

Protein Supplementation for Beef Cows

Beef cows grazing dormant grass (Bermuda or native range) during late fall and winter are generally protein deficient. Cattle producers traditionally supplement their cowherds with protein feeds to correct this deficiency. These supplements not only meet cow's protein requirements, but increase the cow's ability to digest roughage and increase forage intake.

The greatest cost in managing a cow is feed cost. Supplemental protein feeds for cows on winter pasture will be thirty percent of this expense or more in most cattle operations. Managing supplemental protein expense while maintaining cow health and performance can be a key component in making a profit from your cowherd.

Cows' crude protein needs vary dramatically with stage of production. A 1200 pound cow in the first stage of gestation will have a crude protein requirement of 1.9 pounds after calving, due to milk production; her crude protein requirement will rise to 3 pounds per day.

Below is a list of protein supplemental feeds available in Oklahoma and approximate current prices. All prices listed are based on bulk purchases. Sacking of feed in most situations will increase feed prices by \$20 to \$30 per ton. To determine the price of crude protein take the per cwt price of a feed and divide it by its crude protein content.

Feed	\$/Ton	\$/cwt	Crude Protein %	Cost per #
20% Cube	200	10	20	.50
38% Cube	300	15	38	.39
Corn gluten feed, pellet	140	7	22	.32
Barley malt pellet	142	7.1	18	.39
Sunflower meal Pellet	200	10	36	.28
Wheat midds pellet	130	6.5	18	.36
Soybean meals	325	16.25	48	.34
Dried distillers grain	165	8.25	28	.29
Alfalfa hay	140	7	18	.89

The lower the cost/pound of crude protein for a feed the more cost effective it will be in your winter supplementation program. Price will not be your only consideration. Volume of feed to handle, how it can be fed (on the ground or in bunks) and volume required to be purchased at one time also needs to be considered.

The crude protein of native range in February can be as low as 3%. A pregnant 1200 pound cow, on native range consuming 20 pounds of forage will have a protein intake of 0.6 pounds. Her protein requirement will be 1.9 pounds per day. She will need 1.6 pounds per day of supplemental crude protein. Below is a chart showing feed type, pounds of feed required to meet protein needs and cost per day.

Feed	Pounds required	Cost/day
20% cube	8	.80
38% cube	4.2	.63
22% corn gluten pellet	7.3	.51
36% sunflower meal pellet	4.4	.44
18% alfalfa hay	9	.63

A 1200 pound lactating cow will require about 3 pounds of crude protein per day to meet her needs. If she eats 24 pounds of 8% crude protein hay per day it will provide 1.9 pounds of crude protein per day. To meet the cow's crude protein deficit, she'll need to receive 1.1 pounds of supplemental protein per day. The chart below shows feed amounts required to meet their need and estimated cost per day.

Feed	Pounds required	Cost/Day
20% cube	5.5	.55
38% cube	3	.45
22% corn gluten pellet	5	.35
36% Sunflower pellet	3	.30
28% dried distillers grain	4	.33

Other thoughts on protein supplementation are: protein test hay. Native hay harvested in early July will test in a narrow range of 5 to 6 percent crude protein. Bermuda and fescue hays can vary greatly in protein content. A full feed of 10% crude protein or higher hay will meet the protein needs of even a lactating cow.

Fescue, a cool season grass, will have a protein content in the fall, winter and spring months of 11% crude protein or higher. Cows consuming all the fescue they want will not need protein supplementation. Stockpiling fescue for mid and late winter use can reduce supplemental protein needs dramatically.

If you have questions on cow nutrition, call 9178/746-3725. Keep in mind no one has ever made a starved a profit from a cow.