

Make Sure Your Ration is Ready for Summer

Whether you milk cows in the arid southwest, the temperate northeast or somewhere in between, heat stress can take a toll on your profitability during the summer months. Cows that react to heat will consume less dry matter, produce less milk with lower components and experience more health issues.

Fortunately, summer heat is predictable. And the poor performance associated with hot weather can be warded off with proper planning and prevention. It all starts with cow comfort. Then, small adjustments to the ration can be made, if necessary.

Scott Bascom, a Wisconsin Jersey breeder and a dairy specialist for Cooperative Plus, advises dairy producers to be proactive. “Make adjustments to the ration before the hot weather hits. Then, changes will be minor.”

Bascom recommends that dairy producers make changes 45 to 60 days before summer heat sets in. “Cows feel heat stress at temperatures that are comfortable for humans. If we aren’t ready, heat stress can become a problem before we know what is happening.”

Watch Dry Matter Intake

One of the best means of assessing cow comfort and heat stress levels is by monitoring dry matter intake (DMI).

“A mature Jersey cow’s DMI can be as much as nine pounds lower under heat stress conditions than under comfortable conditions,” explained Bascom. “The corresponding drop in milk yield will be 12 to 15 pounds. As well, reduced DMI can result in low body condition scores.”

“I encourage my clients to do anything and everything they can to increase DMI, including pushing up feed more often, offering fresh feed two or three times a day and cleaning waterers more often,” stressed Bascom.

“I like to see my clients feed their highest quality, most digestible forages during the summer months,” he commented. “If forage quality is low, then I suggest they replace some of the forage in the diet with non-forage fiber sources like soy hulls, beet pulp and citrus pulp. These ingredients are more digestible than poor quality forages and provide a good source of digestible fiber.”

“Since hot weather depresses DMI, it is tempting to feed more grain and less forage



Stick to the basics of sound bunk management in the summer. Clean the bunks every day, offer better quality forage, push up feed more often and make sure waterers are clean to encourage dry matter consumption and maintain production.

to give the cow more energy,” Bascom added. “But altering the composition of the ration can increase the risk of acidosis.” The fiber level of the diet should never fall below 18-19% acid detergent fiber and 25-28% neutral detergent fiber.

Bascom continued, “When cows are losing body condition due to low intake, I might recommend increasing the energy density of the diet with fat. However some fat sources can actually depress DMI and further reduce energy intake. So I am very selective with the fat sources I recommend.”

Bascom formulates the diets of milking cows to have a dietary cation-anion balance (DCAB) of +35. He increases the buffer level of the diet and uses commercial products designed to increase DCAB. He also increases potassium to 1.5% of dry matter. These adjustments increase milk production.

“I use dietary supplements to combat heat stress sparingly,” remarked Bascom. “In well managed herds, there seems to be some benefit. But they are not a substitute for providing an environment that keeps cows comfortable.”

Since the cows are comfortable at Norse Star Jerseys, Westby, Wis., Mike Fremstad makes few changes to the summer ration of his 500-cow herd.

“We have misters over the feeding alley and big fans over the bedding areas,” he explained. “There are also misters and fans in the holding area and a fan over the maternity pen.” Fans are run manually and misters set on a thermostat so that they run when the ambient temperature is over 65-degrees Fahrenheit.

“The only change we’ll make to the ration is offering a bit more corn silage if necessary,” Fremstad said. “We find that the cows still have an appetite for corn silage, even in the heat.”

This is a practice of which Bascom approves. “Consider feeding brown mid-rib corn silage during hot weather because these varieties are highly digestible.”

The Challenge of High Humidity

The old adage “it is not the heat, but the humidity” applies not only to humans, but to dairy cattle as well, who sweat at only 10% of the human rate.

For dairy producers in the southwest, who have learned to deal with heat, it is the humidity that may force them to alter the ration.

“The months of May and June get quite hot here, often reaching more than 110 degrees Fahrenheit,” explained Kelly Moss, Litchfield Park, Ariz. “But it is not

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until the humid, monsoon season arrives that we see a dramatic reduction in feed consumption and milk production, often dropping 15-20%. From early July through mid-September there is little relief day or night.”

“As DMI drops, we reduce the amount of forage that is fed and therefore change the forage to concentrate ratio,” commented Moss, who milks more than 1,200 Registered Jersey cows at his Mountain Shadow Dairy. “We try to reserve the best forages for the summer months since it is important to feed the best forages at this time. We may also feed ‘cooler’ concentrates, such as barley rather than corn, and adjust the ingredients in the protein mix.”

“We essentially ‘summerize’ the ration by packing more nutrients into a smaller volume of feed,” noted Moss’s nutritionist, Naji Nassereddine, Eagle Millings, Cassa Grande, Ariz.

The practice requires that herd management be excellent. Small, day-to-day alterations may be necessary to respond to changes in the environment or herd health. “Dairy producers need to keep good records and watch the cows and mangers,” explained Nassereddine. “Cows in the 45 lb. DMI group need to be eating 45 lbs. of dry matter each day.”

“As we reduce the forage level, acidosis becomes a danger and the cows need to be watched closely,” Moss remarked. “We watch consumption levels, but also take note of milk composition, overall health and manure consistency.”

Water is Crucial

The single greatest change a dairy producer can make in the summer ration is to make sure clean water is readily available to all animals, including dry cows and heifers.

“It is not unusual to see a positive milk production response during the summer heat when the availability of water is increased,” commented Bascom. “And animals should not have to walk great distances to get water.”

Special Care for Special Cows

Dry cows are often overlooked in discussions on heat stress. But attention to the diet during this critical time can pay off months down the road.

“Too many people forget close-up cows,” cautioned Todd Stroup, Dairy Management Consultant for Pine Creek Nutrition, Inc., Denair, Calif. “It is important to keep their intake up because

adequate intake transitions them better into the milking herd after they calve. If they go off feed, they are more likely to develop health issues like ketosis, displaced abomasums and calcium and potassium deficiencies.”

Stroup also advises dairy producers to consider the comfort of close-up cows in the heat of summer. Soakers and fans in maternity pens encourage cows to eat and reduce the stress of calving.

Dry cows get special care at Mountain Shadow Dairy, which calves somewhat seasonally because of the summer heat. “Since we have lower pregnancy rates during the summer, our dry cow numbers increase dramatically in June and July. By the end of August we are calving heavily.”

“We focus on dry cow and pre-fresh rations because we have a high number of cows calving during the most stressful months,” he added. “The benefits are fewer cases of milk fever and retained placentas and a better start for our fresh cows.”

Noted Nassereddine, the ration is higher in supplements, with added propylene glycol, calcium propionate, yeast and niacin.

Stick to the Basics

During the heat of summer it is important to practice sound bunk management, watch the cows and stick to the basics of animal husbandry.

Stroup advised, “Clean the bunks every day, keep the faces of the silos shaved, offer better quality forages and clean water troughs weekly.”

Ensure the consultant team of nutritionist, veterinarian and dairy manager is in place and on the same page. “In hot weather, my clients expect me to visit more often because things can change quickly,” remarked Nassereddine.

Bascom agreed. “Good communication is critical. I need to know what problems my clients are seeing even if they appear to be small.”

He summed, “Prevention is the goal. In my experience, herds that take aggressive measures to address heat stress can minimize, or even altogether eliminate, problems.”