**WHITE POTATO**

**Technical Guide**

**GENERAL GUIDELINES**

**Choice of Cultivar**
- Based on market demands and environmental requirements. E.g. white and skin varieties
- Choose certified Elite or Super Elite seeds.

**Soil type**
- Cultivated on a wide range of soil types, however sandy- loams are best.
- Sols rich in organic matter with pH of 5.5-7 is recommended.
- Soil must be well drained with good moisture retention.

**Site selection**
- Land should be flat or slightly sloped, and free from any obstacles, or boulders.
- Select fields that are well drained, open and ventilated.
- Avoid areas that are prone to flooding. Avoid areas where Solanaceae crops (e.g. tomatoes) has been previously grown in the last 2-3 years.

**Planting schedule**
- Planting season is from Oct–Feb. However, ideal planting times in the South region are from Dec-Jan, and from Oct-Dec in the Northeast region.

**Fertilizer and other inputs**
- Fertilizer application should be based on the results from a soil test conducted at least 4 weeks before planting. The results can be useful for at least 2 years.
- Generally, fertilizer can be added in inorganic or organic forms. Nitrogen is required at 95kg, phosphorus 215kg and potassium 320kg per acre. The rule of thumb is 15,1g of NPK per seed, or 1.5kg (5.4 lb) per 100 ft. furrow.
- Micronutrients are also required. Bio-stimulants and homemade compost teas are reported to be good additions.
- Weekly application of fungicides in rotation is recommended.

**Rotation**
- A 3.5-year rotation is recommended to reduce the risk of build up of pests.
- Avoid crops from the same family and rotate with non Solanaceae crops like tomatoes and ginger which can be planted directly into the old furrows.

**Irrigation Requirements (per acre)**
- Approximately 20-40 inches of rainfall is required over the growing period.
- Under irrigation ~ 28,000-42,000 gallons per week.

**Land preparation**
- Utilize the stale seed bed technique to reduce weeds.
- Start land preparation at least two weeks before planting. Planting normally starts from Dec-Jan in the South region and from Oct-Dec in the Northeast region.
- Though to a depth of 18, harrow to create furrows at least 2.5-3ft apart between furrows.
- Organic matter (compost) can be incorporated into the soil at this stage.

**Planting**
- Air dry seed tubers before planting and visually inspect for deformity.
- Use sprouting seed tubers to ensure viability and to reduce weed competition.
- Broadcast NPK fertilizer in furrows and cover with at least 2 inches of soil before planting seeds.
- Plant seed tubers greater that 25mm 12 inches apart, and seed tubers less that 25mm can be planted 10 inches apart.
- Mould plants 1-2 weeks after germination or when the plant is 8 to 12 inches tall.
- Monitor weekly for pest and diseases on both the upper and lower foliage.
- Apply fungicides weekly to prevent fungal spores from washing down on the tubers.
- Harvest free tubers to confirm maturity. Mature tubers bruise less when rubbed with one’s fingers.
- Improve skin quality can be achieved by removing the stems (top killing). However, the climate must be monitored as pruning wet periods and high soil temperatures can cause deformation.

**Germination 1-2 Weeks**
- Monitor weekly for pest and diseases on both the upper and lower foliage.
- Conduct weekly and timely preventative applications of fungicides in rotation.
- Apply fungicides weekly to prevent fungal spores from washing down on the tubers.
- Harvest free tubers to confirm maturity. Mature tubers bruise less when rubbed with one’s fingers.
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**Vegetative 3-5 Weeks**
- Monitor weekly for pest and diseases on both the upper and lower foliage.
- Conduct weekly and timely preventative applications of fungicides in rotation.
- Monitor and apply appropriate pesticides for mites and insects.

**Tuberization 5-9 Weeks**
- Monitor plant between 10-30 days after emergence for signs of maturity, e.g. when leaves turn from green-yellow to yellow and brown, stems die back and senescence.
- Apply fungicides weekly to prevent fungal spores from washing down on the tubers.
- Harvest tubers by hand aid of a fork, or mechanically.
- Exercise care when harvesting to prevent cuts and bruises on the tubers.
- Transport harvested potatoes from the field to crates.

**Maturation 10-14 Weeks**
- Monitor plant between 10-30 days after emergence for signs of maturity, e.g. when leaves turn from green-yellow to yellow and brown, stems die back and senescence.
- Apply fungicides weekly to prevent fungal spores from washing down on the tubers.
- Harvest tubers by hand aid of a fork, or mechanically.
- Exercise care when harvesting to prevent cuts and bruises on the tubers.
- Transport harvested potatoes from the field to crates.

**Harvesting 13-15 Weeks**
- Monitor plant between 10-30 days after emergence for signs of maturity, e.g. when leaves turn from green-yellow to yellow and brown, stems die back and senescence.
- Apply fungicides weekly to prevent fungal spores from washing down on the tubers.
- Harvest tubers by hand aid of a fork, or mechanically.
- Exercise care when harvesting to prevent cuts and bruises on the tubers.
- Transport harvested potatoes from the field to crates.

**Post-harvest**
- Allow bruises incurred during harvesting and transportation to heal before storage.
- Keep tubers for 2-3 weeks based on variety to ensure the hardening of the skin tissue.
- Store tubers in ventilated crates or bins stacked no higher than 4m (13ft 4in) in height.
- Store tubers in a dark, cool, well-ventilated room with temperatures ranging from 20-25°C and with ~90% humidity.

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