

Biodiversity measures in agri-environment payment schemes in selected EU countries

English summary of the TEHO project report
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1. Introduction

This is an English summary of a study that was conducted in order to compare the biodiversity measures in agri-environment payment systems of six EU countries with each other and with the Finnish system. The countries included in the study are Austria, Czech Republic, France, Germany (Schleswig Holstein), Sweden and United Kingdom (England and Scotland). The Finnish system is used as a reference. The countries included in the study have plenty of biodiversity measures, high support levels for biodiversity measures and/or the maintenance and protection of biodiversity is an important priority in the objectives of their agri-environmental programme.

The original and complete version of the study is available in Finnish:

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2. Biodiversity measures

The studied countries have a very different number of biodiversity measures. The largest quantity of biodiversity measures is found in United Kingdom where a farm may select from a long list of optional measures. United Kingdom and Schleswig Holstein in Germany have the biggest share of biodiversity measures of all measures (Table 1). The smallest shares of biodiversity measures are found in Austria and Finland. However, we must remember that the countries were selected to this study because they had a large quantity of biodiversity measures. Thus the results do not describe the mean level of EU countries, but rather the level in those countries with a special emphasis on biodiversity in their agri-environment payment schemes. Moreover, the structure of agri-environmental programmes is different in each country. The mere number of measures or share of total quantity is not enough to describe the importance of biodiversity in each programme. In addition to that, at least the content of measures and support levels should be considered.

A separate Natura 2000 support is in use in Austria, Germany and the Czech Republic. In other countries the measures targeting Natura areas are part of the agri-environment payment schemes.

A diverse set of biodiversity measures is in use in the studied countries. The following sections compare the support levels of similar measures in different countries.

Table 1. The share of biodiversity measures as a percentage of all measures in the agri-environment payment.

Country	Share of biodiversity measures %
Austria	32
Czech Republic	65
Finland	
Basic measures	33
Additional measures	10
Special measures	38
France	56
Germany	
Schleswig-Holstein	80
Sweden	50
United Kingdom	
England, Entry Level and High Level Stewardship	77-78
Scotland, Land Managers Options and Rural Priorities	87

2.1. Measures supporting management of semi-natural grasslands

Semi-natural grasslands are very different in different countries due to different natural conditions and differences in the history of agricultural practices. Thus the management required in each country may vary considerably, and it is not possible to directly compare the management of these areas in different countries. Sweden is the only country comparable with Finland since the semi-natural grasslands are rather similar in both countries. However, also in Sweden there are some types of semi-natural grasslands, which do not exist in Finland.

The support levels for management of semi-natural grasslands vary considerably both within and across countries (Table 2). The smallest support levels are found in Scotland for management of moorland grazing, and the largest support levels in Sweden for hand mowing. It is difficult to compare the Finnish support levels with those of other countries since in Finland the support level is based on a case specific cost estimate, which is made separately for each area. However, it can be concluded that the support levels for valuable meadows in Sweden, and hand mowing in Sweden and Austria are higher than the Finnish maximum support level.

Table 2. Support levels for semi-natural grasslands in the studied countries. The table does not contain all measures related to management of semi-natural grassland, but selected examples, which best illustrate the situation in each country or region.

Country	Supported measure	Annual support level
Austria	Mowing of alpine meadows by tractor	350 €/ha
	by mower	430 €/ha
	by hand	700 €/ha
	Grazing of alpine grasslands	
	Milking cows	150-195 €/ha
	Horses	70-90 €/ha
	Other animals	50-65 €/ha
Shepherd supplement	25-34 €/animal unit	
Czech Republic	Non-fertilized wet meadows	116-135 €/ha
	Non-fertilized mountain meadows	130-150 €/ha
	Species rich pastures	169 €/ha
Finland	Management of traditional biotopes by mowing or grazing, support level is defined according to cost estimate for each area.	Max. 450 €/ha
France ²	Management of woodland pasture	Max. 80 €/ha
	Management of valuable meadows	116 €/ha
	Restoration of an overgrown area	219 €/ha
	Controlled burning	Max. 92 €/ha
Germany Schleswig-Holstein	Support for small islands on North Sea	
	Basic support	120 €/ha
	Mowing supplement	130 €/ha
Sweden	Natural pastures	134 €/ha
	Valuable natural pastures	285-413 €/ha
	Woodland pasture	286 €/ha
	Limestone pastures	150 €/ha
	Management of meadows	156 €/ha
	Management of valuable meadows	451-580 €/ha
	Pollarding for leaf fodder supplement	11 €/tree
	Grazing after mowing supplement	74 €/ha
	Hand mowing supplement	752 €/ha
United Kingdom England	Maintenance of wood pasture	212 €/ha
	Enclosed rough grazing (Uplands)	41 €/ha ¹
	Unenclosed moorland rough grazing	6 €/ha ¹
	Haymaking	71 €/ha ¹
	Maintenance of species-rich semi-natural grassland	236 €/ha
	Management of rush pastures	177 €/ha ¹
	Scotland	Management of wood pasture
Management of moorland grazing		1.90 €/ha
Management of coastal/serpentine heath		112 €/ha 0-30 ha, 64 €/ha 31-70 ha, 1.90 €/ha 71-ha
Management of lowland heath		179 €/ha

1= Support levels have been calculated according to the points given to each optional measure. The total support level for the Entry Level Stewardship is always the same and does not depend on which optional measures are selected.

2= These measures are part of the locally defined measures which may be combined in the same area according to given rules.

2.2. Biodiversity measures on fields

The most common type of biodiversity measure on fields is the establishment of conservation headlands or biodiversity strips and patches with the objective of providing cover and fodder for birds or enhancing plant diversity. In Austria biodiversity strips and patches are part of the basic measure and the support level is relatively low (Table 3). The highest support levels for this measure type are found in United Kingdom and in Germany (Table 3). The maximum support in Finland is of intermediate level, but there is no information available on the realized payment levels.

Table 3. Support levels for conservation headlands, biodiversity strips and biodiversity fields in the compared countries.

Country	Supported measure	Annual support level
Austria	Biodiversity strips and patches 2-5 % of the field area, part of the basic measure (the same support level as for fields)	85 €/ha
Czech Republic	Biodiversity strips on fields	401 €/ha
Finland	Biodiversity fields Biodiversity fields and strips (Special support)	300 €/ha Max. 450 €/ha
France	Nectar flowers, wildlife plants, unharvested headlands	Max. 450 €/ha
Germany Schleswig-Holstein	Biodiversity strips and patches (annual) Biodiversity strips and patches (food for wildlife over winter)	740 €/ha 600-650 €/ha
Sweden	Preserving endangered weeds Unharvested grain crop	430 €/ha 419 €/ha
United Kingdom England	Wild bird seed mixture or nectar flower mixture Unharvested headlands	531-561 €/ha 389-519 €/ha
Scotland	Management of grass margins and beetle banks in arable fields Wild bird seed mix/unharvested crop	692 €/ha 571 €/ha

The studied countries also use many measures that limit pesticide use with the objective of both enhancing biodiversity and limiting pollution. Low input or integrated farming is an example of a holistic approach, but there are also measures for individual fields or headlands. Table 4 shows examples of measures that limit pesticide use.

Table 4. Support levels for measures limiting pesticide use in the studied countries.

Country	Supported measure	Annual support level
Austria	Low input field cultivation	115 €/ha
	Field free of fungicides	25 €/ha
Czech Republic	Integrated vegetable farming	440 €/ha
France ²	No herbicides	113-141 €/ha
	No chemical pesticides	
	Grains	196 €/ha
	Legumes	298 €/ha
Sweden	Uncertified organic farming	
	Grains	70 €/ha
	Oil plants	118 €/ha
	Potato, sugar beet, vegetables	269 €/ha
	Animal husbandry	86 €/ha
	Natural pasture	43 €/ha
United Kingdom		
England	Reduced herbicide use and overwintered stubble	230 €/ha ¹
Scotland	Headlands with no pesticides	102 €/ha
	Headlands with no pesticides, and no N fertilizer	197 €/ha
	Supplement for overwintered stubble	31 €/ha

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2= These measures are part of the locally defined measures which may be combined in the same area according to given rules.

2.3. Maintenance of landscape elements

The measures supporting maintenance of landscape elements and small biotopes are targeted to small areas that are important for biodiversity and sometimes also for cultural history. Measures belonging to this category were found in five countries included in this study. The support levels and the payment criteria vary considerably (Table 5). In Austria and France, the maintenance of landscape elements forms a part of broader measures. In France, the locally defined measures also include maintenance and management of landscape elements. Also in Finland the maintenance of these elements is part of the basic measure, but it is also possible to apply for special support for especially valuable areas. United Kingdom and Sweden have defined specific support for various landscape element types.

Table 5. Support levels for measures related to maintenance of landscape elements and small biotopes in the studied countries.

Country	Supported measure	Annual support level
Austria	Maintenance of landscape elements is a part of the requirements of several measures. There is no separate support for this purpose.	
Finland	The mapping and maintenance of biodiversity objects is part of the basic measure Management of small scale traditional biotopes (Special support) Field islands, forest edges, tree rows (Special support)	100 €/biotope Max. 450 €/ha
France	In the grassland support measure 20 % of the area should include elements important for biodiversity, these elements must be maintained Maintenance of hedgerows, ditches or channels ² Maintenance of trees or groups of trees ² Protection of breeding sites of birds or butterflies ²	76 €/ha, the measure includes also other requirements 0.86-2.84 €/ha Max. 17 €/tree Max. 40.57/ha
Sweden	Basic support for landscape elements Linear elements (in addition to the basic support Concentrated elements (in addition to the basic support) Supplement for valuable elements Maintenance of reindeer fences Maintenance of reindeer summer grazing lands and shelters Travel costs in reindeer herding area	11 €/element type 0.7-7 €/10 m 7-20 €/element 1-31 €/m, 13-39 €/element 2 €/m 677 €/ha 69-137 €/element
United Kingdom England	Maintenance of hedgerows, ditches, stone walls, etc. Hedgerow tree of woodland edge buffer strips Protection of infield trees	8-66 €/100 m ¹ 448-472 €/ha ¹ 13-19 €/tree ¹
Scotland	Maintenance of hedgerows and stone walls Renewal of hedgerows	0.15/m or m ² of stone wall 1.36 €/m

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2= These measures are part of the locally defined measures which may be combined in the same area according to given rules.

2.4. Biodiversity measures on grasslands

All countries included in this study except Finland have included biodiversity measures on grasslands in their agri-environment support schemes. In Finland, the measure extensive ley management is not included here since it is mainly considered a water protection measure. In Sweden and France, for example, similar measures include specific requirements for preserving biodiversity. Biodiversity measures on grasslands include a very diverse set of measures, for example management considering birds and other wildlife or creation of species rich grasslands (Table 6). Typical requirements are connected to the timing of grazing or mowing to protect birds' nests or blooming flowers. The highest support levels are found in the Rural Priorities scheme in Scotland for management of grassland for a certain bird species. The lowest support levels are found in Sweden for the basic support in extensive ley management, and in Germany for the management of permanent grasslands.

Table 6. Support levels for biodiversity measures on grasslands in the studied countries.

Country	Supported measure	Annual support level
Austria	Silage free animal production	130-170 €/ha
	Mowing of steep grasslands	
	Slope 25-35 %	105 €/ha
	Slope 35-50 %	230 €/ha
Czech Republic	Slope 50 %	370 €/ha
	Meadows	74 €/ha
	Protection of bird nesting sites on meadows	183-202 €/ha
France	Pastures	112 €/ha
	Environmental support for grassland	76 €/ha
	Late grazing allowing reproduction of birds/plants ²	Max. 94 €/ha
Germany Schleswig-Holstein	Late mowing allowing reproduction of birds/plants ²	Max. 179 €/ha
	Support for permanent grasslands	35 €/ha
	Support for permanent pastures	60-80 €/ha
Sweden	Feeding areas for geese and swans	85-125 €/ha
	Extensive ley management	
	Basic support	32 €/ha
United Kingdom England	Supplementary support	27-193 €/ha
	Permanent grassland with low inputs	100-177 €/ha ¹
	Field corners out of management	472 €/ha ¹
	No cutting strips within meadows	295 €/ha ¹
	Management of upland grassland for birds	94 €/ha ¹
Scotland	Management of grassland for wildlife	162-255 €/ha
	Management of grassland for a bird species	396-1168 €/ha
	Creation and/or management of species rich grassland	162-326 €/ha

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2= These measures are part of the locally defined measures which may be combined in the same area according to given rules.

2.5. Organic farming support

All countries included in this study support organic farming through their agri-environment payment schemes. Table 7 shows the support levels for organic farming in each country. In three countries a specific organic conversion support is available. If the conversion support is not taken into account, the lowest support levels are found in United Kingdom and the highest levels in Austria. In Finland, the support level for field crops is of average level and the support level for animal production is relatively high.

Table 7. Support levels for organic farming in the studied countries.

Country	Annual support level/ha	Organic conversion support/ha/year	Conversion support may be paid for
Austria	Grains 285 € Vegetables 450-600 € Fodder crops on fields 110-285 € Grassland 110-240 €		
Czech Republic	Field crops 155 € Grassland 71-89 € Vegetables and herbs 564 €		
Finland	Field crops 141 € Animal husbandry in addition 126 €		
France	Annual crops 100 € Legumes, spices and medicinal plants 150 € Grassland 80 €	Annual crops 200 € Legumes, spices and medicinal plants 350 € Grassland 100 €	5 years
Germany Schleswig-Holstein	Field crops and ley 137 € Vegetables 271 €	Field crops and ley 262 € Vegetables 693 €	2 years
Sweden	Grains 144 € Oil plants 244 € Potato, sugar beet, vegetables 556 € Animal husbandry 178 € Natural pasture 89 €		
United Kingdom England	71-92 €	207 €	2 years in addition to the basic organic support
Scotland	Field crops 88 € Improved grassland 73 € Vegetables 88 € Natural pasture 7 €	Field crops 321€ Improved grassland 153 € Vegetables 438 € Natural pasture 7 €	2 years

3. Conclusions

The countries included in this study implement an abundant and diverse assortment of biodiversity measures as a part of their agri-environment payment schemes. Some measures are applied on large areas like the requirements of the basic support, and other measures are targeted to small, but valuable areas for biodiversity. Also support levels vary considerably. The lowest support level is under 2 €/ha in Scotland for management of moorland grazing and the highest support level is 1168 €/ha in Scotland for management of grassland for corncrakes. The big differences in these support levels may be explained by their different management requirements, and the size of the target area.

The Finnish agri-environment programme gives a high priority to water protection measures, and thus the share of biodiversity measures of all measures is low when compared to other countries included in the study. However, also many water protection measures, like plan cover winter, have positive biodiversity effects.

Finland requires a case specific cost estimate to be annexed to the application for the special support. In other countries included in the study this document is not required, but the support levels are either the same for all applicants or the authorities define the support levels in each case. For example in Austria, the case specific support level for the nature conservation measure is defined picking the required management activities and their support levels from a pre-defined list. In France, the locally defined measures have a national maximum support level and a formula for the calculation of support levels in each area. Individualized management plans are made in the Scottish Rural Priorities Programme, for example.

In spite of the great difference in the conditions in different countries, it is possible to find ideas from the measures implemented in other countries for the further development of the agri-environment payment schemes.

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