

# Potato Production from Certified Seed



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# POTATOES (Solanum tuberosum)

Please open and inspect your shipment immediately. You have received Certified Seed Potatoes. We recommend planting them outside as soon as possible. If you cannot plant your potatoes within one week of receipt, keep them in a ventilated bag, store in a cool, dark place (40°F/4.4°C), and protect them from freezing.

One of the largest food crops in the world, potatoes are well renowned for their many culinary uses. To ensure varieties are true to type and free of seed-borne disease, seed potatoes are inspected throughout the growing season and then certified. Only the tuber of the potato can be eaten, as the foliage is toxic.

## SITE AND SOIL PREPARATION:

Potatoes grow best in fertile, well-drained, sandy loam soil that is slightly acidic (pH of 6.0–7.0). Work compost or balanced fertilizer and any other amendments into the soil prior to planting. Well-tilled soil that is free of large rocks will produce the most uniform tubers.

### **PLANTING:**

Seed potatoes may be planted as early as 4 weeks before the last average frost date, as long as the soil is dry and has warmed to above 50°F/10°C. A few days prior to planting, bring the seed potatoes out of cold storage and allow them to warm to room temperature. Cut whole seed potatoes into blocky pieces with at least one or two eyes, each weighing  $1\frac{1}{2}$  – 2 ounces, or measuring 1–1½ inches in diameter (about golf ball size). Small potatoes need not be cut. Fingerling potatoes should be cut crosswise. If possible, let the cut surfaces callus (dry) to reduce the likelihood of rot after planting. If you are concerned about yields or would like to advance your harvest, you may want to try the greensprouting technique—reference our Greensprouting Potatoes technical sheet on our website for more information.

Plant the potato pieces with the eyes facing up 2–3 inches deep and 12 inches apart in rows 30–36 inches apart. Within-row spacing can be adjusted depending on the variety: varieties that produce high yields can be spaced up to 18 inches apart; and varieties being grown only for small new potatoes can be spaced 8 inches apart.

Once the foliage has reached 6–8 inches in height, hill the plants by mounding soil from the aisles up about 4 inches high along the base of the plants. A wide or broad hill is more effective than a narrow, high hill. As the plants grow, repeat the hilling process every couple of weeks until hills are about 12 inches high. Hilling protects the developing tubers from greening. (Greening can make tubers bitter and potentially toxic if consumed in large amounts.) A leaf, straw, or hay mulch may be applied after hilling is complete to conserve moisture and control weeds.

# **FERTILIZATION:**

Potatoes are commonly fertilized a few times throughout the growing season with a foliar spray, such as fish emulsion. Be sure to follow the mixing instructions and apply in the morning to avoid burning the foliage. Do not apply during extended periods of wet weather, as this may encourage foliar fungal diseases.

#### **DISEASES:**

The best disease control is crop rotation, fertile soil, and consistent moisture. Many common tuber diseases, such as scab and black scurf are more likely to occur in overly dry or wet conditions. Inspect foliage regularly for signs of early and late blight. If symptoms arise, treat foliage with a fungicide such as Oxidate<sup>®</sup>.

## **INSECT PESTS:**

If left uncontrolled, insect pests can severely damage potato crops by defoliating plants, spreading diseases, and reducing yields. Row covers work well to exclude insect pests such as Colorado potato beetles, aphids, and leafhoppers. Otherwise, scout for yellow-orange potato beetle eggs on the undersides of leaves and crush them. Manually remove and dispose of potato beetle larvae and adults. Potato beetles can also be controlled with a spinosad or Beauvaria bassiana insecticide, but this approach should be reserved for heavy infestations, as the beetles can develop resistance. Leafhoppers and aphids can be controlled with a pyrethrin insecticide.



Center of photo: Adult Colorado potato beetles Top of photo: Colorado potato beetle eggs

#### HARVEST:

Young new potatoes may be harvested any time after they have reached usable size (about 50 days after planting for early varieties). Harvest by "scratching" at the side of the hill, gently separating the tubers without disturbing the plant, and replacing the soil when done. Harvest mature potatoes in the fall, after the foliage has died back. Potatoes should be left in the ground for at least 2 weeks after the foliage has died in order for them to set skin. However, do not allow the potatoes to freeze as they will become watery and unusable. If it is approaching the end of the growing season, and the foliage has not died back (common in many late varieties), check the tubers to see if they have sized up. If so, you may flail mow the foliage to encourage maturity and skin set.

To harvest, lift the entire root system by hand with a spading fork, or mechanically with a bed lifter. Brush loose soil from the potatoes (do not wash) and allow the skins to dry off for a day or two. Once dry, place in well-ventilated containers and store in a dark, cool, 40°F/4.4°C, place with high (95%) humidity.