



by Steve Martin

Heat stress as a New Year's resolution?

I'VE never thought very much about making New Year's resolutions. Just not my style I guess. The concept does have merit, though.

Taking time each year to ponder a few things in your life that you'd like to be better is a good thing. This concept seems a good fit for both life and business. If you are involved in the dairy industry there really aren't many lines between life and business, so I want to offer an idea for a resolution that relates to our cows.

Since many New Year's resolutions are all but dead by the Super Bowl, perhaps calling these ideas a business goal or a priority for the year might give them a better shot of success. I have one idea for such a plan that may seem an odd topic during the cold wintery weather of January – heat stress.

In just about every part of the U.S., dairy cows experience some degree of heat stress each summer. As such, most dairies have facilities and protocols in place to mitigate its negative impacts. I suspect most farms also have a next plan or project in mind to improve cow comfort and reduce heat stress even more during hot weather.

Here is where the next step in cow cooling connects to January, cold weather, and New Year's resolutions: If you want to get that plan or project ready for the first heat stress of summer, now is the time to get started.

As I and my associates look over each year's compiled client dairy production records, we continue to see the obvious negative impacts of hot weather on cows. And to be sure, they don't end the first time there is a little frost on the pumpkin. Although we know this is true, deciding what mitigation technique is best isn't easy. So my suggestion is to do the easy stuff first.

I should add that I am not in any way an expert on cow cooling, but more of a foot-soldier in the fight to keep cows milking through hot weather. There are plenty of experts, though, at our disposal.

Back in my feed industry days, I remember how amazed I was that feed salesman in the Gulf Coast area seemed to know as much about cooling cows as they did about selling feed. They seemed to know everything about pounds per square inch of pressure, nozzles, timers, check-valves, etc. Not only did they have happier customers shipping more milk during the hot, deep-south summers, they also kept their feed sales going. It was a win-win situation if I've ever seen one.

Even now there are numerous suppliers in our industry that have decided to be good at helping their customers keep cows cool. Utilizing them is a good place to get started. Maybe a heat-stress audit would be

in order. Yes, even in January!

If a New Year's resolution about exercise and diet have the potential to impact your own health, energy level and how well your jeans fit, what are some of the potential benefits from sound business planning that addresses heat stress at the dairy? To list a few, we would have to start with milk production.

Hot cows eat less and produce less milk, but that is just the start. It is the effect of multiple other negative results from heat stress that may be the biggest thief of profitability. No

and lower lifetime milk production.

So I think it is time to rethink shades and other more aggressive cooling effort. Not just in close-up dry cow pens, but as this new data shows, in far-off pens as well.

I suspect that all of these cooling concepts have to do with air-flow, water and shade. If your cows are going to experience a better summer in 2018, now is the time to study and learn a bit more about all three of these concepts.

As with most things in life, the concept of moving air with fans around

wire over an exit alley, or as complicated as a project to add cross-ventilation to a holding pen that takes months to complete and comes with a six-figure price tag.

The way to handle limited water might be related to concentrated cooling. Parlor exit cooling is just such an example. No matter if it's a garden hose and sprinkler over the exit lane or a more elaborate setup with higher flows and electric eyes, wetting cows to the hide as they exit the parlor is good business. You can pick the level of sophistication for



matter whether it is poor heat detection, lower conception rate, or poor hoof health, those effects will hit the bottom line for months to come after hot weather has ended. There is an even more complicated and less intuitive hidden cost to cows that endure hot weather without some help. That particular topic is dry cows.

It is true that, as an industry, we have learned from our past mistakes and no longer forget to take care of non-lactating groups. Yes, we feed them better than we used to and we have complicated moving systems to allow them to progress from dry-off to their next freshening. But have we remembered to keep them cool?

Dry cows need cooling too

Recent work at the University of Florida has uncovered a hidden risk in late-gestation cows that are not cooled. We have all known for a long time that cows in the close-up pen during hot weather might have reduced milk production potential during the next lactation. We might also chalk it up to, "she calved at the wrong time of the year to make maximum milk." While true, the result of that hot non-lactating period has another negative result.

Research results also strongly suggest that the fetus inside an overly hot cow is negatively impacted. Those calves are "imprinted" by heat stress and experience lower growth rates

dairy cows is more complicated than it looks. Things to consider and study include cubic feet per minute of air-flow, fan spacing, prevailing wind speeds an direction, baffles, etc. Most likely, fan suppliers will be the best guide. But don't pass up an opportunity to visit other dairies that have experience with different brands and their application.

Shades are a little more straightforward. It is not any stretch whatsoever to say that all mature cows need shade. Most of the discussion about shades revolves around square footage per cow, cost and orientation. But don't forget the less obvious topics of things like bedding choice, scraping and maintenance, and even gutters.

Now to the third concept that producers have the least control of: Water. Evaporative cooling is perhaps the most powerful cooling tool they have, but it comes with the most complications. In fact, where water is limited the opportunity for maximizing this cooling tool may be out of your control. Opening the pocketbook to buy as much cow cooling potential as is available from putting water on cows generally has a very high return on investment.

Cooling cows with water also has perhaps the widest variety of possible solutions. Utilizing its potential to drop body temperature could be as simple as a \$5 sprinkler head from the hardware store hung with baling

your dairy, just don't miss this opportunity of highly concentrated cooling.

Water availability is not only for wetting and cooling potential, it is also crucial for increased drinking during hot weather. Don't wait until June first to make sure your water trough system is up to the challenge of higher summer consumption levels – especially if your herd size has grown since last year. Just like parlor exit cooling, adding water troughs between the parlor and the feed bunk is an obvious win.

With maximum water intake needed during hot weather, do the math now to see if your wells, flow rates and storage tanks are ready to supply the most important nutrient and ingredient in your cows' diet – water.

Many years ago I had a client in a Southern state who started a major cow-cooling project too late in the year and it wasn't fully completed until nearly October. Not only did his cows miss the opportunity to stay cooler and more comfortable that summer, the old system of water and fans was removed to make way for the new system. The result? Almost no cow cooling all summer. Don't make that very expensive mistake.

Start now if you want to enjoy a full summer of nicely cooled and comfortable cows. Making it a priority now will insure that in the summer of 2018 you are feeding and managing for the bottom line. **WEST**