Milk production

Milk yield increases when sweet potato vines are fed together with sorghum silage as shown below.

<table>
<thead>
<tr>
<th>Sorghum Silage</th>
<th>Potato vines</th>
<th>Milk yield L/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ration 100</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Ration 80</td>
<td>20</td>
<td>14</td>
</tr>
</tbody>
</table>

The additional milk is accompanied by improved body condition.
Silage making

Materials needed include:
1) polythene sheet (size dependent on silage hole),
2) press (roller or drum of water),
3) forage chopper or knife.

Step 1:
Prepare a silage pit...

Step 2:
Harvest sorghum at hard dough grain stage.
Cutting too early makes the material distasteful and hence leading to low intake.

Step 3:
Chop the sorghum finely using mechanical cutter before ensiling. No additives are needed because the material has enough sugars needed for fermentation.

Step 4:
Place material in the silage pit in layers and press firmly to expel any air. When pit is fully loaded, cover completely with a polythene sheet. This material is left to ferment and used when there is feed shortage.

Introduction

Livestock feeding during the dry season is a major challenge to dairy producers in the dry highlands of Kenya.

Cultivation and conservation of forage and dual purpose sorghum mixed with sweet potato vines is a solution to this challenge.

Sorghum

Forage and dual purpose sorghum has the potential to supply quality feeds to ruminants in the dry highlands. This is because:
- Sorghum tolerates conditions of limited moisture and produces a lot of feed during long periods of drought.
- It can be grown under wide range of soils and it can be ratooned (harvested and left to grow again).

The surplus can be conserved as silage and used during feed shortage.

Sorghum is rich in energy but has low protein content making it necessary to supplement with high protein fodder like sweet potato vines.

The vines are well adapted to dry highlands and may be grown in the farm. They increase sorghum silage intake leading to increased milk production.

Sorghum-sweet potato vine silage

This is fodder sorghum mixed with sweet potato vines and preserved through natural fermentation in the absence of oxygen. Sorghum fodder is best for silage at hard dough stage of the grain. The nutritive value varies with management and hence careful handling is necessary.