

CALVING EASE

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Did You Measure It?

All of us are great estimators. We guess at heights, weights, distances, volumes, temperatures, prices, and times. And, surprisingly, most of us are pretty close to the actual value a lot of the time.

When does it pay to measure rather than estimate?

Fortunately, many calf care tasks can be performed within fairly broad limits. Estimated values frequently work well enough to keep calves alive, healthy and growing. For example, who among us is going to measure exactly the amount of bedding added to a calf's pen or hutch?

In other situations, relatively small variations may endanger calf survival, health and growth. Let's make a list of these more critical situations:

1. Diagnosing illness
2. High value product (for example, medicine, vaccine, cleaning chemical)
3. Change in equipment
4. Change in product

Diagnosing illness

We might be in hurry and touch a calf in order to estimate her body temperature. "She doesn't feel feverish, I'll check her out in the morning." With a temperature of 105° this afternoon, she may be very sick by morning. A "touch" estimate is not good enough. Or, we may guess at lung congestion rather than checking with a stethoscope.

High value product

Many of our newer medications have a very high value per milliliter. Checking the container or with the herd veterinarian will verify the proper dose. Guessing at the dose and failing to measure accurately may result in needless over-dosing. More is not always better once the minimum inhibitory concentration of the drug is achieved in the calf's blood.

Errors can occur when inappropriate equipment is used. Several years ago I observed a calf care person injecting 2 cc doses of vaccine using a 35 cc syringe. I seriously doubt that, no matter how high my motivation, I could accurately deliver 2 cc's to all ten calves (not to mention that the same needle was used for all ten, as well). Wrong equipment for the job.

Adding equipment that controls the amount dispensed from a bulk container may make measuring easier. For example, if a one-gallon jug of a cleaning chemical costs \$64 that comes to \$.50 per ounce. A simple jug pump will dispense one ounce at a time. Unscrewing the cap and pouring

(estimating) may result in only fifty to seventy percent of the portions that could have been used. In contrast, with household bleach purchased at less than 2 cents, guessing is probably efficient enough when washing milk handling equipment.

Change in equipment

Beware of advice from others when they say, "This one is the same as the one you were using" [bottle, scoop, pail, can, tank]. A good rule of thumb is to always measure and calibrate any new piece of equipment.

Imagine you have a really nice plastic scoop for measuring out milk replacer powder or calf starter grain. "Oops! The handle broke off! Oh, here's one just the same size." Don't believe it! Always take time to use something with a known volume or a scale to check out the new piece of equipment. Calibrating a rapid read thermometer with ice water pays off, too.

I have seen eight quart pails used to replace ten quart ones. Since all the pails were changed at one time, the difference was not noticed. Calves still received the same proportion of the pail when milk was fed. As the weather got colder, calves started losing weight rather than gaining.

Change in product

The measurement problems I have observed associated with product changes have been primarily in feeds. The ingredients in feeds can vary. Feeds are often processed differently. We end up with substantial differences in density. Both milk replacers and calf starter grains can vary plus or minus ten percent depending on the manufacturer and individual product.

Using only volume to measure milk replacer powder may result in unwanted variations even when using the same product. Add to that a change in either manufacturer or processing. Big differences may occur.

It makes sense to weigh feeds especially where they are fed in small quantities (for example, milk replacer). Even when measuring by volume, it pays to have each worker periodically recalibrate his/her technique. It is very easy over a month to have quantities creep either up or down.

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