

Maize

Land Preparation

Maize need a friable, well aerated, moist and weed free seed-bed. The first ploughing should be done with soil inverting plough so that at least 20-25 cm deep soil is loosened. It should be followed by two to three harrowings or three to four intercrossing ploughings with local plough. Planking should be done after each ploughing. A properly leveled and uniformly graded field is required for good water management also.

A buffer zone of 10-30 m width should be kept to avoid contamination from the non-organic field.

Seeds and Sowing

The maize seed should be planted at a distance of 20-25 cm between plant to plant in a row and rows should have a distance of 60 cm. The seeds are sown at a depth of 3-5 cm. Ten to twenty per cent more seeds than the desired plant population would be normally required to compensate for various field losses. A seed rate of around 20 kg per hectare should be used.

Planting on the side of a ridge is adopted in high rainfall areas. Planting is done in narrow furrows in low rainfall areas. Under normal conditions, the planting is done in flat bed. In areas that face heavy storms during rainy season, planting on flat bed followed by earthing up after 40-50 days is recommended.

Date of planting differs from place to place. However, the following guidelines have to be observed in choosing the date in the case of *Kharif* maize.

In areas with irrigation facilities, planting is taken up two weeks before the onset of monsoon. In rainfed situations, the sowing of maize is done with the onset of rains. Sowing should be done through maize planter or seed drill or manually behind the country plough in furrows.

Water Management

Maize is sensitive to excess water as well as moisture stress. Water should not be allowed to stand in the maize field at any stage of its growth. Maize can tolerate heavy rains, provided excess water is drained away. A good crop requires about 460 to 600 mm of water during its life cycle. At tasselling to silking stage water requirement is critical. At shortage may reduce maize yields considerably.

Weeding

Critical crop weed competition period is first 45 days. The field should be free from weeds during this period. Manual, mechanical or different cultural weed control practices should be adopted. Different botanical or mycoherbicides can also be used and synthetic chemical herbicides should strictly be avoided.

Harvesting

- Husk is turned yellow, grains are hard enough and grains with about 20-25% moisture.
- Mature cobs are removed from the standing plants (plucking of cobs) and they are piled up for 24 hours and then spread for sun-drying.

Post Harvest Management

- Cobs are dried in sun for 5-6 days upto moisture reduces to 10-12%.
- Clean and dry grains are kept in air tight poly bags. By good storage quality and quantity of maize can be maintained upto 2 years.
- Winnowing is done for separating the seeds from husk.
- Normally grains are separated out from the cobs manually by hand or by using hand-sheller (hand-shelling).
- Recently, corn-shellers of greater efficacy (manually driven or electrically operated) are available for use.