Survey #1: IPM awareness, IPM adoption, pesticide use and self-evaluation
TOPICS OF SURVEY #1:

- Farming Context
- Farmers Expectations and Preferences
- Cultural Practices: Farm Level
- Cultural Practices: Crop Level
- Pest Control Efficacy: Perception of the Farmer
- Cost-Efficiency: Perception of the Farmer: Self-Evaluation

Number of Farms: 83

Participant Countries:
- Denmark
- Germany
- Italy
- Slovenia
- The Netherlands
- Spain
- United Kingdom

Total Organic Farms: 5

Average Arable Field Size: 367ha

Main Crops:
- Wheat
- Potato

Average Experience of Farmers: 26 Years
Main arable crops in participating countries

The network covers a wide range of crops...but some countries are more diversified than others.
“I try to restrict my use of crop protection products”, “For me, crop protection must be cost–effective”, “IPM is a way to reduce environmental impacts”, “Not compromising my health” and “High product quality” are statements highly agreed upon by farmers.

“Maintaining agricultural traditions” is not something important, indicating that farmers are open to change and adopting new practices that will benefit them now and in the future.
Pesticide Use

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

- Nature of crops (Potatoes and rapeseed are crops requiring high levels of pest/disease control)
- Geographic location
- Level of IPM adoption

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 treated area (default = 100)
Integrated Pest Management Index

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

Cultural practices at the crop and farm levels were evaluated based on the last 3 cropping seasons. IPM practices included in the index were e.g. number 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...

Each practice rating was then scored between 0-4. The IPM index is the sum of the weighted scores and ranges [0 - 84].

The range of IPM adoption varies across farms, and this explains part of the pesticide use. Farms diversified with grass show a lower TFI and higher IPM index.
Farmers rarely cited Decision Support Systems (DSS) for the decision making of treatments: herbicides, fungicides, insecticides, nematicides, slug control, and growth regulators.

DSS DOES NOT APPEAR TO BE A MAJOR COMPONENT OF IPM STRATEGIES IN IPMWORKS ARABLE FARMS. PROGRESS COULD PROBABLY BE DONE IN THIS AREA.
**Variety Choice**

Criterias for the selection of cultivars in IPMWORKS farms

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### CHOOSING WHEAT CULTIVARS RESISTANT TO DISEASE IS A MAJOR OPTION, PARTICULARLY IN DENMARK, ITALY, SLOVENIA...

Some farmers are growing mixtures of wheat cultivars to enhance the crop robustness.

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### POTATO CULTIVARS RESISTANT TO DISEASES ARE RATHER POORLY USED, BECAUSE OF TECHNOLOGICAL CONSTRAINTS FROM THE INDUSTRY.
Self-evaluation of the quality of the weed, disease, and pest control as compared to other farmers in the area. Results are presented as a function of self-evaluation in IPM adoption.

**Quality of Weed Control**
- Farmers consider weed control similar to better compared to neighbor farmers, whatever the level of IPM adoption. IPM is rather efficient for weed control.

**Quality of Disease Control**
- Farmers consider disease control similar to better compared to neighbor farmers, whatever the level of IPM adoption. IPM is rather efficient for disease control.

**Quality of Pest Control**
- Farmers consider pest control similar to better compared to neighbor farmers, whatever the level of IPM adoption. IPM is rather efficient for pest control.
The farmers were asked to indicate whether their equipment costs, workload/ha, and gross margin were low, similar, or high, as compared to neighbors. Results are presented as a function of a self-evaluation of IPM adoption.

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 than their neighbors. IPM is cost-effective.