

## Plants communicate to fight off pests. Their ‘conversations’ might help us safeguard our food crops

When a beetle larva bites into the leaf of a goldenrod plant .... [t]he bite damages the goldenrod .... causing it to launch molecular defenses against the insect and to emit a concoction of chemicals that change the physiology of goldenrod plants nearby. It's as if the plants are communicating about the invader.

...

The notion that plants communicate was controversial until the end of the 20th century. Biologists first argued that trees and plants could “talk” to one another in the 1980s, but data supporting the idea were dismissed by many researchers as statistically sketchy.

Over the past few decades, however, the scientific community has revised its opinion. A series of papers have shown that when a plant such as goldenrod is damaged, it releases volatile organic compounds (VOCs) that prompt neighboring plants to mount their own chemical defenses against an impending herbivore attack.

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“Understanding the intricacies of the plant world and plant-plant communication in more detail can potentially help us in plant protection in the agricultural context, if we can learn how to use these volatiles to turn on defenses in crop plants effectively,” [says Aino Kalske, a postdoctoral researcher in ecology and evolution biology at the University of Turku in Finland].

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