

CALVING EASE

July 2002

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Are we achieving our goals? (Part 2: Summarizing and Analyzing)

To summarize facts we take many individual pieces of information we've gathered and condense them into many fewer numbers or graphics. The next step is analysis. That's where we draw meaning from the numbers. This is where our heifer enterprise management benefits.

Rules for Summarizing

Use the simplest method that you understand well

If the question is how many navel infections we treated last year all we need is a count: 1, 2, 3 up to the total number. If the question is how many heifers fourteen months and older have not yet been bred all we have to do is count them. No need for anything else.

On the other hand if we try to compare the rate of dead-on-arrival (DOA) calves from one month to another we can't just count. One DOA in June and two in July. A simple count doesn't equal a rate. We need to have counted the number of calves born in June and July as well (for example, nine in June and eighteen in July). Then by dividing DOA's in June (one) by births that month (nine) we find that the DOA rate in June was eleven percent. The figure for July (two divided by eighteen) is eleven percent as well. Even though we had twice as many DOA's in July the rate was exactly the same as in June because the number of calves born doubled as well.

Fortunately many facts are easy to summarize by calculating averages. But we must be careful to remember that averages alone often miss bringing attention to calves and heifers that are problems. For example, we may have used our Hipometer® to estimate weights of thirteen-month-old heifers. They averaged eight hundred pounds. That may sound pretty good. But if we go through the heifer weights individually and count the number of heifers weighing less than seven hundred pounds we might find two out of ten (twenty percent) have this low weight. This observation beyond the average should raise the question, "Why do two out of ten heifers weigh so much less than the rest of their age mates?" "Is there a management change that would reduce this wide variation in weight?"

Summarize the facts so it's easy to answer the heifer enterprise question

Suppose the question is whether treatment rates for respiratory illness in heifers less than three months of age is the same all four seasons of the year. Adding up the cases for the whole year won't help at all. Adding up the cases for the calendar quarter JanFM, AprMJ, JulAS, and OctND when we define winter as December through March and summer as June through

September won't help either. The question defines how we summarize, not the other way around.

Rules for Analysis

The facts summarized are only a tiny part of the real situation

The shorter the period of time captured by our facts the more limited our idea of the real situation. The number of DOA calves in one month hardly defines adequately the herd history. The conception rate in heifers this summer is only a partial picture of summer heifer conception rates year after year. Leaping to conclusions with too little information is full of pitfalls. Trying to explain an event or a trend that we have defined on the basis of too few facts but that actually does not exist is a waste of time and money.

The facts summarized are only part of overall heifer enterprise management

Facts about calf mortality define only a small piece of our heifer enterprise. To interpret mortality information we have to put it into the context of breeding, nutrition, housing, sanitation and other factors. Similar examples apply to growth rates, conception rates, dystocia rates and even average peak milk for heifers.

“Geraniums cause low somatic cell counts.”

In a recent presentation at a dairy meeting a speaker noted that many dairy farms that had geraniums planted around the barn had low somatic cell counts. Hey, let's go plant some geraniums and start counting the premium money for low somatic cell count milk? Nope. Doesn't work that way. Scientifically we say, “Association does not equal causality.” Geraniums don't cause low somatic cell counts. Just because two events happen at the same time doesn't mean one causes the other. Sometimes cause and effect are easy to see. Calves born with a leg back have a higher rate of mortality than calves with a normal two legs front presentation. We have all seen this. Sometimes cause and effect are not so easily connected. Nearly all of the calves have treatable scours between fourteen and twenty-one days of age and they all drink milk replacer. So, drinking milk replacer causes scours? Not that simple is it?

One last point. The most basic step in analysis is to be quite certain that the event you are trying to analyze actually exists. Be sure the facts recorded were reliable ones. We don't want to try to explain a high rate of navel infections reported by a person that can't tell a male from a female calf (if you don't understand this example, ask for help). Be sure rates were calculated properly. We cannot estimate growth rates of young calves by measuring them once when eight weeks of age. The birth weights are missing. We cannot estimate conception rates of heifers if we only know how many heifers are pregnant. The number of heifers bred is missing.

Calf Raisers' Tip

In a recent magazine article mention was made of using notches in the bottom of plastic ear tags as a way to record key health treatments. The most obvious application for calf raisers is notching the bottom of the ear tag each time a calf or heifer is treated for respiratory illness. Two or more notches should raise a red flag if she gets sick yet a third time. Do we really want to keep this heifer that will surely produce less than her full genetic potential when she calves?

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