IPM adoption in my hub

Facilitation approach and progress made in IPM adoption

Natasja Doelman
Netherlands

My group

PRESENTATION OF THE HUB COACH ORGANISATION

The Dutch hub, which is located in the southwest of the Netherlands, is lead by Delphy. The main mission of the organization is to apply IPM in practice and to make farmers aware of what the different IPM strategies are.

THE HUB

Group of 11 farmers

Mix between arable and outdoor vegetable farmers

Most common crops are potatoes, onions, winter wheat, sugar beets and chicory

Most common pests are late blight, BYDV, yellow rust and mildew

OBJECTIVES AND MOTIVATIONS OF THE FARMERS

Motivations of farmers within the hub are to integrate IPM into their farming systems as much as possible. Farmers within the hub are open to new strategies and want to be pioneers in the application of IPM and work on a cropping system that is more robust/resilient to pests and diseases. They are convinced that less pressure on biodiversity will in the end result in a healthier crop with higher yields.
They are motivated to invest in the newest IPM technologies in order to increase their knowledge and reduce environmental impact.

DRIVERS

The farmers within the hub have multiple drivers. These vary from the interest in technical machinery and testing out new practices to social issues where there is a pressure from society.
Most farmers within the hub are very curious to new ideas and technologies and are open to share this with other farmers.

BARRIERS

Barriers for the farmers within this region are the complexity of climatic conditions. Most farmers within the hub are not able to irrigate successfully due to the salty ground and surface water. Also, pest and weed control is one of the barriers in which timing plays a crucial role. Especially while using mechanical technologies when crops have to be treated during the right growth stage.

IPM challenges and results

IPM Challenges

What were the main IPM challenges?

One of the main IPM challenges the hub was facing was disease pressure due to a very wet season. Due to this, the pressure of fungal diseases was high.

Also, in terms of weed management, a shift had to be made while applying new technologies which was a challenge in the beginning for some farmers.

Demo on new farming technologies for sowing and weed management

The hub's results

What progress has the hub made on these challenges ?

In terms of weed management, farmers started to use technical solutions which result in less application of herbicides. For pest and disease control, farmers started to make use of DSS systems in order to determine if an application is necessary or not and what would be the right timing for application.

What issues still need to be addressed ?

What still needs to be addressed within the hub is how predators can help for bio control of pests in several crops. Also, the willingness to reduce the use of plant protection products needs to be increased in this way.

How are the hub farmers going to proceed ?

The farmers are proceeding with the knowledge they gathered during the project and demo events. If the hub itself will remain a close group of farmers is still the question and will be clear after the project, but they definitely gathered and spread valuable knowledge. The cross-visit that will take place in June will definitely increase the group bonding of the hub!

Key conclusions

With use of the right communication, farmers within the hub started to ask questions and were interested in the use of different IPM measures such as application of DSS systems, mechanical weed control and the use of robust or resistant varieties.

Due to the informal way of communication with the farmers, ringing the phone or sending a message via WhatsApp became much easier which resulted in a quicker implementation of IPM strategies.

Facilitation approaches

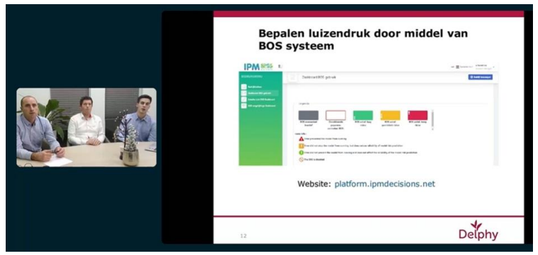
How can we help farmers to apply DSS within their farms?

What is the issue the hub work on more precisely?

Determination of the risk of BYDV with later sowing, resistant varieties and use of a DSS system. Since BYDV is of high risk within the southwestern region in the Netherlands, the DSS of BYDV is tested at multiple farms within the hub.

How did you proceed? What did you do?

At different time intervals, observations were done within the fields. This was done for fields with different sowing dates in order to check if the appearance of a risk within DSS corresponds to a risk within the fields.



Individual facilitation

As part of the individual facilitation, fields visits were done, and a diagnosis was made on the spot.

The results were communicated with the farmers.

Collective facilitation

As part of the collective facilitation, a meeting was done with the group and other farmers to show the in-field results.

Within previous events, field tours were done in order to show the farmers how a machine works on the spot.

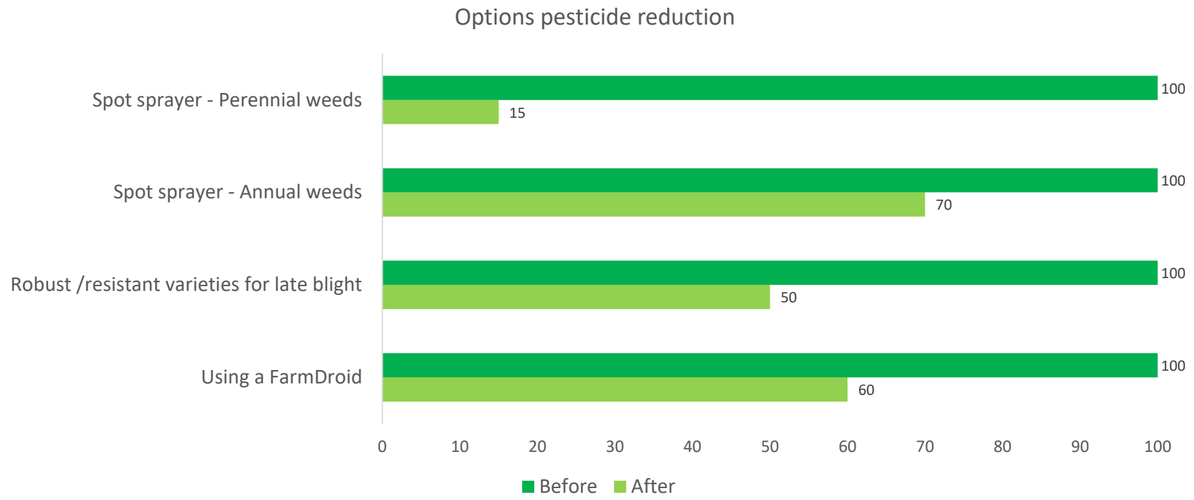
What conclusions can you draw?

The farmers were interested in applying and making use of a DSS to control their aphid population. The monitoring resulted in helpful insights which were directly communicated with the farmers. The system itself was also explained to farmers in order to make them aware of how the program works.

My tips for making it work

For this issue, the decision was made to explain the results within a webinar. This resulted in a high number of participants (55) and in this way, the DSS platform developed in IPM Decisions could be easily demonstrated and farmers were encouraged to directly create an account and monitor their fields.

IPM adoption & pesticide use



Hub members tested several approaches:

- Spot sprayer, 85% reduction herbicides in perennial weed control in cereals. Perennial weeds mostly are present in patches in the field, only these are treated.
- Spot sprayer, 30% reduction herbicides in control of annual weeds. Cameras on the sprayer help to adjust doses to weed development.
- Robust /resistant varieties for late blight: 50% reduction of fungicides. Such varieties need only treatment in periods of high infection risk, for the sake of resistance management.
- FramDroid (robot), 40% reduction of herbicides in sugar beet. The robot knows exact location of every seed, application of herbicides is just around the seeds.

“Dutch farmers are urged to develop more robust cropping systems and apply more IPM. My key interest is to search for opportunities that modern technology offers, such as spot sprayers, and the use of IPM Decision Support Systems.

Natasja Doelman

“The farmers within the hub are pioneers in the field of IPM and responded positively in applying new strategies.

A European network of demonstration farms promoting low pesticide use and economically efficient management strategies

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