

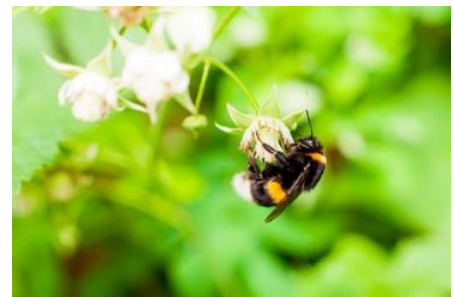
Creating a buzz in Romanian greenhouses

An innovative practice for pollinating greenhouse plants has been creating a buzz in Arad County, Romania.

Boxes of bees

Curtici village is located in Arad County. The area is well known for its tomatoes grown in greenhouses which are sold in season on the markets in the nearby cities. Pollination of the plants is, of course, a vital part of the process, and these farmers usually use a hormone spray to stimulate the fruit to grow. But this painstaking method requires a lot of time, effort and expense and the results have never been quite what the farmers hoped. So they have been looking into alternative solutions which can increase quality, reduce costs and maintain the supply to the local markets.

Until recently, farmers in the region mainly used plant hormones to substitute pollination of their greenhouse tomatoes. Tomato flowers produce the hormone Auxin when they've been pollinated, which stimulates the plant to produce fruit. To substitute this process, sprays containing a synthetic version of this hormone can be used. When the tomato flowers are sprayed individually with this product, the fruit is produced without pollination (a practice known as parthenocarpy).



However, this practice is rapidly declining. Nowadays, it is increasingly common that the work is carried out by restless bumblebees. Farmers have discovered that bumblebee boxes are a growing product on the market at the moment. Thanks to these boxes, a farmer can release bees with the same lifespan (up to 8 weeks) in a greenhouse to pollinate all of the plants at the same time. When they have finished this job, the farmer can set them free to do the same in the surrounding orchards or fields.

"Man cannot do what bumblebee can"

Previously, applying the hormones involved heavy manual work and was a lengthy process. Not only did this cause higher labour costs, but also farmers say the quality and taste of the tomatoes obtained was not always ideal. Ciprian Nincu, from Curtici village came up with the idea to use bumblebee boxes four years ago. He experimented with pollination in his greenhouses, he says "*Man cannot do what the bumblebee can, it's impossible. It's all about the precision and timing of pollination, the bumblebees are masters of that.*" He goes on to say that "*The tomatoes obtained after this type of pollination are of better quality.*"

Spreading the word

Other greenhouse farmers in the area were quick to follow Ciprian's innovation. Gheorghe Cosma, another local farmer was very pleased with the results: "*The bumblebees are pollinating ecologically and [...] our vegetables begin to regain the taste they once had and this is very important for our consumers.*" The farmers were also convinced by the economic results as they have found that costs using bumblebees can be up to 50% cheaper than the costs previously associated with spraying the tomato flowers.