SMARTCROP

Innovative approaches and technologies for Integrated Pest Management (IPM) to increase sustainable food production
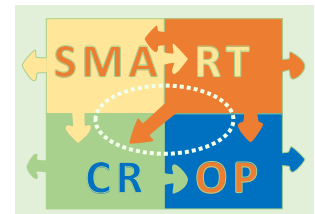
Norway has implemented the EU-Directive on sustainable use of pesticides. However, we lack sufficient IPM-tools for farmers to utilise, as well as measures to stimulate the best possible IPM. SMARTCROP is addressing these challenges.

The main aim of the project is to develop innovative tools, methods and technologies that increase the use and understanding of IPM for the development of a sustainable food production.

The project is divided into four Work Packages (WPs):

1. Innovative IPM-tools
2. Effects of IPM practices on pests and natural enemies, yield, farmer economy, and risk of pesticides
3. Develop and implement new simulation models for pest-pest-natural enemy interactions and environmental risk of pesticides
4. Innovative policies for a persistent adoption of intensive IPM strategies.

Important end-users such as farmers, agricultural extension services, businesses selling IPM-tools, regulatory authorities, wholesalers and retailers are participating in the project. An active participation is crucial both in order to develop robust IPM-tools, as well as to ensure a good understanding of IPM throughout the value chain.

The project will run from 2015-2019 and is financed by The Research Council of Norway – project number 244526/E50.

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Partners

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Work Packages and tasks

WP- and task leaders

1. Development of new IPM-tools
WP1.1   Sensor-based weed harrowing in cereals
WP1.2   Combine odours and natural enemies
WP1.3.   Effect of water on pests and beneficials
WP1.4.   End-users' assessment of suitability of tools

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2. Effects of different IPM practices
WP2.1   Field trials with different IPM-practices, annual crops
WP2.2   . Field trials with different IPM-practices, perennial crops
WP2.3   Lab studies on interactions
WP2.4   End-users' assessment of IPM practices

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3. New models and decision support systems for IPM
WP3.1   Develop new simulation models for pest
             -natural enemy complexes
WP3.2   Refine existing apple scab model
WP3.3   Pesticide fate model adapted for winter conditions
WP3.4   Web application for environmental risk assessment
             of pesticides
WP3.5.   Implement models into existing web-based forecasting system
WP3.6   End-users' assessment of web-based system

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4. Innovative policies for IPM adoption
WP4.1   Consumer, wholesaler and retailer attitude to IPM
WP4.2   Policy instruments for increased availability of IPM tools
WP4.3   Policy instruments to increase farmers use of best IPM

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