

Identifying Adaptation Options and Constraints: The role of agronomist knowledge in catchment management strategy

Water Resources Management

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General Statements (continued)	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
a. Where alternative pesticides cannot prevent severe gross margin losses, spring cropping will increase					
b. A change to the rotation is the intervention of last resort					
c. In general, direct substitutes do not exist for any active substance					
d. If the withdrawal of an active substance is announced 5 years in advance, alternative active substances will be available by the time of withdrawal					
e. The adoption of wide OSR rows and inter row spraying will reduce current dependency on propryzamide and carbetamide					
f. If approved for use, RoundUp Ready OSR would reduce current dependency on propryzamide and carbetamide					
g. If the future of one active substance is uncertain, alternative active substances will come to the market					
Please comment on any of the above statements (a-g). Comments on any statements that evoked a strong opinion from you are particularly valued. (Optional)					

Request for Support with Online Survey

Research Aim: to help the water sector better understand pesticide use patterns in water supply catchments, the agronomic reasons for pesticide use and limitations to the range of active substances available for key weed, pest and disease problems.

Request for Support: In light of your expert knowledge in this area, I would be very grateful if you could take 15 minutes of your time to support this research by completing the survey included in this booklet.

The survey is also available at:

<https://www.survey.cranfield.ac.uk/pesticideconsultation>

Research Outputs: Findings generated through this research will be used to help water company planning processes for potable water supply. Additionally, research findings will be shared with all respondents and the broader community of pesticide users.

All data will be treated in strict confidence and you may respond anonymously if you prefer. Further details are given on the web site.

Further Information: The research is part of an EngD student research project at Cranfield University. Please contact Tom Dolan t.e.dolan@cranfield.ac.uk for further information.

Many thanks for your support

This survey is the third stage of an expert consultation process designed to help Anglian Water gain a greater understanding of the agronomic and the legislative drivers that influence pesticide use in the Anglian region. The statements included in this survey are based upon two rounds of in depth interviews performed with expert agronomists from a range of agronomy organisations.

The survey is divided into seven sections:

- Propyzamide + Carbetamide
- Metaldehyde
- Clopyralid
- Pendimethalin
- Chlortoluron
- Mesosulfuron-methyl
- General pesticide trends

Each section presents a series of statements, for each statement please select one answer from the five point scale 'Strongly Agree' to 'Strongly Disagree'. An optional comments box is included at the end of each section.

Introductory Questions			
1. Name <i>(optional)</i>			
2. Organisation <i>(optional)</i>			
3. Email address <i>(optional)</i>			
4. Do you hold a Basis Certificate in Crop Protection?	Y	N	
5. Which of the following would you use to describe your profession? <i>(please select all that apply)</i>			
Agronomist (self employed)			
Agronomist (employed by pesticide distributor)			
Agronomist (employed by pesticide manufacturer)			
Agronomist (employed by research organisation)			
Agronomist (employed by agricultural consultant)			
Agronomist (employed by farming group)			
Other (please specify)			

General Statements	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
a. No new herbicides for blackgrass will be available in the next 5 years					
b. When one active substance is lost (for whatever reason) other active substance(s) will be used to manage the weed, pest or disease issue					
c. In the absence of effective pesticide control, weed and pest pressures will increase over time					
d. The agronomic impact of losing an active substance depends upon what active substances remain available					
e. Cultural control is a complement to, not a direct substitute for pesticides					
f. Effective resistance management requires as many different modes of action as possible					
g. When an active substance is lost, alternative active substances will be tried in preference to non pesticide interventions					
Please comment on any of the above statements (a-g). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					

	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Pendimethalin and Chlortoluron					
Pendimethalin					
a. The loss of pendimethalin will lead to increased stacking of other pre-emergence residual herbicides to manage grassweeds in cereal crops					
b. If pendimethalin were the only active substance lost, it would be possible to maintain cereal yields using alternative herbicides					
c. Pendimethalin is one of many modes of action used as part of a resistance management strategy for Blackgrass					
d. The loss of pendimethalin would trigger a change to the combinable rotation					
Please comment on any of the above statements (a-d). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					
Chlortoluron					
a. The loss of chlortoluron will lead to increased use of other herbicides at the pre-emergence stage for blackgrass control in the combinable rotation					
b. If chlortoluron were the only active substance lost, it would be possible to maintain cereal yields using alternative herbicides					
c. Chlortoluron is one of many modes of action used as part of a resistance management strategy for Blackgrass					
Please comment on any of the above statements (a-c). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					

	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Propyzamide and Carbetamide					
a. If propyzamide is not available, carbetamide can be used to manage resistant blackgrass in the OSR stage of a combinable rotation					
b. There are no pesticide alternatives to propyzamide and carbetamide for resistant blackgrass management in the OSR stage of a combinable rotation					
c. If propyzamide and carbetamide were banned OSR would continue to be grown in areas where resistant blackgrass is a problem					
d. Without propyzamide and carbetamide, no autumn break crops can be grown where resistant blackgrass is a problem					
e. Without propyzamide and carbetamide, a change to the rotation would be needed where resistant blackgrass is a problem					
f. The loss of propyzamide and carbetamide will lead to increased use of spring crops to manage resistant blackgrass in the rotation					
Please comment on any of the above statements (a-f). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					

	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Metaldehyde					
a. If you couldn't use metaldehyde, methiocarb could be used for slug management					
b. If you couldn't use metaldehyde, ferric phosphate could be used for slug management					
c. There are no pesticide alternatives to metaldehyde					
d. Cultural control is not a substitute for metaldehyde slug control					
e. In the absence of metaldehyde, pesticide substitutes of equal efficacy are available					
f. The loss of metaldehyde would lead to a change to the rotation where OSR and Wheat are grown on heavy soils					
Please comment on any of the above statements (a-f). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					

	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Mesosulfuron-methyl (Atlantis)					
a. There are no pesticide alternatives to Atlantis for blackgrass management at the post-emergence stage in wheat					
b. Where the efficacy of Atlantis is reduced, there will be an increase in the use of residual chemistry at pre-emergence timing in wheat					

c. Cultural control can replace the loss of Atlantis					
d. In high pressure resistant blackgrass areas, a reduction in the efficacy of Atlantis will reduce wheat yields					
e. In high pressure resistant blackgrass areas, a reduction in the efficacy of Atlantis will prompt a change to the rotation					
Please comment on any of the above statements (a-e). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					

	Please Select One				
	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Clopyralid					
a. Clopyralid is the only available pesticide for thistle management in OSR					
b. There are available pesticide alternatives to replace clopyralid for thistle management					
c. Cultural control interventions can substitute for clopyralid control of thistles in OSR					
d. In the absence of clopyralid, thistles will reduce OSR yields					
e. In the absence of clopyralid, thistles can be managed without a change to the rotation					
Please comment on any of the above statements (a-e). Comments on any statements that evoked a strong opinion from you are particularly valued. <i>(Optional)</i>					