

Artificial selection has increased carrots' beta carotene content by 50% since 1970

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. . . [A]fter sequencing the carrot's entire genome, a team of researchers has identified the gene responsible for the vivid coloration: the memorably named DCAR_032551.

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Surprisingly, carrots have not always been orange. In fact, their wild relatives still lack any pigmentation at all, stubbornly clinging to a ghostly shade of white.

How wild white ancestors gave rise to the orange armies that adorn our grocery stores today remains unclear. . . .

The first cultivated carrots, appearing in Asia 1,100 years ago, were purple and yellow. The orange carrots of today "are a result of many years of plant breeding and selection," explains coauthor Megan Bowman, a visiting research associate at Michigan State University at the time of the study.

Today's familiar hue may say just as much about history as biology. 17th century Dutch farmers are said to have dreamt up orange carrots to honor William of Orange, [according to the World Carrot Museum](#).

Whatever the reason, "the popularity of orange carrots is [fortuitous for modern consumers](#)," the authors write in their paper, published [May 9] in Nature Genetics, "because the orange pigmentation results from high quantities of alpha- and beta-carotene, making carrots the richest source of provitamin A in the US diet."

Nutritionists say . . . the deeper the color, the higher the nutrient content. With the preference for ever more intensely orange crops, artificial selection has increased the carotene content of carrots by 50 percent since 1970

. . . .

The carrot, which contains 32,000 genes, joins a select group of about a dozen vegetables to have had their entire genome sequenced. . . .

Read full, original post: [Why are carrots orange?](#)