

Scientists can genetically boost the smell of flowers and even implant new scents

A rose by any other name really would smell as sweet, after scientists discovered how to genetically introduce its scent into other flowers such as petunias and carnations.

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A team of researchers claim to have discovered how to not only boost the natural smell of flowers by up to 10 fold but also transfer different scents between plants.

The scientists at the Hebrew University of Jerusalem have successfully introduced the genes from a rose into a petunia and from a rose into a carnation.

They have also swapped smells between carnations, petunias and clarcias.

Eventually they hope the technology could also be used in yeast so that flowery smells can be added to wine, chocolate and bread.

In research that was published in the Plant Biotechnology Journal, Prof. Alexander Vainstein and his research assistant Michal Moyal Ben-Tzvi succeeded, together with other researchers, to find a way of enhancing the scent of a flower by 10-fold and cause it to emit a scent during day and night - irrespective of the natural rhythm of scent production.

The development, which has been patented by Yissum, the Hebrew University's technology transfer company, is intended to be applied to other agricultural produce.

The flower industry will also be interested in this development, said Prof. Vainstein. "Many flowers lost their scent over many years of breeding.

"Recent developments will help to create flowers with increased scent as well as producing new scent components in the flowers."

He said utilizing natural components could also be used to change not only the smell of fruit and vegetables, but also influence the commercial appeal of a wide array of produce.

More than a third of participants in Flowers and Plants Association surveys stated that scent influenced their choice of flower purchase.

Floral scents are also one of the most popular smells and the perfume industry expends a great deal of effort trying to reproduce the authentic fragrance of fresh flowers.

Israel is the Middle East's flower-producing superpower. Its flower, plant and propagation material exports bring upwards of \$200 million into the economy annually.

Israel is third only to the Netherlands and Kenya in supplying the EU with flowers. Each year, 1.5 billion stems are exported - twice as many as 10 years ago.

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