

Scientific Maize Cultivation in Arunachal Pradesh



ICAR Research Complex for NEH Region
Arunachal Pradesh Centre, Basar -791 101
West-Siang District, Arunachal Pradesh



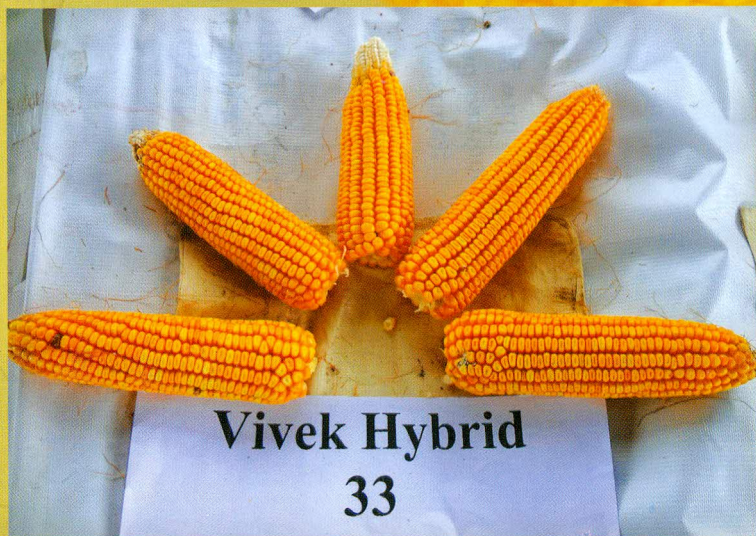
Maize is the important cereal crops and stands third after rice and wheat in area and production, the productivity is the highest among the cereals therefore it is called as queen of cereals.

Selection of Site and Land Preparation:

Any well drained soil is suitable for maize. Sandy and sandy loam fertile soils are preferable. It requires a deep fine and firm tilth.

Varieties:

Varieties like Vijay, Prabhat, Navjot, RCM-1-3, RCM-1-76, Vivek hybrid-9, 15, 19, 21, 25, 31, 33, Vivek QPM, DMH-849, All rounder, HQPM-1 and HQPM-9 can be sown.



Seed Rate:

Depending upon the seed size about 18-20 kg of seeds/ha are required.

Seed Treatment:

Seeds should be dressed with Carbendazim 50% WP @ 2g/kg of seed or Captan 50% WP @ 2.5g/kg of seed.

Sowing time:

- 1) For Jhum: February-March
- 2) For Kharif : May-June
- 3) For Rabi : September-October

Method of Sowing:

Seeds should be dibbled at a depth of 3-4 cm in rows 65-75 cm apart and at a distance of 20-30 cm from seed to seed within the rows (60 x 30 cm is recommended). Two seeds per hill are to be sown followed by thinning 10 days after germination retaining one seedling/hill. Depending upon the fertility status of the soil, a wider spacing can be used.



Manures and Fertilizers:

A combination of organic and inorganic fertilizer gives better results than inorganic fertilizer alone. Compost or FYM @ 5t/ha should be applied. Nutrient requirement from fertilizer is N 60 P_2O_5 40 K_2O 40 kg/ha. For hills zone, a dose of 90:40:40 kg N P_2O_5 and K_2O /ha is recommended under rainfed condition.

Method of Fertilizer Application:

FYM or compost should be applied during land preparation. The entire quantity of P_2O_5 and K_2O and half of the total N is to be applied in furrows (8-10 cm deep) and covered with 4-5 cm of soil. The remaining half of N should be top dressed in two equal

doses followed by earthing up; in each case. The first $\frac{1}{4}$ at 35 days after germination or when the plants are at knee high stage and the second $\frac{1}{4}$ at the tassel initiation stage of the crop i.e. 45-60 days after germination or at the time of elongation of the flag leaf whichever is earlier. The fertilizer should be applied on both sides of row and weeds should also be removed from the field during this operation. However, before application of the fertilizer a light hoeing is to be given between the lines 2-3 days ahead.

Weeding and Interculture:

Light hoeing and earthing up should be done as and when necessary. For further and adequate control of weed, atrazine should be applied @ 0.5-1.0 kg a.i./ha in 1000 litres of water as pre-emergence spray.

Intercropping:

Intercropping with cowpea, frenchbean, blackgram, groundnut and soybean are recommended at 1:1, 1:2 and 1:5 row proportion to utilize the available row space and higher yield.



Irrigation and Drainage:

Maize is primarily grown as rainfed crop; but application of irrigation at the time of soil moisture deficit ensures optimum yield. As per the availability of irrigation water application of irrigation at knee height, tasseling, silking stages and grain filling period are the four critical stage of the maize crop. Excess rain water can be drained out through surface drainage channel of 25 cm width, 15 cm deep spaced at 8 m distance.

Plant Protection:

When infestation of stem borer noticed, spray Deltamethrin @ 175 ml in 250 liters of water. As precautionary measure, the spray may be taken at 15 days after germination. Matured cobs can be protected from bird damage by tying cobs with leaves of the same plant.



Harvesting:

Harvesting should be done as soon as the husk covers turn brown and the silks are completely dry. Harvesting immediately after a shower should be avoided. Ears (cobs) should be thoroughly dried in the sun before shelling or storing unshelled.

Yield:

The maize yield is largely depends on management practices recommended. However, well managed crop gives 3.0 to 6.0 t/ha.

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