

Maize harvesting

Harvesting is carried out with or without husks. Where the climatic conditions offer drying possibilities in the field, harvesting is done when cobs are already dry. Where climatic conditions are humid and do not offer possibilities of drying in the field, non-dry cobs still with husks are harvested and drying continues in the appropriate granaries or cribs.

Preparing the harvest

Before starting the harvest, it is necessary to take certain practical measures both inside the house as well as in the field. Among the most important are:

- Plan all harvest-related activities and get an idea of how the grain will be stored (husks, maize cobs or grains) as soon as the maize matures (Fig. 1).
- Mobilise and clean containers or bags to be used for harvesting.
- Empty and clean granaries or other structures to accommodate the harvest.
- Ensure that labour is available and that practical arrangements (remuneration and meals) are taken care of.
- Clean storage or pre-storage structures' surroundings in preparation for the harvest.
- Clear and clean drying areas while awaiting the harvest.

Maize Harvesting

During harvesting, certain practices are recommended, while others are to be avoided to minimise contamination of maize by certain insects and diseases such as mould.

Recommended Practices

- Harvest maize at full maturity at the moment when the grains are soft, yellowing, shiny
- The maturity of the maize cobs can be tested by checking the condition of the black layer that forms at the base of the grain (where they are attached to the cob). The layer can be observed by removing the grain

from the cob and scraping the tip with the nail (Fig. 4) as suggested by World Food Program (WFP) and Natural Resources Institute (NRI) in their document "Training Manual for Improving Treatment and Storage of Grains After Harvest."

- Harvesting can be carried out as soon as 75% of the stalks are yellowish, the leaves are slightly yellowish and the maize stands are still upright, because delayed harvesting, although it decreases drying time of grains, has disadvantages such as lodging, parasitic attacks, possible delay in planting the next crop, etc.
- Cut the maize directly at the stem and in the field if it is to be stored as cobs or grains. This makes it possible to reduce infestations and rotting, thus ensuring an efficient sorting and saving time and labour.
- When harvesting, it is necessary to isolate infected, mouldy cobs, or those from plants that have already fallen, from other cobs.
- Use clean bags or containers such as specific baskets for collecting maize cobs when harvesting manually from standing crops (Figs 3 & 5)
- Finish the harvesting in the shortest possible time, especially during the rainy season to prevent the cobs from getting wet. As much as possible, the harvest should be done during the bright and sunny days when the sky is clear.
- Burn the rejected maize cobs or dispose them off in a compost pit away from the production area (Fig. 10 & 11).
- If rain catches you during harvesting, cut the stem just below the cob and prevent the water entering the cobs by bending them downwards.



Fig. 1: Maize field ready to be harvested



Fig. 2: Corn harvesting from husks



Fig. 3: Harvesting maize in baskets

Practices to Avoid

- Avoid harvesting maize during the wet season when the moisture content is more than 22%, because it will be extremely difficult to dry it in such a way as to lower the water content sufficiently to keep it in good condition, or being shelled without the risk of being attacked by mould or contaminated by mycotoxins.
- Avoid late harvesting (some of the cobs fall down and this is called lodging) which exposes the maize to attacks and bad weather. In fact, the more the maize cobs are left in the field, the higher the chances of them being damaged by insects or noticing fungi forming around them.
- Avoid mixing healthy and damaged cobs during harvesting, as insect damage is an entry point for fungi, especially aspergillus, which is responsible for maize moulds (Figs 7 & 8).
- Similarly, separate the cobs from fallen plants.
- Avoid placing harvested cobs on an open ground to prevent damages and contaminations. In fact, the ground contains millions of aspergillus germs which contaminate the cobs once they touch the ground.
- Use the preferred types of bags which allow air circulation at harvest. Avoid polythene bags because they lock up humidity and humid conditions inside the bags encourage growth of mushrooms.
- Avoid harvesting after the rains or when air humidity is high.
- Avoid damaging the cobs during harvesting and transporting activities.



Fig. 7: Maize attacked by fungi



Fig. 8: Maize attack by weevils



Fig. 4: Mature maize grains with a black layer beneath the tip (which has been scratched)



Fig. 5: Harvesting maize in baskets



Fig. 6: Isolation of damaged cobs



Fig. 9: Heap the maize deposits directly into the ground



Fig. 10 & 11: Rejected maize cobs are sent to the compost pits

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