



Potato

About Potatoes

Potato is a cool season vegetable that can be grown at various times of the year depending on the local environment and the variety. Potato is vegetatively propagated by planting small whole tubers or pieces of larger tubers. Varieties vary in color, size, shape and starch content; processing types are low in sugar also. "Seed" potatoes (i.e., the young tubers) should be certified free from diseases.



Climate and Soil

Temperature	Frost tolerance	Water needs	Tolerance to waterlogging	Drought tolerance
Cool 20-25°C. Wide range of soil temp at planting possible.	Tolerant to mild frost for short periods.	Shallow, sparse root system, Medium-high needs; frequent light irrigation best.	Low. Tuber rot and soil fungal diseases increase at high soil water.	Poor to fair. Stress causes irregular tuber growth and poor quality.
Humidity tolerance	Wind tolerance	Soil needs	Nutrient requirements	
Medium – Leaf foliar diseases if wet.	Fair to poor.	Light to medium texture. Well drained.	High N and K; medium P	

Production, Harvest and Postharvest Practices

Planting Material	Vegetative using tubers or pieces of tubers, 50g. Certified, disease free seed is important.
Varieties	Many and varied. Local climatic adaptation and market preference Processing varieties are lower in sugar and higher in starch.
Spacing	15-30 cm in-row. Single row on 80-100cm beds. Approx. 30,000-60,000 plants/ha
Field Preparation and Planting	Level soil to permit irrigation. Irrigate pre-plant. Plant in Apr-May in temperate zones; Dec-Mar and Jul-Aug possible in Mediterranean zones. Raised beds to increase soil surface area, aeration, drainage. Plant 15-20 cm deep in moist soil.
Time to harvest	6 to 9 months after planting. Tubers mature after vines die and skins set.
Expected yields	20-50 t/ha
Harvest	Machine or machine assisted harvest. Bruise prevention is critical.
Storage	Storage potential may be long if cold facilities are available. Cool gradually to 5C. High humidity (95%). Length dependent of variety, up to 9 month or more.
Pests and diseases	Weeds, insects, nematode, viral/fungal/bacterial diseases

Prepared by Ron Voss and Mark Bell, June 18, 2007

Primary references: R.E. Voss. Potato Production Principles and Tips. www.vric.ucdavis.edu.
T. Suslow and R. Voss. Postharvest recommendations for Potato. www.vric.ucdavis.edu
UC IPM Pest Management Guidelines. [www.ipm.ucdavis.edu](http://ipm.ucdavis.edu)

For more information visit: International Programs <http://ip.ucdavis.edu/>

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