IPM SURVEYS FACTSHEETS

Outdoor vegetables

IPMWORKS - *An EU-wide farm network demonstrating and promoting cost-effective IPM strategies* - is a four-year project (2020-2024) financed by the Horizon 2020 Research and Innovation programme of the EU. IPMWORKS is made up of a consortium of 31 partners from 16 European countries assembled with various types of organizations covering the following roles: Farmers organizations; Applied research, advisory and extension services; Academic research on social sciences; Academic research on agronomy (sensu lato) and environmental science and Training organizations. The project is coordinated by the French National Research Institute for Agriculture, Food and the Environment (INRAE).

INTEGRATED PEST MANAGEMENT

Integrated Pest Management (IPM) is based on a diversity of pest management measures (prevention, non-chemical control, best practices for optimizing pesticide efficiency, etc.). These are combined at the farm level to enable reduced reliance on pesticides, and therefore a decrease in the exposure of the environment and people to pesticides. Rare pioneer farmers throughout Europe are testing such IPM strategies and are succeeding in achieving good outcomes with low pesticide inputs. However the majority of European farmers still rely heavily on pesticides, with major environmental and societal impacts, because most of them have not adopted a comprehensive, farm-level and holistic IPM strategy so far.

FARMERS' AWARENESS OF IPM AND MOTIVATIONS

Farmers' motivations and level of IPM adoption have been investigated through a survey, just after the farmers joined the network.

"IPM is a way to reduce pesticide use", "Not Compromising my health", Beautiful & healthy crops", and "High product quality" are considered to be the most important statements informing about farmers' motivations for IPM.

Protecting the environment, natural resources, and biodiversity is a very important factor influencing farmers' decision to implement IPM.

DATABASE

NUMBER OF FARMS: **38**

PARTICIPANT COUNTRIES:
BELGIUM
FINLAND
PORTUGAL
SERBIA
THE NETHERLANDS

TOTAL ORGANIC FARMS: **6**

AVERAGE FARM SIZE: **179 HA**

MAIN CROPS:
TOMATO
POTATO
ZUCCHINI

AVERAGE EXPERIENCE OF FARMERS: **21 YEARS**

IPM STRATEGIES USED

DECISION SUPPORT SYSTEM

Farmers of the network are not using DSSs to improve their decisions and avoid unneccessary treatments. Progress could be made in his area.

VARIETY CHOICE

For some vegetables there are some options to select cultivars resistant to diseases.

The survey informs about how far the various components of IPM are already implemented by IMPWORKS farmers in arable fields.

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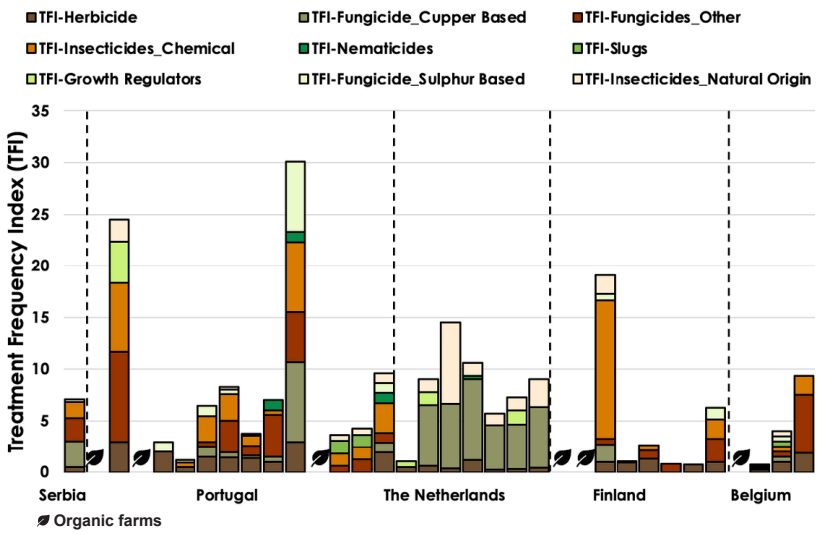
PESTICIDE USE



Treatment Frequency Index (TFI).

TFI is used as a metric of frequency and intensity of pesticide use.

The TFI was determined based on:

→ The number of treatments

→ Average dose (% recommended dose for target pest)

→ Average % of the treated area

TFI metric shows a large range of pesticide use across farms, that can be attributed to:

→ **Nature of crops**

→ **Climate conditions**

→ **Level of IPM adoption**

IPM INDEX

We tested a new IPM Index calculated from the information collected on crop and pest management.

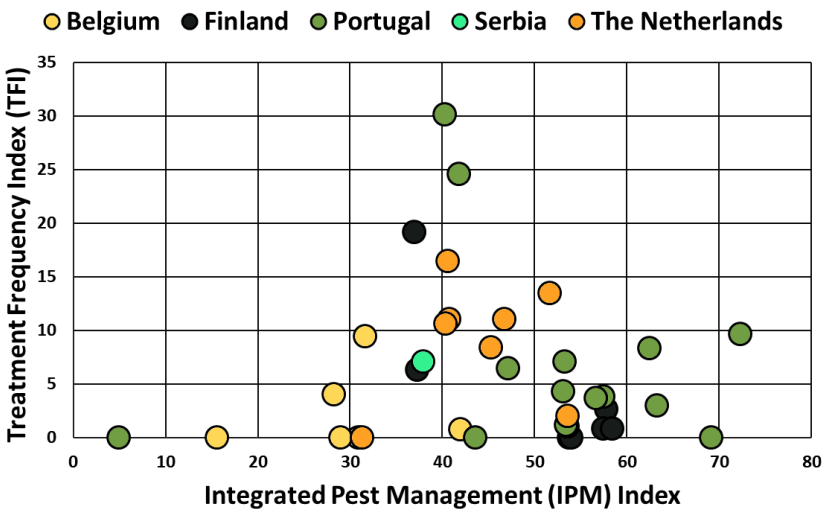
Spatial Management | *Variety choice* | *Decision making for treatments* | *Monitoring treatment effect* | *Number of growing seasons* | *Soil tillage* | *Landscape Management* | *Seed/ seedling treatments*

Mechanical weeding | *Rotation diversity* | *Sowing/ planting date* | *Fertilizer use* | *Rotation diversity* | *Choice of pesticides* | *Soil/ substrate disinfection*

Based on information collected in IPMWORKS farms about the level of adoption of several components of holistic IPM, we tested a new IPM Index (sum of scores summarising IPM practices: diversity of crops in the rotation, use of resistant cultivars, adapted sowing dates to escape pests, soil tillage strategy, use of Decision Support Systems, mechanical weeding...).

The IPM Index ranges [0 - 80].

The range of IPM adoption varies across farms, and this explains part of the pesticide use.



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SELF-EVALUATION

WEED CONTROL | **DISEASE CONTROL** | **PEST CONTROL**

Farmers consider weed, disease, and pest control similar to better compared to neighbor farmers whatever the level of IPM adoption.

IPM is efficient for weed, disease, and pest control.

WORKLOAD | **EQUIPMENT COST** | **GROSS MARGIN**

No clear impact of IPM adoption on workload/ha.
No clear impact of IPM adoption on equipment costs.
Most IPMWORKS farmers think they have similar or higher gross margins as compared to neighbors. **IPM is cost-effective.**

CONCLUSION

The IPMWORKS network of producers in outdoor vegetables displays a large range of practices, wih various levels of IPM adoption. The more IPM is adopted, the less pesticides are needed. Further progress in IPM adoption can be done with the help of IPMWORKS hub coaches.

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