

Clever plants chat over their own network

Recent research from Vidi researcher Josef Stuefer at the Radboud University Nijmegen reveals that plants have their own chat systems that they can use to warn each other. Therefore plants are not boring and passive organisms that just stand there waiting to be cut off or eaten up. Many plants form internal communications networks and are able to exchange information efficiently.

Many herbal plants such as strawberry, clover, reed and ground elder naturally form networks. Individual plants remain connected with each other for a certain period of time by means of runners. These connections enable the plants to share information with each other via internal channels. They are therefore very similar to computer networks. But what do plants want to chat to each other about?

Recently Stuefer and his colleagues were the first to demonstrate that clover plants warn each other via the network links if enemies are nearby. If one of the plants is attacked by caterpillars, the other members of the network are warned via an internal signal. Once warned, the intact plants strengthen their chemical and mechanical resistance so that they are less attractive for advancing caterpillars. Thanks to this early warning system, the plants can stay one step ahead of their attackers. Experimental research has revealed that this significantly limits the damage to the plants.

However there are two sides to the coin. That is not just the case for the Internet but also for plants. It appears that plant viruses can use the infrastructure present to rapidly spread through the connected plants. The infection of one plant therefore leads to the infection of all plants within the network.

This research clearly reveals that the general image of plants is a poor reflection of reality. Who had now suspected that the majority of plants around us are constantly internetting?

Source: Netherlands Organization for Scientific Research

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