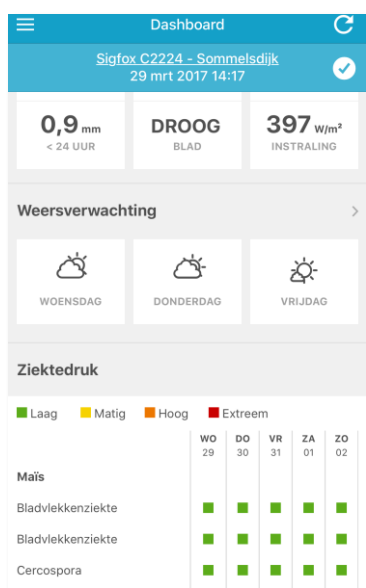


Ideas for IPM

Integrated pest management involves monitoring of pests and pest predators. This can be quite labour intensive and difficult, and several new tools have been developed for farmers to make this easier and more economically attractive. Find out some examples below.



Sensor data for Dutch arable farmers

Sensor data can be used to make arable farming more profitable. A young Dutch enterprise *Appsforagri* is showing this through a pilot project they are currently running with more than 200 farmers. They set up a network of small weather stations on the farms. Sensors measuring air, soil and crop temperature and moisture collect a constant flow of data. Soil temperature is used to predict lice, Phytoftora and thrips. The combination of these data is used to calculate the potential pest or disease pressure for each crop. The company built an app to transfer these data into ready to use information for the farmer. The app is connected to crop protection models for more the 40 arable crops. So, the farmers get field/crop specific advice on when to spray to reach the best effect while using less pesticides. Aart Monster from Appsforagri says "The farmers involved in the testing have reached savings of 60€ per ha on plant protection. Also, more accurate spraying results in a higher yield."

More: www.appsforagri.nl

Pest monitoring in Slovenia

A small company from Slovenia has developed an automated pest monitoring system for different crops which can provide a solution to this issue. Pheromone traps are used to monitor insects, and the system produces real-time overviews of the insect population in their fields. It is a system which can also be collaborative, and if the farmer agrees to be part of the network, they can also see what other traps from other places have captured. This enable farmers to forecast when migrating pests may arrive.



This project is funded by Horizon 2020.

www.trapview.com

For more details on this example and to read more case studies for use of IPM in Brassica species, download the [EIP-AGRI Brochure IPM for Brassica](#).

Controlling pollen beetles in Switzerland

Meligethes aeneus (pollen beetle) are a threat to oilseed rape. They migrate to the crops during the spring, damaging buds to feed on the pollen and nectar in the buds. In Swiss organic production as well as in Swiss IPM-production the use of insecticides in oilseed rape is prohibited. FiBL is developing an alternative non-insecticidal method to control pollen beetles. During migration, oilseed rape pests use volatile cues (signals given off by plants) to locate their host plants. This project is developing a control strategy for the pollen beetle based on repellent odors. By introducing odors to the field, the beetles find it much harder to locate their host plants. The project started with lab screenings of different essential oils, then, based on the two most promising oils, 21 different spray formulations as well as 16 different types of odour dispensers were developed, tested and analysed. Four different odour dispensers are currently being tested under on-farm conditions on organic oilseed rape fields in Switzerland. Claudia Daniel says "we are currently considering technical solutions, such application by drones, but there are still several obstacles to overcome. The input and feedback from farmers is especially important during this stage of project"



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For other ideas on IPM methods, please see the results of the [EIP-AGRI Focus Group on this topic](#)

Photos: Appsforagri, Trapview, FiBL