

What Makes a Bull a Really Good Bull

by Jack McAllister

How good “good” is often very difficult to measure. Good is not a very specific term. If we are talking about the merit of AI bulls we should have in mind some specific measures of merit and some scale of merit we can use as a standard.

Our measure of merit should have mostly to do with the breeding objectives we have for our herd. There are two main purposes of breeding cows in a dairy herd; 1) to get them pregnant because they give more milk after they calve than continuously lactating non-pregnant cows and 2) to produce heifer calf replacements. This second purpose should fit with our breeding objectives for the herd and will be largely determined by the bulls we choose to be the sires of those heifer replacements. Hopefully, we will want the next group of heifer replacements to be superior to the group that preceded them. But just exactly how do we want them to be superior? That is where our understanding of “good” bulls comes in.

Selection of bulls for dairy merit should be based on helping us meet our breeding objectives. Our breeding objective can include individual traits or a composite of traits which make up overall dairy merit.

The list of individual traits for dairy merit may include:

1. Milk, fat and protein production
2. Reproduction, pregnant within 120 days after calving
3. Efficient conversion of feedstuffs to milk
4. Resistance to disease, especially mastitis
5. Calving ease
6. Udder soundness for ease of milking
7. Satisfactory feet and legs for good mobility
8. Longevity for many lactations during a lifetime in the herd
9. Dairy form
10. Body capacity
11. Overall type

The composite of traits for dairy merit are lifetime Net Merit Dollars (NM\$). Here the individual traits which make up NM\$ are weighted by their economic contribution to NM\$. Currently NM\$ evaluations are calculated by USDA quarterly so that we have up to date information for making breeding decisions. The NM\$ index includes 1) fat and protein yield, 2) productive life, 3) somatic cell score, 4) daughter pregnancy rate, 5) body size, 6) feet and leg composite, 7) udder composite and 8) calving ability. Percentile ranks are then determined for the bulls and cows with genetic evaluations. This percentile ranking tells what percentage of bulls or cows ranked below them. For example, a 59th percentile bull for NM\$ has 59 percent of the bulls with NM\$ evaluations ranking below him which means 41 percent of the bulls rank above him. He could be better. In fact, if he were in the 90th percentile 90 percent of the bulls would rank below him and only 10 percent above him. Being 80th percentile or above for NM\$ would make him a very “good” bull.