

# heifer BLUEPRINT

**UW  
Extension**  
University of Wisconsin-Extension



## Averages Don't Tell the Whole Story: Part 2 The Cost of Raising Dairy Calves Using Individual or Automated Feeding Systems

Fall 2018

### Lead Author:

Ryan Sterry  
Agriculture Agent  
UW-Extension  
St Croix County  
[ryan.sterry@uwex.edu](mailto:ryan.sterry@uwex.edu)

### Peer Review:

Matt Akins  
Extension Specialist &  
Assistant Scientist  
UW-Extension &  
UW-Madison Department of  
Dairy Science  
[msakins@wisc.edu](mailto:msakins@wisc.edu)

Mark Hagedorn  
Agriculture Agent  
UW-Extension  
Eau Claire County

Greg Blonde  
Agriculture Agent  
UW-Extension  
Waupaca County



**UW  
Extension**  
University of Wisconsin-Extension

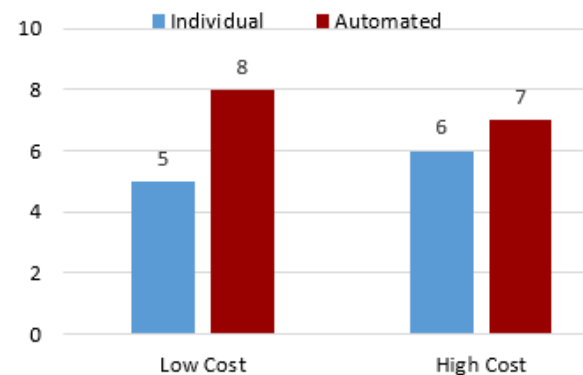
Periodically, UW-Extension Specialists and Agriculture Agents have collected farm level data to benchmark calf and heifer raising costs. Our first fact sheet covered the key findings comparing individual feeding systems (bottle or bucket) to using an automated milk feeding system. In this factsheet, we dig deeper into the variation in costs to rear calves in both systems. The lowest cost producer was \$232 per calf, and the highest was \$816 per calf, a significant range of \$584.

On average, calves raised on automated feeding systems cost a little more, \$431 per calf as compared to \$420 per calf in individual systems. The median (midpoint) cost to raise a calf (not including the calf value itself) of all 26 farms in the study was \$388. Five individual and eight automated feeding systems were below the median cost, and six individual and seven automated feeding systems were above the median cost (Fig 1).

### High and Low Cost Farms Compared

In the first factsheet, costs were summarized into Feed; Paid Labor & Management; Other Variable Costs; Housing & Equipment; and Opportunity Cost Unpaid Labor & Management. Using those same categories, we looked for where differences occurred between higher and lower cost farms. The average cost for the four subgroups presented in Figure 1 were calculated and are presented in Figure 2.

**Fig 1. Number of Individual and Automated Feeding Systems Lower and Higher than the Median Cost**

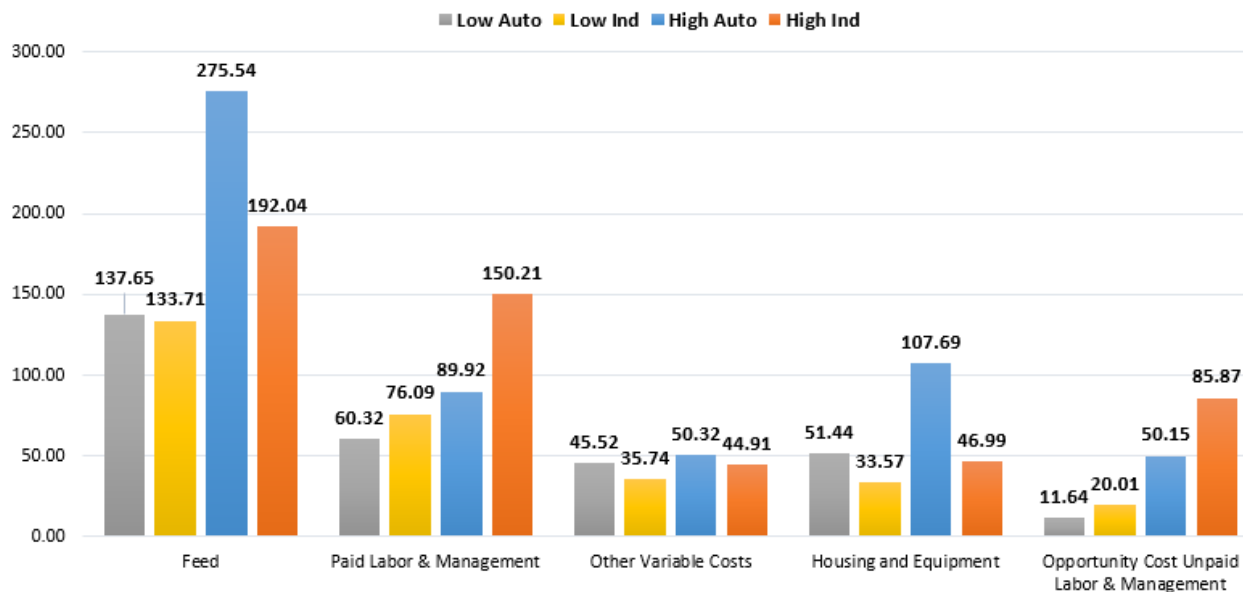


Feed costs were a large portion of the difference between higher and lower cost farms. For automated feeding systems, the feed cost difference between higher and lower cost farms was \$138 per calf. Further analysis revealed \$55 of that difference was attributed to starter feed, and \$82 to liquid feed costs. The remaining \$1 difference was for forage. For Starter, the difference was primarily due to amount fed, with an average price paid \$0.02 / lb greater for higher cost farms. Higher cost automated feeder farms fed on average 145 lbs more starter per calf than lower cost automated feeder farms.

For individual feeding farms, the feed cost difference between higher and lower cost farms was \$58, with \$20 attributed to starter costs and \$38 to liquid feed costs.

Evaluating differences in liquid feed cost was complicated because there was a mix of farms feeding milk replacer, whole milk, or both in all four subgroups. An analysis of the

**Fig. 2 Total Cost per Calf  
Lower or Higher than Median Cost by Feeding System**



higher cost and lower cost farms, regardless of feeding system, showed differences were primarily in amounts fed. The average price per pound for whole milk for both groups was \$0.09/lb. For milk replacer, the lower cost group paid slightly more per pound, \$1.36, than the high cost group at \$1.31/lb; however, amounts fed were different, with the low group feeding an average of 68 lbs of replacer or 845 lbs of whole milk, whereas the higher costs group averaged 129 lbs of replacer and 1007 lbs of whole milk fed.

**A Closer Look at Labor**

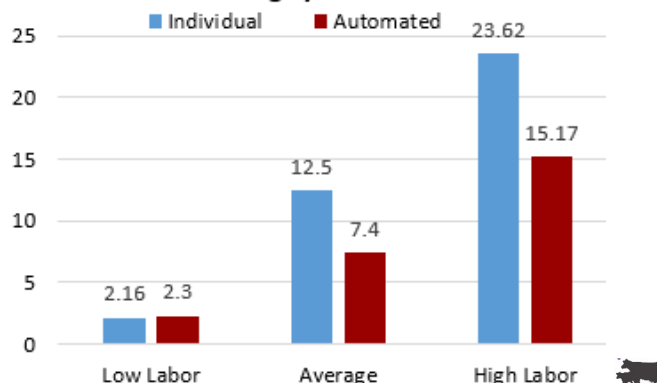
Large labor differences were observed between the higher and lower cost individual feeding farms. For the high cost farms, paid labor was \$74 greater for individual feeding farms, and \$30 greater for automated feeding. Similar differences were found for unpaid labor. Combined, paid and unpaid labor differences were \$140 per calf for individual feeding farms, and \$68 per calf for automated feeding farms. For this study labor was standardized at \$13 per hour, and management standardized at \$22. The same values were assigned to unpaid labor. Because of the standardization, the differences observed were due to varying total labor hours per calf and not wage.

Unpaid labor is an important consideration. Albeit not a cash expense, there is an opportunity cost to time. We can only speculate if farms with high unpaid labor costs do not

realize how much time they are spending, or if they do not value their unpaid labor as we have here.

Amongst all farms, regardless of feeding system, the median hours of labor per calf was 8.5 hours. The lowest labor hours per calf was 2.16 and highest was 23.62. In this data set, automated feeding averaged 5.1 fewer hours of labor per calf (7.4 vs. 12.5). Automated feeding did not guarantee labor savings, though, with two automated feeding farms exceeding 13 hours per calf. The range in labor for automated feeding farms was 2.3 to 15.17 hours per calf. Likewise, three individual feeding farms had fewer than 7.4 hours of labor per calf, the average for automated feeding. The range in labor hours for individual feeding farms was 2.16 to 23.62 hours per calf (Figure 3).

**Fig 3. Low, Average, and High Labor Hours per Calf for Automated and Individual Feeding Systems**



To view the full *ICPA Research Report* please visit: <https://fyi.uwex.edu/heifermgmt/rearing-costs/>.