



*Cooperative Extension System*

# Cattle Producer's Library

Cow-Calf Section

CL1120

## Emergency Rations for Wintering Beef Cows

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Drought conditions greatly reduce the available forage for wintering cattle. During drought periods, both the quality and quantity of hay and winter range forage are often limited.

As a means of stretching limited hay and forage supplies, 1 pound of grain or other concentrate may be substituted for about 2 pounds of hay. Six pounds of grain is the practical limit for replacing hay in the daily ration for wintering a 1,100-pound cow. Feeding 6 pounds of grain will save 12 pounds of hay per head per day. This is a substantial saving over a full feed of hay at prevailing prices.

Corn silage may replace part or all of the hay in the ration at the rate of 3 pounds of silage to 1 pound of hay.

Tables 1 and 2 list examples of possible rations substituting grain for part of the forage and using more straw in the ration. Lesser amounts of grain can be used if hay is more plentiful or relative prices change.

If cows are thin at calving time, conception rates will be reduced 60 to 90 days later at breeding time. After calving, cows' daily nutrient requirements increase 30 to 50 percent because of the lactation requirement.

A high-phosphorus mineral mixture and salt should be available to cows at all times.

Proposed rations are based on making maximum use of grain in meeting the minimum standards for wintering beef cows. A deficiency in Vitamin A in some rations may be met by feeding 1 pound of a commercial protein supplement fortified with at least 10,000 I.U. of Vitamin A or 1 pound of dehydrated alfalfa pellets. Rations are based on cattle being allowed access to range forage or confined to a drylot. The ration assumes that cattle on poor range will have a daily intake of 10 pounds of forage and cattle on very poor range a daily intake of about 5 pounds.

These proposed rations are general in nature, and adjustments may be needed to meet an individual rancher's needs. In drought conditions, all cows should receive 20,000 to 30,000 I.U. of Vitamin A during the last 90 days of pregnancy to ensure against Vitamin A deficiencies and subsequent losses. Feed manufacturers can provide the needed level of Vitamin A in a variety of protein supplements or in a custom pellet. Green color in feed is an indication of carotene or Vitamin A.

Cattle can store Vitamin A in their liver and fat for 4 to 6 months. Cattle on dry pasture during the major part of the summer and on cured hay and straw during the winter can become deficient by spring. That, coupled with the cow's greater need in late pregnancy and lactation, could cause serious problems if the need is not met.

**Table 1. Rations for 1,000-pound pregnant cow.**

| Feed  | Daily feed  | Protein          | Energy            | Ca        | P         | Vitamin A        |
|---|-------------|------------------|-------------------|-----------|-----------|------------------|
|   | (lb)        | (lb)             | (ME Mcal)         | (g)       | (g)       | (1,000s I.U.)    |
| Dairy requirement                           | 19.6        | 1.6              | 17.3              | 23        | 18        | 25               |
| #1 Barley, oats, or wheat straw             | 11.0        | 0.3              | 7.4               | 7         | 3         | 0                |
| Alfalfa hay                                 | <u>11.0</u> | <u>1.6</u>       | <u>10.4</u>       | <u>60</u> | <u>10</u> | <u>280</u>       |
| TOTAL                                       | 22.0        | 1.9              | 17.8              | 67        | 13        | 280              |
| #2 Barley, oats, or wheat straw             | 12.0        | 0.4              | 8.0               | 8         | 4         | 0                |
| Corn  | 5.0         | 0.4              | 7.5               | 1         | 5         | 1.8              |
| Protein supplement<br>(P 20%, Ca 1%, Ph 1%) | <u>2.0</u>  | <u>0.4</u>       | <u>2.8</u>        | <u>9</u>  | <u>9</u>  | <u>?</u>         |
| TOTAL                                       | 19.0        | 1.2 <sup>1</sup> | 18.3              | 18        | 18        | 1.8 <sup>2</sup> |
| #3 Barley, oats, or wheat straw             | 12.0        | 0.4              | 7.4               | 7         | 3         | 0                |
| Corn silage                                 | 30.0        | 0.7              | 11.4              | 12        | 9         | 25               |
| Protein supplement<br>(P 20%, Ph 1%)        | <u>1.0</u>  | <u>0.2</u>       | <u>1.4</u>        | <u>0</u>  | <u>4</u>  | <u>?</u>         |
| TOTAL                                       | 43.0        | 1.3              | 20.2              | 19        | 16        | 25               |
| #4 Barley, oats, or wheat straw             | 12.0        | 0.4              | 7.4               | 7         | 3         | 0                |
| Barley                                      | 6.0         | 0.7              | 8.1               | 2         | 11        | 0                |
| Protein supplement<br>(P 20%, Ph 1%)        | <u>1.0</u>  | <u>0.2</u>       | <u>1.4</u>        | <u>9</u>  | <u>4</u>  | <u>?</u>         |
| TOTAL                                       | 19.0        | 1.3 <sup>1</sup> | 16.9 <sup>1</sup> | 18        | 18        | 0 <sup>1</sup>   |

<sup>1</sup>Marginal unless additional consumption occurs.<sup>2</sup>Add mineral supplement and/or Vitamin A as needed.**Table 2. Rations for 1,100-pound cows nursing calves (average milking ability).**

| Feed  | Daily feed  | Protein    | Energy      | Ca              | P               | Vitamin A      |
|---|-------------|------------|-------------|-----------------|-----------------|----------------|
|   | (lb)        | (lb)       | (ME Mcal)   | (g)             | (g)             | (1,000s I.U.)  |
| Dairy requirement                           | 21.6        | 2.0        | 19.9        | 27              | 22              | 38             |
| #1 Barley, oats, or wheat straw             | 10.0        | 0.3        | 6.7         | 6               | 3               | 0              |
| Alfalfa hay                                 | <u>14.0</u> | <u>2.1</u> | <u>13.3</u> | <u>76</u>       | <u>12</u>       | <u>357</u>     |
| TOTAL                                       | 24.0        | 2.4        | 20.0        | 82              | 15 <sup>1</sup> | 357            |
| #2 Barley, oats, or wheat straw             | 12.0        | 0.4        | 7.4         | 7               | 3               | 0              |
| Barley                                      | 7.0         | 0.8        | 16.3        | 2               | 13              | 0              |
| Protein supplement<br>(P 20%, Ca 1%, Ph 1%) | <u>2.0</u>  | <u>0.8</u> | <u>2.8</u>  | <u>9</u>        | <u>9</u>        | <u>?</u>       |
| TOTAL                                       | 21.0        | 2.0        | 26.5        | 18 <sup>2</sup> | 25              | 0 <sup>2</sup> |
| #3 Barley, oats, or wheat straw             | 12.0        | 0.4        | 7.4         | 7               | 3               | 0              |
| Corn silage                                 | 40.0        | 0.9        | 15.6        | 16              | 12              | 33             |
| Protein supplement<br>(P 20%, Ph 1%)        | <u>2.0</u>  | <u>0.8</u> | <u>2.8</u>  | <u>9</u>        | <u>9</u>        | <u>?</u>       |
| TOTAL                                       | 54.0        | 2.1        | 25.8        | 32              | 24              | 33             |

<sup>1</sup>Add a phosphorus supplement or phosphorus in the salt.<sup>2</sup>Add a mineral supplement and/or Vitamin A as needed.

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