

Weird Cows Aren't Always Wired

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Odd cow antics are usually brought on by stress -- but too often that stress is linked, proven or not, to stray voltage that seeps into cattle through waterers or other sources. Tail-switching, nose-pressing, kicking and general apathy are indeed increased by stray voltage. But non-electrical stresses also trigger these responses, as shown in cases when stray voltage is stopped and abnormal behaviors don't change. These cases are often solved by applying an understanding of basic cow psychology.

Cattle eat, sleep and interact socially using their instincts. When these basic needs aren't easily met or the routine required to meet them is changed, cattle get frustrated.

Cows stanchioned too long try harder to escape and respond to mild threats with aggressive kicking or tail-switching. Cattle that don't get enough time outside are more animated when finally let out. Calves under stress often suck on any alternative object when nursing is unavailable. And when cattle aren't fed enough they grind their teeth, tongue-play and bite at objects such as water bowls.

Stress related to feeding also affects cattle psychologically, which can be more damaging than the physical effects of hunger. Eating fulfills not just an energy need, but social needs, too. A constant feed source satisfies the body, but putting feeders near the herd satisfies the social requirement. Psychological stress brings

numerous and variable responses that usually last longer than physical stress responses, which are more specific -- such as a drop in blood pressure when a cow is shocked.

When cattle can't meet a basic need such as eating, they often show their stress through substitute behavior. Cattle frustrated by watching other cows at the trough for even 25 minutes will kick, prance stalls, and bite water cups in place of what they really want to do -- eat.

Cattle with chronic psychological stress may develop general apathy, also called learned helplessness. It's characterized by an overall decrease in responsiveness to all stimuli, and a lack of interest in surroundings. In barns where long-term stress has occurred, cows may appear calm and easy to work with, but in reality they are resigned to their difficulties and show a general lack of vitality. In one instance, a herd experienced an increase in leg ulcers because cows weren't making their normal frequent posture changes while lying down. Learned helplessness can be very difficult to overcome.

Some animals manage stress with highly repetitive coping behaviors. Repetitive tongue-playing, for instance, is particularly therapeutic for veal calves kept in uncomfortable stalls and fed unnatural diets. In one study, calves that did not tongue-play all developed stomach ulcers, but only 67% of calves that did tongue-play developed ulcers. Repetitive activities can lead to self-mutilation, but preventing these coping behaviors usually increases stress and its undesired health effects.

The ability to avoid or modify stress has been shown to decrease the occurrence of ulcers and repression of experimentally induced tumor growth. Cattle on pasture during the summer and only inside for milking become healthier in large part because they have more control over their basic behavioral needs. Stanchions, and

tie-stalls to a lesser extent, limit a cow's control over her environment. For starters, they impede her natural lying position with head turned back along her side. Cows in stanchions have less sense of control, which increases stress and susceptibility to stress-related health disorders.

Long-term effects of stress can be reduced if cattle come to expect the stress-causing event. Studies show that animals develop fewer stomach ulcers when stress events are predictable. Stress in the milking parlor, for instance, is increased with frequent changes to milking routine.

Cattle feeling discomfort often grind their teeth and press their noses. Nose pressing in particular is often seen as a sign of stray voltage, but many non-electrical causes also increase the length and frequency of nose pressing. Several European researchers who have looked at nose pressing, or leaning as it's also called, say it increases with stall discomfort and is often a response to severe foot rot, severe mastitis and abdominal pain.

Wolfgang Klee of Germany suspects nose pressing is an effort to release the pain-deadening hormone endorphin. Hans Hopster of the Netherlands connects nose pressing with lameness, small or poorly constructed stalls, and any event that decreases lying time. He sees it as a kind of tension relief.

Lene Munksgaard of Denmark has shown that intense routines mean more nose-pressing. Only one of 10 cows tethered in a barn under common management with milking and feeding twice daily, no exercise and staff present 8 hours a day performed nose pressing. But 13 of 22 tethered cows in another barn under intensive management with milking and feeding 4 times daily, 45 minutes outside every other day and staff present 12 hours a day performed nose pressing.

Munksgaard also compared nose pressing in control cows to nose pressing in cows prevented from lying down from 9:00 am. to 4:00 pm. and 10:00 pm. to 5:00 am. Cows with less lying-down time had longer

and more frequent nose pressing. He also observed extended nose pressing among cows with severe mastitis. "Although we do not have a lot of evidence," he says, "it is my impression that cows perform nose pressing when in pain or discomfort."

Tail switching outside fly season is often considered a stray voltage indicator. But tail switching also increases when cows enter and exit barns and face crowded bunks and irregular feeding schedules. Tail switching by a whole herd is often seen in response to bellows from lost calves, cows in labor, or other situations that are clearly not electrical in origin.

Stress isn't always exhibited as odd behavior -- lack of behavior also indicates a disturbed emotional state. Abandonment of self-maintenance or comfort behaviors is common in recently fresh heifers enduring the stress of calving and entering the milking herd, and it's a significant factor in fresh heifer self-destructive syndrome.

Stress also causes deviation from normal group activities such as grazing, eating or resting. Conversely, animals that play and explore have a healthy emotional state. Play comes only when drives related to survival are fulfilled and animals feel secure in their environment.

Since it is clear that odd cattle behavior is not specific to electrical stress, it is premature to blame stray voltage without electrical testing. Diagnosing the reason for strange behavior requires a team approach, starting with the herd manager and including veterinarians, nutritionists and other professional farm service personnel.

Investigate electrical and non-electrical factors at the same time. Thoroughly evaluate cow comfort issues such as stall size, bedding used, ventilation and lighting, as well as the availability of feed and water, daily exercise and social opportunities. This kind of complete review should reveal the sources of physical, and more important, psychological stress in a herd.