The Nutrition of Ewes

F. W. Whetzal

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/sd_sheepday_1967

Recommended Citation
http://openprairie.sdstate.edu/sd_sheepday_1967/7
The Nutrition of Ewes

F. W. Whetzal

General

Sheep are ruminant animals consequently a large proportion of their nutritional requirements can be met with roughage feeds. With this in mind, then the basis of a good ration for ewes is adequate pasture or other top quality forages. The need for supplemental feeding of protein, energy, minerals and/or vitamins to meet the nutritive requirements will depend upon the amount and quality of forage consumed and on the different stages of a ewes reproductive cycle. A mature breeding ewe can be regarded as having about 6 months of critical nutrition needs while a maintenance ration is adequate during the remainder of the year. Higher nutritional planes fed during the flushing period, prior to lambing and during lactation has proven beneficial in improving lamb production.

Wintering (non-critical)

During the early part of the gestation period and until about 6 weeks before lambing the nutritional requirements of mature ewes are relatively low. A ration adequate in quantity and quality to maintain the animal in a thrifty condition with a moderate weight gain is sufficient during this period. A ewe should gain a total of about 30 lb. during the gestation period. A 150 lb. ewe will normally consume 4 or 5 lb. of good quality forage daily. If this amount is consumed and contains 50% TDN and 8.0% protein (4.4% digestible) her requirements will be met for these two nutrients. When poor quality hay or other forage is fed it may be necessary to supply additional nutrients through supplemental feeding. If a supplemental source of protein is needed it can be supplied with either a legume hay or a commercial supplement. If energy is in short supply and the ewes losing weight, additional energy can be supplied by feeding a limited amount of silage, grain or other higher energy feeds that are available. Ewes should not be allowed to become overly fat during this period. A three year study at Montana (Hoversland, A. S., et al) involving over 5,000 ewes showed that supplemental feed treatment during pregnancy influenced lamb mortality. When ewes were grouped into 3 categories based on the amount of weight gain or loss during pregnancy it was shown that: (1) (maintenance or weight loss, 0 to 13 lb.; moderate weight gain, 6 to 12 lb., and high weight gain, 26 lb.), the resulting mortality rates were 33.0, 26.0 and 17.0% respectively. The incidence of abortions in the 3 groups amounted to 5.0%, 1.4% and 0.0% respectively.

1Assistant Professor of Animal Science.
Post weaning (non-critical)

The nutritive requirements of a ewe are lowest during the dry period after the lambs are weaned and up until the pre-breeding "flushing" period begins. Low quality roughage can be fed satisfactorily during this period, however, the feed should be adequate to provide a maintenance ration for the ewe. Experimental work has shown that ewes fed rations too scanty during this period will not be as productive as will better fed ewes. A more detailed discussion of results from different methods of feeding during this period will appear in another section.

Flushing (critical period)

An improvement in nutrition (flushing) of ewes prior to and during breeding has been shown to bring about a higher lambing percentage. The major effect of flushing appears to be upon the increased number of ewes that will produce twins. Under proper conditions an increase of 15 to 20% in twinning can be expected. The condition of the ewe, the length of the flushing period and the rations used can affect the degree of response to flushing. Research on different aspects of flushing will appear in a separate section.

Last 6 weeks of gestation (critical)

Nutritive requirements increase quite rapidly during the latter stages of pregnancy at which time the fetus makes its greatest growth. This is also the period when the danger of pregnancy disease (ketosis) prevails. While requirements increase, ewes that are heavy with lamb and especially those carrying twins have less capacity for large amounts of roughage. This reduction in capacity means that the additional energy needed must be supplied by feeding a more concentrated ration. Fat ewes as well as thin ewes need extra energy during this stage. It is usually necessary to add readily available sources of energy to the ration to prevent ketosis. If adequate available energy isn't supplied a ewe will start utilizing her stored body fat and adequate carbohydrate are needed for proper metabolism of this fat. If the animals supply and utilization of carbohydrates is low ketone bodies will accumulate and result in pregnancy disease.

The extra energy needed can be supplied by adding 1/2 lb. of shelled corn or other grain to the ration.

First month of lactation (critical)

It is during the lactation period that a ewes nutritional requirements are greatest. She must not only maintain her own body but must supply practically all the nutrients needed for the lambs through the milk they consume. Lactating ewes will generally increase their consumption of roughage if it is available. It is reported that during an 18 week period, ewes with twin lambs (whether fed green or dry feed) ate 2.5 times as much, and ewes with a single lamb ate twice as much as a dry ewe. Supplemental grain should be fed during the first 4 to 6 weeks of lactation to assure a good milk flow. One pound of shelled corn or other grain per hundred pounds of body weight in addition to pasture or other roughage should supply the energy requirements. Milk production of a ewe normally reaches its peak at 4 to 6 weeks after the lambs are
corn and diminishes thereafter. By this time the lambs are eating and can be
creep-fed or if desirable, weaned and fed in dry lot. Preliminary work by
researchers at Oklahoma has shown that lambs weaned at 30 days of age and
weighing at least 25 lb. will do well in drylot if properly fed.

Other Considerations

Water and minerals

Clean water and salt should be provided at all times. Mature sheep will
consume from 1 to 6 quarts of water daily depending upon the climate and
succulence of the feed. The amount of salt needed per ewe daily ranges from
1/4 to 3/4 ounces per day or approximately one lb. per month. Salt should be
supplied as stabilized, iodized granular salt or trace-mineralized salt.

One mineral other than salt most likely to be deficient in a ewes diet is
phosphorus. This is particularly true when mature forages are grazed or fed.
Supplemental phosphorus can be supplied by providing ewes free access to dicalcium phosphate (18.5% P), steamed bone meal (12.0 to 14%) or a commercial
mineral supplement containing at least 10% P. Most pasture and range forages
contain adequate amounts of calcium.

Vitamins

It is doubtful that vitamin deficiencies in sheep will occur under normal
conditions particularly if good quality roughages are fed. Vitamins A and E
would be the two vitamins of main concern and most forages contain adequate
amounts of each to supply requirements. If deficiencies do occur, they are
more apt to appear when the forage is mature and dormant, during over-grazing
or in periods of drought. Feeding alfalfa hay as a portion of the ration will
normally prevent vitamin deficiencies.

Supplemental feeds

Good quality alfalfa hay is an excellent supplemental feed for sheep. Not
only is it a good source of protein (ranges from 15 to 20% protein that is about
70% digestible) but also a good source of carotene (10 to 40 mg./lb.), calcium
(1.5%) and a fair source of phosphorus (0.25%). When alfalfa hay is fed as a
supplement it reduces the amount of other forage needed by the ewe.

To supply additional energy to the ration, any of the common grains that
are available are suitable. Shelled corn and milo ranks highest in TDN value
(about 80.0%) followed by barley (75.5%) and oats (70.0%). Corn silage is an
economical and good source of supplemental energy for breeding ewes containing
60 to 65% TDN on a 10% moisture basis.