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## Carrots' colorful history spans thousands of years

By SONOMA COUNTY MASTER GARDENERS

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**Sam Calderon holds a variety of heirloom carrots at Middleton Farm in Healdsburg. Carrots come in a wide variety of colors, such as white, purple, red, yellow, maroon and, of course, orange. Photo by Beth Schlanker, The Press Democrat 2016**

**Question:** I was at the farmers market the other day and noticed quite a number of different colored carrots. I'm most familiar with the orange variety, but now I'm curious about the other types. Do you have any information on the history of how we got so many different types of carrots?

**Answer:** Domesticated carrots have a long and interesting history. And not without a bit of controversy.

It is believed carrots originated over 5,000 years ago, most likely in ancient Persia, areas now known as Iran and Afghanistan. These wild carrots grew all over Europe and Central Asia for thousands of years prior to their domestication. In fact, carrot seeds have been found in prehistoric sites in Switzerland.

It is speculated that carrots, specifically their seeds, were originally used medicinally or as a spice.

Carrot tops put in water or soil will readily generate roots. This keeps the tops growing long enough to produce seeds. It is thought that discarded wild carrot tops taking root in garbage piles led to their domestication.

A 2013 genetic study of a wide variety of both wild and cultivated carrots strongly places wild carrots from Central Asia as the closest genetic relatives of modern domesticated carrots.

There are wild carrots in North America, but they are unrelated to modern carrots. The original wild carrots were thin compared to modern carrots, and not the orange color we see today, but ivory colored. Mutations led to changes in pigmentation.

Cultivation of carrots began as in the last few centuries BCE. The Greeks and Romans were believed to have cultivated carrots for medicinal purposes, but since their writings refer to edible white roots, they may have been referring to either wild carrots or parsnips, which are related.

The first documentation of the cultivation of carrots comes from Persia in the 10th century.

At this point they were purple, yellow or red. It is believed that the first color mutation was from ivory to purple, with another mutation from purple to red or yellow.

Cultivation moved into Spain, then through northern Europe, reaching England as early as the 11th century. By the 14th century, carrots had become a common part of the diet during the Middle Ages. Carrots also became popular as food in Europe as well as China.



Photo by: Christopher Chung/The Press Democrat 2016

Orange carrots, a mutation from the yellow ones, were documented in Spain and Germany in the 15th and 16th centuries and soon became the dominant color.

Interestingly, a 2016 study suggests that the Chinese developed their orange carrots from red, rather than yellow varieties.

The Dutch claim to have developed the orange carrot as a sign of support for the newly established House of Orange in the Netherlands. There is no evidence to support this claim, but they certainly had a hand in developing and popularizing the orange variety.

In the 16th century the Dutch began to develop new varieties of carrots, preferring the orange color, and breeding out other colors.

Orange carrots were featured in many Dutch paintings of the time, which helped popularize them in Europe. The Dutch sold the seeds to the British who took them to Colonial America.

In the 19th century, interest in the nutritional value of carrots increased.

During World War II the British developed a high carotene carrot to improve the night vision of their pilots. In the body, beta-carotene converts into vitamin A (retinol).

Humans need vitamin A for good vision and eye health, for a strong immune system and for healthy skin and mucous membranes. More recently, in the 1980s, Texas A&M developed a carrot with twice the beta carotene of standard carrots, which the developer, Dr. Pike, named the Beta Sweet.

Interestingly, it has a maroon color, similar to original domesticated carrots. In developing this carrot, Dr. Pike used a Brazilian seed noted for its purple color, hoping to develop a novelty carrot with the Texas A&M school colors. When he found it was rich in carotene, he switched his focus to developing a high carotene carrot.

Today it is possible to grow carrots in a variety of colors: white, yellow, red, and purple, and of course, the familiar orange.

*Contributors to this week's column were Wendy Stern, Lisa Howard and Robert Williams. The UC Master Gardener Program of Sonoma County [sonomamg.ucanr.edu/](http://sonomamg.ucanr.edu/) provides environmentally sustainable, science-based horticultural information to Sonoma County home gardeners. Send your gardening questions to [scmgpd@gmail.com](mailto:scmgpd@gmail.com). You will receive answers to your questions either in this newspaper or from our Information Desk. You can contact the Information Desk directly at 707-565-2608 or [mgsonoma@ucanr.edu](mailto:mgsonoma@ucanr.edu).*