

Cost to raise calves, heifers discussed

AT times, questions arise about where to find good data on costs of raising calves and heifers. My answer is always to refer to field studies done in Wisconsin.

I had previously done some calculations on costs per unit of weight and height, but that was more in terms of efficiencies and growth patterns (Kertz et al., 1998).

The first Wisconsin field study was reported in 2000 (Hoffman et al., 1999), the second in 2007 (Zwald et al., 2007) and the most recent one in 2013 (Vanderwerff et al., 2013).

Each of these reports economically profiled different operations, with 62 dairy farms included in 1999; 49 in 2007 comprised of 40 calf enterprises, 15 tie-stall operations, 21 free-stall operations and four custom calf growers, and 62 in 2013 comprised of 30 calf enterprises, 32 heifer operations, 12 tie-stall operations, 13 free-stall operations and seven custom calf or heifer growers.

The basic “snapshot” information changed over those time periods, as shown in the Table. The age of the calf at weaning increased in 2013 versus 1999 and 2007. This may have been related to most of these operations converting to using pasteurized waste milk since 2007 to limit liquid feeding program costs.

The cost of a calf increased fivefold from 1999 to 2007 but then decreased 70% to 2013. Calf period total costs doubled from 1999 to 2007 but then increased by only 12% from 2007 to 2013. However, the total calf period costs as a percentage of total heifer raising costs (which included calf period costs) was relatively low, at 13% in 1999, increasing to 20% in 2007 and then decreasing to 16% in 2013.

Considering how related we now know calf period growth and health are to subsequent milk production (Heinrichs and Heinrichs, 2011; Soberon et al., 2012; *Feedstuffs*, March 12, 2012) and

Bottom Line

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how low the percentage this period comprises of the total heifer growing costs, this is not a good category in which to try to cut costs, especially since calves are the most efficient animal on a dairy in converting nutrients to growth (*Feedstuffs*, Sept. 8).

Feed cost as a percentage of total calf period costs was similar in 1999 and 2007, at 34-38%, but increased to 44% in 2013 even though calf operations largely converted to pasteurized waste milk from milk replacer, according to the reports. However, starter costs would have been much greater in 2013 than in 1999 and 2007, reflecting the much higher feed

costs in general. This occurred even though labor costs per hour increased from \$7 to \$12 to \$13 from 1999 to 2007 to 2013 and management costs increased from \$12 to \$20 to \$23 per hour during the same time periods.

For total heifer costs, the largest contributor was feed costs, which comprised 60%, 52% and 57%, respectively, of the total for 1999, 2007 and 2013.

Costs by weight

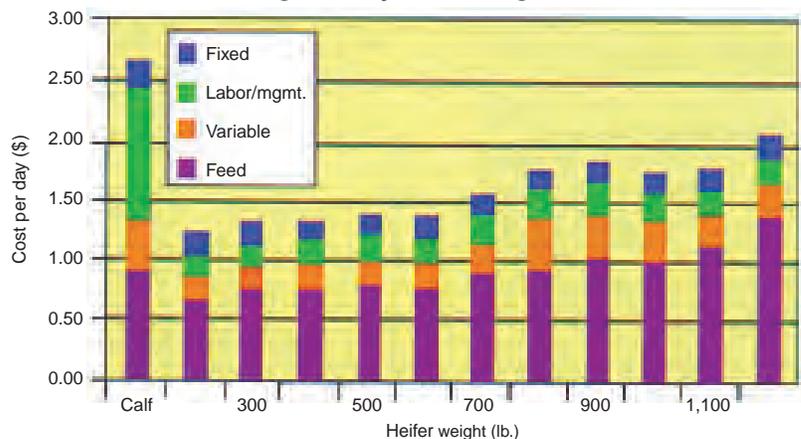
During 1999 (Figure 1), the greatest total cost per day was about \$2.70 for the calf period. After that period, total costs decreased considerably but then progressively increased with increasing bodyweight until they were just more than \$2 per day.

However, while feed costs decreased considerably from less than \$1 per day

Description of key cost and category information for each year surveyed

	1999	2007	2013
Number of operations	62	49	32
Calf weaning, weeks	7.1	7.0	7.6
Calf cost, \$	100	500	150
Calf period total cost, \$	160	326	364
% of total heifer period	13	20	16
Feed cost, % of calf total	38	34	44
Labor cost, % of calf total	40	47	37
Heifer, total cost, \$	1,260	1,649	2,227
Feed cost, % of heifer total	60	52	57

1. Rearing costs by heifer weights, 1999



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during the calf period, they actually exceeded the calf period daily feed cost at 800 lb. and thereafter for heifer weight groupings. This may sound improbable, but it simply reflected feed costs among feedstuffs at that time.

Even though feed costs per pound of milk/milk replacer and calf starter are the greatest during the calf period, their conversion to growth are much greater during the calf period because older, larger-bodyweight heifers have much greater maintenance costs, which more than compensate for the lower cost per pound of feedstuffs (*Feedstuffs*, Sept. 8). This may not happen often to this extent, but in general, greater bodyweight maintenance needs result in poorer feed conversions for large heifers versus calves. Also note that feed costs in general comprise a larger proportion of total costs after the calf period.

In 2007 (Figure 2), total costs per day during the calf period were about \$5.50, or twice what they were in 1999. However, feed costs as a proportion of total calf costs decreased from 38% in 1999 to 24% because labor costs increased proportionally more — from 40% to 47%.

In general, feed costs were proportionally lower throughout the heifer bodyweight categories and never got higher than the calf period cost, as had occurred in 1999.

In 2013 (Figure 3), total calf costs per day were similar to 2007, but feed costs were greater than in 2007 despite operations largely having converted to feeding primarily pasteurized waste milk.

In general, feed costs were considerably greater across all heifer categories in 2013 compared to 2007. In fact, for 2007, heifer feed costs were less than \$1 per day for the first six heifer categories and reached a zenith at \$1.58 per day for the 1,209 lb. heifer category.

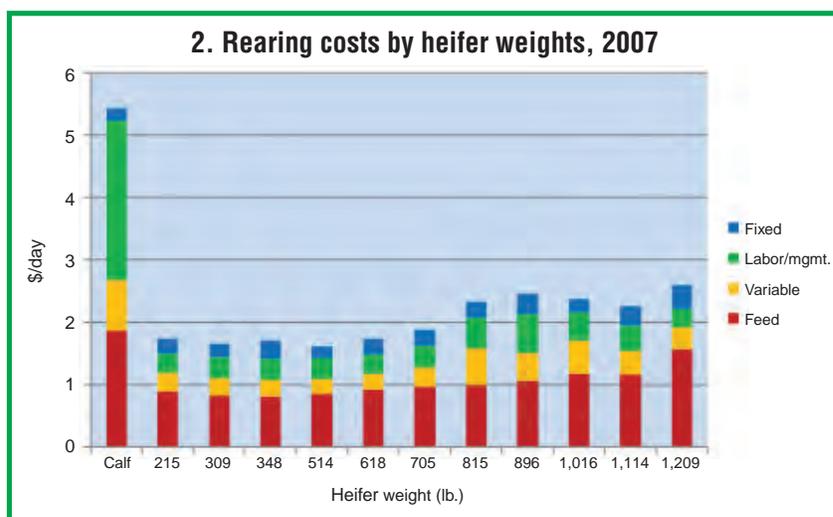
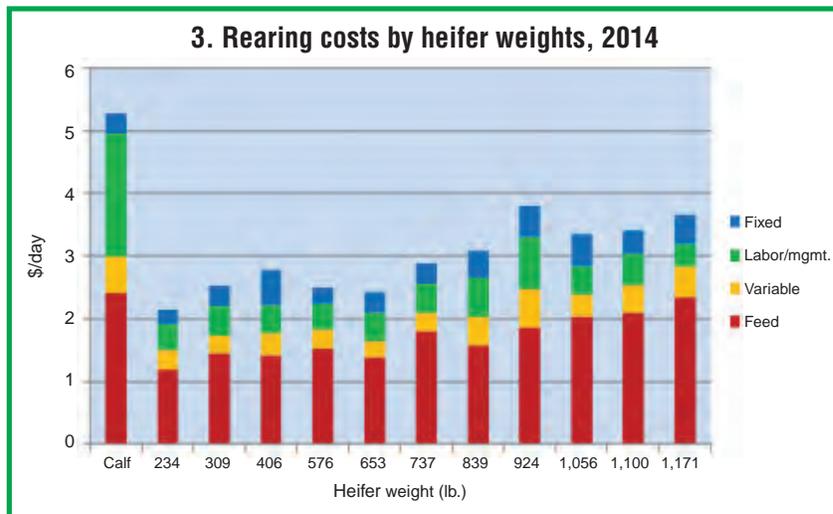
By contrast, in 2013, all heifer categories had feed costs in excess of \$1 per day, with the last three categories exceeding \$2 in daily feed costs. This resulted in feed costs as a percentage of total costs increasing from 52% to 57% for 2013 versus 2007, although they were even greater in 1999, at 60%.

The Bottom Line

These three Wisconsin reports are the best sources, of which I am aware, for daily calf and heifer total costs as well as by categories such as feed and labor.

Feed costs for the calf period are greater among all bodyweight categories but are less as a proportion of total costs primarily due to greater feed efficiency and greater labor costs than for heifer categories.

As heifers grow larger, their



maintenance costs increase accordingly, resulting in poorer feed efficiency, with feed becoming the largest proportion of total costs. This, along with the major effect the calf period has on subsequent milk production, should prompt caution against the common predilection to minimize or cut calf feeding costs.

References

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