

The Metal Silo

For improved grain storage



CIMMYT^{MR}

International Maize and Wheat Improvement Center



WHAT IS A METAL SILO?

It is an airtight cylindrical metal structure constructed by trained local tinsmiths for grain storage. Metal silos are of various capacities ranging from 2 to 20 bags.

ADVANTAGES OF THE METAL SILO

- ✓ Keeps grain for long with no damage
- ✓ Grain is secure from season to season
- ✓ Low maintenance costs
- ✓ Cheap in the long run
- ✓ Saves space
- ✓ Long-lasting
- ✓ Decent and attractive
- ✓ Easy to load and offload
- ✓ Theft-proof
- ✓ Rodent-proof



Esther Nduku Mutua, a farmer from Mutuobare Location, Mbeere South District, Eastern Province, Kenya, checking her metal silo before loading the maize.

PREPARING THE GRAIN FOR STORAGE

Dry the grains under direct sunlight for at least 2 days to the required moisture content depending on the type of crop.



ENSURING THE GRAINS ARE DRY

Test if the grains are properly dried using a glass/bottle and dry salt method, as follows:

1. Put a handful of grains and a handful of **dry** salt in a **dry** bottle or glass.
2. Shake for 2-3 minutes and allow to settle.
3. If salt sticks on the walls of the bottle, then the grains are not properly dried nor have they attained the required moisture content.
4. Dry your grains again and repeat the test.
5. If there is no salt sticking on the walls of the bottle, then the grains are dry and ready for storing in the metal silo.



LOADING THE DRIED GRAINS

1. Before loading the dried grains into the metal silo, tie the grain outlet lid with a rubber band.
2. Open the grain inlet lid.
3. Load the dried grains.
4. Insert a burning candle in the silo to exhaust/use up all the oxygen within it.
5. Tie the inlet lid with a rubber band.
6. Leave it airtight for 30 days in order to ensure that any insects that may have been loaded together with the grain die from the lack of oxygen.



OFFLOADING THE GRAINS

1. Remove the rubber band tied on the outlet lid.
2. Place your container below the outlet.
3. Off load the quantity you require
4. After offloading, put back the outlet lid and tie with the rubber band.



PLACING THE METAL SILO

1. Do not expose the metal silo to direct sunlight or rain water.
2. Avoid spillage of water on metal silo.
3. Keep it at least one meter or three feet below the roof.
4. Do not keep it in direct contact with the house walls.
5. Keep it on a platform.





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