

Reducing pesticides and boosting harvests

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Scientists in Italy are experimenting with sound vibrations to replace pesticides. Adapting different eco-friendly methods they are able to boost harvests and open up a new chapter in sustainable farming.

Scientists in Northern Italy are experimenting with unusual and totally eco-friendly sound and odor devices to fight off insects from their cultivated fields. And their studies suggest that these methods could be as efficient in protecting crops as using chemical based [pesticides](#). In the meantime, in a field study near Pisa, Italy, researchers are learning how important it is to keep semi-natural habitats next to cultivated fields. These areas are an important resource for pollinators and it now seems they even have an impact on the yield of the cultivated crops.

The European grape berry moth and the cicada *Scaphoideus titanus* are considered to be the major pests of cultivated grape. Commonly farmers use plant protection products like insecticides or plant growing regulators to protect their crops against pests and diseases. But used in a wrong way, pesticides can pose a risk to humans and the surrounding environment.

At the Fondazione Edmund Mach in Italy, Ilaria Pertot and her team of the EU research project PURE have found ways to reduce the high pesticide rate in the European grapevine sector by disturbing the mating processes of the pests. The use of special vibrations and the odor of pheromones will in future help to prevent an offspring of the [pests](#) and this could reduce the use of pesticides close to zero.

In central Italy near Pisa scientists of the EU research project QuESSA want to understand how the land next to the cultivated fields – known as semi-natural habitats – may help to maximize the harvest. Camilla Moonen and her team focus on natural pollinators like the wild bee. In experiments they are investigating, whether natural pollinators contribute a higher yield quality.

Both of these studies have shown that modern agriculture can still learn from nature and secure a successful harvest and reduce the usage of chemicals at the same time.

Provided by Youris.com

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