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Scientists unravel the tomato's genetic code

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An international scientific team on Wednesday said it had unravelled the genetic code of the tomato, opening up ways to improve the fruit's taste, nutrition and shelf-life.

Gathering more than 300 researchers in 14 countries, the Tomato Genome Consortium compared today's domesticated tomato with its wild South American parent, *Solanum pimpinellifolium*.

The tomato has 35,000 genes, but there is only a variation of 0.6 percent between the wild variety and the supermarket variety of today, according to the study, appearing in the journal *Nature*.

The tomato is a member of the Solanaceae family, which includes other highly valuable crops such as the potato, pepper and aubergine, as well as spices and herbs that have a medicinal use.

A comparison showed that the tomato is just eight percent different, genetically, from the spud.

Agricultural researchers have been steadily sequencing important crops to pinpoint genes that affect taste, resilience to disease or ability to grow in different soils and climates.

This fast-tracks ways of including useful genes in new strains, either through genetic engineering -- opposed in some countries -- or through traditional cross-breeding.

Previous crops that have been sequenced include corn, wheat, rice, soybean, apple and strawberry.

"The tomato is one of the most common and exploited crop plants," said Francisco Camara of Spain's Centre for Genomic Regulation.

"Getting to know its genome in details allows us on one hand to have a better understanding of the evolution of higher plants thanks to controlled populations such as cultivated ones, and it also provides new tools for future agriculture."

Members of the nine-year-old tomato consortium hail from Argentina, Belgium, Britain, China, France, Germany, India, Israel, Italy, Japan, South Korea, the Netherlands, Spain and the United States.

Sales of tomatoes in the United States alone are roughly \$2 billion (1.6 billion euros) a

year.

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