

REFEREED ARTICLE

FARMER'S AND ADVISOR'S ATTITUDES TOWARDS THE ENVIRONMENTAL STEWARDSHIP SCHEME

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Evidence is presented from face-to-face surveys with 25 farmers and 9 advisors of attitudes towards the Environmental Stewardship Scheme (ESS) in North Norfolk. All the farmers have/intend to join the ESS's entry level scheme (ELS) but only 28% have/intend to apply for ESS higher level scheme (HLS). Simplicity and ease of entering the ELS is contrasted with difficulties associated with applying for the HLS. 21 (84%) farmers use advisors to help make their agri-environment scheme (AES) decisions. Advisors rank environmental improvement as less important than farmers and their advice tends to reflect their specialist training. FWAG was the exception, ranking environmental impact as more important than profitability. We found support for an intermediate scheme to bridge between CSS and ELS and HLS, particularly to assist smaller farmers and some already participating in the CSS to join the ESS: an innovation that may also increase the 'people additionality' of agri-environmental schemes.

Key words: agri-environment schemes, stewardship, advisor(s), farmers, attitudes.

Introduction

In December 2004, the UK's key Agri-environment schemes (AESs), the Environmentally Sensitive Area Scheme (ESA) and the Countryside Stewardship Scheme (CSS) closed to new applicants, to be replaced by the Environmental Stewardship Scheme (ESS). ESAs and CSSs made positive contributions towards 'greening the edges' of farming, but both were criticised for failing to 'green its middle' (Dobbs and Pretty 2001). In particular, ESAs have been criticised for the relatively low up-take of the more demanding higher level tiers and their limited impacts on arable areas, while CSS tended to attract a high proportion of poor, less productive land (Evans *et al.* 2002). The ESS opened on 1st January 2005 and has thus far attracted 3.4 million ha under 25,000 separate agreements, with a first year payment value of £123 million (DEFRA 2006).

The ESS has two levels: an Entry Level (ELS) which has relaxed the principal of environmental additionality and the Higher Level (HLS) which has maintained it. Environmental additionality requires agreements to add to the existing stock of environmental capital – simply maintaining landscape features was not considered sufficient to justify support from the public purse (Dobbs and Pretty 2004)¹. By allowing existing environmental features to be entered in an application, it intended to increase participation rates, a crude measure of 'people additionality' (Carey *et al.* 2003), though this is better thought of as policy measures which encourage positive attitudes to conservation because this 'will in the long-term be more effective than policy measures that do not, since a positive shift in attitudes will increase the output of conservation goods at any specified level of budgetary cost' Colman *et al.* (1992: p.69). Morris and Potter (1995: p.52) go further, concluding that unless agri-environment schemes exert such an influence they 'will inevitably be

seen as temporary bribes, shallow in operation and transitory in their effect'. Key to recording possible over-delivery of environmental goods through 'people additionality' remains the principle of voluntary participation which is why analysis of farmer's environmental decision making is of great importance (Wilson 1997; Porter, 1998; Wilson and Hart 2000; Buller 1999).

This research examines farmers' and advisors' attitudes towards the ESS. Many previous studies have examined determinants of farmer behaviour and participation in ESA and CSS in the East of England (Lobley and Potter 1998; Walford 2002, 2003; Morris *et al.* 2000, and more recently Siebert *et al.* 2006), but we are not aware of published studies on attitudes towards ESS at this early stage in its implementation. The paper is structured as follows. The next section briefly outlines key aspects of the ESS. This is followed by a brief literature review of farmer participation in AES and the role of the advisor. Next our research methodology is outlined, then the findings and analysis. A discussion is followed by a concluding section.

Overview of Environmental Stewardship Scheme (ESS)

The ESS arose from the findings of the Policy Commission on the Future of Farming and Food (Curry Report 2002) which recommended a 'broad and shallow' and a 'deep and narrow' AES to replace ESA and CSS. So the ESS was designed with two levels; a 'broad and shallow' entry level (ELS) and a 'deep and narrow' higher level of environmental stewardship (HLS)². Both levels work on prescription-based activities. Each option selected by the land manager has points attached to it and farmers need to select options to the value of at least 30 points/ha to be accepted onto the ELS. The selected options are recorded on the farm's Farm Environmental Record (FER). Acceptance into ELS is guaranteed if all scheme requirements are met.

The HLS is rather different. It is a competitive, differentiated scheme. A pre-condition to enrolment in the HLS is enrolment onto the ELS. A large list of additional options is available within the HLS³, but only those options outlined in the Targeting Statements attached to each Joint Character Area (JCA) Guidance Notes⁴ are awarded points⁵. Selected options must tally sufficient points to pass a funding-threshold. HLS applicants have to develop a comprehensive Farm Environmental Plan (FEP) which, *inter alia*, records the location of their selected options (DEFRA 2005a). If the proposal exceeds the points-threshold a Project Officer visits the farmer to discuss the proposed options before deciding whether to accept it. For a more detailed account of either the ELS or HLS structure see 'Environmental Stewardship: Entry Level Stewardship' (DEFRA 2005b) and 'Environmental Stewardship: Higher Level Stewardship' (DEFRA 2005c).

Existing AES agreement holders

An existing agreement holder (in CSS, ESA or Habitat Scheme) may apply for ELS/OELS (Organic Entry Level) on any land not currently receiving payment under an existing CSS, ESA, Habitat or Organic Farming Scheme. Where land is covered by existing agreements the holder must continue within these agreements until they expire - or until the 5 year mid-term break - at

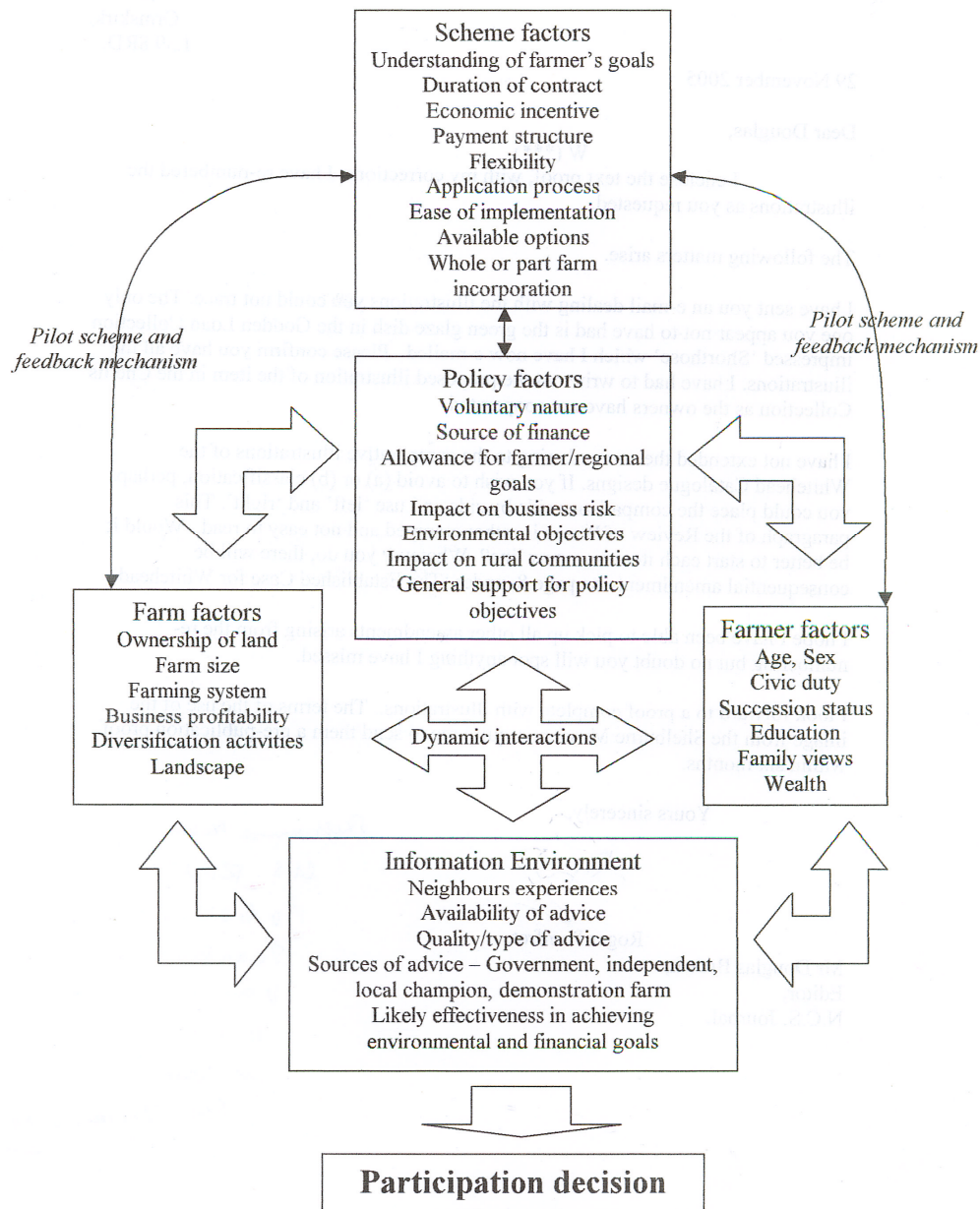
which point they will be offered the opportunity to apply for an ESS agreement. However, when the oldest CSS agreement expires the agreement holder will normally be invited to terminate all their existing agreements and apply to enter into a new HLS agreement (DEFRA 2005d). More recent amendments (introduced after the survey reported in this study was conducted) allow for early transfer where an existing agreement holder acquires substantially more land, can deliver substantial environmental benefits from bringing non-agreement land into the HLS, or can deliver improved environmental management of Sites of Special Scientific Interest (SSSI) or Scheduled Monuments, or where conversion to organic production will secure more effective protection or additional benefits (NFU 2006).

Determinants of farmer participation in AESs: the importance of the 'information environment'

The large body of research on farmer participation into AES, and what influences it, can only be briefly reviewed here. The interested reader is directed to a recent review of about 160 publications and research reports from six EU member states (Finland, Germany, Hungary, The Netherlands, Spain and the UK) into the current state of knowledge on factors affecting farmer's attitudes to biodiversity conservation by Siebert *et al.* (2006). They, along with Wilson and Hart (2000) agree that economic considerations have been the primary driving force for farmers to participate in AESs. However, these studies find that economic issues are not the only determining factor for farmer's decision-making - where there is little or no economic gain more complex factors come into play. The schematic diagram in figure 1 illustrates some of the key influences, and links between them, that are involved in the decision to participate. These can be broadly divided into scheme factors (duration, payment levels and structure, application process whole- or part-farm), policy factors (voluntary nature, source of finance, environmental goals), farm factors (size, ownership, landscape), farmer factors (age, wealth, attitudes, education, attitudes to civic duty) and the farmer's information environment (Wilson 1997; Siebert *et al.* 2006).

The latter includes the dynamics within the farming region, such as whether neighbours are participating, the influential behaviour of community leaders and the pace of innovation diffusion within a district (Jones 1963; Wilson 1992). However, the information environment has been regarded as a neglected factor in the literature (Wilson 1997). Farmers do not make decisions in a vacuum, but the past research focus on the individual implicitly reinforces the view of the farmer as an autonomous, decision-making unit whereas in reality the decision making nexus is far more complex and dynamic (Skerratt 1994; Morris 2004). Recent research has shown that farmers have increasingly sought professional advice to prepare their submissions (Crabb *et al.* 2000). Skerratt (1994: p.121) argued that 'the level of, and satisfaction with, the information and advice received by farmers was an important positive factor in their ESA adoption/non-adoption decision'. Loble and Potter (1998) found a quarter of the non-participants who had planned to join AESs mentioned lack of information as the main reason for non-participation. Wilson and Hart (2001) also found non-participants had

Figure 1. Schematic diagram some of the key factors influencing the participation decision.



little knowledge of the schemes. Winter *et al.* (2000) found that the best conservation plans - both from the farm business and biodiversity perspectives were those in which one-to-one advice had been given. This is the perspective taken in this study which looks at the influence of advisors within the information environment and on participation in ESS.

Research methodology

The survey involved farmers and farm advisors who work in the ESS's Northwest Norfolk Joint Character Area (JCA), an area not previously designated an ESA. Half (58%) of the country's Grade 1 and 2 land is located in the East of England but the land in Norfolk is predominantly classified as Grade 3 (DEFRA 2000); largely farmed as arable interspersed with productive grassland. The CSS proved popular in Norfolk which contains the greatest total area within the scheme and greatest number of agreements of any county in the eastern region. This may be due to the rather low average land quality and is probably linked to the popularity of game shooting. The research region was deliberately constrained to one JCA to reduce variation in farm characteristics and available management options. As previous studies have reported that arable farmers tend to be less enthusiastic about AESs than other farmers (Wilson and Hart 2000), the views of these farmers maybe critical to assess the eventual popularity and take-up of the ESS.

The survey consisted of two questionnaires, one for farmers and one for advisors (Cross 2006). Both questionnaires took a similar form to allow responses to be compared. In-depth interviews with a small sample of farmers were considered preferable to a larger-scale, postal or telephone survey which would reveal less information on beliefs and opinions. The survey contained a mixture of short answer questions where the interviewee received no prompting, and Likert-type questioning where respondents ranked the importance of certain statements, e.g. reasons for enrolling in the HLS. Similar studies have noted that Likert-type questioning is a rather crude way of exploring attributes, there are more culturally sensitive ways, such as loosely structured interviews where the respondent is encouraged to talk freely about specific topics (Burgess *et al.* 1988; Morris and Andrews 1995; Wilson 1996). So respondents were encouraged to discuss issues of particular relevance to their circumstances.

Five farmers from within the sample area were initially selected at random from the phonebook. During the interviews the farmers were asked who their neighbours were and these farmers were then approached, those that agreed to be involved were asked the same question. Advisors were sampled by approaching all major farm business/agri-business advisors (FBAs) and the major agronomy companies in the area. Due to constraints of time and resources, and a lack of a population framework, one-man businesses offering advice were not approached, though individual advisors do operate in the sample area. All but one interview was carried out in person between May and July 2006: each lasted between 50 and 90 minutes. Of 29 farmers approached, 25 (86%) agreed to participate, the high participation rate supports the survey approach used. Of the ten advisors approached, all initially agreed to participate but one later withdrew.

Findings of the survey of farmers

Results were obtained from 25 farmers, the majority (68%) were arable farmers, but 24% had small livestock enterprises and 8% were classified as mixed farmers (with beef enterprises). 12% of respondents were older than 60, a smaller proportion than might be expected given nationally 29% of farmers are over 65 (DEFRA 2004). Several had taken responsibility for the business within the last 5 to 10 years.

Figure 2. Variation in farm size within the sample (N=25).

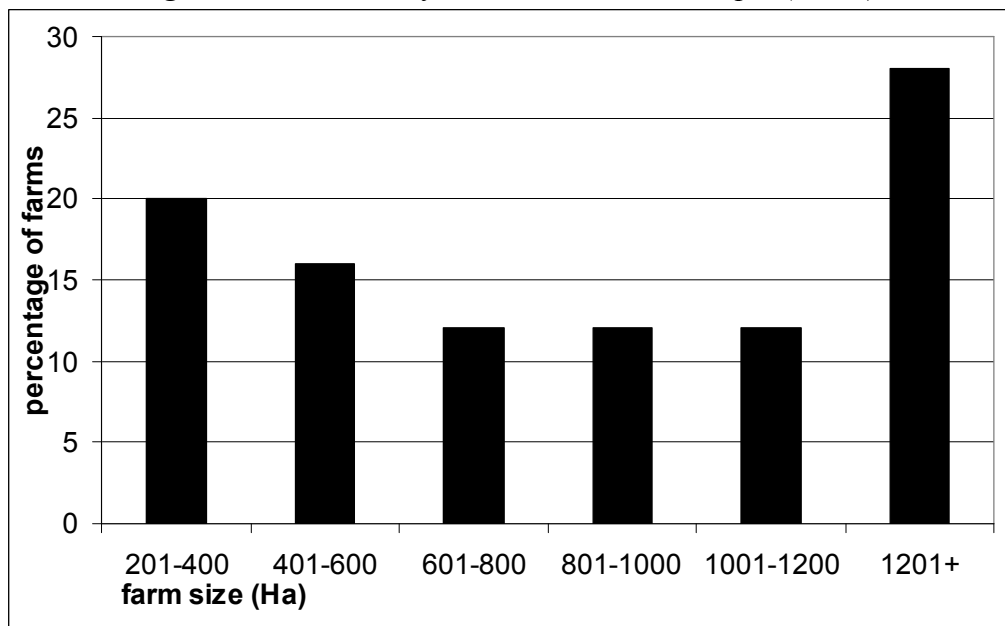


Figure 2 illustrates the range of farm sizes within the sample. The high percentage of farms over 1,200ha reflects the many large, traditional family estates in the region, 67% of these farmers own more than 75% of their farmland. These figures represent all land the farm business has control over including land farmed in-hand and land rented or contracted, it excludes land let out. There are more smaller farms than middle-sized farms; 22% of those farming less than 600ha own at least 75% of their farmland, the majority

Table 1. Actions and intentions towards joining Higher Level Stewardship, by experience with CSS (N=25).

	In or have been in CSS	Not/never in CSS
Total (N)	16	9
In HLS	0	3
Applying to join HLS	4	0
Intend to apply for HLS in the future	8	2
Do not intend to apply for HLS	4	4

(56%) are sole tenants.

Table 1 shows 12 of the 16 farmers previously in the CSS are currently either applying for or intend to apply for HLS, therefore participation in the CSS is a good, but not exact, predictor of intent to apply for the HLS. Additional descriptive statistics for the sample are presented in Table 2.

Table 2. Table of descriptive statistics for the whole farmer sample and the groups within the sample. (N=25).

Group	Number in group	Mean age	% with off farm income	Mean farm size	% with previous CSS enrolment	% that are land owners*	% in or applying for HLS
		years	%	Ha	%	%	%
All farms	25	48.5	52	861.2	64	64	28
Those who are/ have been in CSS	16	47.4	62.5	959.9	100	62.5	25
Those never in CSS	9	50.3	33.3	685.6	0	66.7	33.3
Farmers with over 800ha	13	50.1	53.8	1223.8	76.9	84.6	38.5
Farmers with less than 800ha	12	46.8	50	468.3	50	41.7	16.7
Those that use AES advisors	21	49.7	52.4	769.1	71.4	57.1	28.6
Those that do not use AES advisors	4	57.5	50	1112.5	25	100	25

* Landowners were often tenants as well.

Environmental stewardship: ELS

All those interviewed were either in the ELS or in the process of applying to join. Over half (56%) reported mapping problems during application (DEFRA issue each applicant a map of their registered farmland which is required to complete the FER), 36% said they had waited over a year for their map, a similar proportion said they had waited more than 6 months. Two farmers said that if the problems persisted they would discontinue the process, posing a threat to targeted participation rates if these results are more widely applicable.

The main reason given for enrolling in the ELS was to recoup lost income (Table 3). Farmers did not believe they were profiting from participation, but rather simply recouping money that had been 'taken away from them' through modulation. 'Already doing most activities' and 'new activities easily implemented' scored higher for the ELS than for the CSS or HLS, as it was deliberately designed to do. 'Ease of management'/'goodness of fit with

existing practices' was also important. The ELS clearly appeals because it is relatively undemanding on existing land management practices.

Whilst environmental improvements and benefits were of little importance in selecting ELS options, 84% of farmers did believe they have a responsibility to protect and conserve their land. Nevertheless, farmer's motivation for applying for ELS was mainly economic and many were worried that future payments might be reduced. Another often heard criticism was the lack of flexibility of payments; 'scheme payments must be flexible and change with commodity prices or people will just leave and only the enthusiasts will do it. Then we'll be back to where we were before the scheme began'. Though

Table 3. Primary and secondary motivations for farmers to enter CSS, ELS and HLS (in percentages N= 25).

Reason for enrolment	Reasons to enter					
	Countryside Stewardship Scheme		Entry Level Scheme		Higher Level Scheme	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
Profitable	68.8	12.5	92	8	85.7	14.3
Good way of using poorer land	68.8	18.8	12	36	14.3	71.4
Already doing most activities	6.3	6.3	56	40	0	14.3
Improve other enterprises	12.5	37.5	8	20	28.9	42.9
New activities easily implemented	6.3	12.5	24	56	0	57.1
Rest of business unaffected	12.5	25	0	12	0	42.9
Improve environment	43.8	18.8	4	44	85.7	14.3

presumably, this referred to commodity price increases rather than decreases⁶.

Environmental stewardship: HLS

Of the 25 farmers interviewed, three had enrolled in the HLS and four were in the process of applying. None of the three already enrolled had been in the CSS, but two of those currently applying were taking advantage of the 5 year mid-term break clause, the other two were arguing 'substantial environmental improvements' to terminate their CSS agreements early.

When asked what was the major advantage of the HLS over the CSS, 4 said the higher payments. All three currently enrolled HLS farmers believed that enrolment and implementation was more problematic than for the CSS

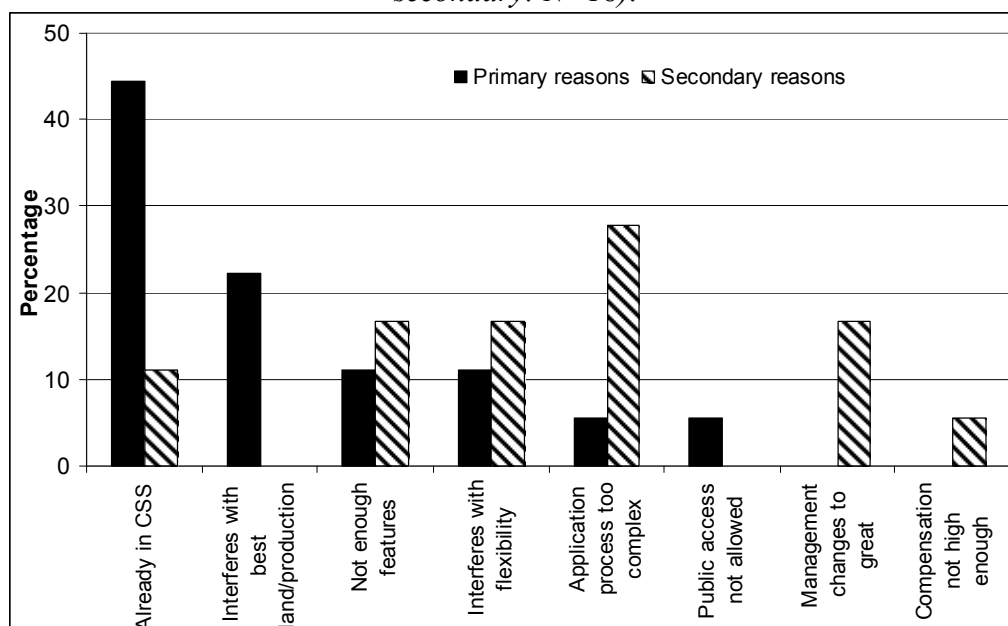
because of the complexity of submitting applications. Nevertheless, all said they would enrol again. Table 3 confirms that financial incentives were again the primary motivation for participation in the HLS: 6 of the 7 in or applying gave 'increased income' as a primary motivation. Most described the levels of payment as 'more than fair'.

Unlike the ELS, all these farmers believed the HLS would improve the environment. Improving shooting was, a primary or secondary motivation for 72% of the 7 in or applying, proving it to be a particularly important motivation. For one farmer it was the main reason for entering, he believed it improved the environment for all wildlife at the same time as helping to secure his farm income. Effective use of poorer land was the most important secondary motivation (Table 3) and in this sense HLS fulfils a role previously assumed by the CSS.

Reasons for non-participation in the HLS were varied (Figure 3). The scheme constraint 'already in CSS' prevented 8 of the 16 currently in the CSS from applying for the HLS. Of the 18 neither in nor currently applying for the HLS, 10 (56%) said they intended to apply in the future (Table 1): the remaining 8 (four of which currently have CSS agreements) believed the scheme was too demanding for their circumstances and did not intend to apply.

'Interferes with best land/production' was a particular obstacle. Though relatively few farmers mentioned 'lacking features' as an important reason, 4 gave it a score of 9 or 10 suggesting it is an important obstacle. An example of a typical statement was; 'I would like to enrol in HLS but it is much more demanding than countryside stewardship and I don't have the features to make the same money as I get from countryside stewardship without major changes

Figure 3. Farmer's primary and secondary reasons for not entering Higher Level Stewardship (individuals could pick more than one option as primary or secondary: N=18).



and investment'. 'Interference with flexibility' and 'complexity of application' were important but less frequently stated reasons for non-participation, whilst inadequate compensation was the lowest scored option.

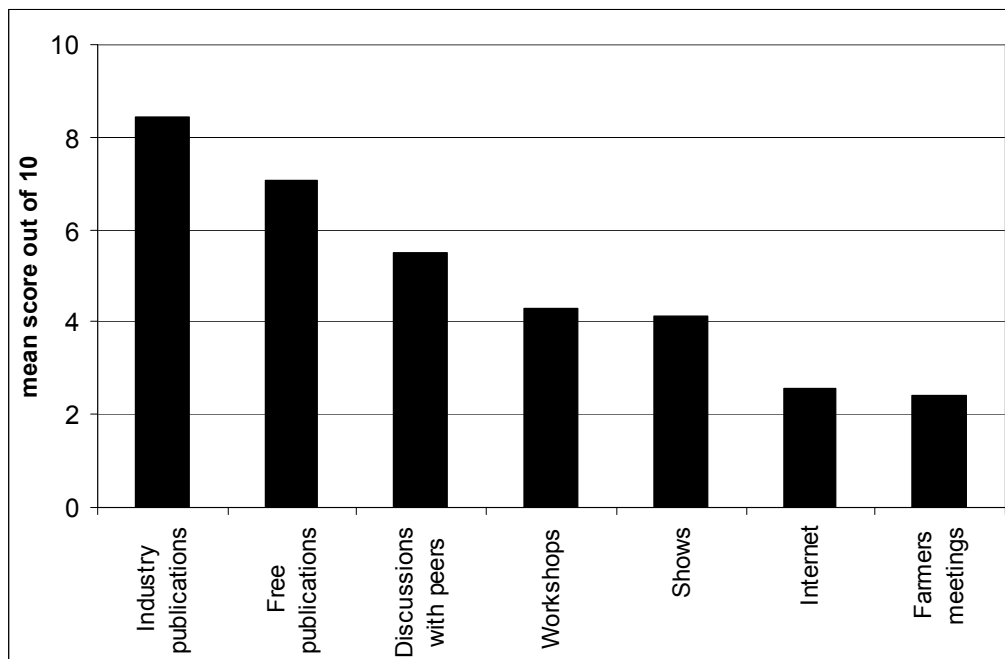
When asked how the HLS could be improved, 47% said shorter agreements, 27% said the scheme needed to become less rigid and more open, another 27% wanted more farmer consultation about the implementation of activities.

Farmers' information environment and the role of advisors in AES decisions

Farmer's key sources of information are shown in Figure 4. Discussion with peers plays a significant role. All farmers recognised that there were exceptional farmers in their area and all but one said they took notice of what these individuals did and would actively seek them out to discuss agricultural issues.

Farmers were also asked about their use of advisors over the last 5 years, a period of particular interest as it covers the time elapsed since Agenda 2000 became policy. A large proportion, 21 (84%) said they had used advisors for specific AES advice at some point in the past. Of these, 18 (90%) said that the consultant was involved in the final contract of the agreement, creating the application and putting forward activities; so strongly influencing the content of the agreement. Of those who used advisors for AES advice, 13 (67%) used FWAG, 8 (40%) used FBAs and 6 (28%) used agronomists⁷.

Figure 4. Information sources used by farmers to keep up to date with agriculture (participants gave sources a score out of 10; not all options were scored and two or more sources could be given an equal score) (N=25).



23 (92%) of farmers noted that advisor's main areas of advice had changed, 78% said it had become more environmentally based. 76% also said that the way advisors operated had changed in the last 10 years, with 44% saying they had become more specialised. This might suggest a narrowing of the fields of advice, it could also mean that the companies have become more knowledgeable on issues that have in the past have not been main-stream to agricultural consultancy. Overall, 20 (80%) of farmers agreed that advisors had a role in encouraging participation in AESs, showing the importance of advisors in achieving target participation levels.

Findings from the survey of advisors

Nine advisors were interviewed, all offered advice on the ELS⁸. All but one (an agronomist) advised on the HLS even though none of the agronomists and only one FBA had given AES related advice 5 years ago. All agreed they had a better understanding of agri-environment issues now and were better at incorporating them into farm business plans. All said that the proportion of their clients they gave AES advice to had more than doubled over the last five years; the representative from FWAG said the organisation's workload had also doubled.

All three agronomists and 4 of the 5 FBAs used FWAG as a source of AE information and advice, FWAG was also the most commonly recommended source of information for clients after DEFRA. All advisors believed payments were sufficiently high for both ELS and HLS and were happy to encourage participation. Table 4 shows advisors motivations for promoting enrolment. Expected 'environmental improvement' (for both ELS and HLS) was of little importance for either group (but particularly among the agronomists). The FWAG spokesperson on the other hand gave 'environmental improvement' as the main reason for enrolment in either level - with 'profitability' and

Table 4. Primary and secondary motivations agronomists and FBAs give for advising farmers to enrol into the ESS (more than one primary or secondary reason could be selected) (Agronomists N=3; FBAs N= 5).

Reason for enrolment	No. of Agronomists		No. of FBAs	
	Primary	Secondary	Primary	Secondary
Profitable	2	1	5	0
Raise average yields	2	0	0	0
Already doing most activities	1	1	2	3
Improve other enterprises	0	3	0	4
New activities easily implemented	0	2	2	3
Rest of business unaffected	0	1	1	4
Improve environment*	0	1	2	0

* Specific to HLS

‘improving other enterprises’ secondary concerns.

When asked about the importance of AESs in agriculture, 4 of the 5 FBAs believed they had an important role to play as they offered an income independent from cropping. 2 of the 3 agronomist companies noted that they could have a negative impact in the long-term, promoting weed growth and transmitting disease. Something none of the other advisors commented on. The agronomist’s responses in particular suggest that their advice on AESs was linked to their advice on production. It is important to note advisors placed less importance on ‘environmental improvement’ in the HLS than farmers generally had, reinforcing the motivation to fulfil business goals, and highlighting a lesser concern for the environmental aims of the ESS.

There was some evidence within the small sample that FBAs and agronomists had different motivations for advising participation (Table 4). FBAs unanimously believed that profitability was the main reason for enrolment, with ease of implementation also important. All stated that ‘already doing most activities’, ‘new activities easily implemented’ and ‘little impact on the rest of business’ were important reasons for participation. All three agronomists also believed profit was a key reason to enrol – but it was not unanimously a primary motivation. An equal number gave ‘raising yields’ as a primary reason, stating that the removal of less productive areas meant average yields increased and total inputs decreased.

In conclusion, there is sufficient evidence, albeit within a small sample, that the three categories of advisors offer similar advice but based on different motivations. There are indications that the advice given by the FBA and agronomists reflects their traditional training and former principle areas of advice. Notwithstanding their own views of their improved ability to offer environmental advice, most do not believe the ESS will achieve much in the way of environmental improvement.

Further analysis of results

This section presents a further analysis of results by three categories, (1) previous participation in the CSS, (2) farm size and (3) views of the future of the ESS.

Countryside stewardship scheme enrolment

Table 1 shows that 4 of the 16 participants in the CSS do not intend to apply for the HLS but 5 of the 9 not previously in the CSS have or intend to apply. Rows 2 and 3 of Table 2 summarise key descriptive statistics of farmers by their participation in the CSS; 16 (64%) of farmers held 38 agreements between them with 3 having 5 or more. Considering the relatively high demands and inflexibility of the HLS, it is perhaps not surprising all previous CSS participants do not intend to apply, and at the same time it is a measure of some success to have attracted farmers not previously in the CSS in its first year of operation. The survey revealed that current rates of participation would have been higher had CSS holders been allowed to convert immediately, though this may have put even more pressure on processing applications, thus putting-off applications from those previously outwith the CSS⁹.

Analysis by farm size

Previous research has shown farm size to be an important factor in farmer behaviour and participation in AESs with a number of studies illustrating larger and medium sized farms are more likely to enrol (Brotherton 1989, 1991, Wilson 1997, Morris and Potter 1995). This study goes some way to support this. The smallest farms (<500ha) have the lowest enrolment figures for the CSS and the highest percentage with no intention of applying for the HLS, yet all have used advisors for AES matters - unlike their larger counterparts (Table 5). Examining each group's motivations for enrolling in the ELS shows that smaller farms put greater importance on management and activity implementation, with 6 (86%) noting 'already doing activities' as a primary reason for enrolment compared to 4 (36%) of medium and 4 (57%) of large farms. Interestingly, smaller farms also noted the importance of environmental improvement more often. Five (60%) smaller farms stated that enrolment in the HLS would interfere too much with the rest of the business, including their best land, ability to respond to changes or they felt they lacked the features needed. This evidence suggests it is not a lack of motivation that stops participation by smaller farms but an inability to accommodate the scheme. For these reasons, the ESS, as currently drafted, disadvantages

Table 5. Description of sample and actions and intentions by farm size (N=25).

	Small	Medium	Large
Band category	<500 ha	>500 < 1200 ha	>1200 ha
Number of farms (N)	7	11	7
Median size (ha)	350	850	1500
Are/have been in CSS (%)	2 (28.6)	8 (72.7)	6 (85.7)
Not/never in CSS (%)	5 (71.4)	3 (27.3)	1 (14.3)
In or applying for HLS (%)	2 (28.6)	2 (18.2)	3 (42.9)
Intend to apply for HLS in the future (%)	2 (28.6)	6 (54.4)	2 (28.6)
No intention to enter HLS (%)	3 (42.9)	3 (27.2)	2 (28.6)
Are in/have been in CSS but have no wish to enter HLS (%)	0 (0)	2 (18.2)	2 (28.6)
Use AE advisors (%)	7 (100)	9 (81.8)	5 (71.4)

smaller farms.

Farmer's and advisor's views on the future of the ESS

In total 5 (63%) believed that some ELS options were open to too much interpretation, saying some definitions were ambiguous and loopholes meant

that these options were too easily manipulated. 7 (78%) of advisors (including FWAG) thought HLS needed changing, all stated HLS was too elitist and too difficult to submit successful applications. FWAG, 3 of the 5 FBAs and 1 of the 3 of agronomists believed there was room for an intermediate scheme between the ELS and HLS, particularly if the HLS was not going to be relaxed. This study has highlighted two groups of farmers to which such an intermediate scheme would appeal; a proportion of those currently in CSS and those with smaller farms.

Discussion

Environmental stewardship: Participation and implications: ELS

The ELS appears to have overcome the resistance to AESs in this predominately arable area. It is also taking over from the CSS in providing income for poorer land but allowing agricultural production to continue elsewhere relatively unaffected. Like CSS, financial issues appear the key driver with both farmers and advisors believing the high uptake is fuelled by a feeling of a economic necessity coupled with, perhaps, a sense of duty to recoup agricultural payments 'lost' via modulation. 4 of the 5 FBAs believed that the ELS was not offering 'new money' to farmers, referring to it as 'money that has been taken away by modulation' and they, like the farmers, thought re-capturing this cash an important reason to enrol. It is not clear why the source of the payment should be a consideration; if the decision was made on economic considerations alone, then as long as payment adequately compensated for costs and any increase in risks incurred, the farmer should enrol: the source of the payment being irrelevant.

Perhaps the fact that the AE payments are co-funded by new treasury money acted as an incentive to raise participation level, which suggests that financing the ESS from a mix of co-funding and modulation was an excellent marketing tool and a good recruiting sergeant. But there is an implication that actions motivated by this belief mean the scheme is not perceived to be voluntary – rather a survival necessity. There are also concerns that the substantial enrolment in the ELS will reduce funds available for the HLS which implies the rate of national modulation will need to increase.

The evidence here suggests beneath the 100% ELS enrolment are more complex attitudes toward the new scheme which are over-ridden by economic motivations. This is a concern, a feeling of necessity coupled with poor administration has created some animosity and cynicism in the farming and advisory community. The lack of farmer's interest in the ELS's environmental improvement suggests agreement holders are compliers and passive adopters (Morris and Potter 1995) – using the scheme to achieve farming goals and gain revenue with importance placed on the goodness of fit with existing farm practices. Enrolment on this basis means that payments must continue to be attractive in the future and respond to commodity prices. Farmers' views are shared by FBAs and agronomists, suggesting the way they advise has helped create this emphasis.

It would be of interest to explore ESS participation in areas of the eastern

region with a higher proportion of grade 1, more intensively farmed land. The implication is that ESS will be less attractive where there are fewer existing environmental features (e.g. hedges, trees and ditches).

Environmental Stewardship, participation and implications: HLS

The findings suggest that the ELS must be better designed to help farmers prepare farmers for the more demanding HLS. Economic gain is still an important factor in HLS entry and the majority of farmers show interest in future application. Yet the criticisms of farmers and advisors suggest revisions are necessary to increase participation rates. The current changes in agriculture mean farmers are often unsure of the future, and this is a key deterrent to entry into long-term agreements especially on farms where there is no close match between current farming activities and scheme options. Moreover the application is perceived to be too complex and agreements too inflexible. Administrative and bureaucratic hold-ups do not help. Rules governing the rolling-over from the CSS to HLS have changed since this survey was conducted but these changes do not appear to have fully met the concerns raised in this research. There is an identified need for an intermediate scheme to help CSS participants transfer to the HLS.

The farmer-advisor relationship

Most farmers used advisors. We found that agronomists primarily concentrated on compatibility with production goals' whilst FBAs selecting options that delivered minimal management changes was of greatest importance. This suggests that the selected options must reflect the increased effort needed to implement them. This is of little consequence in ELS agreements for which advisors and farmers are in agreement that 'farming comes first', but it maybe of greater concern in HLS agreements, where the environmental impacts are of more importance to farmers than advisors.

Smallshire *et al.* (2004) noted that the farm advisory sector remains unregulated and uncoordinated, with a wide range of advisors and types of advice available. There appears to be an argument that the advisory sector need to deliver a more coherent message as to the role of the ESS, particularly the more demanding HLS, and that the difference between their views and those of the farmers be reduced. Advisors need to be convinced of the importance of meeting environmental objectives as well as farm business objectives as this will increase participation and raise the chance of achieving 'people additionality' that will voluntarily provide more environmental goods than farmers have contracted for. Without more consideration being given to the environmental aims of the schemes FBAs and agronomists reasons for application are not compatible with farmer's beliefs that agricultural and conservation achievements can occur together. A greater level of environmental training is needed to create a more balanced approach in the advisory sector.

FWAG

FWAG is involved at numerous levels in AES advice and education, passing advice on to farmers and the different advisors now involved in AESs. The majority of other advisors pass on work or point clients to FWAG for more information and nearly all of them use FWAG as a source of advice themselves (4 FBAs and all 3 agronomists). After DEFRA it is the most used body by farmers. FWAG's expertise and experience puts them in a good position to inform and educate organisations whose traditional areas of advice lie elsewhere. They play an important role in helping participants move from the CSS to the HLS and this role is likely to grow as agri-environmental measures and environmental legislation become more important, yet we were told it is unable to keep up with present the demand for its services.

An 'intermediate scheme' to bridge CSS and ELS to the HLS

The nature of HLS, and its contrast with ELS, results in there being large areas of land whose environmental improvement will not be advanced beyond ELS, the main reason for this being the lack of suitable scheme options. This is likely to become more apparent when current CSS agreements run out. This survey has highlighted a group of CSS agreement holders who feel they are will not be able to apply for the HLS. Presumably retaining existing CSS agreement holders is important, their experience within AES makes them better positioned to implement sustainable countryside management practices (which also makes them more likely to over-deliver on environmental benefits). Actively encouraging CSS participants to transfer into the HLS would reward their past efforts, help preserve environmental improvements and retain their environmental expertise within the farming sector. Smaller farms in particular have found it difficult to incorporate HLS into their business, but are still keen on AES enrolment. This represents a potential loss of willing individuals from the agri-environmental participation.

An intermediate scheme, helping to transfer current CSS holders and small farms into the HLS, could;

- Incorporate activities currently available within the farmers current CSS agreement(s);
- Increase the number of options available within the JCA's Targeting Statement;
- Specifically include options that support current farming activities, such as shooting, hunting and livery services;
- Reducing areas/lengths attached to each option or reduce the number of points needed per ha for smaller farms (other CAP programmes offer concessions to smaller farms).

Allow smaller farms to join together to submit a joint application to the HLS such that combined they achieve the target threshold (points/ha) even if individual farmers within the group do not.

These changes will improve transition from the CSS to the new scheme and help smaller farms participate, in increasing participation rates these changes will increase the likelihood of delivering 'people additionality'.

Conclusions

This study explores farmer's and advisor's attitudes toward the ESS and the importance of the farmer-advisor relationship. A case-study approach was used because of the complex and individual decisions each respondent is faced with. The research would have benefited from a larger sample size particularly with respect to the advisors, but the findings should not be dismissed on this basis alone because they have indicated areas of particular interest which could be followed up by a larger survey.

This study suggests that enrolment into the ELS is predominately an economic decision based on profitability and productivity. This implies that in areas where land is more productive and contains fewer relevant environmental features, ELS participation rates will be lower. Motivations within the sample area also suggest that reductions to the level of payment made in the scheme would also present a threat to participation. The ELS has been successful in recruiting large numbers of farmers in Norfolk but is not likely to instil a change in attitude toward farming or conservation. Advisors (excluding FWAG) share the farmer's opinion that farming comes first in deciding to participate in ELS agreements.

However, the HLS has been criticised for being too demanding particularly for small farms and to a sub-sample of those currently enrolled in the CSS. Current CSS and participants and small farms might be shown some latitude and enrolled under an intermediate scheme, somewhat less demanding than the HLS. An intermediate scheme would most likely improve the 'people additionality' associated with ESS, the voluntary over-delivery of environmental goods should become a key measure, along side the change in the total stock of environmental benefits, of the successfulness of the ESS.

The study has partly addressed the lack of work exploring the role of advisors, but by underlining the importance of advisors has also reinforced the need for further investigation. Advisors play an important role in fashioning agreements, supplying information and encouraging enrolment in AESs and this role looks set to grow. FWAG has a critical role, providing information and guidance to both advisors and farmers. Its environmental background means it gives consistent and reliable advice. There appears some justification for enhancing the funding available for FWAG so it can adequately deal with its influential role and growing workload.

References

Brotherton, I. (1989). Farmer participation in voluntary land diversion schemes: some observations from theory. *Journal of Rural Studies* 5: p. 299–304.

Brotherton, I. (1991). What limits participation in ESAs? *Journal of Environmental Management* 32: p. 241–249.

Buller, H. (1999). Assessing the implementation and effectiveness of agri-environmental schemes through farmer participation and institutional arrangements. Paper prepared for the Third SAGA workshop 'Sustainable Agricultural Use of Aquifers in Southern Europe', Concerted Action FAIR, Milan, Italy, 17–18 December.

Burgess, J., Limb, M. and Harrison, C. (1988). Exploring environmental values through the medium of small groups: 1. Theory and practice, *Environment and Planning A*. 20: p. 309-326.

Carey, P. D., Short, C., Morris, C., Hunt, J., Priscott, A., Davis, M., Finch, C., Curry, N., Little, W., Winter, M., Parkin, A., and Firbank, L. (2003). The multi-disciplinary evaluation of a national agri-environment scheme. *Journal of Environmental Management* 69 (1): p. 71-91.

Colman, D., Crabtree, B., Froud, J. and O'Carroll, L. (1992). Comparative Effectiveness of Conservation Mechanisms, Department of Agricultural Economics, Manchester University, Manchester.

Crabb, R.J., Short, C., Temple, M., Winter, M., Augustin, B. and Dauven, A. (2000). Economic Evaluation of the Countryside Stewardship Scheme Report to MAFF Econ Division, MAFF, London.

Cross, M. (2006). Environmental Stewardship: Farmer's attitudes and the importance of the farmer-advisor relationship. Unpublished thesis submitted in partial fulfilment of MSc Degree, University of Newcastle.

Curry, D. (2002). Farming and Food, a Sustainable Future. Report of the Policy Commission on the Future of Farming and Food. London: DEFRA.

DEFRA (2000). England Rural Development Programme: Appendix A6 - East of England Region. Found @ <http://www.defra.gov.uk/erdp/docs/eastchapter/default.htm>

DEFRA (2004). UK agricultural Statistics in your pocket. Found @ <http://statistics.defra.gov.uk/esg/publications/auk/pocketstats/default.asp>

DEFRA (2005a). Environmental Stewardship. Higher level stewardship: Farm Environmental Plan. Guidance notes. Found @ <http://www.defra.gov.uk/erdp/pdfs/es/hls-fep-handbook.pdf>

DEFRA (2005b). Environmental Stewardship. Entry level stewardship: Terms and conditions and how to apply. Found @ <http://www.defra.gov.uk/erdp/pdfs/es/els-handbook.pdf>

DEFRA (2005c). Environmental Stewardship. Higher level stewardship: Terms and conditions and how to apply. Found @ <http://www.defra.gov.uk/erdp/pdfs/es/hls-handbook.pdf>

DEFRA (2005d). 2005 and beyond – how Defra will manage your current agri-environment agreement from 2005 onwards. Found @ www.defra.gov.uk/erdp/schemes/css/beyond2005.htm

DEFRA (2006). Environmental stewardship: the latest news. Found @ <http://www.defra.gov.uk/erdp/schemes/es/default.htm>

Dobbs, T. L. and Pretty, J. N. (2001). Future Directions for Joint Agricultural-Environmental Policies: Implications of the United Kingdom Experience for Europe and the United States. University of Essex Centre for Environment and Society Occasional Paper.

Dobbs, T. L. and Pretty, J. N. (2004). Agri-environmental stewardship schemes and 'multifunctionality'. *Review of Agricultural Economics* 26 (2): p. 220-237.

Evans, N., Morris, C. and Winter, M., (2002). Conceptualizing agriculture: a critique of post-productivism as the new orthodoxy. *Progress in Human Geography* 26 (3): p. 313-332.

Jones, G. E. (1963). The diffusion of agricultural innovations. *Journal of Agricultural Economics* 15: p. 387-409.

Lobley, M. and Potter, C. (1998). Environmental stewardship in UK agriculture: A comparison of the Environmentally Sensitive Area programme and the Countryside Stewardship Scheme in South East England. *Geoforum*, 29(4): p. 413-432.

Morris, C. and Andrews, C. (1995). The construction of environmental meanings within farming culture: implications for agri-environmental research. Paper presented at the *Anglo-American-Canadian Rural Geography Symposium*. University of North Carolina at Charlotte, August 1995.

Morris, J., Gowing, D. J. G., Mills, J. and Dunderdale, J. A. L. (2000). Reconciling agricultural economic and environmental objectives: the case of recreating wetlands in the Fenland area of eastern England. *Agriculture Ecosystems & Environment*, 79 (2-3): p. 245-257.

Morris, C. and Potter, C. (1995). Recruiting the new conservationists: farmers' adoption of agri-environmental schemes in the UK. *Journal of Rural Studies*

11 (1): p. 51–63.

Morris, C. (2004). Networks of agri-environmental policy implementation: a case study of England's Countryside Stewardship Scheme. *Land use policy* 21 (2): p. 177-191.

NFU (2006). Environmental Stewardship. www.nfuonline.com/x3963.xml

Potter, C. (1998). Against the Grain: Agri-environmental Reform in the United States and the European Union, CAB International, Wallingford, Oxon.

Siebert, R., Toogood, M., and Knierim, A. (2006). Factors Affecting European Farmers' Participation in Biodiversity Policies. *Sociologia Ruralis* 46 (4), p. 318-340.

Skerratt, S. J. (1994). Itemized payment systems within a scheme—the case of Breadalbane. In *Incentives for Countryside Management: The Case of Environmentally Sensitive Areas* (M. Whitby, (Ed.)). Wallingford: CAB International, pp. 105–134.

Smallshire, D., Robertson, P. and Thompson, P. (2004). Policy into practice: the development and delivery of agri-environment schemes and supporting advice in England. *Ibis*, 146(Suppl. 2), p. 250-258.

Walford, N. (2002). Agricultural adjustment: adoption of and adaptation to policy reform measures by large-scale commercial farmers. *Land Use Policy*, 19(3), p. 243-257.

Walford, N. (2003). Productivism is allegedly dead, long live productivism. Evidence of continued productivist attitudes and decision-making in South-East England. *Journal of Rural Studies*, 19(4), p. 491-502.

Wilson, G. and Hart, K. (2000). Financial imperative or conservation concern? EU farmer's motivations for participating in voluntary agri-environmental schemes. *Environmental Planning* 32, p. 2161-2185.

Wilson, G. and Hart, K. (2001). Farmer participation in agri-environment schemes: towards conservation-orientated thinking? *Sociologia Ruralis* 41(2), p. 254-274.

Wilson, G. A. (1992). A survey on attitudes of landholders to native forest on farmland. *Journal of Environmental Management* 34, p. 117–136.

Wilson, G. A. (1996). Farmer environmental attitudes and ESA participation. *Geoforum* 27 (2), p. 115-131.

Wilson, G. (1997). Factors influencing farmer participation in the ESA scheme. *Journal of Environmental Management*, 50, p. 67-93.

Winter, M., Mills, J. and Wragg, A., (2000). Practical Delivery of Farm Conservation Management in England. English Nature Research Report No. 393. Peterborough: English Nature.

Notes

1. This results in troublesome contradictions, for example, farmers who had previously removed hedgerows would be paid to restore them, but those who had maintained hedgerows at their own expense would not qualify for payments (Dobbs and Pretty 2004).
2. The ESS has five primary objectives: protect and conserve; biodiversity; landscape; environmental quality; the historic environment and public access, and two secondary objectives; flood defence and genetic conservation.
3. There is a list of over 180 possible features, along with their condition and management prescriptions.
4. There are over 50 JCA in England.
5. A JCA is defined as an area that has common characteristics in which the environment faces similar threats and opportunities: it has a similar landscape, heritage characteristics and therefore conservation goals. ESS booklets list options and activities that particularly benefit these common conservation goals
6. Views such as 'problems will occur when cereal prices rise again, especially wheat' were expressed by 32% of farmers..
7. We have classified advisors as primarily Farm Business Advisors (FBA) or mainly agronomists based on their principle training and advice offered. We also interviewed a spokesman for FWAG who advises farmers and trains FWAG advisors.
8. One of the interviews was with a representative of FWAG, 5 had backgrounds farm business advice and 3 in agronomy.
9. The authors recognise that it is very difficult to make direct like for like comparisons between CSS and ELS/HLS not only because the schemes are different in structure and operation but also because there has been significant changes in farmer's operating environments. Hence, the comparisons made here are of enrolment and the motivation behind it. To allow these comparisons between CSS and ESS, responses were standardised. Participants were asked to rank their motivations to enter CSS as primary or secondary but when discussing ELS and HLS enrolment they were asked to score each relevant motivation out of ten. To allow comparison with CSS enrolment their highest scoring reasons were assigned the equivalence of the 'primary' motivation.

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