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Talmhaíochta agus
Forbartha Tuaithe

MÄNNYSTRIE O
Fairms an
Kintra Fordèrin

POLICY AND ECONOMICS DIVISION

Farm Business Data
2011

Paul Keatley

Foreword

The 2011 year will see the agricultural industry and individual farm businesses continue to face challenges created by the credit crunch and increased volatility in agricultural commodity markets. Given the current situation, the availability of a sound, robust framework for farm planning decisions is of paramount importance. This is the role that 'Farm Business Data' fulfils, providing a comprehensive and authoritative source of physical and financial information tailored to farm planning needs in Northern Ireland.

The handbook is divided into sections and presents budgets for all the enterprises commonly found in Northern Ireland. Within the section on Farm Support Schemes details on the operation of selected schemes such as the Single Farm Payment Scheme can be found. A range of useful information is also presented in the Miscellaneous section including a summary of nitrates and phosphorous regulations. The latter also includes details on taxation, fixed costs, building costs, machinery costs, hire charges, contractors' charges and conacre rents.

It is important to stress that the handbook is designed to facilitate farm planning exercises. As such, the data presented in the enterprise budgets are in 'normalised' gross margin format and are unsuitable for benchmarking or comparison purposes. Farm performance data are published in 'Northern Ireland Farm Performance Indicators 2009/10', available from Policy and Economics Division in DARD. Alternatively, it may be accessed on the DARD website at www.dardni.gov.uk/statistics.

Uncertainties surrounding future prices mean that users of the data are again advised to make appropriate adjustments to enterprise data when those presented in the handbook become out of date or are felt to be inappropriate for long-term planning.

'Farm Business Data' has been prepared by Paul Keatley with assistance from many individuals inside and outside DARD. The author would like to thank all those who provided information for inclusion in this edition and all who made constructive suggestions for change. Further comments are welcome and should be made to Paul Keatley in DARD, Dundonald House, Belfast BT4 3SB (Paul.Keatley@dardni.gov.uk)

Norman Fulton
Director of Policy and Economics
January 2011

USER NOTES

Arable crops
It should be noted that total variable costs **exclude** contract costs. In situations where a contractor will be used it should be remembered that this additional variable cost will have to be included. Contract rates are given on pages 101 to 103.

Grassland based enterprises
Grassland costs are split in each of the budgets into a grazing cost and a silage cost per head. In the dairy and dairy follower budgets the grazing costs have been calculated at a standard stocking rate of 2 cow equivalents per hectare. For other grazing livestock budgets a stocking rate of 1.8 cow equivalents is used. If these stocking rates are considered inappropriate for individual farm situations they can be adjusted by referring to page 18. The silage cost per tonne charged in all budgets includes a contractor cost for harvesting and buckraking 2.5 cuts into the silo. In situations where the farmer uses his own machinery or makes 2 or 3 cuts the silage cost can be adjusted by referring to page 19.

Taxation
The taxation section on pages 114 to 117 gives general information only. Users are reminded that tax is a complex subject and that professional advice should be obtained before any action is taken which might affect liability to taxation.

DEFINITION OF TERMS

1. **Enterprise output of a crop enterprise** is the total returns for the crop produced; it is the total value for crop sales plus the market value of any part of the crop used or in store on the farm.

2. **Enterprise output of a livestock enterprise** is the value of livestock sold plus the market value of livestock and livestock products transferred to another enterprise (transfers out), plus the market value of any production from the enterprise consumed on the farm less expenditure on livestock and less the market value of livestock transferred in from another enterprise (transfers in).

3. **Variable costs** are defined as those costs which can both be readily allocated to a specific enterprise and vary in proportion with the level of output. Examples of variable costs are fertilisers, sprays, seeds, concentrate feedstuffs, silage and grassland variable costs. Casual labour and contract charges which can be allocated to a specific enterprise are usually regarded as variable costs.

4. **Gross margin** of an enterprise is its **enterprise output** less its **variable costs**.

5. **Enterprise marginal capital** is the estimated amount of capital required to establish the enterprise to the point of first sale of output.

INTRODUCTION

This handbook contains both physical and financial information for farm enterprises in Northern Ireland. For each enterprise, details of output, variable costs and gross margin are presented. The information relates to the production year beginning January 2011 (unless otherwise stated) and is based on price information available at the time of preparation (December 2010). For this reason, adjustments may be necessary to budgeted data where prices have deviated significantly from forecast levels.

The sources of information used in the booklet include the Farm Business Survey, the Agri-food and Biosciences Institute and the College of Agriculture Food and Rural Enterprise (CAFRE). In most of the budgets, more than one level of performance is given. The "typical" level of performance represents that most likely to be achieved. The "low" and "high" levels of performance, where given, encompass the range of performances found in approximately 80% of farms in Northern Ireland. On some farms, the level of performance will be outside the range given for a given enterprise.

If it is considered that the data are not appropriate for a particular farm, a different performance level should be substituted. This may be necessary when a series of farm plans with different levels of performance are used to indicate the range of possible outcomes for a particular farming situation. However, the levels of performance imputed should be realistic as the use of over optimistic or pessimistic levels of performance in a budget can result in the wrong decision being taken. Thus, each farming situation should be assessed adequately so that achievable levels of performance are used in budgets. For situations where a farm enterprise is being expanded, a level of performance similar to that presently achieved should not always be assumed. The quality of the land and livestock may differ, as may the seasonality of production.

CAP REFORM FROM JANUARY 2005

CAP reforms under the Mid-Term Review (MTR) were agreed in June 2003. The central feature of the reforms is that direct payments to producers, in the form of arable area aid and livestock headage premia, have been '*decoupled'* from production and replaced by a Single Farm Payment (SFP), payable annually. The amount of aid available under the SFP is based on Payment Entitlements awarded to farmers who declared land on their 2005 SFP/IACS declaration. Under the model of distribution selected in Northern Ireland, these Entitlements have been calculated by combining a uniform area rate per eligible hectare of land declared for payment of SFP in 2005 with a Historic Reference Amount, where appropriate. The latter has been calculated on the basis of individual livestock and arable subsidy claims by each farm business during the three-year Reference Period (2000, 2001 and 2002). Once established in 2005, the number and value of Entitlements will not normally change.

As the Single farm Payment is decoupled from production, it does not form part of the Gross margin of any enterprise. As a consequence, **in this**

handbook, gross margin budgets for all enterprises have been presented without the Single Farm Payment. Further details relating to the operation of the Single Farm Payment scheme are available on page 77.

Fixed Costs

In assessing the impact of a change in the farm plan on farm profit, it is necessary to deduct the expected total farm fixed costs from the total farm gross margin. The projected farm profit can then be compared with the likely profit from continuing with the existing activities. To show the likely return on additional capital, the budgeted additional net profit should be related to the additional capital required to implement the new plan. When borrowed funds are used to finance the change, the interest charge should be deducted from the additional net profit.

Changes in fixed costs which occur when there is a change in the mix or size of enterprises on a farm will differ considerably between farms as these costs are very dependent on the scale of change and the resources already present on the farm. Such costs by their nature do not change gradually unlike variable costs which vary roughly in proportion to changes in the size of an enterprise. When preparing budgets the fixed costs should be changed if alterations are planned in the area of land farmed, the employment of regular labour, investment in machinery and buildings or, if there are appreciable changes in the usage of other fixed cost items such as fuel.

Farm planning exercises may range from a small modification of the present farming system to a completely new business plan for the farm. The first of these alternatives will, in most circumstances, require considerably less new information on fixed costs than is needed when a new farm plan has to be prepared. In either situation it is more sensible and accurate to prepare a list of the fixed cost items and calculate their cost to the business rather than using fixed cost 'standards' as guidelines. The list should include hired regular labour, depreciation of fixed capital and machinery, machinery repairs, fuel and oil, interest and general overhead costs.

Capital Requirements

Another essential element in farm planning is the cash flow budget. Such a budget will indicate how changes in the farm plan will affect the timing and flow of funds through the business. This can be critical information particularly when outside funding is required or capital resources are limited.

When new plans or budgets incorporating changes are prepared, it is important to determine how much extra capital will be needed. The return on the extra capital may be of particular significance in deciding how best to employ additional resources. Return on existing capital is of less importance, especially as machinery and buildings may have been written-off or have a low salvage value. For this reason, only marginal operating capital requirements per hectare of crop or per head of livestock are given on pages 95 and 96. In a livestock enterprise, this includes the cost of the extra animal(s) and the variable costs required to finance the production cycle until

sufficient incoming funds have been obtained to finance the next period. This figure indicates the minimum necessary operating capital required per extra head of livestock. For a large increase in herd size, the additional operating capital should include the proposed capital outlay on the additional buildings, machinery and funds to pay extra labour until the production cycle is self-financing. Each particular situation should be investigated to determine whether extra labour or other fixed costs should be taken into account.

As many cattle enterprises require a large amount of operating capital (often financed from outside sources) per head and per hectare, an interest charge per head is given below the calculated gross margin in each of the cattle budgets. This, in many instances, is a substantial cost and should not be overlooked when comparing enterprises. Interest charge is calculated by applying the interest rate to the outlay on the animal plus the average variable costs for the production period.

Grassland, forage and calf rearing variable costs are common to many of the cattle enterprises and these topics are covered in pages 18 to 23 and 32 as a basis for inclusion in subsequent cattle budgets.

Occasional reference is made to trade names and proprietary products. No endorsement of such products is intended nor is any criticism implied of similar products not mentioned.

SPRING BARLEY PER HECTARE

	LOW	TYPICAL	HIGH
Grain yield (tonnes)	3.5	4.5	5.5
Price per tonne (£)		150	
Grain output (£)	**525**	**675**	**825**
Straw yield (tonnes)	2.6	3.0	3.5
Price per tonne (£)		70	
Straw output (£)	**182**	**210**	**245**
OUTPUT (£)	**707**	**885**	**1,070**
		£	
Seed 187 kg		71	
Fertiliser 120: 55:55		200	
Sprays herbicide		25	
fungicide		30	
growth regulator		10	
Sundries twine etc.		20	
Total Variable Costs		**356**	
GROSS MARGIN	**351**	**529**	**714**

(a) Grain price - estimated on the basis of 15% moisture content with grain sold at harvest for animal feed. For information on seasonal price movements see page 15.

(b) Seed - 80% certified second generation, 20% farm saved.

(c) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(d) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(e) Sprays - post emergent herbicide.
- fungicide spray for mildew and rhynchosporium.
- insecticide spray for leather jackets may be used after a grass ley.

SPRING OATS PER HECTARE

		LOW	TYPICAL	HIGH
Grain yield (tonnes)		3.5	4.5	5.5
Price per tonne (£)			160	
Grain output (£)		**560**	**720**	**880**
Straw yield (tonnes)		3.0	3.3	3.9
Price per tonne (£)			60	
Straw output (£)		**180**	**198**	**234**
OUTPUT (£)		**740**	**918**	**1,114**
			£	
Seed	187 kg		79	
Fertiliser	80: 55: 55		160	
Sprays	herbicide		25	
	fungicide		25	
	growth regulator		10	
Sundries	twine etc.		20	
Total Variable Costs			**319**	
GROSS MARGIN		**421**	**599**	**795**

(a) Grain price - estimated on the basis of 15% moisture content with grain sold at harvest for animal feed.

(b) Seed - 100% certified second generation.

(c) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(d) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations.
See pages 87 to 90 for further details.

(e) Sprays - post emergent herbicide.
- fungicide, mildew spray.
- growth regulator.
- insecticide may be used following grass at £20 per hectare.

WINTER BARLEY PER HECTARE

		LOW	TYPICAL	HIGH
Grain yield (tonnes)		5.5	6.5	7.5
Price per tonne (£)			150	
Grain output (£)		**825**	**975**	**1,125**
Straw yield (tonnes)		3.4	3.7	4.4
Price per tonne (£)			70	
Straw output (£)		**238**	**259**	**308**
OUTPUT (£)		**1,063**	**1,234**	**1,433**
			£	
Seed	187 kg		65	
Fertiliser	150: 70: 70		250	
Sprays	herbicide		25	
	fungicide (x2)		60	
	insecticide		8	
	growth regulator		10	
Sundries	twine etc.		20	
Total Variable Costs			**438**	
GROSS MARGIN		**625**	**796**	**995**

(a) Grain price - estimated on the basis of 15% moisture content with grain sold at harvest for animal feed. For information on seasonal price movements see page 15.

(b) Seed 100% certified second generation.

(c) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(d) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(e) Sprays - pre or post emergence herbicide.
- April/May, 2 spray fungicide program.
- insecticide for barley yellow dwarf virus.
- growth regulator.

WINTER OATS PER HECTARE

		LOW	TYPICAL	HIGH
Grain yield (tonnes)		5.0	6.0	7.5
Price per tonne (£)			160	
Grain output (£)		**800**	**960**	**1,200**
Straw yield (tonnes)		3.4	3.7	4.4
Price per tonne (£)			60	
Straw output (£)		**204**	**222**	**264**
OUTPUT (£)		**1,004**	**1,182**	**1,464**
			£	
Seed	187 kg		77	
Fertiliser	100: 55: 80		180	
Sprays	herbicide		25	
	fungicide		60	
	growth regulator		10	
Sundries	twine etc.		20	
Total Variable Costs			**372**	
GROSS MARGIN		**632**	**810**	**1,092**

(a) Grain price - estimated on the basis of 15% moisture content with grain sold at harvest for animal feed.

(b) Seed - 100% certified second generation.

(c) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(d) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(e) Sprays - pre emergent herbicide.
- 2 spray fungicide program.
- growth regulator.
- insecticide (Barley Yellow Dwarf Virus) may be required.

WINTER WHEAT PER HECTARE

		LOW	TYPICAL	HIGH
Grain yield (tonnes)		5.5	7.4	8.6
Price per tonne (£)			160	
Grain output (£)		**880**	**1,184**	**1,376**
Straw yield (tonnes)		2.7	3.2	4.3
Price per tonne (£)			60	
Straw output (£)		**162**	**192**	**258**
OUTPUT (£)		**1,042**	**1,376**	**1,634**
			£	
Seed	187 kg		77	
Fertiliser	180: 70: 70		280	
Sprays	herbicide		25	
	fungicide (x3)		110	
	growth regulator		10	
Sundries	twine etc.		20	
Total Variable Costs			**522**	
GROSS MARGIN		**520**	**854**	**1,112**

(a) Grain price - estimated on the basis of 15% moisture content with grain sold at harvest for animal feed.

(b) Seed - 100% certified second generation.

(c) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(d) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(e) Sprays - pre or post emergence herbicide.
- fungicides for control of septoria,ear diseases and mildew/yellow rust if required.
- growth regulator.

SPRING OILSEED RAPE PER HECTARE

		LOW	TYPICAL	HIGH
Yield (tonnes)		1.8	2.4	2.9
Price per tonne (£)			300	
Seed output (£)		**540**	**720**	**870**
OUTPUT (£)		**540**	**720**	**870**
			£	
Seed	8 kg		68	
Fertiliser	80: 30: 0		200	
Sprays	insecticide		10	
	fungicide		25	
	desiccant		35	
Slug pellets	7 kg		15	
Total Variable Costs			**353**	
GROSS MARGIN		**187**	**367**	**517**

(a) Price estimated on the basis of 'double low' varieties sold at harvest.

(b) Yield based on 9% moisture content, desiccant applied 7 to 14 days before harvesting.

(c) Sowing date between late March and mid April. Oilseed rape should not be grown more than 1 year in 5 on the same land.

(d) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(e) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations.
See pages 87 to 90 for further details.

(f) Sprays - insecticide for pollen beetle/seed weevil.
- herbicide is normally not necessary.
- fungicide for light leaf spot and/or sclerotinia.

WINTER OILSEED RAPE PER HECTARE

		LOW	TYPICAL	HIGH
Yield (tonnes)		2.6	3.3	4.0
Price per tonne (£)			300	
Seed output (£)		**780**	**990**	**1,200**
OUTPUT (£)		**780**	**990**	**1,200**
			£	
Seed	4 kg		34	
Fertiliser	190: 50: 20		270	
Sprays	herbicide		55	
	fungicide		25	
	desiccant		25	
Slug pellets	7 kg		15	
Total Variable Costs			**424**	
GROSS MARGIN		**356**	**566**	**776**

(a) Price estimated on the basis of 'double low' varieties sold at harvest.

(b) Yield based on 9% moisture content, desiccant applied 7 to 14 days before harvesting.

(c) Sowing date, mid August to early September. Oilseed rape should not be grown more than 1 year in 5 on the same land.

(d) Fertiliser - Fertiliser application rate based on a medium type soil with a Soil Nitrogen Supply Index of 2, a Soil Phosphate Index of 2 and a Soil Potash Index of 2+

(e) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(f) Sprays - pre or post emergence herbicide.
- fungicide for light leaf spot and/or sclerotinia.

SEED POTATOES PER HECTARE

					LOW		TYPICAL		HIGH
			£/t		£		£		£
Seed ( ) tonnes		@	180	(14)	2,520	(21)	3,780	(25)	4,500
Ware ( ) tonnes		@	130	(5)	650	(8)	1,040	(10)	1,300
Chats ( ) tonnes		@	10	(1)	10	(2)	20	(3)	30
OUTPUT					**3,180**		**4,840**		**5,830**
			£/t						
Seed	4.5t	@	200				900		
Fertiliser	95 : 195 : 185						400		
Sprays	herbicide						35		
	fungicide (blight x 7)						105		
	desiccant (burning down)						40		
	aphidicide						25		
Potato inspection fees					113		147		166
Total Variable Costs					**1,618**		**1,652**		**1,671**
GROSS MARGIN					**1,562**		**3,188**		**4,159**

(a) Potato inspection fees quoted are those proposed for 2011. They comprise a growing crop inspection fee of £46 per hectare and tuber inspection fees and labels of £4.80 per tonne.

(b) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations. See pages 87 to 90 for further details.

(c) Seed cost depends on variety used and class of seed planted.

(d) Potato sacks are supplied by the merchant.

(e) Output of seed per hectare (£)

Price per tonne	Seed Yield (tonnes per hectare)				
£	14	17	20	22	25
100	1,400	1,700	2,000	2,200	2,500
120	1,680	2,040	2,400	2,640	3,000
140	1,960	2,380	2,800	3,080	3,500
160	2,240	2,720	3,200	3,520	4,000
180	2,520	3,060	3,600	3,960	4,500
200	2,800	3,400	4,000	4,400	5,000
220	3,080	3,740	4,400	4,840	5,500

FIRST EARLY POTATOES PER HECTARE

				LOW		TYPICAL		HIGH
		£/t		£		£		£
Ware ( ) tonnes	@	270	(14)	3,780	(19)	5,130	(22)	5,940
Chats (1) tonne	@	10		10		10		10
OUTPUT				**3,790**		**5,140**		**5,950**
		£/t						
Seed 4.5t	@	250				1,125		
Fertiliser 120 : 130 : 200						410		
Sprays herbicide						35		
fungicide (blight x 2)						30		
Potato sacks	@	8.00		112		152		176
Total Variable Costs				**1,712**		**1,752**		**1,776**
GROSS MARGIN				**2,078**		**3,388**		**4,174**

(a) Budget assumes haulm chopping rather than burning down.

(b) Seed - cost depends on variety used and class of seed planted.

(c) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations.
See pages 87 to 90 for further details.

(d) Potato sacks - 25kg paper bags typically 20p per bag.

(e) Output of ware per hectare (£)

Price per tonne	Early Ware Yield (tonnes per hectare)			
£	10	15	20	25
100	1,000	1,500	2,000	2,500
150	1,500	2,250	3,000	3,750
200	2,000	3,000	4,000	5,000
250	2,500	3,750	5,000	6,250
300	3,000	4,500	6,000	7,500

MAINCROP WARE POTATOES PER HECTARE

				LOW		TYPICAL		HIGH
		£/t		£		£		£
Ware ( ) tonnes		@ 130	(33)	4,290	(40)	5,200	(45)	5,850
Chats (2) tonnes		@ 10		20		20		20
OUTPUT				**4,310**		**5,220**		**5,870**
		£/t						
Seed	3.0t	@ 200				600		
Fertiliser	100 :180 : 200					400		
Sprays	herbicide					35		
	fungicide (blight x 9)					135		
	desiccant (burning down)					40		
Slug pellets						15		
Potato boxes		@ 7.50		248		300		338
Total Variable Costs				**1,473**		**1,525**		**1,563**
GROSS MARGIN				**2,837**		**3,695**		**4,307**

(a) Seed **-** cost depends on variety used and class of seed planted.

(b) Fertiliser - For individual farms, fertiliser application rates must be in accordance with the Nitrate and Phosphorous Requlations.
See pages 87 to 90 for further details.

(c) Potato boxes **-** £50.00 per 1 tonne with a 15% depreciation charge (i.e. £7.50 per tonne per year).

(d) Output of ware per hectare (£)

Price per tonne	Ware Yield (tonnes per hectare)				
£	20	25	30	35	40
70	1,400	1,750	2,100	2,450	2,800
90	1,800	2,250	2,700	3,150	3,600
100	2,000	2,500	3,000	3,500	4,000
120	2,400	3,000	3,600	4,200	4,800
140	2,800	3,500	4,200	4,900	5,600

CEREAL SPRAYS

	Main use	Examples of proprietary products	Approximate cost per hectare (£)
Herbicides	Spring cereals (Broad spectrum)	Ally, Jubilee, Starane, Harmony M, Compitox, Sekator	16 to 31
	Winter cereals (Broad spectrum)	**Pre-emergence –** Crystal, Firebird.	22 to 36
	Winter cereals (Broad spectrum)	**Post-emergence –** Ally, Jubilee	17 to 40
Fungicides	Barley (Broad spectrum)	Folicur, Amistar, Amistar Pro, Punch-C, Landmark, Fandango	18 to 49
	Wheat (Broad spectrum)	Foil, Folicur, Silvacur, Flamenco, Opera, Twist Opus, Amistar, Landmark, Proline	18 to 58
	(Mildew)	Corbel, Patrol, Orka	21 to 30
Insecticides	Spring cereals (leatherjackets)	Dursban, Cyren	13 to 25
	Winter barley (aphids - vector BYDV)	Decis, Toppel, Sumi-Alpha,	6 to 10

This list is not exhaustive and no criticism is implied of products which have been omitted. The products listed above are for example purposes only. **No pesticide should be used without careful reference to the manufacturer's label especially regarding crop suitability.**

GRAIN DRYING AND STORAGE

(i) Moist grain storage

@ 16% moisture content requires 5.5 litres per tonne propionic acid.
@ 20% moisture content requires 7.5 litres per tonne propionic acid.
@ 24% moisture content requires 9.5 litres per tonne propionic acid.
@ 28% moisture content requires 11.5 litres per tonne propionic acid.

Propionic acid costs approximately 100-110 pence per litre.

(ii) Grain drying

Contract charges - handling charge approximately £2.00 per tonne plus £3-4 per 1% moisture removed.

(iii) Bulk storage requirements (whole grain)

Barley 1.45 cubic metres per tonne.
Wheat 1.35 cubic metres per tonne.
Oats 1.95 cubic metres per tonne.

(iv) Weight and weight loss on drying to 15% Moisture Content

Original MC	**Equiv. Weight of 100t dried To 15% MC (t)**	**% Weight loss**
15	100.0	0
17	97.7	2.3
19	95.3	4.7
21	92.9	7.1
23	90.6	9.4
25	88.2	11.8
27	85.9	14.1

(v) Anticipated growers prices for barley (ex-farm) 2010/2011

Feed Barley (£/tonne)

November 2010	165
January 2011	180
March	190
May	195

OILSEED RAPE SPRAYS

	Examples of proprietary products	Approximate cost per hectare (£)
Herbicides	**Post-emergence -** Kerb, Butisan S.	42 to 65
Fungicides	Folicur, Proline	23 to 42

This list is not exhaustive and no criticism is implied of products which have been omitted. The products listed above are for example purposes only. **No pesticide should be used without careful reference to the manufacturer's label especially regarding crop suitability.**

POTATO SPRAYS

		Examples of proprietary products	Approximate cost per hectare (£)
Herbicides	Broad Spectrum	Sencorex, Linuron, Titus, Retro	20 to 75
	Couchgrass	Glyphosate, Laser	35 to 70
Fungicides		Bravo 500, Tattoo, Dithane 945, Invader, Trustan, Fubol Gold, Merlin, Galben M, Shirlan, Curzate, Infinito	10 to 30
Desiccants		Reglone, Harvest, Sulphuric acid[1],Spolight	35 to 46

(Haulm chopping can be an alternative to spraying.)

[1] Sulphuric acid normally applied by a contractor

This list is not exhaustive and no criticism is implied of products which have been omitted. The products listed above are for example purposes only. **No pesticide should be used without careful reference to the manufacturer's label especially regarding crop suitability.**

GRASSLAND VARIABLE COSTS

(i) Grazing Variable Costs

Stocking rate (ce/ha)	Fertiliser N kg/ha	Fertiliser £/ha	Other variable costs (£)	Total variable cost per hectare (£)
1.4	60	62	44	106
1.5	75	78	44	122
1.6	90	93	44	137
1.7	105	109	44	153
1.8	120	124	44	168
1.9	135	140	44	184
2.0	**150**	**156**	**44**	**200**
2.1	170	176	44	220
2.2	190	197	44	241
2.3	210	218	44	262
2.4	230	239	44	283
2.5	250	259	44	303

In the dairy cow and dairy follower budgets in this handbook, a stocking rate of 2 cow equivalents per hectare is used, i.e. the grazing variable costs are £200 per hectare. For other grazing livestock budgets a stocking rate of 1.8 cow equivalents per hectare is used i.e. the grazing variable costs are £168 per hectare. If these stocking rates are considered to be inappropriate for a specific farming situation, a more appropriate stocking rate and variable costs per hectare can be selected. Readers should be aware that the implementation of the Nitrates Action Plan may impact on permitted stocking rates on farms (see pages 87 to 90 for further details)

(ii) Grazing - other variable costs

a) Grassland reseeding costs

			£ per hectare
Ground limestone	5 tonnes @	15 £/t	75
Grass seed	35 kg @	3.23 £/kg	113
Fertiliser 60 : 50 : 50			130
Spray - sward kill			30
- herbicide			20
Total Cost			368

(1) The quantity of lime and fertiliser applied will depend on soil analysis.
(2) For autumn reseeds the old sward may be burnt down with paraquat prior to ploughing.
(3) With a sward life of 10 years the annual reseeding allowance would be £36.80 per hectare.

b) Grassland spraying costs

The annual cost of herbicide is estimated at £7.50 per hectare – assumes spray 1 year in 4 against grassland weeds at cost of £30.00 per hectare.

(iii) Silage Variable Costs

	£ per hectare	£ per tonne
Fertiliser 190 : 50 : 100	260	6.50
Other variable costs	44	1.10
Contractors charge	375	9.38
Additives	58	1.45
Polythene	5	0.13
Total Cost	742	18.56

(1) The yield of silage is assumed to be 40 tonnes per hectare.
(2) The sward life is assumed to be 10 years.
(3) Contractor cost includes mowing, harvesting and buckraking 2.5 cuts into the silo.
(4) The total variable cost per tonne of silage (assuming an unchanged yield) with the contractor taking 2 cuts is £16.68. This increases to £20.44 with 3 cuts.
(5) When the farmer uses his own machinery, the total variable cost per tonne of silage is £9.18.
(6) Costs per tonne for additive would be lower for systems involving fewer cuts. Additive costs range from £0.50 to £4.00 per tonne depending on the additive used and the conditions - typically £1.45 per tonne.
(7) Silage as a cash crop. To achieve a gross margin of £200 per hectare, a farmer would require a price of £23.55 per tonne.

(iv) Silage Additives

Category	Examples of products	Approximate cost per tonne Ensiled (£)
Acid based	Add-F, Add-safeR, Co-Sil.	0.50 - 4.00
Sugar based	Molasses, molassed sugar beet pulp Sweet n' Dry.	1.00 - 3.00
Enzymes	Exellex, Clampzyme.	1.50 - 3.00
Inoculants	Bactensil 2000, Bioferm Gold, Ecosyl	0.90 - 2.00
Salts	Ultrasile.	2.00 - 2.50
Enzymes plus inoculements	Axphast gold, Supersile gold	£1.10 - £1.75

This list is not exhaustive and there is no implied criticism of products omitted.

(v) Hay Variable Costs

	£ per hectare	£ per tonne	Pence per 20 kg bale
Fertiliser 130 : 40 : 40	185	23	46
Reseeding allowance	44	6	11
Contract - mowing	25	3	6
- turning (x2)	27	3	7
- bailing (inc. twine)	140	18	35
Total Cost	421	53	105

(1) A yield of 8 tonnes per hectare is assumed.
(2) The variable cost per 20 kg bale of hay for a farmer using his own machinery would be 57p
(3) A hay crop cut in mid July and sold for £1.50, £1.75 or £2.00 per 20 kg bale would generate gross margins of £179, £279 and £379 per hectare respectively. These figures rise to £371, £471 and £571 per hectare if contractor costs are disregarded. As approximately 60% of total grass production occurs by mid July these gross margins are effectively from 0.6 hectares.

(vi) Grassland sprays

Main Use	Examples of proprietary products	Approximate Cost per hectare (£)
Chickweed (non clover swards)	CMPP, (e.g. Optica) Banlene Super, Transfer, Mircam Plus.	14.50 to 22
Chickweed (will protect clover swards)	Alistell	39
Ragwort	2-4D Ester, (e.g Depitox)	9 to 13
Thistle	2-4-D, MCPA	9 to 10
Nettle	Nushot Grazon, Blaster.	60 to 120
Docks (non clover swards)	Doxstar, Starane, Forefront Dockmaster Grassland.	35 to 40
Docks (will protect clover swards)	Squire.	30 to 35
Sward Kill	Roundup Biactive, Clinic, Glyphosate.	13 to 30

This list is not exhaustive and there is no criticism implied of products omitted.

(vii) Seasonality of production

	% of Harvestable Dry Matter
April	11
May	19
June	20
July	17
August	14
September	12
October	3
November to March	4
Total	100.0

(viii) Stocking rates on farms in Northern Ireland

Average stocking rates and the corresponding range on Northern Ireland farms are shown for the main enterprises. The differences illustrate the variation in stocking rates found in practice.

Stocking rate (ce/ha)

	Average	**Range**
Dairy cows	1.96	1.66 to 2.48
Dairy followers	2.07	1.93 to 2.17
Sucklers cows (new LFA)	1.54	1.27 to 1.76
Dairy calf to beef systems	2.02	1.46 to 2.22
Beef calf to beef systems	1.39	1.26 to 1.59
Breeding ewes (lowland)	1.51	1.30 to 1.89

Source: Northern Ireland Farm Business Survey, 2009/10.

(ix) Coefficients for converting into cow equivalents (ce)

Type of Livestock	ce
Dairy cow	1.0
Beef cow (excluding calf)	0.8
Breeding bull	1.0
Other cattle	
under 1 year old	0.4
between 1 and 2 years old	0.6
over 2 years old	0.8
Breeding ewe and lamb(s)	0.2
Breeding ram	0.2
Lamb 6 months to 1 year old	0.1
Other sheep over 1 year old	0.2

(1) One cow equivalent is usually defined in terms of annual metabolizable energy requirements to maintain a 625 kg Friesian cow, produce 4,500 litres of milk and a 45 kg calf.

(2) To calculate the total cow equivalents on a farm, the annual average livestock numbers should be multiplied by the appropriate cow equivalent coefficient.

(3) To calculate the stocking rate on a farm (cow equivalents per hectare) the total cow equivalents are divided by the area of grassland plus the adjusted areas of rough grazing and forage crops.

(4) To calculate stocking rate of grazing livestock, allowances should strictly be made for variation in output, e.g. yield per cow or liveweight gain per head and also for quantities of non-forage feed consumed by each category of livestock.

(x) Typical nutrient content of animal manures at spreading

Manure		Total Nutrient			Available Nutrient [1]		
Form	% DM	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Fresh FYM [2]	---------- (kg/t) ----------						
Cattle	25	6.0	3.5	8.0	0.3- 1.2	2.1	4.8
Pig	25	7.0	7.0	5.0	0.3- 1.4	4.2	3.0
Poultry Manure	---------- (kg/t) ----------						
Layer Manure	30	15	13	9	0.1- 5.2	7.9	6.8
Broiler Litter	60	29	25	18	0.3-10.1	15.0	14.0
Slurries	---------- (kg/m^3) ----------						
Dairy [3]	6	3.0	1.2	3.5	0.1- 0.9	0.6	3.2
Beef [3]	6	2.3	1.2	2.7	0.1- 0.7	0.6	2.4
Pig [3]	6	5.0	3.0	3.0	0.2- 1.8	1.5	2.7

[1] Nutrients available for utilisation by the next crop. In the case of nitrogen, availability is dependent on soil type and time of application. Figures given assume surface application and higher figures relate to spring application.

[2] N and K_2O values will be lower if farm yard manure (FYM) is stored under open conditions for long periods.

[3] Undiluted slurry typically contains 10% dry matter (DM), but with rain dilution the DM content may be lowered to 6% and under.

(xi) Approximate conversion factors

1 hectare = 2.471 acres
1 metre = 3.279 feet
1 m^3 = 220 gallons
1 litre = 0.22 gallon
1 kilogram = 2.205 pounds
100 kg/ha = 80 units/acre

DAIRY COWS - JAN/FEB CALVING (60% SUMMER MILK)

		LOW	TYPICAL	HIGH
Milk yield (litres)		5,100	5,800	6,300
	ppl	£	£	£
Milk sales	@ 24.5	**1,250**	**1,421**	**1,544**
Calves			**100**	
Less herd replacement cost			**192**	
OUTPUT		**1,158**	**1,329**	**1,452**
	£			
Concentrates	@ 230	375	427	464
Grazing	0.275 @ 200		55	
Silage	9.0 @ 18.56		167	
Sundries (AI, vet, misc)			100	
Total Variable costs		**697**	**749**	**786**
GROSS MARGIN PER COW		**460**	**580**	**666**
GROSS MARGIN PER HECTARE @ (2 ce/ha)		**920**	**1,160**	**1,332**
GROSS MARGIN PER 1,000 LITRES		**90**	**100**	**106**

(1) Milk price forecast on the basis of compositional quality and the seasonality of production. Net of all deductions.

(2) 93 calves sold or transferred per 100 dairy cows.

(3) Herd replacement cost:
- 24% replacement rate and 4% mortality are typical.
- replacement cost £1200; cull cow value £480.

(4) Concentrate usage of 0.32kg/litre assumed

(5) For details of grazing and silage variable costs, see pages 18 and 19.

(6) Sensitivity analysis

Change in typical gross margin (£)

	per cow	per hectare
± 1 ppl in milk	58.00	116.00
± £5/t in concentrates price	9.28	18.56
± 100 litres milk	11.59	23.18

DAIRY COWS - MARCH/APRIL CALVING (70% SUMMER MILK)

			LOW	TYPICAL	HIGH
Milk yield (litres)			4,800	5,300	5,800
		ppl	£	£	£
Milk sales		@ 24.3	**1,166**	**1,288**	**1,409**
Calves				**100**	
Less herd replacement cost				**192**	
OUTPUT			**1,074**	**1,196**	**1,317**
		£			
Concentrates		@ 230	298	329	360
Grazing	0.325	@ 200		65	
Silage	7.0	@ 18.56		130	
Sundries (AI, vet, misc)				100	
Total Variable costs			**593**	**624**	**655**
GROSS MARGIN PER COW			**481**	**572**	**662**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**963**	**1,144**	**1,325**
GROSS MARGIN PER 1,000 LITRES			**100**	**108**	**114**

(1) Milk price forecast on the basis of compositional quality and the seasonality of production. Net of all deductions.

(2) 93 calves sold or transferred per 100 dairy cows.

(3) Herd replacement cost:
- 24% replacement rate and 4% mortality are typical.
- replacement cost £1200; cull cow value £480.

(4) Concentrate usage of 0.27kg/litre assumed

(5) For details of grazing and silage variable costs, see pages 18 and 19.

(6) Sensitivity analysis

Change in typical gross margin (£)

	per cow	per hectare
± 1 ppl in milk	53.00	106.00
± £5/t in concentrates price	7.16	14.31
± 100 litres milk	12.53	25.05

DAIRY COWS - OCT/NOV CALVING (55% SUMMER MILK)

			LOW	TYPICAL	HIGH
Milk yield (litres)			5,500	6,500	7,300
		ppl	£	£	£
Milk sales		25.0	**1,375**	**1,625**	**1,825**
Calves				**100**	
Less herd replacement cost				**199**	
OUTPUT			**1,276**	**1,526**	**1,726**
		£			
Concentrates		@ 230	405	478	537
Grazing	0.250	@ 200		50	
Silage	10.0	@ 18.56		186	
Sundries (AI, vet, misc)				120	
Total Variable costs			**760**	**834**	**893**
GROSS MARGIN PER COW			**515**	**692**	**833**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**1,031**	**1,384**	**1,666**
GROSS MARGIN PER 1,000 LITRES			**94**	**106**	**114**

(1) Milk price forecast on the basis of compositional quality and the seasonality of production. Net of all deductions.

(2) 93 calves sold or transferred per 100 dairy cows.

(3) Herd replacement cost:
- 25% replacement rate and 4% mortality are typical.
- replacement cost £1200; cull cow value £480.

(4) Concentrate usage of 0.32kg/litre assumed

(5) For details of grazing and silage variable costs, see pages 18 and 19.

(6) Sensitivity analysis

Change in typical gross margin (£)

	per cow	per hectare
± 1 ppl in milk	65.00	130.00
± £5/t in concentrates price	10.40	20.80
± 100 litres milk	12.17	24.34

DAIRY COWS - AVERAGE CALVING PATTERN (58% SUMMER MILK)

			LOW	TYPICAL	HIGH
Milk yield (litres)			5,800	6,300	6,800
		ppl	£	£	£
Milk sales		25.0	**1,450**	**1,575**	**1,700**
Calves				**100**	
Less herd replacement cost				**199**	
OUTPUT			**1,351**	**1,476**	**1,601**
		£			
Concentrates		@ 230	414	449	485
Grazing	0.262	@ 200		52	
Silage	9.5	@ 18.56		176	
Sundries (AI, vet, misc)				110	
Total Variable costs			**752**	**788**	**824**
GROSS MARGIN PER COW			**599**	**688**	**777**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**1,197**	**1,376**	**1,554**
GROSS MARGIN PER 1,000 LITRES			**103**	**109**	**114**

(1) Average calving pattern in Northern Ireland:-

January/February	25%
March/April	20%
May to September	15%
October to December	40%

(2) Milk price forecast on the basis of compositional quality and the seasonality of production. Net of all deductions.

(3) 93 calves sold or transferred per 100 dairy cows.

(3) Herd replacement cost:
- 25% replacement rate and 4% mortality are typical.
- replacement cost £1200; cull cow value £480.

(5) Concentrate usage of 0.31kg/litre assumed

(6) For details of grazing and silage variable costs, see pages 18 and 19.

(7) Sensitivity analysis

Change in gross margin(£)

	per cow	per hectare
± 1 ppl in milk	63.00	126.00
± £5/t in concentrates price	9.77	19.53
± 100 litres milk	12.49	24.99

DAIRY HEIFER REPLACEMENTS - AUTUMN BORN (2010)

	30 MONTH CALVING			24 MONTH CALVING	
	Physical		Financial	Physical	Financial
			£		£
Value of heifer (allowing for barreners and rejects)			1200		1200
Less value of calf (plus 2% mortality allowance)			225		225
OUTPUT PER HEIFER			**975**		**975**
Calf rearing costs to 3 months			71		71
4-6 months (indoors)		£			
Concentrates (17% protein)	125 kg	@230	29	250 kg	58
Silage	0.7 tonnes	@18.56	13	0.7 tonnes	13
Bedding straw	0.15 tonnes		11	0.15 tonnes	11
Veterinary and miscellaneous			6		8
7-12 months (at grass)					
Concentrates (15% protein)	25 kg	@215	5	180 kg	39
Grazing	0.15 ha	@200	30	0.17 ha	34
Veterinary and miscellaneous			11		11
13-18 months (indoors)					
Barley and minerals	160 kg	@185	30	360 kg	67
Silage	5 tonnes	@18.56	93	4.5 tonnes	84
AI, Veterinary and miscellaneous			10		26
19-24 months (at grass)					
Grazing	0.21 ha	@200	42	0.23 ha	46
AI, Veterinary and miscellaneous			32		10
25-30 months (indoors)					
Barley and minerals	180 kg	@185	33		
Silage	6 tonnes	@18.56	111		
Veterinary and miscellaneous			3		
Total Variable Costs			**530**		**476**
GROSS MARGIN PER HEIFER			**445**		**499**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**637**		**998**

DAIRY HEIFER REPLACEMENTS - AUTUMN BORN (CONTINUED)

(1) See page 32 for details of calf rearing costs.

(2) For details of grazing & silage variable costs, see pages18 and 19.

(3) Sensitivity analysis

Change in gross margin (£)

	30 month calving	
	per head	per hectare
± £50 in heifer value	50	71
± £10 in calf price	10	15

Change in gross margin (£)

	24 month calving	
	per head	per hectare
± £50 in heifer value	50	100
± £10 in calf price	10	20

(4) Targets weights (kilograms)

Age (months)	Autumn born	
	24 month calving	30 month calving
3	85	85
6	155	145
12	290	260
18	415	355
24	560	460
30	-	580

Target daily liveweight gain (kgs/day)

Age (months)	Autumn born	
	24 month calving	30 month calving
3-6	0.78	0.67
6-12	0.75	0.64
12-18	0.69	0.53
18-24	0.81	0.58
24-30	-	0.67

DAIRY HEIFER REPLACEMENTS - SPRING BORN (2011)

	27 MONTH CALVING			24 MONTH CALVING	
	Physical		Financial	Physical	Financial
			£		£
Value of heifer (allowing for barreners and rejects)			1200		1200
Less value of calf (plus 2% mortality allowance)			225		225
OUTPUT PER HEIFER			**975**		**975**
Calf rearing costs to 3 months			71		71
4-9 months (at grass)		£			
Concentrates (17% protein)	100 kg	@230	23	180 kg	41
Grazing	0.14 ha	@200	28	0.15 ha	30
Veterinary and miscellaneous			11		11
10-15 months (indoors)					
Barley and minerals	360 kg	@185	67	405 kg	75
Silage	3.5 tonnes	@18.56	65	3.75 tonnes	70
AI, Veterinary and miscellaneous			6		8
16-21 months (at grass)					
Barley and minerals	0 kg	@185	0	50 kg	9
Grazing	0.21 ha	@200	42	0.22 ha	44
AI, Veterinary and miscellaneous			32		27
22-24 months (indoors)					
Barley and minerals	25 kg	@185	5	135 kg	25
Silage	2.75 tonnes	@18.56	51	2.50 tonnes	46
Veterinary and miscellaneous			5		3
25-27 months (indoors)					
Barley and minerals	65 kg	@185	12		
Silage	2.75 tonnes	@18.56	51		
Veterinary and miscellaneous			5		
Total Variable Costs			**473**		**461**
GROSS MARGIN PER HEIFER			**502**		**514**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**838**		**1029**

DAIRY HEIFER REPLACEMENTS - SPRING BORN (CONTINUED)

(1) See page 32 for details of calf rearing costs.

(2) For details of grazing & silage variable costs, see pages 18 and 19.
It is assumed that silage is harvested by contractor.

(3) Sensitivity analysis

Change in gross margin (£)

	27 month calving	
	per head	per hectare
± £50 in heifer value	50	84
± £10 in calf price	10	17

Change in gross margin (£)

	24 month calving	
	per head	per hectare
± £50 in heifer value	50	100
± £10 in calf price	10	20

(4) Target weights (kgs)

Age (months)	Spring born	
	24 month calving	27 month calving
3	85	85
9	215	195
15	345	300
21	485	435
24	560	500
27	-	580

Target daily liveweight gain (kgs/day)

Age (months)	Spring born	
	24 month calving	27 month calving
3-9	0.72	0.61
9-15	0.72	0.58
15-21	0.78	0.75
21-24	0.83	0.72
24-27	-	0.89

BULL CALF REARING (TO 3 MONTHS)

		kg	£/tonne	TYPICAL £/head
Milk substitute		20	@ 1720	34
Concentrates	(18% Protein)	85	@ 255	22
	(17% Protein)	25	@ 240	6
Hay		20	@ 110	2
Bedding Straw		70	@ 65	5
Veterinary & sundries				15
Total variable costs				**84**

(1) Intake per calf of milk substitute depends on the system of feeding. A calf would consume 35 kg of milk substitute in 6 weeks on ad libitum feeding system whereas on a bucket rearing system the intake per calf would be between 16 and 24 kg.

(2) When whole milk is fed to calves, 135 litres would provide the same energy and protein as 20 kg of milk substitute.

(3) A heifer calf will consume less concentrates over the first three months (80 to 90 kg). The rearing cost for a dairy heifer calf would be approximately £78.

(4) Vaccination will cost approximately £9 per calf.

(5) The daily liveweight gain during the first 3 months will average 0.7 kg.

(6) Typical liveweights at 3 months of age are 120 kg for bull calves and 110 kg for heifer calves.

LIVEWEIGHT TO DEADWEIGHT PRICE CONVERSION TABLE

Liveweight Price (pence per kg)	**Deadweight Price** (pence per kg)							
	Kill out							
	48%	50%	52%	54%	56%	58%	60%	62%
80	166.7	160.0	153.8	148.1	142.9	137.9	133.3	129.0
82	170.8	164.0	157.7	151.9	146.4	141.4	136.7	132.3
84	175.0	168.0	161.5	155.6	150.0	144.8	140.0	135.5
86	179.2	172.0	165.4	159.3	153.6	148.3	143.3	138.7
88	183.3	176.0	169.2	163.0	157.1	151.7	146.7	141.9
90	187.5	180.0	173.1	166.7	160.7	155.2	150.0	145.2
92	191.7	184.0	176.9	170.4	164.3	158.6	153.3	148.4
94	195.8	188.0	180.8	174.1	167.9	162.1	156.7	151.6
96	200.0	192.0	184.6	177.8	171.4	165.5	160.0	154.8
98	204.2	196.0	188.5	181.5	175.0	169.0	163.3	158.1
100	208.3	200.0	192.3	185.2	178.6	172.4	166.7	161.3
102	212.5	204.0	196.2	188.9	182.1	175.9	170.0	164.5
104	216.7	208.0	200.0	192.6	185.7	179.3	173.3	167.7
106	220.8	212.0	203.8	196.3	189.3	182.8	176.7	171.0
108	225.0	216.0	207.7	200.0	192.9	186.2	180.0	174.2
110	229.2	220.0	211.5	203.7	196.4	189.7	183.3	177.4
112	233.3	224.0	215.4	207.4	200.0	193.1	186.7	180.6
114	237.5	228.0	219.2	211.1	203.6	196.6	190.0	183.9
116	241.7	232.0	223.1	214.8	207.1	200.0	193.3	187.1
118	245.8	236.0	226.9	218.5	210.7	203.4	196.7	190.3
120	250.0	240.0	230.8	222.2	214.3	206.9	200.0	193.5
122	254.2	244.0	234.6	225.9	217.9	210.3	203.3	196.8
124	258.3	248.0	238.5	229.6	221.4	213.8	206.7	200.0
126	262.5	252.0	242.3	233.3	225.0	217.2	210.0	203.2
128	266.7	256.0	246.2	237.0	228.6	220.7	213.3	206.5
130	270.8	260.0	250.0	240.7	232.1	224.1	216.7	209.7
132	275.0	264.0	253.8	244.4	235.7	227.6	220.0	212.9
134	279.2	268.0	257.7	248.1	239.3	231.0	223.3	216.1
136	283.3	272.0	261.5	251.9	242.9	234.5	226.7	219.4
138	287.5	276.0	265.4	255.6	246.4	237.9	230.0	222.6
140	291.7	280.0	269.2	259.3	250.0	241.4	233.3	225.8
150	312.5	300.0	288.5	277.8	267.9	258.6	250.0	241.9
160	333.3	320.0	307.7	296.3	285.7	275.9	266.7	258.1
170	354.2	340.0	326.9	314.8	303.6	293.1	283.3	274.2
180	375.0	360.0	346.2	333.3	321.4	310.3	300.0	290.3

18 MONTH HEIFER BEEF

(October/November 2011 born continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished Heifer	275	@	265	729	729
Less Value of calf plus 2% mortality allowance				180	180
OUTPUT				**549**	**549**
Calf rearing costs to 3 months				78	78
4-6 months (indoors)			£/t		
Concentrates (17% protein)	2.0 to 1.0 kg/day	@	240	43	22
Silage	1.5 tonnes	@	18.56	28	28
Veterinary and miscellaneous				6	6
7-12 months (at grass)			£/t		
Concentrates (15% protein)	100 kg to 30 kg	@	220	22	7
			£/ha		
Grazing	0.15 ha	@	168	25	25
Veterinary and miscellaneous				8	8
13-18 months (indoors)			£/t		
Barley and minerals	4.3 to 2.0 kg/day	@	185	143	67
Silage	4.5 to 5 tonnes	@	18.56	84	93
Veterinary and miscellaneous				6	6
				_____	_____
Total variable costs				**443**	**338**
GROSS MARGIN PER HEAD				**106**	**210**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**283**	**563**
Number of cattle finished per hectare				3.3	3.2
Interest charge per head (@ 4%)				24	21

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) Two levels of concentrate requirements are given. The lower quantity is required with 'GOOD' quality silage (6 to 7 weeks regrowth, 70 D) and the higher level with 'MEDIUM' quality silage (10 weeks regrowth, 60 D).

18 MONTH HEIFER BEEF (CONTINUED)

(3) Number of housed and grazing days and daily liveweight gain (DLWG)

	1st Winter Housed	Grass	2nd Winter Housed
Days	90	180	180
DLWG (kg)	0.75	0.9	0.9

(4) For details of grazing & silage variable costs, see pages 18 and 19. Where silage is harvested by the farmer, gross margins would increase by approximately £6 per tonne of silage used.

(5) Sensitivity analysis

Change in gross margin (£)

	Quality of silage			
	MEDIUM		**GOOD**	
	per head	per hectare	per head	per hectare
+ £10 in calf value	10	27	10	27
+ 5p/kg in sale value	14	37	14	37

22 MONTH STEER BEEF

(October/November 2011 born continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished steer	320	@	255	816	816
Less Value of calf plus 2% mortality allowance				230	230
OUTPUT				**586**	**586**
Calf rearing costs to 3 months				84	84
4-6 months (indoors)			£/t		
Concentrates (17% protein)	2.5 to 1.0 kg/day	@	240	54	22
Silage	1.2 tonnes	@	18.56	22	22
Veterinary and miscellaneous				6	6
7-12 months (at grass)			£/t		
Concentrates (15% protein)	110 kg to 40 kg	@	220	24	9
			£/ha		
Grazing	0.15 ha	@	168	25	25
Veterinary and miscellaneous				8	8
13-18 months (indoors)			£/t		
Concentrates (15% protein)	2.0 to 0.5 kg/day	@	220	79	20
Silage	4.5 to 5 tonnes	@	18.56	84	93
Veterinary and miscellaneous				6	6
19-22 months (at grass)			£/t		
Barley and minerals	130 kg to 60 kg	@	185	24	11
			£/ha		
Grazing	0.17 ha	@	168	29	29
Veterinary and miscellaneous				7	7
				_____	_____
Total variable costs				**452**	**341**
GROSS MARGIN PER HEAD				**134**	**245**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**278**	**511**
Number of cattle finished per hectare				2.2	2.1
Interest charge per head (@ 4%)				33	29

22 MONTH STEER BEEF (CONTINUED)

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) Two levels of concentrate requirements are given. The lower quantity is requiredwith 'GOOD' quality silage (6 to 7 weeks regrowth, 70 D) and the higher level with 'MEDIUM' quality silage (10 weeks regrowth, 60 D).

(3) Weight at 3 Months: 120 kg lwt.

Daily liveweight gain (kg)	
0.75 (3 months to turnout)	0.6 Housed (1st winter)
0.90 At grass (1st summer)	1.0 At grass (2nd summer)

(4) Grazing and silage costs - see pages 18 and 19.

(5) Sensitivity analysis

Change in gross margin (£)

	Quality of silage			
	MEDIUM		GOOD	
	per head	per hectare	per head	per hectare
± £10 in calf value	10	21	10	21
± 5p/kg in sale value	16	33	16	33

24 MONTH STEER BEEF

(January/February 2011 born continental type calves)

			TYPICAL	HIGH
	kg(dwt)	p/kg	£/head	£/head
Finished steer	335 @	265	888	888
Less Value of calf plus 2% mortality allowance			230	230
OUTPUT			**658**	**658**
Calf rearing costs to 3 months			84	84
4-9 months (at grass)		£/t		
Concentrates (15% protein)	100 to 50 kg @	220	22	11
		£/ha		
Grazing	0.11 ha @	168	18	18
Veterinary and miscellaneous			8	8
10-15 months (indoors)		£/t		
Concentrates (15% protein)	1.8 to 0.5 kg/day @	220	71	20
Silage	4 to 4.5 tonnes @	18.56	74	84
Veterinary and miscellaneous			5	5
16-21 months (at grass)		£/ha		
Grazing	0.20 ha @	168	34	34
Veterinary and miscellaneous			8	8
22-24 months (indoors)		£/t		
Barley and minerals	6.7 to 3.0 kg/day @	185	112	50
Silage	2.75 to 3.0 tonnes @	18.56	51	56
Veterinary and miscellaneous			4	4
			_____	_____
Total variable costs			**491**	**381**
GROSS MARGIN PER HEAD			**167**	**277**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**300**	**498**
Number of cattle finished per hectare			2.09	2.0
Interest charge per head (@ 4%)			38	34

24 MONTH STEER BEEF (CONTINUED)

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) Two levels of concentrate requirements are given.
The lower quantity is required with 'GOOD' quality silage (6 to 7 weeks regrowth, 68 D) and the higher levels with 'MEDIUM' quality silage (10 weeks regrowth, 60 D).

(3) Weight at 3 Months: 120 kg lwt.

Daily liveweight gain (kg)	
0.75 At grass (1st summer)	0.90 At grass (2nd summer)
0.60 Housed (1st winter)	1.0 Housed (2nd winter)

(4) Grazing and silage costs - see pages 18 and 19.

(5) Sensitivity analysis

Change in gross margin (£)

	Quality of silage			
	MEDIUM		GOOD	
	per head	per hectare	per head	per hectare
± £10 in calf value	10	18	10	18
± 5p/kg in sale value	17	30	17	30

28 MONTH STEER BEEF

(April/May 2011 born continental type calves)

			TYPICAL	HIGH
	kg(dwt)	p/kg	£/head	£/head
Finished steer	365 @	265	967	967
Less Value of calf plus 2% mortality allowance			230	230
OUTPUT			**737**	**737**
Calf rearing costs to 3 months			84	84
4-5 months (at grass)		£/t		
Concentrates (17% Protein)	60 to 30 kg @	240	14	7
		£/ha		
Grazing	.04 ha @	168	7	7
Veterinary and miscellaneous			8	8
6-11 months (indoors)		£/t		
Concentrates (15% Protein)	2 to 1 kg/day @	220	79	40
Silage	3 to 4 tonnes @	18.56	56	74
Veterinary and miscellaneous			5	5
12-17 months (at grass)		£/ha		
Grazing	0.16 ha @	168	27	27
Veterinary and miscellaneous			8	8
18-23 months (indoors)		£/t		
Concentrates (15% Protein)	2 to 1 kg/day @	220	79	40
Silage	5 to 5.5 tonnes @	18.56	93	102
Veterinary and miscellaneous			5	5
24-28 months (outdoors)		£/ha		
Grazing	0.25 ha @	168	42	42
Veterinary and miscellaneous			8	8
Total variable costs			**515**	**456**
GROSS MARGIN PER HEAD			**223**	**281**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**318**	**402**
Number of cattle finished per hectare			1.5	1.5
Interest charge per head (@ 4%)			45	43

28 MONTH STEER BEEF (CONTINUED)

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) To be sold on the commercial market the steer must be marketed under 30 months of age.

(3) Two levels of concentrate requirements are given. The lower quantity is required with 'GOOD' quality silage (6 to 7 weeks regrowth, 68 D) and the higher level with 'MEDIUM' quality silage (10 weeks regrowth, 60 D).

(4) Weight at 3 Months: 120 kg lwt.

Daily Liveweight Gain (kg)	
0.75 At grass	0.50 Housed (2nd Winter)
0.60 Housed (1st Winter)	1.00 At grass
0.90 At grass	

(5) Grazing and silage costs - see pages 18 and 19.

(6) Sensitivity Analysis

Change in Gross Margin (£)

	Quality of silage			
	MEDIUM		GOOD	
	per head	per hectare	per head	per hectare
+ £10 in calf value	10	14	10	14
+ 5p/kg in sale value	18	26	18	26

CEREAL BULL BEEF

(Friesian type calves)

				TYPICAL
	kg(dwt)		p/kg	£ /head
Finished Bull	260	@	245	637
Less Value of calf plus 2% mortality allowance				80
OUTPUT				**557**
Calf rearing costs to 3 months				84
4-13 months			£/t	
Concentrates (13-15% Protein)	2 tonnes	@	220	440
Straw				15
Veterinary and miscellaneous				30
Total variable costs				**569**
GROSS MARGIN PER HEAD				**-12**
Interest charge per head (@ 4%)				16

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) Bulls are potentially dangerous. Guidance on the handling of bulls can be obtained from DARD.

(3) Market outlets for bull beef should be identified before production is commenced.

(4) Friesian type bull calves finished at 13 months of age. DLWG of 1.3 kg between 4 and 13 months of age

(5) Sensitivity analysis

Change in gross margin (£)

	per head
± £10 in calf value	10
± 5p/kg in sale value	13.0
± £10/t in concentrate price	20

GRASS SILAGE BULL BEEF

(Born spring 2011 continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished Bull	325	@	265	861	861
Less Value of calf plus 2% mortality allowance				230	230
OUTPUT				**631**	**631**
Calf rearing costs to 3 months				84	84
4-6 months			£/t		
Concentrates (17% Protein)	0.5 to 0.3 tonnes	@	240	120	72
Silage	0.5 to 1.0 tonnes	@	18.56	9	19
Veterinary and miscellaneous				12	12
7-14 months					
Concentrates (15% Protein)	1.4 to 0.9 tonnes	@	220	308	198
Silage	5.0 to 6.0 tonnes	@	18.56	93	111
Veterinary and miscellaneous				17	17
Total variable costs				**643**	**513**
GROSS MARGIN PER HEAD				**-12**	**119**
GROSS MARGIN PER HECTARE @ 2 ce/ha				**-39**	**296**
Number of cattle finished per hectare				6.7	5.0
Interest charge per head (@ 4%)				26	23

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(2) Bulls are potentially dangerous. Guidance on the handling of bulls can be obtained from DARD.

(3) Market outlets for bull beef should be identified before production is commenced.

(4) Two levels of concentrate requirements are given. The lower quantity is required with 'GOOD' quality silage (6 to 7 weeks regrowth, 68 D) and the higher level with 'MEDIUM' quality silage (10 weeks regrowth, 60 D). Care should be exercised with silage intake levels to avoid under finished animals at 15 months.

GRASS SILAGE BULL BEEF (CONTINUED)

(5) Continental type bull calves born during the spring and finished at 14 months of age. DLWG of 1.40 kg between 4 and 14 months of age.

(6) Silage costs - see page 19.

(7) Sensitivity Analysis

Change in Gross Margin (£)

	Quality of silage			
	MEDIUM		GOOD	
	per head	per hectare	per head	per hectare
+ £10 in calf value	10	33	10	25
+ 5p/kg in sale value	16	54	16	41
+ £10/t in concentrate price	19	63	12	30

CALF TO STORE SYSTEM

(January 2011 born continental type calves)

	kg(lwt)	£/100kg	TYPICAL £/head
Sale	390	@ 145	566
Less value of calf plus 2% mortality allowance			230
OUTPUT			**336**
Calf rearing cost to 3 months			84
4 - 10 months (at grass)		£/t	
Concentrates (17% protein)	100 kg	@ 240	24
Grazing	0.15 ha	@ 168	25
Veterinary and miscellaneous			11
11 - 16 months (indoors)			
Concentrates (15% protein)	1.5 kg/day	@ 220	59
Silage	4.5 tonnes	@ 18.56	84
Veterinary and miscellaneous			6
Total Variable Costs			**293**
GROSS MARGIN PER CALF			**43**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**59**
Interest per head (@ 4%)			20

(1) January born continental type bull calves sold during the following spring ; 3.0 cattle per hectare.

(2) Weight at 3 Months: 120 kg lwt.

Daily liveweight gain (kg): - At grass 0.8
- Housed 0.6

LOWLAND SUCKLER COWS - MAY/JUNE CALVING (2011)

						TYPICAL
	sold per cow		kg(lwt)		£/100kg	£/head
Calves	0.98	@	320	@	155	486
Less herd replacement cost						40
calf purchases	0.08					18
OUTPUT						**428**
					£/t	
Concentrates - cow & calf			150 kg	@	185	28
					£/ha	
Grazing			0.31 ha	@	168	52
					£/t	
Silage - cow			8 tonnes	@	18.56	148
- calf			2.5 tonnes	@	18.56	46
Veterinary and miscellaneous						38
Total Variable Costs						**313**
GROSS MARGIN PER COW						**115**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha						**183**

(1) Calves weaned during March/April (10 months old) at a liveweight between 300 and 340 kg. 0.96 calves born per cow and 6 per cent mortality birth to weaning.

(2) Herd replacement cost

Cow purchase price	£850
Cull cow price	£700
Replacement/Mortality	15% replacement rate and 1% mortality per annum
Bull depreciation	£10 per cow/year

(3) Daily liveweight gain

	At grass	Housed
Bulls	1kg	0.9kg
Heifers	1kg	0.9kg

(4) For details of grazing & silage variable costs, see pages 18 and 19.

(5) Sensitivity analysis

	Change in Gross Margin (£)	
	per cow	per hectare
± £10/t in concentrate price	2	2
± £5/100 kg in sale price	16	25
± 0.1 calves sold per cow	50	79

LOWLAND SUCKLER COWS - FEBRUARY/MARCH CALVING (2011)

					TYPICAL £/head
	sold per cow	kg(lwt)		£/100kg	
Calves	0.98	@ 270	@	155	410
Less herd replacement cost					40
calf purchases	0.10				23
OUTPUT					**348**
				£/t	
Concentrates - calf		50 kg	@	240	12
- cow		50 kg	@	185	9
				£/ha	
Grazing		0.30 ha	@	168	50
				£/t	
Silage - cow		7 tonnes	@	18.56	130
Veterinary and miscellaneous					44
Total Variable Costs					**246**
GROSS MARGIN PER COW					**102**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha					**173**

(1) Calves weaned during October. DLWG of 0.95 kg. 0.94 calves born per cow and 6 per cent mortality birth to weaning.

(2) Herd replacement cost

Cow purchase price	£850
Cull cow price	£700
Replacement/Mortality	15% replacement rate and 1% mortality per annum
Bull depreciation	£10 per cow/year

(3) For details of grazing & silage variable costs, see pages 18 and 19.

(4) Sensitivity analysis

Change in gross margin (£)

	per cow	per hectare
+ £10/t in concentrate price	1	2
+ £5/100 kg in sale price	13	22
± 0.1 calves sold per cow	42	71

LOWLAND SUCKLER COWS - SEPTEMBER/OCTOBER CALVING (2011)

					TYPICAL
	sold per cow	kg(lwt)		£/100kg	£/head
Calves	0.98	@ 280	@	155	425
Less herd replacement cost					40
calf purchases	0.10				23
OUTPUT					**363**
				£/t	
Concentrates - calf		150 kg	@	240	36
- cow		200 kg	@	185	37
				£/t	
Silage - cow		8 tonnes	@	18.56	148
- calf		1 tonnes	@	18.56	19
				£/ha	
Grazing		0.28 ha	@	168	47
Veterinary and miscellaneous					48
Total Variable Costs					**335**
GROSS MARGIN PER COW					**28**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha					**46**

(1) Calves weaned during June. DLWG of 0.95 kg. 0.94 calves born per cow and 6 per cent mortality birth to weaning.

(2) Herd replacement cost

Cow purchase price	£850
Cull cow price	£700
Replacement/Mortality	15% replacement rate per annum
	1% mortality per annum
Bull depreciation	£10 per cow/year

(3) For details of grazing & silage variable costs, see pages 18 and 19.

(4) Sensitivity analysis

Change in gross margin (£)

	per cow	per hectare
± £10/t in concentrate price	4	6
± £5/100 kg in sale price	14	23
± 0.1 calves sold per cow	43	71

HILL SUCKLER COWS - SPRING CALVING (2011)

	sold per cow		kg(lwt)		£/100kg	TYPICAL £/head
Calves	0.94	@	230	@	155	335
Less herd replacement cost						38
calf purchases	0.06					14
OUTPUT						**283**
			kg		£/t	
Barley and minerals			110	@	185	20
Grazing						34
			tonnes		£/t	
Silage			6	@	18.56	111
Veterinary and miscellaneous						40
Total Variable Costs						**206**
GROSS MARGIN PER COW						**78**

(1) Calves weaned during October. 0.92 calves born per cow and 4 per cent mortality birth to weaning.

(2) Herd replacement cost

Cow purchase price	£700
Cull cow price	£550
Replacement/Mortality	15% replacement rate per annum 1% mortality per annum
Bull depreciation	£10 per cow/year

(3) For details of grazing & silage variable costs, see pages 18 and 19.

Change in gross margin (£)

	per head
± £10/t in concentrate price	1
± £5/100 kg in sale price	11
± 0.1 calves sold per cow	36

BEEF HEIFER REPLACEMENTS - SPRING BORN 2011
24 MONTH CALVING

		TYPICAL
		£/head
Value of heifer (allowing for barreners & rejects)		750
Less Value of calf plus 2% mortality allowance		210
OUTPUT		**540**
Calf rearing costs to 3 months		71
4-9 months (at grass)	£/t	
Concentrates (17% protein)	20 kg @ 240	5
	£/ha	
Grazing	0.11 ha @ 168	18
Veterinary and miscellaneous		11
10-15 months (indoors)	£/t	
Barley and minerals	400 kg @ 185	74
Silage	4.5 tonnes @ 18.56	84
Veterinary and miscellaneous		8
16-21 months (at grass)		
Grazing	0.19 ha @ 168	32
AI Bull charges, veterinary and miscellaneous		27
22-24 months (indoors)	£/t	
Barley and minerals	40 kg @ 185	7
Silage	3 tonnes @ 18.56	56
Veterinary and miscellaneous		3
Total variable costs		**396**
GROSS MARGIN PER HEAD		**144**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha		**255**

(1) Production of a continental cross Friesian heifer. Target weights:-

320 kg at 15 months
520 kg at 24 months

(2) 2.1 heifer replacements per hectare.

BEEF HEIFER REPLACEMENTS - SPRING BORN - 24 MONTH CALVING (CONTINUED)

(3) For details of grazing & silage variable costs, see pages 18 and 19.

(4) Sensitivity analysis

Change in gross margin (£)

	per head	per hectare
± £10 in heifer values	10	18
± £10 in calf prices	10	18

FINISHING SUCKLED STEER CALVES

(Purchased Autumn 2011)

				TYPICAL
	kg (dwt)		p/kg	£/head
Sale of finished steer	360	@	270	972
	kg (lwt)		£/100 kg	
Less Value of calf plus 2% mortality allowance	265	@	165	437
OUTPUT				**535**
			£/t	
9-14 months (indoors)				
Concentrates (17% Protein)	2.0 kg/day	@	240	86
Silage	3.5 tonnes	@	18.56	65
Veterinary and miscellaneous				9
			£/t	
15-20 months (at grass)				
Barley and minerals	40 kg	@	185	7
			£/ha	
Grazing	0.19 ha	@	168	32
Veterinary and miscellaneous				10
21-24 months (indoors)				
Barley and minerals	6 kg/day	@	185	133
Silage	3 tonnes	@	18.56	56
Veterinary and miscellaneous				9
Total variable costs				**408**
GROSS MARGIN PER HEAD				**127**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**311**
Interest charge per head (@ 4%)				32

(1) Continental calves born during the spring 2011, purchased at the autumn suckler sales and sold at 2 years of age. 2.8 steers finished per hectare.

	1st Winter Housed	Grass	2nd Winter Housed
Days	180	180	120
DLWG (kg)	0.6	0.9	1.0
Concentrates (kg)	360	40	720

(2) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies.

(3) Sensitivity analysis

Change in gross margin (£)

	per head	per hectare
+ £5/100 kg in purchase price	13	32
+ 5p/kg in sale prices	17	42

WINTER (2011/2012) STEER FINISHING
400 KG STORE

				TYPICAL £/head
	kg (dwt)		p/kg	
Sale of finished steer	340	@	265	901
	kg(lwt)		p/kg	
Less Purchase	400	@	160	640
OUTPUT				**261**
			£/t	
Barley and minerals	4 kg/day	@	185	170
Silage	7 tonnes	@	18.56	130
Veterinary and miscellaneous				7
Total Variable Costs				**307**
GROSS MARGIN PER HEAD				**-46**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**-220**
Interest charge per head (@ 4%)				20

(1) Continental cross steers purchased during the autumn of 2011 and finished in 230 days in house with a DLWG of 0.95kg. 5.7 steers finished per hectare. Deadweight price is net of marketing expenses.

(2) Cattle are sold at 22 months.

(3) Gross margin under various purchase and sale price scenarios.

Gross margin (£ per head)

		Purchase Price p/kg (lwt)				
		130	**140**	**150**	**160**	**170**
Sale price (pence per per kg (dwt))	**200**	-147	-187	-227	-267	-307
	220	-79	-119	-159	-199	-239
	240	-11	-51	-91	-131	-171
	260	57	17	-23	-63	-103
	280	125	85	45	5	-35

WINTER (2011/2012) STEER FINISHING
500 KG STORE

				TYPICAL £/head
	kg(dwt)		p/kg	
Sale of finished steer	360	@	265	954
	kg(lwt)		p/kg	
Less Purchase	500	@	155	775
OUTPUT				**179**
			£/t	
Barley and minerals	4 kg/day	@	185	111
Silage	5 tonnes	@	18.56	93
Veterinary and miscellaneous				7
Total Variable Costs				**211**
GROSS MARGIN PER HEAD				**-32**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**-233**
Interest charge per head (@ 4%)				14

(1) Continental cross steers. Purchased during the autumn 2011 and housed for 150 days with a daily liveweight gain of 1.0 kg. An average of 8.0 steers finished per hectare. Deadweight price is net of marketing expenses.

(3) Silage costs - see page 19.

(3) Gross margin under various purchase and sale price scenarios.

Gross margin per head

		Purchase Price p/kg (lwt)				
		120	**130**	**140**	**150**	**160**
Sale price (pence per per kg (dwt))	**200**	-91	-141	-191	-241	-291
	220	-19	-69	-119	-169	-219
	240	53	3	-47	-97	-147
	260	125	75	25	-25	-75
	280	197	147	97	47	-3

SUMMER STEER FINISHING 2011
420 KG STORE

				TYPICAL
	kg(dwt)		p/kg	£/head
Sale of finished steer	330	@	260	858
	kg(lwt)		£/100kg	
Less Purchase	420	@	165	693
OUTPUT				**165**
			£/t	
Barley and Minerals	20 kg	@	185	4
			£/ha	
Grazing	0.25 ha	@	168	42
Veterinary and miscellaneous				8
Total Variable Costs				**54**
GROSS MARGIN PER HEAD				**111**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**668**
Interest charge per head (@ 4%)				14

(1) Sale price is after deduction of marketing expenses which include fees for meat inspection, grading, insurance, offal disposal, clipping, R&D and LMC levies

(2) Continental cross steers. Purchased during the spring 2011 and grazed for 180 days with a daily liveweight gain of 1.0 kg. An average of 4.0 steers grazed per hectare.

(3) Grazing variable costs - see page 18.

(4) Average Northern Ireland stocking rates for summer cattle finishing would typically be lower with approximately 2.6 cattle finished per hectare.

(5) Gross margin under various purchase and sale price scenarios.

Gross margin per head

		Purchase price p/kg (lwt)				
		140	**150**	**160**	**170**	**180**
Sale price (pence per per kg (dwt))	**200**	18	-24	-66	-108	-150
	220	84	42	0	-42	-84
	240	150	108	66	24	-18
	260	216	174	132	90	48
	280	282	240	198	156	114

'TRADITIONAL' STORE TO BEEF SYSTEM

(Purchased October 2011)

				TYPICAL
	kg(dwt)		p/kg	£/head
Sale of finished steer	350	@	260	910
	kg(lwt)		£/100kg	
Less Purchase	360	@	160	576
OUTPUT				**334**
			£/t	
Barley and minerals	300 kg	@	185	56
Silage	5.5 tonnes	@	18.56	102
			£/ha	
Grazing	0.22 ha	@	168	37
Veterinary and miscellaneous				20
Total Variable Costs				**215**
GROSS MARGIN PER HEAD				**119**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**358**
Interest charge per head (@ 4%)				27

(1) Continental cross steers. Purchased during October 2011 and finished one year later. 2.8 cattle finished per hectare. Deadweight price is net of marketing expenses.

	Housed	Grass 2nd year
Days	180	180
DLWG (kg)	0.55	1.0
Concentrates (kg)	300	NIL

(2) Grazing and silage costs - see pages 18 and 19.

(3) Average Northern Ireland stocking rates for summer cattle finishing would typically be lower with approximately 1.6 cattle finished per hectare.

(4) Sensitivity analysis

	Change in gross margin (£)	
	per head	per hectare
± £5/100kg in purchase price	18	50
± 1p/kg in sale price	4	11

SUMMER GRAZING OF STORE CATTLE 2011

		TYPICAL
	kg(lwt) £/100kg	£/head
Sale of store steer	450 @ 160	720
Less Purchase	300 @ 170	510
OUTPUT		**210**
	£/t	
Barley and minerals	40 kg @ 185	7
	£/ha	
Grazing	0.18 ha @ 168	30
Veterinary and miscellaneous		12
Total Variable Costs		**50**
GROSS MARGIN PER HEAD		**160**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha		**960**
Interest charge per head (@ 4%)		11

(1) Continental cross steer purchased during the Spring 2011 and grazed for 180 days with a daily liveweight gain of 0.85 kg. An average of 5.6 steers grazed per hectare.

(2) Grazing variable costs - see page 18.

(3) At the average Northern Ireland stocking rate of 1.65 cow equivalents per hectare, 4.5steers would be stocked per hectare.

(4) Gross margin under various purchase and sale price scenarios.

Gross margin per head

		Purchase Price p/kg (lwt)				
		140	**150**	**160**	**170**	**180**
Sale price (pence per per kg (lwt)	**130**	115	85	55	25	-5
	140	160	130	100	70	40
	150	205	175	145	115	85
	160	250	220	190	160	130
	170	295	265	235	205	175

LOWLAND BREEDING EWES - MID MARCH LAMBING

	kg		p/kg		LOW £		TYPICAL £		HIGH £
Lambs (no.) sold finished	21	@	350	(1.20)	88	(1.40)	103	(1.60)	118
Wool							2		
Less Flock replacement cost							15		
OUTPUT					**75**		**90**		**104**
	kg		£/t						
Concentrates	55	@	230				13		
Grassland (including hay/silage)							22		
Veterinary and miscellaneous							10		
Total Variable Costs							**45**		
GROSS MARGIN PER EWE					**30**		**45**		**60**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha					**274**		**406**		**538**

(1) Lamb sales pattern (%)

	June	July	Aug	Sept	Oct to Dec
Mid March lambing	17	19	14	13	37
Mid April lambing	4	14	21	25	36

(2) Sale price of lambs is net of marketing expenses.

(3) A stocking rate of 9 ewes per hectare is assumed in this budget.

(4) Flock replacement cost. Ewe replacement rate of 25% (inclusive of 5% ewe mortality). Ewes purchased at £100 and culls sold at £60. Rams purchased at £320 and sold after 3 years at £65.

(5) If replacements are retained rather than purchased, the flock replacement cost will fall, but so too will lamb output.

(6) Flocks in the new LFA will have a similar physical performance.

(7) Grazing, silage and hay costs - see pages 18 - 20.

(8) Sensitivity analysis

Change in gross margin(£)

	TYPICAL	
	per ewe	per hectare
± 0.1 in lambs reared per ewe	7.3	66
± 10p/kg in sale value	2.9	26
± £20/t in concentrate price	1.1	10

LOWLAND BREEDING EWES
EARLY (DECEMBER/JANUARY) LAMBING

	kg		p/kg		LOW £		TYPICAL £		HIGH £
Lambs (no.) sold finished	21	@	390	(1.05)	86	(1.30)	106	(1.45)	119
Wool							2		
Less Flock replacement cost							15		
OUTPUT					**73**		**93**		**106**
	kg		£/t						
Concentrates - ewe	70	@	230				16		
lambs	35	@	225				8		
Grazing and hay/silage							26		
Veterinary and miscellaneous							13		
Total Variable Costs							**63**		
GROSS MARGIN PER EWE					**10**		**30**		**43**
GROSS MARGIN PER HECTARE @ 2.5 ce/ha					**124**		**380**		**533**

(1) Lamb sales pattern (%)

April	May	June	July	Aug to Nov
15	20	20	15	30

Some producers may be able to sell up to 90% of their lambs before the end of June.

(2) Sale price of lambs is net of marketing expenses.

(3) A stocking rate of 12.5 ewes per hectare is assumed in this budget. Stocking rate is higher than that achieved by 'Mid March' lambing due to the earlier lamb sales.

(4) Flock replacement cost . Ewe replacement rate of 25% (inclusive of 5% ewe mortality). Ewes purchased at £100 and culls sold at £60. Rams purchased at £320 and sold after 3 years at £65.

(5) With this production system, housing is normally required at lambing. Approximately 0.10 fewer lambs will be reared per ewe than for 'Mid March' lambing.

LOWLAND BREEDING EWES - EARLY (DECEMBER/JANUARY) LAMBING (CONTINUED)

(6) Flocks in the new LFA will have a similar physical performance.

(7) Grazing, silage and hay costs - see pages 18 - 20.

(8) Sensitivity analysis

Change in gross margin (£)

	TYPICAL	
	per ewe	per hectare
± 0.1 in lambs reared per ewe	8.2	102
± 10p/kg in sale value	2.7	34
± £20/t in concentrate price	2.1	26

UPLAND BREEDING EWES - CROSSBRED TYPE IN SDA

			LOW		TYPICAL		HIGH
			£		£		£
	kg @ p/kg						
Lambs sales (no.)	21 @ 340	(0.74)	53	(0.98)	70	(1.12)	80
	16 @ 340	(0.31)	17	(0.42)	23	(0.48)	26
Wool					2		
Less Flock replacement cost					15		
OUTPUT			**57**		**80**		**93**
	kg @ £/t						
Concentrates	65 @ 230				15		
Grazing and hay					22		
Veterinary and miscellaneous					10		
Total Variable Costs					**47**		
GROSS MARGIN PER EWE			**10**		**33**		**46**

(1) For the typical flock, 70% of lambs are sold fat at 21kg halfweight, 30% as stores at 16kg halfweight.

(2) Sale price of lambs is net of marketing expenses.

(3) Flock replacement. Ewe replacement rate of 25% (inclusive of 5% mortality). Ewe replacements purchased at £100 each and culls sold at £60 each. Rams purchased at £320 each and sold after 3 years for £65.

(4) Sensitivity analysis

Change in gross margin(£)

	TYPICAL
	per ewe
± 0.1 in lambs reared per ewe	6.6
± 10p/kg in sale value	2.7
± £20/t in concentrate price	1.3

HILL BREEDING EWES - MOUNTAIN TYPE IN SDA

			LOW		TYPICAL		HIGH	
				£		£		£
	kg	p/kg						
Lamb sales (no.)	20 @	330	(0.21)	14	(0.27)	18	(0.33)	22
	14 @	330	(0.49)	23	(0.63)	29	(0.77)	36
		£/head						
Cull ewes	0.18 @	50				9		
Wool						2		
Less Flock replacement cost						2		
OUTPUT				**45**		**56**		**66**
	kg	£/t						
Concentrates	55 @	230				13		
Grazing						16		
Veterinary and miscellaneous						10		
Total Variable Costs						**39**		
GROSS MARGIN PER EWE				**7**		**17**		**28**

(1) 25 lambs per 100 ewes retained as replacements.

(2) Lambs sales, 30% sold fat at 20kg halfweight and 70% sold as stores at 14kg halfweight.

(3) Sale price of lambs is net of marketing expenses.

(4) Flock replacement. Rams purchased at £320 each and sold after 3 years for £65

(5) Ewe mortality of 7% per annum.

(6) Sensitivity analysis

Change in gross margin(£)

	TYPICAL
	per ewe
± 0.1 in lambs reared per ewe	5.2
± 10p/kg in lamb sale value	2.0
± £20/t in concentrate price	1.1

STORE LAMB (16 kg +) FINISHED ON GRASS

	kg (halfweight)	p/kg	TYPICAL £
Lamb sale	21	@ 340	71
Less lamb purchase	16	@ 340	54
OUTPUT (feeder's margin)			**17**
Grazing			3
Veterinary and miscellaneous			1
Total Variable Costs			**4**
GROSS MARGIN PER LAMB			**13**

(1) Store lambs are purchased at an average half weight of 16 kg during the summer/autumn and typically grazed for approximately 100 days. Approximately 70% of the finished lambs are sold in the period October to December. Price for finished lambs is net of marketing deductions.

(2) Average weekly liveweight gain of 0.7 kg. However, some producers could achieve a liveweight gain of 1.0 kg per week.

(3) A mortality rate of less than 1% is typical.

(4) Own grazing is charged at £0.8 per month for each lamb. Rented grass keep would cost approximately £0.45 per lamb per week.

(5) Sensitivity analysis

	Change in gross margin (£)
	per lamb
± 10p per kg halfweight in purchase price	1.60
± 10p per kg halfweight in sale price	2.10

STORE LAMB (14 kg +) FINISHED ON GRASS AND CONCENTRATES

	kg (halfweight)	p/kg	TYPICAL £
Lamb sale	21	@ 340	71
Less lamb purchase	14	@ 340	48
OUTPUT (feeder's margin)			**24**
	kg	£/tonne	
Concentrates	45	@ 225	10
Grazing			4
Veterinary and miscellaneous			1
Total Variable Costs			**15**
GROSS MARGIN PER LAMB			**9**

(1) Store lambs are purchased during the summer/autumn at an average half weight of 14kg and typically grazed for 150 days. Approximately 66% of the finished lambs are sold in the period December to February. Price for finished lambs is net of marketing expenses.

(2) Average weekly liveweight gain of 0.66 kg.

(3) A mortality rate of 1% is typical.

(4) Typically 15kg of concentrates per month are fed for 3 months. However, up to 25kg of concentrates may be fed per month.

(5) Own grazing is charged at £0.8 per month for each lamb. Rented grass keep would cost approximately £0.45 per lamb per week.

(6) Sensitivity analysis

	Change in gross margin(£)
	per lamb
± 10p/kg in purchase price	1.40
± 10p/kg in sale value	2.10
± £10/t in concentrate price	0.45
± 10 kg in concentrate use	2.25

STORE LAMB (14 kg) FINISHED ON FORAGE CROPS

	kg (halfweight)			TYPICAL
	kg		p/kg	£
Lamb sale	21	@	345	72
Less lamb purchase	14	@	340	48
OUTPUT (feeder's margin)				**25**
	kg/day		£/tonne days	
Concentrates	0.2	@	225 125	6
			p/day @	
Grazing			4.2 @ 100	4
Veterinary and miscellaneous				1
Total Variable Costs				**11**
GROSS MARGIN PER LAMB				**14**

(1) Store lambs are purchased at an average halfweight of 14kg during the autumn and typically fed during a 125 day finishing period on forage crops. The finished lambs are assumed to be sold in February.

(2) Price for finished lambs is net of marketing expenses.

(3) Average weekly liveweight gain of 0.8kg.

(4) A mortality rate of 1% is typical.

(5) Forage costs include seed, fertiliser and spray expenses only. No allowance for crop cultivations has been included. Typical contractor charges for cultivations would be £65 per hectare for swedes and £50 per hectare for stubble turnips, or approximately£1/ lamb.

(6) Swedes sown in May and fed from November provide 6,500 lamb grazing days per hectare at a typical variable cost of £275 per hectare or 4.2 pence per lamb grazing day. Stubble turnips sown in July and grazed from November provide 4,000 grazing days per hectare at a typical variable cost of £300 per hectare or 7.5 pence per lamb grazing day.

(7) Sensitivity analysis

Change in gross margin (£)

	per lamb
+10p/kg in purchase price	1.40
+10p/kg in sale value	2.10

STORE LAMBS FINISHED INDOORS

	kg (halfweight) kg @ p/kg	TYPICAL £
Lamb sale	22 @ 355	78
Less lamb purchase	15 @ 335	50
OUTPUT (feeder's margin)		**28**
	kg £/tonne	
Concentrates	85 @ 225	19
Veterinary and miscellaneous (including fodder)		3
Total Variable Costs		**22**
GROSS MARGIN PER LAMB		**6**

(1) Store lambs are housed in November at an average half weight of 15kg. They are typically finished after 100 (up to 140) days concentrate only feeding period. The finished lambs are sold in the early spring.

(2) Price for finished lambs is net of marketing deductions.

(3) Concentrate intake and liveweight gain

	Store lamb	
	30 kg (lwt)	40 kg (lwt)
Concentrate intake per month (kg)	25	35
Typical weekly liveweight gain (kg)	0.8	1.1

(4) A mortality rate of 2.5% is typical.

(5) Sensitivity analysis

Change in gross margin (£)

	per lamb
+ 10p/kg in purchase price	1.50
+ 10p/kg in sale value	2.20
+ £10/t in concentrate price	0.85
+ 10 kg in concentrate use	2.25

PIG REARING

				LOW		TYPICAL		HIGH
		£/head		£		£		£
Sales (no.) of 39 kg weaners	@	42	(18.0)	756	(21.0)	882	(24.0)	1,008
	number	£/head						
Plus cull sows	0.36	@ 130				47		
Less boar charge						3		
OUTPUT				**800**		**926**		**1,052**
		£/t						
Sow meal		260		337		355		368
Creep and link feeds		450		122		142		162
Grower pellets		290		235		274		313
A.I. Costs				16		16		16
Veterinary and miscellaneous				55		55		55
Total Variable Costs				**764**		**841**		**914**
GROSS MARGIN PER SOW				**36**		**84**		**138**
GROSS MARGIN PER WEANED PIG				**2.0**		**4.0**		**5.7**

(1) Herd replacement. It is assumed that sows and boars have an average breeding life of 2.5 years; 1 boar per 75 sows; sow mortality 4.0% and 100% of replacements . retained

(2) As the number of weaners sold per sow increases, the sow meal allocation per weaner falls.

	LOW	TYPICAL	HIGH
Number of weaners sold per sow per year	18	21	24

Meal consumption per weaner (kg)	LOW	TYPICAL	HIGH
Sow meal	72	65	59
Creep & link feeds	15	15	15
Grower pellets	45	45	45
Total feed	**132**	**125**	**119**

(3) A.I. Costs - semen cost £3 per bottle. Each sow inseminated on average 2.6 times per year and uses two bottles of semen per insemination.

(4) 'Veterinary and miscellaneous' costs do not include 'fixed costs' such as electricity, water and transport which are directly associated with the pig enterprise - **See page 98 for a breakdown of fixed costs**

(5) Sensitivity analysis

	Change in gross margin (£ per sow)		
	LOW	TYPICAL	HIGH
+ £1 in sale price	18	21	24
+ £5 in average feed price	12	13	14

PIG FINISHING

				TYPICAL £
	kg (dwt)		p/kg	
Sale	80	@	125	100
	kg (lwt)			
Less purchase	39			42
OUTPUT				**58**
	kg		£/t	
Finisher meal	175	@	260	46
Veterinary and miscellaneous				3
Total variable cost				**49**
GROSS MARGIN PER PIG				**10**

(1) Conversion table for converting liveweight to deadweight

kg lwt.	Killing out (KO)%
79 - 87	74
88 - 95	75
96 - 102	76

(2) Prices for finished animals are net of marketing deductions.

(3) The mortality rate is typically 1%. On average 1 pig in 120 sold is condemned and no payment is received.

(3) Typical feed conversion rate (FCR) of 2.7 : 1. There is a large variation in FCR between units depending on management practices adopted, genetics, slaughter weight and health status.

(4) 'Veterinary and miscellaneous' costs do not include 'fixed costs' such as electricity, water and transport which are associated with the pig enterprise - **See page 98 for a breakdown of fixed costs**

(5) Sensitivity analysis

	Change in gross margin £ per pig
± 1p/kg in sale price	0.80
± £5/tonne in average feed price (FCR 2.7:1)	0.88

PIG REARING AND FINISHING

			LOW		TYPICAL		HIGH	
				£		£		£
	kg (dwt)	p/kg						
Sales of pigs (no.) @	80 @	125	(19)	1,900	(22)	2,200	(25)	2,500
	Number	£/head						
Plus cull sows	0.36 @	130				47		
Less boar charge						3		
OUTPUT				**1,944**		**2,244**		**2,544**
		£/t						
Sow meal		260		356		372		384
Creep & link feeds		450		128		149		169
Grower pellets		290		375		421		464
Finisher meal		260		840		915		1008
A.I. Costs				16		16		16
Veterinary and miscellaneous				90		90		90
Total Variable Costs				**1,804**		**1,962**		**2,129**
GROSS MARGIN PER SOW				**140**		**282**		**414**
GROSS MARGIN PER FINISHED PIG				**7.36**		**12.80**		**16.58**

(1) Sale price for finished animals are net of marketing expenses.

(2) Herd replacement. It is assumed that sows and boars have an average breeding life of 2.5 years; 1 boar per 75 sows; sow mortality 4.0% and 100% of replacements retained.

(3) Mortality 4% weaning to sale. In addition, 1 pig in 120 sold is condemned for which no payment is received.

(4) High performing herds have significantly better FCR than low performing herds.

(5) A.I. Costs - semen cost £3 per bottle. Each sow inseminated on average 2.6 times per year and uses two bottles of semen per insemination

	LOW	TYPICAL	HIGH
Number of weaners sold per sow per year	18.0	20.0	22.0

Meal consumption per finished pig (kg)	LOW	TYPICAL	HIGH
Sow meal	72	65	59
Creep & link feed	15	15	15
Grower pellets	68	66	64
Finisher pellets	170	160	155
Total feed	**325**	**306**	**293**

(5) 'Veterinary and miscellaneous' costs do not include 'fixed costs' such as electricity, water and transport which are directly associated with the pig enterprise
- **See page 98 for a breakdown of fixed costs**

(6) Sensitivity analysis

Change in gross margin

Change	£ per sow		
	LOW	**TYPICAL**	**HIGH**
± 1p/kg in sale price	15.2	17.6	20.0
± £5/tonne in average feed price	31	34	37

ENRICHED CAGED LAYING HENS

PER HEN HOUSED	TYPICAL pence/dozen	GOOD pence/dozen
Sales	79.80	79.80
Less pullet	12.90	12.50
OUTPUT	**66.90**	**67.30**
Concentrates @£275/t	47.97	45.46
Miscellaneous	2.22	2.14
Total Variable Costs	**50.19**	**47.60**
GROSS MARGIN PER DOZEN (pence)	**16.71**	**19.70**
GROSS MARGIN PER BIRD (£)	**4.51**	**5.52**

(1) Average data per hen housed over the typical 58 week laying cycle

Type of production	Yield (dozen eggs)	Feed used (g. per day)	Mortality (%)
Typical production	27	116	6
Good production	28	114	4

(2) The egg price is a weighted average (by class of egg and market destination) and excludes packaging and marketing costs. Fluctuations in egg prices make it imperative that up to date information is obtained in the preparation of any budget.

(3) Miscellaneous costs are comprised of electricity, water, insurance, repairs, maintenance and sundries. Labour, rent and depreciation are not included in miscellaneous costs.

(4) Sensitivity analysis

	Change in gross margin(£) per hen housed	
	TYPICAL	**GOOD**
± 1p in sale price/dozen	0.27	0.28
± £5/t in feed price	0.24	0.23

(5) Further information and advice may be obtained from DARD's Poultry Technology Service.

FREE RANGE LAYING HENS

PER HEN HOUSED	TYPICAL pence/dozen	GOOD pence/dozen
Sales	98.70	98.70
Less pullet	14.00	13.50
OUTPUT	**84.70**	**85.20**
Concentrates @£295/t	58.93	54.36
Miscellaneous	5.00	4.81
Total Variable Costs	**63.93**	**59.17**
GROSS MARGIN PER DOZEN (pence)	**20.77**	**26.03**
GROSS MARGIN PER BIRD (£)	**5.19**	**6.77**

(1) Average data per hen over the typical 58 week laying cycle

Type of production	Yield (dozen eggs)	Feed Used (g. per day)	Mortality (%)
Typical production	25	123	10
Good production	26	118	6

(2) The egg price is a weighted average and excludes packaging and marketing costs.

(3) Miscellaneous costs are comprised of electricity, water, insurance, repairs, maintenance, litter and sundries. Labour, rent and depreciation are not included in miscellaneous costs.

(5) Sensitivity analysis

	Change in gross margin(£) per hen housed	
	TYPICAL	**GOOD**
± 1p in sale price/dozen	0.25	0.26
± £5/t in feed price	0.25	0.24

(6) Further information and advice can be obtained from DARD's Poultry Technology Service.

BROILERS

				TYPICAL
	kg		p/kg	pence/bird
Sales	2.1	@	72.50	152.25
	No.		£/100	
Less Day Old Chicks	1.03	@	28.50	29.36
OUTPUT				**122.90**
	kg		£/t	
Concentrates	3.6	@	280	100.80
Miscellaneous				13.76
Total Variable Costs				**114.56**
MARGIN PER BIRD (pence)				**8.33**
MARGIN PER 1,000 BIRDS (£)				**83.35**

(1) Most broilers in Northern Ireland are produced under contract to poultrymeat processors. Where growers have invested in new or modernised housing, additional payments may be made.

(2) 40 day production period of mixed sex birds.

(3) 3% mortality is typical

(4) Feed Conversion Ratio of 1.7:1.

(5) Miscellaneous costs include litter, medication, electricity, gas, and cleaning and washing, insurance, maintenance, repairs . and sundries. Labour, rent and depreciation are not included.

(6) Sensitivity analysis

	Change in gross margin	
	per bird (p)	per 1,000 birds (£)
+ 1p/kg in sale price	2.10	21.00
+ £5/t in concentrate price	1.80	18.00
+ 0.01 in FCR	0.59	5.93

(7) Further information and advice may be obtained from DARD's Poultry Technology Service.

NON-THOROUGHBRED HORSES

		TYPICAL £/mare		HIGH £/mare
	sold per mare £		sold per mare £	
Sales - (3 year old)	0.60 @ 3,000	1,800	0.75 @ 5,000	3,750
Less mare depreciation		250		450
OUTPUT		**1,550**		**3,300**
Stud fees		200		500
Registration		25		25
Bedding		100		115
Fodder		215		250
Concentrates		275		310
Veterinary and medicines		280		310
Farrier		225		260
Grazing		50		50
Transport and marketing		125		160
Total Variable Costs		**1495**		**1,980**
GROSS MARGIN PER MARE		**55**		**1,320**

(1) The output and gross margins of horse production are subject to more variation than most farming enterprises.

(2) 'High' performance is associated with premium level efficiency and judgement.

(3) Typical production level - 3 foals produced every 5 years
High production level - 3 foals every 4 years.

(4) Variable costs include costs of rearing offspring (yearling, 2 year old and 3 year old). They are calculated on an average year basis i.e. total associated costs multiplied by 0.6 (typical) and 0.75(high).

(5) Mare Depreciation:
Typical Purchase Price £3000 Cull Value £500 Average Life 10 years
High Purchase Price £5000 Cull Value £500 Average Life 10 years

FARMED DEER

				Venison Sale
	sold finished	kg	£/kg (dwt)	£/hind
Stags	0.43 @	56 @	3.80	92
Hinds	0.38 @	48 @	3.60	66
	culls		£/head	
Stags	0.01 @		104	1
Hinds	0.07 @		95	7
Less stags	0.01 @		450	5
Output per hind				**160**
	kg		£/t	
Concentrates	150 @		220	33
Forage cost				30
Veterinary, medicine				8
Sundries - including haulage				12
Total Variable Costs				**83**
GROSS MARGIN PER HIND				**77**

(1) Deer farming is a small enterprise in Northern Ireland. Careful planning, including the identification of possible market outlets, should be undertaken before commencing production.

(2) Hinds sold as breeding stock generally attract a higher price than those sold for venison, although the market for breeding stock is very limited. This budget assumes that replacement hinds are retained rather than bought in.

(3) A stocking rate of up to 7 hinds per hectare is possible.

(4) Farmed deer require fencing but this is not included in the calculation of gross margin per hind

The Single Farm Payment Scheme

The Single Farm Payment (SFP) Scheme was introduced in the United Kingdom on 1 January 2005 and replaced most existing crop and livestock payments.

To claim SFP the applicant must be a farmer undertaking agricultural activity, hold SFP Entitlements on 15 May in any scheme year and, have eligible agricultural land at their disposal on 15 May. Individual field parcels declared to activate SFP entitlements must be at least 0.1 hectares and applicants need to be registered with DARD as a farm business before an application can be processed.

SFP Payment Entitlements

If a farm business did not establish entitlements in 2005 and wishes to claim SFP it will have to obtain entitlements by transfer from another farm business. This transfer could be sale with or without land, by lease with leased land or through inheritance. To trade entitlements, the applicant needs to be registered and approved by DARD as a farm business. Applications to transfer entitlements must be received by DARD on or before 2 April in the year in which they are to be used in order to be eligible for payment (a guidance booklet on the transfer of entitlements is available on request from the Trading Section, Single Farm Payment Branch, Orchard House).

In 2011 there are two types of Entitlements

- Standard – allocated to most applicants. These must be activated once every two years, otherwise they will be taken from the applicant and returned to the National Reserve.
- Special Entitlements (subject to special conditions) – to be eligible for payment on these the applicant must maintain the level of agricultural activity notified to them by DARD. These entitlements must also be activated once every two years. Special Entitlements can be changed to Standard Entitlements by declaring one eligible hectare of eligible land; once changed over they cannot be changed back.

To activate all the Entitlements held and maximise payment of SFP upon them, the farm business must have an equal number of eligible hectares of agricultural land at its disposal on 15 May. Unless the business states otherwise, DARD will activate entitlements up to the limit supported by the eligible land entered into the scheme on the field data sheet, starting with the highest value entitlements. Where entitlements are of equal unit value, priority will be given to those entitlements which were not activated in the previous year. This ensures that the payment is maximised each year and the value of entitlements returned to the National Reserve is minimised.

Applications

Claims for payment of SFP Entitlements held by the farm business must be made each year on a Single Application Form (SAF). Farmers who completed a SAF in the previous year will automatically be issued with a SAF in March of the following scheme year. Forms are also available upon request from local DARD offices.

Legislation states that the closing date for all Single Application Forms is 15 May without penalty. Applications received between 16 May and up to 9 June will be penalised (except in cases of force majeure/exceptional circumstances). However, where the 15 May is a Saturday or Sunday we will accept completed applications on the following Monday.

As the 15 May 2011 is a Sunday, applications will be accepted on 16 May without penalty and with penalty until 10 June.

Other than on grounds of force majeure/ exceptional circumstances late applications will be rejected.

DARD also offers an increasingly popular online application service. Anyone wishing to use this channel must register, in the first instance, with the Government Gateway in order to gain secure access to this and other online services offered by the Department. Applicants intending to submit their SAF online are strongly advised to complete this registration process at least two weeks before the closing date for the receipt of applications. Further information on how to register with the Government Gateway and access online services thereafter may be found at www.dardni.gov.uk/onlineservices

Verification of Applications

Administrative and on-farm checks are carried out to ensure applications have been completed correctly and that SFP eligibility rules have been satisfied. Penalties will be applied if scheme rules have not been met or discrepancies are identified.

On-farm Inspections

A minimum of 5% of claims received each year are subject to an on-farm inspection in order to (a) verify the details of the claim (including the usage and area of each field parcel) and (b) to confirm that scheme eligibility criteria have been met. There is also a requirement to carry out on-farm inspections on at least 1% of all claims received to verify compliance with Cross-Compliance standards (see below). In some cases, there is a higher inspection rate set by EU law, for example, in the area of Cattle Identification and Registration. Farm businesses selected for inspection are identified mainly using a risk analysis method with a smaller number chosen on a random basis. Complaints and referrals from members of the public and other Government Bodies will also be investigated.

Cross Compliance

To qualify for receipt of direct agricultural support, farmers are required to observe certain responsibilities towards the protection of the environment, animal, public and plant health and animal welfare throughout the scheme year. This is known as Cross Compliance which is comprised of two elements - Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Conditions (GAEC).

Statutory Management Requirements are specific articles contained within 18 European regulatory requirements covering the environment, animal, public and plant health and animal welfare. They were phased in over three years beginning from 1 January 2005 and all SMRs are now in force
The Good Agricultural and Environmental Conditions were developed from a framework set out by the European Commission to address soil erosion, soil organic matter, soil structure and minimum level of maintenance. The GAECs fall into 7 measures; soil management, supplementary feeding, overgrazing, under grazing, field boundaries, protection of habitats, archaeological sites and permanent pasture and irrigation authorisations.

The Cross Compliance Standards are set out in a series of booklets available from the Department. In Northern Ireland, farm businesses' adherence to the Cross-Compliance requirements is checked by four Competent Control Authorities (see below). Each of these, with the exception of the Health and Safety Executive Northern Ireland (HSENI), is responsible for inspecting the Cross-Compliance standards that falls under its area of responsibility. HSENI inspections are undertaken by the Department of Agriculture and Rural Development.

1. Department of Agriculture and Rural Development (DARD)

- Good Agricultural and Environmental Condition Requirements (GAEC's);
- Feed and Food Law SMR

2.Northern Ireland Environment Agency (NIEA)

- Environmental SMR's

3. Health and Safety Executive Northern Ireland (HSENI)

- Safe use of pesticides SMR

4. Veterinary Service

- Animal Identification SMRs;
- Illegal hormone use SMR;
- Disease notification SMRs;
- Animal welfare SMRs.

Payments

The EU rules provide for full payments to be made between 1 December of the scheme year and 30 June of the following year. The Department aims to complete the vast majority of payments as early as possible within the seven-month payment window provided for in the EU regulations. The payment timetable for each scheme year is published in November.

The fixed exchange rate to be applied each year is the actual rate prevailing on 30 September. The exchange rate for the 2010 year was €1 = 0.85995. EU rules provide that direct aid payments can only be made direct to the applicant's bank account through the Bankers Automated Credit Services (BACS) system

Payment will normally be made in sterling. If an applicant wishes they can receive their payment in euro into a UK Euro bank account. An application for payment in euro must be made on the Single Application Form for the year in question.

From 2010 EU rules require a minimum payment level. In Northern Ireland the minimum payment level is €100. This means that if the total value of the Entitlements claimed is less than €100 no payment can be made.

Modulation

Modulation is the transfer of funds from farming subsidies to agri-environment and other rural development schemes. One type of modulation is applied on a compulsory basis at the same percentage rate in all EU Member States. An additional national (voluntary) rate of modulation is also applied in Northern Ireland. The rates of compulsory and voluntary modulation to be applied in 2011 are as follows.

Payments of	Compulsory Modulation rate	Voluntary Modulation rate	Total
Up to €5,000	0%	9%	**9%**
€5,000+ - €300,000	9%	5%	**14%**
€300,000+	13%	1%	**14%**

Penalties

There can be serious consequences for breaching scheme rules, including a reduction in the amount payable, the loss of the entire payment for the scheme year, the repayment of any subsidy already paid, and even exclusion from the scheme in future years. DARD does not have discretion to waive penalties, except in cases of force majeure/ exceptional circumstances or obvious error.

Circumstances when a penalty may be applied include:

- Late applications
- All land on the holding not declared (an under declaration)
- Ineligible land declared (an over declaration)
- fields duplicated with another farmer (an over declaration)
- cross-compliance requirements breached

However, if the applicant has provided the Department with factually correct information or can show that they were not at fault, the claim will be adjusted to the actual situation and a penalty will not be applied.

Changes to the SFP Scheme

This document constitutes only a brief summary of some of the main aspects of the SFP scheme and is not intended to replace the more detailed scheme guidance booklet or other related notifications from DARD. SFP applicants should, therefore, ensure they make themselves familiar with all current SFP guidance material, most particularly the “Guide on How to Complete your Single Application and Field Data Sheet”, which is issued along with the Single Application packs from mid-late March each year, as well as the “Guide to the Single Farm Payment Scheme” which is available on request from local DARD offices.

Further information and advice on the Single Farm Payment Scheme can be obtained from Single Farm Payment Branch. Contacts details are provided on pages 123-124.

LESS FAVOURED AREA COMPENSATORY ALLOWANCES 2011

Less Favoured Area Compensatory Allowances (LFACA) is an annual subsidy scheme designed to contribute to the continuation of farming in the Less Favoured Areas (LFA) in Northern Ireland and thus to the maintenance of viable rural communities. As well as contributing towards the maintenance of the countryside it promotes the everyday use of good environmental practices complementary to maintaining sustainable farming.

Applicants have to maintain a minimum stocking density during a control period which for the 2011 scheme is 01 April 2010 to 31 October 2010 and must farm at least three hectares of eligible forage land (which may include a share of common land) lying within the LFA designation. There are comparable schemes in the rest of the UK and in other member states.

The minimum stocking density requirement of 0.2 livestock units per hectare comprising suckler cows, heifers, ewes, breeding female deer and breeding female goats must be maintained throughout the entire 7 month period 01 April - 31 October. To be eligible for the cattle bonus enhancement 25% of eligible livestock units must be suckler cows or heifers throughout the entire 7 month period 01 April - 31 October.

Those farm businesses eligible to apply will have submitted a 2010 IACS return; and;

- Indicated in that return that they wished to apply for LFACA, and
- Completed LFACA information in that return

The payment rates in respect of 2011 LFACA are £47.62 per hectare for Severely Disadvantaged Land (SDA) and £23.81 per hectare for Disadvantaged Land (DA) and Common Land (CL).

AGRI-ENVIRONMENT SCHEMES

Agri-environment schemes reward farmers for environmentally sensitive land management. They are considered crucial in delivering Government's commitment to:

- Deliver on biodiversity;
- Mitigate climate change
- Enhance the landscape;
- Protect our heritage;
- Promote responsible management of farm nutrients.

There are currently approx 12,500 participants in the Environmentally Sensitive Areas (ESA) Scheme, Countryside Management Scheme (CMS) and Organic Farming Scheme (OFS), with 42% of the farmland area of Northern Ireland under agreement. The ESA scheme is closed for new applications but existing agreements will remain in place.

(A) Northern Ireland Countryside Management Scheme (NICMS)

The new Countryside Management Scheme, which replaces the existing Countryside Management Scheme and Environmentally Sensitive Areas Scheme, was launched in June 2008. 943 Scheme agreements commenced on 1 January 2009. A further 4800 applications were received in 2010. These applications will be prioritised, based on environmental criteria, and it is anticipated that approx 2300 applications will be progressed to agreement stage, with agreement start date of 1 January 2012.

(B) Organic Farming Scheme (OFS)

The Organic Farming Scheme was introduced in 1999 to assist farmers converting from conventional production methods to organic production. A new Organic Farming Scheme has been developed, and opened for applications in September 2008, with 33 agreements commencing on 1 January 2009. It is anticipated that the Scheme will open for further applications during 2011.

Applicants may enter parcels of land into five year agreements. The land must be registered with an approved Organic Sector Body and this Body ensures that farms approved as organic adhere to all the required standards.

Further information on agri-environment schemes may be obtained from any DARD office.

FORESTRY

(1) WOODLAND GRANT SCHEME

Grants are available under this scheme for the establishment, restocking and natural regeneration of broadleaved, conifer and mixed woodlands.

1.1 New Planting (Establishment Grant)

A minimum area of 0.2 hectares must be planted. Grants for new planting at the rates shown below are payable in 2 installments; 70% on completion of planting and the remaining 30% at year 5, subject to a final inspection.

SPECIES	GRANT (£/HA)
Conifer	1,600
Broadleaves	2,400

1.2 Restocking

Grants are payable in one installment on completion of planting as follows:-

SPECIES	GRANT (£/HA)
Conifer	400
Broadleaves	600

1.3 Natural Regeneration

A discretionary payment of 50% of the agreed initial costs is payable on completion of the approved work. Alternatively, a 'fixed payment', equivalent to the rate for restocking, is payable when the regeneration has been successfully established.

1.4 Community Woodland Supplement (CWS)

The purpose of this supplement is to encourage the creation of new woodlands close to towns and cities which will be of value for informal public recreation. Full public access is required. In addition to receiving the establishment grant, a supplement of £1,000 per hectare is payable as a lump sum once the initial planting is completed and the agreed facilities are in place.

1.5 Sustainable Forestry Operations Grant (SFOG)

SFOG is intended to help towards some of the cost of eligible investment work necessary in special woodlands of high environmental potential and to enhance social and environmental benefits. A grant of £50 per hectare is payable at the end of each year for an agreed 5 year plan. For areas of 5 hectares or less, SFOG will be payable in one installment at the end of the first year. The minimum area eligible is one hectare per application.

1.6 Woodland Environment Grant (WEG)

This is a discretionary payment, to assist work in existing woodlands requiring one-off remedial measures to secure significant environmental benefits through the enhancement of biodiversity or to improve the public amenity of woodlands. A grant of up to 50% of the cost of the agreed operations and not

exceeding £3000 is payable on completion of all work. The minimum area eligible is one hectare per application.

1.7 Short Rotation Coppice (SRC)

Support for the planting of SRC crops, for renewable energy purposes, is available and will be considered in the context of development of the renewable energy market in Northern Ireland. The provision of support will be at the discretion of the Forest Service, and a number of conditions apply.

The maximum rate of grant for establishment of SRC is £1000/ha.

Grant will normally be paid in two installments, 70% on completion of planting, and the remaining 30% after the plantation has been cut back and residual herbicide applied.

The minimum qualifying area for SRC is 3.0 hectares.

SRC will not qualify for either restocking or natural regeneration grants, nor for Farm Woodland Premium Scheme payments.

(2) FARM WOODLAND PREMIUM SCHEME (FWPS)

This is designed to encourage the establishment of new woodland on farms by providing an annual payment to farmers to compensate for income forgone. Payments are made for 10 or 15 years depending on the type of woodland.

Entry to the scheme will only be possible if the planting proposed for the new woodland is eligible under the Woodland Grant Scheme.

Payment rates (£/hectare/year)

Applicant	Category of land	Outside LFA	LFA – Disadvantaged Areas	LFA – Severely Disadvantaged Areas
Farmer	**Arable and other improved land**	**290**	**240**	**200**
Non-farmer	**Arable and other improved land**	**100**	**100**	**100**
Farmer/ Non-farmer	**Unimproved land**	**Ineligible**	**90**	**60**

Woodlands in the landscape

All new planting grant schemes must be designed to ensure that they will not have an adverse effect on the environment, e.g. because of size, nature or

location. Each application will be assessed as to its likely impact before being approved.

Further Details

Further details of all forestry grant schemes are available from **Afforestation and Plant Health Branch, Room 26, Dundonald House, Upper Newtownards Road, Belfast, BT4 3SB, tel. 028 90 765391** or by emailing grants.forestservice@dardni.gov.uk**.** These details are also available online at **www.forestserviceni.gov.uk**

Nitrates and Phosphorus Regulations

The Nitrates Action Programme Regulations (Northern Ireland) 2010 and the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006 bring into operation measures to improve the use of these nutrients on farms and reduce their input to Northern Ireland's water environment from agricultural sources.

The Nitrates Action Programme (NAP). Regulations meet Northern Ireland's legal and environmental obligations and the Phosphorus Regulations support the Action Programme Measures. Both sets of Regulations apply to all agricultural land in Northern Ireland.

The Nitrates Action Programme has to be reviewed and, where necessary, revised, at least every four years. This process was carried out in 2010 and a revised action programme has now been set out in the Nitrates Action Programme Regulations (Northern Ireland) 2010 (2010 NAP Regulations) which update and replace the 2006 NAP Regulations.

The following is a summary of the Nitrates Action Programme and the Phosphorus Regulations:

1. Closed Spreading Periods

- Chemical Nitrogen fertiliser must not be applied from midnight 15 September to midnight 31 January.
- Organic manures, including slurry, poultry litter, sewage sludge and abattoir waste, must not be applied from midnight 15 October to midnight 31 January.
- Farmyard manure (FYM) must not be applied from midnight 31 October to midnight 31 January.
- There is no closed spreading period for dirty water.
- Land application restrictions listed below apply to spreading of all fertilisers, including dirty water

2. Land Application Restrictions

- All fertilisers, chemical and organic, must not be applied:
  - on waterlogged soils, flooded land or land liable to flood;
  - on frozen ground or snow covered ground;
  - if heavy rain is forecast in the next 48 hours;
  - on steep slopes that is an average incline of 20% or more on grassland or an average incline of 15% or more on all other land) where other significant risks of water pollution exist. Risk factors to be considered include the proximity to waterways, the time to incorporation, the type and amount of fertiliser being applied and / or the soil and weather conditions.
- Prevent entry of fertilisers to waters and ensure application is accurate, uniform and not in a location or manner likely to cause entry to waters.
- Chemical fertilisers must not be applied within 2m of any waterway.
- Organic manures including dirty water must not be applied within:
  - 20m of lakes;

- 50m of a borehole, spring or well;
- 250m of a borehole used for a public water supply;
- 15m of exposed cavernous or karstified limestone features;
- 10m of a waterway other than lakes; This distance may be reduced to 3m where slope is less than 10% towards the waterway and where organic manures are spread by bandspreaders, trailing shoe, trailing hose or soil injection or where adjoining area is less than 1 hectare in size or not more than 50m in width

- Application rates:
  - No more than $50m^3$/ha (4500 gal/ac) or 50 tonnes/ha (20t/ac) of organic manures to be applied at one time, with a minimum of three weeks between applications;
  - No more than $50m^3$/ha (4500 gal/ac) of dirty water to be applied at one time, with a minimum of two weeks between applications.

- Slurry can only be spread by inverted splashplate, bandspreaders, trailing shoe, trailing hose or soil injection.
- Dirty water to be spread by same methods as slurry and by irrigation.
- Sludgigators must not be used.

3. Nitrogen (N) Fertiliser Crop Requirement

	Maximum kg N/ha on grassland
Dairy farms*	272 (8 1/4 bags/ac)
Other farms	222 (6 3/4 bags/ac)

(N from organic manures other than livestock manure must be subtracted)

*More than 50% of N in livestock manure comes from dairy cattle
** Approximate number of 50kg bags of a 27% N type fertiliser

- For non-grassland crops, the crop requirement as determined by the latest edition of RB209, must not be exceeded.

4. Chemical Phosphorus Fertiliser

- Can only apply chemical fertiliser containing phosphorus if soil analysis shows a crop requirement as determined by the latest edition of RB209.

5. Livestock Manure Nitrogen Limits

- 170kgN/ha/year farm limit.
- Farms with at least 80% grassland may apply annually by 1 March to NIEA for a derogation to permit application of up to 250kgN/ha/year of grazing livestock manure. Additional conditions and Cross-Compliance verifiable standards will apply. Further guidance is available from NIEA.

6. Livestock Manure and Silage Effluent Storage Requirements

- 26 weeks livestock manure storage capacity for pig and poultry enterprises. 22 weeks for other enterprises.
- Provided certain criteria are met there are allowances for out-wintering, animals in bedded accommodation, separated cattle slurry, renting additional tanks, poultry litter stored in a midden or field heap and exporting slurry to approved outlets.
- Livestock manure and silage effluent storage must be maintained and managed to prevent seepage run-off
- New or substantially enlarged or reconstructed stores must comply with Silage, Slurry and Agricultural Fuel Oil (SSAFO) (Northern Ireland) Regulations, 2003.
- FYM storage:
    - FYM may be stored in middens with adequate effluent collection facilities.
    - Until 31 December 2012, FYM may be stored in field heaps where it is to be applied but for no longer than 180 days. After that date such FYM field heaps are permitted but for no longer than 120 days. FYM field heaps must not be located on land that is waterlogged, flooded or likely to flood.
- Poultry litter storage
    - Poultry litter may be stored in middens with adequate effluent collection facilities.
    - Poultry litter may be stored in field heaps until 30 September 2011.
    - Poultry litter may only be stored in field heaps for a maximum of 180 days in the field where it is to be applied and must be covered with an impermeable membrane within 24 hours of placement in the field.
    - Field storage of poultry litter is to be reviewed in 2011.
- FYM and poultry litter field heaps must not be stored:
    - in the same location of the field year after year;
    - within 50m of lakes;
    - within 20m of a waterway;
    - within 50m of a borehole, spring or well;
    - within 250m of a borehole used for a public water supply;
    - within 50m of exposed cavernous or karstified limestone features.
- Provide sufficient storage for dirty water for periods when conditions for land application are unsuitable

7. Land Management

- Crop and soil management to minimise soil erosion and nutrient run off.

8. Record Keeping

- Agricultural area, field size and location
- Cropping regimes and areas, Soil Nitrogen Supply (SNS) index for crops other than grassland.
- Livestock numbers, type, species and time kept.
- Organic and chemical fertiliser details including imports and exports.

- Evidence of a Phosphorus requirement if chemical Phosphorus fertiliser sown.
- Storage capacity and where applicable associated evidence to support allowances to reduce capacity
- Evidence of control over the agricultural area and the right to graze common land.

Many of these records already exist on farms, for example, SAF / IACS form, farm maps, herd and flock records and fertiliser receipts.

- Records to be ready by 30 June each year for period 1 January to 30 December of previous year.
- Records to be retained for inspection from previous five calendar years.
- If you operating under an approved derogation, you must keep your fertilisation plan on farm and ready for inspection by 1 March for that calendar year. Your fertilisation account for the previous calendar year must be received by NIEA by 1 March.

Full details of all Measures can be found in the NAP Guidance Document 2011 - 2014 and Workbook that can be accessed online at www.dardni.gov.uk and www.ni-environment.gov.uk

Further information and advice on these Nitrates and Phosphorous Regulations can be obtained from the local DARD offices or Northern Ireland Environment Agency. Contacts details are provided on pages 123 & 126.

AVERAGE FERTILISER PRICES 2010

		£ per tonne
C.A.N (27% N)		200
Urea (46% N)		264
Cereal fertiliser	18.14.14	293
	16.16.16	343
	15.15.17	308
Grassland fertiliser	20.10.10	268
	27.5.5	274
	27.4.4	256
	25.5.5	251
	25.0.5	225
	26.0.6	228
Silage fertiliser	24.6.12	275
	22.4.14	265
	25.0.13	258
Ground limestone	(Collected)	11
	(Delivered and spread)	15

(1) All prices refer to the average net retail price charged to Northern Ireland farmers in the period January-October 2010.

(2) Figures used in the budgets in this publication are based on anticipated prices for 2011.

FEEDINGSTUFF PRICES AT OCTOBER 2010

	% protein	£ per tonne
Dairy nuts	18	225
	20	235
Calf milk replacer (bags)	22	1720
Calf starter/weaner meal	18	250
Calf rearing nuts	17	230
Cattle fattening nuts	16	205
Cattle concentrate	30	230
Sheep feed (bulk)	18	220
(bags)	18	250
Lamb feed	16	220
Pig creep pellets (bulk)	20	540
(bags)	20	560
Pig link/early grower	21	345
Pig grower/rearer meal	20	290
Pig fattening meal	19	270
Sow meal	18	260
Barley meal		185
Maize meal		205
Soya bean meal		300
Whole wheat		190
Whole Barley		180

(1)The prices quoted above are for bulk purchase except where stated.

(2) Figures used for the budgets in this publication are based on anticipated prices for 2011.

RELATIVE FEED VALUES

These relative feed values are calculated using unit costs for metabolisable energy and crude protein derived from the reference feedstuffs of barley and soya. The value of the rumen degradable protein (if applied) is allowed for by calculating a unit cost based on the price of urea. If a particular feedstuff price is lower than the relative value then it is a 'good buy' and vice versa. Two feedstuffs may be compared with each other in terms of the differences between the price of each foodstuff and its relative value.

CAUTIONS

These relative values are only a guide:-

(1) They are based on average analysis; actual samples may differ from the averages used.

(2) The unit values for metabolisable energy and crude protein depend on the balance of nutrients in the reference feedstuff. Barley and soya have been chosen as the most appropriate; other reference feedstuffs would give different answers.

(3) The real unit values of metabolisable energy and crude protein depend on the feeding situation and not entirely on the feedstuffs. For example, undegradable protein has a low value for mature growing cattle but a high value for fast growing young stock.

(4) Energy density is also an important consideration, i.e. straw may be a 'good buy' compared with flaked maize, but would be entirely unsuitable for high yielding dairy cows.

Relative feed values therefore only give a crude guide to feedstuff values.

Feed	Relative Value
Barley	100.00
Wheat	103.80
Hipro soya	170.00
Maize	105.60
Oats	92.10
Urea	185.00
Grass	25.00
Hay (Good)	63.75
Hay (Average)	56.25
Silage (Good)	24.10
Silage (Average)	22.47
Barley straw	35.00
Maize gluten meal	184.30
Maize gluten feed	113.00
Herring fish meal	213.50

Feed	Relative Value
Linseed meal	129.00
Rapeseed meal	125.90
Soya bean meal 44	141.80
Potatoes	23.10
Molasses	73.90
Dried molassed sugar beet pulp	101.00
Brewers' grains	27.90

ENTERPRISE MARGINAL CAPITAL REQUIREMENTS (EMCR)

(a) Arable Enterprises

	EMCR £ per hectare
Spring barley (6 months)	356
Spring oats (6 months)	319
Winter barley (10 months)	438
Winter oats (10 months)	372
Winter wheat (10 months)	522
Spring oilseed rape (6 months)	353
Winter oilseed rape (10 months)	424
Seed potatoes (6 months)	1,652
First early potatoes (6 months)	1,752
Maincrop ware potatoes (6 months)	1,525

(b) Livestock Enterprises

	Initial Capital (1) (£)	Variable Costs per livestock place (2) (£)	Total EMCR per livestock place (3) (£)
Dairy cows (1 month)	1200	52 – 70	1252 – 1270
Dairy heifer replacements	225	461 – 530	686 – 755
18 month heifer beef	180	443	623
22 month steer beef	230	452	682
24 month steer beef	230	491	721
28 month steer beef	230	515	745
Cereal bull beef	80	569	649
Grass silage bull beef	230	643	873
Calf to store system	230	293	523
Lowland suckler cows - May calving	850	313	1163
- Feb calving	850	246	1096
- Oct calving	850	335	1185
Hill suckler cows	700	206	906
Beef heifer replacements	210	396	606
Finishing suckled calves	437	408	845
Winter cattle finishing 400kg (230 days)	640	307	947
Winter cattle finishing 500kg (150 days)	775	211	986
Summer cattle finishing 420kg (180 days)	693	54	747
Traditional store to beef system (12 mths)	576	215	791
Summer grazing of store cattle (6 mths)	510	50	560
Lowland breeding ewes - March lambing	100	45	145
Lowland breeding ewes - Dec lambing	100	63	163
Upland breeding ewes	100	47	147
Hill breeding ewes	100	39	139
Store lamb finishing (3-5 mths)	48 - 54	4 – 22	58 – 72

	Initial Capital	Variable Costs Livestock per place	Total EMCR Livestock per place
	(1) (£)	(2) (£)	(3) (£)
Pig rearing (per sow) (5mths)	140	350	490
Pig finishing (per pig) (3 mths)	42	49	91
Pig rearing/finishing (per sow) (6 mths)	140	981	1121
Horses – half bred mares	3,000	1,495	4,495
Deer – Hinds	200	83	283

(1) For livestock enterprises the initial capital is the purchase price of the animal.

(2) The variable costs quoted for a livestock enterprise are the total variable costs invested in the enterprise until the point of first sale. In the case of a dairy cow this represents one month's variable costs. Details of total variable costs for each enterprise can be found under the appropriate enterprise gross margin budget.

Fixed costs (excluding labour)
By type of farm business 2009/2010[1]

Dairy Farms	Very Small	Small	Medium	Large
Area farmed (hectares)[2]	33	47	73	139
		£'s per Ha		
Conacre rent	42	36	69	105
Depreciation of buildings/work	91	129	183	232
Depreciation of machinery	114	126	156	147
Machinery running costs	148	163	148	156
Electricity and heating fuels	48	46	44	46
Building repairs	39	53	52	56
Misc. (inc. farm rates)	86	70	55	48
Total	**568**	**623**	**707**	**790**
Cattle and Sheep Farms	SDA	DA	LFA	Non-LFA
Area farmed (hectares)[2]	107	68	93	65
		£'s per Ha		
Conacre rent	24	26	25	53
Depreciation of buildings/work	34	70	44	78
Depreciation of machinery	62	111	75	120
Machinery running costs	66	103	76	112
Electricity and heating fuels	5	9	6	12
Building repairs	21	48	28	49
Misc. (inc. farm rates)	23	47	30	46
Total	**235**	**414**	**284**	**470**

Other Farm Types	Cereals	General Cropping	Mixed	Pigs
Area farmed (hectares)[(2)]	69	69	62	8
		£'s per Ha		£'s per £100 output
Conacre rent	46	320	81	0
Depreciation of buildings/work	49	45	59	2
Depreciation of machinery	230	288	316	3
Machinery running costs	178	216	266	2
Electricity and heating fuels	11	21	34	2
Building repairs	26	28	51	1
Misc. (inc. farm rates)	52	39	63	1
Total	**592**	**957**	**870**	**11**

(1) Farm types

Dairying	Farms with more than two-thirds of total Standard Gross Margin (SGM) from dairying (including associated young stock).
Cattle and Sheep	Farms which do not qualify as Dairy farms but have more than two-thirds of total SGM from cattle and sheep.
Cereals	Farms with more than two-thirds of total SGM from cereals, oilseeds and set-aside.
General cropping	Farms which do not qualify as Cereal farms but have more than two-thirds of total SGM from arable crops (including field scale vegetables) or in a mixture of arable and horticultural crops.
Mixed	Farms where crops account for one third, but less than two thirds of total SGM and livestock for one third, but less than two thirds of total SGM.
Pigs	Farms with more than two-thirds of total SGM from pigs.

(2) Area farmed has been adjusted for conacre taken or let. Planning for 2011 should take account of any anticipated changes in fixed costs. As the levels of fixed costs per hectare differ considerably between farms, the data quoted above should be treated with caution. Since the composition of the labour force between family and hired workers is so variable between farms, no attempt has been made to produce data for comparison.

ANNUAL TRACTOR COSTS - Estimates for 2011

	4-Wheel drive						2-Wheel drive			
Horse power	120		100		80		90		80	
Initial Cost (£)	38,500		29,250		25,000		22,000		21,000	
	Per year	Per hour	Per year	Per hour	Per year	Per hour	Per year	Per hour	Per year	Per hour
Repairs	1,540	3.08	1,170	2.34	1,000	2.00	880	1.76	840	1.68
Depreciation (average charge)	3,290	6.58	2,500	5.00	2,130	4.26	1,880	3.76	1,790	3.58
Insurance	875	1.75	780	1.56	730	1.46	710	1.42	670	1.34
Fuel & Oil	5,525	11.05	4,875	9.75	3,900	7.80	4,550	9.10	3,575	7.15
TOTAL	11,230	22.46	9,325	18.65	7,760	15.52	8,020	16.04	6,875	13.75

(1) Initial cost based on purchase price.

(2) Based on annual use of 500 hours. Higher annual use will result in higher annual, but lower hourly costs. Heavy operations, e.g. slurry mixing, will result in a greater cost than light work.

(3) Annual repair costs have been estimated using 4% of the initial cost.

(4) Depreciation has been calculated by reducing balance method, using 15% depreciation and a life of 9 years.

(5) Insurance costs are for comprehensive cover with up to 5% contracting. Costs will also depend on excesses, claims history and the need for cover on implements

(6) Fuel has been costed at 65 pence per litre.

(7) No interest or leasing charges have been included.

NEW MACHINERY PRICES

Tractors (See Page 99)

	£		£
Quad (4WD Bike)	4,000 - 7,000	Plough	5,000 - 17,000
Rough terrain forklift	15,000 - 40,000	Harrow	1,000 - 1,500
4 WD utility vehicle	6,000 - 10,000	Power harrow	5,500 - 9,000
Pick-up	9,000 - 20,000	Land roller	800 - 1,300
Slurry tanker	3,000 - 15,000	Land leveller	250 - 1,000
Slurry pump	1,500 - 4,500	Fertiliser sower	1,000 - 5,000
Manure rotaspreader	2,500 - 14,000	Crop sprayer	1,000 - 10,000
Yard scraper	250 - 800	Potato harvester	20,000 - 60,000
Mower conditioner	5,000 - 17,000	Box tipper	2,500 - 4,000
Precision chop harvester	15,000 - 30,000	Cattle trailer	2,500 - 5,000
Double chop harvester	5,500 - 6,500	Link box	250 - 750
Silage trailer	4,500 - 12,000	Welder	250 - 1,000
Buckrake	1,000 - 2,000	Compressor	300 - 800
Bale spike	150 - 350	Generator	400 - 1,500
Grass topper	700 - 3,000	Power washer	200 - 1,250
Sheargrab	1,000 - 2,000	Water pump	1,000 - 2,500
Tractor loader	3,500 - 6,000	Hedge cutter	5,500 - 25,000
Silage feeding trailer	700 - 1,500	Chain saw	200 - 600
Diet feeder wagon	10,500 - 30,000	Bulk meal bin	1,500 - 2,500

AGRICULTURAL CONTRACTORS' CHARGES

	Cost (£)	
1. Cultivations		
Ploughing - Lea	50 to 70	per hectare
- Stubble and other	50 to 60	"
Discing	15 to 20	per hour
Chain harrowing	10 to 15	"
Power harrowing	25 to 35	per hectare **or**
	25	per hour
Ground driven rotary harrowing	15	"
Springtine harrowing	15 to 18	"
Rotavating - Large types 100"	30 to 40	per hectare **or**
	23 to 26	per hour
Land Levelling	20	per hour
Rolling - Light	10 to 15	per hectare
- Heavy	12 to 16	"
Reseeding (Complete operation not including seed/fertiliser)	290 to 370	"
2. Seeding and Planting		
- combined drilling	20 to 25	per hectare
- precision seeding	40 to 55	"
- potato planting (automatic)	22 to 30	per hour
- direct drilling	40 to 50	per hectare
- one pass cultivation and drilling	44 to 55	"
- destoning	140 to 170	"
3. Spraying and Spreading		
Crop spraying (excluding chemicals)	14 to 22	per hectare
Fertiliser	15 to 25	per tonne
	6 to 12	per hectare
	18 to 25	per hour
Lime spreading	15 to 18	per tonne
Farmyard Manure		
- Entire operation	30 to 45	per hour
Slurry spreading (1,100-1,500) gallon tanker	16 to 22	"
Slurry spreading (2,000 gallon tanker)	20 to 25	"
Slurry spreading (self-propelled tanker)	35 to 50	"
Slurry Spreading (umbilical system)	55 to 75	"
Slurry Spreading (umbilical system)	4 to 7	per 1000 gallons
Pumping and agitating (tanks)	20 to 25	per hour

	Cost (£)	
4. Harvesting		
Forage, including harvester, tractor and trailer		
- precision (complete operation)	130 to 170	per hectare
- precision (without buckraking)	115 to 155	"
- double chop (complete operation)	110 to 140	"
Buckraking into silo	16 to 25	"
Additional tractor and trailer for haulage	20 to 25	per hectare **or**
	18 to 22	per hour
Mowing hay or grass (conventional)	17 to 30	per hectare
Mowing hay or grass (Conditioner/auto swather)	22 to 35	per hectare
Topping grass	16	per hectare
Tedding, turning or raking	12 to 15	"
Pick-up baling - including twine	0.30 to 0.40	per small bale
- excluding twine	0.18 to 0.22	"
Big bale silage - round, chop, net and wrap	6.50 to 7	per bale
Big bale straw	2.00 to 2.50	"
Combine harvesting	75 to 100	per hectare
Potato harvesting (ground destoned)	240 to 320	per hectare
Forage Maize harvesting (complete operation)	160 to 190	per hectare
5. Grain Drying and rolling		
Drying - Handling charge	2	per tonne
per 1% moisture removed,	3 to 4	"
Rolling	19 to 22	

	Cost (£)	
6. Ditching and Field Drainage		
Wheeled digger - bucket type	18 to 25	per hour
Tracked digger	24 to 30	"
Bulldozing	50 to 75	"
Opening field drains only	0.50	per metre
Laying drains (excluding stones)	0.70 to 0.80	"
Mole draining	85 to 95	per hectare
Laying water piping	15 to 20	per hour
Subsoiling	18	"
Stoner	15 to 20	"
7. Miscellaneous		
Hedge cutting - flail	18 to 25	per hour
- saw	16 to 20	"
Sawing logs - chainsaw	11.50	"
Haulage - tractor and trailer (higher prices for larger tractors and 4WD)	15 to 25	per hour
Relief milking - typical (largely dependent on size of herd and milking system)		
Monday-Saturday	40 to 70	per milking
Sunday	65 to 110	"
Hoof paring		
Call out fee (includes first 3 cows)	60	per call
Additional cows	7	per cow
Sheep shearing	1.00 to 1.20	per ewe
Fencing: assume strainers max 30m apart, and double strainers on corners		
5 rows of barbed wire		
- total cost	4.00 to 4.75	per metre
- labour only	1.20 to 1.70	"
Sheep fence plus 3 lines of barbed wire		
- total cost	4.20 to 5.50	per metre
- labour only	1.50 to 2.20	"

These contract charges are considered to be reasonable for operations carried out in normal circumstances. The rates include fuel, oil lubricant and operator's wages. Prices will differ from one district to another and will be affected by the contracted area. If a farmer supplies fuel, the price may be lower. The charges may be subject to VAT.

TYPICAL HIRE CHARGES

	Capacity	Per Day (£)	Per Week (£)
Quad		40	150
Plough		75	350
Chain harrow		30	100
Power harrow (3m plus blades)		90	420
Rotavator (plus blades)		70	300
Land roller		30	150
Fertiliser sower		20 to 25	100
Crop sprayer		25 to 30	130
Lagoon mixer		25	70
Slurry pump		40	125
Rotary spreader	7.3 cu yard	50 to 100	250 to 300
Slurry tanker	1300 gall	55	250
" "	1100 gall	50 to 70	200 to 300
Bale lifter		12	30
Telescopic handler	13m	100	425
Rough terrain forklifts	3t	50	175
Single axle dump trailer	8t	25	90
Twin axle dump trailer	10t	25 to 30	130
Tractor	80hp		300
Tractor (4wd)	100hp	80	350 to 450
Mini digger	3t	105	440
Strimmer	40cc	15 to 17	35
Chain saw		25	90
Welder (diesel)	350 amp	50	200
Generator diesel	5kw	25	60
" "	10kw	35	150
Power washer	3000 si	35	80
" "	1500 psi	20 to 30	60
Steam washers		30	80
Compressor/Jack hammers	100 ctm	25 to 30	75
Round bale trailer		25 to 30	90
Yard sweeper		40	-
Silage trailer	6t	25 to 40	100 to 120
Post driver		30	130
Low loader		25	-
Grasseed sower		25	100
Weed wiper		35	150
Grass topper		40	125
Rush topper		50	150
Spiker		40	-

1.) Prices do not include VAT.
2.) Prices listed above are intended for guidance only, considerable variation may be expected.

BUILDING COSTS

	Area per head (sq metres)	Cost £
Dairy cows		
Portal framed cubicle house, slatted floors, tanked completely 2.4m deep(shuttered tank)	7.0	2,750/head
Portal framed cubicle house, solid floors, excluding slurry storage	7	1,150/head
Suckler cows		
Bedded house with calf creep, excluding slurry storage	Cow 7.5 Calf 1.5	1,500/head
Cubicles with calf creep, feeding passage, excluding slurry storage	Cow 6.0 Calf 1.5	1,050/head
Finishing cattle		
Slatted house with feeding passage, completely tanked(shuttered tank)	2.75 to 3.25	1,550/head
Bedded house with feeding passage (excluding slurry storage)	4.0	600/head
Pigs		
Loose housing for dry sows	2.5 to 3.7	550-600/head
Farrowing accommodation with slatted floors	5.0	1,500-1,700/head
Weaner house, flat deck	0.45	130/head
Finishing house, fully slatted (natural ventilation)	0.65	120-140/head
Finishing house, fully slatted (controlled environment)	0.65	140-160/head
Grower accommodation	0.75	100-110/head
Sheep		
Portal frame, slatted floor, shallow tanks	1.3	140/head
Silo (Excluding effluent collection)		
Roofed silo (300 - 400m^2)-Shuttered, reinforced concrete walls and floor		£150/m^2
Open silo (300 - 400m^2)-Shuttered, reinforced concrete walls and floor		£90/m^2
General purpose house		
150 sq metres, with concrete floor		£110/m^2
200 sq metres, with concrete floor		£100/m^2
Slurry storage		
Shuttered Slatted tank, 2.4 m deep with piers, heads and slats (narrow and small tanks cost more)		£65 - £120/m^3
Above ground store with reception tank, pump etc. (small tanks cost more proportionally)		£35 - £60/m^3

AMORTIZATION TABLE

Annual charge to write off £1,000, repayment includes capital and interest assuming payment by one annual instalment

Write off period (years)	Rate of interest %															
Year	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
5	231	237	244	250	257	264	271	278	284	291	299	305	313	320	327	334
6	197	203	210	216	223	230	237	243	250	257	265	271	279	286	293	301
7	173	179	186	192	199	205	212	219	226	233	240	248	255	262	270	278
8	155	161	167	174	181	187	194	202	208	216	223	230	238	245	253	261
10	130	136	142	149	156	163	170	177	184	192	200	207	215	223	231	239
12	113	119	126	133	140	147	154	162	169	177	185	192	201	209	217	226
15	96	103	110	117	124	132	139	147	155	163	171	179	188	196	205	214
20	80	87	94	102	110	118	126	134	142	151	160	168	178	187	196	205
25	71	78	86	94	102	110	119	128	136	146	155	164	173	183	193	202
30	65	73	81	89	97	106	113	124	133	143	153	161	172	181	191	202
40	58	66	75	84	93	102	111	121	131	141	150	160	170	180	190	200

Example : £10,000 is borrowed. (The equivalent annual cost factor at 8% over 8 years is £174 per £1,000) Therefore, the annual service charge to service interest and capital repayment on the £10,000, repayable over 8 years is 10 x £174 = £1,740

LOAN OUTSTANDING

Amount outstanding on a 10 year loan of £1000 at the end of each year

	Rate of interest %															
Year	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
1	920	924	928	931	934	937	940	943	946	948	951	954	957	960	963	966
2	836	843	850	856	862	868	874	879	884	889	894	900	905	910	916	922
3	747	758	768	776	784	792	800	808	815	822	829	836	844	852	860	867
4	655	667	680	689	699	709	718	728	737	746	754	763	772	782	792	801
5	558	571	585	595	606	617	628	638	648	658	668	678	688	698	708	718
6	456	469	484	494	505	516	527	538	548	559	569	580	591	601	611	622
7	348	362	376	384	395	405	415	425	435	445	455	465	476	486	496	506
8	236	247	261	266	274	283	291	299	307	316	324	333	341	350	358	367
9	117	126	137	138	143	148	153	158	163	168	173	178	183	188	193	198

The annual charge to write-off the loan must first be calculated.
The equivalent annual cost factor at 8% over 10 years = £149. At the end of the first year the amount to repay, at 8% interest, will equal £1,080. When the annual charge of £149 is deducted, the amount outstanding on the loan is £1,080 - £149 = £931.

INTEREST RATES - ANNUAL PERCENTAGE RATE (APR)

It is important to distinguish between nominal rates which are often quoted by lending institutions and true rates of interest. The Annual Percentage Rate (APR) allows for the fact that interest is usually charged at less than annual intervals, and hence an element of compounding will occur, i.e. interest will be charged on the accumulated interest. The higher the annual nominal interest rate and the more frequently the interest charges are applied to the loan, the more pronounced will this compounding be and the higher the APR.

Loans from all sources should be converted to APR, which shows the effective rate of interest calculated on an annual basis. This allows a true comparison to be made between different sources of borrowed finance.

The approximate annual percentage rate is given by:

$$\left[\left(1+\frac{n}{p}\right)^{p}-1\right]\times 100$$

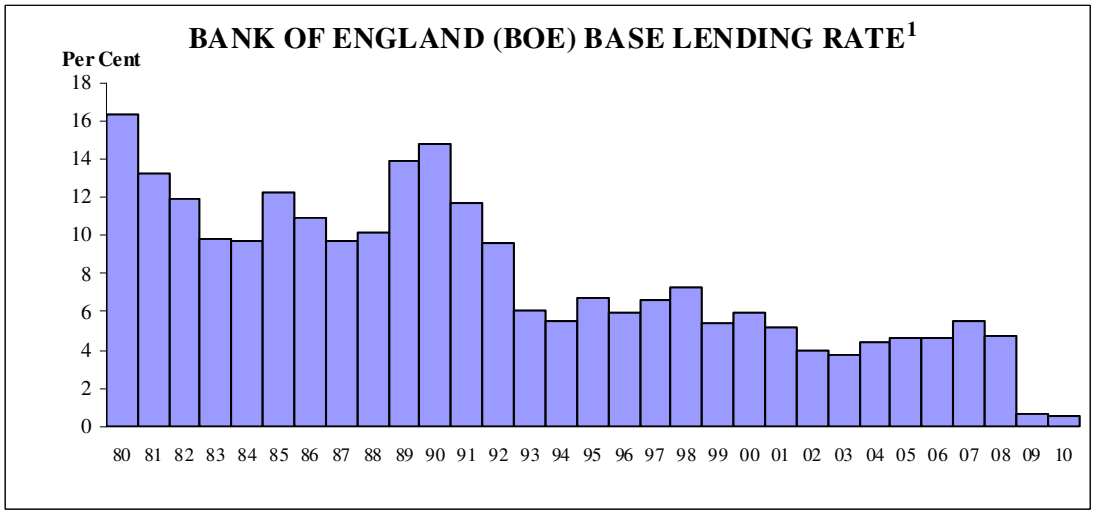
where n = nominal interest rate expressed as a decimal
p = number of instalments per year

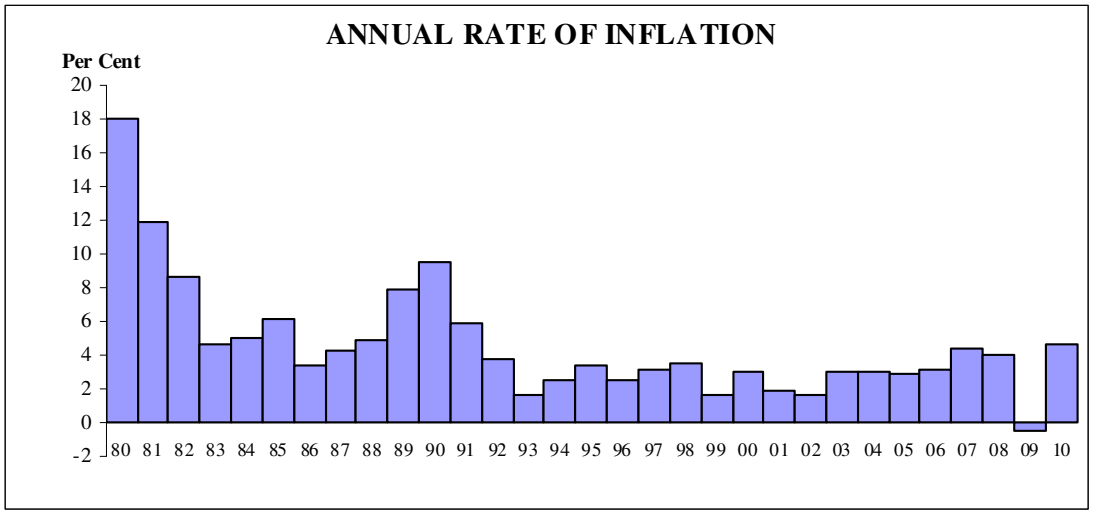
example : A nominal interest rate of 14% with monthly charging gives an approximate annual percentage rate of 14.9%

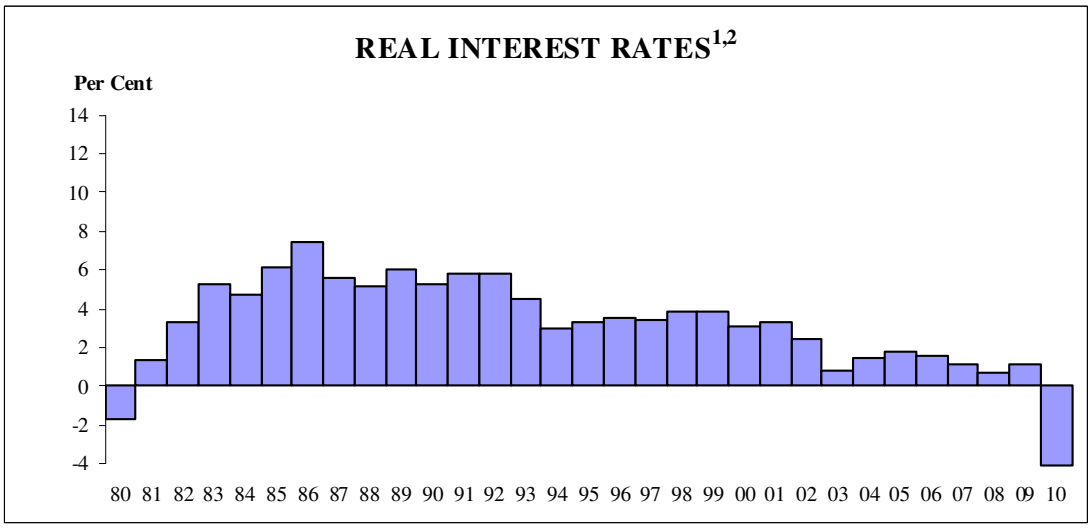
REAL INTEREST RATES

When preparing budgets to estimate the viability of an investment, it is common to include costs and returns at present day values, even though these may be expected to rise due to inflation over the life of the investment. Where this real terms approach is adopted, a more realistic estimate of the effect on profitability can be gained by basing capital charges on the real rate of interest rather than the APR. On the other hand it is important to remember that all costs and returns may not increase or, indeed decrease at the same rate. Also some allowance should be made in decision making for possible changes in inflation rates. Often in times of rising or falling inflation, nominal interest rates will rise or fall. This will clearly have consequences for cash flow.

The real rate of interest is the APR adjusted for the annual rate at which costs and prices relating to the investment are expected to increase. A crude estimate of the real rate of interest may be made by subtracting the expected inflation rate from the APR (see figure overleaf).







1. Acutal commercial lending rates applied depend on various factors such as loan term and risk.

2. Calculated as the difference between Bank of England base rate and annual rate of inflation

AGRICULTURAL WAGES (REGULATION) (NORTHERN IRELAND) ORDER 2010

The Agricultural Wages Board for Northern Ireland by Order No. 90 dated 5th April 2010 provides revised rates for minimum Agricultural wages. This Order replaces Order No. 89 which operated from 6th April 2009. Under this minimum wage system, advancement is conditional on a workers experience and qualifications.

Minimum wage rate

As effective from 6th April 2009, all age bands (16-22 years) for minimum wages have been removed.

The minimum wage rates (£ per hour) - effective from 5th April 2010 for grades 1 – 6 workers are as follows:

Grade	Rate per Hour £
Grade 1-Minimum Rate (Applicable for first 40 weeks cumulative employment)	5.90*
Grade 2-Standard Worker	6.25
Grade 3-Lead Worker	6.86
Grade 4-Craft Grade	7.37
Grade 5-Supervisory Grade	7.81
Grade 6-Farm Management Grade	8.44

*From 1st October 2010, the minimum wage rate for grade 1 workers was increased to £5.93 per hour.

Where at any time the National Minimum Wage becomes higher than the hourly rates set out above, then the minimum rates shall be equal to the National Minimum Wage.

The definitions for the grades and the qualifications required for each grade are available at: http://www.dardni.gov.uk/enforcement-awb

Overtime

The minimum overtime rates (£ per hour) effective from 5th April 2010 are as follows:

Grade	Rate per Hour £
Grade 1-Minimum Rate (Applicable for first 40 weeks cumulative employment)	8.90
Grade 2-Standard Worker	9.38
Grade 3-Lead Worker	10.29
Grade 4-Craft Grade	11.06
Grade 5-Supervisory Grade	11.72
Grade 6-Farm Management Grade	12.66

For the purpose of this Order, the following employment is defined as the employment which is to be treated as overtime employment:-

(a) employment in excess of 39 hours in any week for a whole-time worker.

(b) employment on a day on which a worker is entitled to be allowed a holiday in accordance with the holiday provisions of the Order.

Holiday Entitlements

From 1st April 2009, an agricultural worker who has been in continuous employment with the same employer shall be entitled to holiday entitlement proportionate to the number of days worked as detailed below:

- works 1 day per week = 6 days holiday;
- works 2 days per week = 11.5 days holiday;
- works 3 days per week = 17 days holiday;
- works 4 days per week = 22.5 days holiday; and
- works 5 days per week = 28 days holiday.

An agricultural worker who has been in continuous employment with the same employer for **more than** 52 weeks is entitled to one additional day's holiday in every holiday year from those dates listed in Agricultural Wages legislation. For example an employee working a 5 day week the total holiday entitlement is 29 days made up of 28 days holiday leave and the 1 additional day. This holiday entitlement is proportionate to the number of days worked.

The rate of holiday remuneration must not be less than the minimum wage rate set out above.

Accommodation Offset

From 6th April 2009, the Accommodation Offset for "Temporary and Harvest workers" is £31.22 per week. This 'Accommodation Offset' is for agricultural workers on a contract of less than 52 weeks i.e. those defined as "Temporary and Harvest workers".

Further information on Agricultural Wages Board Orders or matters relating to Agricultural Wages is available from: The Secretary, Agricultural Wages Board, Room 916, Dundonald House, Upper Newtownards Road, Belfast, BT4 3SB or telephone: 028 9052 0813.

ALTERNATIVE ENTERPRISES

A wide range of alternative enterprises is found on individual farms in Northern Ireland. Some of these developments are relatively new, while others are simply being more widely publicised. Such enterprises may be seen to be attractive; however, they should not be undertaken without a considerable amount of research. Substantial capital may be required and new skills in production and marketing may have to be acquired. With alternative enterprises there is often a high level of risk and the potential market outlets should be thoroughly investigated before production is started.

The main groups of alternative enterprises are agricultural contracting; tourism and recreation (bed and breakfast, open farms, horse breeding); value-adding enterprises (on-farm processing, farm shops and stalls); unconventional agricultural enterprises (Christmas trees, amenity turf, game birds, ostriches, rabbits, snails, goats' and sheeps' milk); ancillary resources (letting buildings for non-agricultural use, forestry); and the production of environmental goods in return for government grants.

Information and advice on alternative enterprises can be obtained from Rural Enterprise Advisors who can be contacted through your local DARD office.

ORGANIC FARMING

Organic farming aims to produce high quality food using sustainable methods of production and avoids the use of artificial fertilisers and chemicals which minimises damage to the environment and wildlife. Organic produce must comply with organic food standards and, in general, there is a minimum two year conversion period from non-organic methods.

It is difficult to be specific about the margins from organic farming. There is a specific market (that should be identified before production is commenced) and it is possible to obtain a premium for organically produced food. However, any premium can, at least in part, be offset by lower yields.

Details of financial assistance for Organic Farming are provided on page 83. Advice on Organic farming is also available from your local DARD advisors who can be contacted through your local DARD office.

LIVESTOCK WELFARE

Animal welfare is an important and emotive subject. The previous welfare codes have been strengthened with the ‘The Welfare of Farmed Animals (Northern Ireland) Regulations 2000’. A number of the recommendations from the previous welfare codes have been turned into legal requirements and implement European Union Directives on the welfare of calves, pigs and battery hens. Any person who causes unnecessary pain or distress to any livestock situated on agricultural land and under their control, or permits any such livestock to suffer any such pain or distress of which they know or may

be reasonably expected to know, shall be guilty of an offence. In addition, ignorance of the regulations is no longer a legitimate excuse.

The following basic points are common to all regulations. Livestock systems must be designed to provide:-

- Comfort and shelter;
- Readily accessible fresh water;
- Nutritionally adequate food;
- Freedom of movement;
- The company of other animals - particularly of like kind;
- The opportunity to exercise most normal patterns of behaviour;
- Light during daylight hours;
- Flooring which neither harms nor causes undue strain;
- The prevention of, or rapid diagnosis and treatment of vice, injury, parasitic infestation or disease;
- The avoidance of unnecessary mutilation;
- Emergency arrangements to cover outbreaks of fire, breakdown of mechanical services (including artificial ventilation equipment) and disruption of supplies.

Detailed advice on the application of the regulations in individual circumstances is available from local Divisional Veterinary Offices.

AVERAGE CONACRE RENTS BY TYPE OF USE 2004 - 2009

£ per hectare

Use	2004	2005	2006	2007	2008	2009
Grass	198	180	174	184	193	188
Potatoes	433	453	567	586	686	623
Cereals	247	156	186	190	222	211
Rough grazing	53	45	44	46	41	34
All uses	**165**	**158**	**165**	**162**	**171**	**168**

Source:- Farm Business Survey

SALES OF AGRICULTURAL LAND 1981 - 2006 [2] [3] [4] [5] [6]

Year	Number of sales	Area sold (ha)	Price [1] (£/ha)
1981	696	7,081	2,897
1982	921	8,950	2,683
1983	863	7,870	2,866
1984	815	8,105	2,958
1985	709	7,785	3,130
1986	725	7,682	3,128
1987	660	7,179	3,204
1988	660	7,791	2,855
1989	639	7,695	3,359
1990	489	5,249	3,313
1991	462	5,243	3,362
1992	467	4,552	3,383
1993	467	4,721	4,330
1994	420	4,605	5,056
1995	355	4,050	5,950
1996	223	3,425	5,419
1997	257	2,912	7,858
1998	223	2,151	8,746
1999	163	1,672	8,267
2000	174	1,614	9,634
2001	67	597	9,961
2002	55	550	12,456
2003	44	520	14,950
2004	40	562	16,286
2005	63	1,095	19,837
2006	85	2,303	24,870

(1) Calculated by dividing the total value of sales by the total area sold.

(2) Source:- DARD, compiled from Valuations and Lands Agency data.

(3) Excludes individual sales under 2 hectares (5 acres) up to 2001 and sales outside agriculture.

(4) There is a delay (estimated to be 3 months) between the date on which a sale is agreed and when it appears in this series.

(5) Figures for 2002 are estimates due to lack of data.

(6) Land sales of less than 5 hectares are not included for 2003, 2004 and 2005.

TAXATION 2010-2011

These notes on taxation are a summary only. A series of booklets giving details of tax related matters are available from any tax office on request. All booklets and other information are also available on the internet at www.hmrc.gov.uk. Alternatively, a professional adviser may be approached.

1. Income Tax

1.1 Income Tax Allowances

	£
Personal allowance[1]	6,475
Personal allowance for people aged 65-74 [1,2]	9,490
Personal allowance for people aged 75 and over [1,2]	9,640
Married couple's allowance - aged 75 and over [2, 3]	6,965
Income limit for Personal Allowance	100,000
Income limit for age-related allowances	22,900
Minimum amount of married couple's allowance	2,670
Blind person's allowance	1,890

[1] From the 2010/11 tax year the personal allowance reduces where the income is above £100,000. When this is the case, it is reduced by £1 for every £2 of income above the £100,000 limit.

[2] These allowances reduce where the income is above the income limit for age related allowances by £1 for every £2 of income above the limit. They will never fall below the basic personal allowance unless income level is above £100,000

[3] Tax relief for the Married Couple's allowance is given at the rate of 10 per cent.

1.2 Income Tax rates (%)

	Income Tax Rate	Taxable Band
Starting rate for savings*:	10%	£0 to £2,440
Basic rate:	20%	£0 to £37,400
Higher rate:	40%	£37,401-£150,000
Additional rate:	50%	Over £150,000

*There is a 10 per cent starting rate for savings income only. If an individual's non-savings income is above this limit then the 10 per cent starting rate for savings will not apply.

The income tax rates available for dividends are 10% (ordinary), 32.5% (upper) and 42.5%(additional).

2. Corporation Tax

Profits are chargeable at the following rates:

	Profits band	Tax rate & allowances
Small Profits Rate	Up to £300,000	21%
Marginal Relief Rate	£300,001 to £1,500,000	28% less relief*
Main rate of Corporation Tax	Above £1,500,000	28%

*The relief is £1,500,000 minus the amount of profits multiplied by 7/400

3. Capital Gains Tax (CGT)

Applies to capital gains made by an individual. Capital gains accruing to companies are chargeable to Corporation Tax.

(a) Annual exemption of £10,100 for individuals with independent taxation.

(b) For gains on or before 22 June 2010, Capital Gains tax is charged at the rate of 18%. After this date, the tax rate for individuals is 10%, 18% or 28%. The rate of tax applied depends on total level of taxable income and whether the gains qualify for Entrepreneurs relief.

4. Inheritance Tax

Inheritance Tax (IHT) may be payable on an estate when someone dies, or when assets are transferred into a discretionary trust or to a company.

There is no Inheritance Tax to pay on estates up to £325,000 (effective from 6th April 2009). An excess above this value is liable to inheritance tax at a rate of 40% (most farms in Northern Ireland get 100% property relief).

5. Value Added Tax (VAT)

Annual turnover threshold for VAT registration £70,000 from 1 April 2010.

Three rates of VAT (Effective from 4th January 2011):

Standard rate – 20% - Most goods and services
Reduced Rate - 5% - Various items e.g. domestic fuel and power
Zero Rate – 0% - Certain goods and services e.g. food.

From 1 April 2010 many VAT-registered businesses had to switch from paper to online VAT Returns. From that date, if your annual turnover was £100,000 or more (exclusive of VAT) - or if you became VAT-registered on or after 1 April 2010 - you will have to submit your return online and pay VAT electronically. In order to submit your VAT returns online you must register for online services on the HMRC website (www.hmrc.gov.uk)

6. Stamp Duty

Purchasers of property are subject to the following rates of stamp duty for property purchased from January 2010.

- 0% on purchases below £125,000*.
- 1% on purchases between £125,000 and £250,000*
- 3% on purchases between £250,001 and £500,000;
- 4% on purchases above £500,000.

*From 25 March 2010 and up to 25 March 2012, purchases by first-time buyers are subject to a zero rate up to £250,000. Residential property in disadvantaged areas is subject to a zero rate up to £150,000 and 1% between £150,000 and £250,000. Above this value the same rates as those specified above apply.

(Contact Inland Revenue for further details).

7. Forestry - wholly removed from income and corporation tax from 14 March 1988.

8. National Insurance

Class 2 Self employed (up to state pension age)

Flat rate £2.40 per week (small earnings exemption £5,075 per year).

Class 4 Self employed (state pension age)

8.0% of profits/gains between £5,715 and £43,875.
1.0% of profits/gains over £43,875.

SELF ASSESSMENT AND CURRENT YEAR ASSESSMENT OF TAX

1. Self assessment.

Self Assessment involves completing an online or paper return to inform HM Revenue & Customs (HMRC) about income, capital gains etc. This information is used by HMRC to work out your tax bill or you can do this yourself. HMRC will issue a notice to complete a tax return for the previous tax year after the start of the new tax year to everyone they know is required to complete a self-assessment return. Tax returns relating to 2010/11 tax year must be sent back by the following deadlines:

- Paper returns - **31 October 2011**. The deadline for paper tax returns is later than this if you receive the notice to file your tax return after the 31 July. In this case you'll have three months from the date you receive the notice if you want to send in a paper return.

- Online returns - **31 January 2012**. The deadline is earlier if you owe tax of less than £2,000 and you want HMRC to collect it by reducing your Pay As You Earn (PAYE) tax code next year. In this case you need to send your tax return online by **30 December 2011** instead. HMRC will try to amend your code number, but it's not always possible, and you may still have to make a payment instead by 31 January.

  The deadline is only later than 31 January if you received the notice to file your tax return after 31 October. You'll then have three months from the date you receive the notice to send your return online.

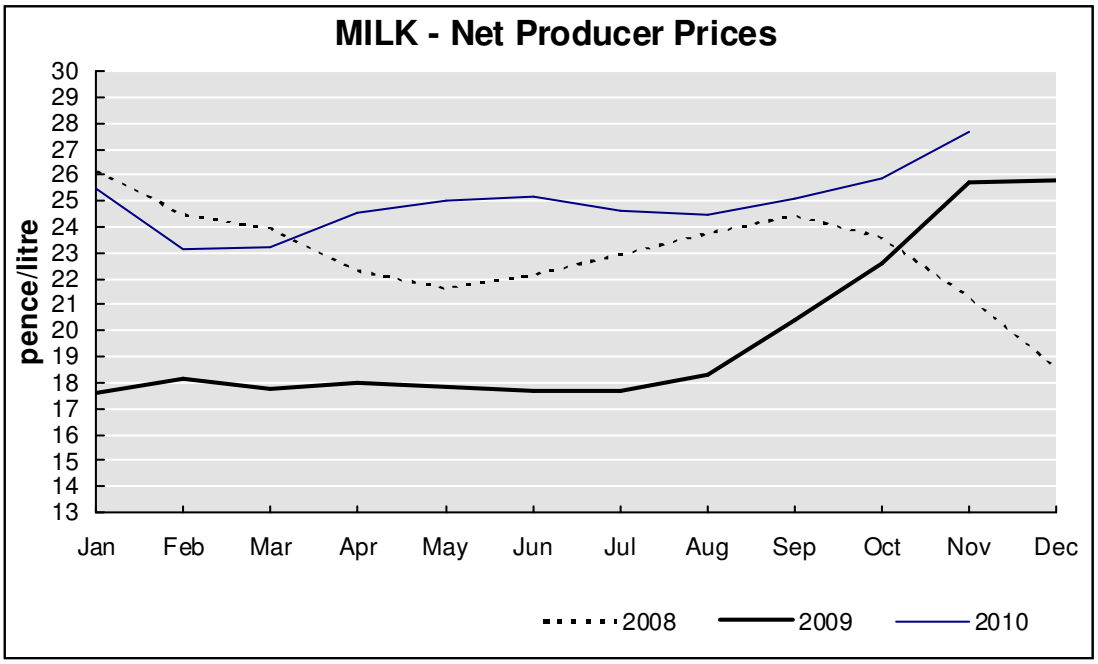
  In order to submit your form online you must register for online services on the HMRC website (www.hmrc.gov.uk)

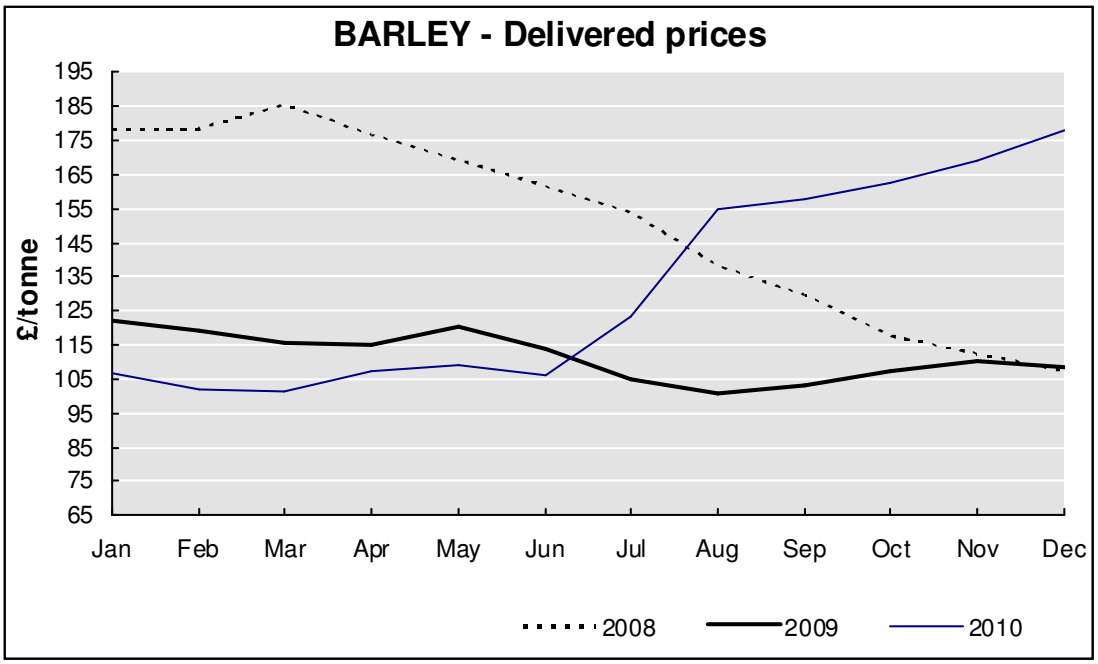
Fixed automatic penalties will apply to late returns and interest and penalties for late payments. There is now a statutory requirement to keep records including relevant receipts, invoices etc. to support the figures entered on the return.

2. Current (same) year assessment.

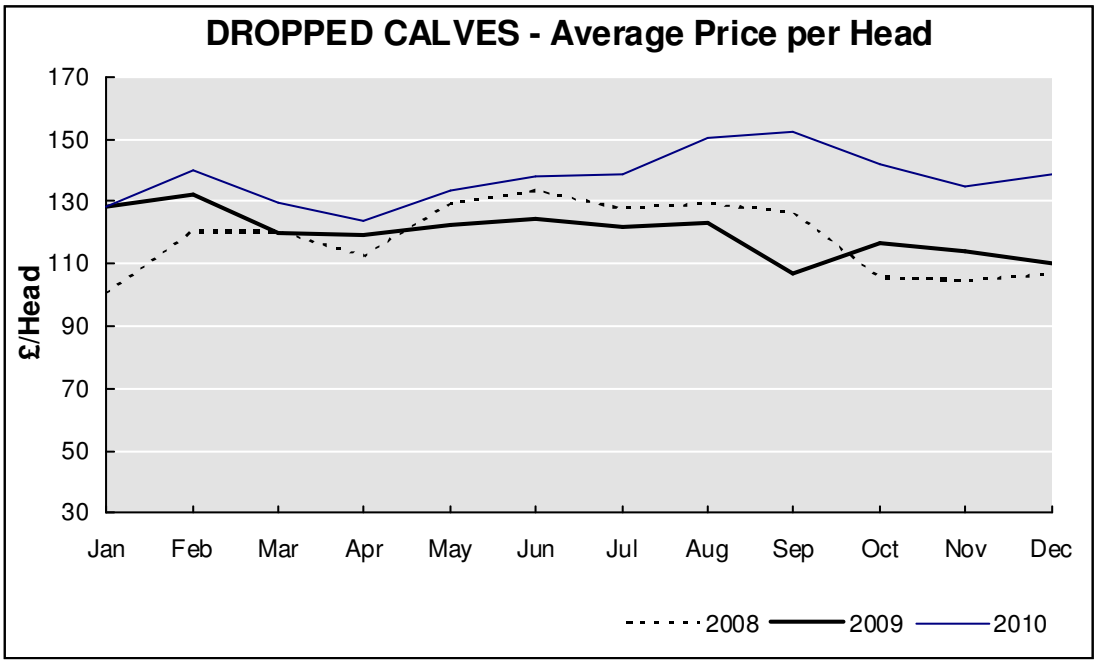
The tax liability will be based on the profit arising in the same year. Therefore, taxable business profits for any year will be those shown on a set of yearly accounts ending in that tax year

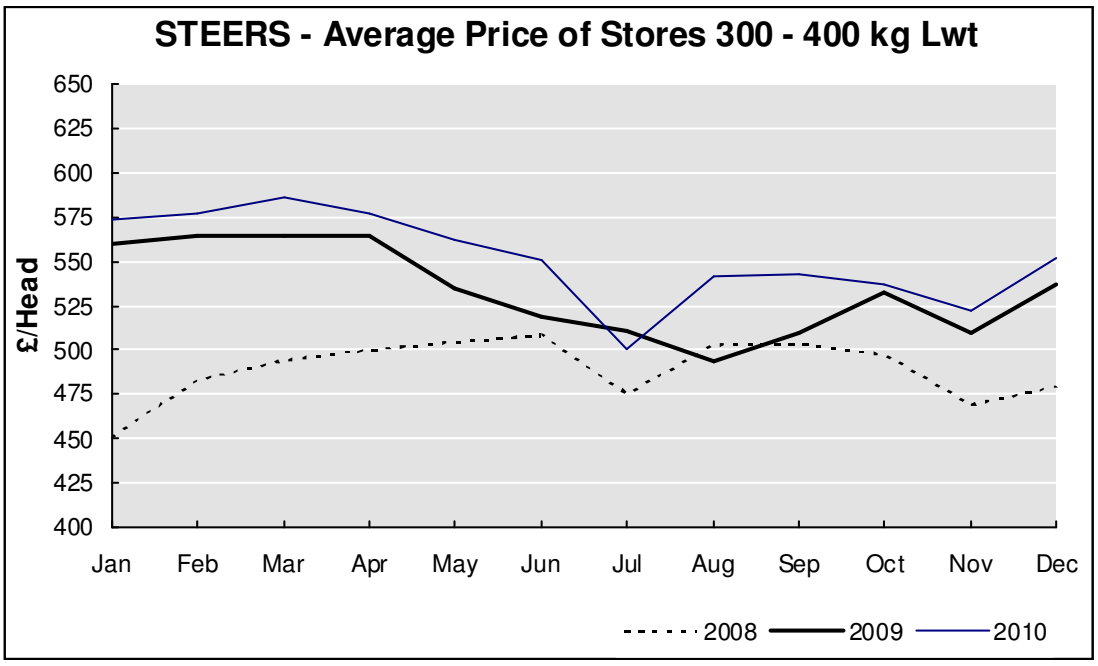
MILK AND BARLEY PRICES, 2008 - 2010



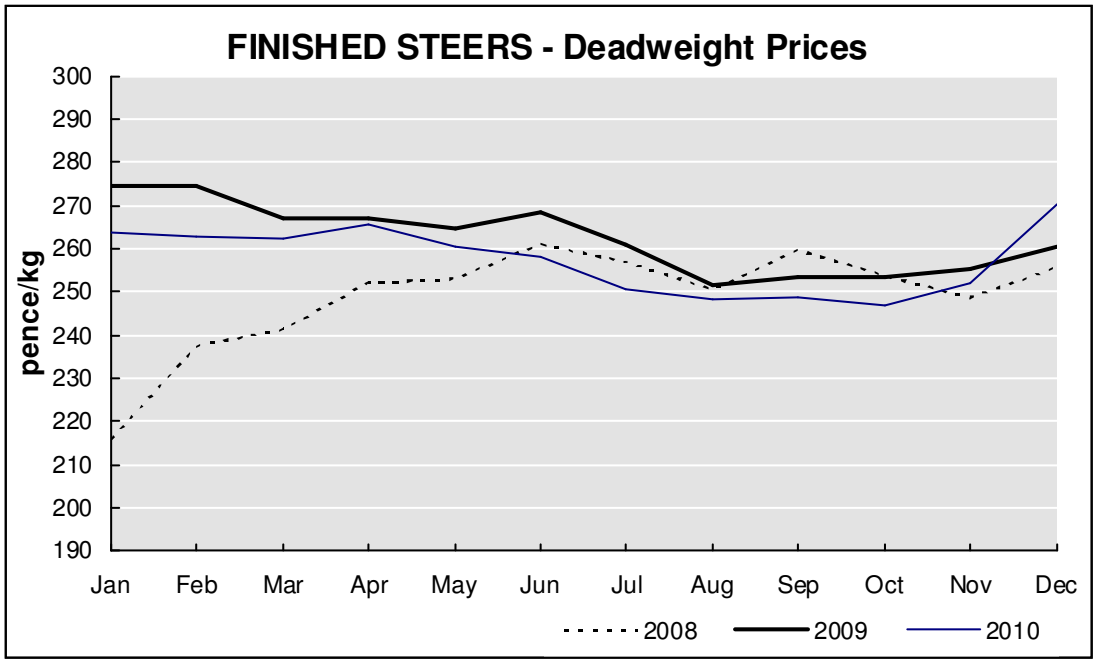


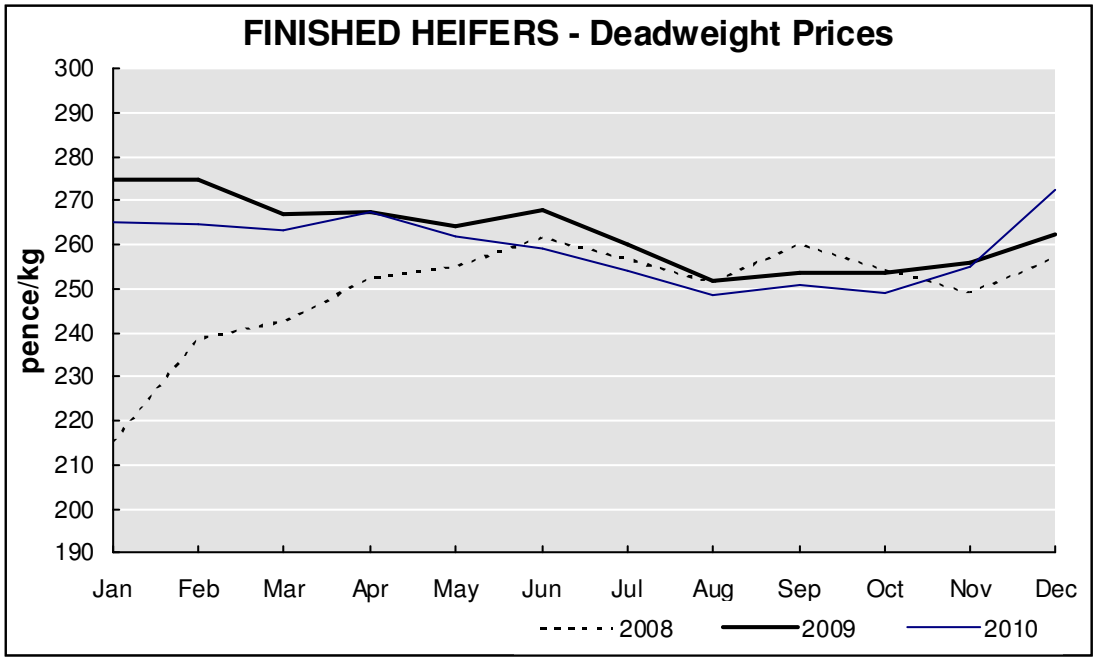
CATTLE PRICES, 2008 - 2010





BEEF PRICES, 2008 - 2010





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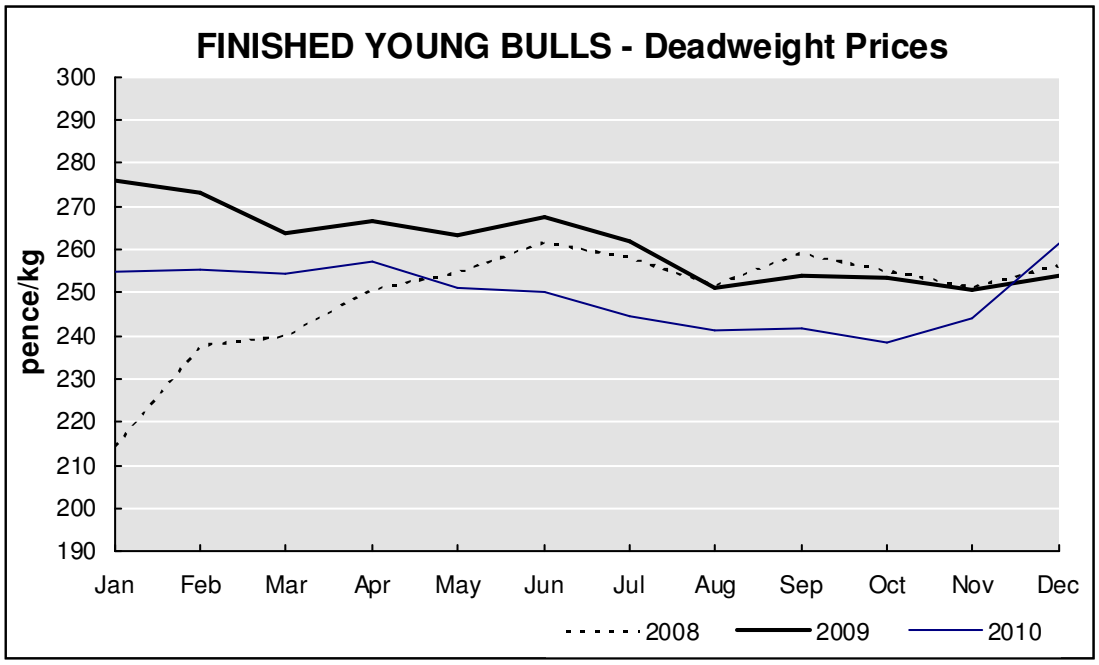
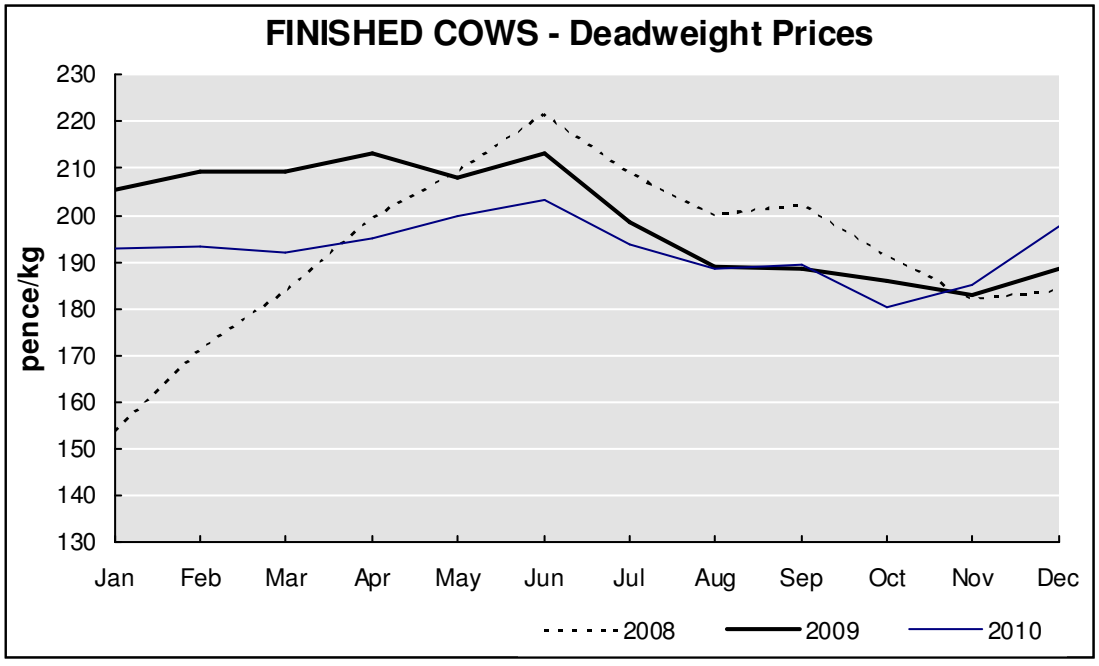
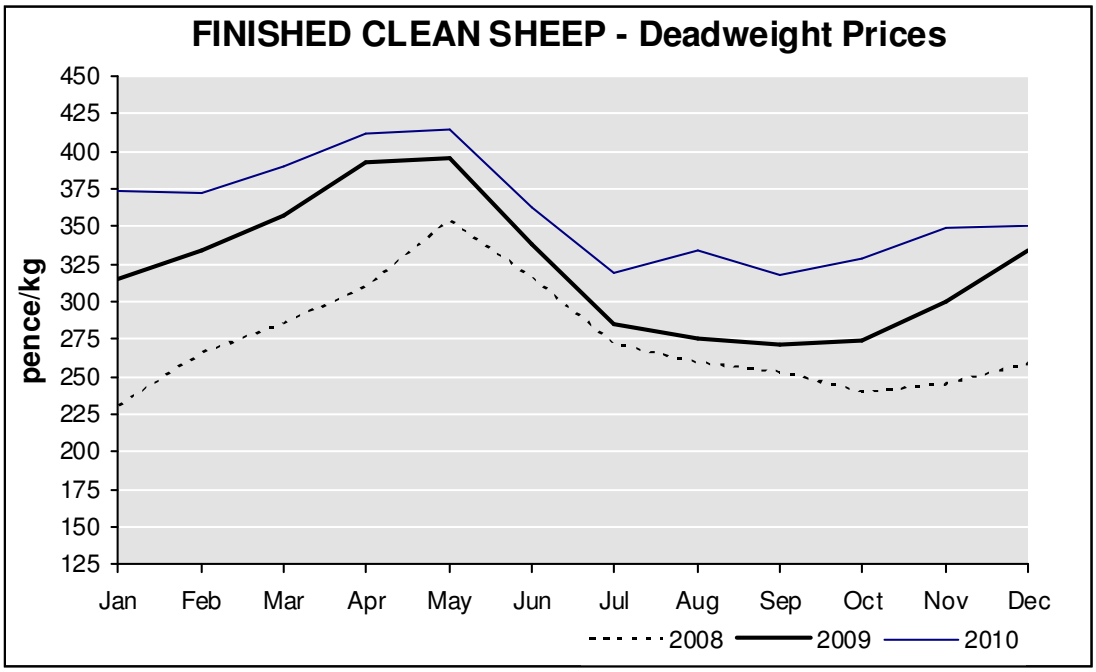
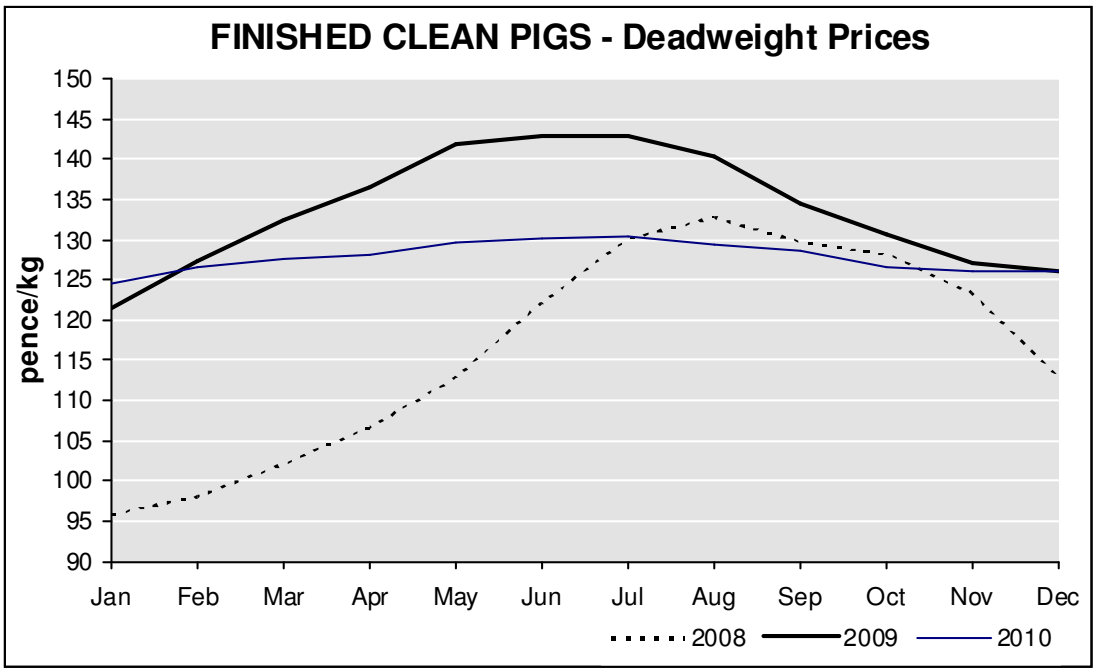




LAMB AND PIGMEAT PRICES, 2008 - 2010





DARD CONTACT LIST

You can contact the Department of Agriculture and Rural Development (DARD) by telephone, in writing, by email or by forwarding your request through the website www.dardni.gov.uk

By Telephone

If you know the name of the person you wish to speak to, please telephone **0845 30 44 510**. For all other enquiries please select the appropriate number from page 124.

In Writing

If you wish to write to the Department you can use the following postal address:

Department of Agriculture and Rural Development
Dundonald House
Upper Newtownards Road
Belfast BT4 3SB
Northern Ireland, UK

By Email

The DARD Helpline email is dardhelpline@dardni.gov.uk

By Website

Customer feedback/queries can be made at:
http://www.ruralni.gov.uk/contact_us/feedback.htm

Customer complaints can be made at:
www.dardni.gov.uk/index/customer-service/complaints-procedure/customer-complaints-logging-form.htm

New DARD Telephone Numbers

Animal Health & Welfare and Veterinary Public Health Information and services relating to animal welfare, veterinary public health, and the prevention and control of animal diseases.	**0845 30 44 500**
Education and Training Education and training courses provided by College of Agriculture and Rural Enterprise (CAFRE).	**0845 30 44 501**
Environment Agri-environment schemes. Countryside Management advice including Cross-Compliance, Nitrates Directive, Codes of Good Agriculture Practice, Farm Waste Management, Uncultivated Land Regulations and Field Boundary Removals.	**0845 30 44 502**
Farming Livestock. Crops. Horticulture. Plant health. Equine. Organic farming. Farm business management. Information technology.	**0845 30 44 503**
Fisheries Aquaculture. Sea fisheries. Fish health. Foyle, Carlingford & Irish Lights Commission.	**0845 30 44 504**
Flood Defence and Drainage Sea and river defences. Flood protection. Flood risk management. Drainage. Maintenance of designated watercourses. *For flooding emergencies contact the Flooding Incident Line 0300 2000 100.*	**0845 30 44 505**
Food Knowledge and technology transfer. Marketing support to food businesses. Food industry training. Food Business Incubation Centre. Food Safety. Product certification. Marketing and quality standards.	**0845 30 44 506**
Forests Timber production and marketing. Plant health controls for wood and bark, Woodland grants (including Short Rotation Coppice). Recreation. Educational visits. *For caravanning and camping bookings you will need to book directly with the Forest Park. See the Forestry section in the Government Offices pages.*	**0845 30 44 507**
Grants and Funding Single Farm Payment, LFACA, agri-environment, farm, fisheries, forestry and rural development payments and grants, pre-2005 schemes.	**0845 30 44 508**
Rural Development Northern Ireland Rural Development Programme, Rural and community development, Farm diversification, Rural Champion, Rural Proofing, Rural White Paper.	**0845 30 44 509**
DARD Corporate Services DARD Headquarters, Press Office, information services and systems, human resources and facilities management.	**0845 30 44 510**
Textphone For people with hearing difficulties.	**0845 30 44 511**
Calls from non-UK numbers or networks/International Calls	**0044 9037 8418**

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43 Beltany Road
Coneywarren

OMAGH BT78 5NF
Tel: 028 8224 3337

AFBI Loughgall
(Horticulture and Plant Breeding Station)
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Department of the Environment (DOE)
Northern Ireland Environment Agency (NIEA)

Water Management Unit, 17 Antrim Rd, Lisburn, BT28 3AL

Internet - www.ni-environment.gov.uk

General Enquiries	Tel: 028 9262 3100	Fax Number: 028 9267 6054
Nitrates regulations	Tel: 028 9262 3184	
SSAFO Regulations	Tel: 028 9262 3102	
Groundwater authorisations	Tel: 028 9262 3278	
Sewage Sludge to Land	Tel: 028 9262 3445	

Water Pollution Hotline Tel: 0800 80 70 60
(A 24-hour confidential hotline for reporting pollution incidents)

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Copies of this booklet can be made available on request in alternative formats.
Please telephone 028 9052 4063

Department of
Agriculture and
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www.dardni.gov.uk

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