

VITAMIN D TOMATOES TO TREAT NUTRIENT DEFICIENCY



Tomatoes gene-edited to produce vitamin D - aka the sunshine vitamin - could be a simple and sustainable innovation to help millions of people. Vitamin D deficiency is linked to a higher risk of cancer, dementia, and many leading causes of mortality.

40%

of Europeans have vitamin D insufficiency

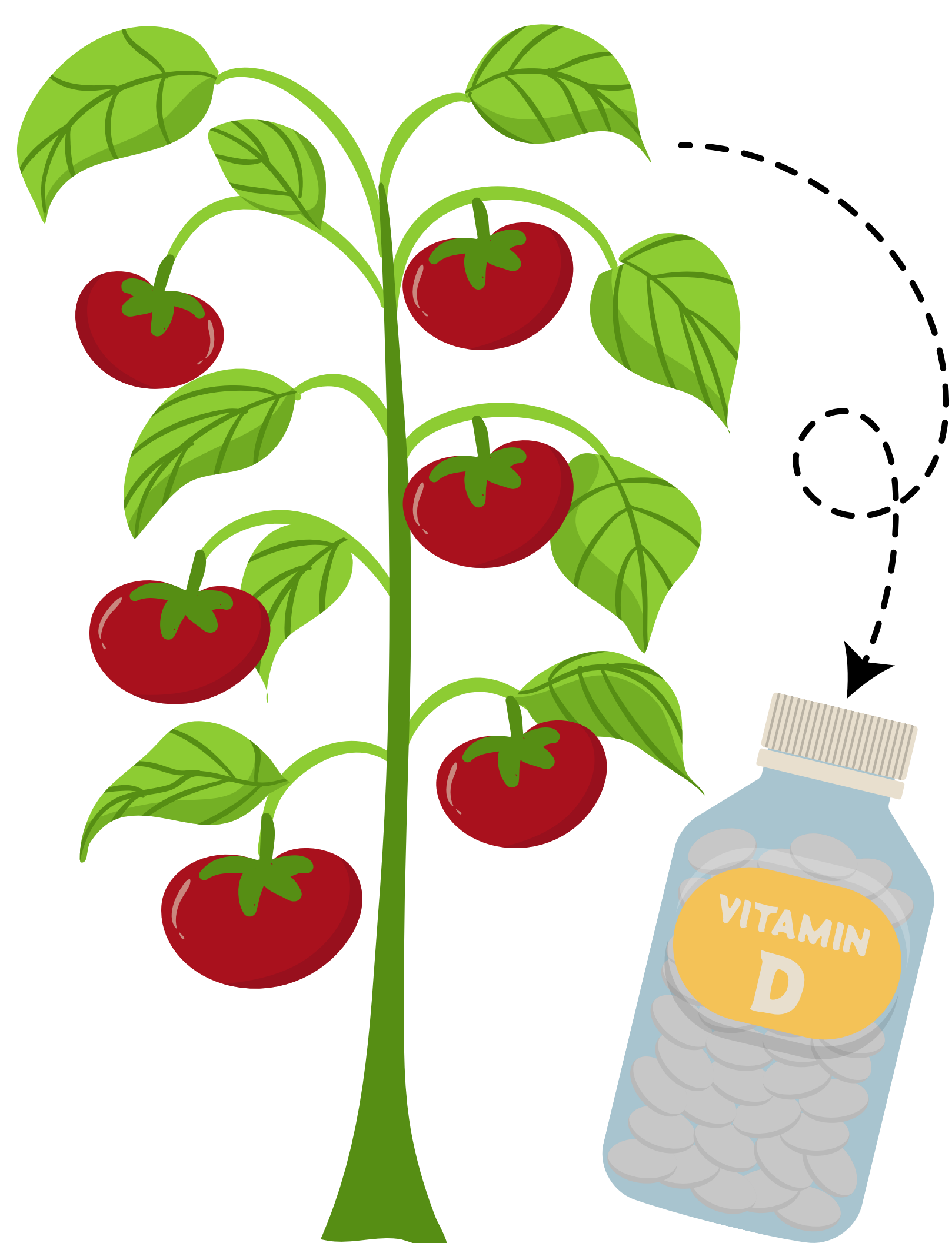
FIRST PLANT-BASED SOURCE OF VITAMIN D3

Researchers in Professor Cathie Martin's group at the John Innes Centre are using gene editing to enable more accumulation of provitamin D3 all over the plant, including in the ripe tomato fruit.



Their work has shown that you can biofortify tomatoes with provitamin D3 using gene editing, which means tomatoes could be developed as a plant-based, sustainable source of vitamin D3.

After treatment with UVB light to convert provitamin into vitamin D3, one tomato contained the equivalent of two medium sized eggs or 28g tuna - both recommended dietary sources of vitamin D.



The UK spends **£100m** each year prescribing Vitamin D supplements

When growing tomatoes the leaves are usually waste material. However, leaves could be used for the manufacture of plant-based vitamin D3 supplements, or for food fortification.

This innovative research not only addresses a huge health problem, but may help producers, because tomato leaves which currently go to waste, could be used to make supplements from the gene-edited lines.



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