

# Disaster Relief

## *Diet Supplements for Livestock: Protein, Vitamin A, and Minerals*

Most grain rations for cattle and sheep supply enough protein to maintain a satisfactory 10% to 12% level. But when you feed livestock in emergency situations mostly low-protein materials such as ground ear corn, grain straws, or grass straws, a protein supplement is needed.

We recommend about 1 lb of 20% to 30% protein supplement/head/ day. Use cost comparisons to get the best protein supplement for your money. Compare cost per pound of protein supplied, rather than cost per ton of the supplement. Different supplements contain the following protein levels:

- Alfalfa seed screenings 25%
- Field or cull peas 20%
- Linseed meal 30–36%
- Cottonseed meal 40–47%\*
- Soybean meal 44–49%\*

\*Level specified by manufacturer

Urea can replace part of the protein if its price is favorable. One pound of feed grade urea equals 2.62 pounds of crude protein. Never feed urea to poultry or swine. Urea in high levels is toxic to livestock. Do not feed urea at levels greater than 1% of a total ration (grain and hay) or 3% of a concentrate mix.

Give hungry livestock a fill of feed without urea before turning them onto feed that contains urea. Mix urea thoroughly with the feed, and use it with an available energy source, such as grain or molasses. Do not feed urea with roughage alone.

Molasses is occasionally an economical energy source but must be fed with some dry feedstuffs. Liquid molasses can be self-fed if you use a wooden float device to restrict consumption, or it can be mixed with grain at a feed mill.

### **Vitamin A**

Hay supplies most necessary Vitamin A during winter feeding. If you eliminate hay from the ration, Vitamin A supplements may be necessary. A number of stable, dry forms of Vitamin A are available commercially. You can mix these with feed, with salt, or complete mineral mixes.

We suggest the following daily levels of Vitamin A:

- Bred cows or mature cattle 20,000 I.U.
- Yearling cattle 10,000 I.U.
- Bred ewes 5,000 I.U.
- Milking cows 40,000 I.U.

### **Minerals**

Removing hay from livestock rations may cause mineral deficiency. To correct this problem, supplement grain rations with a free-choice mixture of one part dicalcium phosphate and one part trace mineralized salt.

No additional salt is needed with this mixture. Although hungry cattle may crave salt, limit the feeding of loose salt to 10 lb per animal per day.

Cattle on limited water should not be fed salt or minerals for 3 or 4 weeks, or until adequate water is available.

From The Disaster Handbook - 1998 National Edition, University of Florida/Institute of Food and Agricultural Sciences SP 2431.

Revised by Dr. **Wayne Groce**, Professor, Mississippi State University College of Veterinary Medicine Office of Special Programs

*Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation or group affiliation, age, disability, or veteran status.*

**Information Sheet 1720**

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. **VANCE H. WATSON**, Interim Director (POD 06-06)