**Solanaceae (nightshade) Family**

1. **Irish Potato (Solanum tuberosum L.)**

**Introduction:**

The potato plant (*Solanum tuberosum*) is a perennial herb, but in agriculture it is used as an annual crop. Potatoes are originates from South America, most likely from the central Andes in Peru. Potatoes are the world's most widely grown tuber crop and the fourth largest crop in terms of fresh produce (after rice, wheat, and maize). Although potatoes grow seeds, the seeds are rarely used when potatoes are planted. Seed tubers are most commonly used to plant potatoes. The crop is used mainly for food (78 percent), the remainder is split 8% as livestock feed, 6% as seed, and 8% is wasted.

Origin: Modern-day Southern Peru and extreme northwestern Bolivia.

**Main stages of growth and development of potatoes:**

**The growth cycle of the potato can be divided into five stages:-**

**Stage 1: Sprout development**

Sprout develops from eyes on seed tubers and grows upward to emerge from the soil. Roots begin to develop at the base of emerging sprouts. At this stage the plants depends upon the stored food in the tuber seed for the growth process.

**Stage 2: Vegetative growth**

Leaves and brunched stems develop from aboveground nodes along emerged sprouts. Roots and stolons develop at below-ground nodes. Photosynthesis begins in the leaves and stems above ground. The plant prepares to store nutrients in tubers.

**Stage 3: Tuber initiation:-**

Tubers begin forming on the end of stolons; the stolon tips swell and tubers begin to form. Above ground, shoots develop ahead of flowers. Stolons usually swell before the plant flowers. Tuber development begins 5 to 6 weeks after sprouts emerge from the soil.

**Stage 4: Tuber bulking**

Tubers enlarge. Sugars and starches accumulate in the newly formed tubers. Optimal soil moisture and temperature as well as the availability of soil nutrients are very important for a good yield.

**Stage 5: Maturation**

The tubers reach full size. The leaves and stems above ground begin to dry out and die. Tuber skins harden. When the top of the plant dries out and dies, tubers are ready for harvesting. The harvest of mature tubers can begin 10 to 26 or more weeks after planting (70 to 120 days) depending on the variety. However, potato tubers can be harvested at any size they are edible.



 