

rapid and normal development of corm. Due to high rainfall leaching of nutrients is faster in this region, therefore fertilizers especially N should be applied in the form of several split doses. Earthing-up should be done after each top dressing.

Plant protection:

Colocasia is not affected by serious diseases and insects as in other parts of the country. But in this region it is generally affected by following diseases and insects.

Leaf blight: Leaf blight of colocasia is the most destructive and this is common in the region due to high rainfall during cropping season. When weather is cloudy, rainfall coupled with moderate temperature & high humidity, the epidemics of disease is favoured. The disease appears on the foliage first as purple to brownish circular water-soaked lesions of 1-2 cm in diameter, usually at the tip, base and margins of the leaves.

Control: The disease can be controlled by using 2-3 spray of Dithane M-45 @ 2 g/ litre of water followed by Ridomil @ 2 g/ litre of water after 15 days of first application. The spraying should be started 3-4 months after planting if symptom appears. Otherwise one prophylactic spray of Dithane M-45 @ 2 g/ litre of water is sufficient.

Corm borer (*Haplosonyx chalybaeus*): It is a serious insect of colocasia. The larvae makes holes in developing corms and corms become unmarketable and unfit for consumption.

Control: Carbofuran 3G @ 1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base. Entomogenous fungi *Beauveria bassiana* @ 10⁹ spores/ml found effective to control the grubs.

Leaf webber: The larvae rolls the leaves and feeds on them thereby reducing the photosynthetic area of the leaves.

Control: Collect the leaves and burry them in soil. Collection of adults during June-August hiding below the leaves and leaf bases. Crop should be sprayed with Endosulfan @ 2 ml/litre of water.

Harvesting and yield:

Crop gets ready for harvest when most of the leaves begin to turn yellow. Generally, it takes 6-8 months after planting depending upon the variety. Damage to tubers should be avoided while harvesting. Generally 20-25 t/ha tuber yield is obtained by adopting improved package of practices.

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COLOCASIA

Package of Practices for Cultivation in Meghalaya



Technology Mission (MM-1)



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MEGHALAYA

Colocasia (*Colocasia esculenta*), an important member of family *araceae* is known as Kashriew in Khasi, Kachu in Assamese and taro, eddoe, dasheen or old cocoyam in hindi. All the plant parts *i.e.* leaves, petioles, corms and cormels are eaten in some or other parts of north eastern region. It is an important source of food during lean period and feed for livestock. It is abundantly grown both in nature and kitchen garden of the farmers. The farmers are generally growing local varieties as a mixed crop. Lack of improved genotypes /varieties and marketing facilities are the major constraints in commercialization of this crop. A good yield can be obtained by adopting the improved production technology.

Nutritional value:

It is a rich source of carbohydrate, minerals and vitamins. Starch is a main constituent of carbohydrate in colocasia. Peel contains non starchy nutrients and can be used as feed. The calcium oxalate content varies from 0.1 to 0.4 % on fresh weight basis. The irritating effect can be removed after boiling. It is also a rich source of Ca, P, Fe, vit. C *etc.*

Soil and climate:

The best soil is sandy loam or alluvial with abundant organic matter and moisture holding capacity. The land should be ploughed 2 to 3 times after applying adequate quantities of organic manure. It requires a warm humid climate with a mean temperature above 20 °C. In natural habitat, it is commonly found near water sources. This crop also survives well at high altitudes on hills if frost-

free conditions remain during the cropping season. An annual rainfall of 200 cm, well distributed during growth period is required for optimum tuber yield. When rainfall is low, yield is reduced.

Planting material:

- (a) Small corms or setts cut from large corms.
- (b) Cormels or setts cut from large cormels.

The planting material *i.e.* corm /cormel should be true to type, 40-50 g in weight, disease/insect free, without cuts and fully sprouted at the time of sowing.

Time and method of planting:

May-June is the best planting time for Meghalaya. Planting is done on well prepared land in pits filled up with farm yard maures and burnt leaves, straw, bushes *etc.* Sprouted corms or cormels are planted 5-7 cm deep at a spacing of 40-50 cm between and within rows in the pits. When plants grow to about 30 cm height, the soil around is loosened and earthing up is done.

Water and weed management:

There is sufficient rainfall in the region throuout the growing period. Therefore proper drainage is required to avoid the water logging. Weed problem is more critical at early vegetative growth and during late season. Keeping the plots free from weeds during initial periods of crop growth helps in better growth. Weeds are generally removed manually. Mulching with dried leaves just after planting reduces the weed growth. Mulching with black polythene is found beneficial for both reducing the weed and increasing the yield.

Varieties:

Farmers are generally growing local types which are available with them. ICAR Research Complex for NEH Region, Umiam has identified several genotypes/ varieties like ML-1, ML-2, ML-9, BCC-1 and Nadia Local which are not only high yielding but also moderately resistant to leaf blight, a major disease of colocasia in this region.

Table 1: Colocasia genotype recommended for Meghalaya

Variety	% Disease	Remarks	Yield (q/ha)
ML-1	13	Moderately resistant	228
ML-2	18	Moderately Resistant	205
ML-9	19	Moderately Resistant	210
BCC-1	10	Resistant	169

Manure and fertilizer:

Being a tuber crop it responds well to manure and fertilizer application. Well rotten FYM or compost should be applied @ 12-15 t/ha at the time of sowing. In addition 220 kg Urea , 375 kg SSP and 134 kg MOP should also be applied per hectare. One third dose of Urea and full dose of SSP and MOP should be given at the time of planting, while the remaining two third doses of Urea should be applied in 2-3 split doses at 30 days interval after every weeding. Initial application of NPK helps in rapid development of early leaves. The second application should be given after 2-3 months of sowing in order to ensure