



Dairy Technical Bulletin

What To Do With The Sacred Heifer?

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In downtown New York City, there are men in business suits that talk about cows. Actually, they even talk about killing cows. Fortunately, they are talking about killing sacred cows in their businesses. These figurative sacred cows are things that have been immune to criticism and need to be culled.

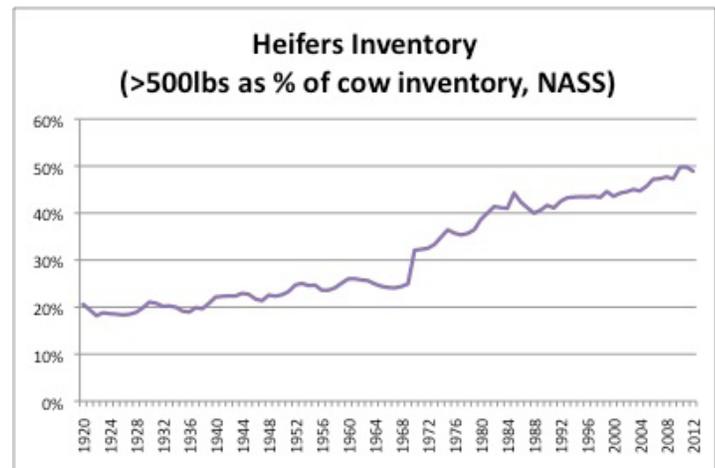
In the real dairy world, one of the sacred cows is oddly, the heifer.

One of the first lessons for a farm kid is that a heifer calf is always better than a bull calf. You were always in the right to raise all the heifers you could. A run of heifers spelled certain profit in two years. Lift the leg, lift the tail, hurray, it's a heifer!

Well, in 2012, it's a sacred heifer.

Increasing heifer inventories, high feed prices, and new genetic tools are forcing dairy producers to reevaluate how they look at their replacement strategies.

Chart 1 shows that over time we have increased the heifer population as a percent of the milking herd. These stats look at dairy heifers over 500 lbs., so although they do not reflect all heifers, they do reflect trends pretty well. Over the last 30 years, we have increased the heifer inventory about 20%. Considering we have also reduced the average age at calving, where have all these heifers come from? First, better calf and heifer management is a great animal welfare story. Better facilities, vaccines, milk replacers, and skilled caregivers have pushed heifer inventories up.



In the last 5 years, there has been another boost. I think this is due to two factors. One is sexed semen, that's the obvious one. The other factor is our reproductive programs. Ten years ago, the standard was a 20% preg rate, but with all the new sync programs a 25% preg rate is becoming the new standard. More pregnancies, more calves, more heifers.

More heifers are better, right? Isn't that what we were taught?

The economics in the dairy business have been a little upside down the last couple of years for replacements. A springing heifer can be bought for \$1500 while the cost to raise it is \$1800 to \$2200. You think \$2000 seems high? Sit down with your accountant and give real values to forages, facilities, and

labor. Or look at the bill from your custom heifer raiser, and use a sharp pencil. While cost and market value are likely to get closer, the guaranteed profit of raising your extra heifers is likely a story of the past.

Does it make sense for a producer to maximize his heifer crop?

Many farms are culling cows for \$800-1200 to be replaced with a heifer that cost \$1800 to \$2200 to raise. Does that make sense? Certainly replacing a fat, open, low producing 1800 lb cow with three teats makes sense but how far can we push this? What about an 80 lb pregnant four year old that has the potential to peak at 160 lbs next lactation? Simple math would say that reducing the cull rate from 40 to 25% would easily put \$100,000 in the pocket of a 1000 cow herd (\$750 difference in value over 150 head).

There are certainly advantages to keeping a high cull rate such as lower death losses, lower SCC, less vet bills etc. But on farms with great heifer management, there is often better cow care. We've improved milk quality, cow comfort, and pregnancy rates. On paper, higher cull rates may reduce milk production. On a 90 lb herd, increasing the cull rate from 25% to 40%, should decrease herd average 3-4 lbs/day simply because you are milking fewer high producing cows. If there are any issues with fresh cow health or milk quality, this advantage would likely be quickly erased.

How many heifers should I raise?

There are some great tools like those from Dr. Cabrera at UW Madison (http://dairymgt.uwex.edu/heifer_replacement/index.php) to get through the math of culling rates. Essentially, what is your voluntary cull rate? This is more difficult than it seems. For many farms this probably requires better tracking of cows leaving their farm. Did that "low milk production" or "reproduction" cull really need to leave or did we need to open some stalls for the next flush of heifers? Do we have accurate records from the past year or two that we are willing to trust? If you determine how many heifers you need, then you are ready for the next step.

What heifers do I cull?

There are two factors that should go into culling. First, cull calves and heifers that have health issues (ASAP). Cut your losses early before you stick another couple thousand into an animal that will never produce at its genetic potential. Second, look at genetics. Genomics is quickly becoming a great tool to identify the next group of heifers you might want to cull. It also negates the popular objection that we will reduce genetic progress by reducing cull rates on the dairy herd.

Other strategies:

Start using beef semen on some cows. Does it really make sense to have every calf born on the farm be a dairy heifer calf? Even now dairy bull calves often have more value than dairy heifer calves because of their potential as feeders. If you think this will continue, a crossbred (beef) calf might be a better option.

Move past the sharp pencil, calculator and thumb rules. The same business folks that talk about killing sacred cows also use sophisticated economic modeling to make sound business decisions. We have just begun to tackle this in the dairy industry. There are models out there (<http://cahpwww.vet.upenn.edu/node/121>) that are taking us past simplistic spreadsheets. A "net present value" is the theoretical value of each animal based on projected future income with adjustments for inflation, genetic potential etc. Huh? And now you see the issue. Do you have the data you need? Do you understand and trust this modeling to make sound decisions on your farm? I suspect the next round of dairy consultants will have degrees in mathematics and might come from New York City.

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