



MAKING SILAGE USING SILO BAGS

AIM: TO SUPPORT FARMERS TO USE SILO BAGS TO MAKE SILAGE TO FEED TO CATTLE DURING THE DRY SEASON

What is silage and how can I make it?

- ❖ Silage is made by fermentation of fresh fodder that is high in sugars.
- ❖ The fermentation happens under anaerobic conditions (i.e. the air has been removed). This is easily achieved with silo bags.

The silo bags shown in this fact sheet are produced by a Kenyan company Packaging Industries Limited (PIL). For more information see <https://pil.co.ke/product/mama-silage-bag/> or contact your local ZDTP extension officer.

What are the benefits of using silo bags to make silage?

- ❖ Silage can be made in pits, drums or silo bags.
- ❖ Silo bags offer the following advantages compared to pits:
 - ✓ Makes good silage as total air and water exclusion is easily achieved.
 - ✓ Farmers report bags as less labour intensive than pit silo.
 - ✓ Reduced soil contamination of silage.
 - ✓ Relatively easy to transport within and between farms.
 - ✓ Possibilities for farmers to sell silage in bags to cattle owners.
 - ✓ No loss of nutrients through seepage.



What crops can I use to make silage?

- ❖ Maize, sorghums and Napier/Bana grass, in that order, are the preferred silage crops in Zambia.
- ❖ Growing maize for silage is similar to growing maize for grain.

Tips to increase your silage yield:

- ✓ Aim for a higher plant population for a silage crop.
- ✓ Prepare land and **plant early** to maximize on yield.
- ✓ Seed the crop at 25 kg/ha and fertilize with 200kg compound-D.
- ✓ Top dress with 200 kg of urea.
- ✓ Keep the crop **weed free** especially during the early growth stage.

Tips when using silo bags

- ✓ With silo-bags, it is best to wilt material before ensiling to reduced excess water accumulating at the bottom of the bag.
- ✓ Choose a fine day and cut the crop.
- ✓ Leave the crop overnight.
- ✓ Make the silage the next day once the crop is wilted.
- ! Take care not to puncture the bag during ensiling or storage stage. A hole in the bag will cause air to enter and can spoil the whole bag of silage.

PRACTICAL FARM ADVICE F01E



MAKING SILAGE USING SILO BAGS

So how do I make silage in silo bags?

- ❖ Harvest the maize crop at milk stage (*see photo*).
- ❖ Chop the stover plus grain into 3-cm pieces.
- ❖ Regularly pack and compact the chopped fodder in layers. This can be done by an adult climbing into the bag and pressing the material by foot. *See photos below*.



REMEMBER to check the bags regular to ensure they are free from holes.



Filling the bag and compacting as you go.



Compacting the stovers once the bag is full



Tying the bag to make it airtight

What is the capacity of the bags?

- ❖ The silo bags being pictured measure 2.5 by 1.4 m.
- ❖ When fully packed they can hold 300-350 kg of silage.
- ❖ This can feed a cow for 14 days when silage is fed at 20kg/day. See *fact sheet 06A* for more information on feeding silage as part of an annual feeding plan



Management of silage bags after opening

- ❖ Silage is ready 45 days after sealing.
- ❖ Only open the bag when you are ready to feed the silage.
- ❖ When the bag is opened, use the silage every day until the bag is finished
- ❖ Remove the required daily amount of silage and immediately close the bag tightly again.
- ❖ Repeat this procedure daily to reduce chances of increased spoilage of silage once the bag is opened.

REMEMBER to store the empty bag safely for use again next year.

The ZDTP is focused on supporting dairy farmers to improve their productivity, milk quality and linkages to urban markets. The views expressed in this publication are those of the implementers of the programme and do not necessarily reflect those of the New Zealand Government. For further information, please contact ZDTP Country Manager Tania Thomson on tania@primeconsultants.net or +260 96 456 4206.