

Department of Agriculture
Business Plan
2003/04 – 2012/13

JULY 2007

Department of Agriculture
Falkland Islands Government

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**Department of Agriculture Short-Term Plan 2007/08 Financial Year.
In Support of the Ten Year Plan.**

Budget: £998,350

Operating budget

Transfer Payments

Pasture Improvement £350,000
Business Development £35,000

Total £1,383,350

Key objectives:

1. To improve the “Sheep Genetic Improvement” decision support package for farmers and promote its linkage with performance recording and objective measurement.
2. Determine and publicise the cost-effectiveness of cropping options and bi-pass protein supplementation as tools to improve sheep and cattle productivity and profitability.
3. Continue to lead an organic scheme that is relevant to the agricultural key products of the F.I.’s (wool, sheep meat and beef) for farmers who wish to participate.
4. Promote the expansion of effective grazing management strategies as tools to improve farming profitability through reduced livestock death rates; improved livestock growth rates; improved livestock reproductive efficiency and increased numbers of animals available for slaughter.
5. Progress monitoring and surveillance of significant animal disease to ensure Competent Authority compliance with international standards.

Outcomes:

1. Increase the understanding of objective measurement and its benefit to flock productivity and profitability. Have bodyweights, fleece weights and fleece tests for 50% of rams used in 2008.
2. 50% of sheep flocks utilising the DoA’s “Sheep Selection Service” as an aid to improved selection efficiency.
3. Falkland Islands organic scheme operational with 15% of national wool & lamb capacity undergoing conversion.
4. Trial results publicised on cost effectiveness of protein supplementation and strategic forage cropping to improve farming profitability.
5. 30% of the Islands sheep production participating in “group breeding schemes”.

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6. At least 50 farms participating in Department led courses, field days and workshops during the year.
7. Establishment of plant species baseline data at all departmental “Grazing Management” trial sites.
8. Increased adoption of enhanced grazing management strategies on farms (target 30% of farms evaluating improved Gross Margin options).

executive summary

This business plan focuses the Department of Agriculture’s limited resources into five key programme areas for agricultural development. The programmes, their discounted total cost and calculated net benefit over the 10-year life of the plan to the Islands agricultural economy are:

Programme	Total Cost (£000)	Total Benefit (£000)	Net Benefit (£000)	Benefit / Cost Ratio
• business skills development	1,653	2,852	1,199	1.7
• wool development	3,041	10,174	7,133	3.3
• meat development	1,788	1,584	-204	0.9
• fish, animal and plant health	3,040	189	-2,851	0.1
• rural development and new industries	1,447	1,077	-370	0.7
Total	10,969	15,876	4,907	1.4

Officers within the Department firmly believe that substantial financial and social gains can be achieved for the rural sector by fine-tuning existing production systems with a focus on measuring and reviewing performance.

The gains are underpinned by the on-farm application of a series of productivity enhancing projects within a structure that demands continuous business analysis and review at every stage of implementation. Activity will focus on the needs of each individual farm business unit and will prioritise the Department’s products and services on the key on-farm profit drivers.

The programmes complement The Islands Plan and provide the link between the tasks described in The Islands Plan and the Department of Agriculture’s business. The programmes also describe a series of measurable objectives that individual officers build upon when developing their performance agreements.

Four essential elements of the business plan are:

1. an approach to agricultural service delivery that is focussed on the key on-farm profit drivers;
2. the establishment of clear measurable targets for the agricultural sector in 10 years
3. a workforce plan that ensures an integrated approach to service delivery and provides career paths for staff; and,
4. an analysis of the benefits and costs of the Department’s main programmes.

vision

- A prosperous and self-reliant agricultural sector that creates opportunities for Falkland Islanders and is highly valued locally and internationally.

mission

- To foster a viable and internationally competitive agricultural industry through integrated applied research, extension, business skill development and regulatory programmes.

long term strategic direction

- Work in partnership with Falkland Island agencies and the farming sector to increase the Island's capability to deliver specified wool and meat products with unique attributes (environmentally friendly, ethically produced, safe and appealing).
- Develop a culture of continuous business analysis and review within the farming sector to increase farm profitability.
- Develop in partnership with the farming community, integrated wool and meat production systems to match agricultural products to consumer expectations.
- Minimise the threat of exotic plant and animal disease, zoonoses and pests to protect the Islands agricultural industries and population.

short to medium term operating policies

- Work within the Islands Plan to identify and facilitate opportunities in agricultural production that will increase economic growth and employment in the agricultural sector.
- Focus the Department of Agriculture's products and services on 5 areas of core business (1. business skills development, 2. wool development, 3. meat development, 4. fish, animal and plant health and 5. rural development and new industries).
- Focus on the provision of farm management information and advice that is objective, practical, well costed and tailored to the needs of individual farms.
- Provide professional veterinary service to Falkland Islanders, Falkland Island industries and their international customers.
- Protect the community from the health risks associated with zoonotic diseases.
- Provide high quality and timely policy advice to the Falkland Island Government administration.
- Ensure that the Falkland Islands Government receives an appropriate return from its resources.
- Increase community awareness of the importance of agriculture and the role of Department of Agriculture's services to farmers, Government and the community.
- Departmental staff working within a set of mutually agreed key values.

key values

1. we acknowledge and recognise the needs of a diverse client base
2. our interaction with clients is professional at all times (polite, friendly, helpful, confidential)
3. we aim to provide timely and professional advice (efficient, accurate, focussed, pro-active) to our clients
4. our services are focussed on the key on-farm profit drivers
5. we promote the Department and the agricultural sector and their role in the economy
6. we value, support and respect each other;
7. we acknowledge and recognise the needs of staff
8. we communicate in an active and meaningful way
9. we work as one team with one direction
10. we encourage a consensus approach to addressing issues
11. we are resourceful and encourage innovation and creativity
12. we are accountable and act with honesty and integrity
13. we establish and work towards realistic targets
14. we evaluate ourselves and our work to continually improve what we do and how and why we do it

industry overview and target setting

Sheep farming and the export of wool have provided the main base of the Falkland Islands economy for the last 160 years. With the introduction of the fishery conservation zone in 1987 the sale of fishing licences has become the major contributor to the Island's economy (Table 1). However, agriculture in the form of sheep farming remains the major form of land use. The acid and infertile soils coupled with a windy and cool oceanic climate, and the distances from major markets, has ensured that wool is the main land based agricultural export (Table 2).

Table 1. Main contributors to the Falkland Island economy's value added gross domestic product (Source - FIG 2003).

Sector	Contribution (%)	Value (£000)
Fisheries	44	30,800
Government	16	11,200
Trade, hotels and restaurants	12	8,400
Communications, finance and business services	9	6,300
Agriculture	7	4,900
Construction	5	3,500
Transport	2	1,400
Other (excluding FIG)	5	3,500
Total	100	70,000

Table 2. Estimated value of the land based agricultural sector in 2002/03 illustrating the relative contributions of various commodities.

Commodity	Value (£000)	(%)
Wool	4,600	92
Meat	395	8
Total	4,995	100

While wool remains the main commodity, given the construction of the Sand Bay abattoir, it is essential to develop meat and livestock industries that complement existing wool production systems. While global wool prices appear to be firm for the short to medium term the development of complementary enterprises is important to spread income sources and indeed spread the risk associated with future downward movements in the world wool price. The development of the meat industry and other complementary livestock enterprises is critical to spreading the risks associated with a single commodity based industry.

To establish a starting point for this business plan, the Department has defined a number of key performance measures for the agricultural sector (Table 3). Realistic targets have then been set which will bring about substantial financial gain for the rural sector. The targets are conservative and in most cases are already being achieved or exceeded by the Islands top 20% of farms. Some of the specific tasks to achieve these targets are described in Table 6.

To achieve these targets the Department has been structured around 5 main programmes of activity. These programmes are focussed on fine-tuning existing production systems. There are considerable gains to be achieved within the existing wool and meat industries as shown in Table 5.

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PERFORMANCE INDICATOR/ ACTIVITY

Potential for Change over ten years include:

Item	Position at May 2003	Potential target after 10 year	2004/5	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Total Sheep	630,000	789,000	630,000	630,000	630,000	640,000	650,000	660,000	690,000	725,000	750,000	790,000
Sheep per farm Management unit	5,100	11,000	5,100	5,200	5,500	6,000	7,000	8,000	9,000	10,000	10,500	11,000
Number of ewes Mated each year	200,000	250,000	200,000	205,000	210,000	215,000	220,000	225,000	230,000	235,000	240,000	250,000
Lambing %	60	70	60	60	60	60	62	64	66	68	69	70
Hogget death rate	18	10	18	17	16	15	14	13	12	11	10	10
Sheep per hectare	0.55	0.69	0.55	0.55	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69
Total greasy wool Production (kg)	2,375,000	3,070,000	1,900,000	1,900,000	1,900,000	2,150,000	2,220,000	2,280,000	2,430,000	2,600,000	2,800,000	3,070,000
Greasy wool production per sheep (kg per hd)	3.76	4.15	3.60	3.60	3.60	3.65	3.70	3.75	3.80	3.85	4.00	4.15
Average wool fibre per diameter	26.4	23.6	26.4	26.4	26.4	26.1	25.8	25.5	25.1	24.7	24.2	23.6
Wool income £	4,165,000	7,570,000	3,000,000	3,000,000	3,000,000	3,300,000	3,370,000	4,,500,000	5,300,000	6,000,000	6,700,000	7,600,000
Number of sheep for meat export	14,000	41,000	25,000	26,000	27,000	28,000	30,000	32,000	34,000	36,000	38,000	41,000
Total cattle	5,100	6,500	5,100	5,100	5,250	5,500	5,750	5,900	6,000	6,150	6,300	6,500
Number of cows mated each year	2,000	2,100	2,000	2,000	2,000	2,000	2,000	2,050	2,100	2,100	2,100	2,100
Calving %	50	60	50	50	50	50	52	54	56	58	59	60
Cattle slaughtered for meat	360	470	360	370	380	390	400	410	420	440	460	470
Beef income £	120,000	180,000	120,000	125,000	130,000	140,000	150,000	160,000	165,000	170,000	175,000	180,000

programmes and long-term objectives

business skills development

A programme that is building an approach to whole farm management based on a culture of continuous business analysis, education and review. The approach is being applied at the individual farm level and recognises the unique attributes of each farm. The programme will achieve:

1. Increased farm profitability through the implementation of enhanced business skills to every facet of farm management
2. Reduced subsidy and assistance measures

wool development

A programme focussed on getting more from existing wool production systems by fine tuning production, harvesting, and preparation systems to achieve.

1. Improved wool quality and quantity through:
 - the supply and evaluation of superior genetic material
 - increasing reproductive rate
 - improved sheep nutrition with improved grazing management and improved pasture
 - ensuring that emerging international opportunities for improvement of the Falkland Island wool production system are evaluated.

meat development

A programme focussed on developing livestock and integrated livestock production systems that can consistently supply local and export markets with the products consumers' demand. The programme will achieve:

1. Improved sheep meat and beef quality and quantity through:
 - the supply and evaluation of superior genetic material
 - increasing reproductive rate
 - improved sheep and cattle nutrition with improved grazing management, improved pasture and cost effective winter feed options
 - evaluation of pre-slaughter value adding opportunities

fish, animal and plant health

A programme that provides veterinary and regulatory services within the Islands to achieve:

1. Reduced public health risks from chemical contamination and zoonotic diseases
2. Reduced incidence of animal and plant diseases
3. No new introductions of animal and plant diseases
4. Increased awareness of animal welfare

rural development and new industries

A programme focussed on new and complementary agriculture development, industry training and social and financial support to achieve:

1. Increased quantity of organic products
2. Increased number of young Falkland Islanders starting careers in agriculture
3. Increased skill within the farming community
4. Alternative livestock products

workforce plan

The Department is small with a mixture of local officers and short-term contract officers. The skill base is narrow and the “expertise” for a particular discipline usually lies within one or at best two officers. Professional and technical isolation is an issue and the ability to rigorously review and critique new and existing activities is limited. Coupled with a relatively high turnover of staff the Department has found it difficult to implement a long-term, consistent and integrated approach to agricultural development. To minimise these difficulties it is essential that the Department adopts a workforce plan that:

- establishes a clear staff structure;
- provides clear reporting relationships for staff;
- provides clear career paths and opportunities for progression for staff;
- encourages integration and teamwork;
- ensures continuity of programmes and activities;
- facilitates, supports and rewards appropriate training;
- enables roles and job descriptions to change as needs change; and,
- seeks to reduce the reliance on external contract officers.

This business plan proposes to establish a staff structure (Figure 1) that ensures an integrated approach to service delivery and provides clear career paths for staff (in particular young Falkland Islanders wishing to pursue careers in agriculture). This will reduce the Island’s reliance on external contract officers within the Department of Agriculture. It is critical to the Island’s agricultural future that Falkland Islanders establish and own the strategic direction for agriculture.

A key element of the workforce plan is managing staff turnover to ensure maintenance of continuity within the Department’s existing programmes. Department staff and the Rural Business Association are keen to see existing programmes continue to develop as opposed to unnecessary changes in direction at each turnover of staff. The ability to modify roles / posts to reflect emerging demands in the rural sector is also important.

budget

The budget request for 2003/04 is shown in Table 4 and estimates for subsequent years in Table 5.

Table 4. Budget request for the Department of Agriculture for 2003/04 as submitted to Standing Finance Committee.

Programme	£(000)
• business skills development	269
• wool development	576
• meat development	300
• fish, animal and plant health	403
• rural development and new industries	438
Total	1,986

return on expenditure

To estimate the return on the Department of Agriculture’s expenditure to the Falkland Islands rural economy, the present value of annual net benefits (NPV), and benefit cost ratio (BCR) was calculated for each of the Department’s programmes over a ten-year period. To estimate the benefits, a static model of the Island’s sheep and beef production systems was developed. The model estimated the impact on key performance measures of gradual gains in productivity or business skill derived from

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the Department's activities. The gains in productivity used within the model were conservative and realistic and in most cases are already being achieved or exceeded by the top 20% of farms within the Islands (Table 3).

The change in total income compared to the income in the 2002/03 year was used to measure the benefit of each of the Department's programmes. The present value of the annual net benefits was calculated using a discount rate of 8% (Tables 5 and 6).

The overall NPV for the Department was £4,907 M with a benefit cost ratio of 1.4. However, three programmes returned a negative NPV with a benefit cost ratio of less than one. Caution must be exercised with this form of analysis for some sectors of the public service. A number of roles performed by public service agencies for the community do not always lend themselves to this form of economic analysis.

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Table 5. The costs, benefits, net benefits and benefit cost ratios (BCR) for each of the five Department of Agriculture programmes estimated over a 10-year period at a discount rate of 8%.

Programme	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	Total	NPV	BCR
Business skills development													
Cost	269	277	286	209	216	222	229	236	243	250	2,437	1,653	
Benefit	164	328	492	491	491	491	491	491	491	491	4,421	2,853	
Net Benefit	-105	51	206	282	275	269	262	255	248	241	1,984	1,200	1.7
Wool development													
Cost	576	449	463	477	491	400	376	387	399	411	4,429	3,041	
Benefit	539	657	780	1,186	1,429	1,775	2,083	2,300	2,988	3,404	17,141	10,174	
Net Benefit	-37	208	317	709	938	1,375	1,707	1,913	2,589	2,993	12,712	7,133	3.3
Meat development													
Cost	300	266	274	282	291	229	236	243	251	258	2,631	1,788	
Benefit	-129	-24	86	182	297	310	428	548	541	665	2,904	1,584	
Net Benefit	-429	-290	-188	-100	6	81	191	305	291	407	273	-204	0.9
Fish, animal and plant health													
Cost	403	415	427	440	453	467	481	495	510	525	4,616	3,040	
Benefit	25	26	27	27	28	29	30	31	32	33	287	189	
Net Benefit	-378	-389	-401	-413	-425	-438	-451	-464	-478	-493	-4,329	-2851	0.1
Rural development and new industries													
Cost	438	252	156	178	139	151	192	160	206	169	2,043	1,447	
Benefit	49	50	51	353	55	356	58	360	61	363	1,756	1,077	
Net Benefit	-390	-202	-105	175	-84	205	-135	200	-145	194	-287	-370	0.7
Total costs	1,986	1,660	1,606	1,587	1,590	1,469	1,514	1,521	1,609	1,614	16,156	10,969	
Total Benefits	647	1,037	1,436	2,240	2,300	2,961	3,089	3,729	4,114	4,956	26,508	15,876	
Total net benefit	-1,339	-623	-170	653	710	1,492	1,575	2,208	2,505	3,342	10,353	4,907	1.4

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Table 6. The benefit cost ratios for each of the five Department of Agriculture programmes estimated over a 10-year period at a discount rate of 8% (for more detail see Table 5)

Programme	Current lead staff*	Specific tasks to achieve potential targets** as described in Table 3	Total Costs (£000)	Total Benefits (£000)	Net Benefits (£000)	Benefit Cost Ratio
Business Skills Development	Wool Advisor and Rural Development Officer	<ul style="list-style-type: none"> improve wool marketing to achieve a wool price deviation of –6% or better provide information and tools to develop a culture of continuous business analysis and review 	1,653	2,852	1,199	1.7
Wool Development	Wool Advisor	<ul style="list-style-type: none"> decrease wool fibre diameter by an average of 0.3µm per year over 10 years increase wool production per head by an average of 1% per year over 10 years increase the number of ewes mated by an average of 2.5% per year over 10 years 	3,041	10,174	7,133	3.3
Meat Development	Beef Advisor and Wool Advisor	<ul style="list-style-type: none"> sheep mortality decreased by an average of 2% per year increase lambing by an average of 2% per year increase liveweight gain by an average of 2.5% per year increase the number of ewes by an average of 2.5% increase the number of breeding cows by an average of 1% per year increase calving % by an average of 2 % per year 	1,788	1,584	-204	0.9
Rural Development and New Industries	Rural Development Officer	<ul style="list-style-type: none"> 25% of farms producing products certified as organic establish 8 daughter studs for ram production 10, 20 and 30 young Falkland Islanders undertaking or completed degree, diploma or certificate courses in agriculture respectively 	1,447	1,077	-370	0.7
Fish, Animal and Plant Health	Senior Veterinary Officer	<ul style="list-style-type: none"> health certificates issued (fish, meat, wool, pets) ship inspections disease surveillance clinical services for pets and livestock abattoir meat inspection 	3,040	189	-2,851	0.1
Total			10,969	15,876	4,907	1.4

* Titles and individual officers may change over time.

** In estimating the costs and benefits, these specific tasks have been applied to the Islands entire flock and herd. The specific tasks are conservative and are already being achieved or exceeded by the top 20% of farms in the Islands. (i.e. they are goals that are achievable Islands wide)

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Figure 1. Proposed Organisational Chart for the Department of Agriculture from March 2004 (Figures in brackets denote proportion of full time equivalents for part-time staff)

