

Dairy Heifer Nutrition

It's extremely important to feed your heifer well from the very beginning. Giving her plenty of energy, protein and fiber are vital to her growth and development as a show heifer and ultimately, a future lactating cow. If she doesn't get enough of these three main nutrient categories, it can delay getting her to the milking herd. However, the same can be said for feeding her too well. Giving her too much energy, protein and not enough fiber will result in an over-conditioned heifer and that will impact her future productivity and profitability.

As your heifer develops from a calf to a cow, her diet nutrient requirements will change. When she is a young calf, her rumen is not yet developed and, as a result, she cannot digest forages like alfalfa and grass hay. It is important to not introduce hay until she is at least 2-2 1/2 months old. Good quality calf starters that can be purchased from your local feed mill will contain ingredients that will help the calf's rumen to begin developing. Once her rumen is developed, it is crucial that she receives forage each day to keep her rumen healthy. Good quality grass and alfalfa hay will help her develop a deep rib cavity that will give her the capacity to consume enough feed to maximize her production as a milking cow. Feeding her poor-quality forages can limit her growth and will require more grain to meet her nutrient requirements, resulting in added costs to raise her. Be sure the ingredients in her ration are not moldy or spoiled or they will make her sick.

Grains provide added energy and protein that will help meet the remaining nutritional needs that forages can't provide. Some examples of quality grain ingredients for growing heifers include processed corn (flaked, cracked or ground), soybean hull pellets, beet pulp, canola meal and soybean meal.

A good mineral and vitamin supplement should also be an essential part of your heifer's diet. There are several options for meeting your heifer's vitamin and mineral needs. There are bagged vitamin/mineral products as well as vitamin mineral blocks available at your local feed mill or store.

Water is absolutely necessary for your heifer. She needs as much water as she will drink...there's really no such thing as too much water. Be sure the waterer is cleaned often, and the water isn't dirty.

On the back of this page are some nutrient recommendations for your heifer at various stages of development. If you are unsure of how to calculate these numbers, contact a local dairy producer, nutritionist, or county extension agent for assistance.

Age	Feeds to Feed	Nutrient Recommendations
Birth to 2 months	Whole Milk or Milk Replacer and a good quality calf starter	2-3 quarts of milk per day. 18-23% protein calf starter. Once they start eating starter, make sure they are offered water during the day. The higher the protein, the more water they will need. Start introducing starter at a week of age. They will not eat much so a handful is enough.
2-4 months of age	Transition to a good quality calf grower ration (can be from a local mill or mixed with on farm ingredients). Begin introducing forages slowly (small handful to start with). Slowly increase forage to no more than 50% of what she eats.	16-18% protein. 70-73 TDN (total digestible nutrients).
4-6 months of age	Continue to increase forage levels and reduce her grain consumption. A good goal would be to be at ~60-65% forage by 6 months of age. If you have silage or haylage available, you can begin to feed these to your heifers but in very small amounts. No more than 5-10 lbs as fed (2-3 lbs dry matter basis)	15-16.5% protein. 66-70 TDN.
6 months to breeding age	Continue to increase forage levels and reduce grain consumption. Increase to 70-75% forage. You can continue to increase silage if they have already been introduced to it.	14-15% protein. 62-65 TDN
Pregnant heifers	Maximize forage intake but they may still need some grain depending upon the quality of the hay and silage you are feeding.	12.5-14.5% protein. 60-63 TDN

It is important to evaluate your heifer regularly to make sure she is growing well in terms of height, body condition and overall confirmation development. Taking pictures of them monthly, weighing them and measuring their hip or wither height are good ways to evaluate them. Heifer weight and height charts are readily available on the internet, but here's a good link to find these recommendations.

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