

DNA sequencing uncovers genes that could yield bigger, sweeter, crispier watermelon

Scientists from Beijing Academy of Agricultural and Forestry Sciences took a comprehensive look at the [genomes](#) of 414 watermelons representing seven species, with the goal of finding [genes](#) that will help develop better fruit quality and resistance to pests, disease, [drought](#), and other biotic and abiotic stresses.

According to the paper published in *Nature Genetics*, the researchers developed an enhanced version of a reference genome, which is used by scientists and breeders to look for new and interesting versions of genes from their samples. The first watermelon reference genome published in 2013 was created using short-read sequencing technologies. In the latest study, long-read sequencing technologies were used to develop a better-quality reference genome for the watermelon community.

Results showed that cultivated watermelon was domesticated by breeding out the bitterness traits while boosting sweetness, fruit size, and flesh color. The modern watermelon varieties have been further improved in the past few hundred years through the improvement of sweetness, flavor and crispy texture. The team also discovered parts of the watermelon genome that could be altered for continuous improvement of fruit quality, such as by making them bigger, sweeter, and crispier.

Read full, original article: [Crop Biotech Update November 6, 2019](#)