

CALVING EASE

September 1998 (Rev. Dec '03)

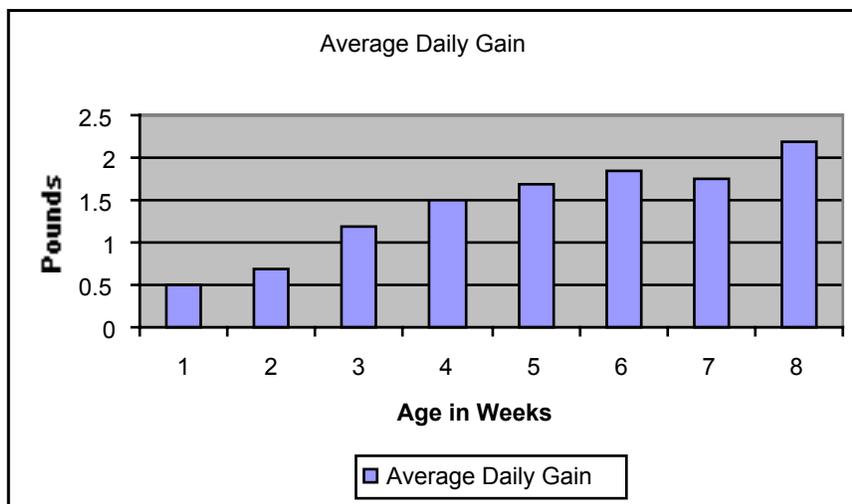
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Consistent Growth, Desirable but Hard to Achieve

We all must have calves to which we point with pride and say, "Just look at that healthy calf." At the same time most of us have at least one calf that we would prefer remained unobserved - a "poor-doer." Wouldn't it be great to just wave a magic wand and achieve consistent growth in our heifers? Of course, consistent also means fairly rapid growth, not consistently low gains.

Gains vary by Age

For pre-weaned heifers age makes a big difference in rate of growth. As shown in the figure below average growth rates at eight weeks were three and four times greater than during the first two weeks of life.



Data from Noblehurst Farms, Inc., Fall, 1997, One hundred calves weighed weekly for eight weeks.

At any given age, calves vary in rate of growth

Now, that's not any surprise to anyone working daily with heifer calves. But the amount of variation may not be such common knowledge. As the facts show in the table below, while 46 percent of the two-week-old calves gained less than one-half a pound per day, fully 33 percent gained over a pound a day.

Average Daily Gain in Pounds	Age of Calves			
	Two weeks old	Four weeks old	Six weeks old	Eight wks old
	Percentage	Percentage	Percentage	Percentage
Less than 0.1	15	2	0	0
0.1-0.5	21	0	0	0
0.6-1.0	31	19	12	3
1.1-1.5	17	32	24	21
1.6-2.0	10	30	24	10
Greater than 2	6	17	40	66
Total	100	100	100	100

Just as we were weaning calves during the sixth week, we found six that were gaining 2.5 pounds or more daily but at the same time there were four others gaining 1.0 pounds or less per day. So far as we could see we had given all of the calves essentially the same food and care. But, we did not measure the immunity level of the newborn calves as they arrived at our facility. Mike Fowler and others found in their research on over 2,000 calves that immunity may make a big difference in rates of gain. Calves with high immunity from colostrum had 21 to 24 percent higher rates of gain than those with low colostrum immunity. And, Fowler and others established that feed conversion rates (pounds of feed needed to get a pound of gain) were much better (31 to 35 percent) in high immunity calves versus calves with low immunity. (Editor's note: We found the same relationship between passive immunity levels and feed conversion rates in a 1999 feeding trial at Noblehurst Farms with 150 calves. The very lowest immunity calves were only one-half as efficient users of feed as the highest calves.)

What Should We Expect?

First, expect variation in rates of gain - it will happen. Second, make a plan to accommodate this variation in order to reduce stress as you wean calves and make changes in housing and groupings. Third, try to reduce variation by providing consistent, quality care in a low stress environment.

Reference Cited: Fowler, M. A. and Others, "Comparison of Calf Performance, Morbidity and Mortality of Purchased Holstein Calves Based on Immunoglobulin Status at Time of Arrival." Paper presented at American Association of Bovine Practitioners, September 19, 1997, Montreal, Quebec.

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