

# Making hay could save farmers during drought

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MAKE hay while the sun shines, so goes the popular saying. It is one of those sayings that you have probably taken for granted.

Hay is pasture that has been conserved and stored to be used when there is a shortage, like during droughts. Of course, the saying has been used to mean other things as well.

Basically, it refers to taking advantage of what is available in plenty and storing it to be used in face of shortage.

During the rainy season, there is plenty of food crops, pasture and fodder. Man and his livestock are well fed. The vegetation has grown and it is green all over. Animals are eating what they can and trampling on the rest. They are well-watered too.

As a result of the rains, livestock gain in weight. Lactating cows are produce more milk. There is more milk supply to the processing factories. Due to increased supply, demand goes

down and in response to the law of supply and demand, the cost of milk comes down.

The time to make hay is during the rains. As soon as the growing season comes to an end, these green vegetation turns pale green, then some plant species will lose their green and, eventually, all except the drought resistant will turn brown. Food shortage will creep in. Reports of livestock dying will be made. To prevent this from happening can only be achieved during the rainy season.

Hay-making refers to conservation of food for human consumption and forage for livestock. Storing food for human consumption has been taking place for the centuries.

A lot of improvements on existing storage facilities have been done. As a result, supply of foodstuffs for human consumption is there throughout the year whatever the weather.

Forage conservation, on the other hand, has not received much

attention from livestock farmers in Kenya. Very few farmers conserve forage. Some few people conserve for commercial purpose. They conserve and sell to farmers who did not conserve.

Most farmers cannot afford to buy hay or silage. This means their animals depend only on what the land can currently produce. During prolonged drought periods, very little or nothing is produced and animals die.

Forage conservation can be achieved in two ways - hay and silage making.

Hay-making is a method of conservation for those grasses and legumes that can be quickly dried and baled. The grasses and/or legumes are cut down when about 50 percent of them have flowered. Cutting earlier reduces the land potential while late cutting leads to nutritional loss and poor quality hay.

If left longer, it loses its green colour, which is a sign of nutritional loss. The cutting should be done

during the growing season when the sky turns clear, when there is sunshine within the growing season.

When dry, it is gathered and baled, then kept in shelter that will keep rain water off. If the hay is gathered before it is dry, moulds grow and it starts to rot. Eventually the farmer ends up with compost manure, which cannot be fed to his livestock.

Pleating in the shelter is a sign of hay rotting. This heating has been reported to ignite fires in the shelters resulting to extensive damage. It can be avoided by proper drying before storage.

Hay making procedures involve baling, and mechanical baling is out of reach for small-scale farmers. Every livestock farmer gets surplus forage during the growing season but shy away from making hay because they recognise one step in the procedure that is impossible.

The purpose of baling is to compact, thus reducing volume

and consequently, space occupied by hay. It also makes it easier to handle. The compaction gets rid of air thus reducing micro-organism activities.

Baling does not have to be done mechanically. In fact hay can be put in stacks in the shelter without baling. Alternatively, baling can be done by hand by tying together some volume using sisal.

Forage crops that get damaged if livestock are left to graze are called fodder. If there is excess fodder crop, it can be conserved by making silage. Examples of fodder crops are maize, nappier grass and sorghum.

To make silage, some gently sloping ground with good drainage is excavated and lined with crop residues or polythene paper. Fodder crops that have attained maximum growth are cut and allowed to wilt. The wilted fodder is chopped and filled in, little at a time. Molasses or maize flour is added stepwise

to those fodder crops that have low sugar content eg nappier grass. This provides sugar for the bacteria that produce the acid that does the conservation.

Once full, it is heaped up into an anthill and covered with polythene paper. This drains the moisture from rain away. The soil is put back retaining the heaped up appearance. Finally, a trench is dug all round to make sure no water gets into the conserved fodder.

Both hay and silage can remain unspoilt for several days, even years if well conserved.

If forage conservation is practised, the supply of livestock feed will be well-spread out throughout the year. Livestock products will no longer be seasonal and death of livestock animals due to starvation will be reduced.

As a result, livestock farmers will have income throughout the year and this will raise their living standards.