Department of
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POLICY AND ECONOMICS DIVISION

Farm Business Data
2007

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Foreword

The year 2007 will see the agricultural industry and individual farm businesses continue to adjust to the introduction of the Single Farm Payment. Other important changes, including the end of OTMS and the removal of the beef export ban, have also taken place. The implementation of the Nitrates Action Plan will bring more change to a number of farm businesses.

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.

In this edition of 'Farm Business Data', the full impact of decoupling subsidies from agricultural production is quantified for the affected enterprises. As will be seen, the elimination of direct payments has had a major impact on the gross margins of these enterprises and for some, the budgeted gross margins are negative. Obviously, such an outcome cannot be sustained in the long-term. **Therefore, 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data are again advised to make appropriate adjustments to enterprise data when those presented in the handbook become out of date or are felt to be inappropriate for long-term planning.**

The handbook is divided into sections and presents budgets for all the enterprises commonly found in Northern Ireland. A range of useful information is presented in the miscellaneous section, including details of various grant schemes, taxation and fixed costs. The latter includes building and 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 2005/06', available from the Policy and Economics Division of DARD. Alternatively, it may be accessed on the DARD website at www.dardni.gov.uk/statistics.

'Farm Business Data' has been prepared by Christopher Breen and Mark McLean with assistance from many individuals inside and outside DARD. Particular thanks are due to Blinnia Cunningham and Frankie Quinn for their contributions to the compilation of the handbook.

The authors would also 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 Mark McLean in DARD, Dundonald House, Belfast BT4 3SB (Mark.McLean@dardni.gov.uk)

Norman Fulton
Director of Policy and Economics
December 2006

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 94 to 96.

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 rate 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 109 and 110 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.

Click on red button to go straight to section

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 2007 (unless otherwise stated) and is based on price information available at the time of preparation (September 2006). 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.** Guides to the SFP scheme and its conditions may be obtained from the Grants and Subsidies Division website (www.dardni.gov.uk/grants-and-funding), or from the contacts given on page 119.

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 92 and 93. 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)	3.0	4.5	5.5
Price per tonne (£)		85	
Grain output (£)	**255**	**383**	**468**
Straw yield (tonnes)	2.6	3.0	3.5
Price per tonne (£)		45	
Straw output (£)	**117**	**135**	**158**
OUTPUT (£)	**372**	**518**	**625**
		£	
Seed 187 kg		60	
Fertiliser 70: 55:60		79	
Sprays herbicide		25	
fungicide		25	
Sundries twine etc.		16	
Total Variable Costs		**205**	
GROSS MARGIN	**167**	**313**	**420**

(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 - up to 110 kg N per hectare may be used on lighter soils and continuous cereal land.

(d) 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)	3.4	4.0	4.5
Price per tonne (£)		90	
Grain output (£)	**306**	**360**	**405**
Straw yield (tonnes)	3.0	3.3	3.9
Price per tonne (£)		50	
Straw output (£)	**150**	**165**	**195**
OUTPUT (£)	**456**	**525**	**600**
		£	
Seed 187 kg		65	
Fertiliser 70: 55: 60		79	
Sprays herbicide		25	
fungicide		25	
growth regulator		10	
Sundries twine etc.		16	
Total Variable Costs		**220**	
GROSS MARGIN	**236**	**305**	**380**

(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 - up to 100 kg N per hectare may be used on lighter soils.

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

WINTER BARLEY PER HECTARE

		LOW	TYPICAL	HIGH
Grain yield (tonnes)		5.0	6.0	7.0
Price per tonne (£)			85	
Grain output (£)		**425**	**510**	**595**
Straw yield (tonnes)		3.4	3.7	4.4
Price per tonne (£)			45	
Straw output (£)		**153**	**167**	**198**
OUTPUT (£)		**578**	**677**	**793**
			£	
Seed	187 kg		55	
Fertiliser	125: 55: 80		119	
Sprays	herbicide		25	
	fungicide (x2)		50	
	insecticide		8	
	growth regulator		10	
Sundries	twine etc.		16	
Total Variable Costs			**283**	
GROSS MARGIN		**295**	**394**	**510**

(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 - up to 80kg N after grass ley, normally between 100 and 160 kg (light soil).

(d) 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	6.8
Price per tonne (£)			90	
Grain output (£)		**450**	**540**	**612**
Straw yield (tonnes)		3.4	3.7	4.4
Price per tonne (£)			50	
Straw output (£)		**170**	**185**	**220**
OUTPUT (£)		**620**	**725**	**832**
			£	
Seed	187 kg		62	
Fertiliser	100: 55: 60		91	
Sprays	herbicide		25	
	fungicide		50	
	growth regulator		10	
Sundries	twine etc.		16	
Total Variable Costs			**254**	
GROSS MARGIN		**366**	**471**	**578**

(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 - up to 100 kg N per hectare may be used.

(d) 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 (£)			90	
Grain output (£)		**495**	**666**	**774**
Straw yield (tonnes)		2.7	3.2	4.3
Price per tonne (£)			40	
Straw output (£)		**108**	**128**	**172**
OUTPUT (£)		**603**	**794**	**946**
			£	
Seed	187 kg		60	
Fertiliser	150: 65: 90		141	
Sprays	herbicide		25	
	fungicide (x3)		80	
	growth regulator		10	
Sundries	twine etc.		16	
Total Variable Costs			**332**	
GROSS MARGIN		**271**	**462**	**614**

(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 - up to 200kg N per hectare.

(d) 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 (£)			150	
Seed output (£)		**270**	**360**	**435**
OUTPUT (£)		**270**	**360**	**435**
			£	
Seed	8 kg		55	
Fertiliser	125: 50: 60		108	
Sprays	insecticide		10	
	fungicide		15	
	desiccant		35	
Slug pellets	7 kg		15	
Total Variable Costs			**238**	
GROSS MARGIN		**32**	**122**	**197**

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

(b) Yield based on 8% 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 - phosphate and potash applied in seedbed, straight nitrogen applied as a split dressing in the spring.

(e) 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 (£)		150	
Seed output (£)	**390**	**495**	**600**
OUTPUT (£)	**390**	**495**	**600**
		£	
Seed		55	
Fertiliser 150: 60: 60		124	
Sprays herbicide		65	
fungicide		20	
desiccant		35	
Slug pellets 7 kg		15	
Total Variable Costs		**314**	
GROSS MARGIN	**76**	**181**	**286**

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

(b) Yield based on 8% 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 - phosphate and potash applied in seedbed, straight nitrogen applied as a split dressing in the spring.

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

SEED POTATOES PER HECTARE

					LOW		TYPICAL		HIGH
			£/t		£		£		£
Seed ( ) tonnes		@	140	(14)	1,960	(21)	2,940	(25)	3,500
Ware ( ) tonnes		@	100	(5)	500	(8)	800	(10)	1,000
Chats ( ) tonnes		@	10	(1)	10	(2)	20	(3)	30
OUTPUT					**2,470**		**3,760**		**4,530**
			£/t						
Seed	4.5t	@	170				765		
Fertiliser	95 : 195 : 185						198		
Sprays	herbicide						35		
	fungicide (blight x 9)						135		
	desiccant (burning down)						40		
	aphidicide						25		
Potato inspection fees and levies					125		162		183
Total Variable Costs					**1,323**		**1,360**		**1,381**
GROSS MARGIN					**1,147**		**2,400**		**3,149**

(a) Potato inspection fees quoted are for 2006. They comprise a growing crop inspection fee of £40.50 per hectare, £4.40 per tonne for tuber inspection fees and labels.

(b) Levy rates payable for the promotion of seed potato interests remain unchanged for 2006. The rates are £10 per hectare of growing crop, and £0.90 per tonne of seed potatoes certified for export.

(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

FIRST EARLY POTATOES PER HECTARE

				LOW		TYPICAL		HIGH
		£/t		£		£		£
Ware ( ) tonnes	@	140	(14)	1,960	(19)	2,660	(22)	3,080
Chats (1) tonne	@	10		10		10		10
OUTPUT				**1,970**		**2,670**		**3,090**
		£/t						
Seed 4.5t	@	140				630		
Fertiliser 120 : 130 : 200						225		
Sprays herbicide						35		
fungicide (blight x 2)						30		
Potato sacks	@	8.00		112		152		176
Total Variable Costs				**1,032**		**1,072**		**1,096**
GROSS MARGIN				**938**		**1,598**		**1,994**

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

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

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

(d) Output of ware per hectare (£)

Price per tonne	Early Ware Yield (tonnes per hectare)			
£	10	15	20	25
120	1,200	1,800	2,400	3,000
130	1,300	1,950	2,600	3,250
140	1,400	2,100	2,800	3,500
150	1,500	2,250	3,000	3,750
160	1,600	2,400	3,200	4,000

MAINCROP WARE POTATOES PER HECTARE

			LOW		TYPICAL		HIGH
		£/t		£		£	
Ware ( ) tonnes		@ 100	(33)	3,300	(40)	4,000	(45) 4,500
Chats (2) tonnes		@ 10		20		20	20
OUTPUT				**3,320**		**4,020**	**4,520**
		£/t					
Seed	3.0t	@ 140				420	
Fertiliser	100 :180 : 200					209	
Sprays	herbicide					35	
	fungicide (blight x 9)					135	
	desiccant (burning down)					40	
Slug pellets						15	
Potato boxes		@ 6.00		198		240	270
Total Variable Costs				**1,052**		**1,094**	**1,124**
GROSS MARGIN				**2,268**		**2,926**	**3,396**

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

(b) Fertiliser - normally 1 tonne of 10:18:20 per hectare.

(c) Potato boxes - £40.00 per 1 tonne with a 15% depreciation charge (i.e. £6 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, Starane, Harmony M, Compitox	10 to 30
	Winter cereals (Broad spectrum)	**Pre-emergence** – Crystal, Girebird.	15 to 30
	Winter cereals (Broad spectrum)	**Post-emergence** - Encore, Panther, Ally, Jubilee	17 to 40
Fungicides	Barley (Broad spectrum)	Folicur, Amistar, Amistar Pro, Punch-C, Landmark, Gandango	15 to 50
	Wheat (Broad spectrum)	Foil, Folicur, Silvacur, Flamenco, Opera, Twist Opus, Amistar, Landmark, Proline	15 to 50
	(Mildew)	Corbel, Patrol, Orka	25 to 30
Insecticides	Spring cereals (leatherjackets)	Dursban, Cyren	18 to 25
	Winter barley (aphids - vector BYDV)	Decis, Toppel, Sumi-Alpha,	5 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 75-85 pence per litre, contractors charge for treatment (excluding chemical) £1.30 per tonne.

(ii) Grain drying

(a) Own drier. The cost of fuel to remove 5% moisture per tonne and electricity for fans and augers would amount to approximately £9.00.

(b) Contract charges - handling charge approximately £5.00 per tonne plus £3.00 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 14% 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
27	88.2	11.8

(v) Anticipated growers prices for barley (ex-farm) 2006/2007

Feed Barley (£/tonne)

November 2006	104
January 2007	106
March	108
May	110

OILSEED RAPE SPRAYS

	Examples of proprietary products	Approximate cost per hectare (£)
Herbicides	**Post-emergence -** Kerb, Butisan S.	53 to 106
Fungicides	Folicur, Proline	28 to 42

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POTATO SPRAYS

		Examples of proprietary products	Approximate cost per hectare (£)
Herbicides	Broad Spectrum	Sencorex, Linuron, Opogard, Titus, PDQ	20 to 75
	Couchgrass	Glyphosate, Laser	10 to 65
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 40

(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	70	50	35	85
1.5	90	60	35	95
1.6	110	75	35	110
1.7	130	90	35	125
1.8	150	105	35	140
1.9	170	115	35	150
2.0	**190**	**130**	**35**	**165**
2.1	210	145	35	180
2.2	230	160	35	195
2.3	250	170	35	205
2.4	270	185	35	220
2.5	290	200	35	235

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 £165 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 £140 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.

(ii) Grazing - other variable costs

a) Grassland reseeding costs

		£ per hectare
Ground limestone	5 tonnes @ 15 £/t	75
Grass seed	35 kg @ 2.5 £/kg	88
Fertiliser 50 : 50 : 60		62
Spray - sward kill		30
- herbicide		30
Total Cost		285

(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 £28.50 per hectare.

b) Grassland spraying costs

The annual cost of herbicide is estimated at £7.00 per hectare – assumes spray 1 year in 4 against grassland weeds at cost of £28.00 per hectare.

(iii) Silage Variable Costs

	£ per hectare	£ per tonne
Fertiliser 200 : 40 : 40	140	3.50
Other variable costs	35	0.80
Contractors charge	300	7.50
Additives	50	1.30
Polythene	5	0.10
Total Cost	530	13.20

(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 £11.70. This increases to £14.70 with 3 cuts.
(5) When the farmer uses his own machinery, the total variable cost per tonne of silage is £5.70.
(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 £1.25 per tonne.
(7) Silage as a cash crop. To achieve a gross margin of £500 per hectare, a farmer would require to sell at £25.70 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	£1.15 - £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	90	11	22
Reseeding allowance	35	4	9
Contract - mowing	20	3	5
- turning (x2)	20	3	5
- bailing (inc. twine)	100	13	25
Total Cost	265	34	66

(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 31p.
(3) A hay crop cut in mid July and sold for £1, £1.50 or £2 per 20 kg bale would generate gross margins of £135, £335 and £535 per hectare respectively. These figures rise to £275, £4750 and £675 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.	12 to 22
Chickweed (will protect clover swards)	Alistell,	29 to 44
Ragwort	2-4D Ester, (e.g Depitox)	9 to 13
Thistle	2-4-D, MCPA, Agritox, Depitox.	9
Nettle	Garlon 2, Nushot Grazon, Blaster.	60
Docks (non clover swards)	Doxstar, Starane, Forefront Dockmaster Grassland.	14 to 40
Docks (will protect clover swards)	Squire.	30 to 35
Sward Kill	Roundup Biactive, Clinic, Glyphosate.	10 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	1.94	1.29 to 2.41
Dairy followers	2.23	1.96 to 2.29
Sucklers cows (new LFA)	1.58	1.51 to 1.65
Calf to beef systems	1.90	1.50 to 2.53
Calf to store systems	1.87	177 to 1.94
Breeding ewes (lowland)	1.95	1.71 to 2.26

Source: Northern Ireland Farm Business Survey, 2005/06.

(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 m^3 = 220 gallons
1 hectare = 2.47 acres
100 kg/ha = 80 units/acre
4,500 litres = 1,000 gallons

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

			LOW	TYPICAL	HIGH
Milk yield (litres)			5,100	5,800	6,300
		ppl	£	£	£
Milk sales		@ 16.5	**842**	**957**	**1,040**
Calves				**70**	
Less herd replacement cost				**118**	
OUTPUT			**794**	**909**	**992**
		£/t			
Concentrates		@ 150	237	226	198
Grazing	0.275	@ 165		45	
Silage	9.0	@ 13.20		119	
Sundries (AI, vet, misc)				90	
Total Variable costs			**491**	**480**	**453**
GROSS MARGIN PER COW			**302**	**429**	**539**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**604**	**857**	**1,078**
GROSS MARGIN PER 1,000 LITRES			**59**	**74**	**86**

(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 1% mortality are typical.
- replacement cost £750; cull cow value £280.

(4) Concentrate usage for low performance 0.31kg/litre, typical 0.26kg/litre, and high 0.21kg/litre.

(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
± 0.5 ppl in milk	29.00	58.00
± £5/t in concentrates price	7.54	15.08
± 100 litres milk	8.22	16.44

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

			LOW	TYPICAL	HIGH
Milk yield (litres)			4,800	5,300	5,800
		ppl	£	£	£
Milk sales		@ 16.3	**782**	**864**	**945**
Calves				**70**	
Less herd replacement cost				**118**	
OUTPUT			**734**	**816**	**897**
		£/t			
Concentrates		@ 150	187	167	165
Grazing	0.275	@ 165		45	
Silage	7.0	@ 13.20		92	
Sundries (AI, vet, misc)				90	
Total Variable costs			**415**	**395**	**393**
GROSS MARGIN PER COW			**319**	**421**	**504**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**639**	**842**	**1,009**
GROSS MARGIN PER 1,000 LITRES			**67**	**79**	**87**

(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 1% mortality are typical.
- replacement cost £750; cull cow value £280.

(4) Concentrate usage for low performance 0.26kg/litre, typical 0.21kg/litre, and high 0.19kg/litre.

(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
± 0.5 ppl in milk	26.50	53.00
± £5/t in concentrates price	5.57	11.13
± 100 litres milk	8.85	17.70

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

			LOW	TYPICAL	HIGH
Milk yield (litres)			6,100	6,800	7,300
		ppl	£	£	£
Milk sales		17.0	**1,037**	**1,156**	**1,241**
Calves				**70**	
Less herd replacement cost				**127**	
OUTPUT			**980**	**1,099**	**1,184**
		£/t			
Concentrates		@ 150	284	265	263
Grazing	0.250	@ 165		41	
Silage	10.0	@ 13.20		132	
Sundries (AI, vet, misc)				110	
Total Variable costs			**567**	**548**	**546**
GROSS MARGIN PER COW			**413**	**551**	**638**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**826**	**1,101**	**1,276**
GROSS MARGIN PER 1,000 LITRES			**68**	**81**	**87**

(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: - 26% replacement rate and 1% mortality are typical.
- replacement cost £750; cull cow value £280.

(4) Concentrate usage for low performance 0.31kg/litre, typical 0.26kg/litre, and high 0.24kg/litre.

(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
± 0.5 ppl in milk	34.00	68.00
± £5/t in concentrates price	8.84	17.68
± 100 litres milk	8.93	17.87

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

			LOW	TYPICAL	HIGH
Milk yield (litres)			5,800	6,300	6,800
		ppl	£	£	£
Milk sales		17.0	**986**	**1,071**	**1,156**
Calves				**70**	
Less herd replacement cost				**118**	
OUTPUT			**938**	**1,023**	**1,108**
		£/t			
Concentrates		@ 150	252	227	214
Grazing	0.262	@ 165		43	
Silage	9.5	@ 13.20		125	
Sundries (AI, vet, misc)				100	
Total Variable costs			**521**	**495**	**483**
GROSS MARGIN PER COW			**417**	**528**	**625**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**834**	**1,055**	**1,250**
GROSS MARGIN PER 1,000 LITRES			**72**	**84**	**92**

(1) Average calving pattern in Northern Ireland:-

January/February	25%	May to September	15%
March/April	20%	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: - 24% replacement rate and 1% mortality are typical.
- replacement cost £750; cull cow value £280.

(5) Concentrate usage for low performance 0.29kg/litre, typical 0.24kg/litre, and high 0.21kg/litre.

(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
± 0.5 ppl in milk	31.50	63.00
± £5/t in concentrates price	7.56	15.12
± 100 litres milk	9.14	18.27

DAIRY HEIFER REPLACEMENTS - AUTUMN BORN (2007)

	30 MONTH CALVING			24 MONTH CALVING	
	Physical		Financial	Physical	Financial
			£		£
Value of heifer (allowing for barreners and rejects)			750		750
Less value of calf (plus 2% mortality allowance)			130		130
OUTPUT PER HEIFER			**620**		**620**
Calf rearing costs to 3 months			55		55
4-6 months (indoors)		£/t			
Concentrates (17% protein)	125 kg	@155	19	250 kg	39
Silage	0.7 tonnes	@13.20	9	0.7 tonnes	9
Bedding straw	0.15 tonnes		7	0.15 tonnes	7
Veterinary and miscellaneous			6		8
7-12 months (at grass)					
Concentrates (15% protein)	25 kg	@140	4	180 kg	25
Grazing	0.15 ha		25	0.17 ha	28
Veterinary and miscellaneous			11		11
13-18 months (indoors)					
Barley and minerals	160 kg	@110	18	360 kg	40
Silage	5 tonnes	@13.20	66	4.5 tonnes	59
AI, Veterinary and miscellaneous			10		26
19-24 months (at grass)					
Grazing	0.21 ha		35	0.23 ha	38
AI, Veterinary and miscellaneous			32		10
25-30 months (indoors)					
Barley and minerals	180 kg	@110	20		
Silage	6 tonnes	@12.20	79		
Veterinary and miscellaneous			3		
Total Variable Costs			**398**		**355**
GROSS MARGIN PER HEIFER			**222**		**265**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**318**		**530**

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 (2007)

	27 MONTH CALVING			24 MONTH CALVING	
	Physical		Financial	Physical	Financial
			£		£
Value of heifer (allowing for barreners and rejects)			750		750
Less value of calf (plus 2% mortality allowance)			130		130
OUTPUT PER HEIFER			**620**		**620**
Calf rearing costs to 3 months			55		55
4-9 months (at grass)		£/t			
Concentrates (17% protein)	100 kg	@155	16	180 kg	28
Grazing	0.14 ha		23	0.15 ha	25
Veterinary and miscellaneous			11		11
10-15 months (indoors)					
Barley and minerals	360 kg	@110	40	405 kg	45
Silage	3.5 tonnes	@13.20	46	3.75 tonnes	50
AI, Veterinary and miscellaneous			6		8
16-21 months (at grass)					
Barley and minerals	0 kg	@110	0	50 kg	6
Grazing	0.21 ha		35	0.22 ha	36
AI, Veterinary and miscellaneous			32		27
22-24 months (indoors)					
Barley and minerals	25 kg	@110	3	135 kg	15
Silage	2.75 tonnes	@13.20	36	2.50 tonnes	33
Veterinary and miscellaneous			5		3
25-27 months (indoors)					
Barley and minerals	65 kg	@110	7		
Silage	2.75 tonnes	@13.20	36		
Veterinary and miscellaneous			5		
Total Variable Costs			**356**		**340**
GROSS MARGIN PER HEIFER			**264**		**280**
GROSS MARGIN PER HECTARE @ (2 ce/ha)			**441**		**559**

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	@	1235	25
Concentrates	(18% Protein)	85	@	180	15
	(17% Protein)	25	@	155	4
Hay		20	@	80	2
Bedding Straw		70	@	45	3
Veterinary & sundries					11
Total variable costs					**60**

(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 3 months (80 to 90 kg). The rearing cost for a dairy heifer calf would be approximately £55.

(4) Vaccination for hoose will cost approximately £5 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 100 kg for bull calves and 85 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

18 MONTH HEIFER BEEF

(October/November 2007 born continental type calves)

			TYPICAL	HIGH
	kg(dwt)	p/kg	£/head	£/head
Finished Heifer	285 @	185	527	527
Less Value of calf plus 2% mortality allowance			110	110
OUTPUT			**417**	**417**
Calf rearing costs to 3 months			55	55
4-6 months (indoors)		£/t		
Concentrates (17% protein)	2.0 to 1.0 kg/day @	155	28	14
Silage	1.5 tonnes @	13.20	20	20
Veterinary and miscellaneous			6	6
7-12 months (at grass)		£/t		
Concentrates (15% protein)	100 kg to 30 kg @	125	13	4
		£/ha		
Grazing	0.15 ha @	140	21	21
Veterinary and miscellaneous			8	8
13-18 months (indoors)		£/t		
Barley and minerals	4.3 to 2.0 kg/day @	110	85	40
Silage	4.5 to 5 tonnes @	13.20	59	66
Veterinary and miscellaneous			6	6
Total variable costs			**301**	**239**
GROSS MARGIN PER HEAD			**117**	**178**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**311**	**477**
Number of cattle finished per hectare			3.3	3.2
Interest charge per head (@ 7%)			27	24

(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	38	14	38

22 MONTH STEER BEEF

(October/November 2007 born continental type calves)

			TYPICAL	HIGH
	kg(dwt)	p/kg	£/head	£/head
Finished steer	345 @	185	638	638
Less Value of calf plus 2% mortality allowance			160	160
OUTPUT			**478**	**478**
Calf rearing costs to 3 months			60	60
4-6 months (indoors)		£/t		
Concentrates (17% protein)	2.5 to 1.0 kg/day @	155	35	14
Silage	1.2 tonnes @	13.20	16	16
Veterinary and miscellaneous			6	6
7-12 months (at grass)		£/t		
Concentrates (15% protein)	110 kg to 40 kg @	125	14	5
		£/ha		
Grazing	0.15 ha @	140	21	21
Veterinary and miscellaneous			8	8
13-18 months (indoors)		£/t		
Concentrates (15% protein)	2.0 to 0.5 kg/day @	125	45	11
Silage	4.5 to 5 tonnes @	13.20	59	66
Veterinary and miscellaneous			6	6
19-22 months (at grass)		£/t		
Barley and minerals	130 kg to 60 kg @	110	14	7
		£/ha		
Grazing	0.17 ha @	140	24	24
Veterinary and miscellaneous			7	7
Total variable costs			**315**	**250**
GROSS MARGIN PER HEAD			**163**	**228**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**339**	**475**
Number of cattle finished per hectare			2.2	2.1
Interest charge per head (@ 7%)			41	37

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 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).

(3) Weight at turnout 135 kg lwt.

Daily liveweight gain (kg)	
0.75 (3 months to turnout)	0.6 Housed (1st winter)
0.90 At grass (1st summer)	1.10 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	17	36	17	36

24 MONTH STEER BEEF

(January/February 2007 born continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished steer	335	@	185	620	620
Less Value of calf plus 2% mortality allowance				160	160
OUTPUT				**460**	**460**
Calf rearing costs to 3 months				60	60
4-9 months (at grass)			£/t		
Concentrates (15% protein)	100 to 50 kg	@	125	13	6
			£/ha		
Grazing	0.11 ha	@	140	15	15
Veterinary and miscellaneous				8	8
10-15 months (indoors)			£/t		
Concentrates (15% protein)	1.8 to 0.5 kg/day	@	125	41	11
Silage	4 to 4.5 tonnes	@	13.20	53	59
Veterinary and miscellaneous				5	5
16-21 months (at grass)			£/ha		
Grazing	0.20 ha	@	140	28	28
Veterinary and miscellaneous				8	8
22-24 months (indoors)			£/t		
Barley and minerals	6.7 to 3.0 kg/day	@	110	66	30
Silage	2.75 to 3.0 tonnes	@	13.20	36	40
Veterinary and miscellaneous				4	4
Total variable costs				**337**	**275**
GROSS MARGIN PER HEAD				**123**	**185**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**221**	**333**
Number of cattle finished per hectare				2.1	2.0
Interest charge per head (@ 7%)				46	42

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 turnout 100 kg lwt.

Daily liveweight gain (kg)	
0.75 At grass (1st summer)	0.90 At grass (2nd summer)
0.60 Housed (1st winter)	1.10 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 2007 born continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished steer	355	@	185	657	657
Less Value of calf plus 2% mortality allowance				160	160
OUTPUT				**497**	**497**
Calf rearing costs to 3 months				60	60
4-5 months (at grass)			£/t		
Concentrates (17% Protein)	60 to 30 kg	@	155	9	5
			£/ha		
Grazing	.04 ha	@	140	6	6
Veterinary and miscellaneous				8	8
6-11 months (indoors)			£/t		
Concentrates (15% Protein)	2 to 1 kg/day	@	125	45	23
Silage	3 to 4 tonnes	@	13.20	40	53
Veterinary and miscellaneous				5	5
12-17 months (at grass)			£/ha		
Grazing	0.16 ha	@	140	22	22
Veterinary and miscellaneous				8	8
18-23 months (indoors)			£/t		
Concentrates (15% Protein)	2 to 1 kg/day	@	125	45	23
Silage	5 to 5.5 tonnes	@	13.20	66	73
Veterinary and miscellaneous				5	5
24-28 months (outdoors)			£/ha		
Grazing	0.25 ha	@	140	35	35
Veterinary and miscellaneous				8	8
Total variable costs				**362**	**332**
GROSS MARGIN PER HEAD				**135**	**165**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**193**	**236**
Number of cattle finished per hectare				1.5	1.5
Interest charge per head (@ 7%)				56	53

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 turnout 110 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	25	18	25

CEREAL BULL BEEF

(Friesian type calves)

				TYPICAL £ /head
	kg(dwt)		p/kg	
Finished Bull	260	@	160	416
Less Value of calf plus 2% mortality allowance				35
OUTPUT				**381**
Calf rearing costs to 3 months				60
4-13 months			£/t	
Concentrates (13-15% Protein)	2 tonnes	@	125	250
Straw				12
Veterinary and miscellaneous				33
Total variable costs				**355**
GROSS MARGIN PER HEAD				**26**
Interest charge per head (@ 7%)				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 1.15 kg between 4 and 13 months of age, with a feed conversion ratio of 6.1:1.

(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 2007 continental type calves)

				TYPICAL	HIGH
	kg(dwt)		p/kg	£/head	£/head
Finished Bull	325	@	185	601	601
Less Value of calf plus 2% mortality allowance				160	160
OUTPUT				**441**	**441**
Calf rearing costs to 3 months				60	60
4-6 months			£/t		
Concentrates (17% Protein)	0.5 to 0.3 tonnes	@	155	78	47
Silage	0.5 to 1.0 tonnes	@	13.20	7	13
Veterinary and miscellaneous				10	10
7-14 months					
Concentrates (15% Protein)	1.4 to 0.9 tonnes		125	175	113
Silage	5.0 to 6.0 tonnes		13.20	66	79
Veterinary and miscellaneous				14	14
Total variable costs				**409**	**335**
GROSS MARGIN PER HEAD				**32**	**106**
GROSS MARGIN PER HECTARE @ 2 ce/ha				**107**	**265**
Number of cattle finished per hectare				6.7	5.0
Interest charge per head (@ 7%)				30	27

(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 2007 born continental type calves)

			TYPICAL
	kg(lwt)	£/100kg	£/head
Sale	390	@ 125	488
Less value of calf plus 2% mortality allowance			160
OUTPUT			**328**
Calf rearing cost to 3 months			60
4 - 10 months (at grass)		£/t	
Concentrates (17% protein)	100 kg	@ 155	16
Grazing	0.15 ha	@ 140	21
Veterinary and miscellaneous			9
11 - 16 months (indoors)			
Concentrates (15% protein)	1.5 kg/day	@ 135	36
Silage	4.5 tonnes	@ 13.20	59
Veterinary and miscellaneous			5
Total Variable Costs			**206**
GROSS MARGIN PER CALF			**121**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**167**
Interest per head (@ 7%)			25

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

(2) Weight at turnout 135 kg lwt
Daily liveweight gain (kg): - At grass 0.8
- Housed 0.6

LOWLAND SUCKLER COWS - MAY/JUNE CALVING (2007)

						TYPICAL
	sold per cow		kg(lwt)		£/100kg	£/head
Calves	0.98	@	320	@	125	392
Less herd replacement cost						52
calf purchases	0.08					9
OUTPUT						**331**
					£/t	
Concentrates - cow & calf			150 kg	@	125	19
					£/ha	
Grazing			0.31 ha	@	140	43
					£/t	
Silage - cow			8 tonnes	@	13.20	106
- calf			2.5 tonnes	@	13.20	33
Veterinary and miscellaneous						50
Total Variable Costs						**251**
GROSS MARGIN PER COW						**80**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha						**127**

(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	£700	15% replacement rate and 1% mortality per annum
Cull cow price	£440	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

LOWLAND SUCKLER COWS - FEBRUARY/MARCH CALVING (2007)

					TYPICAL £/head
	sold per cow		kg(lwt)	£/100kg	
Calves	0.98	@	270 @	125	331
Less herd replacement cost					52
calf purchases	0.10				11
OUTPUT					**268**
				£/t	
Concentrates - calf			50 kg @	155	8
- cow			50 kg @	110	6
				£/ha	
Grazing			0.30 ha @	140	42
				£/t	
Silage - cow			7 tonnes @	13.20	92
Veterinary and miscellaneous					54
Total Variable Costs					**202**
GROSS MARGIN PER COW					**66**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha					**112**

(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	£700	15% replacement rate and 1% mortality per annum
Cull cow price	£440	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

LOWLAND SUCKLER COWS - SEPTEMBER/OCTOBER CALVING (2007)

TYPICAL

	sold per cow	kg(lwt)		£/100kg	£/head
Calves	0.98	@ 280	@	125	343
Less herd replacement cost					52
calf purchases	0.10				11
OUTPUT					**280**
				£/t	
Concentrates - calf		150 kg	@	155	23
- cow		200 kg	@	110	22
				£/t	
Silage - cow		8 tonnes	@	13.20	106
- calf		1 tonnes	@	13.20	13
				£/ha	
Grazing		0.28 ha	@	140	39
Veterinary and miscellaneous					58
Total Variable Costs					**261**
GROSS MARGIN PER COW					**19**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha					**31**

(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	£700	15% replacement rate and 1% mortality
Cull cow price	£440	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

HILL SUCKLER COWS - SPRING CALVING (2007)

					TYPICAL
	sold per cow		kg(lwt)	£/100kg	£/head
Calves	0.94	@	230	@ 125	270
Less herd replacement cost					55
calf purchases	0.06				7
OUTPUT					**208**
			kg	£/t	
Barley and minerals			110	@ 110	12
Grazing					22
			tonnes	£/t	
Silage			6	@ 13.20	79
Veterinary and miscellaneous					50
Total Variable Costs					**163**
GROSS MARGIN PER COW					**45**

(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	15% replacement rate and 1% mortality
Cull cow price	£420	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

BEEF HEIFER REPLACEMENTS - SPRING BORN 2007
24 MONTH CALVING

		TYPICAL
		£/head
Value of heifer (allowing for barreners & rejects)		700
Less Value of calf plus 2% mortality allowance		90
OUTPUT		**610**
Calf rearing costs to 3 months		55
4-9 months (at grass)	£/t	
Concentrates (17% protein)	20 kg @ 155	3
	£/ha	
Grazing	0.11 ha @ 140	15
Veterinary and miscellaneous		7
10-15 months (indoors)	£/t	
Barley and minerals	400 kg @ 110	44
Silage	4.5 tonnes @ 13.20	59
Veterinary and miscellaneous		3
16-21 months (at grass)		
Grazing	0.19 ha @ 140	27
AI Bull charges, veterinary and miscellaneous		22
22-24 months (indoors)	£/t	
Barley and minerals	40 kg @ 110	4
Silage	3 tonnes @ 13.20	40
Veterinary and miscellaneous		7
Total variable costs		**287**
GROSS MARGIN PER HEAD		**324**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha		**572**

(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 2007)

			TYPICAL
	kg (dwt)	p/kg	£/head
Sale of finished steer	340	@ 185	629
	kg (lwt)	£/100 kg	
Less Value of calf plus 2% mortality allowance	265	@ 125	331
OUTPUT			**298**
		£/t	
9-14 months (indoors)			
Concentrates (17% Protein)	2.0 kg/day	@ 155	56
Silage	3.5 tonnes	@ 13.20	46
Veterinary and miscellaneous			9
		£/t	
15-20 months (at grass)			
Barley and minerals	40 kg	@ 110	4
		£/ha	
Grazing	0.19 ha	@ 140	27
Veterinary			10
21-24 months (indoors)			
Barley and minerals	6 kg/day	@ 110	79
Silage	3 tonnes	@ 13.20	40
Veterinary and miscellaneous			9
Total variable costs			**280**
GROSS MARGIN PER HEAD			**18**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**44**
Interest charge per head (@ 7%)			41

(1) Continental calves born during the spring 2007, 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 (2007/2008) STEER FINISHING
400 KG STORE

				TYPICAL
	kg (dwt)		p/kg	£/head
Sale of finished steer	330	@	185	611
	kg(lwt)		p/kg	
Less Purchase	400	@	125	500
OUTPUT				**111**
			£/t	
Barley and minerals	4 kg/day	@	110	101
Silage	7 tonnes	@	13.20	92
Veterinary and miscellaneous				7
Total Variable Costs				**201**
GROSS MARGIN PER HEAD				**-90**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**-429**
Interest charge per head (@ 7%)				26

(1) Continental cross steers purchased during the autumn of 2007 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)				
		80	**90**	**100**	**110**	**120**
Sale price (pence per per kg (dwt))	**150**	-26	-66	-106	-146	-186
	160	7	-33	-73	-113	-153
	170	40	0	-40	-80	-120
	180	73	33	-7	-47	-87
	190	106	66	26	-14	-54

WINTER (2007/2008) STEER FINISHING
500 KG STORE

				TYPICAL £/head
	kg(dwt)		p/kg	
Sale of finished steer	350	@	185	648
	kg(lwt)		p/kg	
Less Purchase	500	@	110	550
OUTPUT				**98**
			£/t	
Barley and minerals	4 kg/day	@	110	66
Silage	5 tonnes	@	13.20	66
Veterinary and miscellaneous				12
Total Variable Costs				**144**
GROSS MARGIN PER HEAD				**-47**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**-340**
Interest charge per head (@ 7%)				18

(1) Continental cross steers. Purchased during the autumn 2007 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)				
		70	**80**	**90**	**100**	**110**
Sale price (pence per per kg (dwt))	**140**	-4	-54	-104	-154	-204
	150	31	-19	-69	-119	-169
	160	66	16	-34	-84	-134
	170	101	51	1	-49	-99
	180	136	86	36	-14	-64

SUMMER STEER FINISHING 2007
420 KG STORE

				TYPICAL £/head
	kg(dwt)		p/kg	
Sale of finished steer	345	@	185	638
	kg(lwt)		£/100kg	
Less Purchase	420	@	125	525
OUTPUT				**113**
			£/t	
Barley and Minerals	20 kg	@	110	2
			£/ha	
Grazing	0.25 ha	@	140	35
Veterinary and miscellaneous				8
Total Variable Costs				**45**
GROSS MARGIN PER HEAD				**68**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**408**
Interest charge per head (@ 7%)				19

(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 2007 and grazed for 180 days with a daily liveweight gain of 0.9 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)				
		80	**90**	**100**	**110**	**120**
Sale price (pence per per kg (dwt))	**140**	102	60	18	-24	-66
	150	136	94	52	10	-32
	160	171	129	87	45	3
	170	205	163	121	79	37
	180	240	198	156	114	72

'TRADITIONAL' STORE TO BEEF SYSTEM

(Purchased October 2007)

				TYPICAL
	kg(dwt)		p/kg	£/head
Sale of finished steer	350	@	185	648
	kg(lwt)		£/100kg	
Less Purchase	360	@	125	450
OUTPUT				**198**
			£/t	
Barley and minerals	300 kg	@	110	33
Silage	5.5 tonnes	@	13.20	73
			£/ha	
Grazing	0.22 ha	@	140	31
Veterinary and miscellaneous				32
Total Variable Costs				**168**
GROSS MARGIN PER HEAD				**29**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**87**
Interest charge per head (@ 7%)				37

(1) Continental cross steers. Purchased during October 2007 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	0.9
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 2007

			TYPICAL
	kg(lwt)	£/100kg	£/head
Sale of store steer	450	@ 105	473
Less Purchase	300	@ 125	375
OUTPUT			**98**
		£/t	
Barley and minerals	40 kg	@ 110	4
		£/ha	
Grazing	0.18 ha	@ 140	25
Veterinary and miscellaneous			12
Total Variable Costs			**42**
GROSS MARGIN PER HEAD			**56**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha			**335**
Interest charge per head (@ 7%)			14

(1) Continental cross steer purchased during the Spring 2007 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, 4.5 steers would be stocked per hectare.

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

Gross margin per head

		Purchase Price p/kg (lwt)				
		75	**85**	**95**	**105**	**115**
Sale price (pence per per kg (lwt))	**75**	71	41	11	-19	-49
	85	116	86	56	26	-4
	95	161	131	101	71	41
	105	206	176	146	116	86
	115	251	221	191	161	131

LOWLAND BREEDING EWES - MID MARCH LAMBING

	kg	p/kg		LOW £		TYPICAL £		HIGH £
Lambs (no.) sold finished	21 @	215	(1.20)	54	(1.40)	63	(1.60)	72
Wool						2		
Less Flock replacement cost						11		
OUTPUT				**45**		**54**		**63**
	kg	£/t						
Concentrates	55 @	140				8		
Grassland (including hay/silage)						15		
Veterinary and miscellaneous						6		
Total Variable Costs						**29**		
GROSS MARGIN PER EWE				**16**		**26**		**35**
GROSS MARGIN PER HECTARE @ 1.8 ce/ha				**148**		**230**		**311**

(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 £70 and culls sold at £30. Rams purchased at £150 and sold after 3 years at £30.

(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	4.5	41
± 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 @	250	(1.05)	55	(1.30)	68	(1.45)	76
Wool						2		
Less Flock replacement cost						11		
OUTPUT				**46**		**59**		**67**
	kg	£/t						
Concentrates - ewe	70 @	140				10		
lambs	35 @	140				5		
Grazing and hay/silage						18		
Veterinary and miscellaneous						10		
Total Variable Costs						**43**		
GROSS MARGIN PER EWE				**3**		**17**		**24**
GROSS MARGIN PER HECTARE @ 2.5 ce/ha				**43**		**207**		**305**

(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 £70 and culls sold at £30. Rams purchased at £150 and sold after 3 years at £30.

(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	5.3	66
± 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 sold (no.)	20 @ 195	(1.05)	41	(1.25)	49	(1.35)	53
Wool					2		
Less Flock replacement cost					11		
OUTPUT			**32**		**40**		**44**
	kg £/t						
Concentrates	65 @ 140				9		
Grazing and hay					15		
Veterinary and miscellaneous					6		
Total Variable Costs					**30**		
GROSS MARGIN PER EWE			**2**		**10**		**14**

(1) For the typical flock, 70% of lambs are sold fat at 21kg halfweight, 30% as stores at 16kg halfweight. Average halfweight of 20kg per lamb.

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

(3) Flock replacement. Ewe replacement rate of 25% (inclusive of 5% mortality), one third retained and two thirds purchased. Ewe replacements purchased at £70 each and culls sold at £30 each. Rams purchased at £150 each and sold after 3 years for £30.

(4) Sensitivity analysis

Change in gross margin(£)

	TYPICAL
	per ewe
± 0.1 in lambs reared per ewe	3.9
± 10p/kg in sale value	2.5
± £20/t in concentrate price	1.3

HILL BREEDING EWES - MOUNTAIN TYPE IN SDA

		LOW	£	TYPICAL	£	HIGH	£
	kg @ p/kg						
Lambs sold (no.)	16 @ 215	(0.70)	24	(0.90)	31	(1.10)	38
	£/head						
Cull ewes (0.18)	@ 20				4		
Wool					1		
Less Flock replacement cost					1		
OUTPUT			**28**		**35**		**41**
	kg £/t						
Concentrates	55 @ 140				8		
Grazing					12		
Veterinary and miscellaneous					6		
Total Variable Costs					**26**		
GROSS MARGIN PER EWE			**2**		**9**		**16**

(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 £150 each and sold after 3 years for £30

(5) Ewe mortality of 7% per annum.

(6) Sensitivity analysis

Change in gross margin(£)

	TYPICAL
	per ewe
± 0.1 in lambs reared per ewe	3.4
± 10p/kg in 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	@	220	46
Less lamb purchase	16	@	230	37
OUTPUT (feeder's margin)				**9**
Grazing				2
Veterinary and miscellaneous				1
Total Variable Costs				**3**
GROSS MARGIN PER LAMB				**6**

(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 £0.60 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	@ 220	46
Less lamb purchase	14	@ 230	32
OUTPUT (feeder's margin)			**14**
	kg	£/tonne	
Concentrates	45	@ 140	6
Grazing			3
Veterinary and miscellaneous			1
Total Variable Costs			**10**
GROSS MARGIN PER LAMB			**4**

(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 £0.60 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	1.40

STORE LAMB (14 kg) FINISHED ON FORAGE CROPS

	kg (halfweight)			TYPICAL
	kg		p/kg	£
Lamb sale	21	@	230	48
Less lamb purchase	14	@	230	32
OUTPUT (feeder's margin)				**16**
	kg/day		£/tonne days	
Concentrates	0.2	@	115 125	3
			p/day @	
Grazing			3 @ 100	3
Veterinary and miscellaneous				1
Total Variable Costs				**7**
GROSS MARGIN PER LAMB				**9**

(1) Store lambs are purchased at an average halfweight of 14kg during the autumn of 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 £115 per hectare or 2.9 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 £125 per hectare or 1.9 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)	TYPICAL
	kg @ p/kg	£
Lamb sale	22 @ 230	51
Less lamb purchase	15 @ 230	35
OUTPUT (feeder's margin)		**16**
	kg £/tonne	
Concentrates	85 @ 140	12
Veterinary and miscellaneous (including fodder)		3
Total Variable Costs		**15**
GROSS MARGIN PER LAMB		**1**

(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	1.40

PIG REARING

				LOW		TYPICAL		HIGH
		£/head		£		£		£
Sales (no.) of 39 kg weaners	@	36	(18.0)	648	(20.0)	720	(22.0)	792
	number	£/head						
Plus cull sows	0.36 @	70				25		
Less gilts bought	0.10 @	120				12		
boar charge						3		
OUTPUT				**658**		**730**		**802**
		£/t						
Sow meal		160		207		208		208
Creep and link feeds		370		100		111		122
Grower pellets		185		226		244		260
A.I. Costs				16		16		16
Veterinary and miscellaneous				50		50		50
Total Variable Costs				**600**		**629**		**656**
GROSS MARGIN PER SOW				**59**		**101**		**146**
GROSS MARGIN PER WEANED PIG				**3.3**		**5.1**		**6.6**

(1) Herd replacement. It is assumed that sows and boars have an average breeding life of 3 years; 1 boar per 75 sows; sow mortality 4.0% and 75% 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	20	22

Meal consumption per weaner (kg)	LOW	TYPICAL	HIGH
Sow meal	72	65	59
Creep & link feeds	15	15	15
Grower pellets	68	66	64
Total feed	**155**	**146**	**138**

(3) A.I. Costs - semen cost £3 per bottle. Each sow inseminated twice. 2.6 services per sow per year

(4) 'Veterinary and miscellaneous' costs do not include 'fixed costs' such as electricity, water and transport which are directly associated with the pig enterprise - typically £50 per sow

(5) Sensitivity analysis

	Change in gross margin (£ per sow)		
	LOW	TYPICAL	HIGH
± £1 in sale price	18	20	22
± £5 in average feed price	14	14	13

(6) At a typical level of performance an average weaner price of £31 is required to cover the variable costs of production.

PIG FINISHING

				TYPICAL £
	kg (dwt)		p/kg	
Sale	79	@	95	75
	kg (lwt)			
Less purchase	39			36
OUTPUT				**39**
	kg		£/t	
Finisher meal	160	@	160	26
Veterinary and miscellaneous				3
Total variable cost				**29**
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 directly associated with the pig enterprise - typically £2 per pig.

(5) Sensitivity analysis

	Change in gross margin
	£ per pig
± 1p/kg in sale price	0.79
± £5/tonne in average feed price (FCR 2.7:1)	0.80

PIG REARING AND FINISHING

			LOW		TYPICAL		HIGH
				£		£	£
	kg (dwt)	p/kg					
Sales of pigs (no.) @	79	@ 95	(18)	1,351	(20)	1,501	(22) 1,651
	Number	£/head					
Plus cull sows	0.36	@ 70				25	
Less gilts bought	0.1	@ 120				12	
boar charge						3	
OUTPUT				**1,361**		**1,511**	**1,661**
	£/t						
Sow meal	160			207		208	208
Creep & link feeds	370			100		111	122
Grower pellets	185			226		244	260
Finisher meal	160			490		512	546
A.I. Costs				16		16	16
Veterinary and miscellaneous				80		80	80
Total Variable Costs				**1,119**		**1,171**	**1,232**
GROSS MARGIN PER SOW				**242**		**340**	**429**
GROSS MARGIN PER FINISHED PIG				**13**		**17**	**20**

(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 3 years; 1 boar per 75 sows; sow mortality 4.0% and 75% 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 twice. 2.6 services per sow per

	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**

PIG REARING AND FINISHING (CONTINUED)

(5) 'Veterinary and miscellaneous' costs do not include 'fixed costs' such as electricity, water and transport which are directly associated with the pig enterprise - typically £12.50 per pig.

(6) Sensitivity analysis

Change in gross margin

	£ per sow		
	LOW	**TYPICAL**	**HIGH**
± 1p/kg in sale price	14.2	15.8	17.4
± £5/tonne in average feed price	29	31	32

CAGED LAYING HENS

PER HEN HOUSED	TYPICAL pence/dozen	GOOD pence/dozen
Sales	41.00	41.00
Less pullet	8.73	8.40
OUTPUT	**32.27**	**32.60**
Concentrates @ £125/t	22.64	21.43
Miscellaneous	1.40	1.35
Total Variable Costs	**24.04**	**22.78**
GROSS MARGIN PER DOZEN (pence)	**8.23**	**9.82**
GROSS MARGIN PER BIRD (£)	**2.14**	**2.65**

(1) In Northern Ireland, most caged birds are kept under contract to an egg packer. Farmers receive a fee (typically around £1.40 per bird per laying cycle) from which they must meet labour, electricity, water and other miscellaneous costs. In addition bonuses may be paid based on production performance.
An alternative method of payment is where farmers are paid an agreed price per dozen eggs depending on size and quality.

(2) 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	26	116	10
Good production	27	114	5

(3) 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.

(4) Miscellaneous costs are comprised of electricity, water, insurance, repairs, maintenance 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	0.26	0.27
± £5/t in feed price	0.24	0.23

(6) 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	65.00	65.00
Less pullet	9.79	9.40
OUTPUT	**55.21**	**55.60**
Concentrates @ £145t	31.15	28.73
Miscellaneous	4.17	4.00
Total Variable Costs	**35.32**	**32.73**
GROSS MARGIN PER DOZEN (pence)	**19.89**	**22.87**
GROSS MARGIN PER BIRD (£)	**4.77**	**5.72**

(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	24	127	15
Good production	25	122	10

(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	0.24	0.25
± £5/t in feed price	0.26	0.25

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

BROILERS

				TYPICAL pence/bird
	kg		p/kg	
Sales	2.1	@	52.00	109.20
	No.		£/100	
Less Day Old Chicks	1.04	@	24.50	25.48
OUTPUT				**83.72**
	kg		£/t	
Concentrates	3.6	@	184	66.24
Miscellaneous				10.03
Total Variable Costs				**76.27**
MARGIN PER BIRD (pence)				**7.45**
MARGIN PER 1,000 BIRDS (£)				**74.50**

(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) 4% 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	0.39	3.86

(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	@ 1,800	1,080	0.75	@ 5,000	3,750
Less mare depreciation			150			450
OUTPUT			**930**			**3,300**
Stud fees			200			500
Registration			25			25
Bedding			100			115
Fodder			215			250
Concentrates			250			285
Veterinary and medicines			280			310
Farrier			225			260
Grazing			50			50
Transport and marketing			125			160
Total Variable Costs			**1470**			**1,955**
GROSS MARGIN PER MARE			**-540**			**1,345**

(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 - 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 Depeciation Typical Purchase Price £2000 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	@	2.60	63
Hinds	0.38	@	48	@	2.40	44
	culls				£/head	
Stags	0.01	@			104	1
Hinds	0.07	@			95	7
Less stags	0.01	@			450	5
Output per hind						**110**
	kg				£/t	
Concentrates	150	@			140	21
Forage cost						22
Veterinary, medicine						6
Sundries - including haulage						12
Total Variable Costs						**61**
GROSS MARGIN PER HIND						**49**

(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

MUSHROOMS - TRADITIONAL

			per crop	
	lbs	p/lb	£	pence per lb
Sales	11,000 @	53	**5,830**	**53**
		£/t		
Compost	20t @	85	1,700	15
Casing			230	2
		p/tray		
Plastic trays (6lb)	@	27	495	5
Fuel for heating			330	3
		p/lb		
Picking - 11,000 lbs	@	10.0	1,100	10
Electricity			80	1
Fungicides and insecticides			50	1
Disinfection/fumigation (at end of crop)			15	1
Casual Labour			375	3
Miscellaneous			80	1
Total Variable Cost			**4,455**	**40**
GROSS MARGIN			**1,375**	**13**

(1) Polythene-clad house (33.5 m x 8.5 m) filled with approximately 1,100 bags of ready pasteurised and spawned compost. Cropping 550 lbs per tonne of phase II compost.

(2) 5.5 crops per house per year.

(3) No contract charges included for laying out casing or emptying house.

(4) No charge for disposal of spent compost.

(5) The success of any horticultural enterprise is very dependent on marketing.

(6) Figures are based on a 10 house unit.

MUSHROOMS - DUTCH SHELVING

			per crop	
	lbs	p/lb	£	pence per lb
Sales	19,500 @	55	**10,725**	**55**
		£/t		
Compost - Phase III	30t @	125	3,750	19
Casing			383	2
		p/tray		
Plastic trays (6lb)	@	27	878	5
Fuel for heating			660	3
		p/lb		
Picking - 19,500 lbs	@	10.0	1,950	10
Electricity			75	0
Fungicides and insecticides			83	0
Disinfection/fumigation (at end of crop)			25	0
Casual Labour			575	3
Miscellaneous			80	0
Total Variable Cost			**8,459**	**43**
GROSS MARGIN			**2,266**	**12**

(1) Polythene-clad house (33.5 m x 8.5 m) filled with approximately 30 tonnes of phase III compost. Cropping 650 lbs per tonne of of phase III compost on Dutch Shelving.

(2) 7.5 crops per house per year.

(3) No contract charges included for laying out casing or emptying house.

(4) No charge for disposal of spent compost.

(5) The success of any horticultural enterprise is very dependent on marketing.

(6) Figures are based on a 10 house unit.

BRUSSELS SPROUTS PER HECTARE

		tonnes	£ per net		nets per tonne	£
Sales		14	@ 3.50		@ 160	**7,840**
	Number		£ per 1,000			
Plants	28,000	@	19.50			546
Fertiliser	230 : 90 : 100					190
Sprays	herbicides					65
	fungicides					135
	insecticides					45
Casual labour	planting					120
	harvesting					1,150
Sundries	nets					165
Total Variable Costs						**2,416**
GROSS MARGIN						**5,424**

(1) Fertiliser 600 kg/ha of 15 : 15 : 17
500 kg/ha 27½% N

(2) The success of any horticultural enterprise is very dependent on marketing.

CARROTS PER HECTARE

		tonnes	£ per tonne	£
Sales		50 @	160	**8,000**
Seed				300
Fertiliser	50 : 80 : 115			167
Sprays	herbicides			190
	fungicides			220
	insecticides			100
Casual labour	harvesting			285
	washing and grading			345
Sundries	bags			700
Total Variable Costs				**2,307**
GROSS MARGIN				**5,693**

(1) Fertiliser 500 kg/ha of 10 : 16 : 23

(2) The success of any horticultural enterprise is very dependent on marketing.

LEEKS PER HECTARE

		tonnes		£ per 5kg net	£
Sales		17	@	3	**10,200**
Variable costs					
	Number	£ per 1,000			
Plants	125,000	@ 16			2,000
Fertiliser	230 : 90 : 100				190
Sprays	herbicides				120
	fungicides				135
Casual labour	planting				425
	harvesting				2,645
Sundries	nets				465
Total Variable Costs					**5,980**
GROSS MARGIN					**4,220**

(1) Fertiliser 600 kg/ha of 15 : 15 : 17
500 kg/ha 27½% N

(2) The success of any horticultural enterprise is very dependent on marketing.

SUMMER/AUTUMN CAULIFLOWER PER HECTARE

			Dozen	£ per 10	£
Sales			1,700 @	2.50	**5,100**
	Number	£ per 1,000			
Plants	28,000	@ 23			644
Fertiliser	230 : 90 : 100				190
Sprays	herbicides				40
	fungicides				30
	insecticides				45
Casual labour	planting				120
	harvesting				860
Sundries	boxes				875
Total Variable Costs					**2,804**
GROSS MARGIN					**2,296**

(1) Fertiliser 600 kg/ha of 15 : 15 : 17
500 kg/ha 27½% N

(2) The success of any horticultural enterprise is very dependent on marketing.

WHITE CABBAGE PER HECTARE

		tonnes	per tonne	£
Sales		40	@ £80	**3,200**
	Number	£ per 1,000		
Plants	25,000	@	17	425
Fertiliser	230 : 90 : 100			190
Sprays	herbicides			65
	fungicides			95
	insecticides			30
Casual labour	planting			120
	harvesting			550
Total Variable Costs				**1,475**
GROSS MARGIN				**1,725**

(1) Fertiliser 600 kg/ha of 15 : 15 : 17
500 kg/ha 27½% N

(2) The success of any horticultural enterprise is very dependent on marketing.

WINTER BROCCOLI PER HECTARE

			£
		Dozen	
Sales		1460 @ 4.20	**6,132**
	Number	£ per 1,000	
Plants	70,000	@ 23	1,610
Fertiliser	155 : 100 : 140		165
Sprays	herbicides		40
	fungicides		50
	insecticides		15
Casual labour	planting		120
	harvesting		1,150
Sundries	boxes		775
Total Variable Costs			**3,925**
GROSS MARGIN			**2,207**

(1) Fertiliser 600 kg/ha of 10 : 16 : 23
350 kg/ha 27½% N

(2) The success of any horticultural enterprise is very dependent on marketing.

FERTILISER PRICES [1] AT SEPTEMBER 2006

		£ per tonne
Nitrochalk (27% N)		154
Urea (46% N)		200
Cereal fertiliser	15:15:17	180
	0:24:24	190
Grassland fertiliser	20:10:10	175
High N fertiliser	25:5:5	175
	27:6:6	175
Silage fertiliser	24:6:12	180
Ground limestone (delivered and spread)		15

(1) All prices one tonne lots ex-store.

(2) Figures used in the budgets in this publication are based on anticipated prices for 2007.

FEEDINGSTUFF PRICES AT SEPTEMBER 2006

	% protein	£ per tonne
Calf milk replacer(bags)	25	1233
Calf starter/weaner meal	18	179
Calf rearing nuts	17	155
Dairy nuts	16	148
	18	155
Cattle fattening nuts	15	140
Cattle concentrate	34	191
Sheep feed (bulk)	16	151
(bags)	16	180
Pig creep pellets (bulk)	24	363
Pig creep pellets (bags)	24	378
Pig grower/rearer meal	22	205
Sow meal	16	172
Pig fattening meal	20	178
Flaked maize		159
Barley meal		123
Maize meal		125
Soya bean meal	44	163
Sugar beet pulp		118
Maize gluten	20	100

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

(2) Figures used for the budgets in this publication relate to the year of usage.

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)	205
Spring oats (6 months)	220
Winter barley (10 months)	283
Winter oats (10 months)	254
Winter wheat (10 months)	332
Spring oilseed rape (6 months)	238
Winter oilseed rape (10 months)	314
Seed potatoes (6 months)	1,360
First early potatoes (6 months)	1,072
Maincrop ware potatoes (6 months)	1,094

(b) Livestock Enterprises	Initial Capital (1) (£)	Variable Costs per livestock place (2) (£)	Total EMCR Per livestock place (3) (£)
Dairy cows (1 month)	750	33 – 47	783 – 797
Dairy heifer replacements	130	341 – 399	471 – 529
18 month heifer beef	110	301	411
22 month steer beef	160	315	475
24 month steer beef	160	337	497
28 month steer beef	160	362	522
Cereal bull beef	35	355	390
Grass silage bull beef	160	410	570
Calf to store system	160	204	364
Lowland suckler cows - May calving	700	251	951
- Feb calving	700	202	902
- Oct calving	700	261	961
Hill suckler cows	700	165	865
Beef heifer replacements	90	286	376
Finishing suckled calves	371	280	651
Winter cattle finishing 400kg (230 days)	500	200	700
Winter cattle finishing 500kg (150 days)	575	144	719
Summer cattle finishing 420kg (180 days)	546	45	591
Traditional store to beef system (12 mths)	450	169	619
Summer grazing of store cattle (6 mths)	420	41	461
Lowland breeding ewes - March lambing	70	29	99
Lowland breeding ewes - Dec lambing	70	43	113
Upland breeding ewes	70	30	100
Hill breeding ewes	70	26	96
Store lamb finishing (3-5 mths)	32 - 37	15 – 3	47 – 40

	Initial Capital (1) (£)	Variable Costs Livestock per place (2) (£)	Total EMCR Livestock per place (3) (£)
Pig rearing (per sow) (5mths)	120	262	382
Pig finishing (per pig) (3 mths)	36	29	65
Pig rearing/finishing (per sow) (6 mths)	120	585	705
Horses – half bred mares	2,000	1,470	3,470
Deer – Hinds	200	61	261

(c) Horticultural Enterprises

	EMCR £ per ha
Mushrooms	2,819
Brussels sprouts	1,101
Carrots	977
Leeks	2,870
Summer/autumn cauliflower	1,069
White cabbage	925
Winter broccoli	2,000

(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.

(3) For an arable or horticultural enterprise the marginal capital requirement equates with the total variable costs for the enterprise excluding any contractor charges and harvesting and marketing costs.

FIXED COSTS (EXCLUDING LABOUR AND CONACRE COSTS) BY TYPE OF FARM BUSINESS [1], 2005//2006.

	Dairying			
	Very Small	Small	Medium	Large
Area farmed (hectares)[2]	28	43	64	125
FIXED COSTS (£ per ha)				
Depreciation of machinery	151	98	138	132
Machinery running costs	129	140	133	110
Electricity and heating fuels	30	33	35	26
Miscellaneous (inc. farm rates)	68	63	56	49
Depreciation of buildings/work etc	108	87	123	113
Building repairs	32	44	39	36
TOTAL	**518**	**465**	**524**	**466**

	Beef Cattle & Sheep			Cropping
	SDA	DA	Non LFA	
Area farmed (hectares)[2]	103	63	51	55
FIXED COSTS (£ per ha)				
Depreciation of machinery	55	93	67	207
Machinery running costs	53	86	89	216
Electricity and heating fuel	4	8	15	33
Miscellaneous (inc. farm rates)	21	39	51	56
Depreciation of buildings/work etc	36	49	34	178
Building repairs	21	31	36	45
TOTAL	**190**	**306**	**292**	**735**

(1) Farm types

Dairying	Dairy cows including associated young stock account for over two-thirds of the total Standard Gross Margin (SGM)
Cattle and Sheep	At least two-thirds of the total SGM from beef cattle and sheep.
Cropping	At least two-thirds of the total SGM from arable crops and / or combinable crops.

(2) **Area farmed** has been adjusted for conacre taken or let. Planning for 2006 should take account of any anticipated changes in fixed costs. As the level of fixed costs per hectare differ considerably between farms, the data quoted above should be treated with caution. Since the incidence of conacre and 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 - NEW MACHINE

	4-Wheel drive						2-Wheel drive			
Horse power	120		100		80		90		80	
Initial Cost (£)	38,000		33,500		30,000		29,000		27,000	
	Per year	Per hour	Per year	Per hour	Per year	Per hour	Per year	Per hour	Per year	Per hour
Repairs	1,520	3.04	1,340	2.68	1200	2.40	1,160	2.32	1,080	2.16
Depreciation (average charge)	3,240	6.48	2,860	5.72	2560	5.12	2,476	4.95	2,305	4.61
Insurance	875	1.75	780	1.56	730	1.46	710	1.42	670	1.34
Fuel & Oil	3,400	6.80	3,000	6.00	2400	4.80	2,800	5.60	2,200	4.40
TOTAL	9,035	18.07	7,980	15.96	6,890	13.78	7,146	14.29	6,255	12.51

(1) Initial cost based on list 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.

(6) Fuel has been costed at 40 pence per litre.

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

NEW MACHINERY PRICES

Tractors (See Page 96)

	£			£	
Quad (4WD Bike)	4,000	7,000	Plough	5,000	17,000
Rough terrain forklift	20,000	40,000	Harrow	1,000	1,300
4 WD utility vehicle	9,000	25,000	Power harrow	5,500	8,000
Pick-up	9,000	20,000	Land roller	800	1,300
Slurry tanker	3,000	5,000	Land leveller	250	1,000
Slurry pump	1,500	2,200	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	7,000	Welder	250	1,000
Buckrake	1,000	1,600	Compressor	300	800
Bale spike	150	250	Generator	600	1,500
Grass topper	700	3,000	Power washer	400	1,250
Sheargrab	1,000	1,500	Water pump	1,000	2,500
Tractor loader	3,500	6,000	Hedge cutter	5,500	25,000
Silage feeding trailer	700	1,200	Chain saw	350	600
Diet feeder wagon	10,500	25,000	Bulk meal bin	1,500	2,500

AGRICULTURAL CONTRACTORS' CHARGES

	Cost (£)	
1. Cultivations		
Ploughing - Lea	38 to 55	per hectare
- Stubble and other	33 to 40	"
Discing	14	per hour
Chain harrowing	10	"
Power harrowing	25 to 30	per hectare **or**
	22	per hour
Ground driven rotary harrowing	14	"
Springtine harrowing	14	"
Rotavating - Large types 100"	28 to 35	per hectare **or**
	22 to 24	per hour
Rolling - Light	9 to 13	per hectare
- Heavy	11 to 14	"
Reseeding (Complete operation not including seed/fertiliser)	275 to 350	"
2. Seeding and Planting		
- combined drilling	17 to 20	per hectare
- precision seeding	40 to 55	"
- potato planting (automatic)	18 to 22	per hour
- direct drilling	40 to 45	per hectare
- one pass cultivation and drilling	40 to 45	"
- destoning	130 to 160	"
3. Spraying and Spreading		
Crop spraying (excluding chemicals)	12 to 20	per hectare
Fertiliser	13 to 20	per tonne
	5 to 10	per hectare
	17 to 22	per hour
Lime spreading	14 to 16	per tonne
Farmyard Manure		
- Entire operation	30 to 40	per hour
Slurry spreading (1,100-1,500) gallon tanker	14 to 18	"
Slurry spreading (2,000 gallon tanker)	17 to 22	"
Slurry spreading (self-propelled tanker)	33 to 48	"
Slurry spreading (sludigator)	20 to 24	"
Slurry Spreading (umbilical system)	55 to 70	"
Slurry Spreading (umbilical system)	4 to 5	per 1000 gallons
Pumping and agitating (tanks)	16 to 21	per hour

	Cost (£)	
4. Harvesting		
Forage, including harvester, tractor and trailer		
- precision (complete operation)	110 to 130	per hectare
- precision (without buckraking)	95 to 110	"
- double chop (complete operation)	90 to 100	"
Buckraking into silo	15 to 20	"
Additional tractor and trailer for haulage	10 to 17	per hectare **or**
	14 to 16	per hour
Mowing hay or grass (conventional)	16 to 22	per hectare
Mowing hay or grass (Conditioner/auto swather)	20 to 30	per hectare
Topping grass	15	per hectare
Tedding, turning or raking	10	"
Pick-up baling - including twine	0.25 to 0.30	per small bale
- excluding twine	0.16 to 0.20	"
Big bale silage - round and wrap	4.25 to 4.75	per bale
- round	4.50 to 5.00	per bale net
Big bale straw	1.70 to 2.20	"
Combine harvesting	60 to 100	per hectare
Threshing	13	per hour
Potato harvesting (ground destoned)	220 to 320	per hectare
Forage Maize harvesting (complete operation)	145 to 160	per hectare
5. Grain Drying		
Minimum charge	12	per tonne
Drying - Handling charge	5	"
per 1% moisture removed,	3	"
6. Milling and Mixing		
Rolling - at Millers' premises	10	per tonne
Rolling - on farm service	11	"
Milling	14	"
Mixing	5	"
Cubing	12	"

	Cost (£)	
7. Ditching and Field Drainage		
Wheeled digger - bucket type	16 to 20	per hour
Tracked digger	22 to 28	"
Bulldozing	45 to 65	"
Opening field drains only	0.40	per metre
Laying drains (excluding stones)	0.65 to 0.75	"
Mole draining	80 to 90	per hectare
Laying water piping	13 to 14	per hour
Subsoiling	14	"
Stoner	14 to 17	"
8. Miscellaneous		
Hedge cutting - flail	17 to 20	per hour
- saw	14 to 18	"
Sawing logs - chainsaw	11	"
Haulage - tractor and trailer (higher prices for larger tractors and 4WD)	14 to 18	per hour
Relief milking - typical (largely dependent on size of herd and milking system)	22 to 35	per milking **or**
	12	per hour
Hoof paring dairying cows - rear feet only	5	per cow
- all feet	9	"
Sheep shearing	0.80 to 1.00	per ewe
Fencing: assume strainers max 30m apart, and double strainers on corners		
5 rows of barbed wire		
- total cost	3.25 to 3.75	"
- labour only	1.20 to 1.70	"
Sheep fence plus 3 lines of barbed wire		
- total cost	3.80 to 4.80	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		50	225
Chain harrow		30	100
Power harrow (3m plus blades)		70	350
Rotavator (plus blades)		50	230
Land roller		15 to 20	80
Fertiliser sower		20 to 25	100
Crop sprayer		25 to 30	130
Lagoon mixer		25	70
Slurry pump		35	125
Sludgigator		40	225
Rotary spreader	7.3 cu yard	30 to 40	175
Slurry tanker	1300 gall	35	150
" "	1100 gall	30	130
Bale lifter		8 to 10	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		200
Tractor (4wd)	100hp		350
Mini digger	3t	90	300
Strimmer	40cc	15 to 17	35
Chain saw		25	60
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 30	90
Post driver		20	
Low loader		25	
Grasseed sower		25	100
Weed wiper		35	150
Grass topper		35	125
Rush topper		40	150

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

BUILDING COSTS

	Area per head (sq metres)	Cost per sq metre	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	per cubic metre
Above ground store with reception tank, pump etc. (small tanks cost more proportionally)		£35 - £60	per cubic metre

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:

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

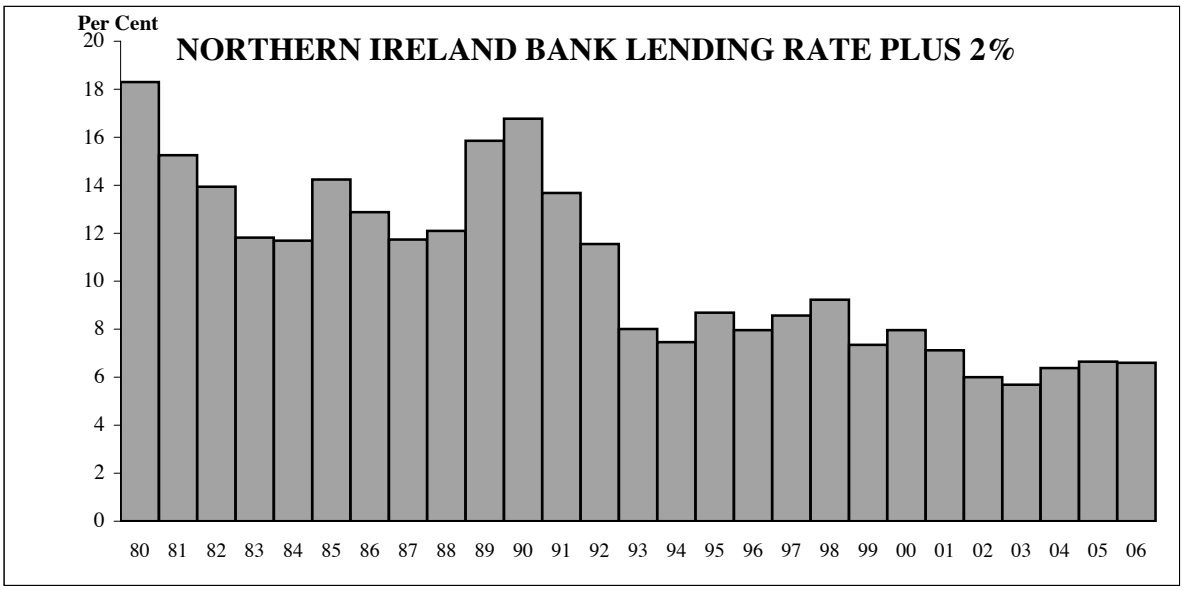
where n = nominal interest rate expressed as a decimal
p = number of instalments per year

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).


Per Cent
NORTHERN IRELAND BANK LENDING RATE PLUS 2%
20
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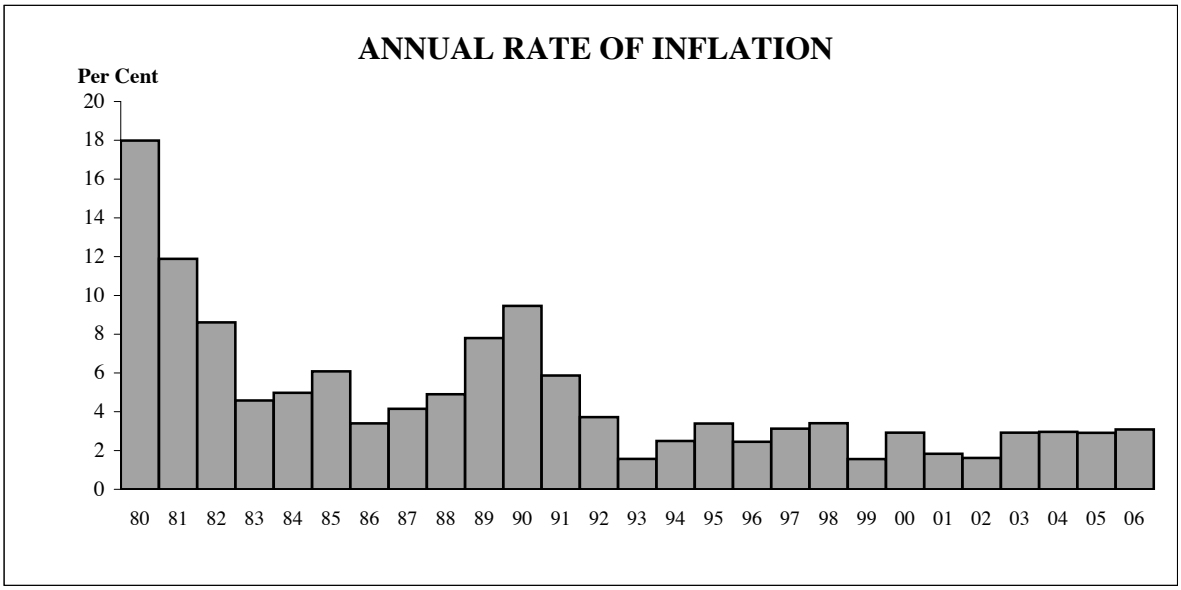
ANNUAL RATE OF INFLATION
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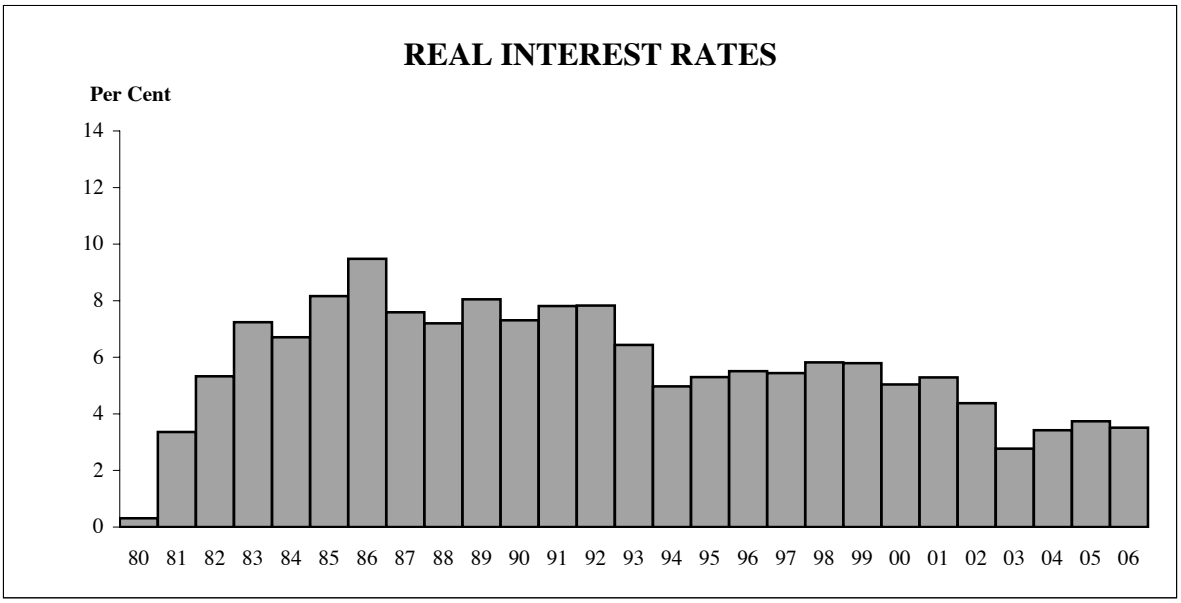
REAL INTEREST RATES
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AGRICULTURAL WAGES (REGULATION) (NORTHERN IRELAND) ORDER 2006

The Agricultural Wages Board for Northern Ireland by Order dated 3rd March 2006 has increased with effect from 3rd April 2006 the minimum rates of wages for workers in agriculture, including workers in market gardens and nursery grounds. This Order replaces Order No. 84 which operated from 4th April 2005.

The wage rates payable from 3rd April 2006 are:-

Age	Rate per 5-day week 39 hours (£)	Rate per day (£)	Rate per hour (£)	Overtime rate per hour (£)
19 years + over	214.25	42.85	5.50	8.25
18	182.10	36.42	4.68	7.02
17	150.00	30.00	3.84	5.76
16	128.55	25.71	3.29	4.94
15 + under	107.12	21.42	2.75	4.13

Overtime

Notes

The overtime rates are as shown in table above.

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 the hours per week for which a minimum weekly rate as set out in the above table is payable;

(b) employment on the weekly day off;

(c) employment on Sunday;

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

"Week" means any 5 days from Monday until Saturday inclusive on which it is agreed between an employer and a worker that the worker shall be required to work.

"Weekly day off" means such a day in each week (not being a Sunday or additional holiday in accordance with the provisions of the holidays entitlement) as may be agreed between an employer and a worker as being the day on which the worker shall not be required to work.

FORESTRY

WOODLAND GRANT SCHEME

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

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.

SPECIES	AREA (HA)	GRANT (£/HA)
Conifer	0.2 ha & Over	1,200
Broadleaves	0.2 - 9.9 ha	1,850
	10 ha & Over	1,550

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

SPECIES	GRANT (£/HA)
Conifer	325
Broadleaves	525

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

Enclosed Land Supplement
Where new planting is carried out on land that was previously enclosed and improved for agricultural purposes, a supplement of £500 per hectare is payable with the first installment of the establishment grant.

Community Woodland Supplement
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 £950 per hectare is payable as a lump sum once the initial planting is completed and the agreed facilities are in place.

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 £35 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.

Woodland Improvement Grant
This is a discretionary payment, to assist work in existing woodlands requiring one-off remedial measures to bring them up to Forest Service Conservation standards. A grant of 50% of the cost of the agreed operations is payable on completion of all work. The minimum area eligible is one hectare per application.

Short Rotation Coppice – Challenge Fund
A Challenge Fund exists to assist in establishing Willow Short Rotation Coppice. The Challenge Fund is so called as it is competitive and applicants are required to bid for the money they need to establish Short Rotation Coppice fro energy end use. A judging panel awards grants to those Schemes that best meet the aims of the Challenge and which offer best value or money. Land planted under the Challenge Fund is not eligible for other Forestry grants.

Livestock Exclusion Annual Premium
This Scheme is now closed to new applicants.

FARM WOODLAND PREMIUM SCHEME

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.

ANNUAL PREMIA RATES PAYABLE (£ PER HECTARE)

LAND TYPE	LAND CATEGORY		
	SDA	DA	ELSEWHERE
Arable	160	230	300
Other Improved Land	140	200	260
Unimproved Land (Including Rough Grazing)	60	60	Nil

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 grants are available from **Private Woodlands & Plant Health Branch, Room 23 Dundonald House, Upper Newtownards Road, Belfast, BT4 3SB.**

AGRI-ENVIRONMENTAL SCHEMES

(A) Environmentally Sensitive Areas (ESA) Scheme
The ESA Scheme is a voluntary agri-environment scheme aimed at conserving areas of the countryside that are highly valued for their scenic beauty, wildlife habitats or distinctive heritage features. Five separate areas within Northern Ireland have been designated as ESA, covering in total 20% of the land area. The five Environmentally Sensitive Areas are:

Mournes and Slieve Croob
Antrim Coast, Glens and Rathlin
Sperrins
West Fermanagh and Erne Lakeland
Slieve Gullion

Participating farmers receive an annual management payment in return for following a set of management prescriptions. The prescriptions aim to maintain and enhance wildlife habitats and historic and landscape features on the farm. Participants may also apply for additional payments for capital enhancement works such as restoration of field boundaries and traditional farm buildings. Annual management payments range from £205 to £1,110 per hectare.

(B) Countryside Management Scheme (CMS)
The CMS is a voluntary agri-environment scheme that applies to all farmland outside the ESAs. The scheme is designed to encourage landowners to adopt or continue with environmentally sensitive farming practices that address water quality, biodiversity and landscape and heritage features. As with the ESA scheme, additional payments are available for capital enhancement work. Annual management payments are similar to the ESA scheme ranging from £20 to £1,110 per hectare.

(C) Organic Farming Scheme (OFS)
The OFS was introduced in 1999 to assist farmers converting from conventional production methods to organic production. Applicants may enter parcels of land into five year agreements. The land must be registered with an approved Organic Sector Body.

The scheme also imposes additional environmental conditions. Participants are required to adhere to a set of rigorous environmental conditions, recommended by the UK Register of Organic Food Standards, which are more rigorous than those enforced on other farmers.

Explanatory leaflets and application forms for ESA, CMS and OFS Schemes may be obtained from any DARD office.

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 - see page 110 (wildlife diversity, public access, landscape value).

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.

LIVESTOCK WELFARE

Animal welfare is an important and emotive subject. The previous welfare codes have been strengthened with the 'Welfare of Livestock Regulations (Northern Ireland) 1995'. 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; and
Emergency arrangements to cover outbreaks of fire, the breakdown of mechanical services (including artificial ventilation equipment) and the 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 2000 - 2005

£ per hectare

	2000	**2001**	**2002**	**2003**	**2004**	**2005**
Grass -Cutting	247	248	265	264	241	227
Grazing	185	187	194	194	194	175
Potatoes	482	406	412	479	433	453
Cereals	213	233	246	208	247	156
Rough grazing	51	49	51	54	53	45
All uses	**182**	**184**	**174**	**166**	**165**	**158**

Source:- Farm Business Survey

SALES OF AGRICULTURAL LAND 1981 - 2005 [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

(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 2006-2007

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.inlandrevenue.gov.uk., (or for queries regarding VAT, see the Customs and Excise site: www.hmce.gov.uk) Alternatively, a professional adviser may be approached.

1. Income Tax

(a) Tax rates (%)

Taxable Income (£)	Dividends	Interest	Other Income
Starting rate up to £2,150	10	10	10
Basic rate £2,151 to £33,300	10	20	22
Higher Rate over £33,300	32.5	40	40

(b) Personal allowances Single £5,035

The married couple's allowance now only applies if either spouse was born before 6 April 1935. Relief in respect of this allowance is restricted to 10%.

2. Corporation Tax

Profits are chargeable at the following rates:

	Profits band	Per cent tax
Small companies' rate	Up to £300,000	19.00
Upper marginal rate	£300,001 to £1,500,000	32.75
Main companies' rate	Above £1,500,000	30.00

3. Capital Gains Tax

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

(a) Base date 31.3.82 for assets owned on or before 31.3.82.
(b) Capital gains are treated as the top slice of income: 10% to starting rate limit (£2,150), 20% to basic rate limit (£33,300) and 40% when basic rate limit is exceeded.
(c) Annual exemption £8,800 for individuals with independent taxation.

4. Inheritance Tax

Chargeable on lifetime gifts and transfers on death.

Threshold £285,000
Tax Rate 40% (most farms in Northern Ireland get 100% property relief).

5. Value Added Tax (VAT)

Annual turnover threshold for registration £61,000 from 1 April 2006.

Standard rate 17½%.
Fuel & Power 5%.
Agricultural Flat Rate Scheme 4%.

6. Stamp Duty

Transfers of property on or after 23rd March 2006 carry the following rates of stamp duty: 1% on sales of property if between £125,000 and £250,000; 3% between £250,001 and £500,000; and 4% if consideration is above £500,000. Transfers of property in disadvantaged areas (as specified for this purpose) after 23rd March 2006, which do not exceed £150,000, are exempt from stamp duty. (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, flat rate £2.10 per week (small earnings exemption £4,465 per year).
Class 4	8.0% of profits/gains between £5,035 and £33,540. 1.0% of profits/gains over £33,540.

SELF ASSESSMENT AND CURRENT YEAR ASSESSMENT OF TAX

A new tax return form was issued in April 1997. Two main changes were introduced by the Inland Revenue:-

1. Self assessment.

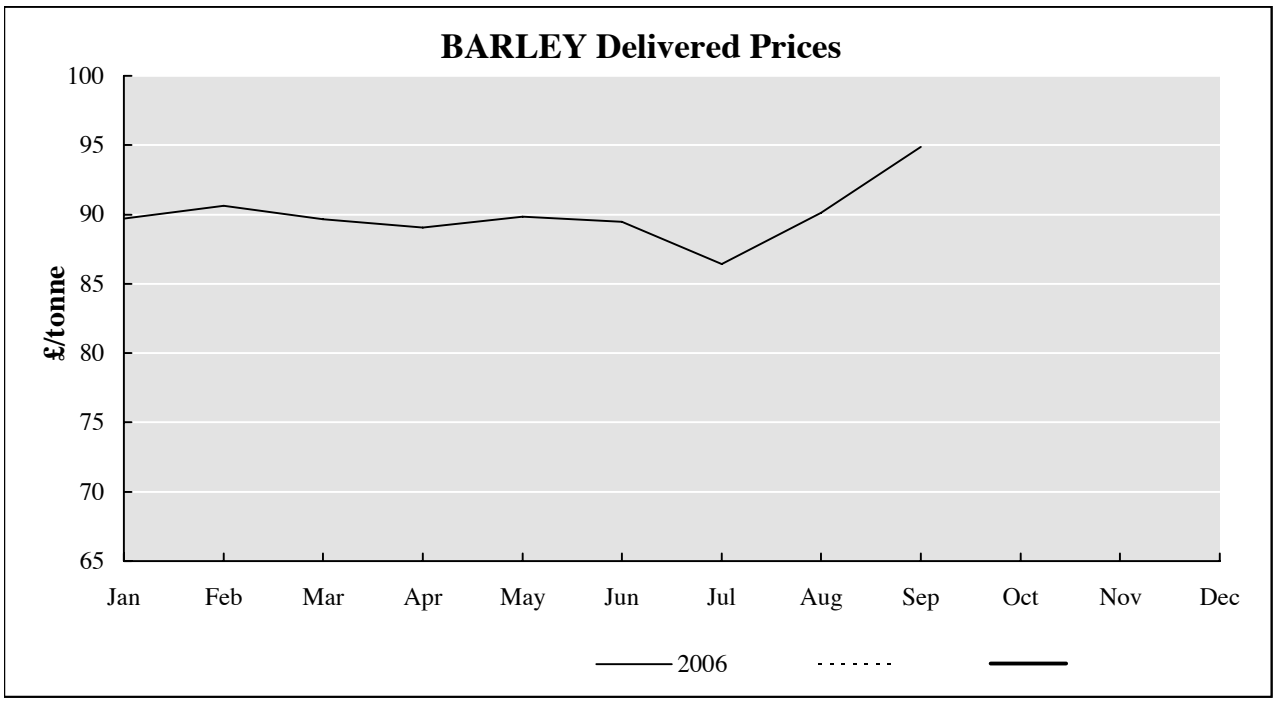
Everyone who receives a tax return (i.e. their income is not taxed at source) will be able to calculate their own tax liability or have the Inland Revenue do it for them. The tax return relating to 2006/07 must be sent back by 31 January 2008. If you want the Inland Revenue to calculate your tax liability for you, then you should send your return back by 30 September 2007 to guarantee having a statement of your tax liability sent out in time to make payment on the 31 January 2008. You can however send your tax return in at any time and still request the Revenue to calculate your tax.

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.

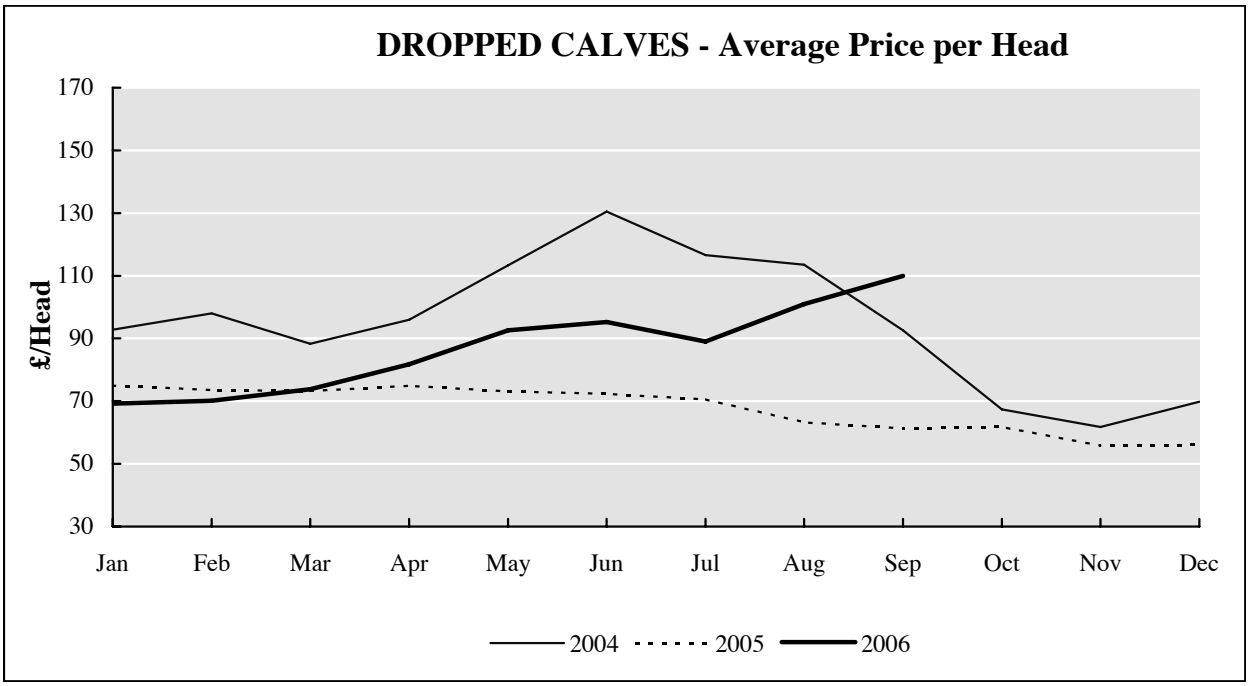
2. Current (same) year assessment.

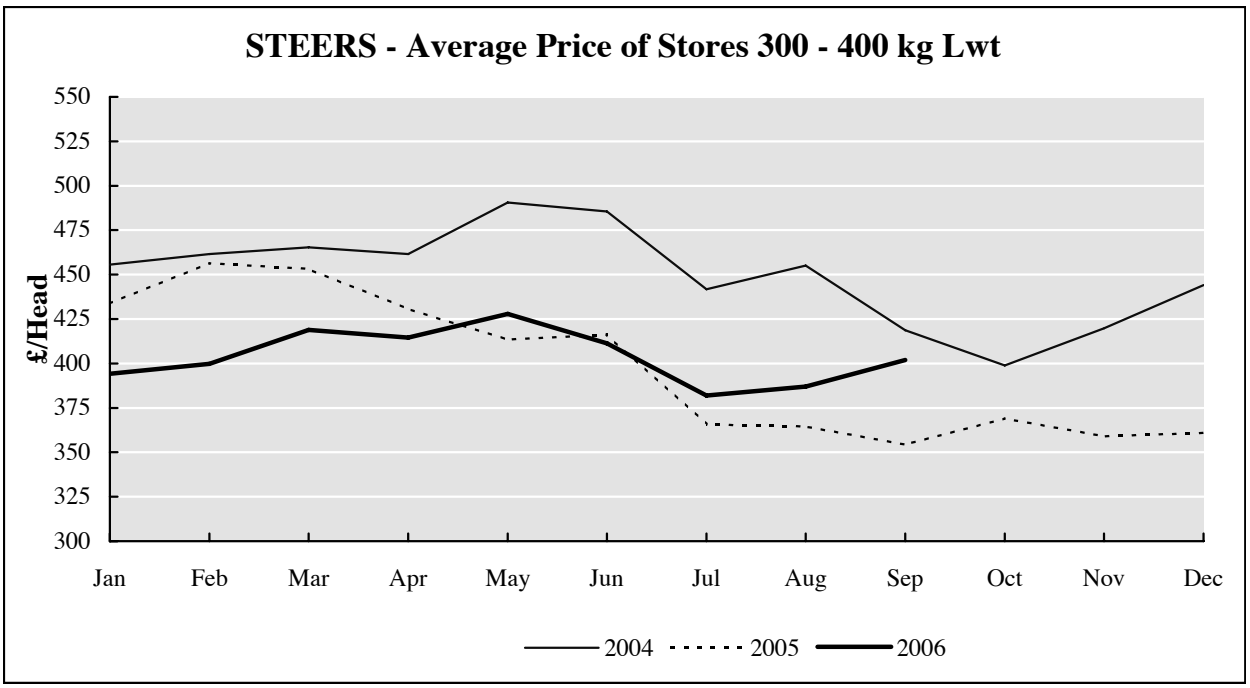
The tax liability will be based on the profit arising in the same year. Therefore, taxable business profits for any year will be those shown on a set of yearly accounts ending in that tax year.

BARLEY PRICES 2006

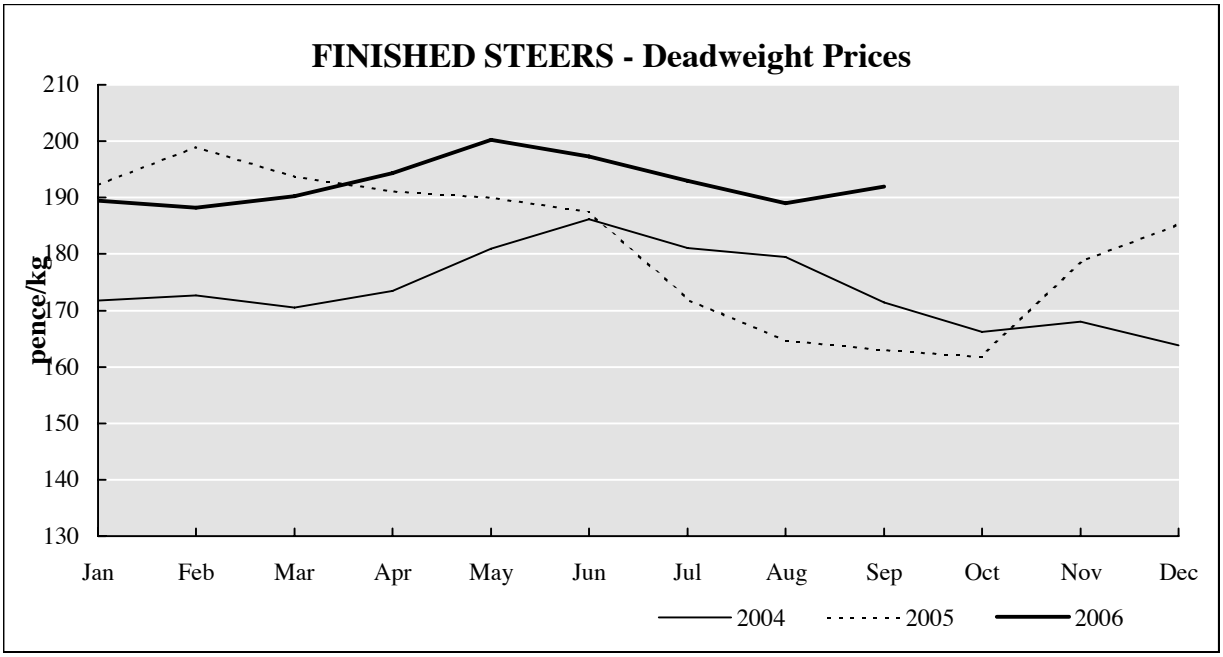


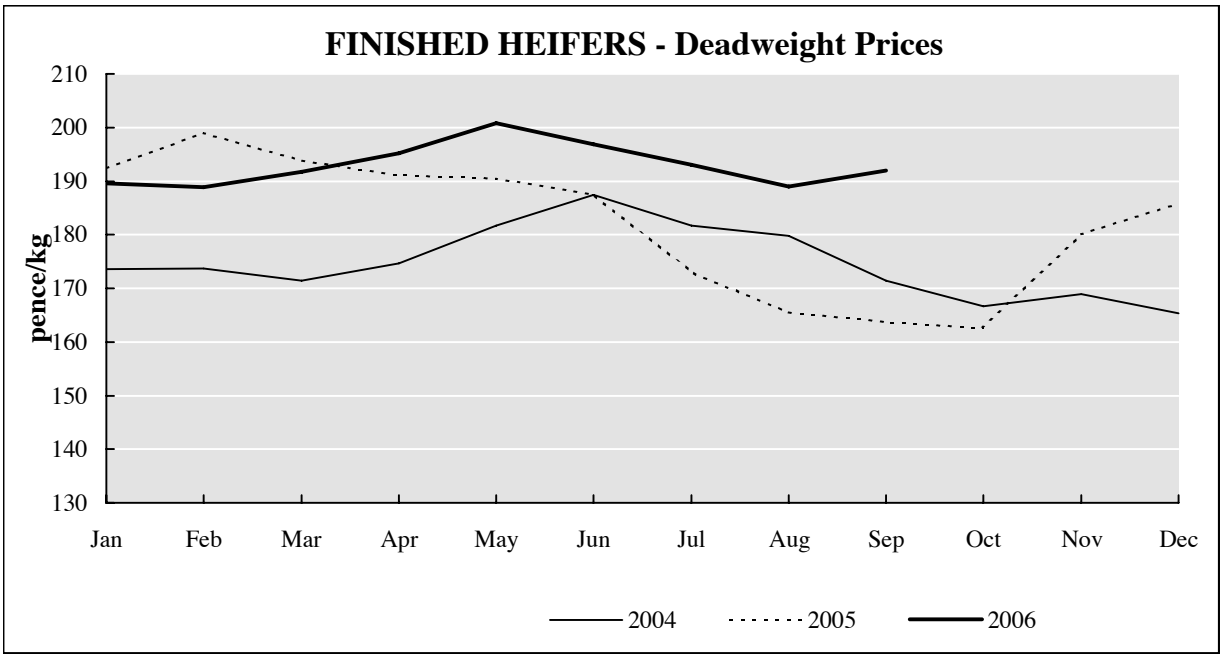
CATTLE PRICES, 2004 - 2006



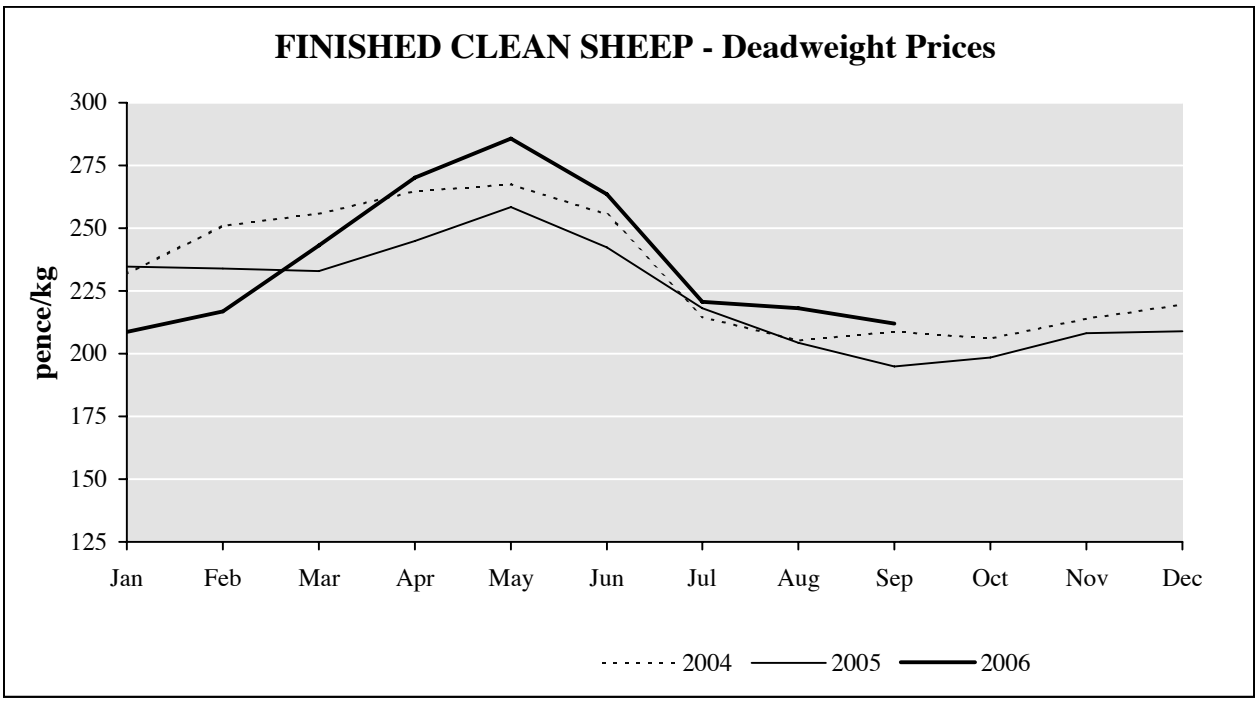


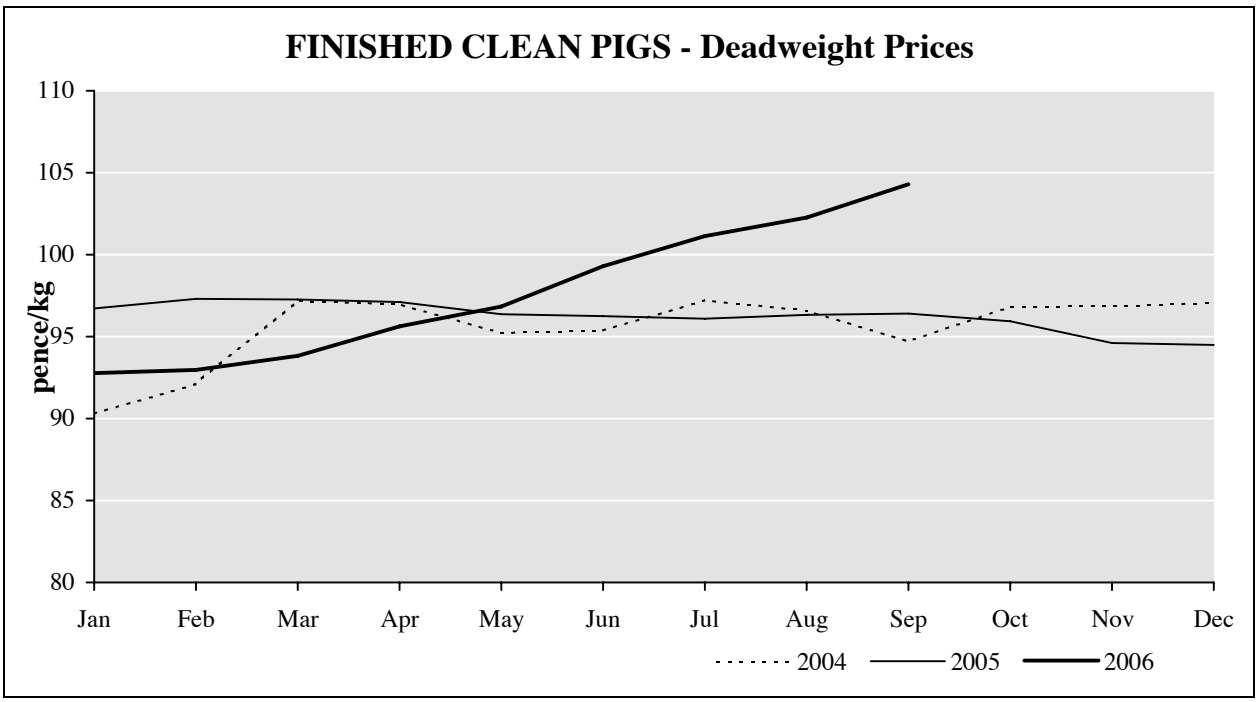
BEEF PRICES, 2004 - 2006





LAMB AND PIGMEAT PRICES, 2004 - 2006





DARD and AFBI CONTACT LIST

DARD Headquarters
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 90 520100

Policy and Economics Division
Dundonald House

Farm Business Survey	028 9052 4721
Weekly & Quarterly Market Reports	028 9052 4785
Farm Census	028 9052 4528 or 9052 4855

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College of Agriculture, Food and Rural Enterprise (CAFRE)

Greenmount College of
Agriculture and Horticulture
ANTRIM BT41 4PU
Tel: 028 9442 6666
e-mail: enquiries@dardni.gov.uk
Internet: www.greenmount.ac.uk

Enniskillen College of Agriculture
Levaghy
ENNISKILLEN BT74 4GF
e-mail: kevin.o'donnell@dardni.gov.uk
Internet: www.enniskillencollege.ac.uk

Loughry College – The Food Centre
COOKSTOWN
Co. Tyrone BT80 9AA
Tel: 028 8676 8100
Internet: www.loughrycollege.ac.uk

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Veterinary Service
Room 716
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 9052 4580

Mall West
ARMAGH
BT61 9DL
Tel: 028 3752 9900

Crown Buildings
Pound Street
LARNE BT40 1SH
Tel: 028 2826 3222

Kilpatrick House
38 - 54 High Street
BALLYMENA
BT43 6DP

Crown Buildings
Asylum Road
LONDONDERRY
BT48 7EB
Tel: 028 7131 9500

Crown Buildings
Thomas Street
DUNGANNON
BT70 1HR
Tel: 028 8775 4777

9 Robert Street
NEWTOWNARDS
BT23 4DN
Tel: 028 9182 5825

Inishkeen House
Killyhevlin
ENNISKILLEN
BT74 4EJ
Tel: 028 6632 5004

Sperrin House
Sedan Avenue
OMAGH
BT79 7AQ
Tel: 028 8225 1020

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Animal Health Division
Room 715
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 9052 4650

Food Policy Division
Room 140
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 9052 4879

Quality Assurance Division
Now responsible on behalf of the Food Standards Agency for the issue of milk licences.
Tel: 028 9052 4685

Milk Quotas
Room 137
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 9052 4680 (quotas)
Tel: 028 9052 4624 (marketing, food safety and export certification)

Poultry and Eggs Branch
(Administers EC Regulations on egg and poultry production and processing)
Room 1022
Dundonald House
Upper Newtownards Road
BELFAST BT4 3SB
Tel: 028 9052 5001 (general and technical enquiries)

Meat Hygiene Section
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Upper Newtownards Road
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Seeds and Horticulture Branch
(general enquiries - quality standards)
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Upper Newtownards Road
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Tel: 028 9052 4488 or 9052 4876

Plant Health Branch
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Room 142
Dundonald House
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Potatoes Branch
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Agri-Food and Biosciences Institute (AFBI)

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Tel: 028 9268 2484

Veterinary Sciences Division (VSD)
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Seed Certification Plant Testing Station
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Agri-Food and Biosciences Institute (AFBI) was created on 1st April 2006 as the amalgamation of DARD Science Service and the Agricultural Research Institute of Northern Ireland.

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Private Woodlands & Private Health Branch
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Agriculture Development Centres

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BALLYMENA BT4 6DT
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Crown Buildings
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BALLYMONEY BT53 6DS
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18 The Square
BALLYCLARE BT39 9BB
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2 Newry Road
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Rathkeltair House
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