



Fodder management: hay and silage making

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Summary

The practice describes the preparation of green forage (containing between 65 and 80 percent water) for storage.

Description

Preparation of green forage (containing between 65 and 80 percent water) for storage relies on three different techniques.

1. Green forage preparation techniques

1.1 Hay making

Hay is obtained after dry-storage or desiccation the grass; it contains less than 15 percent water.

During tedding, green forage is cut and dried as quickly as possible. Drying can be done naturally (exposure to the sun on the ground aerating the forage regularly by turning it over) or artificially by active circulation of air.

Sun-drying requires two or three days without rain. The hay must then be kept in appropriate conditions (covered area). If, when harvesting, the grass has matured and has already dried standing, then it is not hay but straw.

Hay produced on grazing land (Sahel) has the nutritive value of straw because it is harvested when the plants reach maturity. The product obtained only meets basic maintenance needs and, in rare cases, the marginal production of milk and meat.

1.2 Silage making

In contrast to hay, silage is the product obtained from wet storage. This method of storage uses the acidifying power of lactic bacteria, which reduces the pH to around four, below which all chemical reaction and fermentation ceases. This fermentation process preserves forage in its wet state away from air. This ensures that minimum dry matter and nutritional value is lost and to avoid creating products that are toxic to the animal.

To obtain good silage, it is necessary to use airtight silos (total anaerobiosis); several types of silo are used around the world. These are tunnel silo, trench silo, corridor silo, tower silo, etc. Clean forage is collected without soil from the earth, it is then chopped and piled. If necessary apply additional techniques such as pre-tedding for forage with a high water content, or use preservatives (sugar products, formic acid, anti-moulds, etc.) to improve preservation.

It is essential to harvest forage at the optimal time, from the viewpoint of nutritional quality, quantity available and climatic conditions, and then to store it properly to reduce losses.

1.3 Round bale silage

Round bale silage is a relatively new method of preserving forage. It is a



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combination of hay and silage making and has certain advantages and disadvantages over other forage preservation systems. Round bale silage is simply forage of a relatively high moisture content that is baled with a round baler and then stored in a sealed container, usually a plastic bag.

Both grasses and legumes can be preserved as round bale silage if proper techniques are followed. It is much easier to make good hay crop silage in silos than in large round bales.

Although the silage obtained can be kept for approximately a year, baled silage is more likely to spoil, compared to silage in traditional silos because; (1) fermentation is less complete and (2) damage to the plastic covering results in harmful introduction of oxygen. Some people think that baled silage is best adapted for use late in the growing

season, with bales fed as early as possible. Late in the season may often be a difficult time to dry hay in the field – increasing the value of round bale silage.

2. Minimum requirements for the successful implementation of the practice

- Access to grass land that can be tilled.

3. Objectives fulfilled by the project

3.1 Resource use efficiency

Storing forage is an effective way to preserve forage for dry seasons or for winter to ensure continuous regular feed for livestock.

3.2 Pro-poor technology

Having forage available in dry seasons save the livestock animal from deceasing and farmers from losing their capital.