Package of practices of Maize

CLIMATE

Maize can be grown in temperate high lands, tropical as well as sub-tropical regions. A moderate temperature, adequate moisture are basic need of Maize crop. However, the crop is susceptive to water logging condition, which needs to be avoided.

SOIL

Maize requires a well drained sandy loam soil with organic matter. It thrives well in soil pH between 5.5 to 8.0.

SOWING TIME:

1. Kharif season crop: Seed is sowed in the month of February/March.

2. Rabi season crop: Seed is sowed in middle of October to middle of November.

LAND PREPARATION AND MANURING

A well prepared flat-beds which has given 4-5 deep ploughing provided an ideal condition for sowing of crop.

1. FYM or compost: 5 tonne / ha

2. N: 100-120 Kg

3. P_2O_5: 60 Kg

4. K_2O/ 30-40 Kg

Urea should be applied in 3 splits, mainly at sowing, knee-high and tasselling stages. Entire dose of P & K_2O with 40 Kg urea should be applied at the time of sowing. Application of 25 Kg of $ZnSO_4$ at sowing is also recommended since maize is susceptible to Zn deficiency.

METHOD OF PLANTING

1. Seed treatment: Treated with Bavistan@ 3gm/Kg of seeds before sowing in the field.

2. Depth of Sowing: 4-6 cm, where maize is generally sown on flat beds.

3. Spacing: 70cm x 25cm for row to row and plant to plant

4. Plant density of 66,666/ha.

5. A healthy seeds of 20-22Kg required for cultivation in one hectare of land.

INTERCULTURE OPERATION:

Thinning should be done after 10 days of germination keeping one plant per hill. At knee high stage (about 35 days after germination) the crop plants should be earthed-up followed by light hand weeding. The second earthing up should be done at 60 days after germination of the crop; it may slightly vary in respective to locality.

IRRIGATION: For Kharif Maize, irrigation at early knee-high, tasselling and 50% silking stages are to be given.

For rabi Maize, first irrigation is to be applied 3-4 weak after seedling emergence, subsequently at 4-5 weeks till March and thereafter at 1-2 weeks interval.

Variety: Hybrid variety – Ganga hybrid makka-5, Himalayan hybrid Makka. The composite variety, Prabhat and Dhawal are specially recommended for cultivation in North-eastern hill regions. The variety of QPM (HQPM-3) and Baby corn (HM-4) are also found to be suitably grown in the district.

PLANT PROTECTION:

1. Maize Stem Borer: The Larvae attack the crop from June to September, first they scrap the leaves and then bore into the stem, thus resulting in dead heart of the central shoot.
   Control: Application of Endosulfan 35EC @250 ml and Monocrotophos 36 WSC @275 ml/ha in 125 litres of water by starting spray 2-3 weeks after sowing. Application of Neem based pesticides like Margosa @2 ml/ltrs of water are found to be benefecial.

2. Army worm and Silk cutter:These insects feed on the leaves in the Whorl.
   Control: Spray Sevin (Carbaryl) 50 WP@ 250g in 125 ltrs of water.

3. Leaf Blight: Maydis leaf blight symptoms appear on leaves on the form of spindle shaped neurotic to brown lesions. Such lesions may emerge to form large, irregular patches.
   Control: spraying of Indofil M45 @ 500g in 250 ltr of water/ha. Give the spray at 10 days interval.

4. Weed control: Pre-emergence application of Atrazine @ 1 Kg a.i/ha is recommended for weed control.
5. Bird damage: To save the crop from bird damage, apply Malathion 5% dust on cobs, especially on the outer rows.

Intercropping:

Growing of one row of soybean in between 2 rows of maize (60 cm spacing) gave increase in yield of maize.The planting of one row of Maize alternating every 4 rows of Urdbean or black gram (30cm spacing) is found to be most suitable, resulted in the highest productivity.

HARVESTING AND THRESING:

Maize is ready for harvesting even when the stacks and leaves are somewhat green but the husk cover has dried and turned brown. Shell Maize when the moisture content ranges between 15-20%. Conventional harvestor combines can be used for threshing Maize with husk to save labour involved in dehusking.

The Maize ears should preferably be dried for 3-4 days after harvesting to improve grain recoveries and reduce breakage losses during shelling.