

REFEREED CONFERENCE PAPER

**FARMING AND FOOD PRODUCTION DEVELOPMENTS
IN THE SHROPSHIRE HILLS ENVIRONMENTALLY
SENSITIVE AREA, UK. 1997-2008¹**

Graham Tate and Julian Park

European agricultural and environmental policy has evolved considerably over the last 15 years. In this paper the changes in farm businesses in an Environmentally Sensitive Area in England are evaluated based on two surveys with the same farmers at the start and end of this period. The rate of participation in the environmental scheme had increased significantly at a time when Government led goals in this area had developed and become more output focussed. A combination of policy, market and animal health status changes had encouraged a number to leave cattle production, and though remaining with stock and grass they had decided against any extensive development in the direction of pluriactivity – with or without Government encouragement. This left the future of this group in some uncertainty given that two significant forms of financial support, the environmental scheme and the Hill Farm Allowance, were due to close.

Key words: Agri-environment policy, pluriactivity, hill farming, extensification

Introduction

The Shropshire Hills Environmentally Sensitive Area (SHESA) was designated in 1994 as part of a UK Government initiative in response to the EU wide regulation 2078/92, which created 22 similar areas where financial incentives had been on offer to farmers to farm in a way of benefit to conservation and the environment. The objectives of ESAs were ‘to maintain and enhance the landscape, wildlife and historic value of an area by encouraging beneficial agricultural practices’ (MAFF 1998). More specifically for the SHESA area these objectives were:

1. To maintain landscape quality and wildlife conservation value of open moorland and permanent grassland.
2. To enhance the wildlife conservation value and landscape quality of heather and other semi-natural vegetation.
3. To maintain and enhance landscape quality through management of characteristic landscape elements.
4. To maintain and enhance archaeological and historic features.

In the 15 years since the inception of the SHESA the original designation and indeed ESA policy has been superseded by Environmental Stewardship and the Higher Level Scheme. Agricultural and environmental policy has also evolved considerably under CAP reforms. In this paper we briefly consider the changes in policy over this 15 year period, and via two farmer surveys (in

1. This paper was originally presented at the 17th International Farm Management Congress, Bloomington, Illinois, USA, July 2009, and is reprinted by kind permission of the International Farm Management Association. It is extracted from Volume 1 of the Proceedings (Peer Reviewed Papers), ISBN 978-92-990038-8-6 which can be found on the IFMA website (www.ifmaonline.org).

1997 and 2008) and with (Tate 2001) evaluate the changes in farming and farm business structures in the SHESA over the same period.

Overview of developments in Policy 1990 to date

Since the 1990's European agricultural policy reform has increasingly incorporated an environmental perspective, this being integrated into the CAP, (Communities 2006). This increased environmental emphasis is both well-established and on-going, with the 1992 CAP reforms already including provisions for Member States to establish agri-environment schemes in Agri-environmental Regulation, Council Regulation (EEC) No. 2078/92. Indeed some Environmentally Sensitive Areas had already been established in the UK as early as 1987.

The Integration Strategy introduces objectives for water, agro-chemicals, land use and soil, climate change and air quality, in addition to landscape and biodiversity. A range of policy instruments are used to implement the strategy from regulatory measures specified by agricultural and environmental legislation and directives, to agri-environmental incentive schemes with voluntary participation (Pearce 2005). Such schemes encourage environmentally sensitive farming and management practices in agriculture that go beyond the requirements of legislative controls and are mechanisms to enforce minimum environmental standards and prevent environmental degradation beyond agreed reference points (Bromley 1997).

Following Agenda 2000 reform, the Rural Development Regulation (Council Regulation (EEC) No. 1257/1999) combined several policy measures, including the adoption of specific agri-environmental incentive measures. It also led to the introduction of a new Slaughter Premium and via the England Rural Development Plan 2000-2006 a new Hill Farm Allowance (HFA) which took the place of Hill Livestock Compensatory Allowances (HLCA) when the latter were lost in 2000.

2001 saw the first large scale foot and mouth disease outbreak in England since 1967. All livestock businesses were directly affected, not least with relation to cash flow problems caused by closed markets if not by actual infection with the disease or the contiguous cull. Research on this Foot and Mouth Disease (FMD) outbreak concluded (Scott 2004) that along with these direct effects there were a number of indirect effects such as the loss of trust in administrations and the impact on rural tourism that should be noted. The year 2004 saw the 10th anniversary of the SHESA, the point at which the original applicants would have had the chance to leave the scheme or enrol for a further 10 year period. Participants who enrolled in 1995 would have been offered a further 10 year extension in 2005 and so on.

A transition from headage-based subsidies and the commencement of the new Single Farm Payment (SFP) took place in January 2005. This was followed later that year by the introduction of a new conservation scheme called Higher Level Stewardship (HLS) which required applicants to offer conservation improvements to the Government selected from a menu of potential conservation options in exchange for payments and the closure to new applicants, but not extensions for existing participants, of all 22 of the UK

ESA schemes.

The SFP is now paid to farmers who keep their land in Good Agricultural and Environmental Condition (GAEC), thus the rules oblige farmers to maintain their land in such a way that food outputs are no longer essential. Farmers opinions of this approach have been investigated but it has been shown that production intentions have been largely unaffected by any freeing up of the subsidy system via the SFP. Payments are now made largely on an area under management basis rather than the old headage system, and the composition of these payments has moved from a historic level of payments approach, based on claims made up to and including 2004, to a flat rate regional average payment with this applying fully from 2012. The environmental schemes such as HLS and the ESA programme are to be largely funded by a top-slice taken from the SFP known as modulation. The year 2007 saw the launch of new incentives under the Rural Development Plan for England (RDPE) to provide grant aid to groups who wish to modernise their businesses via some form of diversification or ‘non-farm but on-farm’ business development, adding potential scope to overall farm business viability.

Participation rates in SHESA, 1994 to date

When the area was designated in 1994, payments to farmers were set within a range from £12 to £75 per hectare for land in Tiers 1A to Tier 2. Farmers were obliged to observe written management prescriptions relating to each ‘Tier’ subscribed for. An example of such a prescription to be observed by participant farmers, and one of 19 prescriptions applying to the ‘All Land’ Tier 1A was the following:

‘Do not increase your existing application rates of inorganic or organic manures’ (MAFF 1994).

Performance of the SHESA scheme was kept under review by two UK government departments, the Ministry of Agriculture Fisheries and Food (MAFF) and the expenditure watchdog, the Audit Commission. The latter commented in 1997 that ‘the take-up rate of the six ESAs launched in 1994 has been slower than that in previously designated areas (NAO 1997).

Farmers’ rate of participation had grown significantly by 2003 to 71.4 per cent of an eligible area of 32,900 ha compared with a national average of 64 per cent. The area of ESA land peaked at 653,000 Ha in 2004 but has since declined nationally to 503,000 Ha in 2008 (Defra 2009). A review of the whole agri-environment programme in 2003 and the performance monitoring reports completed by the relevant agencies stated that ‘on average just over half the PIs (Performance Indicators) had been met on Stage I and Stage II ESAs....and a quarter on Stage IV ESAs. The report added that the impacts on wildlife and conservation in each ESA were, in any case, difficult to quantify, especially for the Stage IV ESAs (Ecoscope 2003).

The ESA prescriptions were applied against a background of subsidy payments that were to change radically during the course of this research. The

subsidy system in place in 1996 involved payments per head of livestock for sheep and cattle with extra payments to designated hill producers, including those in the SHESA of 'Hill Livestock Compensatory Allowances' (HLCAs) to compensate farmers for the shorter grazing season/longer winter feeding period in the hill and marginal land areas as designated by the European Union. There were also headage payments for all sheep both upland and lowland, beef cattle and suckler cows. Such payments were widely disliked by conservationists who saw them as inducements to intensify livestock production. Hence on the one hand the government appeared to be making payments for furthering conservation objectives in the SHESA, whilst on the other payments were available that were thought to provide an incentive to increase the rate of stocking.

The farm business position in SHESA, 1997

In 1996 the SHESA consisted of 38,500 Ha of hill farm land comprising some 531 registered holdings with 244 participants in the SHESA and an average holding area of 48.25 ha (ADAS 1996). The land use in 1996 was predominantly grassland at 73 per cent compared with the average for England and Wales of 39 per cent and 355 of the 590 holdings in Ministry of Agriculture Census District 8 or 60% were less than 50 ha in size (MAFF 1996) with the predominant enterprises as cattle and sheep.

The original survey involved the researcher visiting 43 farms within the SHESA between July 1996 and February 1997, of which 42 met the sampling criteria for the study. The sample comprised 22 SHESA non-participant and 20 participant farms as a stratified randomised sample and triangulated for the characteristic of area farmed with the MAFF population of holdings for Agricultural District number eight within Shropshire for the 1994 Agricultural Census (MAFF 1994). The sample was drawn from the population of sheep producers within the geographical area of the SHESA made available to the researcher by the British Wool Marketing Board.

A number of the results of the earlier survey have already been reported in the academic literature (Tate 1999) with the objectives of the original survey being:

1. To evaluate the impact of Tier 1A prescriptions on the farms, and
2. To examine any mismatch between these and the farmers' business and personal objectives.

A number of potential effects of the impact of participation in the SHESA were considered including stocking rates of sheep and cattle, changes in farm management practices and farmers' business and personal objectives.

The MAFF Grazing Livestock Units system² was used to assess the stocking densities of both the participant and non-participant groups of farms. This was also the system used by MAFF (the former Ministry of Agriculture, Fisheries and Food, the forerunner of Defra) to determine the eligibility of

2. The MAFF Grazing Livestock Units system (MAFF 1997) assesses suckler cows at 1.0 GLU, male cattle aged <2 years at 0.6 GLU, male cattle aged >2 years at 1.0 GLU and female sheep at 0.15 GLU.

businesses for the whole range of headage subsidies, and so was particularly relevant to any farm budgeting exercises. The 1997 survey found that participants stocked at a greater stocking rate than non-participants in the SHESA. The actual figures showed a slight difference in stocking rates ($P=1.46 \text{ GLU Ha}^{-1}$, $NP=1.37 \text{ GLU Ha}^{-1}$). Although this difference was not statistically significant it was still surprising to find that participants in an environmental scheme were actually farming more intensively than non-participants, although both groups were farming below the intensity of 2.0 GLU Ha^{-1} at which MAFF would commence the reduction of subsidy payments due to excessive stocking.

The farmers in the survey were asked whether or not they had changed their farm management practices on admission to the SHESA or since September 1994, the date when the SHESA commenced. Six participants had made eight changes to these practices, two of which were to comply with the Tier 1A objectives of the scheme and seven non-participants had made a total of 10 changes to their farm management practices since 1994. It was striking that only two changes had been made by the participant group in order to comply with the requirements of the SHESA scheme. This suggested that it was an easy scheme to comply with in order to receive the management premium.

Table 1: Perceived Disadvantages of Participation in the SHESA-Participants and Non-participants

Reason given	Participants (n=20)	Non-participants (n=22)
Reduced autonomy	4	12
Reduced fertility	4	7
Stocking rate limits	1	6
Reduced capital value	1	2
Reduced income	1	2

Both participants and non-participants were asked their views on perceived disadvantages of participation in the SHESA scheme. All respondents in the non-participant group mentioned at least one disadvantage from participating as shown in Table 1, the most common being reduced autonomy. The significance of this response was highlighted when the sample was asked what

Table 2: Attractive Aspects of Farm Work and Farm Management

Attractive aspect	Participants (n=20)	Non-participants (n=22)
Independence and an open-air life	28	35
Working with stock	12	13
Variety of tasks	7	15
Totals	47	63

they found were the attractive aspects of farm work and farm management as an open question with the interviewer logging the responses as represented in Table 2. The most popular categories were independence and an open-air life (63 responses) and the work with livestock (25 responses). None stated that they recognised any social esteem from farming or the benefits of being in business or the tax benefits of being self-employed.

The non-participant group perceived participation as potentially onerous when their responses were compared with the actual experience of the participant group. These findings were supported by a similar study in the Pennine Dales ESA (Whitby 1992) which commented that there appeared to be a gulf in the way that ESA scheme was perceived by participants and non-participants. The participants were much more positive about the scheme, in line with the findings of this research in 1997.

The farm business position in the SHESA, 2008

In 1997 the SHESA consisted of 531 registered holdings and the average holding area of these was 48.25 ha (ADAS 1996). Grassland percentage cover had declined slightly over the period for the South Shropshire District as a whole from 73% to 71% (Defra 2008) with the predominant enterprises remaining as cattle and sheep. The same data source indicated that as at 2007 average farm size had remained almost unchanged at 43.35 Ha.

The objectives of this re-survey were:

1. To contact the original sample of 42 farms surveyed in the 1997 investigation to ascertain changes that have been made in both their farm and non-farm enterprises over the past 11 years;
2. To relate these changes, where appropriate, to participation or non-participation in the SHESA or to changes in farm support or other policy issues over the 11 year period.

A telephone survey was undertaken contacting 40 farmers from the original sample of 42 farmers in November 2008. Of the 40 contacted 33 were able and willing to assist with the re-survey, the remaining 7 were accounted for by four deaths and three farmers retiring and in all cases the land had been amalgamated into other units with the loss of an identifiable system of management and stocking regime.

Of the 33 respondents 15 had been participants in the SHESA in 1997 and 18 had been non-participants. Only 8 non-participants remained in 2008, 10 having become participants in the SHESA in the intervening period. When asked why these changes had come about, the new participants stated that they had been influenced by the financial incentives on offer, and by reports from friends and neighbours that the scheme did not greatly affect individual autonomy, this discounting the initial widespread reservations of 1997. The remaining 8 non-participants claimed that they wished to remain autonomous and carry on farming in the way they thought appropriate.

The 1997 participant group were asked about the development of the

scheme during the intervening 11 years since the last survey. All had been invited to continue in participation at the 10 year renewal point and all 15 had proceeded to go ahead with the renewal, none had left the scheme or moved over to Higher Level Stewardship (HLS). On the issue of diversification of income there had been no applications to either the England Rural Development Plan (ERDP) or latterly since 2007 the RDPE, both schemes set up to encourage 'on-farm but non-farm' sources of income. There had been some development involving pluriactivity, two wives having decided to go out to work part-time and three farms going into farmhouse bed and breakfast accommodation. A number of respondents claimed to be aware of encouragement in the direction of pluriactivity.

On the issue of changes in farming policy the main areas to be reported were a loss of all cattle enterprises on seven farms including four SHESA participant and three non-participant holdings, due to the availability of government schemes, a lack of economies of scale, poor buildings, poor or uncertain profitability in recent times and a need to improve handling facilities. Reduced fertiliser inputs were also claimed and a greater reliance on natural manures in the future due to large increase in inorganic fertiliser prices.

On the issue of stocking rates, these had drifted downwards for both participants and non-participants, however it was clear that those who had given up cattle based enterprises had compensated, at least in part, with an increase in the number of sheep kept.

Table 3: Stocking Rates² for SHESA participants and Non-Participants

	Participant sample	Non-participant sample
1997	1.46	1.37
2008	1.42	1.32

Table 3 shows that there was still a small positive differential between the stocking rate of participants and non-participants of 0.10 GLU, not far short of one ewe per hectare.

Discussion and Conclusion

The loss of some of the survey sample was to be expected since the 1997 survey when the average age of the participants in the SHESA was 58 and that of the non-participants was 51. Simply by adding 11 years to the sample declared ages in 1997 those for 2008 become 69 and 62 respectively with a sizable minority over the age of 80 years.

The increase in SHESA participation was also noted by Defra in their commissioned monitoring reports increasing to 71.4 per cent of eligible area (Defra 2004). This appears as a further 10 cases in the re-survey sample and is largely due to the financial incentives on offer and a change in the perception of the difficulty in compliance with scheme objectives. As the SHESA was relatively new in 1997 this appears to be a result of diffusion of knowledge about the scheme within the farming community. The increase in participation is a significant change for the SHESA as a whole, but of some concern was

that only a quarter of performance indicators were met for the Stage IV ESAs by 2003 (Ecoscope 2003).

The loss of cattle from seven farms including four participant holdings is also a significant finding. The SHESA does not specify the need to keep cattle, yet the environmental benefits of either mixed cattle/sheep grazing or cattle only systems have been established both in terms of biodiversity and the invasion of weed grass species. However these are quite small farms, the majority being less than 50 ha with older individuals in charge who do not feel happy to continue with cattle. The past 11 years have shown this to be an unpredictable enterprise entailing hard work, lacking economies of scale and modern equipment and with government schemes to provide some compensation for leaving the enterprise, admittedly on the grounds of animal health. The 2001 outbreak of FMD alone meant the slaughter of 581,802 cattle in the UK (Defra 2004).

Overall stocking rates have drifted downwards slightly in the case of participants by 2.7% and 3.6% with non-participants, which is in line with Defra regional data but of more concern is the lack of migration of holdings into HLS, a lack of development of pluriactivity and engagement with schemes encouraging this and generally of confidence in the future. This could be a reflection of the nature of these holdings in that few can be considered to be full time farm businesses and thus they are rather marginal to the concerns of financial viability of those involved. This in itself might be because most are within the age group involved in winding down their income earning activities.

The survey participants reported that they had been through a period of change and development since the last investigation in 1997. Many reflected that this had been due to changes in Government policy towards agriculture including what were seen as a more complex world, less suited to small scale livestock producers and production. Others saw the changes resulting more from chance events-the operation of markets and the effects of animal diseases. Either way few felt in any way insulated from change and a number were cautious of what the future held for hill sheep and beef production in the light of the future closure of both the environmental scheme and the Hill Farm Allowance.

About the authors

Dr Graham Tate (Graham.Tate@wlv.ac.uk) is a senior lecturer in Rural Enterprise and Strategy in the Department for Enterprise and Strategic Management in the University of Wolverhampton Business School. He has more than 25 years experience of consultancy, research and teaching in the fields of farm business management, farm diversification, entrepreneurship and business management. His current research activities include two PhD studentships on farmers' new enterprise decisions after sugar beet and the financial viability of bioenergy in the West Midlands. He holds a PhD from Reading, an MBA from Aston and a BSc (Hons) from Wye College.

Dr Julian Park (j.r.park@reading.ac.uk) is Senior Lecturer in Agri-environmental Systems at the University of Reading and Faculty Director of Teaching and Learning (Life Sciences). His research interests are in the sustainability of agricultural systems, the impacts of agriculture on the environment and the use of new technologies in agricultural systems.

References

ADAS (1996) *Letter* from the project officer with information about the participants within the SHESA and land details.

Bromley, D. (1997) *Environmental Benefits of Agriculture: Concepts Environmental Benefits from Agriculture: Issues and Policies*. Paris, OECD. pp. 35-53.

Communities, C. O. E. (2006) *Commission Regulation (EC) No. 1974/2006 of 15 December 2006 laying down detailed rules for the application of Council Regulation (EC) 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)*. L 368/15 Brussels: Official Journal of the European Union.

Defra (2004) *Animal Health and Welfare: FMD Data Archive*, Department of Environment, Food and Rural Affairs, London, available at <http://footandmouth.cs.l.gov.uk/secure/fmdstatistics/spbycounty.cfm?mode=c> [Accessed 14.01.2010].

Defra (2008) *Agricultural Statistics*. London, Department of Environment, Food and Rural Affairs: [Accessed 01.12.2008].

Defra (2009) *Area of Land under Agri-environment agreement in England*. Department of Environment, Food and Rural Affairs, London, available at: <http://www.defra.gov.uk/environment/biodiversity/documents/indicator/200905h4.pdf> [Accessed 14.01.2010].

Ecoscope (2003) *Review of agri-environment schemes-monitoring and R&D results*. (RMP/1596).

MAFF (1994) *The Shropshire Hills ESA-Guidelines for Farmers*. London, Ministry of Agriculture, Fisheries and Food

MAFF (1996) *Small area statistics from the agriculture and horticulture census, 1992-1994*. London, Ministry of Agriculture, Fisheries and Food

MAFF (1997) *The Integrated Administration Control System*. London, Ministry of Agriculture, Fisheries and Food.

MAFF (1998) *Report of Environmental Monitoring – The Shropshire Hills 1994-1997*. London, Ministry of Agriculture, Fisheries and Food.

NAO (1997) *Protecting Environmentally Sensitive Areas*. The Stationery Office, London.

Pearce, D. (ed) (2005) *What constitutes a good agri-environmental policy evaluation?* Paris, pp. 71-97.

Scott, A., Christie, M. and Midmore, P. (2004) Impact of the 2001 foot-and-mouth disease outbreak in Britain: implications for rural studies. *Journal of Rural Studies*, 20, pp.1-14.

Tate, G. J. (2001) *An Evaluation of the Shropshire Hills Environmentally Sensitive Area from the Farm Business Perspective*. PhD. Thesis, The University of Reading.

Tate, G. J., and Park, J. R. (1999) The uptake of beef cattle extensification premium in a Less Favoured Area (LFA): A case study in Shropshire, England. *Journal of Farm Management*, 10(4), pp.208-218.

Whitby, M., Saunders, C. And Walsh, M. (1992) *A Socio-Economic Evaluation of the Pennine Dales Environmentally Sensitive Area*. University of Newcastle upon Tyne.