

Growing Potatoes

by Anne-Marie Walker



A venerable and greatly missed Master Gardener, Ruth Beckner, taught me to grow potatoes; *Solanum tuberosum*. Raised on a potato farm, it was her job to certify seed potato disease free. If you want to grow potatoes, she explained, plant only certified seed because potatoes, more than any other vegetable crop, are subject to disease. She further counseled that should not stop one from adding this root vegetable to the garden because potatoes magically introduce a mysterious expectation for what lies beneath the soil. Hooked on tasty homegrown potatoes, we captured children's interest at Farm Day asking them three riddles: What has eyes but cannot see? What is the first vegetable grown in space? What gives our bodies carbohydrates for energy? **Potatoes!**

First cultivated in South America between 3,000 and 7,000 years ago, tubers (potatoes) are a modified stem, in which the plant as it developed, stored carbohydrates during the winter to sprout new shoots in the spring. A cool season perennial grown as an annual, potatoes can be planted in Marin as early as February and as late as May. Tuber production will occur underground until soil temperatures reach 80 degrees. For every one pound of seed planted, you may expect to harvest 10 pounds of potatoes. In light sandy soil, plant the seed 3" deep and 6" to 12" apart. When the plant is 6" high, cover with another 3" of soil. This is called "hilling" and can be done once again after 6 more inches of plant growth to increase production of tubers and to avoid sunscald or greening. A green potato should not be eaten as it contains a high level of toxic alkaloid solanine. Fingerling potatoes and russet varieties are especially prone to greening. Water just enough to keep soil from cracking and to avoid rot; about one to two inches per week.

After 90 to 120 days, the plant flowers white, pink, red, blue or purple; colored blooms generally produce pinkish skin potatoes. Dig up a test potato. If it is a good size, cut off the plant at ground level and throw away all leaves and any tiny green fruit as they are toxic and can spread disease. Leaving the crop in the ground for another couple of weeks without watering hardens off the skin. Harvested tubers can be stored in a cool (40 to 50 degrees F), dark, well ventilated area for up to 8 months. The best resistant varieties include Buffalo, Bison, Carola, Carlotta, White Rose, Kennebec, Chieftain, Nargold Russet, Red Lasoda and Yukon Gold. For inquiring gardeners, new potatoes are simply young potatoes harvested after 70 to 90 days with both lower levels of starch and yield.

Related to tomatoes and eggplants, potatoes are subject to the following diseases: *Phytophthora infestans*, sclerotinia, black leg, powdery mildew, powdery scab, leafroll virus, potato root nematodes and purple top. The best cultural practices to avoid disease are resistant varietal selection and a four year crop rotation. The Irish experience tragically teaches the consequences

of successively planting a monoculture. In 1846, the airborne fungal disease, *Phytophthora infestans*, blew across Europe and when it reached Ireland, left 1 in 8 people dead from famine.

The remarkable potato can be grown in almost every climate except tropical environs. It performs well from sea level to 15,000 feet. We eat potatoes for breakfast, lunch and dinner for their high value in protein, vitamin C, niacin, B vitamins, iron and energy. A recent article in the New York Times titled "Pommes de Terroir," is the story of the "lowly" potato giving root to a lofty food culture in southern Sweden where certain varieties sell for as much as \$100 a pound on Cape Bjare peninsula. Said to evoke their growing grounds, these potatoes are treasured. You won't know the treasure your bit of Marin terroir can produce until you try planting certified disease free seed potato!