

# AgriSearch

## Annual Report 2008

The Northern Ireland Agricultural Research  
& Development Council Annual Report  
for the year ended 31 March 2008





## Northern Ireland Agricultural Research & Development Council

Trustees and Advisers as at 1st September 2008

### Trustees

William H Yarr – Chairman  
James Campbell – Vice Chairman  
Wilfred Mitchell (retired 08/10/07)  
Peadar Montague  
Gary Hawkes  
Nigel McLaughlin  
Douglas Rowe  
James Walker  
Phelim O'Neill (appointed 25/06/07)  
Mary McCormack (appointed 09/06/08)

### Secretary

David Mark

### Contact Details

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www.agrisearch.org

### Dairy Advisory Committee

James Brown - Chairman  
John Thompson  
Albert Foster  
Jonathan Moore (appointed 06/03/08)  
Dr Alan McIlmoyle  
Sean Clarke (retired 07/09/07)  
Trevor Lockhart (retired 07/09/07)  
Dr Ian Carrick (appointed 01/05/08)  
Gary McHenry (appointed 01/05/08)

### Beef Advisory Committee

Kenneth Sharkey - Chairman  
Edward Carson  
Michael McBride  
Derek Shaw (appointed 23/04/07)  
Karl Mullan (appointed 23/04/07)  
Harry Sinclair (appointed 23/04/07)  
Colin Duffy  
Dr Mike Tempest  
Dr Colin McKee  
Dr Raymond Steen (appointed 23/04/07)

### Sheep Advisory Committee

Ian Buchanan - Chairman  
David Chambers  
Isaac Crilly  
Samuel Wharry  
Dr Moore Chestnutt  
Dr Lewis McClinton (appointed 15/02/08)  
Terry Acheson (retired 07/09/07)

### Committee Secretary

Lynsay Alcorn

## Extracts from Chairman's Statement

Bill Yarr



- Levy rates have remained unchanged since 1997 at 0.02p/litre of milk processed, 20p/head for beef cattle through meat plants and 5p/head for sheep similarly processed.

- Levy income received during the year was £432K, very similar to that received during the previous 12 months.

- £531K was committed on 9 new projects during the year (6 dairy, 2 beef and 1 sheep).

- Since formation of AgriSearch in 1997, 69 projects have been supported at a cost of £4.1M of levy money received.

- With complimentary funding towards these 69 projects (mainly from DARD) of approximately £8M, AgriSearch commissioned research over the period has totalled £12M.

- Frustration was experienced during the year with delays in the approval of complimentary funding. This was said to be due to the pending appointment of a Senior Scientific Adviser within DARD. 14 projects within this category were on hold at the 31st March 2008, amounting to £713K of AgriSearch committed funding. Approval for 3 of these projects was received in April 2008 and a further 8 in September 2008.

- AgriSearch has expressed concern over the level of

Government funding to be made available in the future for agricultural research. A consultation paper on the draft DARD Evidence and Innovation Strategy 2008-13 was issued during June 2008 and AgriSearch responded strongly on the need to maximise funding for such research.

- AgriSearch responded to the contents of the NI Red Meat Task Force Strategy Review published in October 2007. Our clearly stated objective was to assist the Task Force by utilising research effort in finding the best way forward for the industry.

- Cash balances shown in the balance sheet include £1.2M of committed funding for projects not completed. The cost of AgriSearch's administration is met out of interest received on cash balances and so every pound of levy received is used to commission new research.

- Assuming DARD approval of complimentary funding towards AgriSearch commissioned projects, £500K of uncommitted levy is currently available to part fund new projects.

- Appreciation is expressed by the Board to Wilfred Mitchell who retired in October 2007 after 11 years as an 'Independent Farmer Representative'. Mary McCormack, from Creggan Co. Tyrone and with a dairy background was appointed in June 2008 to fill the vacancy.

- Following the untimely death in October 2006 of Cecil Mathers, Phelim O'Neill was appointed in June 2007 as a Red Meat Levy Collector Representative.

- Appreciation is expressed to the Chairmen and members of the three Advisory Committees for their input on behalf of AgriSearch during the year. There were several retirements during the year and also a number of new appointments as listed on Page 01 in this Annual Report.

- Thanks are also expressed to David Mark and Lynsay Alcorn of Countryside Services for the efficient provision of Secretariat services to AgriSearch.

- A difficult period faces AgriSearch in fulfilling its main objective of identifying and commissioning agricultural research to be of practical benefit for primary producers in the dairy, beef and sheep sectors.





## Norwegian Dairy Cattle - well suited to Northern Ireland dairy farms

Within the Scandinavian countries, functional traits such as fertility and mastitis resistance have been included within dairy cow breeding programmes for over thirty years. Eight years ago, the Agricultural Research Institute of Northern Ireland (now AFBI-Hillsborough) initiated a major study to evaluate the performance of one of these Scandinavian breeds (Norwegian dairy cattle) within Northern Ireland.

This study, which is co-funded by AgriSearch and DARD, has compared the 'life-time' performance of Norwegian and Holstein-Friesian cows on 16 local dairy farms. The study will finish later this year. Some key performance measurements from lactations 1 – 5 are presented in Table 1.

When examined across lactations 1 – 5, Norwegian cows produced approximately 4% less milk than Holstein cows. However, Norwegian cows produced milk with a higher fat and protein content, and a lower somatic cell count. In addition, Norwegian cows had significantly higher fertility levels, while the number of Norwegian cows culled as infertile was considerably lower than for the Holstein breed.

The final outcomes of this study, which will include a full economic analysis, will be presented later this year. The results to date clearly highlight the improved mastitis resistance, higher fertility and better longevity of Norwegian cows under typical Northern Ireland conditions.

**Table 1:**  
Performance of Norwegian and Holstein Cows during Lactations 1 – 5

	Norwegian Cows	Holstein-Friesian Cows
<b>305 Day Milk Yields (kg)</b>		
Lactation 1	5600	5800
Lactation 2	6270	6480
Lactation 3	6810	7260
Lactation 4	6940	7320
Lactation 5	6960	6930
<b>Average Milk Quality (lactations 1 - 5)</b>		
Milk Fat %	3.84	3.76
Milk Protein %	3.31	3.23
SCC (000/ml)	194	267
<b>Average Fertility (lactations 1 - 5)</b>		
Conception to 1st AI (%)	60	45
Calving interval (days)	380	393
Cows culled as infertile (%)	12	29
<b>Cows remaining on farms at present (%)</b>		
	17	11

## Can grass silage replace concentrates when finishing continental bulls?

This question is currently being addressed in a project at the Agri-Food and Biosciences Institute – Hillsborough (AFBI) with the project jointly funded by AgriSearch and DARD. The finishing of continental bulls has traditionally involved intensive high-concentrate-based systems.

However, the upward trend in cereal prices has a very negative impact on the economics of intensive finishing systems. While beef x dairy bulls have exhibited reasonable live weight gains when finished on silage: concentrate-based diets (2:1 ratio on a dry matter basis), limited information is available on the performance of continental bulls on high forage diets.

Over a two year period, continental bulls were offered either ad libitum concentrates or grass silage and concentrates at a 50:50 ratio on a dry matter basis. Very high quality grass silage (D value 780g/kg) was offered in year 1, whilst good quality grass silage (D value 700g/kg) was offered in year 2. Results of the study are presented below.

### Main findings

- Replacing 50% of an ad libitum concentrate diet with grass silage has only small effects on bull performance, provided the silage is of high feed value.
- Replacing 50% of an ad libitum concentrate diet with grass silage reduces feed costs and increases margin/feed relative to ad libitum concentrates.

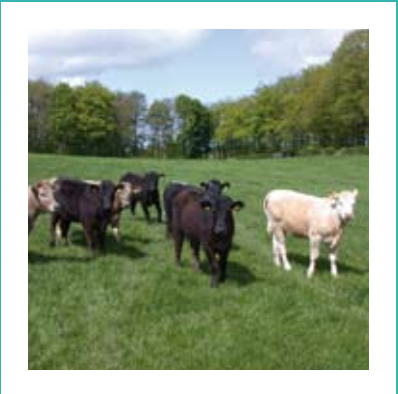
**Table 2:**  
The effect of forage:concentrate ratio on animal performance and economics of bull beef production

Forage:Concentrate Ratio	Year 1 Silage D-value 780g/kg		Year 2 Silage D-value 700g/kg	
	50:50	Ad lib conc	50:50	Ad lib conc
<b>Performance</b>				
Live weight gain (kg/day)	1.47	1.48	1.40	1.48
Dressing Proportion (g/kg)	574	583	575	583
Carcass Weight (kg)	392	398	377	398
<b>Economics</b>				
Carcass Value (£)*	1012	1030	976	1030
Feed Costs (£/head)†	316	418	310	418
Margin/Feed (£)‡	95	12	65	12

\* Beef price (£2.60/kg) x carcass weight;  
† Silage cost £99/t DM and concentrate cost £220/t fresh;  
‡ Margin/feed = carcass value - feed costs - purchase price (£1.71/kg live weight)

# 50%

Replacing 50% of an ad libitum concentrate diet with grass silage reduces feed costs and increases margin/feed relative to ad libitum concentrates.





# 100

A ewe with an index of 100 lambled without help, had good mothering ability and reared good lambs (lamb weaning weight) compared to other ewes in the flock.

Mr. Bill Yarr, chairman of AgriSearch Board, and Dr. Marijntje Speijers, AFBI Hillsborough, looking at the lambing recording books of the Hillsborough ewe management recording scheme.



## Hillsborough Management Recording Scheme for breeding ewes

On-farm research undertaken by the Agri-Food and Biosciences Institute, Hillsborough indicates that currently 20-30% of ewes receive intervention at lambing. This represents a major labour input requirement in sheep production systems, which can be addressed through the selection of easier-care breeding stock. To assist commercial producers select sheep with easier-care traits, AFBI Hillsborough has introduced an easy to use management recording system for breeding ewe flocks. It is available to all sheep farmers in Northern Ireland and has been developed from ongoing research into easier-care systems funded by DARD and AgriSearch. The system is based on tagging lambs and simple recording of any intervention required at lambing and the weight of lambs at 2-3 months.

Marijntje Speijers, a research scientist at Hillsborough, who oversees the Recording Scheme, explains;

‘Key traits for “easier management” are: lambing ease, lamb viability and mothering ability. The key traits for productivity are number of lambs reared and lamb weight. By scoring commercial sheep for these important traits, the best and worst

performing ewes within a flock can be identified.’

The Hillsborough Management Recording Scheme is a simple recording of these easier-care and productivity traits and enables ranking of the ewes in order of performance, removing confounding effects of sire of lambs and age of ewe. An index is calculated on a scale from 0 – 100 within each flock; a ewe with an index of 100 lambled without help, had good mothering ability and reared good lambs (lamb weaning weight) compared to other ewes in the flock.

Outputs from the Recording Scheme can be used to:-

- Identify superior ewes to breed replacements from. Where replacements are home reared, ewes with high indexes can be bred to maternal sires to produce prolific, easier-care female replacements. In such a system, lower ranking ewes are crossed with terminal sires to produce lambs for slaughter.
- Identify ewes suitable for easier-care lambing systems. Research at AFBI, Hillsborough has demonstrated the potential for grass-based outdoor lambing systems to reduce labour requirements at lambing time. Ewes within a flock with high indexes are likely to require less assistance at lambing and suit these outdoor systems where grass-only systems can be developed with no requirement for concentrates.

With huge rises in costs of production, options to reduce input requirements are urgently needed for the sheep industry in Northern Ireland. The Hillsborough Management Recording Scheme, developed with the help of AgriSearch, provides very a solid basis for making genetic progress

within commercial flocks to reduce the requirement for intervention at lambing.

For further details about the Scheme contact Marijntje (Mari) Speijers or Dessie Irwin at the Agri-Food and Biosciences Institute, Hillsborough on (028) 9268 2484.



## Income and Expenditure account for the year ended 31 March 2008

	Notes	2008 £	2007 £
<b>Incoming resources</b>			
<b>Incoming resources from generated funds</b>			
Milk income		314,007	312,240
Beef income		80,002	84,177
Sheep income		37,681	41,692
Investment income		103,861	70,785
<b>Total incoming resources</b>		<b>535,551</b>	<b>508,894</b>
<b>Resources expended</b>			
<b>Charitable expenditure</b>			
Direct programme expenditure	1	530,866	312,042
Dissemination costs		35,518	35,116
<b>Governance costs</b>			
Management and administration		51,490	51,904
<b>Total resources expended</b>		<b>617,874</b>	<b>399,062</b>
<b>Net (outgoing) incoming resources for the year</b>		<b>(82,323)</b>	<b>109,832</b>
Fund balance brought forward at 1 April		588,452	478,620
<b>Fund balance carried forward at 31 March</b>		<b>506,129</b>	<b>588,452</b>

All amounts above relate to continuing unrestricted operations of the company.

The company has no recognised gains and losses other than those included in the results above, and therefore no separate statement of total recognised gains and losses has been presented.

There is no material difference between the net outgoing resources and the funds for the financial year stated above and their historical cost equivalents.

## Balance Sheet at 31 March 2008

	Notes	2008 £	2007 £
<b>Fixed assets</b>			
Tangible assets		5,084	7,627
<b>Current assets</b>			
Debtors	2	127,565	116,429
Cash at bank		1,569,817	1,477,185
		<b>1,697,382</b>	<b>1,593,614</b>
<b>Creditors: amounts falling due within 1 year</b>	3	<b>(668,031)</b>	<b>(585,193)</b>
<b>Net current assets</b>		<b>1,029,351</b>	<b>1,008,421</b>
<b>Total assets less current liabilities</b>		<b>1,034,435</b>	<b>1,016,048</b>
<b>Creditors: amounts falling due after more than 1 year</b>	4	<b>(528,306)</b>	<b>(427,596)</b>
<b>Net assets</b>		<b>506,129</b>	<b>588,452</b>
<b>Funds</b>			
Unrestricted funds		506,129	588,452
<b>Total funds</b>		<b>506,129</b>	<b>588,452</b>

The financial statements were approved by the Trustees on 9th June 2008 and were signed on their behalf by:

**William H Yarr**  
Director

## Management and administration expenditure for the year ended 31 March 2008

	Notes	2008 £	2007 £
<b>Promotions, publications, advertising and educational activities</b>			
Public relations services		6,360	5,754
Travel expenses		2,520	1,648
		<b>8,880</b>	<b>7,402</b>
<b>Administrative Costs</b>			
Management charge: Countryside Services Limited		20,764	19,419
Audit and accountancy fees		3,412	3,197
Insurance	5	(1,821)	2,800
Miscellaneous expenses		110	293
Computer software support		1,889	1,744
Chairman's honorarium		5,300	5,110
VAT costs		10,334	9,285
Depreciation		2,543	2,543
Bank fees		79	111
		<b>42,610</b>	<b>44,502</b>

## Notes to the financial statements for the year ended 31 March 2008

	2008 £	2007 £
<b>1. Committed grant expenditure</b>		
Committed expenditure at 1 April	1,002,918	1,271,928
Further commitments during the year	530,866	312,042
Paid during the year	(353,557)	(581,052)
<b>At 31 March</b>	<b>1,180,227</b>	<b>1,002,918</b>
<b>2. Debtors</b>		
<b>Amounts falling due within 1 year</b>		
Trade debtors (levies due)	108,255	101,573
Prepayments and accrued income	19,310	14,856
	<b>127,565</b>	<b>116,429</b>
<b>3. Creditors: amounts falling due within 1 year</b>		
Trade creditors	-	-
Other creditors - committed grant expenditure	651,921	575,322
Accruals and deferred income	16,110	9,871
	<b>668,031</b>	<b>585,193</b>
<b>4. Creditors: amounts falling due after 1 year</b>		
Other creditors - committed grant expenditure	528,306	427,596
<b>5. Insurance</b>		
£		
The current year credit is made up as follows:		
- 2006/07 Insurance premium reversed	(2,800)	
- 2007/08 Insurance premium paid	2,480	
- 2007/08 Insurance premium repaid	(1,501)	
	<b>(1,821)</b>	

The 2006/07 insurance premium accrued in the 2007 accounts was reversed as the Company's insurers could not back date its insurance for that year when the policy had lapsed.

### Registered Auditors:

PriceWaterhouseCoopers LLP  
18 Northland Row  
Dungannon BT71 6AP

**For a full set of financial statements please  
contact The Secretary at AgriSearch:**

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BT71 7DX [www.agrisearch.org](http://www.agrisearch.org)

**Copies of the full financial statements can  
also be viewed at: [www.agrisearch.org](http://www.agrisearch.org)**