What IWM strategies / tactics are UK arable farmers employing for weed control

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Overview

The objective was to develop an understanding of the following by conducting interviews with UK arable farmers:

• what are the problem weeds
• strategies / tactics being employed
• drivers for decision making
• barriers to uptake of IWM
• where knowledge is gained / trusted
Interview protocol

• The same protocol / questions was used across all participating countries and cropping systems

• 4 sections:
  1. Farmer / farm details (size, ownership, problem weeds)
  2. What they do on their farm to control the weeds they have
  3. Factors that affect the decision making process
  4. Where they access information to make weed control choices

• Tried to avoid leading questions as much as possible

• Interviews recorded and then transcribed
What are the main weed issues?

“Most other weeds get controlled by black-grass measures”

“BLW’s cleavers is the main target”

“BLW’s not an issue, always there but can control them”
What farmers are doing for weed control?

- Scouting
  - Monitoring & evaluation
  - Sensing technology

- Rotation
  - Diverse cropping systems (in space and time)
  - Field margin management
  - Cultivar choice/establishment
  - Sowing pattern
  - Cultivar choice
  - Sowing date
  - Seed rate
  - Water management

- IWM
  - Targeted control
  - Field/soil management

- Tillage/depth
  - Stubble management
  - Seed bed preparation

- Prevent establishment
  - Reduce seed return
  - Reduce impact of weeds on crop
  - Supportive tactics

- Pre-sowing herbicide
- Pre-em herbicides
- Post-em herbicide (autumn)
- Post-em herbicide (spring)
- Patch spraying
- Hand weeding
Monitoring black-grass abundance
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Un-treated:  

Flufenacet treated:
Monitoring black-grass abundance

moulsoe.cross: 2015
Crop: Winter wheat

moulsoe.cross: 2016
Crop: Winter wheat

moulsoe.cross: 2018
Crop: Winter wheat

moulsoe.cross: 2019
Crop: Winter wheat
Diversity / flexibility is key to sustainable weed control

Rotations / cropping

Drilling dates

Cultivations

Herbicides

Monitoring
What factors affect farmers decision making

- Economic
- Bio-physical
- Technical
- Regulatory
- Individual
- Societal/cultural
Information sources for farmers

- Experience at a farm/parents
- Independent farm advisors
- Information/demonstration days
- Peers/colleagues
- Study clubs
- Education
- Company advisors
- Magazines
- Social media
- Internet in general
- Publicity from industry
- Contract workers
Summary

• Diversity & flexibility key to IWM
• Monitor success of tactics employed
• Will IWM changes affect profitability
• Use sources / places of information that you trust