

Package of Practices:

Potato (*Solanum tuberosum*)

Description - Potato (*Solanum tuberosum*) belongs to the family Solanaceae and is the most important food crop in India. The potato is a crop so-called a ' poor man's friend. Potato is being cultivated in the country for more than 300 years Potato is a temperate crop.

Field preparation –

A well-pulverized seedbed is required for good lubrication of the potato crop. Potato is taken as a Rabi crop. Soon after the harvest of the Kharif crop, the field should be plowed once 20-25 cm deep with soil turning plow. Thereafter, two to three cross harrowing or four to five ploughings with local plow should be done. One or two plankings are also needed to make the surface smooth and level. Enough moisture is essential at the time of sowing.

Recommended variety - Kufri Jyoti & sugar-free L R and Kurfi - Chipsona - 1 (for chips)

Seed rate -

The seed rate is about 1.5 to 2.5 tonnes per hectare.

Spacing –

A row-to-row distance of 45 to 60 cm and plant-to-plant 15 to 20 cm should be maintained in the main crop.

Seed treatment –

Soaking Potato seed tubers with 1% urea and 1% sodium bicarbonate and subsequently treating with Azotobacter and Phosphobacteria (bio-fertilizer) gives higher tuber yield and reduces the use of N and P fertilizers up to 25%.

Sowing time - a) Early crop-25th September to 10th October

b) Main crop-15th October to 25th October

Planting method –There are three methods of planting:

1. **Planting potatoes on ridges:** After preparation of the field, ridges are made at a distance of 45-60 cm with the help of a spade. Planting of potatoes is done on the ridges with the help of khurpi.
2. **Flat method:** Planting of potatoes is done on a flat surface in shallow furrows. Ridges are made after germination when plants attain 10-12 cm in height. This method is suitable for light soils. Later on, two to three things are done to make the ridges thick.

3. Planting potatoes on a flat surface followed by ridges: In this method field is prepared and then shallow furrows are opened on the flat surface. Potatoes are planted in furrows and immediately after planting tubers, small ridges are made. Later on, these ridges are made thick by earthing up of the side soil.

Irrigation management –

The potato crop is very much responsive to good water management. Removal of excess water is essential. The soil must be kept always moist but hardening or too wet conditions of soil should not be allowed. Irrigation may be moderate to heavy but over-flooding of water on ridges should be avoided.

Weed management – Manual Weeding

Fertilizer management – Generally 20-0 tonnes of FYM is recommended for potato cultivation. FYM is applied to the field during land preparation.

Disease and pest management –

Best practice for effective control of potato pest complex (soil born as well as sucking pests) - Application of phorate 10 G @ 1.5 a.i./ha at planting + foliar spray with chloropyriphos 20EC @ 0.5 kg a.i. /ha at 45 DAP + foliar sprays with cartap hydrochloride 50 sp @ 1.0 kg a.i./ha at 60 DAP + foliar sprays with imidacloprid 17.8 SL @ 0.04 kg a.i./ha at 75 DAP.

Best practice for controlling late blight - Either spraying twice with ridomil MZ-72 (8% metalaxyl + 64% mancozeb) @ 2.5 g/lit at 7-10 days interval or spraying twice with Antracol (70% propinab) @ 2.5 g/lit at 7-10 days interval is very much effective.

Micronutrient management –

Harvesting –

The crop should be harvested when haulms start yellowing and falling on the ground. At this stage, haulms should be removed at ground level. The crop should be harvested about 15 days after cutting the haulms. There should be optimum moisture in the soil at the time of harvest. After digging, the tubers may be allowed to dry on the ground for some time in the shade.

