



Source: [Onion | Tierras y Aguas | Organización de las Naciones Unidas para la Alimentación y la Agricultura | Land & Water | Food and Agriculture Organization of the United Nations \(fao.org\)](#)

Watch Out For:

- Pests such as onion flies, onion thrips, and leafminers and diseases such as purple blotch, downy mildew, slippery skin, etc.

Onion (*Allium cepa*) is believed to have originated in the Near East. The crop can be grown in various climates, from temperate to tropical. Present world production is about 46.7 million tons of bulbs from 2.7 million ha (FAOSTAT, 2001).

Under normal conditions, an onion forms a bulb in the first season of growth and flowers in the second. The production of the bulb is controlled by day length and the critical day length varies from 11 to 16 hours depending on the variety. The crop flourishes in mild climates without extremes in temperature and without excessive rainfall. For the initial growth period, cool weather and adequate water is advantageous for proper crop establishment, whereas, during ripening, warm, dry weather is beneficial for a high yield of good quality. The optimum mean daily temperature varies between 15 and 20°C. Proper crop variety selection is essential, particularly in relation to the day length requirements; for example, a long-day temperate variety in tropical zones with short days will produce vegetative growth only without forming the bulb. The length of the growing period varies with climate, but in general, 130 to 175 days are required from sowing to harvest.

The crop is sown in the nursery and transplanted after 30 to 35 days. Direct seeding in the field is also practiced. The crop is usually planted in rows or on raised beds, with two or more rows in a bed, with a spacing of 0.3 to 0.5 x 0.05 to 0.1 m. The optimum soil temperature for germination is 15 to 25°C. The plant should not flower for bulb production since flowering adversely affects yields. Bulbs are harvested when the tops fall: Low temperatures (lower than 14 to 16°C) and low humidity are required to initiate flowering. Flowering is, however, not much affected by day length.

Onion can be grown on many soils, but medium-textured soils are preferred. The optimum pH is in the range of 6 to 7. Fertilizer requirements are normally 60 to 100 kg/ha N, 25 to 45 kg/ha P, and 45 to 80 kg/ha K.

The crop is sensitive to soil salinity and yield decrease at varying levels of ECe is: 0% at ECe 1.2 mmhos/cm, 10% at 1.8, 25% at 2.8, 50% at 4.3, and 100% at ECe 7.5 mmhos/cm.