

Onion farming tips

Ecological Requirements

- Onions do best in well-drained soils that are at least 60m deep, shallow soil may be utilized, but with adaptations in management practices
- Though onions can be produced on a wide range of soil types, avoid heavy soils as these may lead to problems such as bad aeration, crusting and a blemished product of lower quality
- Best pH range is 6.0 – 6.8; lower pH levels can result in problems with regard micronutrient uptake
- It grows best at below 1,900m altitude; 500-700mm rainfall; 15- 30 °C temperature range.

Varieties

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| <p>RED PINOY F1 from Royal Seeds</p> <ul style="list-style-type: none">• Well adapted onion to both rain fed and irrigation• Maturity only 90 days from transplanting• Strong pungency• Yield potential 30 tonnes per acre• Long shelf life of up to 6 months at room temperature• Deep red attractive bulbs with a high market demand | <p>RED CREOLE from Royal Seeds</p> <ul style="list-style-type: none">• Well adapted to diverse climatic conditions• Maturity 150 days from transplanting• Ideal onion for the fresh market• Yield potential 16 tonnes per acre• Good storage quality• Deep red colour | <p>BOMBAY RED from Royal Seeds:</p> <ul style="list-style-type: none">• Very pungent onion• Maturity 150 days from transplanting• Very popular red onion with farmers and the market• Yield potential 16 tonnes per acre• Excellent shelf life and transportability• Deep purple red colour | <p>TEXAS EARLY GRANO from Royal seeds</p> <ul style="list-style-type: none">• A high yielding variety well adapted for the tropics• Maturity 120 days from transplanting• Very popular white onion with farmers and the market• Yield potential 21 tonnes per acre• Excellent shelf life and transportability• White colour with golden exterior |

Land preparation

- Land should be ploughed or ripped as deep as possible, and a good seed bed prepared, with all lumps broken up with a disc and smoothed with a roller.
- Make a nursery bed to raise your seedlings near the planting site.



Planting

- Seedlings will be ready for transplanting in about 40 days when 10- 15cm. 7-10 days before transplanting gradually reduce watering and remove the shade. This will give the seedlings chance to get used to the strong sunshine.
- Just before transplanting (2 hours before transplanting) water the nursery fully so that you will be able to remove each seedling with a little lump of soil.
- Before planting apply 10 – 16tons/acre of well-rotten manure (do not apply fresh manure as it will cause development of thick necks and excess leaves at the expense of bulb formation) and 80kg TSP and dig these into the soil.
- Transplant early in the morning or late in the evening (from 6 – 10 am or 4 – 6pm)
- Uproot the healthy strong seedlings leaving the weak seedlings to strengthen for planting latter.

- Space 30 x 10cm. Make holes 1.3cm ($\frac{1}{2}$ "") deep, and then firm up the seedling with the surrounding soil.

Top-dressing

- When Onion start to grow well, top-dress with 120kg/acre CAN.

Weeding

- Onions develop slower than other vegetable crops and are more susceptible to weed competition especially during the early growth stages, this can result in yield losses.
- Weeds can be controlled successfully through either pre- or post emergence herbicides, use only registered products.
- Care should be taken to avoid damage to the bulbs when mechanical weed control measures such as hoeing are used.

Diseases

| Purple Blotch | Downey Mildew | Rust | Fusarium rot |
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| <p>Small water-soaked lesions on leaves or stalk with white centers; which enlarge to become zonate and brown to purple in color with red or purple margin surrounded by yellow zone; large lesions may coalesce and girdle leaf, killing any tissue between the lesions and the leaf tip; severely infected foliage may die</p> | <p>Pale spots or elongated patches on leaves; gray-purple fuzzy growth on leaf surface; leaves turning pale then yellow; leaf tips collapsing</p> | <p>Small white flecks on leaves and stems which develop into circular or elongated orange pustules; severe infestations can cause leaves to yellow and die</p> | <p>Rotting of bulbs, yellowing and root wilting</p> |
| <ul style="list-style-type: none"> ● Routine spray with fungicides like RIDOMIL ● Plant resistant varieties such as Red Creole ● Cultural methods | <ul style="list-style-type: none"> ● Destroy all crop residual after harvest ● Practice crop rotation ● Use fungicides like THIOVIT JET, SCORE & ORTIVA | <ul style="list-style-type: none"> ● Plant resistant varieties ● Spray with fungicides SCORE and ORTIVA ● Cultural methods (crop rotation and field sanitation) | <ul style="list-style-type: none"> ● Use certified seed |

Pests

| Pests | Description | Control |
|--------------|---|---|
| Onion thrips |  <p>These are tiny brown insects found between the leaf sheath and stem which cause silvery streaks on leaves. The tips of affected leaves wither and die.</p> | <ul style="list-style-type: none"> • Spray with MATCH if crop is less than 6 weeks, in older crop use KARATE |
| Leaf miners |  <p>Thin, white, winding trails on leaves; heavy mining can result in white blotches on leaves and leaves dropping from the plant prematurely; early infestation can cause yield to be reduced; adult leafminer is a small black and yellow fly which lays its eggs in the leaf; larvae hatch and feed on leaf interior</p> | <ul style="list-style-type: none"> • Remove plants from soil immediately after harvest • Spray with DYNAMEC |

Harvesting

- When the soil at the base of the plants begins to crack, this indicates that the bulbing process has begun.
- When the onion bulbs are mature, the leaves will begin to yellow and fall over.
- For bulb purpose onion become ready for harvesting in 120 to 150 days.
- Harvesting is done when 50-75% of leaves have dried and drooped down. Bend over the rest of the tops.
- After a few days, the bulbs can be pulled from the soil and left on the soil surface to begin curing.



- Onions are left in the sun for 10-14 days to cure with the bulbs covered by the leaves. Do not leave the onions in the ground for longer than 2 weeks as they become open to organisms that can cause rot in storage, or they might even start growing again.
- Once the neck of the bulb has dried completely, the leaves can be cut and the bulbs stored. Cut dried leaves 3.5cm (1.5 inches) from the stem and remove the roots, then grade bulbs according to size & quality.