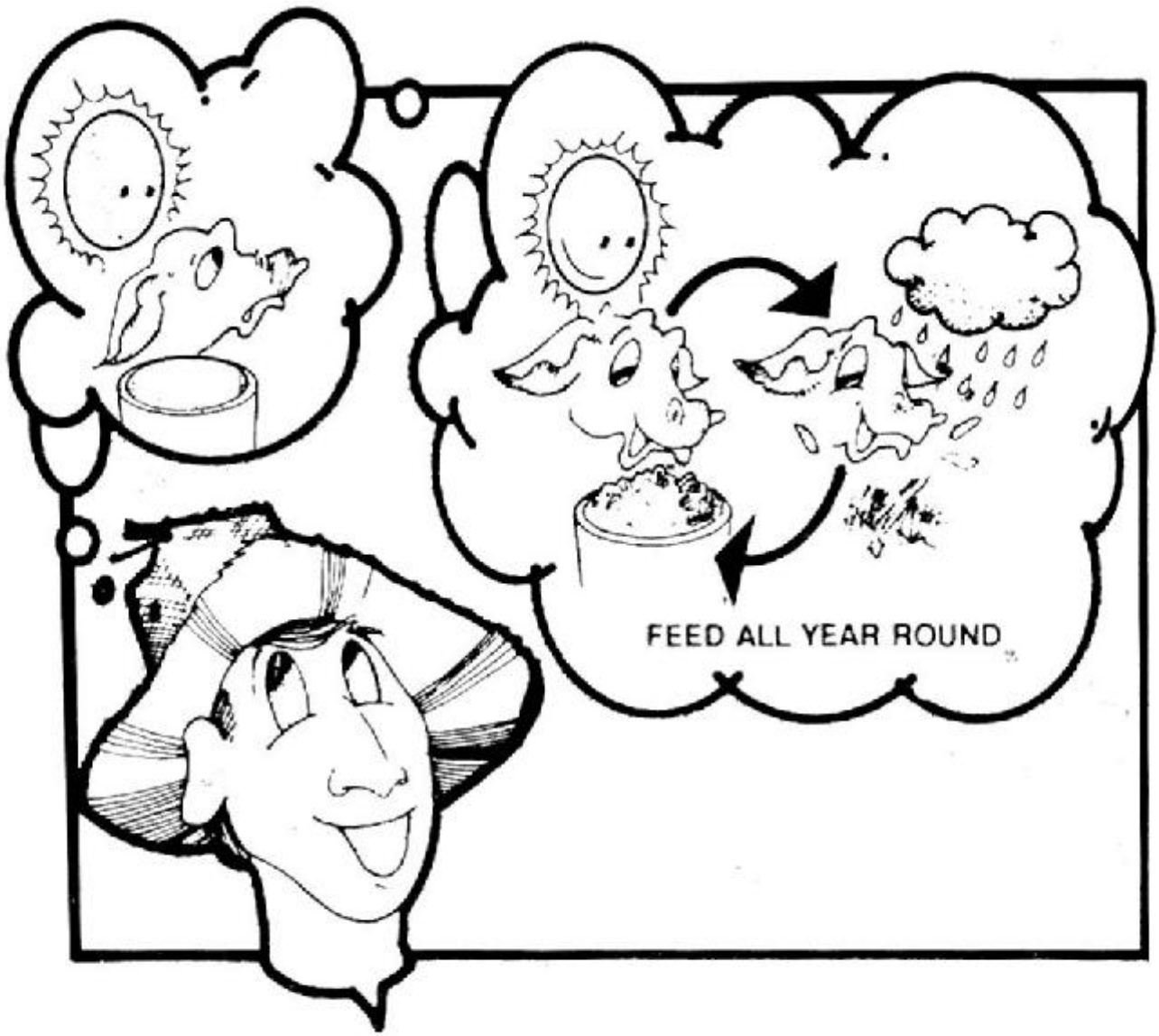
SILAGE PRODUCTION TECHNOLOGY



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SILAGE PRODUCTION TECHNOLOGY

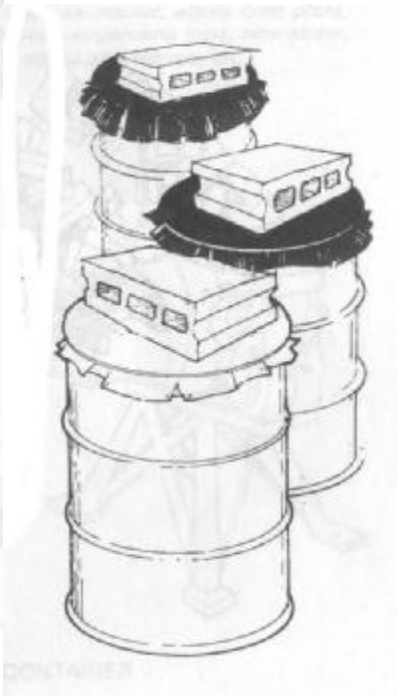
WHAT IS SILAGE?

Silage is a preserved / fermented livestock feed for cattle, carabaos and goats containing 65% moisture and 35% dry matter. It is the product formed when grasses and other plants and agri-leftovers with sufficient moisture and sugar content are stored without air.

Silage making or ensiling is easy to do. Moreover, properly prepared silage is higher in feeding value than most fibrous crop residues.

WHY BUY THIS TECHNOLOGY

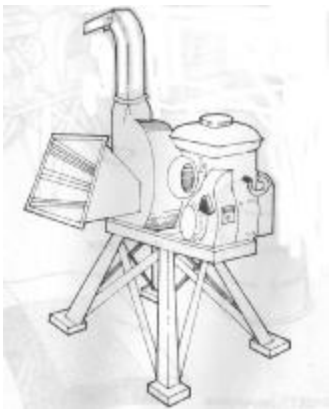
1. It affords the farmers a " home made fed" which he controls entirely.
2. It fills in the required consistent dairy feed requirement of ruminants on a year round basis.
3. Abundant agri-leftovers are utilized as livestock feed thereby preventing them from merely rotting in the field or being burned and becoming potential pollutants.
4. If properly prepared and kept sealed from air, silage can be stored for a long period without any deterioration in feeding quality.
5. The technology is practical, relatively cheep and simple that can easily be adopted and replicated by farmers.



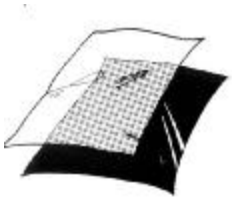
WHAT ARE THE THINGS NEEDED IN SILAGE PRODUCTION?

GRASSES or AGRI-LEFTOVERS with sufficient internal moisture of 65-70% and sugar such as: Napier, whole corn plant, corn stover, sugarcane tops, rice straw, banana stalks and leaves, etc.

SILOS / CONTAINERS



CHOPPING MACHINES



PLASTIC SHEETS

Polyethylene gauge 0.003, transparent or black

WHAT ARE CHOPPING MACHINES AND SILOS / CONTAINERS FOR?

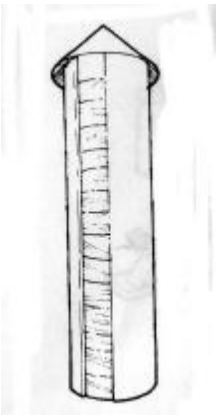
A chopping machine is very important in silage production. The process itself requires speed and specific cut size of 1/2-1 inch (1-2.5 cm) to hasten good fermentation of the product. For higher feed volume requirements, mechanical shopping is imperative.

The forage shopper is affordable and suitable for use by small hold livestock raisers.

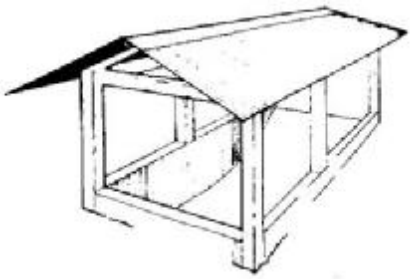
The silos / containers are necessary for the anaerobic fermentation to ensure good quality silage. There are a number of silo types.

UPRIGHT SILOS

↓ CONVENTIONAL TOWER

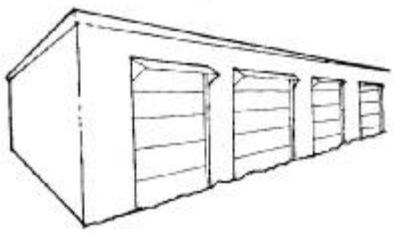


HORIZONTAL SILOS ↓



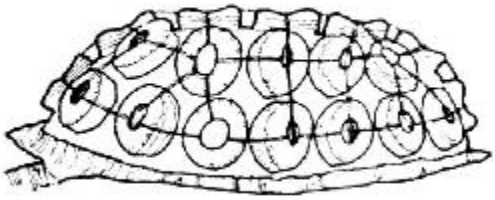
BUNKER

TREMCH ↓



SEALD STORAGE

BAG DRAINAGE CANAL



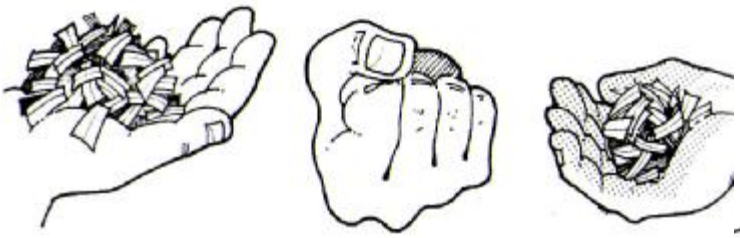
HOW IS SILAGE PREPARED

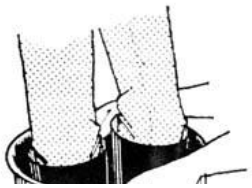
1. Harvest / gather.

Partially wilt silage materials until moisture content is 65-70%

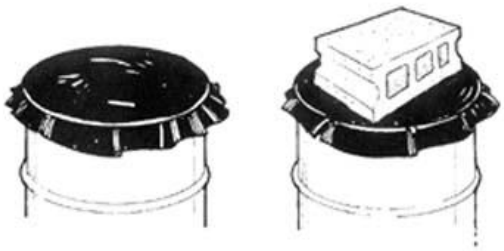
2. Chop silage materials into 1/2-1 inch (1-2.5 cm) length for ease and rapid packing.
3. Fill silo rapidly and continuously.

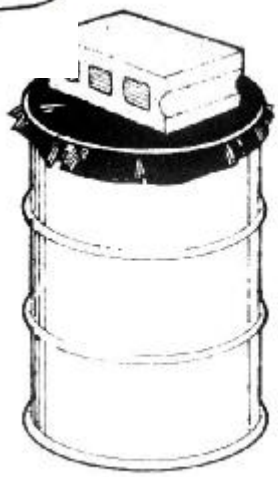
How is the desired moisture content determined?





The chopped material has more or less 65-70% moisture content: if upon squeezing the material, the hand becomes moist but not wet, no water drips and it does not spring back to its original form.





4. Pack and compact materials well to remove as much air as possible.

Using a man's weight, press on the chopped materials to remove as much air as possible.

5. Cover the silo fully with plastic sheets to protect from rain and intrusion of oxygen. Place weights to prevent plastic cover from being flown by wind

6. Ensile materials for 18 days.
7. Feed after 18 days of ensiling.

AFTER 18 DAYS

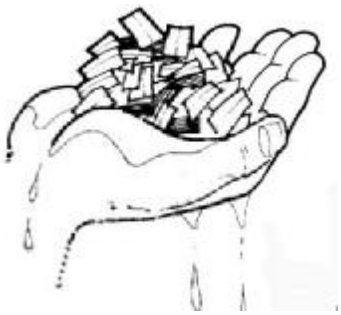
WHAT ARE THE CHARACTERISTICS OF GOOD QUALITY SILAGE?

It is light brown or deep green in color, depending on the kind of original material.
It is sweet smelling.

WHAT ARE THE CHARACTERISTICS OF BAD QUALITY SILAGE?

It is colored black with while molds;
Foul smelling / with acidic smell

Too wet silage is also not good.
Silage is too wet when water drips from the hand when it is held.



WHAT ARE THE REQUISITES FOR GOOD QUALITY SILAGE?

1. Moisture content of the forage materials to be ensiled should be 65 -70%.
2. Materials should be chopped into 1/2-1 inch (1-2.5 cm) length.
3. Silo should be filled rapidly and continuously and sealed properly.
4. The process should be strictly anaerobic.
5. The materials should be packed properly in the silo.
6. The materials should have sufficient sugar content for effective fermentation process.