

Demonstration Test Catchments

The Role of Farm Advisors in Improving the Uptake of Water Quality and Other Environmental Measures

Delivering advice to farmers has been used as a mechanism to encourage uptake of environmental best management practices, however the farm advice sector has dramatically changed over recent years. Many organisations and businesses now offer advice and there is a risk that the sector has become fragmented. Recent research by the Demonstration Test Catchments programme investigated the role of various organisations and businesses which provide one to one advice on diffuse water pollution from agriculture (DWPA) mitigation measures through interviews with a variety of farm advisors (see Box 1) in three agriculturally contrasting regions of England: East Anglia, North West and South West. Interviews with 81 farm advisors were conducted during September and October 2013, either face to face or over the telephone. Objectives were to assess:

- What mitigation measures are being recommended by advisors?
- How do recommendations differ between sources of advice? Do they conflict?
- Which mechanisms (regulatory, financial incentives, signposting or voluntary approach) are being used to encourage uptake of measures?

What are farm advisors recommending?

The responses provided during interviews regarding the most commonly recommended measures were categorised under 35 different headings. The most common were buffer strips and reducing fertiliser applications. Analysis using a multidimensional scaling statistical tool (PROXSCAL) was carried out, which assigns each **recommendation** to a location in a conceptual two dimensional space dependent upon the advisors who recommend it.

Recommendations located near each other in Figure 1 are more likely to be recommended by the same advisor

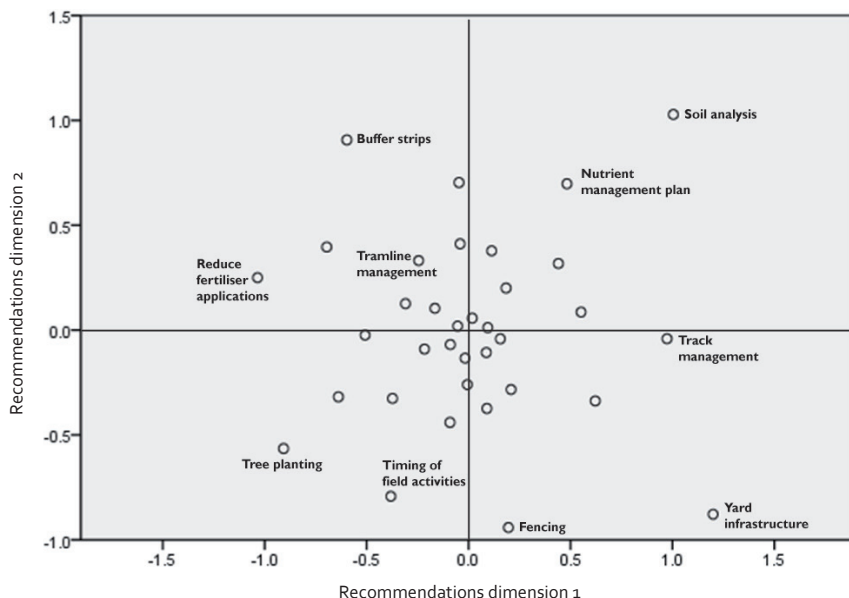


Figure 1. DWPA mitigation measures plotted on a 2D similarity scale using PROXSCAL based upon advisors recommending them.

- Many recommendations cluster near the central origin, suggesting no particular pattern exists.
- Peripheral measures (labelled on Figure 1) are more distinctive in terms of who does or does not recommend them.
- Groupings occur between measures in different quadrants, e.g. soil analysis and nutrient management plans (top right) are less likely to be recommended by an advisor who also recommends tree planting (bottom left).

Box 1. Organisations interviewed

Catchment Sensitive Farming
 Natural England
 Environment Agency
 Rivers Trusts
 Farmer network
 Seed and fertiliser sales staff
 Independent agronomists
 Feed nutritionist consultant
 Agri consultant companies
 Forestry Commission
 Land agents
 Auction house
 Ex FWAG
 Woodland Trust
 Levy Boards
 Wildlife Trusts
 Water companies
 NFU
 Vets
 RSPB

PROXSCAL was also used to assign each **advisor** to a specific location in a conceptual two dimensional space dependent upon the recommendations most commonly made. To compare the similarities in recommendations between organisations *standard deviation ellipses* were created in ArcGIS using the PROXSCAL outputs. The ellipses define the core area of interest for a group of advisors.

Comparisons between shape, size and location of various ellipses help inform interpretation of the data (Figure 2)

- Overlap exists between organisations in terms of recommendations, with certain measures being proposed by many different advisors (e.g. timing of field activities and buffer strips,), however distinctions also exist, suggesting there are different niches.
- The Environment Agency is illustrated with a narrow ellipse reflecting the particular focus in their advice on enforcement of regulatory measures.
- The most overlap occurs between Natural England and organisations with an environmental agenda as many of the latter focus on recommending agri-environmental scheme (AES) options as an incentive to engage with farmers.

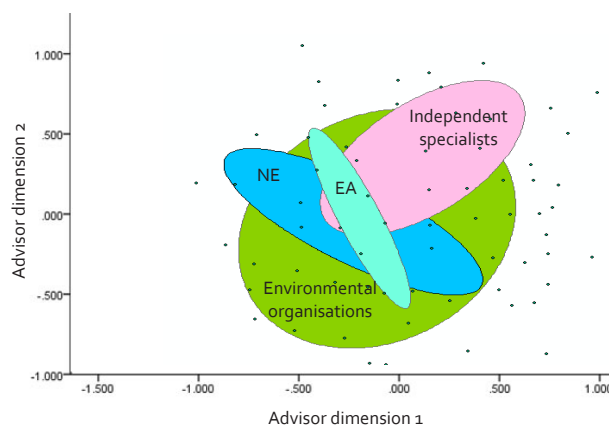


Figure 2. Advisors plotted on a 2D similarity scale using PROXSCAL based upon measures they recommend, with 1 standard deviation ellipses.

Conflicts in advice

Advisors reported that conflicts in recommendations could exist between those with differing agendas (environment, government or economic).

- The amount of fertiliser to spread and silage cutting times varied greatly amongst advisors with environmental or economic agendas.
- Species and habitat priorities varied amongst environmental organisations, thus influencing recommendations. One example being tree planting to create shading for fish versus open spaces for wading birds.
- Advice regarding dates for closed periods in Nitrate Vulnerable Zones differed between advisors. Changing regulations were stated by many non governmental advisors as causing confusion and difficulties with keeping up to date and delivering consistent advice.
- Conflicts occurred within and between government organisations. The most common disagreements involved AES options and whether they were effectively targeted. For example, AES grassland management options resulting in over or under grazing of grasslands.

Such findings indicate that the advice sector could be more efficient, as collectively it does not provide consistent advice.

Mechanisms used by farm advisors

Table 1. Mechanisms used to encourage uptake of measures

		CSFO	Natural England	Environment Agency	Land Agent	FWAG	Independent specialist	Rivers Trust	Wildlife Trust	Large Company	Woodland Trust	RSPB	Forestry Commission
Tree / hedge planting	South West												
	North West												
	East Anglia												
Timing of field activities	South West												
	North West												
	East Anglia												

Differences exist between advisors regarding the mechanisms they use to encourage uptake of measures.

- Many organisations focus upon one form of mechanism (e.g. RSPB encouraging AES options), whilst a select few use a variety of mechanisms (e.g. Catchment Sensitive Farming Officers use funding, voluntary approach, regulatory advice and signposting).
- The majority of advisors favour specific mechanisms for certain measures (e.g. grants and AES for tree / hedge planting) but employ a combination of mechanisms in other instances (e.g. timing of field activities).
- The mechanisms used by advisors varied across the three regions.

Advice delivered by different organisations is not homogeneous and some do indeed have particular niches within the farm advice sector. Policy makers therefore need to consider not only what environmental and DWPA mitigation measures need to be encouraged but also which organisations are best placed to deliver on the ground advice to the farmers through the various mechanisms available. There is scope to make better use of non-government advisors by maintaining communication and providing briefing sessions when new schemes are introduced. This, for instance, is likely to be important for the effective implementation of future agri-environmental policy.

Future Research

Interviews with farmers in each of the three DTC catchment will be conducted throughout 2014 to investigate which mechanisms best encourage the uptake of particular mitigation measures. Interviews will be conducted with farmers who have and who have not adopted specific measures of interest to understand their motivations.

Further information: This survey was conducted as part of the Demonstration Test Catchments project which is a collaborative research project funded by the UK Department for Environment, Food and Rural Affairs (Defra). To find out more, or if you have any comments or queries, please contact [Emilie Vrain \(e.vrain@uea.ac.uk\)](mailto:e.vrain@uea.ac.uk) or [Andrew Lovett \(a.lovet@uea.ac.uk\)](mailto:a.lovet@uea.ac.uk) at the University of East Anglia.