

Raising Good Replacements

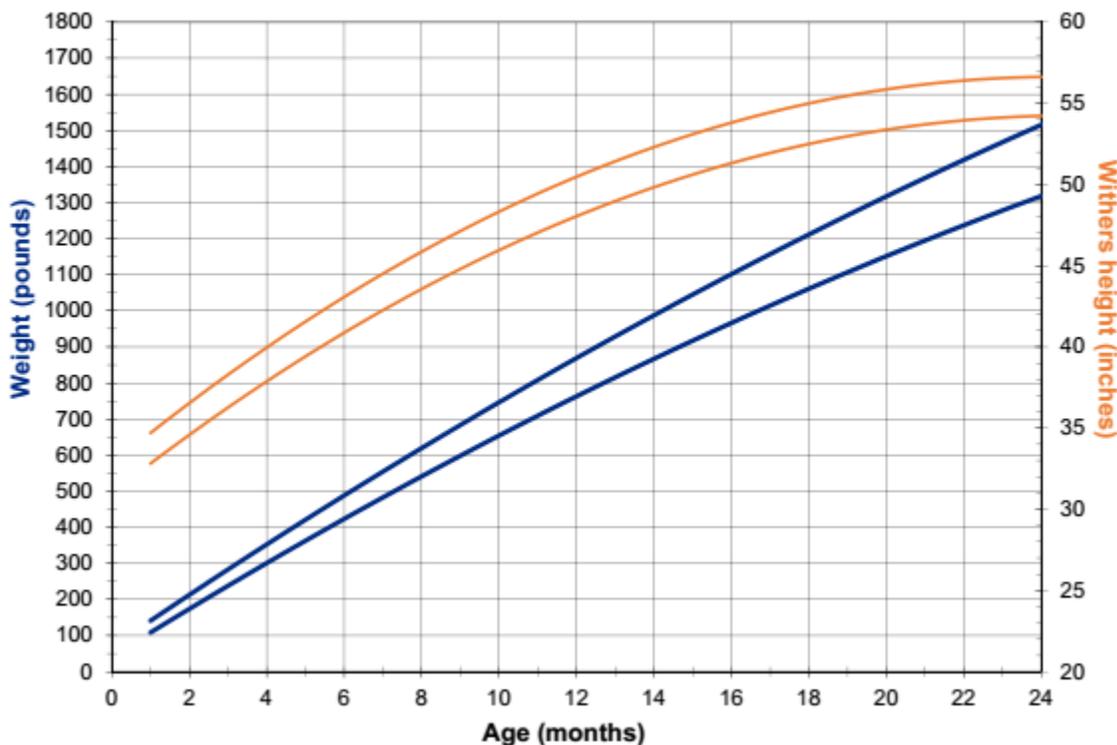
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A question I often get asked while pregnancy checking heifers is 'Doc, do you think that 15 month old heifer over there is big enough to breed?' This is a great question to ask, but at that point we can't do much about it if she's not big enough other than feed her for a few more months. What we should do is figure out what size we want to breed our heifers at and change our youngstock rearing practices to guarantee all our heifers are big enough to breed when we want to breed them. This goal can be achieved through good management, keeping adequate records and working with your Veterinarian and Nutritionist.

The first step is setting goals and the second step is keeping records and measuring to see if we are achieving our goals. A general goal is to have our heifers at 55-60% of mature body weight and a 3 (out of 5) body condition score (BCS) at breeding. This, with good nutrition moving forward, should result in a heifer calving out at 85% of her mature body weight and a BCS of 3.5.



Holstein Heifer Growth



<https://extension.psu.edu/growth-charts-for-dairy-heifers>

A growth chart, as seen above, is a very useful tool for tracking your farm's heifer growth compared to the average and to your past performance. Any Nutritionist or Veterinarian

has these charts and with a measuring stick and a weigh tape your heifer growth data can easily be charted. The clinic I work out of provides weigh taping, measure height, charts the data, and provides a follow up report where we work with our producers to make manageable changes to improve calf and heifer growth.

What does it cost us if we don't meet our calf and heifer growth targets? In the end, time and money, and in many cases a lot of money. Mortality, morbidity, treatment costs, labour, extra feed costs, later age at first calving, calving difficulties, stillbirths, loss of milk production, and early culling all cost a dairy operation. Spending a little money and putting in some effort upfront will have huge paybacks down the road.

Now that we know the goals and the costs of not achieving those goals the real question is how do we raise a healthy calf which then grows into a well grown, well-conditioned heifer who catches first service and calves out with no problems? Outlined below are my key points to raising good replacements, from birth to breeding. If you want more details on a specific point, ask your herd vet at your next herd health.

Calves:

Colostrum- Make sure it's clean, good quality, and gets in the calf in a timely manner. This gets talked about a lot because it is the single most important thing we can do to start a calf off right and yet we still see many calves who don't get adequate colostrum.

Transition Milk- The milk from 2nd-6th milkings. This milk is higher in fat, protein, milk solids, IgGs & vitamin A. New research suggests calves who consume transition milk for their first few days of life following colostrum at birth are healthier, grow better and have a stronger immune system.

Nutrition- All Holstein calves need a MINIMUM of 8L per day, ideally I'd love to see more. 3x a day feeding is better than 2x/day and many meals per day with a robotic feeder is better yet. The more a calf grows in the first few months of life, the more she will milk when she reaches the milking herd. It's been proven a calf with high milk intakes is significantly less likely to get sick.

Bedding- Make sure it's clean, dry and there is a lot of it. A calf that is able to nest in straw is 50% less likely to get pneumonia.

Ventilation- Fresh air is a must. A little cool air in winter is far better than stale air, stale air harbours bacteria and viruses. Calf coats and feeding more milk or milk replacer in winter easily combats the cool fresh air of winter.

Preventing Disease- If good management techniques aren't preventing calf scours and pneumonia be sure to talk to your Veterinarian as there are many great preventative products for both scours and pneumonia that cost less than \$5 a dose.

Weaning- Must be done gradually over a minimum of 2 weeks. All calves must be eating 1kg calf starter per day before weaning. To maximize weight gain, and a stress free

weaning keep calves in their normal housing for a week or two after weaning before moving. Weaning calves at 10 weeks old have better growth and easier transition compared to calves weaned earlier.

Pre Breeding Heifers:

Nutrition- Pre-breeding heifers generally thrive on a ration of 16-18% protein. With our 3-6 month old heifers getting an 18% protein ration and then decreasing protein slightly as heifers get older. Our goal feeding these heifers is to maximize growth while getting our heifers to a BCS of 3 (no higher) by breeding age.

Bunk Space- All heifers need to be able to eat at once. Cattle are herd species and like to do their daily activities together, we don't want the submissive heifer to lose out of growth because there wasn't room for her at the bunk.

Vaccinations- Make sure all heifers get two doses of modified live vaccine before breeding to ensure adequate protection against pneumonia and abortions.

Bred Heifers:

Nutrition- A ration of 14-15% protein normally does a good job growing heifers without putting excess condition on there. Remember we want to aim for a BCS of 3.5 at calving. Heifers with excess fat have difficulty calving and are at a significant risk to develop transition cow diseases like ketosis.

For all Heifers:

Bedding- Calves and heifers grow best if clean and dry, what bedding you use doesn't matter as long as there is plenty of it. If you wouldn't kneel in your heifer pens, go add more bedding.

Water- This is often a forgotten resource. We want clean, fresh water to be available to our heifers and calves at all times. Calves given free choice water (this is also a ProAction requirement) grow better and consume more calf starter, resulting in better rumen development. If housing more than 15 heifers in a pen together, multiple water troughs are recommended to allow for adequate intakes.

Raising healthy, well grown heifers doesn't have to be complicated but it does take management. So go get out your weigh tape and measuring stick. Measure some calves and heifers and see where you stack up to the average. Give your Vet and your Nutritionist a call, discuss your calves and heifers, make a plan and make yourself more money in the future!