Integrated Pest Management Tools

Total reliance on pesticides

Holistic IPM strategy
Integrated Pest Management Tools

Five Pillars of Holistic IPM

Pillar 1 • Agricultural landscapes with diverse semi-natural habitats

Pillar 2 • Cropping systems designed to manage pests, weeds and diseases

Pillar 3 • Optimized decision making, guiding operational and strategic IPM choices

Pillar 4 • Preferential use of non-chemical control options

Pillar 5 • Increased efficiency of treatments
Integrated Pest Management Tools

- Develop
- Create
- Demonstrate
- Discuss
The IPM Decisions Platform

1. Create an IPM Decisions account and login
2. Add your farm(s)
3. Add crop/pest combinations
4. Select decision support systems
5. Monitor DSS outputs for period of high risk

Platform live!

Horizon 2020

IPM Decisions – Project 817617
IPMWorks – Project 101000339

www.IPMDecisions.net
www.IPMWorks.net
## IPM Decisions Platform

<table>
<thead>
<tr>
<th>Pest</th>
<th>Crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabbage moth</td>
<td>Brassicas</td>
</tr>
<tr>
<td>Cabbage fly</td>
<td>Brassicas</td>
</tr>
<tr>
<td>Septoria</td>
<td>Wheat</td>
</tr>
<tr>
<td>Carrot rust fly</td>
<td>Carrot</td>
</tr>
<tr>
<td>Cutworm</td>
<td>Multiple crops</td>
</tr>
<tr>
<td>Orange wheat blossom midge</td>
<td>Wheat, Rye, Barley, Oats, Triticale</td>
</tr>
<tr>
<td>Pollen beetle</td>
<td>Oilseed rape</td>
</tr>
<tr>
<td>Saddle gall midge</td>
<td>Wheat, Rye, Barely, Oats, Triticale</td>
</tr>
<tr>
<td>Codling moth</td>
<td>Apple, Pear</td>
</tr>
<tr>
<td>Barley Yellow Dwarf Virus</td>
<td>Winter wheat, winter barley</td>
</tr>
<tr>
<td>Potato early &amp; late blight</td>
<td>Potato</td>
</tr>
<tr>
<td>Grey Field slug</td>
<td>Oilseed rape and cereals</td>
</tr>
</tbody>
</table>

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https://www.platform.ipmdecisions.net/
Link to the platform...

https://www.platform.ipmdecisions.net/login

https://www.platform.ipmdecisions.net/
Winter Wheat

Barley Yellow Dwarf Virus

BYDV TSUM model

Risk status

High

Medium

Low

TSUM

Guidance

- Based on current data available, conditions have reached or are above 100 day-degrees over a base of 3°C. The risk of winged aphids being present in the crop is high, winged aphids likely to be present in crop in coming days. The "TSUM" chart indicates that the accumulated degrees over 3°C since crop emergence or last insecticide spray is approaching 170 degrees, which is associated with the emergence of winged aphids that
Adaptation Dashboard

Select Model for adaptation

Hutton Criteria Late Blight Model (IPM Decisions) for Potato on Brussels Virtual Demonstration Farm

Original Parameters
Minimum Temperature Threshold
10
Relative Humidity Threshold
90
Consecutive Days

Revised Parameters
Minimum Temperature Threshold
10
Relative Humidity Threshold
85
Consecutive Days

Risk status

PHYTIN

Risk status

PHYTIN
For Researchers and Developers

- Development environment (Python) to access to all the platform resources:
  - Data sources, Tools, DSS Models

- OpenAlea Scientific Workflow & Visual Programming
  - Test existing models
  - Develop new models for sustainable agriculture

- IPM-Decisions Factory
  - Transform Python / OpenAlea models to a DSS
  - Integrate this DSS after review
IPM Demonstration Network

A network of demo farms

- Demonstrating cost-effective IPM strategies

Promoting a holistic vision of IPM

- Able to reduce the reliance on pesticides

A specific methodology based on hubs of farmers

- Peer-to-peer knowledge exchange to progress further towards holistic, cost-effective IPM
A Pan-European IPM Demo Network

Data collected across the network illustrates and benchmarks the performance of holistic IPM strategies.
1. Agrosystem. Concepts and theory – Holistic approach to IPM
2. Plant health risk challenges and policy context in the EU
3. Integrated Weed Management
4. Integrated Disease Management
5. Integrated Invertebrate Pest Management
6. Holistic IPM examples
7. Assessment of an IPM system
8. Soft skills for facilitating interactive learning and demonstration on IPM
Risk averse

IPM standard

Holistic
IPM Demonstrations – BYDV management

Risk averse (4) V
IPM standard (2) V
Holistic (0)

Risk averse
IPM standard
Holistic

IPM standard
Risk averse
Holistic

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**Aim of IPM NET:** To better understand the effectiveness of IPM approaches on farm yield, profitability and sustainability.

- Access to tools and knowledge
- Collect and analyze IPM data
- Share information and experience
Aim of IPM NET: To better understand the effectiveness of IPM approaches on farm yield, profitability and sustainability.

Open for IPM NET Pilot Members

Kick-off meeting with Steering Group

Opportunities for IPM NET Sponsors
Aim of AdvisoryNetPEST
Increase the sharing of knowledge and adoption of innovative solutions to reduce the use and risks of pesticides.

2024 - 2029
Integrated Pest Management Tools

Develop
Create
Demonstrate
Discuss

Holistic IPM strategy