

# Radish (*Raphanus sativus*)

## History

The radish, scientifically classified as *Raphanus sativus*, is an annual vegetable found throughout the world and now commonly recognized as a small bulbous red root.

The early history of the plant is quite obscure. Oldest “literary references and archaeological remains” indicate that the plant could have originated in North China<sup>1</sup>. However, the greatest diversity of radish varieties are found in the eastern Mediterranean and near the Caspian Sea, suggesting a different area of origin<sup>2</sup>. The radishes that Linnaeus described as *R. sativus* he believed to originate from China<sup>3</sup>.

There is not even agreement as to which ancient civilization cultivated the radish first: the Greeks, Egyptians, or Chinese. Some say that radishes were eaten in ancient Egypt as early as 2700 B.C<sup>4</sup>. Herodotus himself claimed to have seen an inscription of a radish he called “*surmaia*” on a pyramid<sup>5</sup>. However, Herodotus could not read hieroglyphics, and for this reason Egyptologists have disregarded that claim. They

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<sup>1</sup> Weaver, William Woys. Heirloom Vegetable Gardening. New York: Henry Holt and Company, 1997

<sup>2</sup> Rubatzky, Vincent E, and Yamaguchi, Mas. World Vegetables: Principles, Production and Nutritive Values. New York: Chapman & Hall, 1997

<sup>3</sup> Candolle, Alphonse de, Origin of Cultivated Plants, D. Appleton and Company, New York; 1885. pp.29-36.

<sup>4</sup> Weaver, William Woys. Heirloom Vegetable Gardening. New York: Henry Holt and Company, 1997

<sup>5</sup> Candolle, Alphonse de, Origin of Cultivated Plants, D. Appleton and Company, New York; 1885. pp.29-36.

hypothesize that the word for radish didn't exist in Egyptian until the Greeks introduced it to them<sup>6</sup>. However, what is known is that many different varieties of radishes spread all over Europe and Asia, with different countries preferring specific varieties. Black radishes of *R. niger* were favorites in Spain, and another popular European variety to use in kitchen gardens was called *R. radicola*. In Asia, different varieties were cultivated; among them the *R. longipinnatus*, also known as Daikon, in China, and the *R. raphanistroides* variety in Japan<sup>7</sup>.

Adding to the complications of the history of the radish is its many different names. In Europe, many of the names sound similar, from ramoraccio in Italian to armoracia in Greek, both used to describe radishes. By contrast, the names for radish in Semitic languages range from *fugal* in Hebrew to *fuil*, *fidgle* or *figl* in Arabic. In India the name for their radish variety is *moola*, and then the Chinese and Japanese also have entirely differing names for the radish<sup>8</sup>. Sometimes, if the names for a certain plant are similar, the way a plant has traveled can be traced, but the many for radishes prevent a definite conclusion on the origination or even early propagation of the radish.

In the historical records, Galen of Pergamon wrote that radishes were eaten in the region around 129-199 A.D. Also, the Greek physician Dioscorides documented drawings of radishes. However, these radishes were large, long varieties, from which the Long Black Spanish radish is descended. The smaller, rounder radishes were cultivated by the Dutch in the 1500s while smaller more delicate “icicle radishes” were developed

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<sup>6</sup> Weaver, William Woys. Heirloom Vegetable Gardening. New York: Henry Holt and Company, 1997

<sup>7</sup> Rubatzky, Vincent E, and Yamaguchi, Mas. World Vegetables: Principles, Production and Nutritive Values. New York: Chapman & Hall, 1997

<sup>8</sup> Candolle, Alphonse de, Origin of Cultivated Plants, D. Appleton and Company, New York; 1885. pp.29-36

in the 1600s<sup>9</sup>. The English and French continued cultivating these smaller radishes. Many noblemen in the French court bred different varieties, so many types of radishes had aristocratic names. In the fallout of the French Revolution these names were dropped, causing even more confusion when trying to trace how certain modern radishes are related to the older ones.<sup>10</sup>

## **Scientific Classification, Anatomy**

Radishes are classified under the *Brassicaceae* family, together with cabbages, turnips, and watercress. While this taxonomy might not seem obvious, it is because all of these vegetables have similar seed pods<sup>11</sup>. We eat the fleshy root part, known as the hypocotyls, as well as the upper portion of the root<sup>12</sup>. Different varieties have different shapes and colors, from the small bulbous common red garden radish to the long tapered white daikon variety popular in Asia pictured here. Other cultivars can be yellow, purple or even black or green.

The leaves are most often an oblong, rounded shape with leaves radiating out from the stem in a sort of rosette shape<sup>13</sup>. Summer varieties tend to flower early due to the long days. Flowers are often purely white, but can also be different colors like lilac.

## **Planting and Growing Radishes**

Radishes cross very easily, so when planting heirloom varieties, or if one is otherwise worried about the purity of the varieties, a plant with different flower colors

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<sup>9</sup> Weaver, William Woys. Heirloom Vegetable Gardening. New York: Henry Holt and Company, 1997

<sup>10</sup> *ibid*

<sup>11</sup> *ibid*

<sup>12</sup> Rubatzky, Vincent E, and Yamaguchi, Mas. World Vegetables: Principles, Production and Nutritive Values. New York: Chapman & Hall, 1997

<sup>13</sup> Rubatzky, Vincent E, and Yamaguchi, Mas. World Vegetables: Principles, Production and Nutritive Values. New York: Chapman & Hall, 1997

from all the others should be pulled up immediately. One advantage of having so many different types of radishes is that the different types allow the planting and harvesting of radishes year-round. Specific varieties are meant for summer while others are meant for late fall and well into winter. Especially the summer varieties, sown in spring or summer, grow very fast, often ready to eat or for the market within a month. They do well in well tilled moist sandy loam soils, and raising beds is recommended for long root varieties like daikon, allowing more space for growth<sup>14</sup>.

## **Nutrition**

Even in the ancient civilizations, the nutritional value of radishes was well known. Before the Middle Ages, radishes were used by sailors to prevent scurvy because of its high vitamin C content. It is also rich in vitamin B6, fiber, folate, and minerals like K, Ca, Mg, and even iodine.

## **In Upstate New York**

The varieties most likely found in central New York in the early part of the nineteenth century were probably the French varietal *jaune hatif*, the Black Spanish Winter Radish and Early Purple Turnip Shaped Radishes, depending on the seasons of course. The Shakers, like with so many other vegetables, were the primary sources for seeds, especially the Black Spanish.<sup>15</sup> The Early Purple is a beautiful and hardy variety, allowing it to be grown pretty much all year round, while the *jaune hatif* is more exclusively a summer radish<sup>16</sup>. The Black Spanish variety is also a very hardy root and

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<sup>14</sup> *ibid*

<sup>15</sup> Duane, William; "A Catalogue of garden, herb, flower, tree, shrub, and grass seeds, gardening, agricultural and botanical books, garden tools". Philadelphia; William Duane, 1813.

<sup>16</sup> Weaver, William Woys. Heirloom Vegetable Gardening. New York: Henry Holt and Company, 1997

able to handle bad winters. Seed catalogs from the nineteenth century encouraged sowing the Black Spanish from May until August because it stands the heat very well and because it gives them more time to develop<sup>17</sup>.

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<sup>17</sup> Candolle, Alphonse de, Origin of Cultivated Plants, D. Appleton and Company, New York; 1885. pp. 29-36