

## Production Technology of Potato Mainly Practiced in Pakistan

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### Abstract

Potato, aalu (*Solanum tuberosum*) is important crop in Pakistan because potato crop gives more yield as compare to other crops grown in Pakistan. Potato rich in Carbohydrates, protein, minerals, vitamins etc. The highest production of potato is in Punjab, followed by Khyber Pakhtunkhwa, Balochistan and Sindh. Main areas of production of potato which contribute 75% in Punjab includes Okara, Depalpur, Sahiwal, Qasor and Pakpattan. In this review is detail about production technology of potato that normally practiced in Pakistan. This article is result of different books, journals etc.

**Keywords:** Technology; Potato; Pakistan

### Introduction

Potato (*Solanum tuberosum*) annual plant of Solanaceae family grown for edible tubers. Potato consumption in Pakistan is showing an upward trend, now annual per capita intake is over 16kg. Apart from some subsistence growers in the north, most Pakistani farmers produce for urban markets rather than household consumption, and the potato has become a significant source of rural income.

### Production Areas

- **Punjab:** Okara, Depalpur, Sahiwal, Pakpattan, Basirpur, Arifwala, Daska, Kasur, Gujranwala, Shiekhupura.
- **Khyber Pakhtunkhwa:** Nowshera, Mardan, Sawabi, Mansehra, Abbottabad, Swat.
- **Baluchistan:** Kalat, Pishin, Ziarat, Kila Saifullah, Loralai, Quetta.

### Land requirement and preparation

Potato crop require good fertile soil which should have proper drainage system. Soil organic matter should not be less than 1.5. For better germination of potato crop plough soil with mold board plough and two to three time plough the land with cultivator to pulverize the soil. It grows best on sandy loamy soils having PH 6 - 7.5.

### Seed Rate

For autumn crop seed rate is 1200 - 1500 kg. Tuber size should be of egg size. Spring and summer crop seed rate is 500 - 600kg. The tubers should be cut in to pieces and each piece should have two eyes. 50 - 60-gram weight or 50 - 60 mm seed should be used.

### Seed treatment

- For sprouting of tubers, better germination and early maturity. Tubers are spread in thin layer in a cool place and exposed to diffused light.
- Seed Treatment is very important to protect plants from diseases i.e. *Rhizoctonia solani* or any other;
- The tubers are dipped in 1% thiourea solution for 1 hour before planting. This treatment is given to break the dormancy of the tubers when they are to be used before resting period of the tubers when they are to be used before resting period of 2.5 to 3 month.

### Sowing Time

- **Autumn Crop:** 15 sep. to 15 nov. crop sown in this time require temperature 20 to 25°C at germination
- **Spring Crop:** 1<sup>st</sup> Jan. to 15 Feb. Crop sown at this time not suitable for seed production.
- **Summer Crop:** 1<sup>st</sup> April to 30 June.

Method of Sowing

Sowing of potato is done in furrows. Row to row distance should be 60 – 75 cm and plant to plant distance should be 20 cm. Seed depth should be 7 - 10 cm. egg size seed is best for seed purpose.

Fertilizer requirement

12-15-ton FYM per acre should be added before 45 - 60 days of sowing crop. Before applying chemical fertilizer land test should perform to check fertility level of soil.

N = 100 kg P = 50 kg K = 50 kg zinc sulphate (21%) =10 kg

Irrigation

First irrigation done immediately after sowing. Water should not over the furrows otherwise germination will be affected. Water should remain 2/3 of furrows. Then water should apply with 7 - 10 days of interval.

Varieties of Potato

- 1. Cardinal
- 2. Diamant
- 3. Faisalabad White
- 4. Faisalabad Red
- 5. SH-5
- 6. PRID
- 7. DESIREE
- 8. LADY ROSSETTA –RED
- 9. RODEO.

Weeds

- 1. Trianthema portulacastrum
- 2. Phalaris minor
- 3. Avena fatua
- 4. Chenopodium album
- 5. Dectyloctenium aegyptium
- 6. Rumex dentatus etc.

Weeds control can be done through manually (hoing), mechanically or chemically by using different chemicals recommended by experts.

Diseases

- o Late Blight of Potato
- o Early blight of Potato
- o Fusarium Wilt
- o Common Scab

- o Stem Canker
- o Potato Leaf Roll Virus
- o Mosaic

These diseases are control by using healthy seed. Proper seed treatment with chemicals. Diseased plant should rooted up.

Insects

- o Jassid
- o Cut worm
- o Aphid
- o Whitefly
- o Potato tuber moth
- o Helicoverpa Armigera American Caterpillar

Control by using resistant varieties. Using light traps. Pest scouting should also be done for better control of insects. Different insecticides are also used for the control of insects.

Storage

Cut the above ground spreading 10 to 15 days before harvesting so that potato skin become hard and should not spoil during cold storage. Air circulation is necessary during storage [1-6].

Conclusion

Potato is poor man food in Pakistan and every farmer can get yield up to 200 mond per acre using this production technology. There needed great research work on potato to achieve better results.

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