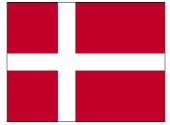


How I implement IPM

Details of a holistic IPM strategy with low pesticide input in a European farm



velas

My farm



Abildskovgaard ApS

Voejstrupvej 61, 5672 Broby
Denmark

Pedo-climatic context

- Abildskovgaard covers several different soil types. It ranges from sandy soil to sandy clay soil.
- Denmark do have more sandy soils compared to the rest of the European soils.
- Wet climate with sufficient rainfall during the growth season.

Main pests

- Weeds: resistant Italian ryegrass
- Limited effect of the available herbicides

Agronomical context

- 312 ha in grain-based crop rotation
- Winter wheat: 43%
- Spring barley: 25%
- Oil-seed rape: 12%
- Oat (spring): 2%
- Rye-grass for grass seed production: 5%

Socio-environmental context

- Abildskovgaard is owned and run by Jacob and Anders Rasmussen
- In addition to plant production, there is also a production of piglets and pigs for slaughtering on the farm

Objectives and motivations of the farmer

- The project can contribute to good experiences and knowledge sharing between farmers.
- Identification of new tools and methods to fight the weed Italian Ryegrass.



My strategy

Goals

- Keep the grass weeds at a level, where it does not cause yield loss
- Reduce the amount of grass weeds without the use of additional herbicides



Focus points

- False seed bed: Plowing in the autumn has caused grass weeds to sprout before the spring crop is established
- Crop rotation: Winter barley has been removed from the crop rotation to avoid early sowing and due to a lack of herbicides to use in winter barley
- Crop rotation: More spring seed, in addition to spring barley, oats will be added from 2023
- Delayed sowing: Wheat is established after the 25th of September, which is late in this area
- Herbicides: Avoid use of ALS-herbicides as resistance has been confirmed
- Rotational ploughing: 4-5 years between each ploughing where it's possible. It is expected, that the grass weeds will decay at the bottom of the plough furrow and decay before next ploughing

Key measures

- **Field programs, such as Farmtracking can quantify data on GPS level. We can then refer back to this data to better understand why the problem arised.**
- **Resistance testing of Italian ryegrass**
- **Monitoring of grass weeds at field level**

My results

Comparison with standards

Change of crop rotation

Winter barley has been taken out of the rotation due the early sowing time and the very limited possibility of pesticides available

More spring crops in the rotation – both spring barley and oat

Change of pesticide use

- Focus on herbicides with effect
- Such as "Topik" and "Focus Ultra" on wheat to control Italian rye-grass

Herbicides to which there is resistance are not used

- ALS-agents

Key conclusions

Agronomically:

- **Focus on optimizing the crop rotation, in relation to keeping the grass weeds under control**
- **A number of agronomic solutions have already been implemented and are worth pursuing to disrupt the ryegrass cycle: rotation with crops from different seasons, false seed-bed and delaying the sowing date, etc.**

Environmentally:

- **Avoid using extra herbicides in relation to grass weeds**

Sustainability indicators

Very good

- Sowing late
- Pesticides with effect

Medium

- False seed bed
- Rotational plowing

To improve

- More spring crops
- Greater variety in spring crops

Legend

In green = positive trend
In red = negative trend

Our feedback



“ You have to learn to live with a certain number of weeds. The weed just needs to be kept at a level, where it does not take advantage of the crop

Jacob Rasmussen, Abildskovgaard (Denmark)

It is beneficial to participate in an IPM hub, as the exchange of experience will lead us in the right direction in relation to IPM and weed control on the farm.



“ We use all the IPM-tools that make sense on this farm to manage grass weeds. It is going very well, as Abildskovgaard is very interested in reducing the grass weeds without the use of additional herbicides

Helle Bundgaard Elander, Velas (Denmark)

Our starting point was a resistance test on Italian rye grass. We know that there is a limited effect of the available ALS-herbicides – that’s why we use all the IPM-tools that make sense on the property.

