



EM4857

Supplementing Cattle on Drought Affected Pastures and Ranges

The extended drought conditions in Washington may have serious consequences on pastures and ranges. Cattle owners in many areas may have to reduce inventories to a level which they feel their feed will carry. Other producers will be leasing summer pasture crops from farmers who have a substantial irrigation water supply.

Another practice which may receive consideration is meeting a portion of the energy needs through grains when grains are a good buy relative to roughage costs. All livestock producers will be making maximum use of farming wastes, such as straw, corn stalks and other byproducts from crop production.

Even producers who have sufficient range to carry their cattle numbers will find that drought affected feeds may not have the same feed value as feeds produced in normal growing years. In addition to producing a lower yield, thus reducing the carrying capacity, grasses forced into a dormant condition because of a shortage of moisture will be low in vitamin A, phosphorus, and protein. Cattle owners need to meet these deficiencies or face the consequence of low calf crops and extended calving seasons.

To maintain optimum productivity in the beef cow herd during drought conditions, supplemental feeding may be necessary. Mature cows can get by with less energy than first calf heifers and yearlings. First calf females are still growing as well as experiencing the stress of lactation. Their energy requirements are higher than those of mature cows. To feed the cow herd economically for optimum production, divide the cattle by production class, and feed accordingly.

Minerals. Provide the same salt and mineral supplementation during drought as during normal conditions. However, phosphorus, the element most likely to be limiting to cattle, will be even more critical in a drought year. A mixture of 50% trace mineralized salt—50% dicalcium phosphate supplied free choice to the cow herd will meet this phosphorus requirement. Place this salt mixture close to stock watering locations.

Vitamin A. Lack of vitamin A may become a problem in cows during the fall and winter after summer grazing on drought affected pasture or range. Cows should receive a vitamin A and D booster shot about 30 days prior to calving. Calves should receive a booster shot at birth.

Protein. If drought conditions occur in early summer when cows are bred, severely affected forage may not meet the cows' protein requirement. As a result, reproductive performance may be drastically reduced. Protein requirements can generally be met with 2 to 3 pounds of oil meal (soybean, cottonseed, canola, etc.) or with 5 pounds of alfalfa hay.

Energy. Energy sources may be the most limiting energy nutrient during a drought. Energy needs not met by drought depleted grasses can be supplied either by hay or grain. Barley, wheat, oats, or other small grains should be rolled or ground before feeding. Corn can be fed whole but will be utilized better if coarsely cracked. The factors determining whether to use hay or grain are cost per unit of Total Digestible Nutrients (TDN), and availability to the producer.

Limiting Intake using Salt. When you use grain or oil meals as supplemental feed, you can use salt to limit intake in a self-feeding situation on range. Cattle will consume salt up to about 0.1% of their body weight. Therefore, an 1100-pound cow would consume 1.1 pounds of salt mixed in a grain or protein supplement. When using salt to limit intake, the percentage of salt added to the concentrate depends on the desired intake of concentrate.

Percent salt in supplement = [pounds of salt / (pounds of concentrate + pounds of salt)] X 100.
For instance, to feed 10 pounds of rolled barley in a self-feeding system, use about 10% salt to limit intake. To feed 2 pounds of canola meal, use approximately 35% salt. The salt mix used to limit intake should be 25% of the trace mineralized salt—dicalcium phosphate described above and 75% plain salt. Monitor intake closely when using this system.

There are a few precautions that you should use. First, adapt the cattle to the desired concentrate level before adding salt and self feeding. After salt is added, watch intake closely. Make sure that cattle have adequate supplies of water available. Water intake will be higher than normal.

Each method of supplementing drought affected pastures and ranges has some advantages and

disadvantages. As indicated earlier, no one method is best for all producers.

Because of the expense involved, some producers will decide not to supply any supplement. In the short run this may appear to be a wise decision. Still, recognizing the depressing effect a drought will have on the breeding cow numbers and the probable high calf prices when conditions stabilize, the consequence of poor conception rates and extended calving season due to nutrient deficiencies could be very costly.

Information on soil moisture monitoring and crop evapotranspiration from Washington's Public Agricultural Weather Stations (PAWS) and Washington Irrigation Scheduling Expert (WISE) are available on the Scientific Irrigation Scheduling (SIS): web page <http://sis.prosser.wsu.edu>

Drought advisories and other Washington State University Cooperative Extension Bulletins are available online at <http://pubs.wsu.edu>
Type "drought" in the search box for downloadable files.

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