"Whiplash Weather" and Animal Health

By Lark Burnham, PhD • Ruminant nutrition

Extreme temperature fluctuations are not unusual in the spring and fall. However, this year, the Midwest and other parts of the U. S. have experienced this phenomenon, which I have dubbed 'whiplash weather', all summer. It is as if the seasons are wrestling for control, whoever is on top gets to dominate the weather.

Although semi-normal seasons occur periodically, they are intermixed with unusually warm or cold ones. The climate is changing, and like a teenager getting ready for that first big date, it keeps trying on various combinations. Unusual combinations will continue to appear until the residents of planet Earth finally admit there is a problem and actually do something to stop it.

We have already experienced three of the hottest years on record, and just in the last ten years. Maybe it is difficult to remember those unusually warm winters after the zinger of 2013-2014, but they will appear again.

Until Mother Nature settles into the 'new normal', whatever that will be, it is best to live by the motto "Prevention is cheaper than treatment."

Maybe you have noticed (or experienced) a lot of sniffling and sneezing in humans and livestock this summer. That is because "whiplash weather" is stressful on all animals. Many may welcome the chance to turn off the AC, or even pull on a sweater. However, animals do not have that luxury. One horse owner (M. Berkenmeier, Holton, KS) reported that her equines have "haired out" (grown a thicker coat) and then shed it several times this summer. The temperature swings here have been severe enough to trick the animal body into thinking that winter is coming.

Many animals cannot grow hair or shed in response to these fluctuations, they are forced to endure the discomfort (hot or cold). This discomfort triggers a stress response, the more severe the fluctuation, the greater the reaction.

Stress triggers a number of biological responses: 1) hormones are secreted that redirect energy from the digestive tract to the muscles for the 'fight of flight response; 2) Food intake may be erratic or stop entirely; 3) Beneficial microbes in the gut die from starvation. A decrease in protective microorganisms allows pathogens, which are always present, but in small numbers, to proliferate. The beneficial microbes are a key part of the immune response.

Until Mother Nature settles into the 'new normal', whatever that will be, it is best to live by the motto "Prevention is cheaper than treatment." Probably the most effective strategy, both in the short and long term, is the religious use of probiotics. Dry forms, which can be added to feed, should be used daily to protect against normal stresses (look for CFU or colony forming units at least 108 microbes/gram). Major weather fluctuations require more concentrated forms such as pastes and drenches.

Be aware of the weather, anticipate stressful events and either add extra bedding for colder than usual snaps, and fans and hose-downs for extreme heat. Shade and shelter are strongly recommended. It shouldn't have to be said, but I will anyway: most animals can't put on or take off their coats at a moment's notice. Extreme weather fluctuations at any time of the year will trigger the stress response, in both humans and livestock. Avoid vet visits and use probiotics and common sense.

About the author:

Lark Burnham received a B.S. in Animal Science (1979), from Kansas State University and a M.S. in non-ruminant nutrition (1995) from Kansas State Universtity, Manhattan, and a Ph.D. Doctorate in ruminant nutrition (2004) from Texas Tech University, Lubbock. Her special interests are comparative nutrition, the role of the micro flora in all mammals, fiber digestion, and probiotics. Lark currently works for Natur's Way. Inc., Horton, KS, which produces MSE probiotics.