



This article is provided by the author(s) and Teagasc T-Stór in accordance with publisher policies.

Please cite the published version.

The correct citation is available in the T-Stór record for this article.

NOTICE: This is the author's version of a work that was accepted for publication in Journal of Farm Management. Changes resulting from the publishing process, such as peer review, editing, corrections, structural formatting, and other quality control mechanisms may not be reflected in this document. Changes may have been made to this work since it was submitted for publication. A definitive version was subsequently published in Journal of Farm Management, 2008, 13(5), 1-15, which may be accessed online at www.ingentaconnect.com.

This item is made available to you under the Creative Commons Attribution-Non commercial-No Derivatives 3.0 License.



**What are the financial returns to agriculture from a common property resource? A
case study of Irish commonage.¹**

Cathal Buckley*

Rural Economy Research Centre, Teagasc, Athenry, Co. Galway.

and

Department of Economics, National University of Ireland, Galway

Tel: +353(0) 91 845293, Fax: +353(0) 91 845296, email: cathal.buckley@teagasc.ie

Tom M van Rensburg

Department of Economics, National University of Ireland, Galway.

Tel: +353(0) 91 493858, Fax: +353 (0) 91 524130, email: thomas.vanrensburg@nuigalway.ie

Stephen Hynes

Rural Economy Research Centre, Teagasc, Athenry, Co. Galway.

Tel: +353(0) 91 845269, Fax: +353(0) 91 845296, email: stephen.hynes@teagasc.ie

*Corresponding author.

¹ This paper was written as part of a Rural Stimulus funded project, financed by The Department of Agriculture, Fisheries and Food

Abstract

Commonage in the Republic of Ireland has traditionally been used for agricultural activity, mainly livestock grazing. In recent times due to its prevailing common property characteristics and upland landscape, this resource is increasingly attracting the interest of recreational enthusiasts. However, the potential opportunity costs associated with recreation – namely the commercial value of sheep and cattle grazing on commonage remains to be investigated. This paper aims to fill this gap in the literature by analysing the agricultural returns from livestock rearing enterprises on commonage land for a sample of farmers in the west of Ireland. Results indicate that stocking rates are three times higher on privately owned land compared to shared commonage. Over 80 per cent of the farms in the sample had a gross margin under €20,000. In total, 96 per cent of gross margin was found to be attributable to Common Agricultural Policy (CAP) payments; with area based payments twice as important as direct livestock subsidies.

Keywords: Commonage, common property, returns to agriculture, recreation.

1. Introduction

There has been little, if any, research to-date exploring the agricultural returns to commonage land even though it accounts for approximately 8 per cent of total land area in the Republic of Ireland (Bleasdale, 2006) and involves 8.5 per cent of all farms (Central Statistics Office, 2000). Results from the Teagasc² National Farm Survey³ (NFS) indicate that returns to livestock farming are heavily dependant on CAP payments, particularly in marginal areas (Connolly et al., 2004). If these payments were removed then livestock rearing activity in commonage areas may be uneconomic for the majority of farms.

Commonage refers to land on which two or more farmers have grazing rights (Lafferty et al., 1999). Under common law in the Republic of Ireland, land held in commonage is seen as a tenancy in common. Each tenant holds an undivided share in the property and has a distinct and separate interest in the property. The ownership is divided into notional shares, rather like shares in a company. Commonage is not physically divided so no one person owns any particular part of the property. In a sense it is communally owned and operated and third parties must treat the co-owners as a single unit for transactions in respect of the land (Pearce and Mee, 2000).

This paper has four aims; firstly to explore the importance and commercial values associated with traditional agricultural use of commonage, secondly to

² Teagasc – the Agriculture and Food Development Authority – is a national semi state body providing integrated research, advisory and training services to the agriculture and food industry and rural communities.

³ National Farm Survey (NFS) is collected as part of the Farm Accountancy Data Network of the European Union (FADN).

evaluate the importance of CAP related payments to profitability of livestock grazing enterprises on commonage, thirdly to compare returns to commonage with that from privately owned land and fourthly to highlight policy concerns associated with the resource. This study is based on a sample of 278 commonage farmers in the west of Ireland. The remainder of the paper is organised as follows: firstly some context and background information is provided on commonage. Following this the policies that govern the use of farm commonage in the Republic of Ireland are reviewed. Next a description of the research methods is provided. Then, the empirical strategy used to examine returns to commonage is presented and results are discussed. Finally, some discussion and concluding remarks are offered.

2. Background

A considerable international literature (Bromley, 1992; Ostrom, 1990, 2000; Stevenson, 1991) exists on the use of common property resources. Yet research to-date in Ireland on this topic has been limited. Access to commonage grazing is technically restricted to shareholders. Although shareholders have distinct undivided shares they cannot exclude other co-shareholders, so shareholders can rival each other for the grazing resource. Commonage in the Republic of Ireland is characterised by the distinct lack of shareholder organisation and no widespread local rules exist for managing the resource. In many instances, due to the un-segregated nature of commonage it is not possible to exclude non-shareholders. Hence, individual decisions to control stock numbers do not give a farmer exclusive rights over the benefits of his/her actions and consequently

many commonages suffer from overgrazing (Bleasdale 1995; Bleasdale and Sheehy-Skeffington 1995, Emerson and Gillmor 1999).

Commonage in the Republic of Ireland is a remnant of a system of communal tenure which is thought to have originated under the Brehon laws but which became known during the early 19th century as the Rundale system (Andrews 1987; Kelly 1997). Under the Rundale system land around the houses was used primarily for growing crops while the common higher ground (or outfield) was used for livestock grazing (O'Loughlin, 1987; Whelan, 1997). Commonage grazing rights prevailed mostly on upland tracts of land as this was considered agriculturally uneconomic and unproductive and therefore unsuitable for division during land reforms (Inter-departmental Committee on Land Structure Reform, 1978; O'Loughlin, 1987).

According to Bleasdale (2006) the total commonage area in the Republic of Ireland stands at 441,125 hectares. The Census of Agriculture in 2000 indicated that there were 11,837 farms (8 per cent nationally) using commonage for agricultural activity (Central Statistics Office, 2000). The majority of commonage (approximately 80% plus) is mountain or hill commonage and is traditionally associated with extensive livestock grazing.

The majority of the commonage resource in the Republic of Ireland is concentrated along the western seaboard. In total, 4 western counties Mayo, Galway, Donegal and Kerry account for over 70 per cent of the commonage in the Republic of Ireland (Bleasdale, 2006). An assessment of the importance of

commonage across the Republic of Ireland was undertaken by Lafferty et al. (1999) using data from the Census of Agriculture 1991. This analysis suggests the majority of farmers have commonage grazing rights of less than 30 hectares. However, there is a cohort of approximately 200 farmers, with entitlements to about one-third of total commonage area.

All land in the Republic of Ireland is owned either by private individuals or state bodies and recreational users do not have a de-facto legal right of entry (Mountaineering Council of Ireland, 2003). A right to roam (Scotland), everyman's right of access (Scotland, Sweden, Norway, Denmark, Germany) or access land (England and Wales) prevalent across other European countries does not prevail.

Theoretically, high-value land is more likely to be in private ownership and protected against trespass (Bromley, 1991). Lands with high economic value for production, privacy, or game hunting are usually guarded through fencing, posting⁴, and threats of prosecution. By contrast, where land is plentiful and cheap (or marginal), owners spend less time and money fencing or policing their lands. This has strong resonance for commonage. The Republic of Ireland is covered with informal walks many of which cross commonage land. Farmers in the past have put forward the argument of interference with agricultural activity as an argument for prohibiting recreational access to farmland. If returns to agriculture from commonage are found to be low, then there is not a great

⁴ "Posting" is term used in the USA. It refers to legally serving notice on members of the public that trespassing in general, or certain activities, will not be permitted on the land. The most common means of posting is to place signs around the perimeter of the property.

opportunity cost (in any event) to opening up commonage for recreation. There is little to suggest that the two activities cannot operate in tandem in any event.

However, it must be acknowledged that there are other potential costs to landowners from recreation whether the activity takes place on land with high or marginal economic potential. Landowners are concerned that greater public access for recreation will lead to adverse outcomes such as greater costs arising from higher insurance premiums, threats to livelihoods via being sued by the public, threats to crops / livestock and increased workloads that lead to no meaningful return (Mulder et al., 2006; O'Reilly, 2006; Millward. 1996).

Under the recent Fischler CAP reforms each Member States is to divert a part of its direct payment endowments towards rural development policies – so called modulation. EU agricultural policy has shifted from subsidised commodity production towards supporting the multifunctional role of agriculture. This specifically includes the production of environmental goods and the delivery of public goods generally (Ahner, 2003; Kearney, 2000).

There is evidence that the demand for recreation on commonage in Ireland may be significant. Results from Buckley et al. (2007) reveal a median willingness to pay for formal access with improved trail infrastructure to upland and lowland commonage walks of between €5.96 and €9.13. A travel cost study by Hynes et al. (2007) relating to recreational pursuits on a lowland seashore farm commonage site in the west of Ireland found that the mean willingness to pay

(i.e., the consumer surplus + travel cost) of the average recreationalist using the commonage area in Connemara was €41.92 per trip.

3. Policy provision for commonage in the Republic of Ireland

Under the Less Favoured Areas (LFA) scheme (introduced in 1975), headage payments were brought in on mountain / hill farming land and farming in certain less-favoured areas (Hickie, 1999). Seventy-two per cent of the Republic of Ireland was classified as a Less Favoured Area. In these areas, farmers were eligible to receive headage (per head) payments for cattle, sheep, goats, horses and donkeys. The aim of the scheme was to compensate farmers in order to provide a reasonable level of income in areas with natural disadvantages. In practice, this incentive system increased production on more marginal farming land types such as lowland and upland commonage. Further livestock premia schemes in the form of the ewe and suckler cow premiums were introduced in 1980 (Heritage Council, 1999).

Under the 1992 (McSharry) and 2000 (Agenda 2000) CAP reforms, market supports were significantly reduced and additional direct livestock based payments were introduced to off-set a fall in product prices. In operational terms post Agenda 2000 direct livestock payments included 10 measures overall, six of which were premia measures (suckler cow, special beef for male cattle, ewe, extensification, a slaughter premium and area aid for cereals) supported by the guarantee section of the EAGGF⁵ and four for headage payments (suckler cows,

⁵ EAGGF (European Agricultural Guidance and Guarantee Fund) is the mechanism through which the Common Agricultural Policy (CAP) is financed. It is divided into two sections: Guarantee section - expenditure on price support, domestic market intervention and refunds and rural development. Guidance section - support for structural improvements, modernisation of farms, eradication of animal diseases etc.

male cattle, sheep / goats and mares) paid to farmers in disadvantaged areas and partially funded by structural funds⁶ (Department of Agriculture, Food and Rural Development 2000) (See Appendix 1 for appropriate rates).

The Rural Environment Protection Scheme⁷ (REPS) was launched in 1994. Due to the financial incentives provided by REPS it was thought the scheme would be highly attractive to farmers in marginal areas and would go some way towards addressing overgrazing on commonage. Overgrazing in the upland regions in the west of Ireland became an issue in the early 1990s, mainly as a consequence of direct livestock payments under the CAP. The common pool nature of commonage and the lack of institutional controls made it very vulnerable to such over-exploitation.

Subsequently, targeted EU legislation was introduced which required all commonage farms, irrespective of whether they were in REPS or not, to farm according to a Commonage Framework Plan⁸ (CFP), (Department of Agriculture, Food and Rural Development 2000). The EU stipulated that commonage regeneration was to be achieved by the drawing up of a Framework Plan for every commonage. Since the task of preparing a CFP for every site in the Republic of Ireland would take some time (it was only finished in 2005) a blanket 30 per cent de-stocking on all commonages was introduced until an

⁶ Collective name for the four funds: the European Regional Development Fund, the European Social Fund, the Guidance section of the European Agricultural Guidance and Guarantee Fund and the Financial Instrument for Fisheries Guidance.

⁷ The Rural Environment Protection Scheme (REPS) was introduced in the Republic of Ireland under EU Council Regulation 2078/92 in order to encourage farmers to carry out their activities in a more extensive and environmentally friendly manner.

⁸ The objective of the commonage framework planning process is to set sustainable stocking levels which will ensure the protection and rejuvenation of commonage areas that are at risk because of overgrazing.

individual CFP for every commonage had been prepared. Commonage farmers in REPS now had to comply with the over-arching compulsory CFP's.

The Commonage Framework Plans were used to produce individual farm plans. An overall de-stocking percentage for site specific commonage is specified if the commonage is overgrazed by domestic animals (Bleasdale, 2000). Each shareholder in a commonage is obliged to abide by a REPS plan or a farm plan drawn up by Dúchas⁹ (if not in REPS) as a condition of eligibility for CAP related payments. Alternatively the shareholder can withdraw from using commonage entirely (Department of the Environment and Local Government, 2002). The Dúchas Scheme paid compensation on the basis of proven loss of income, while REPS payments were fixed and are area based (see Appendix 1 for details).

Under the so called Fischler CAP reform (2002-03) the Republic of Ireland has opted for full decoupling. This means that a single farm payment has replaced direct livestock payments since 2005¹⁰. REPS, the disadvantaged area compensatory allowance scheme (DACAS)¹¹, the Duchas Scheme and livestock premia (base year was 2003 and not de-coupled at this time) are the significant direct payments applicable to commonage farmers in the sample. These schemes and their associated payment rates are outlined in Appendix 1.

⁹ The then Irish Heritage Agency.

¹⁰ The single farm payment is based on the number of premium claims made in the historical 3 year reference period from 2000-2002.

¹¹ DACAS - Disadvantaged Area Compensatory Allowance Scheme introduced in 2001 to replace Headage Scheme and paid on a land area basis in disadvantaged areas only.

4. Methods

The case study area used in this paper was the Connemara region in Co. Galway Ireland. This is a remote district in the west of Ireland. In the spring and summer of 2004, questionnaires were undertaken on a face to face basis with the owner-operators at their residence by trained recorders. Questionnaire delivery took approximately 45 minutes and followed a standard format. The questionnaire was piloted for one month during February 2004 and this aided in the design of the survey. Given the large geographic dispersion associated with commonage farmers, area cluster sampling was used to draw a sample from the population based on secured listings¹². Townlands or villages with more than 3 commonage farmers were targeted. Geographically, all areas of Connemara were covered. In total 278 usable questionnaires were collected. Each survey provided detailed data on revenue and cost summaries, farm premia, labour and costs of farm operations (particularly in relation to grazing and livestock activities). Information was also collected on whether each farm included dairying, sheep, beef or suckler cow production. Additional information on the movement of livestock was also obtained. The base year for data collected was 2003.

The following conventions were used in data gathering and in performing the analysis; all inputs even though subsidised were valued at their market price, production was valued at farm gate prices and all prices were expressed in euros. Gross margin analysis was used to determine economic returns to commonage

¹² A listing of commonage farmers was secured from Teagasc (semi-state) advisors and from other researchers working with farmers who claimed under the Duchas scheme.

and to private land from agricultural activity. There is a debate in the literature as regards to the most appropriate costs to include when analyzing production decisions in the short run (Jones, 2007), as some costs traditionally thought of as fixed costs are relevant and link to production. However, in this research gross output and variables cost categories adopted were in line with that used in the Teagasc National Farm Survey so that direct comparisons could be drawn for farms of a similar soil type and topography. This was done for validity purposes¹³. During the pilot phase we attempted to collect fixed costs so that net margins could be derived. However, due to the nature and type of farming in commonage areas, the quality of information provided by respondents on these costs was sparse so the focus was placed instead on deriving gross margins. Stocking rates¹⁴ were the main methodology for apportioning outputs and variable costs between commonage and private land, except where payments such as REPS and DACAS allowances applied specifically to commonage land.

5. Results

The average total commonage size was 516.6 hectares and the average commonage shareholding per farm within this was 56.9 hectares as seen in Table 1. There was very little inward or outward leasing of commonage. The average amount of private land owned was 22.8 hectares. Commonage farms tend not to be homogenous as seen by the significant standard deviations across Table 1. Farm size in the sample varies from 4 hectares to over 800 hectares. Sheep was

¹³ Results were compared with the NFS for mainly hill sheep and cattle rearing farms on marginal soils.

¹⁴ Livestock unit equivalents as used in the Teagasc National Farm Survey and grazing time on commonage and private land was used to establish relevant stocking rates.

the main farm enterprise across the sample averaging 12.7 livestock units¹⁵ per farm followed by cattle at 7.0 livestock units. Only two farms had a dairy enterprise but dairy cows were never grazed on commonage. Other livestock units consisted mainly of horses, but other enterprises were not prevalent across the sample and horses were not grazed on commonage.

< Table 1: Average land resource and livestock units per farm >

Within the sample, 12% of respondents did not graze livestock on commonage during the base year. About 30% of the sample were exclusively sheep farming, 25% were exclusively cattle farming while 45% had both cattle and sheep enterprises. Sheep was the dominant farm enterprise across 63% of the sample. The weighted average farm stocking rate across the sample was 0.26 livestock units per hectare (LU/Ha) as indicated in Table 1. Stocking rates were much higher on private land at 0.48 LU/Ha compared to 0.16 LU/Ha on commonage. Commonage framework regulations obviously influenced stocking rates as 44% of the sample reported having to reduce stocking rates on commonage for reasons of compliance. In total 76.6% of the sample had a higher stocking rate on their private land.

Mean total gross output across all sampled farms was €18,690 as shown in Table 2. Direct Payments were responsible for 74% of gross output across the sample (Livestock premia, REPS, DACAS and Duchas scheme). This is slightly higher than comparable farms in the NFS which averaged 65% (Connolly et al., 2004). However, it should be noted that commonage does attract higher payment under

¹⁵. A dairy cow is taken as the basic grazing livestock unit of 1. All other grazing stock are given equivalents in relation to this animal. The following livestock unit equivalents apply suckling cow is 0.9, cattle 1-2 years are 0.7. Hill ewes are 0.14.

REPS and DACAS as outlined in Appendix 1. In total 68% of the sample (189 farms) were in REPS and 24% (64 farms) claimed under the Duchas scheme. Due to the extensive nature of farming in the case study region, livestock premia were responsible for just 23% of gross output. Area based payments (REPS, DACAS) were a much larger component, accounting for 47% of gross output.

Average total variable costs across the sample were €4,090. Feed was by far the most significant cost, accounting for 42% of direct costs. This is broadly in line with results from the NFS which shows feed costs to be 48% of total direct costs (Connolly et al., 2004). Livestock purchases (14%), fertilizer (10%), and veterinary / artificial insemination (12%) were the next most significant costs across the sample. Average farm gross margin across the sample was €14,600. This is similar to results from the NFS for a similar cohort of farms operating on marginal soils (Connolly et al., 2004).

< Table 2: Analysis of average farm gross margin >

In absolute terms, gross margin returns were higher on commonage (€8,004) compared to private land (€6,596). However, per hectare returns to private land were 97 per cent higher at €276 compared to €140 for commonage. The average gross margin per hectare across the entire sample was €180 as indicated in Table 3. When livestock premia payments are excluded (a decoupled scenario) average farm gross margin falls by 29% to €10,272. Gross margin returns were higher on private land at €173 per hectare compared to €108 per hectare for commonage. In all 3% of farms in the sample showed a negative gross margin net of livestock premia payments. When all subsidies are removed, gross margin falls to €775 per

farm across the sample. On a per hectare basis, return to private land declined to €23 and return to commonage to €4 per hectare. In total, 45% of farms indicated a negative gross margin net of all subsidies.

< Table 3: Analysis of average farm gross margin inclusive and exclusive of subsidies >

In terms of the distribution of gross margin returns, over 80% of the farms in the sample have a gross margin under €20,000 as illustrated in Figure 1. One farmer in the sample indicated a negative gross margin. In total, 31% of the sample had a gross margin under €10,000, while half the sample had a gross margin between €10,000 and €20,000. Excluding all subsidies a total of 46% of the farms in the sample showed a zero or negative gross margin.

< Figure 1: Distribution of farm gross margin inclusive and exclusive of subsidies >

Results indicate that agricultural returns across the sample were highly dependent on subsidies. In total, 94% of farm gross margin is attributable to direct payments, with a 2 to 1 ratio between area based and direct livestock subsidies as shown in Table 4. In all, 65% of gross margin on commonage and 54 per cent on private land was attributable to area based subsidies. Due to higher stocking rates on private land livestock based subsidies were more important accounting for 43% of gross margin compared to 28% on commonage.

**< Table 4: Analysis of average farm direct payments as a proportion of
gross margin>**

The results presented here were restricted to gross margin analysis and do not factor in overhead costs. Using NFS data and applying it to this sample would equate to overhead costs of approximately €70 per hectare. Accepting this as a proxy for our sample, 19% of farms would show a negative overall net margin in a decoupled scenario and 86 per cent of farms would show a negative net margin exclusive of all subsidies.

6. Conclusions and discussion

One of the main aims of the study was to explore the importance of commercial values associated with traditional agricultural activity on commonage. Results indicate that although farmers had twice as much land in commonage, stocking rates were three times higher on private land than they were on commonage land.

Additional aims of the study were to evaluate the importance of CAP related payments to profitability of livestock grazing enterprise on commonage and to compare returns to commonage with that from privately owned land. Average gross margin returns were 97% higher on private land at €276 per hectare compared to €140 per hectare for commonage land. If premia payments directly linked to livestock production are excluded, a decoupled scenario, average farm gross margin falls to €173 per hectare for private land and to €108 per hectare for commonage. In all, 3 per cent of farms in the sample showed a negative gross margin net of livestock payments. This is lower than might be expected but is

due to the extensive nature of farming in the region driven by prevailing topography. When all subsidies (livestock and area based payments) are removed, returns to private land falls to €23 and to €4 per hectare for commonage. In total 45 per cent of farms indicate a negative gross margin net of subsidies. CAP based payments are hence highly significant for positive gross margin returns. In total 94 per cent of gross margin is attributable to CAP payments, area based payments were twice as important as livestock subsidies.

The results presented here were restricted to gross margin analysis and do not factor in overhead costs. Using Teagasc NFS overhead cost data as a proxy then 19% of farms would show a negative overall net margin in a decoupled scenario and 86% of farms would show a negative net margin exclusive of all subsidies. It is accepted that production henceforth will be more market driven and this could precipitate a decline or discontinuation of production in marginal areas such as commonage (Matthews, 2002). Our results concur with this outlook.

Based on results presented here the opportunity cost to traditional agricultural activity of opening up the commonage resource for recreational activity would be low. Indeed there is little to suggest the two activities could not operate in tandem in any event. Recreational demand for access to desirable landscapes, such as commonage is estimated to be significant (Buckley et al., 2007, Hynes et al., 2007). Increased affluence, mobility and changing values have brought about new demands with respect to landscape, conservation, heritage and recreation, with a greater emphasis on consumption demands for goods and services in rural areas. Much of the Republic of Ireland's commonage is located in remoter

coastal, upland and mountainous regions and has considerable recreational appeal.

However, landowners have concerns about other potential costs from recreation such as higher insurance premiums, threats to livelihoods via being sued by the public, threats to crops / livestock and increased workloads that lead to no meaningful return. Future research needs to examine farmers' attitudes to the provision of this public good and identify the conditions necessary for engagement with this activity.

Results presented above indicate CAP payments to be highly significant for farm viability in marginal areas. Post Fischler reforms, subsidies in the longer term are in question. However, land in marginal areas has potentially high recreational values. The delivery of public goods such as recreational opportunities on marginal land such as commonage may provide a rationale for continued public support of farmers in these disadvantaged often remote areas in the future. Public access for recreation on commonage is an example of the multifunctional role agriculture could serve in these rural areas.

APPENDICES

Appendix 1 - Payment Rates

Disadvantaged Area Compensatory Allowance Scheme Payment Rates

Less Severely Handicapped Lowland and Coastal Areas with Specific Handicaps:

€76.18 per forage hectare to a maximum of 45 hectares

More Severely Handicapped Lowland:

€88.88 per forage hectare to a maximum of 45 hectares

Mountain Type Grazings in Less or More Severely Handicapped Areas:

€101.58 per hectare on first 10 forage hectares

€88.88 per hectare on remaining forage hectares up to 45 hectares

Rural Environment Protection Scheme

In REPS 2 (1999/2000) farmers who participated in the scheme were compensated on a per hectare basis (€151per ha) up to a maximum of 40 hectares. Those in targeted areas of high environmental sensitivity received higher payments, €242 per hectare for the first 40 hectares, €24 per hectare for the each additional hectare up to 80 hectares and €18 per hectare for each additional hectare up to 120 hectares. Commonage was designated a target area. This extra compensation was in recognition of the fact that their compliance with higher environmental standards is compulsory.

Duchas Scheme:

If de-stocking is required, payments will be made on the loss of calculated gross margin per ewe de-stocked, using Teagasc data for the year in question. In 2006 this was €27 for each de-stocked ewe. The maximum stocking rate for which compensation is allowable is 5 ewes/hectare. However, in most other cases the amount payable will be calculated for the plan, as a combination of the income foregone and/or the costs of carrying out the plan. Costs can be demonstrated by receipts, but standard rates may be used. Teagasc Management Data, Department of Agriculture Farm Investment Scheme, and commercial farm relief fees may also be used. Payment for losses will also require receipts or similar proof.

Livestock Premia	Basic rates
EU Suckler Cow Premium	€224.15
EU Special Beef Premium	€150 (9 / 21 months)
Bull Premium	€210
Extensification Premium	€80 / €40 (Stocking rate dependant)
Slaughter Premium	€80
Ewe Premium	€21 / €29

Source: (Department of Agriculture, Fisheries and Rural Development, 2007).

Bibliography

- Ahner, D. (2003) *The greening of the European Common Agricultural Policy*, European Commission, available at <http://ec.europa.eu/environment/governance/pdf/conferences/03012728dahnerpresentation.pdf> .
- Andrews, J. H. (1987) The struggle for Ireland's Public Commons. In: O'Flanagan, P., Ferguson, P. and K. Whelan (1987). *Rural Ireland 1600-1900: modernisation and change*. Cork University Press, Cork. pp.1-23.
- Bleasdale, A. (1995) *The vegetation and ecology of the Connemara uplands, with particular reference to sheep grazing*, PhD Thesis, University College Galway.
- Bleasdale, A. and Sheehy Skeffington, M.J. (1995) The upland vegetation of northeast Connemara in relation to sheep grazing. In: D.W. Jeffrey, M.B. Jones and J.H. McAdam (1995), *Irish grasslands - their biology and management*, Royal Irish Academy, Dublin, pp.110-124.
- Bleasdale, A. (2006) Personal communication with Andy Bleasdale, 1 November 2006.
- Bleasdale, A. (2000) Towards a Partnership in the Management of Targeted Areas, Teagasc *REPS Conference 2000*, Portlaoise, Ireland.
- Bromley, D.W. (1992) 'The commons, common property, and environmental policy', *Environmental and Resource Economics*, **2**(1), p. 1-17.
- Bromley, D.W., (1991) *Environment and Economy: Property Rights and Public Policy*, Blackwell: Oxford.
- Buckley, C, van Rensburg, T.M and Hynes, S. (2007) Public access for walking: A contingent valuation assessment of farm commonage recreation in Ireland. *Irish Economic Association 21st annual conference, 27th-29th April*, Bunclody, County Wexford, Ireland.
- Connolly, L. Kinsella, A. and Guinlan, G. (2004) *National Farm Survey 2003*. Teagasc, Athenry, Ireland.
- Central Statistics Office. (2000) *Census of Agriculture*, Cork.
- Department of Agriculture, Food and Rural Development. (2000) *Cap Rural Development Plan 2000-2006 Ireland*, available on line at http://www.agriculture.gov.ie/publicat/ruraldev/CAP_RD_Plan_amended.pdf.
- Department of Agriculture, Fisheries and Food. (2007) *CAP payment guide 2002*, accessed on 19/08/06 at <http://www.agriculture.gov.ie/areasofi/CAPGUIDE2002.doc>.

Department of the Environment and Local Government. (2002) *Making Ireland's Development Sustainable: Review, Assessment and Future Action*, Stationary Office, Dublin.

Emerson, H. J. and Gillmor, D. (1999) 'The Rural Environment Protection Scheme of the Republic of Ireland', *Land Use Policy*, **16**(4), p. 235-245.

Heritage Council. (1999) *Impact of Agriculture Schemes and Payments on Aspects of Ireland's Heritage*, accessed 19/08/06 at <http://www.heritagecouncil.ie/publications/agriherit/index.html>.

Hickie, D. Smyth, E. Bohnsack, U. Scott, S and Baldock, D (1999) *A report on the impact of agriculture schemes and payments on aspects of Ireland's heritage*, The Heritage Council, Kilkenny.

Hynes, S., Buckley, C. and van Rensburg, T.M. (2007) 'Recreational pursuits on marginal farm land: A discrete-choice model of Irish farm commonage recreation', *Economics and Social Review*, **38**(1), p. 63-84.

Inter-departmental Committee on Land Structure Reform. (1978) *Inter-departmental Committee on Land Structure Reform - Final Report*, Stationery Office, Dublin.

Jones, J. (2007) The use of relevant cost analysis to assess production viability following the decoupling of support payments in England, *16th International farm management association congress*, 15-20th July, Cork, Ireland.

Kearney, B. (2000) Agricultural policy scenario and focus on the environment - Some Reflections, accessed 15/08/07 at http://www.teagasc.ie/Publications/refs2000/refs2000_paper03.htm.

Kelly, F. (1997) *Early Irish Farming: A Study Based on The Law-Texts of the 7th and 8th Centuries A.D.*, Dundagan Press Ltd, Dundalk, Co. Louth.

Lafferty, S, Commins, P and Walsh, J.A. (1999) *Irish Agriculture in Transition: A census of Agriculture in the Republic of Ireland*, Teagasc, Dublin.

Matthews, A. (2002) *Future Role of REPS under a Changing CAP*, accessed 15/08/07 at <http://www.teagasc.ie/publications/2002/refs/paper01.htm>

MCI, Mountaineering Council of Ireland, (2003) *Environmental Policy Documents*, accessed 01/05/04 at <http://www.mountaineering.ie/mci/mcinews/May03/MCI%20Env%20Policies%20Approved%20May%202003.doc>

Millward, H. (1996) 'Countryside Recreational Access in the United States: A Statistical Comparison of Rural Districts', *Annals of the Association of American Geographers*, **86**(1), p. 102-122.

Mulder, C., Shibli, S. and Hale, J. (2006) 'Rights of Way Improvement plans and increased access to the countryside in England: some key issues concerning supply', *Managing Leisure*, **11**(2), p. 96-115.

O'Loughlin, V. (1987) *Commonage and Agricultural Development in West Mayo*. Masters Thesis, National University of Ireland Galway, Galway.

O'Reilly, P. (2006) 'No access' say hill farmers, Irish Farmers Journal online, 21 October, available at <http://www.farmersjournal.ie/2006/1021/news/currentedition/newsfeatures.html>

Ostrom, E. (1990) *Governing the Commons. The evolution of institutions for collective action*, Cambridge University Press, New York.

Ostrom, E. (2000) Private and Common property. In: B Bouckaert and G De Geest (2000). *Encyclopaedia of Law and Economics*. Edward Elgar, Cheltenham, UK, pp. 332-379.

Pearce, R.A. and Mee, J. (2000) *Land Law*, Round Hall Sweet and Maxwell, Dublin.

Stevenson, S. (1991) *Common Property Economics: a general theory and land us.*. New York: Cambridge University Press.

Whelan, K. (1997) *The Atlas of the Irish Rural Landscape*, Cork University Press, Cork.

Table 1: Average land resource and livestock units per farm

	Mean	Standard Deviation
Land Resource (Hectares)		
Total commonage size	516.6	748.8
Commonage share	56.9	87.1
Commonage leased in	0.32	2.9
Commonage leased out	0.1	1.3
Private land owned	22.8	37.6
Private land leased out	0.2	1.8
Private land leased in	1.2	4.8
Total available land	80.9	96.8
Livestock Units*		
	Mean	Standard Deviation
Dairy	0.1	1.3
Beef	6.9	9.6
Sheep	12.7	14.1
Other	0.3	.95
Total	20.1	16.9
Mean stocking rate		
	Private land	Commonage land
Livestock units / hectare	0.48	0.16

(N=278)

* A dairy cow is taken as the basic grazing livestock unit of 1. All other grazing stock are given equivalents in relation to this animal as recommended by the Teagasc National Farm Survey.

Table 2: Analysis of average gross margin

Outputs	Mean (€)	% output
Livestock sales	4,628	25
Other outputs	246	1
Livestock premia	4,328	23
REPS	5,430	29
DACAS	3,353	18
Duchas Scheme	705	4
<i>Total output</i>	<i>18,690</i>	<i>100</i>
Variable costs	Mean (€)	% cost
Feed costs	1,715	42
Fertiliser costs	401	10
Crop protection	126	3
Seeds	21	0
Contractors	302	7
Veterinary / artificial insemination	511	13
Livestock purchases	569	14
Casual labour	445	11
<i>Total variable costs</i>	<i>4,090</i>	<i>100</i>
<i>Farm gross margin</i>	<i>14,600</i>	

(N=278)

Table 3: Analysis of average farm gross margin inclusive and excluding of subsidies.

	Total	€ / ha	€ / ha	€ / ha
	Farm	farm	private	commonage
	(€)			
Farm gross margin	14,600	180	276	140
Gross margin – no livestock subsidies	10,272	127	173	108
Gross margin – no subsidies	775	10	23	4

(N=278)

Table 4: Analysis of average farm direct payments as a proportion of gross margin.

Direct payments	Total farm		Private land		Commonage land	
	€/Ha	% gross margin	€/Ha	% gross margin	€/Ha	% gross margin
Livestock subsidies	62	34	118	43	39	28
Area subsidies	108	60	149	54	91	65
Total	170	94	267	97	130	93

(N=278)

Figure 1: Distribution of farm gross margin inclusive and exclusive of subsidies.

