Their body/pheno type is quite different from what we saw before. Their limbs are very developed, and they have extraordinary strength and awake senses. They generally stay close to their mothers, but after they're done feeding, they join the other young ones and usually form a kind of kindergarten in the center of the herd. It is a wonderful sight to see the calves play and run among the more sedentary cows.

- Health concerns have been a non-issue so far. This certainly seems logical, especially if we take into account the importance of the senses in general, development and nutrition in particular. The calves love to use their limbs to the fullest and must rely on their senses early on. They also begin learning from their mothers immediately. They imitate their mother and can be observed nibbling on plants very early on. All these factors most certainly will contribute to a healthier animal.

- There are also real time savings in not having to bottle or bucket feed the calves. Some of that saved time is off-set by separating the nurse calves in the afternoon.

- Particularly notable have been the positive changes to herd dynamics, which is of greater import on a biodynamic farm, where the herd serves as the heart organ, than on a conventional farm. Only now, with the calves being part of it, does the herd seem to be complete and fully rounded. Maternal behavior is increased, as several cows, not only the mothers, keep an active eye on the calves. A lot more care-taking behavior can be observed. (This happens in the wild as well: wolves, coyotes, and elephants are well-known for the packs' females watching over the young.) The whole herd seems more settled. Amazingly, we also saw our herd sire discipline a young one as it was holding up traffic in a lane. In the future, the herd being with all its rhythms and dynamics might also benefit from the fact that the calves were part of it early on.

On the other side of the ledger, here are some challenges that arise, and recommendations for overcoming these obstacles:

- The calves are getting more wily. While they are not exceedingly wild, they definitely are more wary. It is a little harder to collect them (it has been very helpful to us to issue a neck collar to all the nursing calves), but they still are approachable. It is certainly easier to catch bottle-fed calves. However, with the right setup and consistent handling, the suckling calves are quite manageable. In terms of fencing needs, I would recommend two- or three-strand high-tensile wire as perimeter fencing.

- The weaning process can be more of a challenge, as the much tighter mother/calf bond needs to be severed. In our experience to date, though, the stressful period lasts only one to two days. The weaning would be easier if mother and calf could be out of eye- and ear-shot from one another. Once the animals are weaned, it might be a good practice to consciously establish the relationship to humans, since that did not happen as much during the nursing phase.

- One main concern is, obviously, the loss of valuable milk production. There certainly will be less milk in the bulk tank, although the exact amount is hard to determine as the calves' needs change with age. For us, the nursing mothers often are quite empty during the afternoon milking, but then in the morning milking, they have full udders. (We milk the mothers out fully.) One interesting consideration is the fact that the milk gland excretes milk continuously, so maybe there is some kind of off-set when the calf empties it frequently. While the loss in milk has an immediate negative economic effect, this could be more than balanced out with positive long-term benefits, such as increased health and better and more efficient grazing behavior, as well as calmer and more content cows.

It is important to remember that this method is still new for us. A more comprehensive evaluation will be possible once these animals enter the milking herd. Outstanding questions include: Do they seem to be more efficient and productive grazers? Are they as tame and calm as other first calf heifers? How is their overall health? How strong is their mothering instinct? How healthy are their calves? How is their milk production?

So far, the benefits have been very encouraging, in line with other farmers who have implemented this system with success, and we will continue this management method. At Hawthorne Valley, the outpouring of support and positive comments from customers, visitors, and passers-by when they see the calves romping out on the pastures, amidst the rest of the herd, have been overwhelming. In the larger context, introducing suckling systems on dairy farms can play an important role in living up to the image that the organic/biodynamic sector has set out for itself: sound, safe, and animal-friendly farming methods resulting in high quality food.

We will keep you posted, but do not hesitate to inquire.