

Bulb Growth Stages of Onion

Allium cepa L.



FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 4



FIGURE 5

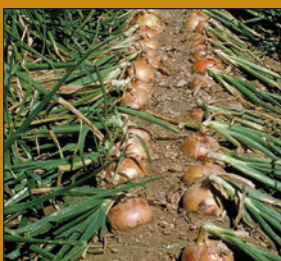


FIGURE 6



FIGURE 7



FIGURE 8

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Allium cepa L.

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PHOTOGRAPHS: Courtesy of H. F. Schwartz [01/2011]

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 p.s.) [Fig. 4]

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.

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ADDITIONAL RESOURCES AVAILABLE AT:

<http://onion.ipmpipe.org>

<http://wiki.bugwood.org/PIPE:Onion>

<http://www.apsnet.org/> — Compendium of Onion & Garlic Diseases and Pests, 2nd Ed.