

## Methods to Reduce Feed Costs for Dairy Heifers

Raising dairy replacement heifers contributes a sizeable percent of the total costs of the dairy herd. Whether you raise your own heifers or have them custom raised, eventually the milking herd has to pay their rearing costs.

Heifer raising goals (Holsteins) are to have the heifers gain between 1.7 and 1.9 pounds pre day, calve at 23 to 24 months of age and weigh between 1300 and 1350 pounds , pre-calving. Wither height should be at least 56 inches and the heifer should be a body condition score 3.5 (1 to 5 scale).

Feed costs make up the largest share of the costs to raise a calf to freshening. 2007 Minnesota Farm Business Management results from over 400 dairy farms show 45.2% of total heifer raising costs are feed. One method to reduce feed costs is to combine corn co-products with low quality forages. Low quality forages, such as corn stalks, oat hay, sorghum-Sudan grass, etc, are low in energy, protein, calcium and phosphorous but high in Neutral Detergent Fiber (NDF). Corn co-products such as distillers grains are high in protein, energy, phosphorous yet low in calcium and NDF.

Can we combine wet distillers grains and solubles with corn stalks for growing heifers? Studies have been conducted on this proposal at South Dakota State University. Dairy farmers in Iowa are using these feedstuffs for their 500 + pound heifers. South Dakota researchers mixed ground corn stalks and wet distillers at a ratio of 69% WDGS and 31% corn stalks, as-fed. Then they mixed this blend at 86% with 14% rye straw, minerals and vitamins. They compared this diet to a traditional diet of alfalfa and grass hays, alfalfa haylage, corn silage dried distillers grains and solubles (DDGS), earlage, vitamins and minerals.

Heifers on both diets gained too fast (2.82 vs. 2.31 pounds per day traditional verses co-product/corn stalks ration. Interestingly, the cost of feed was reduced from \$0.86 per day to \$0.52 per day by feeding the WDGS/corn stalks ration. This trial was conducted in 2004.

What might a ration for an 800 pound heifer look like? We've developed heifer rations using ground or shredded corn stalks, WDGS (30% dry matter), minerals and vitamins to achieve a 1.6+ pound average daily gain. The ration consisted of 7.82 pounds WDGS, 9.8 pounds of corn stalks, 0.02 pounds of limestone and 0.05 pounds of trace mineral and vitamins pack, all on a dry matter basis. These are all mixed as a total mixed ration (TMR) to get the WDGS to adhere to the corn stalks. This ration resulted in a 16% crude protein, 0.68Mcal NEm, 0.40 Mcal NEg, 62% NDF, 5.03% fat, 0.31% calcium, 0.29 % phosphorous ration at a current cost of \$1.06 per day. Last December this ration cost \$0.69 per day.

A more traditional ration similar to the "traditional" ration used by the SDSU study would cost \$1.29 per day. A difference of \$0.23 per head per day doesn't sound like a lot until you consider the 800 pound heifer to be the "average" size heifer in a dairy herd. So a herd of 100 cows would have about 75 heifers that could be fed this lower cost ration. In one year that is a saving of over \$6,000.

There are some precautions to be aware of when using co-products. We need to make sure the fat content of the WDGS is between 10 and 12 percent. Too much fat will result in fatty uddered heifers that will not milk to their potential. Most heifer rations would not contain excess sulfur, but the entire ration sulfur content should be less that 0.4 percent of the dry matter. Be sure to watch consistency of the product, from a moisture, fat and sulfur standpoint.

Finally, we have seen research that shows little deterioration in WDGS if it is bagged with no pressure and filled in a down hill position. That could allow a smaller dairy to purchase WDGS at one time and store it for up to a year. We do need to feed 6 to 8 inches off the face daily to keep the product fresh. Most of our Iowa farms are purchasing a weekly quantity from local ethanol plants.

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