

### Bulb Growth Stages of Onion

*Allium cepa* L.

#### ALLIUM TYPE

Fresh Market and Storage Onion

Both pre- and post-bulb production are technically vegetative growth phases that occur during the first cycle of growth after planting (seeds, transplants, sets).

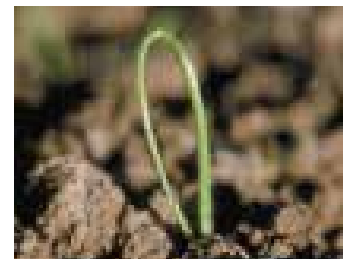
#### PRE-BULB GROWTH STAGES

- 1 Radical and flag leaf emergence (10–30 days post seeding) *Fig. 1*
- 2 One to two true leaves (30–50 days p.s.)
- 3 Three to four leaves (50–70 days p.s.) *Fig. 2*
- 4 Five to seven leaves (70–90 days p.s.) *Fig. 3*
- 5 Eight to 12 leaves, bulb initiation (90–110 days)

#### POST-BULB GROWTH STAGES

- 6 Bulb diameter of 2.5 to 4.0 cm (110–130 days p.s.)
- 7 Bulb diameter of 4.0 to 7.5 cm (130–150 days p.s.) *Fig. 5*
- 8 Bulb diameter greater than 7.5 cm (150–170 days p.s.)
- 9 Bulb enlargement complete, greater than 50% cropped to dry down (more than 170 days p.s.) *Fig. 6*

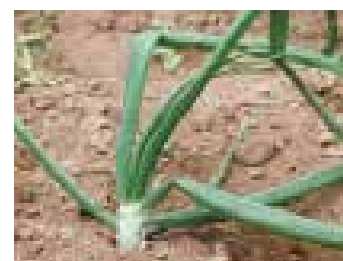
Reproductive Stages do not technically begin until the second cycle of growth after vernalization of the mature bulb; the bulb will then produce a scape or seed stalk (*Fig. 7*) and umbel (*Fig. 8*) which produces true seed after fertilization.



*Fig 1*



*Fig 2*



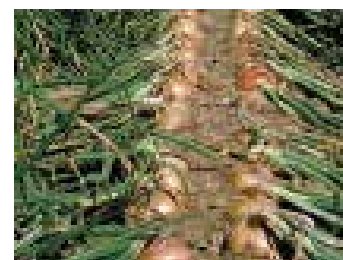
*Fig 3*



*Fig 4*



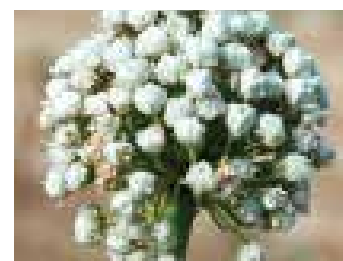
*Fig 5*



*Fig 6*



*Fig 7*



*Fig 8*