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AN OVERVIEW OF UK POLICY AND GRANT SCHEMES

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ABSTRACT
There has been a recent coming-together of agriculture and countryside policy, and a search for new policies to encourage countryside conservation alongside viable farming, using regulations, incentives and cross-compliance. Environmental payment schemes have been the most popular of these. Beginning with SSSI management agreements, we have developed many schemes. ESAs now cover 15% of UK farm land, and embrace landscape, wildlife and historic objectives. Newer schemes include nationally-available ones such as Countryside Stewardship in England; and Tir Cymen and the Hedgerow Restoration Scheme in Wales. Originally, schemes often targeted marginal areas, or land which was not farmed. Today, schemes increasingly work hand in hand with productive farming. Government, on behalf of the public, can use schemes to buy environmental goods from farmers in the same way that others buy crops and livestock. In future, the UK could benefit from better integration of schemes, and a further increase in expenditure. But schemes alone cannot integrate agriculture and conservation. A more radical reform of the complexities of the CAP, including set-aside and livestock regimes, is also vital. Farmers, conservationists and politicians must work together to build a balanced policy framework for the future.

INTRODUCTION

Before I start, I should like to thank the conference organisers for inviting me to give this paper. As an officer in the Countryside Commission, whose remit covers the English countryside, and not Scotland, Wales or Northern Ireland, the title at first gave me some concern. However, my thanks to contacts in partner organisations for helping me to broaden my paper to deal with the UK as a whole. I should also say that it gives my own personal view, and not necessarily the Countryside Commission's official policy.

CHANGING PRIORITIES

UK policy for agriculture and the countryside has reached a new stage of development. From a post-war period when agriculture was seen as a benign influence upon the countryside, and during which time farming underwent major changes in pursuit of increased 'food from our own resources', the 1970s and 80s saw a growing appreciation that in many ways, farming and conservation policies had been in conflict with one another.

The policy drive to produce more food from the land had led many farmers to change their farming patterns and practices in ways which had reduced the diversity of our landscapes and wildlife. By encouraging greater food production, alongside reductions in farm labour, these changes

had made it difficult for farmers to devote time and effort to take care of the many beautiful and historic features of the countryside which had ceased to have economic value. At the same time, there was a growing awareness of the need to conserve the countryside, and to encourage people in our burgeoning towns, cities and suburbs to appreciate it and use it responsibly. We have all learned much from this legacy of change and conflict.

But in the past ten to fifteen years there has been a general recognition of the importance of helping farmers to re-invest time and effort in their role as 'stewards of the countryside'. This has, I believe, led to a gradual coming-together of agriculture and conservation policies, increasingly building links between the production of food and fibre, and the generation of a beautiful, diverse and enjoyable countryside at the same time.

The government has been seeking new policies which can encourage both the conservation and enhancement of the countryside **alongside** productive farming: if you like, putting together some building blocks for a new, more multi-purpose strategy for rural areas (- although I don't think you could claim that we have anything like a coherent strategy at the moment!).

In preparing the Countryside Commission's recent policy statement, 'Paying for a Beautiful Countryside', I spent a lot of time reviewing the various new policies. I feel that these policies now have real potential to help transform the relationship between modern farming and the countryside, for the better. They should help to create a future policy framework which encourages farmers to farm responsibly and for the benefit of society as a whole, through a mixture of mechanisms. These are:

regulation, which should set those basic environmental and countryside standards that we all expect from responsible and safe farming;

incentive, providing appropriate support for the creation of new or better countryside benefits, for example through payment schemes; and

cross-compliance (that rather clumsy word) or more accurately, **adjusting other policies**, to make sure that other support for farming or rural development does not compromise the aims of these first two mechanisms.

PAYMENT SCHEMES

Regulations have certainly been a major preoccupation for farmers over the last year or so. But among the new 'agriculture and countryside' policies, I would suggest that countryside payment schemes have so far been the most popular mechanism: schemes which pay farmers for making positive contributions to the countryside, managing important areas and features under threat, or upgrading the quality of damaged or neglected areas.

The first countryside payments, made by the Nature Conservancy Council on Sites of Special Scientific Interest (SSSIs), offered certain farmers management agreements to secure sensitive management of land which was of special value for wildlife. Some agreements have been in existence for many years, but the system expanded after a new payment formula was introduced in the 1981 Wildlife and Countryside Act. SSSI agreements have

been limited only to 'special sites', and each agreement has been tailor-made to the needs of the site. Although these features make it a relatively costly system, SSSI management agreements now cover over 180,000 ha of 'special' land in the UK.

Through the late '80s and into the 1990s, there have been a growing number of schemes and grants which encourage farmers to produce a wider variety of 'countryside products'. The Ministry of Agriculture and its counterparts in Wales, Scotland and Northern Ireland have developed an impressive fleet of Environmentally Sensitive Areas, schemes which will soon cover 15% of the UK's farmland. ESAs are designed with the help of farming and conservation interests, to preserve the characteristic landscapes and habitats of particular designated parts of the country, mainly in the hills and uplands, and certain 'fragile' lowland landscapes. Although they began with relatively limited aims and small resources, ESAs now take a very broad view of integrating agriculture and conservation within their boundaries, helping farmers to care for landscape, wildlife and history.

The Countryside Commission set up its first payment scheme, at the request of the Department of the Environment, in 1989. This was the Countryside Premium scheme, offered for five-year set-aside land in Eastern England. Farmers were offered a menu of standard payments to adopt management which would create benefits on set-aside land, such as areas for quiet recreation, and grassland rich in wildflowers. In 1991, again at DoE's behest, we launched the Countryside Stewardship scheme, a more bold, experimental scheme which targets landscapes all over England, looking to encourage new forms of countryside management. This scheme has been able to attract land throughout 'the wider countryside', not just the 'special areas' where other schemes are on offer. Also, in 1992 we launched the Hedgerow Incentive Scheme, another national scheme which adds to Ministry of Agriculture funds to offer special payments to farmers to restore neglected hedges. In Wales, our sister organisation the Countryside Council for Wales (CCW) has recently launched two similarly ambitious, 'wider countryside' schemes - Tir Cymen and the Hedgerow Restoration Scheme - although for the time being Tir Cymen is only available in three pilot areas.

To add to its tailor-made SSSI agreements, English Nature, successor in England to the Nature Conservancy Council, launched a Wildlife Enhancement Scheme in 1992, which offers standard agreements to farmers in larger SSSIs, similar to the agreements offered in ESAs and Countryside Stewardship. And in National Parks and some Regions, Counties and Districts, local authorities have launched farm and conservation schemes of their own.

The motive behind all these schemes is really to show that it is possible for government, on behalf of the public, to buy environmental goods from a farmer, in the same way that others buy crops and livestock. Schemes encourage farmers to produce valuable things which conventional markets for food and fibre do not, nowadays, give them any real incentive to produce. The activities they fund, and the management they promote, have become much more varied and sophisticated over the years, as experience has shown us how to improve scheme performance and value for money.

INTEGRATING AGRICULTURE AND CONSERVATION

In the early days, conservation grants and schemes were often confined to marginal areas or to land which in some cases had been hardly farmed at all. For example, those awkward corners which farmers had, until recently, found unprofitable to drain or plough, where wildlife had flourished undisturbed; or those marginal farms on poor quality soils or in harsh climates, where farming practices were still dictated largely by natural constraints. Early schemes tried to identify and protect these 'special areas' from damage, because of recent changes which had increased the profitability of bringing them into production, or of greatly increasing their production.

Today, particularly with the more recent schemes and the expanded range of ESAs, we can attract the profitable farmer who wishes to do something positive for the environment. It is my impression that we are moving into an era where schemes must increasingly work hand in hand with productive farming, in the wider countryside, beyond the 'special' areas. Increasingly, all kinds of farmer can see the attraction of mixing certain kinds of countryside scheme within their overall business management plan. With help from schemes and with the good technical advice provided by many local and national groups, farmers can identify opportunities to improve the countryside for themselves and their neighbours. It may also bring them added financial benefits - in the form of new business ventures, a better public image, and a more attractive, and therefore valuable, asset to pass on to future generations.

On the whole, farmers seem to like countryside schemes. Spending on schemes has grown from four or five million pounds a year in the early 1980s to over 60 million pounds in 1992. The Government proposes that this figure should reach nearly 100 million pounds a year by 1996, and a range of new schemes have been launched this year under the UK Agri-Environment programmes.

The Countryside Commission, and many others, are keen to see the budget increased significantly beyond this, by the end of the decade. I am sure that there are a lot more countryside benefits which these schemes could generate, which would still represent good value for taxpayers' money. However, we must also try to simplify the picture by scheme integration; because there are now so many schemes, each with different rules and targets, that it can be very difficult for farmers to keep abreast of what is on offer. I would like to see Government moving towards a single 'menu' or shopping-list of countryside benefits during the next few years, in each of the four UK countries. Such a menu could be available throughout each country, but on a discretionary basis, so it would be up to farmers to offer to supply the various items on that menu for government agencies, as buyers, to choose between.

So much for payment schemes. But we mustn't be led, by all this, to think that they are the be-all and end-all of what is needed to integrate agriculture and conservation, in the future. Other, major issues will need to be tackled. Whilst we have been pouring efforts into schemes, greater resources have been poured into other policies which have, in many cases, constrained or undermined the performance of our schemes. In particular, Government needs to press for changes to the 'big spender' elements of the CAP, to make sure that these, which still dwarf EC expenditure on countryside schemes, are not undermining countryside quality.

For example, the 1992 CAP reform introduced set-aside to control arable production. I am pleased that the Countryside Commission has now 'gone public' in saying that this offers few real environmental benefits, and soaks up resources that might be better directed to other schemes. For example, schemes which involve new land uses, like tree-planting and meadow restoration, would bring many environmental benefits, whilst also taking land out of arable.

The CAP also involves many direct payments to farmers, such as beef and sheep premia; which because they are paid on **headage**, have encouraged some farmers to stock or crop at intensities which, as we increasingly recognise, cannot be sustained without damaging the land and the countryside. I believe that many farmers, as well as conservation bodies, would be happier with a livestock regime which would make it possible and profitable to keep fewer stock on their land, and thus to be able to manage both stock and land more carefully. Achieving these sorts of change will require imagination and co-operation from all interested groups.

FIELD MARGINS AS AN EXAMPLE

Just for the record, I thought you might find it interesting to look at how various policies currently offer some help for field margin management in the countryside. I hope you will excuse me if these details relate only to England.

It is possible to have a kind of 'field margin' option within Set-aside (which is not a countryside scheme) - but only if you count a 20 metre wide strip as a field margin. Under rotational or non-rotational set-aside, the payments for these wide bands are the same as for all set-aside land. The environmental benefit of these strips depends very much upon the interest of the farmers who create them, but with help from organisations such as FWAG, RSPB and the Game Conservancy, you may achieve some benefits.

Among countryside schemes, if you have non-rotational set-aside, or are in an ESA, you could also look to open up your field margins to public access, in which case you might qualify for payments for this. The payments in ESAs (which incidentally, could include field edges on pasture land as well as arable) are for a 10 metre wide accessible margin around the field. For the Countryside Access scheme on NRSA, the planned payment will be slightly lower for a 10 metre wide accessible margin, but it will be on top of the basic set-aside payment. These schemes will offer you specific cash, for a specific new countryside benefit.

There are field margin and conservation headland options in some of the ESAs where arable farming is common - the Breckland ESA has the most comprehensive options. Here, you can choose a 6 metre or 12 metre margin or headland. Similarly, in any part of the country, if you wish to enter Countryside Stewardship, you'd be looking at a 6 metre margin, available if your land is in one of the priority landscape types for Stewardship - for instance along a waterside, on the coast, or on chalk - or, wherever you have hedges which you are going to restore or protect through the scheme, you can opt for a 6 metre strip, or a 2 metre strip on which a lower payment is offered.

In both ESAs and Stewardship, the specific field margin payments would be in addition to other payments you might get under the scheme, such as payments for hedge laying, tree planting or other capital work. In these schemes, you are paid directly in return for providing specific countryside benefits.

Beyond this, I know that a growing number of farmers who are not in schemes are experimenting with field margins and conservation headlands, mainly as a management tool and a means to more efficient use of the land. As you know, on some soils, crop yields drop dramatically as you get to the field edge, and in the current economic climate you may well ask yourself whether it is worth cultivating, sowing and spraying right up to that edge when the return it can give you may be very small. A 1 or 2 metre unsprayed, uncultivated or grass-sown strip around the field might make both good business sense, and could do a lot for the wildlife and landscape of your farm - and maybe also the sporting value - without any special grants. As someone who works to improve the grants system, it is important for me to remember that there is life beyond grants!

Focusing here on field margins illustrates the rather piecemeal way in which different policies can affect one aspect of the farm. It is a long way from the simple, integrated countryside strategy that I believe we need to work for, but on the other hand, at least it offers quite a bit more for the countryside than we had twenty years ago!

CONCLUSIONS

In conclusion, the various countryside agencies share the Government's concern, that more thorough environmental reform of the complexity and bureacracy of the CAP must be a central aim of future policy, for both farmers and conservationists alike.

In the meantime, we must work together to find practical and profitable ways to combine farming and conservation, in everyday land management. The countryside agencies and farmers together must continue to help government to set appropriate environmental standards through regulations and codes of practice, and to consider ways in which we could perhaps develop new markets for countryside benefits. We should recognise the valuable work done by farming and voluntary organisations, such as experiments in integrated crop management which may benefit the countryside, and work to develop new techniques and skills for habitat restoration.

Because we seek a thriving, diverse and beautiful countryside for everyone to enjoy, I believe the Countryside Commission and other countryside agencies are willing to work in partnership with farmers and other land managers, towards this goal.

POLICY OR SCHEME AFFECTING FIELD MARGIN	MINIMUM WIDTH OF STRIP	MANAGEMENT AND OTHER CONDITIONS	PAYMENT RATE PER 100M PER YEAR
Set Aside - rotational or non-rotational	20m	former arable land only: natural regeneration or sown strip, several cuts allowed	£22.50
Countryside Access scheme on non-rotational Set Aside only	20m strip of set aside land, with 10m wide access strip along it	as for set-aside withat least one cut annually	£145/mile which is around £9
ESA field margins: Breckland ESA	6m or 12m strip	cultivate annually or bi-annually to create a seedbed (Aug-Feb)	£350/ha, which is £21 or £42
ESA conservation headlands: Brecklands ESA	6m or 12m strip	limited herbicide & pesticide use, headland is not rolled until after harvest	£110/ha, which is £6.75 or £13.50
South Wessex Downs ESA	6m strip		£60/ha which is £3.75
Access in ESAs	10m access strip along field edge or elsewhere	arable or pasture land eligible cut at least once annually	£274/mile, which is around £17
Countryside Stewardship (now merged with Hedgerow Incentive Scheme)	6m strip along field margin with or without hedge	must be either on a landscape type eligible for Stewardship, or alongside hedges entered into the incentive scheme grazed or mown, follow Game Conservancy guidelines if on unhedged arable	£35 basic payment. With linear access, £45-55, depending on type of access plus lump sum per new path or bridleway
Countryside Stewardship - new for 1994:	min. 2m strip alongside hedge	as for the 6m strip	£15

FIELD MARGINS AS A NATURE CONSERVATION OBJECTIVE IN THE NETHERLANDS AND GERMANY FOR NATURE CONSERVATION; POLICY, PRACTICE AND INNOVATIVE RESEARCH

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ABSTRACT

To be an attractive form of agricultural nature management, field margin management has to fulfil at least two qualities. Firstly, it has to be effective ecologically. Secondly, the possibility to combine it with current use of the adjacent field is a prerequisite for farmers to participate in great numbers.

From many investigations it appears that field margins have a higher species richness than the rest of the field. Furthermore, is that there are several indications that specific field margin management, of which the absence of fertiliser or herbicide use are important elements, is indeed ecologically effective. This holds both for grassland (Melman & Van Strien, 1993) and arable land (De Snoo, 1993; Wolff-Straub, 1985; Schumacher, 1980).

Amongst others based on these findings, both in the Netherlands and most Bundesländer of Germany field margins are recognised as an objective for nature conservation. For several years margin management has been part of the national programmes concerning nature conservation issues within agriculture.

This paper deals with the Dutch policy of field margin management, the actual practice and with the innovative experiments to introduce this type of management on a larger scale. In addition some information about the German situation is presented.

THE NETHERLANDS

Nature conservation on agricultural land in the Netherlands has a relatively short history. As an element of policy it had its birth in 1975 when the so called Relation Paper was published. This note focuses on the nature conservation value of agricultural land. An important part of the programme, based on the Relation Paper is that farmers (in selected areas) are invited to adapt their farming practice to a more nature-friendly one (on an voluntary basis). They have the opportunity to conclude a management agreement, for which they are financially compensated (extensification of management reduces their income). For a more general paper about the Dutch programme based on the Relation Paper see Baldock (1993).

Position margin management

In the first period, management agreements were directed at field-wide agreements with no specific attention for margins; their conservation

qualities had not yet been recognised. Once this was the case, there was a reluctance to implement margin management within the regulation. Reasons for this were (1) the difficulty of inspecting compliance of the farmers not using fertiliser and/or herbicides; (2) doubt about the ecological effects in the long term.

The aspect of compliance inspection is hard to solve, especially for grassland. The chance to see the farmer while applying fertiliser is very small and inspection of the margin after application is very laborious and is possible only for a few days. After this the pellets disappear. Another method of inspection is monitoring the vegetation a number of years. If one doesn't recognise any difference in colour, growth or composition between the vegetation of the margin and the rest of the field one may go and speak to the farmer and talk about the way he manages the margins. However, it may be clear that this is no base for judicial consequences, i.e. to withdraw the compensation paid in the foregoing years in case he has not been able to save the margins from fertiliser effectively. For arable land inspection is less problematic. From the first year on cessation of herbicide-use is easy visible. However, until recently the attention of nature conservation was mainly aimed at grassland; arable land was treated stepmotherly.

On the second point the results of the research mentioned above gave sufficient indication that specific margin management is effective; model studies for grassland show that the influence of the management on the adjacent parcel is limited, even in the long term (Melman & Van Strien, 1993). Also for arable margins several indications for robust results are available (Dover *et al.*, 1990).

Notwithstanding the difficulty of compliance inspection for margin management in grassland effectively, it is incorporated in the programme because of its potential ecological meaning and its modest costs to the farm business. Concerning the use of fertiliser trust is an important element of the agreement between the farmer and the public authority.

Increasing recognition of the significance of field margin management

In the course of time field margin management is assigned an increasingly independent position in agricultural nature conservation. This can be illustrated by several alterations which are carried through in the regulation:

- the possibility to conclude margin management exclusively instead of inclusively; at first one was obliged to combine margin management (of which no use of fertiliser is the most important element) with field wide management (of which postponement of mowing and grazing is the most important element). This obligation has now been removed.
- greater choice of widths; at first one had a choice between a fixed width of 3, 5 or 10m. This range is widened from 2 to 12m with steps of 1m. Recently, for a specific situation a flexible width has been introduced, varying within a margin so that there is a possibility that the curving character of a landscape element is bordered by a straight line of arable land. To calculate the rate of compensation the average width is calculated which mest be a maximumed of 12m. These elements of increasing flexibility reflect not only the growing importance of margin management, but perhaps especially the Dutch bureaucratic style of working. Nevertheless, for the Dutch situation

it is a way of finding solutions. Each square metre is important, whether for agriculture or for nature conservation.

Table 1. Some features of field margin management agreements in The Netherlands. Additions/alterations from mid-1994 between sq.brackets.

width of margin	scope of prescriptions	payment (dfl/ha.yr)
2 - 12 m	grassland: fertiliser herbicides sowing deposition of mud (from adjacent ditches)	1300 [1600]
	arable land: fertiliser herbicides/pesticides [crops] [mech. weeders]	1500-2200 [2200-2800]

Innovative research

All the elements of the more flexible approach of margin management helped to lower the threshold to enter a management agreement. The participation is growing steadily (table 2) . Yet, despite all our efforts we felt that the flexible, inviting character of field margin management still was not optimal. So there was a challenge to look for further improvement. Therefore an experiment was designed in which some new elements of application of margin management were to be tried out. To make this understandable I have to tell you some specific details of the Dutch situation in which agricultural nature conservation is embedded.

Table 2. Parcticipation in field margin agreements in course of time.

year	length [km] (area. [ha])	average width [m]
1989	311 (141)	4,5
1990	704 (321)	4,6
1991	953 (443)	4,7
1992	1239 (585)	4,7
1993	1595 (810)	5,1

In the first place the area in which management agreements can be concluded is limited up to 100,000 ha (i.e. exclusive of the area in which reserves, to be withdrawn from current agriculture, are planned). In several regions the ecological ambitions are for the greater part fulfilled when only margin management is practised; nature conservation-oriented management on the rest of the field is not necessary.
Secondly, it is felt by the farmers that their fields being designated as an area wherein management agreements can be concluded induces a (prescriptive) planological decision and thus is a threat for the freedom of conduct of business. They feel to be doomed to be second class farmers,

because they fear that works of land-improvement will not be carried out any longer. This is in spite of the procedure which ensures that application of the Relation Paper programme follows planological decisions and does not induce these.
Thirdly, farmers feel the current system of agreements sometimes acts like a straightjacket. The management agreement contains mainly statements of what one is not to do (notwithstanding the voluntary character of entering into an agreement) and thus is not very challenging in positive sense.

The starting point for the experiment is that margin management is ecologically sufficiently effective and as such does not need special attention. The main problem to be solved is how the barrier to farmers' participation can be lowered. The design of the margin experiment tries to join in the three above-mentioned points.

Modest claim on area

To meet first and second points, in the experimental areas the margins are the only elements for which an agreement can be concluded. This reduces the amount of hectares needed in an area by 75-90%. This way of using the available hectares enables to exploit a far larger area for agricultural nature conservation. Furthermore, farmers, hopefully, no longer feel so heavily threatened, because nature conservation has no interest in the field itself. Only the margins are targeted, which because of their qualities have less agricultural importance than the rest of the fields.

Limited quantity personnel available

Another point of attention at the start of the experiment is the quantity of personnel which is needed. As a rule the traditional management agreements require personal visits to the farmers. Without this approach farmers would not recognise agreements as a serious option. To minimize time needed for recruiting farmers we tried to design a promotion campaign which would rouse enough enthousiasm to conclude an agreement without visiting the farmers. The campaign included information via local press and attractive brochures.

Nature result payment

The third point has been taken into the experiment by introducing another concept of paying the farmers. In the current system one is paid for creating nature-friendly conditions (e.g. no fertiliser). Payment is assured whether or not nature reacts to these favourable conditions. In the experiment the concept of nature result payment is introduced. Farmers are paid for positive results only, whether or not as a consequence of their efforts. This basis for payment has been discussed for several years and has fierce supporters and opponents (Van Strien *et al.*, 1988; Clausman & Melman, 1991). We considered the time was ripe to try this concept in practice, at least for the botanical aspect on which the experiment is focused. The basic idea is that paying according to this concept farmers are approached in their quality as entrepeneurs. They are free to choose the way they achieve nature benefits on their fields. There are no prescriptions as to how to reach them. This might be a more challenging way for farmers to contribute to nature conservation. Notwithstanding the possible advantages complications should also be mentioned. These concerns questions like:

- how is the nature result to be defined?
- who is going to assess the results? (skill and time)

- how and when are the results to be announced to the paying authorities?
- how are the given results to be inspected? (e.g. in what time-scale after the announcement); this is especially important given the limited quantity of public authority personnel;
- what is to be paid per unit of nature result?
- what to do in case announcer and controller disagree?
- how to react when farmers haven't sufficient results in relation with their efforts? (frustration!)

Some questions had to be answered, at least tentatively, before the start of the experiment (see also the poster of Kruk *et al.* presented during this symposium).

We defined the nature result in terms of the presence of a number of selected plant species. The selection was based on: (a) the indication for the nature value of the whole vegetation (if you find one of the species, you may expect a diverse vegetation), (b) recognisability (conspicuous flowers), (c) attractiveness (no problematic weeds), (c) distribution (preferably throughout the country), (d) rareness (not too rare, to prevent farmer-frustration) and (e) flowering time (more or less simultaneously). This resulted in a list of 19 species for grassland and 15 for arable land. We composed a booklet in which the entire selection is presented. This is a handbook for the farmers to be able to assess the results. As a consequence of payment concept we considered the farmer responsible for announcing the results. Concerning the control/verification of the announced results, this has to be done as soon as possible after the results are reported. This minimizes the risk of not being able to find the species. We try to do it within two weeks after the announcement is received (announcement once a year, before a fixed date).

Quality classes of nature

The payment for the results depends on the number of species found, that are on the list. Three quality-classes are distinguished (table 3). Scoring below the lowest class (less than two species) gives no money at all. Payment (grassland) for the first class (2 or 3 species) is *f*0,15/m margin of two m width, for the second quality class (4 or 5 species) it is equal to the traditional compensation payment (*f*0,25/m margin) and for the third and highest class *f*0,35/m margin. The species are to be found on a piece of 100m length, appointed by the paying party (government). Such a sample has to be taken on each 1000m margin for which an agreement is concluded. It is essential that the payment is entirely determined by the results: there are no prescriptions about the management. It is up to the farmer how to reach the results. The only condition is that the results arise from natural regeneration (not planting or sowing).

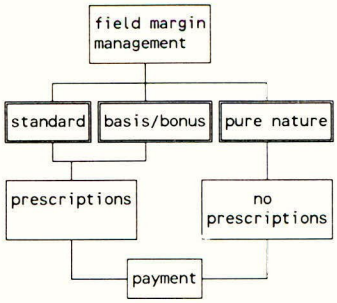

Fig. 1. Three payment concepts of management agreements

Beside this completely result dependent payment (called 'pure nature' payment) we offered the possibility of traditional compensation payment

(called 'standard' payment) and also a hybrid between these two, the so-called 'base-bonus' payment (fig. 1; table 3). For these two ways of participation the farmers have to fulfil the normal management prescriptions (e.g. no fertiliser). The farmers are fully free to choose between these three variants. Moreover, they may change from year to year. For instance, after a few years of 'standard' payment they might find it more profitable to join pure nature-result payment, because they know they have enough species for the more profitable high-quality class.

Table 3. Payment for field margin agreements in relation to quality class (number of species on the list) according to or three rewarding concepts. Mind the distinction between grass and arable.

quality class payment concept	lowest (0-1 species)		low (2-3 species)		middle (4-5 species)		high (≥6 species)	
	grass (2m)	arable (6m)	grass (2 m)	arable (6 m)	grass (2 m)	arable (6 m)	grass (2 m)	arable (6 m)
pure nature	0,00	0,00	0,15	0,50	0,25	0,90	0,35	1,30
base-bonus	0,15	0,50	0,15	0,50	0,25	0,90	0,35	1,30
standard payment	payment as middle class							

First results of the experiment

The experiment was started by us actively in two provinces; one location (Zuid-Holland) concerned grassland and the other (Gelderland) arable land. The other provinces also had the opportunity to join. This resulted in participation of another six provinces (we have 12 provinces in the Netherlands). So there is much interest in this phenomenon. It feels very comfortable to be invited by farmers for the sake of nature conservation. We don't meet this attitude in the normal practice of the Relation Paper programme.

Table 4. Progress of the field margin experiment in the different provinces of The Netherlands.

Province	culture	start date	standard		base-bonus		pure nature		total	
			nr of farmers	km	nr of farmers	km	nr of farmers	km	nr of farmers	km
Zuid-Holland	grass land	nov"92	2	5	-	-	8	107	10	112
Gelderland	arable	dec"92	5	2	-	-	-	-	5	2
Drenthe	arable	mar"93	3	8	-	-	-	-	3	8
Friesland	grass land	sep"93	29	97	1	3	7	24	37	124
Groningen	arable	sep"93	3	4	-	-	-	-	3	4
Brabant	grass land	nov"93	no data available							
Overijssel	grass land	nov"93	2	4	-	-	-	-	2	4
Total			44	121	1	3	15	131	60	254

Notwithstanding their interest in the experiment, concrete participation of the farmers has so-far been moderate on average but varies strongly from province to province (table 4). (Per province the experimental area involves about 30-50 farmers). The main limiting factor is probably fear for planological consequences (designation), due to the rising nature value of the field margins by the nature aimed management. What starts on voluntary basis may lead to obligations which one cannot escape, is what farmers think. Even letters of the authorities stating that there will be no relation between the experiment and the planning decisions in their region hardly persuades doubting farmers. Concerning uptake statistics it has to be mentioned that so far the farmers are approached by written material and public meetings only; they are not visited at home yet as is the case with normal management agreements. So, the participation cannot be compared with that of the regular programme. Later in the experiment such visits will take place and then there will be an indication as to how far participation depends on the way farmers are approached. Anyhow, the participation is already sufficient enough to present some interesting features.

In the first place it is striking that participation is higher on grassland than on arable land. Probably, stopping the use of fertiliser and herbicides has more severe consequences on arable crops than on grassland yield. A second feature is that the majority of the participants chooses the traditional standard payment. Notwithstanding the attractiveness of pure nature payment they prefer the certainty of payment. However, the intitial choice might be a strategic one: first financial certainty via standard payment and later higher income via pure nature payment. So, in the next years the pattern may change; farmers are free to change from year to year.

A remarkable phenomenon linked to the nature result payment was the growing interest of the farmers in nature itself. We organised some field excursions to teach the farmers how to recognise the species for which payment was to be made. The floristic richness of the margins was enteriley new for them and learning the species promoted their interest and involvement. It might be that coupling the paying to the presence of species delivers an extra stimulus for performing nature-oriented management. However, substantial conclusions on this can only be drawn after a number of years.

Significance for policy

So far the experiment appears to be a stimulus for margin management. Its popularity is rising both among farmers and policy-makers. For this reason the Dutch minister of nature conservation (the Secretary of State, to be precise) asked for special attention to be given to field margin management. Therefore, in Spring 1994 it will be examined which elements of the experiment can be put into real, operational practice. Possibly, the selective use of nature-conservation hectares for margin management is the first to be introduced. Concerning the incentive concept it will be too early to decide on introducing nature result payment; some extra years experience will be necessary. The same holds for the more extensive method of promoting agreements. There is a continuous drive to optimize the cost-effectiveness relation of the personnel manpower. Besides the margin experiment there are some other activities on this item. The whole of these will contribute to the future system of acquisition.

GERMANY

Because Germany consists of sixteen Länder which all organise their own programme of nature conservation, it is not too easy to gather information on this subject together. Notwithstanding the quality journals about nature conservation, publications on national scale do not always cover all the Länder; programme parts dealing with field margins are not always treated into the same level of detail; schemes are continuously developed, so information quickly becomes out-of-date; an finally, not all programmes are completely embedded in EC-policy and not easy to trace. So, it is not the ambition of this paper to present a complete overview. (For a more general paper about the German programmes see Baldock (1993)).

Table 5. Some features of the field margin programmes in the Bundesländer of Germany (based on Anonymous (1991)).

land use	Grass-land margins	Arable land margins					
scheme-info ▸ ▾ Länder	pro-gramme	pro-gramme	width	scope of prescriptions	payment (DM per ha per year)	area under agreement (ha)	start date
Baden-Württemberg[1]	No	Yes	≥5m? 3-6m?	crop-margin: crop(density) herbicides fertiliser bound. strip: peren. char. mowing freq.	up to 1400	0,7	1987
Bayern	Yes	Yes	3-5m	herbicides fertiliser	1000	2829	1985
Berlin	No	Yes	3-5m	herbicides fertiliser	700-1150	13	1987
Bremen	No	Yes	3-6m	herbicides fertiliser mech. weeders	700-1500	1,7	1987
Hamburg	No	No?	? only parts	herbicides fertiliser	450-1400	50	1987
Hessen	No	Yes	3-5m	herbicides fertiliser	900-1300	295	1986
Niedersachsen[1]	No[2]	Yes	3-10m	crops herbicides fertiliser mech. weeders	1000-1500	174	1987
Nordrhein-Westfalen[1]	No	Yes	2-10m	herbicides fertiliser	750-1200	ca 850	1985
Rheinland-Pfalz	No	Yes	2-5m	herbicides fertiliser	1250	76	1986
Saarland	No	Yes	?	crops herbicides fertiliser	1100	4,6	1987
Schleswig-Holstein	Yes	Yes	3-6m 5-24 (fallow)	herbicides fertiliser mech. weeders 1-2 yr fallow no sowing	300-800 700+10 for each soil qual. point	1,6	1986

[1] more recent information used (1992/1993) for some of the items

[2] There are also policies for margins along water courses, but here, ecological conservation is on an obligatory basis and therefore falls outside the scope of this paper.

In Germany the attention given to field margin management dates from the late seventies. It was especially the research of Schumacher which drew attention to the ecological potency of the margins of arable land. Gradually in most Bundesländer a field margin programme has been implemented as a part of the nature conservation activities (table 5). About the field margin programmes the following remarks can be made.

- The basis of the margin programmes is, just as in the Netherlands, the ecological effectiveness and the modest demands margin management makes upon agriculture.
- For the most part the programmes are focused on arable land. Only two Länder show also (implicit) interest for grassland margins.
- Concerning arable land there are also some differences with the programme of the Netherlands. Besides the crop margin in some Länder also a boundary strip is targeted. This strip is intended to provide both an element with an ecological value on its own and an element of connectivity within the agricultural landscape.
  This boundary strip, which is thought to have a perennial character, does not always exist already but might need to be created. For this purpose special seed mixtures are developed, containing the ecologically appropriate species, originating from the local neighbourhood.
- The incentive concept is the 'traditional' one: a management agreement is based on prescriptions about the use of the margin and the participants get a fixed amount of money per unit area per year, irrespective of the concrete nature results.
- In most Länder farmers can enter into an agreement if their fields are entered into the programme. In some cases, however, an additional ecological check is performed; for example margins need to have a minimum number of (a selection of) species. Also the connectivity properties (especially concerning the boundary strip) can be taken into account before a margin can be entered into an agreement.
- Many leaflets, brochures etc. have been made to promote margin management. At least this is the case for Baden-Württemberg, Nordrhein-Westfalen and Niedersachsen.
- The impression is that during the execution of the programmes improvements have been made, aimed at the (1) enhancing participation; (2) possibility to inspect the agreements; (3) ecological effectiveness.
- Some aspects of the programmes have been criticized by a national working group (Anonymous, 1991). Some of the points probably also apply to margin management. These are: (1) programmes are designed for short term; (2) shortage of (quality) personnel; (3) insufficient inspection of the agreements; (4) programmes too much directed at margins only (there is more to do for nature conservation). (For a review per state see also Hepburn & Weins (1993)).

CONCLUDING REMARKS

Both in the Netherlands and in Germany management of field margins is given close attention in programmes for nature conservation. Important aspects of margin management are the ecological effectiveness and the possibity to fit with current agricultural practice. In Germany the field margin programmes concern mainly arable land, whereas in the Netherlands so far attention has been directed to grassland margins.

In both countries there are several activities taking place to enhance the attractiveness for farmers. The changes deal with the management prescriptions, the width of the margins and the payment-level.

In the Netherlands an experiment has recently begun in which amongst others a new paying-concept has been introduced: nature result payment. In this concept payment is based on the actual nature results. The farmer is free to choose how to manage the margins. This might be more challenging for farmers than the 'traditional' condition payment.

A problem, especially in the Netherlands, is the fear of farmers for designation of their fields as a result of their nature aimed management. This appears to be a serious barrier to farmers concluding a management agreement, irrespective of the basis of payment.

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