MINISTRY OF AGRICULTURE FISHERIES AND FOOD
WELSH OFFICE, AGRICULTURE DEPARTMENT

ECONOMIC EVALUATION OF THE ARABLE AREA PAYMENTS SCHEME

FOLLOW UP STUDY

BY

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EXECUTIVE SUMMARY

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INTRODUCTION

1. This Study, commissioned by MAFF and WOAD in November 1996, follows and updates the baseline socio-economic evaluation of the AAPS undertaken in 1992/3. Its overall objective was "to evaluate the impact of the AAPS on arable farming in England and Wales". Its detailed objectives included : an evaluation of the Scheme's effectiveness in controlling production of eligible crops; an analysis of its impact on a range of economic indicators; an assessment of farmers' attitudes to, and perceptions of, a wide range of issues connected with the Scheme, including its administration, the impact of set-aside and links with agri-environment schemes; and consideration of possible future scenarios.

2. The Study drew on a wide range of published information but the main source of data was a specially commissioned survey of 575 farmers in England and Wales. This was supplemented by discussions with over 25 organisations affected by AAPS, including those concerned with the environment, and with a small sample of leading farmers. In addition, economic modelling was used by the University of Reading to test a number of possible scenarios. During the course of the survey, discussion on the future of the AAPS in the UK and Europe continued and towards the end of our task President Santer announced his Agenda 2000 propositions. We have included an assessment of these in the report.

3. This Executive Summary follows the outline of the main report. The report itself is self-contained; the data on which it is based i.e. the detailed results of the survey, is available from MAFF/WOAD.

BACKGROUND TO THE AAPS

4. **Chapter 1** outlines the background to the introduction of the AAPS (rising cost of surpluses, GATT/world trade concerns, environmental anxieties about intensive production) and traces its development from its introduction in 1992 to the present day, touching on the ever increasing complexity of the Scheme and noting the difficulty of separating out other developments, e.g. changes in green rates, from the impact of the Scheme itself on farmers. It highlights the role of set-aside in helping to maintain subsidised exports from the EU at their maximum permitted levels and notes the widely acknowledged conclusion that the overall level of compensation to farmers has been higher than was envisaged when the Scheme was introduced.

EFFECTS ON PRODUCTION

5. **Chapter 2** examines changes in crop areas, production of eligible crops, yields and farming intensity, as they are affected by the AAPS. The area on which aid can be claimed is a key element in the Scheme and one which has proved contentious in some parts of the EU. In England and Wales, with the exception of forage maize, the area claimed under the AAPS has remained stable and close to the base area. At its peak in 1993, set-aside reduced the area sown to cereals by 13.6%.

6. When the Scheme started, "slippage", i.e. farmers' propensity to maximise output in all circumstances, was thought likely by some commentators to undermine the impact of set-aside. However, although farmers deployed a range of measures, e.g. taking their poorest land out of production, the overall conclusion of the survey was that the major element of the Scheme which affected production levels was the introduction of compulsory set-aside for all farms wishing to claim area payments under the Main Scheme. The AAPS was thought by most respondents to the survey to have had little effect on yields and most said that they had not changed the use of inputs, so intensity of production has not been changed overall by the Scheme.

7. Our overall conclusions are that there is little evidence for slippage; that in 1992 and 1993 the Scheme was broadly successful in reducing cereal production; and that from 1994 onwards the successive reductions in the set-aside requirement have allowed production to increase again.

EFFECTS ON FARM INCOMES

8. As **Chapter 3** reports, the survey confirms that the introduction of the AAPS has increased the profitability of farms growing eligible crops, with the larger cereal-growing farms benefiting disproportionately in terms of absolute increases in income and those on the Simplified Scheme benefiting proportionately less. The exceptional profitability of 1995 was considered unlikely to be repeated, and preliminary information on farm incomes for the 1996 harvest year indicates a significant fall in profits. The current strength of the £ and its effect on all crop prices is likely to result in a further sharp fall in profits for the 1997 harvest. While the income distribution between small and large farms has not changed very much, the absolute income differentials have widened markedly. The smaller the farm, the greater the percentage of profit that comes from AAPS.

9. Finally, the survey strongly suggests that farmers believe they have benefited from the AAPS, even allowing for other changes during its period of operation e.g. green rates, compared with the price support system it replaced. So if the intention of the Scheme was to be broadly neutral with respect to incomes - and this underlies the compensation principle - then it has overcompensated farmers for the reduction in price guarantees.

EFFECTS ON FARM STRUCTURE

10. **Chapter 4** analyses the impact of AAPS on farm size through land purchase and land rental data. Although there is anecdotal evidence to support the view that the AAPS has brought about change, for example, by encouraging larger farms to increase in size to mitigate the impact of 15% set-aside or by increases in rents as IACS cheques began to come through, overall it is difficult to discern a clear impact. Perhaps the most prevalent view is that the AAPS has delayed restructuring in the arable sector, or a least helped to slow the rate of change.

EFFECTS ON RESOURCE USE AND FARMERS' PLANNING

11. **Chapter 5** considers the extent to which farmers have changed their patterns of resource use as a result of AAPS and whether they feel in a better or worse position in planning the development of their farms. Our Study, and others carried out since the start of the Scheme, tended to confirm that farmers have not systematically changed their use of variable inputs on crops as a result of the AAPS. Similarly, the introduction of the Scheme has not significantly affected the size of the labour force on arable farms. There has been a small increase in net investment in machinery as a result of AAPS, but we found no evidence of large scale retooling. The situation in relation to buildings was broadly similar.

12. The initial view that the Scheme would be short-lived led to a short term attitude amongst some arable farmers but by 1995, as profitability began to increase, this seemed largely to have dissipated. However, many respondents to the survey commented on the difficulty of attributing changes to the Scheme itself as opposed to other factors such as world cereal shortages and hence high market prices.

13. In England, two-thirds of those surveyed claimed that their rotations had not changed since the introduction of AAPS, with an even higher proportion on larger and more specialist farms. Rather more farmers (47%) thought the Scheme had aided forward planning than thought the reverse (30%) but the proportion who felt it discouraged planning grew with farm size. Finally, two-thirds of all farmers interviewed were "quite optimistic" about the future prospects for their businesses. The level of optimism tended to grow with the size of business.

SET-ASIDE

14. In **Chapter 6** we report the answers to the full range of questions we asked about set-aside - effect on rotations, choice of land for set-aside, management, etc. We consulted widely amongst environmental organisations and also conducted a literature search.

15. In choosing land for set-aside farmers took account of two main factors : whether it fitted in with the rotation and whether it was the least productive. In England, most farms used natural regeneration as their set-aside cover, although this method was less popular in Wales. Approximately half of farmers sprayed their natural regeneration with a non-selective herbicide.

16. Only 2% of farmers in England had set-aside in agri-environment schemes. Their general comments on set-aside reveal the ways in which farmers have been able to use it to their advantage (e.g. weed control, resting the land) but the environmental benefits are also widely recognised. The overwhelming impression, in relation to set-aside management, is that after initial concerns, farmers have learned to live with it and many would be reluctant to see it go. It is interesting to note that the Agenda 2000 suggestions would allow voluntary set-aside to continue, and the evidence from the survey is that this would be welcomed by the industry in general.

17. The environmental organisations had strong views about the impact of the AAPS. They argued that its environmental impact would always be limited, whatever attempts were made at cross-compliance, because it was fundamentally aimed at production, not at environmental targets. They also compared unfavourably the overall level of expenditure under AAPS with that of the environmental schemes.

LINKS WITH THE AGRI-ENVIRONMENTAL SCHEMES

18. **Chapter 7** records a high level of awareness among arable farmers of agri-environmental schemes, but little uptake of them in relation to set-aside. The Countryside Access Scheme, which "tops up" the set-aside payment, has a disappointingly low uptake. Environmental groups we consulted felt that the relatively low payments were the cause. It is noteworthy that the higher payments in the access element of the Countryside Stewardship Scheme seem to have attracted a considerably higher level of uptake.

19. The most consistently expressed view from the environmental organisations on the links between the AAPS and the agri-environmental schemes was that there is a tension between the relatively high payments for the farmer, with what are seen as quite lax environmental constraints, and the low payments under the latter, where the restrictions are tight. The overall conclusion, from listening both to farmers and to environmental organisations, is that there are too many different schemes with different objectives which are not well integrated and too complex.

ADMINISTRATION

20. **Chapter 8** deals with the perceptions of the Scheme's administration by MAFF and WOAD. Although we detected some feelings of dissatisfaction, and concern about the draconian nature of penalties for infringing the rules, despite recent relaxation, the general consensus was that, following a difficult start, the Scheme had settled down, was well understood by applicants and was being fairly administered. Two-thirds of those contacted in England during the survey felt that the AAPS was being applied fairly and efficiently, with a higher proportion expressing this view on larger and more specialist cropping farms. In Wales, the level of satisfaction tended to be a little lower. There seemed to be a wide level of understanding and acceptance of the ease of completion of the IACS form and understanding of the Explanatory Booklet. Suggestions for improvement ranged from "simplifying the administration" to "less severe penalties for genuine mistakes".

21. The timing of arrival of the main IACS cheque in England varied considerably between respondents but no clear pattern emerged from the survey, although Welsh farmers appeared to have to wait longer for their cheques which was probably the result of delays in the year most recent to the survey (1996). Some disparity of treatment is inevitable, given the complexity of the Scheme and the numbers involved, but we believe that MAFF and WOAD should continue to keep payments and penalties under review, and that in certain cases there is a need for an appeals procedure.

THE EMERGING CEREAL TRADING ENVIRONMENT

22. **Chapter 9** considers long term outlook for world cereal production and demand. Taking account of the calculations on demographic trends and the implications for production by Professor Dyson, it concludes that there will be an increasingly tight world demand/supply situation as we approach the year 2020. This analysis confirms the need to retain the productive capacity of arable land for the longer term.

23. In the immediate future the outlook for European cereal farmers is more uncertain, with the EU dependent on exporting to world markets which are likely to be volatile, and at a time when the WTO pressures are likely to continue the process of freeing up world markets and thus global agriculture. It seems likely that the US will argue for further radical changes following the FAIR Act and it is not yet clear whether the Agenda 2000 proposals will go far enough to meet US aspirations; at present, this seems unlikely. Under the 'Peace Clause' the AAPS can continue until 2003, so it may be that an extension until 2005/6 could be negotiated as part of an overall deal. From the point of view of UK farmers a reasonable period of transition might be more acceptable than a sudden ending of the AAPS, with all that could mean in terms of disruption of cropping and uncertain profitability.

THE AAPS UNDER DIFFERENT SCENARIOS

24. **Chapter 10** describes the modelling of possible future scenarios that we conducted as part of the Study. The University of Reading model predicts likely changes to production, crop patterns and farm incomes, taking into account constraints by farm type, size and region, together with crop profitability.

25. After validation, the model was used to prepare a 'base scenario' with which changes to the AAPS could be compared. The base scenario is essentially a prediction of the likely changes in production, gross margins and income per crop for the 1997 harvest year, compared with the 'validation year' of 1996. Apart from the change in the obligatory set-aside rate from 10% to 5% during the year, both cereal and oilseed returns have been reduced by the strong pound. This has led the model to predict a decrease in farm gross margins of between 10% and 33% for the farm types we looked at, with an overall average reduction of 23%.

26. The Agenda 2000 scenario is expected to have relatively little impact on production and incomes. A small increase in the volume of cereal production is predicted, together with a small overall increase in income related to cereal groups. However, total farm income is predicted to fall by a small amount with the decrease in payments for oilseeds and protein crops affecting both income and area of production.

27. Modulation (capping payments at 150ha per farm) unsurprisingly hits larger farmers harder and benefits smaller farmers. The consequences for large farms could be very serious. With a reduction in eligible land, fewer cereals, oilseeds and proteins are grown on the larger farms and this forces changes in production patterns. Overall, the area of eligible crops decreases and, although prices rise, overall farm income falls. Modulation by limiting payments to 250,000 ECU per holding cannot be calculated from this sample because of the sizes of farms in the survey.

28. Different Set-Aside Rates (0%, 15%, 25%) were also modelled. An obligatory set-aside rate of 0% allows the model to determine the optimal distribution of voluntary set-aside and crop production patterns at current payment levels. Under this scenario there are no significant changes to farm production or gross margins and aggregate farm income is set to rise by about 1%. This result is consistent with the Agenda 2000 scenario and confirms that the obligatory 5% rate is close to the optimal national economic performance.

29. Under the higher rates of set-aside the effects are more serious, with aggregate income from each of the crops sharply reduced, production down and prices up. This could increase imports, force prices down again and so further reduce incomes. At a 25% rate, the effect would equate to a fall in farm income of 32%.

30. Decoupling (i.e. a removal of the AAPS) would lead to a fall in gross margins for every farm affected of between 11% and 30% on cropping activities. Again, production would fall, imports increase and incomes would fall. The model does not predict the size or form of any decoupled compensatory payment; it simply indicates the size of the likely effects of AAPS removal.

CONCLUSIONS

31. The final chapter **Chapter 11**, draws together the Study's main conclusions. These are summarised below:

- there have been substantial windfall gains for UK farmers since compensation payments have been higher than intended because of green £ devaluations;

- the administration costs of the Scheme are reasonable, in view of its complexity and the need to preserve the public interest;

- the procedures with which farmers have to comply are appropriate to the very large sums of money involved;

- the effect of the Scheme was to reduce the production of eligible crops in the early years when the set-aside rate was at a maximum and there does not appear to have been a large problem with 'slippage';

- subsequent changes have meant that production has increased again;

- overall, AAPS type arrangements are capable of bringing about restraint in production, although they can never do so with great accuracy, given annual variations in crop yield;

- there is no evidence from the survey that the existence of set-aside as the main mechanism for production constraint has any appreciable effect on the yield from land which remains in production;

- the AAPS has not produced a financial bonanza for arable farmers. The best year so far, 1995, saw the influence of a number of other factors on farm incomes;

- early evidence is that the financial results for arable farmers will be much poorer for the 1996 harvest year and worse still for 1997;

- farmers in all size categories have benefited from the AAPS; it makes up a bigger proportion of profits on smaller farms than bigger ones but in absolute terms larger farms have enjoyed bigger income increases;

- the AAPS has delayed restructuring in the arable sector, or at least slowed the pace of change;

- the Scheme has had little effect on farming systems and most farmers' use of inputs has not changed as a result if it;

- set-aside provided an opportunity for taking land out of intensive crop production and has had environmental benefits, although these have been eroded as the area of set-aside has declined;

- overall, the AAPS cannot be regarded as an effective mechanism for achieving specific environmental objectives because it is driven by other priorities;

- small increases in cereal payments under the Agenda 2000 scenario are unlikely to affect production or income from cereals significantly: but production of oilseeds and proteins would fall;

- modulation at 150ha would reduce levels of production on large farms and levels of income nationally. The effects would be more serious for very large farms, although it is difficult to predict this accurately using the Reading model;

- increasing the set-aside rate decreases the economic performance of cropping activities, especially when the rate rises to 15% or above.

- an obligatory set-aside rate of 5% produces a national economic performance very close to the optimal;

- removing the AAPS without a replacement would result in a large loss of gross margins (21%) and incomes for all farmers. Prices would rise and production would fall; imports would increase. Large areas of land would become unprofitable.

- the model developed for the Study is a powerful tool for policy analysis and can be used to simulate a wide range of scenarios.