

CALVING EASE

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IMPROVING HEIFER HANDLING (Part 1)

BASIC BOVINE SCIENCE

How much do you know about the basic sight and hearing senses of calves and heifers? In spite of the danger of boring the folks that already know this stuff, let's do a basic review. First, calves have wide-angle vision. The breadth is estimated at around 300 degrees. Bovines use this field of vision to define their "personal" space. This is called a "flight zone." In addition, it seems pretty well established that bovines possess color vision.

Second, calves and heifers are quite sensitive to high frequency noises. Compared to people whose highest sensitivity is roughly between 1000 to 3000 Hz. bovine highest sensitivity is around 8000 Hz.

MORE GENERAL RULES

1. When a person moves into a heifer's flight zone she will normally try to move away. (If you want to find out more about "flight zones" go to www.dairyherd.com. After registering, click on "editorial archives" and search for "behavior" or "flight zone." You are looking for their September, 2001 issue.)
2. The size of a heifer's flight zone will decrease slowly if she is handled frequently and gently.
3. Previous experiences of a calf will affect how she will react to future handling. These memories may persist many months. Fear memories are significant in increasing flight zones.
4. Calves can readily tell the difference between two situations and make choices to avoid the more stressful situation.
5. Calves and heifers are sensitive to changes in color and texture.
6. Moving objects and people seen through sides of a chute can frighten heifers.
7. Novelty can be a strong stressor. Repeated exposure will reduce the novelty effect.

APPLICATIONS FOR CALVES

Calving pen care is our first opportunity to demonstrate gentle calf handling. Having a good supply of clean dry bath towels is a first step. One or more towels can be used to dry and massage a wet calf. Aim for a hair coat that is fluffy dry. Even a dry calf can benefit from a minute's massage with a dry towel to encourage blood circulation.

The time spent feeding colostrum is another chance to reinforce person-calf contact. Even calves fed with an esophageal tube feeder can benefit from a few moments of attention. Our goal with

these just-born calves is to stimulate them. Get them dry. Get them standing up. Get them to walk around. Feed a bottle from beside the calf rather than in front. That way she can lean against you and you can rub her back line. Scrub your hands back and forth on their sides. Stimulate blood flow. Take advantage of these opportunities on day one to begin minimizing a heifer's flight zone with positive person-calf contact.

Preweaned calves raised in individual hutches or pens can benefit from frequent and gentle handling. This will help develop smaller flight zones. They will have fewer "fear memories." Most of us have figured out that roughly handled calves that are chronically stressed don't do as well as ones that are handled gently and patiently. Part of good handling is taking the opportunity with very young calves to touch them as often as possible.

Try to keep things consistent. Calves don't need novelty. The same people providing care. The same sounds from day-to-day. The same times for feeding. A consistent bedding routine. Some folks argue for having consistent colors. It is known that cattle will balk at an abrupt change in color in their environment. We have seen calves that normally have a very small flight zone behave fearfully on rainy days when the caretakers have on bright yellow rain suits instead of dull blue or brown clothing. Some calf raisers even go so far as to insist on just one color of feeding pails. While it might be true that one color is preferred over another, because calves are quite adaptable it's more likely true that a consistent color is more important. But since calves are attracted to light perhaps lighter colors are better than darker ones?

APPLICATIONS FOR HEIFERS

As calves move into groups we have the opportunity to choose how they will be handled. The physical move from hutches or pens into group housing can be either a low or high stress event. Calves can be handled roughly and impatiently contributing to yet another fear memory. Or, they can be handled carefully and patiently helping to maintain a small flight zone.

If heifers have to be loaded on a trailer or truck with loading chutes we should give some thought to the kinds of sides on these chutes. Solid sided chutes are much less stressful than ones where the heifers can see through them. Also, using the same equipment each time heifers are transported should reduce stress as well.

CALF RAISERS TIP We want young calves to start exploring starter grain as early as possible. Normally because we want to change this grain frequently we only put a small amount in their pails. Small calves have a hard time reaching the bottom of these pails. Pam's solution is to drop a plate into the top of a 10-quart pail. For the first few weeks the starter grain just sits on top of the plate close to the top within easy reach for the calf. As the calf matures the plate is taken out and pail is used normally.

References: Grandin, Temple "Adapting Bovine Behavior to Improve Performance" available at www.afns.ualberta.ca/wcds/wcd97/ch29-97.htm. Grandin, Temple "Restraint of Livestock" Proceedings of the Animal Behavior and the Design of Livestock and Poultry Systems International Conference, 1995. Roenfeldt, Shirley "3 areas where you can improve animal handling" in *Dairy Herd Management* 38:9 (September 01) pp. 38-41.

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