

Cultivation Methods of Rabi Maize



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Mono-cropping is the most prevalent cropping system in Meghalaya. However, there is considerable scope for second crop after the harvest of first crop. Maize is cultivated in an area of 4034 ha with the productivity of 1429 kg/ha which is lower than the national average. So, maize can be grown as second crop as an alternative approach to increase cropping intensity in the state.

Maize requires considerable moisture and warmth from germination to flowering. The optimum range of temperature for germination is 21° and for growth 32°. Extremely high temperature and low humidity during flowering may damage the leaf, desiccate the pollen and interfere with pollination, resulting in poor grain setting. Well distributed rain of 55-70 cm is conducive for proper growth.

Field Preparation : Maize can be grown in all types of soil having adequate provision of drainage. The field selected for maize cultivation should be ploughed 2-3 times to obtain fine tilth for better and uniform germination of the crop. Application of lime is necessary to achieve higher yield of maize as the soil of this region is highly acidic with pH ranging from 4.0-5.5. Therefore, lime @ 1-2 tonne/ha should be applied in soil at 1-2 week before sowing. Application of lime reduces the P fixation as well as Al toxicity leading to favorable condition for proper growth and development of maize.

Variety : Varieties suitable for rabi season are as follows:

RCM 1-1, RCM 1-2,

RCM 1-3, Laxmi Hemant, Dewaki Suwan, Vijay Composite, Gujrat Makki-1, DA 61A, RCM75, RCM76, HQPM 1,

Seed rate:

15-20 kg/ha

Sowing Time :

High altitude :

Mid Aug- Last Aug

Mid altitude :

Mid Aug - Mid Sep

Low altitude :

Last Aug- Mid Sep

Spacing :

High altitude : 40 x 20 cm

Mid altitude : 50 x 30 cm

Low altitude : 40 x 15 cm

Fertilizer application : 80-60-40 NPK kg/ha or 23 kg Urea, 33kg SSP and 9kg MOP/bigha, respectively should be applied. Half dose of nitrogen and full dose of P and K should be applied at the time of sowing. The remaining half dose of nitrogen should be applied in 2 splits. i.e. at knee high stage and tasselling stage. FYM @ 10 tone/ha at least 20-30 days before sowing of maize with half dose of recommended dose of NPK produce the same yield as obtained due to 100% of the recommended dose of NPK .

Irrigation : If sufficient rainfall occur, it is not necessary to irrigate the field. But if there is dry spell at some of the critical stages of maize, irrigation should be provided at these stages immediately to avoid any loss in yield. These stages are knee high stage, tasselling stage, grain formation stage and milk/dough stage.

Weeding : Keeping the field free from weeds upto 60 days is necessary to obtain higher yield of maize. Pre emergence application of Atrazin @0.5 kg ai/ha or Simazin @ 1.5-2 kg ai/ha, respectively has been found to control the weed effectively. Under integrated approach of weed control, application of Atrazin@ 0.5 kg a i /ha as pre emergence followed by one hand weeding at 45 days after sowing found to control the weed and increase crop yield

Harvesting: When the silk attains brown colouration, then the cob is ready for harvest.