

## ALTERNATIVE FEEDS WHICH MAY BE USED DURING PERIODS OF RESTRICTED FORAGE AVAILABILITY

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There are several alternative feed resources which may be used to replace all or part of feed supply during limited forage availability.

1. **Corn.** Corn should be considered an alternative feed. Corn is generally the most inexpensive source of concentrated energy, and energy is the nutrient which is most often limited. One of the most common nutritional errors that producers make is to feed complex mixtures, usually high in crude protein, when corn can be fed cheaper with identical or better results.

As a general rule-of-thumb, it takes 5 pounds of corn to replace 9 pounds of average quality hay.

Things to watch for:

- In some years, there have been many reports of corn which is high in Aflatoxin. In some cases, this might still be useful feed, but you must be careful. See "Aflatoxin in Tennessee," E&PP INFO 212.
- Avoid changing to high-corn diets abruptly. Make changes slowly, over several days.
- Corn tends to decrease utilization of forage. For maximum utilization of forage, keep corn levels below 1.0 percent of body weight.

- Avoid substituting corn for hay at over 50 percent of the ration.

2. **Other Grains.** Grains such as milo, oats, barley or wheat may also be used in cow-calf rations. These grains will require some processing.

3. **By-Product Feeds.** Certain by-product feeds may be considered as alternatives for beef cattle. These may include soybean hulls (soyhulls), distiller's by-products, whey, corn gluten feeds, or vegetable by-products. No matter which by-product feed is being considered, there are several factors which the beef producer should consider before these are used. These include:

a. **By-Product Feeds Are Often High in Moisture.** This makes transporting expensive and may make them unstable for \*storage. Always calculate the value of feeds on a dry-matter basis. For example, if a feed is 40% dry matter, divide the price paid by 0.4 to figure the value on a dry matter basis. Also, calculate transportation costs. The true cost of feed includes all transportation costs, and should be calculated based on the value as delivered to the farm.

b. **Carefully Evaluate the Nutrient composition of the By-Product Feed.** Most commercial sources of by-product feeds will provide a nutrient composition of the feed. If this is not available, it is recommended that the buyer have the feed analyzed. Many feed companies provide this service or feed may be analyzed by the University of Tennessee's Forage Testing Laboratory. By-product feeds are often variable in nutrient content.

c. **Be Aware of Problems With Contaminants.** These include any chemicals or waste products added or formed during the production process that may

be detrimental to animal performance or health, or which could leave residues in meat or milk.

d. **Crop Residues.** Field crop residues such as soybean or corn stubble may also stretch carrying capacity where available, but will usually require supplementation.

e. **Ask questions.** Extension agents are often aware of the best alternatives in your area. Feed dealers want your business, so should have good information, but it is a good idea to shop around.