

CRISPR gene editing could yield drought-tolerant tomatoes and kiwis that grow in salty soil

Genetic engineering will allow the production of tomatoes and kiwis that are more tolerant to saline lands and will require less water. The initiative will also develop biostimulants directly applicable to plants to make them more tolerant to stress caused by drought and salinity

Agriculture has been one of the activities hardest hit by climate change. Figures in this regard indicate that around 40% of the world's land area corresponds to land affected by drought, a value that could increase to 50% between now and 2025.

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One of the initial focuses of the project is to generate new varieties of tomatoes and kiwis using the CRISPR / Cas9 genetic engineering technique. In the case of tomato, the characteristics of "Poncho Negro", a Chilean variety originating in the Azapa Valley that has high resistance to salinity and the effect of heavy metals, will be studied.

Components to improve tomato 7742 (seminis), the most widely produced and marketed variety in Chile, will also be investigated. Regarding kiwis, the aim will be to increase tolerance to salinity and drought of varieties used as rootstocks, to improve the productivity of Hayward commercial kiwi plants; the third most exported in Chile.

[Editor's note: This article was published in Spanish and has been translated and edited for clarity.]

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