

Package of Practices of Potato

Potato is an important crop and it can supplement the food needs in a substantial way as it produces more dry-matter food, has well balanced protein and produces more calories from unit area of land and time than other major food crops.

Climate

Potato is basically a crop of temperate region but there is a large variation in the gene pool with respect to crop's response to thermoperiods. Generally potato crop is raised when maximum temperatures are below 35°C and minimum temperatures below 20 °C (with ideal tuberization temperature in range of 16-22 °C).

Soil

Potatoes can be grown in alluvial, hill, black, red and laterite soils having pH in the range of 5.5-8.0. Soil should be fine, loose and without compacted layers that hinders root penetration and de-shapes tubers. Well-drained coarse or sandy loam to loamy soils, rich in organic matter are ideal for potato cultivation.

Land Preparation:

One deep ploughing followed by three to four shallow ploughings are sufficient to prepare the soil to good tilth. Planking is necessary to break clods to make soil loose, friable and porous and to conserve soil moisture for better sprouting.

Dormancy Breaking

Cut the tubers in pieces having at least three healthy eyes and dip in 1% solution of thiourea for one hour. The planting should be done just after treatment or kept in wet gunny bags for one night.

Varieties

Kufri Jyoti, Kufri Giriraj, Gulmarg Special, Shalimar Potato-1, Shalimar Potato-2.

Seed Rate: 20-25 q/ha.

Seed Size: 35-45g.

Planting Time

- a) High Hills (above 1800 m) : Mid April-May.
- b) Mid Hills (1600 m) : Mid March

Manures and Fertilizers

Apply 25-30 tonnes of farmyard manure at the time of planting. Recommended doses (kg/ha) of N, P & K are 150:100:100 respectively. Nitrogen is applied to the crop in two split doses, i.e.

half at the time of planting and remaining half at the time of first earthing up for effective utilization by the crop.

Planting Method

Normally a spacing of 60 cm between rows and 20 cm between plants is adopted. Ridge and furrow method is the most popular method carried out manually or mechanically. In manual method, the furrows are made with the help of curved/narrow-blade spade followed by fertilizer mixture application, covering it with soil and finally making of ridges. The seed tubers are dibbled on each ridge.

Intercultural Operations and Irrigation

First earthing up is done when plants are 10-15cm long. Final earthing up is done when crop is 6-8 weeks old. First irrigation is given when sprouts emerge out of soil and subsequent irrigations are given as and when required. Always give half ridge irrigation. Irrigation is withdrawn 15-20 days before harvesting of crop to allow firming of tuber skin.

Mulching:

Plant material such as paddy straw, maize or farm refuses acts as good mulch and is applied on ridges. In hilly regions, local available material such as pine needles or leaf litter are quite effective in controlling run off loss and conserving moisture.

Weed management

Weeds are well managed by cultural or chemical methods or combination of both the methods. They are effectively controlled by hoeing and weeding when the crop is about a month old followed by earthing up.

Harvesting

Crop is ready to harvest when tops begin to dry and topple down. At this stage it is advisable to dehaulm the crop for increasing the shelf life of tubers. Harvesting is done manually with the help of spade or *khurpi* or by bullock drawn single row digger/plough.

Post harvest Handling

After harvesting, potatoes are kept in heaps in cool places for another 10-15 days for drying and further curing of skin. Heaps 3-4 meter long, wide at the base and about 1 meter wide at the top are the best. In hills the harvested potatoes are spread in well-ventilated rooms for drying. Before grading, all the cut, damaged and rotted tubers are removed. The tubers are then graded and packed in gunny bags according to sizes preferably in 4 sizes, e.g. small (less than 25g), medium (25-50g), large (50-75g) and extra large (above 75g).