SMALL HOLDER SILAGE MAKING

FOR DRY SEASON FEEDING


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Why make silage?
- To preserve livestock feed when at optimal nutrients value for dry season feeding.
- To avoid feed wastage in times of plenty.
- To conserve fodders in succulent form.

Fodder for silage making
- Maize
- Sorghum
- Napier
- Guatamala grass
- Any succulent fodder.

Silage making for smallholder
- Trench silo
- Tube silo
- Above ground silo

Materials and equipments for silage making
- Forage
- Forage chopper (pangas)
- Forage additives (molasses)
- Plastic tube-sheet (gauge 1000).
- Containers for mixing and applying the additive (molasses).
- 200 litres drum with lid.
- Water.

Procedure
From the methods listed above, select one that is suitable to your situation. Trench and above ground silo are best used on big farms. Tube is best used on small holder farms.

1. ABOVE GROUND SILO

Step I
Select flat ground with gentle slope. Cut three pieces of polythene about 5 m long or more depending on the available fodder. Spread them on the ground in the direction of the slope, with an overlap of 30 cm (15 cm from either sheet).

Above the ground silo being filled

Step II
- Chop the material and pour it in the middle of the sheet.
- Spread it evenly leaving 45 cm at the edge all round.
- Add the material, until you make a layer of 30 cm thick.
- Compress the material using a tanker filled with water until it feels firm when stepped on.
- Lightly but evenly apply molasses (additive) using a watering can.
Farmer applying molasses on chopped material

- Repeat the process until all the material is used.

Covering the silo with soil

2. TUBE SILO
- Chop the material on the clean surface.

Compressing the material using a drum

Step IV
- Cover the material using polythene sheet. Turning the 45 cm left upwards on the forage and the big one on top, allow for good overlap.
- Cover the top with a polythene sheet allowing it to overlap.
- Add soil on top of the sheet as it holds the polythene in place and also improves on compaction.

Farmer chopping Napier grass

- Sprinkle molasses/water on the chopped material at the ratio of 1 litre of molasses to 2 or 3 water, depending on the viscosity of the molasses. This is necessary especially for materials with low sugar content.
Farmer adding molasses to chopped material

- Cut 2.5 m (7.5 ft) length of plastic tube.
- Tie off one end of the tube with sisal twine.
- Fill the tube with chopped material by compressing well, firm hand pressure is good enough.
- Tie the other end of the tube to seal it completely.
- Stack the filled bags in a safe dry place free of rats.
- Place some weight on top of the sealed tube for continuous compression.
- The silage will be ready for use within three weeks.

3. TRENCH SILO
- Dig the trench silo on the sloppy ground.

- The silo measuring 35 m$^3$ will hold 17,500 kg or 17.5 tons of material.

Ready trenched Silo
- Place a plastic sheet in the dug trench.
- 1 m$^3$ holds 500 kg of silage.
- Evenly apply molasses.
- Use 11 litres molasses for every 560 kg of fresh material (1 litre molasses per bag of 50 kg fresh material).

Trench spread with plastic sheet
- Put the material in the silo and spread it evenly in layer of about one 30 cm (1 ft) thick. Compress the material using a tanker filled with water until it feels firm when stepped on.
- Repeat the process until the silo is filled up.
- Cover the silo with the plastic sheet (polythene).
- Add soil to hold the plastic in place to a thickness of about 5 cm (2.5 inches).

- Finally protect the silo from surface run-off by digging water channels around the silo pit.
- Leave the silo undisturbed until when silage is needed.