SHEEP SHEET

Selecting Drought Feeds for Sheep

Sheepdex G-3

by Dr. Lyle G. McNeal, Executive Director, NSP; Sheep & Wool Specialist;

The obvious choice of feed in a drought will be the stored hays and feed grains that is on the farm or ranch.

However, some feeds have special properties to meet the requirements of, say weaners and lactating ewes and may have to be saved or purchased and brought in if they are not on the farm. Alternatively, a producer's stored feed may be in demand in the area and he may profit by selling it and buying a cheaper substitute.

If feed has to be bought, there may be a number of alternative roughages from which to choose. During a drought, the major feed requirement of livestock is energy. Generally speaking cereal grains, i.e. corn, barley, oats, and wheat are examples of high energy feeds. But they are also more costly per unit of weight. On the other hand, legume roughages, i.e. alfalfa, clover, vetch, pea, and grass mixes with the above legume hay contain less energy than grains, but have higher protein values per unit of weight. Grass hays, i.e. oat, beardless barley, brome, fescue, bluegrass, Bermuda and other harvested grass forages contain less energy and protein the grains and legume hays.

Generally, the roughage that provides the cheapest source of energy is the best to buy. However, certain classes of animals have special requirements.

Needs of some classes of sheep

Weaned lambs and breeding ewes in late pregnancy or in lactation need roughage in their diet. Often this can come from pasture residues but very often some quality hay must be fed,

especially if the major part of their ration (diet) is wheat, barley or oats.

These classes of sheep may also need a higher protein content in their diet, which can be obtained from some supplements. For example, low-protein oats can be supplemented with peas or beans (pinto, lima, navy, etc.).

Pregnant ewes need a proportion of roughage during the last four to six weeks of pregnancy and the first six weeks of lactation. However, hay alone, unless of very high quality, is not a satisfactory diet for ewes in late pregnancy, as they find it difficult to eat enough to satisfy their needs. They will need about 11% to 12% crude protein in their rations.

Weaned lambs need some roughage in their ration at least until they are about 5 to 6 months old. Weaners also need good water. They need about 14% to 15% crude protein in their rations.

Ewes in early pregnancy and adult wethers have no special requirements to be to concerned about, particularly during drought.

Characteristics of feeds

Hay

Because of its value to ewes and weaners and in introducing sheep to grain, good quality hay is an important resource during a drought. Stocks of hay should be carefully monitored and regulated during the drought feeding program. Hay is often difficult and expensive to buy during a drought.

The quality of hay depends on its composition and the time of cutting. The earlier the hay is cut and the higher its legume (alfalfa, clover etc.) content, the better it is. Save the best quality hay for the weaners and if the drought persists preserve if for the lactating ewes.

When buying hay, always buy by weight; do not buy on a per-bale basis (if possible) without checking the weights of the bales first. Bale weights can vary by as much as 100%.

Straw

Straw can be used as the roughage part of a ration

during a drought but its protein content is low and so is its digestibility; it may need extra treatment before it is used as a livestock feed too. Ammoniated treated straw has shown benefits in reducing the costs of wintering ewes in early pregnancy. Short, fine stemmed straw is more acceptable than coarse clean straw. All of the cereal grains leave straw as a residue following grain harvesting (wheat, barley, oat, rye, etc.).

Oats

Oats is the safest cereal grain to feed because of its high fiber content, which helps to reduce digestive problems. Oats is usually in strong demand during a drought and the cost per energy unit will generally be higher than that of other grains, like wheat.

If there are limited quantities of oats on the ranch, they should be reserved for weaner lambs as part of their ration and other special purposes; for example, quickly introducing sheep to grain diets.

Oats is, however, lower in protein than most other grains (around 13% crude protein). In the absence of a green harvest, some protein supplementation will be needed if low-protein oats form the major part of the ration for weaners and ewes and lambs.

Wheat

Because its fiber content is very low, wheat should be introduced carefully to avoid digestive problems and even deaths. Experience in previous droughts has removed much of the prejudice against wheat and has shown it to be a valuable drought feed.

Wheat (like other grains) has a high energy content. It is likely to be one of the cheapest sources of energy and the most readily available during a prolonged drought.

The wastage of wheat and barley when fed on the ground seems to be less than the wastage of oats.

Barley

Barley contains more fiber than wheat, and has close to the same energy value. Experience has indicated that it may produce fewer digestive problems than wheat.

However, barley still needs to be fed with the same care as wheat when sheep are being introduced to it.

Sorghum and Corn

These grains, particularly sorghum has about the same energy value as most of the other grains. However, corn generally has one of the highest energy values of all the feed grains.

Peas and Beans

Peas and beans have close to the same energy value as wheat, but have much higher protein contents. These can be used to best advantage by adding small quantities (up to 20% or 30%) to enrich low-protein rations for weaners and lactating ewes.

Pellets, Cubes and Wafers

The value of these feeds as drought rations is largely determined by considering their energy content. Generally the more fiber they contain, the lower their energy content.

Pellets generally have a higher protein content than grains. In most cases, however, **there is no advantage** in paying a premium for pellets with a very high protein content as drought rations unless they are used, like peas or beans, to balance a protein-deficient ration.

Pellets should be introduced carefully to avoid digestive upsets. Pellets may vary in their composition, particularly as the drought progresses, and care should be taken feeding a new batch of pellets to sheep that have been eating pellets for some time.

Be sure to limit feed the pellets to the sheep, especially ewes or rams. The rate of passage for pellets is faster than most roughages, thus, consumption will increase significantly. Economics will obviously dictate a strict feeding regime, if producers must resort to pellet feeding.

Protein, minerals and other supplements

The protein content of a grain will vary with the region, state, locale etc. where it was grown and the season. As a very general rule, the plumper (fatter) the grain kernel, the better the energy value but the lower the protein content.

In most cases there is no advantage in paying high prices for extra protein in feeds for drought feeding. Similarly, supplementation of sheep with urea and vitamin A is not likely to be profitable even under drought conditions. Some examples of primary exceptions are as follows:

Grain that is too low in protein for milking ewes and weaners can be improved by adding a **protein supplement**, another grain more concentrated in protein like peas and beans.

Protein supplements such as peas and beans fed to ewes before breeding may improve twining rates.

Lambs that are dry-lot fed for sale as fats need a high-protein diet, followed by energy as they near the

mature frame and muscle mass.

Where roughage is of poor quality and is being fed as the only ration, or with grain to weaners, it can be improved by adding a **protein supplement** such as cottonseed oil meal, soybean oil meal, linseed oil meal, peas, beans, etc.

Dry sheep fed solely on very low quality roughage such as cereal straw may be helped by a urea-molasses liquid supplement or block, but the response can be variable and some sheep will not consume the supplement at all. More reliable results would come from a supplement of hay or grain.

Vitamin A can be beneficial to weaned lambs up to one year old if they have not eaten green feed for three to four months. Rams that have been fed grain with no green feed for six months may have improved fertility if fed vitamin a month before breeding.

Limestone and salt are valuable additives to grain rations, especially for ewes in late pregnancy and early lactation, if stock have been fed a heavy grain diet for a long period.

Summary

Selecting the 'ideal' drought feeding program may not be possible or feasible during such a serious environmental crisis, however, the primary nutrients a sheep producer must surely be concerned with for the ewes and lambs are energy and protein. Meeting the nutrient deficiencies during the drought is important, but the daily dry matter intake and bulk value of the feeds is paramount to overall flock health, next to a clean and reliable source of drinking water. Finally, the driving force that limits a producers response to dealing with drought conditions, is his access to the financial resources to procure the necessary feedstuffs. If economics is the limiting factor the only alternative when found in these situation may be partial or total flock liquidation. Unfortunately, market prices for livestock producers finding themselves in a drought, are most likely to be extremely depressed. Thus, the sheep producer may feel abandoned to the circumstances and either get out of sheep ranching permanently or possibly temporarily.

For more information write The Navajo Sheep Project, Inc. PO Box 4454, Logan, UT 84323-4454. The Navajo Sheep Project is a registered non-profit Utah corporation.