

サイレージ調製はソルガムとトウジンビエ茎葉部の飼料利用率を向上させる

Silage preparation improves feed utilization of sorghum and pearl millet stover

西アフリカ半乾燥地域においてソルガムとトウジンビエの茎葉部は反芻家畜の主な粗飼料源であるが、その屋外放置が長く及ぶと飼料としての栄養価値は低下する。そこで収穫直後の両作物の茎葉部を用いてサイレージを調製したところ、その栄養成分はよく保存され、新鮮物と同等であった(図1)。また肉牛へのサイレージの給与により、放置茎葉部の給与と比べて、採食量と飼料利用率が大幅に改善された(図2)。このように作物残渣を活用したサイレージの調製により、乾季飼料不足の緩和と家畜生産性の向上が期待される。

In the semi-arid areas of West Africa, sorghum and pearl millet stovers are the main sources of roughage for ruminants, but their nutritional value decreases due to long-term outdoor exposure. On the other hand, silages prepared with both stovers immediately after harvest were well preserved, and their nutrients were equivalent to those of fresh stovers (Fig. 1). In the feeding experiment of beef cattle, the intake and feed utilization rate of silage remarkably increased compared to those of the exposed stover (Fig. 2). Therefore, the use of crop residues to prepare silage is expected to alleviate the shortage of feed in the dry season and improve the productivity of livestock.

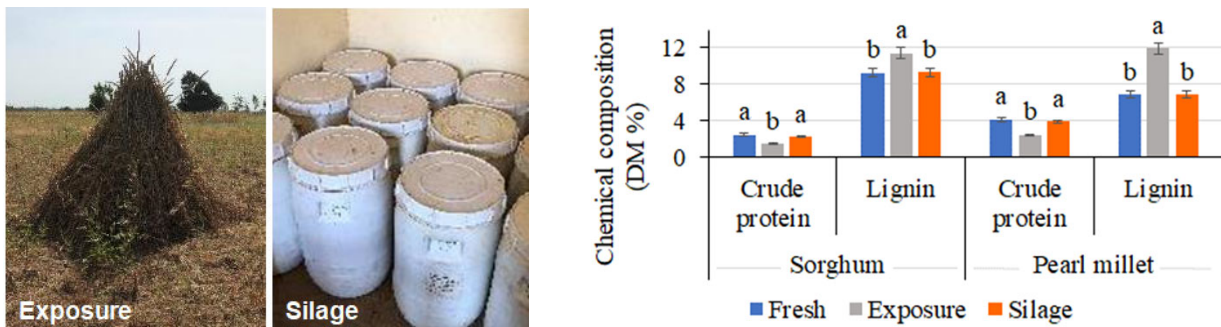


図1 作物茎葉部の屋外での放置とサイレージ調製(左)による飼料成分の変化(右)

Fig. 1. Storage of crop stovers during exposure and ensiling (left) and changes in their chemical composition (right). ^{a, b} Means of three samples differ significantly ($p < 0.05$).

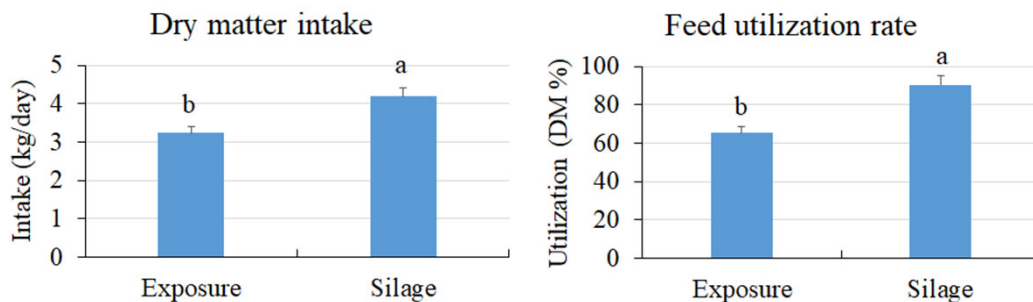


図2 ソルガム茎葉部の保存方法の違いによる肉牛の乾物採食量と飼料利用率

Fig. 2. Dry matter intake and feed utilization rate of beef cattle due to differences in storage method of sorghum stover. Feed utilization rate = cattle intake / total feed × 100%. ^{a, b} Means of eight cattle differ significantly ($p < 0.05$).