

Time for Technology

CowSignals: A Successful Approach to Putting the Focus of Dairy People Where it Should Be: On the Cow

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This column and most of my work normally focuses on the new and novel in automation and sensor technologies. While technology is important, especially in terms of my own little corner of the dairy world, it is not the most critical success factor in dairy production. In the last column, I addressed how pedometers and other sensors can help us observe and monitor the cow. Since sensors can monitor a situation continuously, they can provide valuable information, but if these tools mean we stop looking at cows with our own eyes we are making a very big mistake. This is my 30th column for Ontario Dairy Farmer, and I want to mark this milestone with a clear statement that good managers will use all that data as best they can, but they will also never stop learning from observing the cows themselves.

I work with a group of veterinarians in Holland that have gained an international reputation for teaching dairy farmers, herd workers, feed advisors, veterinarians and barn designers to be more sensitive to what our cows are telling us. They have branded their workshops, lectures and books as "CowSignals" and they are delivering these products in over 60 countries around the world in more than 15 languages. At the Western Canadian Dairy Seminar, this program was so well received that it was repeated 4 years in row as a preconference workshop. There have also been a number of workshops in the Maritimes and lectures in Ontario and Quebec. The concept was developed 12 years ago by Dr. Jan Hulsen and Dr. Joep Driessen, who saw far too many dairy cows facing stressful situations on clients' farms. Many of these conditions, like hocks with no hair, and varying degrees of lameness were viewed as normal because they had become so commonplace. Ten years ago, Canadians such as Doug Young and Dr. Neil Anderson were at the leading edge of improving cow comfort and in fact much of their advice has made it into CowSignals training. Yet, lame cows, sore hocks, and rumen acidosis are still the norm in many dairy barns today. While we all think we are better than that, when it comes to stress on cows many of us remain "blind" to one or more aspects of the problem.

This winter, the CowSignals concept was on the program at the Canadian Dairy Expo, where Dr. Joep Driessen himself presented a lecture on this topic sponsored by Purina, and at the Progressive Dairy Operators Conference where Dr. Nico Vreeburg will talk CowSignals as well as sharing his experiences with Herd Navigator and barn design for

robotic milking. Hopefully this will be the beginning of a reawakening with respect reducing stress on dairy cows.

The CowSignals program teaches that low stress management of the dairy herd provides cows with the "six freedoms of the pasture". As illustrated in Fig. 1, the "CowSignals diamond" identifies these six freedoms as: unrestricted access to feed, water, light, air, rest and space. Every farmer trouble shooting their own dairy facilities and management and every advisor doing so for a client, brings their own set of biases to the situation. Applying the mantra of "feed, water, light, air, rest and space" to every assessment prevents tunnel vision and ensures every aspect of meeting the needs of the cow is given consideration. The CowSignals process also emphasizes a formal approach to problem solving that involves standing back and observing cows undisturbed, then getting in for a closer look and not making any conclusions until you have weighed your observations in relation to "feed, water, light, air, rest and space." When assessing cow behaviour it is useful to understand the "nature of the beast". By nature, the cow is a "herd animal" and when it comes to eating and resting they show a clear preference for doing these things as a group at the same time. So having an eating space and a resting space for every cow in the herd is a priority in the world of CowSignals. Dairy cows are also "flight animals" that prefer to avoid conflict rather than face it. Although we have no predators in our dairy barns, conflict avoidance is also part of the strategy for less dominant animals in the herd in dealing with their herd mates. So the CowSignals approach puts considerable emphasis on laying out barn space so animals have choices in terms of routes to feed and water, and access to milking in robot barns etc. The concept also puts a lot of emphasis on identifying and addressing the "high risk" places and times when cows are most likely to suffer from stress. In that context, close up, calving and fresh cows, cows already lame or sick, and smaller animals low in the picking order deserve special attention.

While conclusions about what to improve vary from farm to farm, creating a "stress free calving line" is often high on the list. The elements of a "stress free calving line" include a large bedding pack for close up cows, perhaps with optional gates that can form a squeeze and a temporary calving pen, beside a pack area for milking cows which is right beside the parlor. Lots of manger space is also critical in this area. Farms that have this minimize stress by minimizing the changes in the cow's environment around calving time, and by offering maximum grip and comfort for resting and rising. Adequate manger space reduces competition for feed and quick turnaround through the parlor before other cows get in the way, means the fresh and lame cows in the pack get maximum time to rest.

What started as a single workshop format and a single book has grown to include more focussed topics like Young Stock Signals, Hoof Signals, Robotic Milking Signals and several other topics, and it looks like it is developing a following here in Ontario as well.

In future columns we will look at "feed, water, light, air, rest and space" in a little more detail.

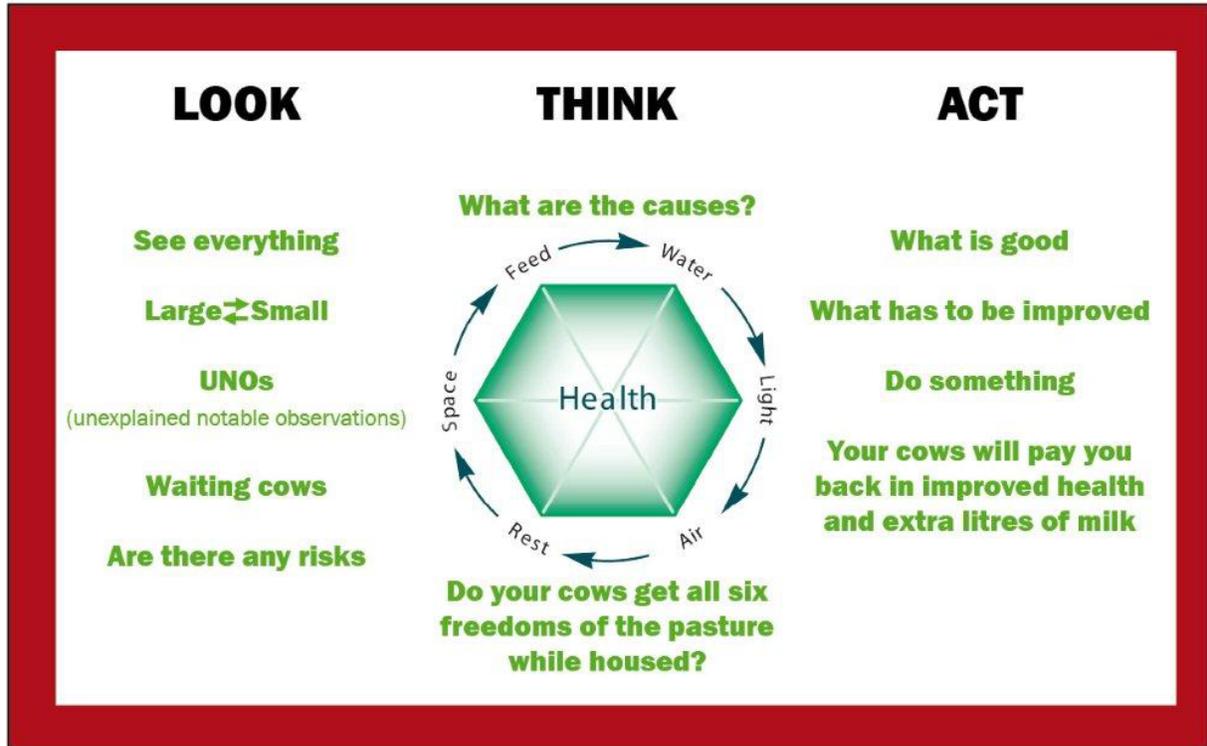


Fig. 1 - The cow signals diamond and structured assessment process.