

Potatoes: From the Andes to Our Gardens

By Laura Huenneke



Potatoes are diverse in color, size, and shape. Image from Wikipedia, credited to photographer Avodrocc - <https://www.flickr.com/photos/ccordova>, licensed under the [Creative Commons Attribution 2.0 Generic license](#).

Potatoes exhibit a humble personality relative to more glamorous “fancy” vegetables. But perhaps you remember them as star actors in “The Martian,” the movie based on Andy Weir’s novel of the same name, in which a stranded astronaut survives by growing potatoes on Mars. Packed with protein and vitamins as well as starch for energy, they served as virtual lifesavers. Even if you are not depending on them for survival, they are worth cultivating in a home garden.

Potatoes have a long history as a dietary staple. Many know the story of Irish famine due to the failure of potato crops caused by blight. But potatoes are not native to Ireland (or Europe); instead, they evolved in South America and were imported to Europe in the

late 16th century. Less than 200 years later, they were widespread as a food crop for working Europeans.

Potatoes were initially domesticated in the high Andes Mountains of Peru and Bolivia. From that center of origin, South Americans cultivated a huge diversity of colors, sizes, and shapes. The tuber, a swollen underground stem storing both protein and starch, is the key characteristic of potatoes. Last year scientists reported the fascinating finding that the gene for producing tubers apparently originated in tomatoes, close relatives of potatoes in the genus *Solanum*.

The first couple of times I grew potatoes, I found them very cheering and enjoyable. They quickly produced large green flourishing plants that made me feel successful all summer, even if the eventual harvest was rather meager. After experimenting with techniques, I now find them a satisfying fall harvest as well.

Early spring is a perfect time for purchasing seed potatoes (tubers, not actually seeds). It's best to order disease-free tubers, rather than risk fungal or viral infection on potatoes you find in the grocery store. The buds or "eyes" on the tuber produce both roots and green shoots. Larger tubers can be cut into pieces, so long as each piece has at least one eye. Many growers recommend "chitting" the tubers, letting each piece rest for a couple of weeks in a bright place indoors, to give the new sprouts a head start.

Potatoes can be grown directly in the ground, in raised beds, in grow bags, in straw bales, and even in "towers" where soil and straw are continually added. Most forms of cultivation are based on "hilling" or piling additional soil or growing medium up around the young shoots as they grow upward. This creates more room for tubers to form in the added volume. I've found that using grow bags makes harvest simpler at the end of the season. It's fun to dump them out and sort through the soil and straw for tubers, and much easier than digging into the ground or raised beds.

There are hundreds of potato varieties, varying in taste and texture, in color of flesh and of skin, in size and shape (from fingerlings to round or oblong giants), and in length of growing season. Full-size potatoes can be harvested early to yield so-called "new potatoes." One under-appreciated distinction is that varieties are either determinate or indeterminate. A determinate potato produces tubers at a single level of the root system (generally near the original seed tuber). An indeterminate variety will produce potatoes throughout the underground system, yielding tubers through the entire depth of your hills or tower. Determinate varieties may be better for containers or bags, where you might not have enough vertical room for much hilling.

Potatoes are freeze-sensitive, so I don't start them outdoors until early May. As a plant native to the high-elevation Andes, potatoes appreciate cooler temperatures. Last year

in my warm Doney Park garden, the potatoes struggled in the hot full sun of June and July. Growth picked up a bit after I put up a partial shade cloth; I will try that for most of the summer this next season. If you can stand the suspense of not seeing your potential harvest until digging time at the end of the season, do try growing the delicious, nutritious potato.

Laura Huenneke has lived and gardened just east of Flagstaff for more than 20 years. She is a Master Gardener and co-editor of the Gardening Etc. column, part of the University of Arizona's Coconino County Cooperative Extension Master Gardener Program. To learn more visit <https://extension.arizona.edu/programs/coconino-county-master-gardener>.