

## 15. The present agricultural scene

“It is easy to plough with a pencil, especially when you are a thousand miles from the farmyard.”<sup>1</sup>

### § a. The difficulties of farming in the Islands

Farming in the Islands is a difficult occupation. The weather (especially the wind), the low soil fertility and the geographical isolation of the Islands combine to produce an agricultural environment which presents many challenges. For those who have overcome these challenges which the Islands present to the farmer, the rewards, both personal and economic, can be considerable. Farming in the Islands remains today what it always has been - a lifestyle as well as an economic activity. Rural life in the Islands can easily be romanticised, and like many farming communities harsh economic realities are pressing, but nevertheless the quality of life which camp living can provide is very distinct and fulfilling. There is a strong social bond which binds people together in camp, and there are fewer ex-patriates living in camp. Any account or appraisal of farming, of the natural environment, and of how humans and nature have related in the Islands, must take account of human aspirations for personal fulfilment and achievement which can be the result of working on the land.<sup>2</sup>

Much has changed in the Islands since Louis Antoine de Bougainville and John Byron brought the first settlers, and Richard Moody subsequently assumed his responsibilities as Governor. Throughout the 230 years of its settled history, the Islands have provided a home and livelihood for pioneering and rugged individualists who value a ‘sense of space’, and who relish the challenges which their individualism confronts. The natural environment of the Islands has also changed a great deal as the human settlers have adapted and modified their chosen domicile. The account of the farming industry outlined above provides ample evidence of some of the difficulties experienced by those who have chosen to make their living from the land. It also

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<sup>1</sup> Attributed to Richard Wagner, former Economic Advisor to the Islands Government (1991-2001).

<sup>2</sup> Strange, I; (1985) *The Falkland Islands: South Atlantic Islands*; New York: Dodd, Mead & Company; p119.

shows what the consequences have been for the natural environment of the Islands as farmers have struggled to make a living.

Change and adaptation have occurred throughout the history of the Islands, but there have been a number of significant changes in the agricultural industry since the 1970s. The original conception of Moody was that the Islands should be divided into a large number of smallholdings and farms, but this vision was never fulfilled because very soon after the establishment of sheep farming a pattern of large-scale sheep ranches emerged. Many of the problems which farming faces in the Islands today come as a direct result of the adoption of a ranching style of sheep farming, not least because until recently the governance of these farms has been in the hands of a few powerful (and generally conservative) non-resident landowners. Since the publishing of the Munro Report in 1924 the constant theme of any analysis of Islands farming has been the need for sub-division. The Shackleton Reports of 1976 and 1982 provided the ultimate impetus to enable this to begin. Sub-division is now a reality, but questions need to be asked about the effectiveness and the wisdom of this sub-division. Has sub-division and local ownership been a success? Have the structural changes since the late 1970s resulted in an improvement or degradation of the grasslands? How has the natural environment of the Islands fared since sub-division? Why have changes in farming practices been so difficult to implement?

#### § b. Sub-division

Frank Mitchell doubts if sub-division would be successful in the long-term. This is an understandable reaction from someone closely involved with the traditional farming practices of the Islands, but sub-division of the farms was a necessity in the 1980s because of the greatly increased labour costs. The old system could not continue without radical reform. Before the 1982 Conflict 90% of the land was owned by people who did not live in the Islands; currently (2003) 95% of the land is owned and farmed by those who live and work in the Islands. This enormous social change has had its problems, but, in purely social terms, it has been a great success. The sense of pride and self-confidence in the land-owning farming community is palpable. A land-owning meritocracy of the Islands is an appropriate agricultural structure for the 21st century. The previous structure was a dependency-based, almost feudal, system which

was unable to sustain the hopes and aspirations of those who actually worked on the land. Moody's original land tenure aspirations have eventually been realised. However, in purely economic terms, it is doubtful if the division of the large farms has been an entire success. The Chief Executive of the Islands Government commented, in 2001, that 40% of farms in 2001 were operating at a loss and the true cost of government subsidy to the farming community is nearly £8M annually. This includes direct subsidies, the coastal shipping service, the costs of the Agricultural Department, a proportion of the costs of running the Government Air Service, and the rural road network. In 1999 the total value of the wool clip was £2.4M; the costs of running the Agricultural Department alone totalled £2M. Since 1989 the financial return on wool has almost halved. This decrease in farm income has occurred despite the fact that during the same period there has been an increase in total sheep numbers, an increase in the wool produced and a decrease in the average micron size of the wool (*i.e.* an increase in 'fineness'). One leading farmer has commented, in 2001, that while in 1989 he received £48,600 for his wool, in 2000 he received only £16,000. Falkland Landholdings, the last remnants of the farms of the Falkland Islands Company, which is a wholly owned subsidiary of the government, is currently (2004) operating at a large loss. It is quite clear that that a pastoral industry cannot be maintained in the Islands without government assistance. Such support requires a political decision, but it is doubtful that such political sympathies for the farming community still exist as strongly today as was previously the case.

There are a number of factors which have contributed to this position:

- Although sheep farming and wool production will be a feature of Falkland Island rural life for many years to come, the dominance of wool is over and will probably never again be the primary industry of the Colony. There has been an understandable reluctance to face this reality because of the changes that this will require.
- Whereas sheep farming still has a powerful rôle in the culture and imagination of the Islands, in reality it has a minor part in the economic life of the community. Farming is now the 'poor relation' of the fishing industry. In broad terms farming has produced an income over the past ten

years of £25M; revenue from fishing licences has contributed £250M to the Islands' economy during the same period.

- Wool prices have always fluctuated (the last substantial profit on wool production occurred during the Korean War in the 1950s), and although it currently (2004) shows signs of a slight improvement, the fact remains that wool is now only 2½% of the world fibre market, and that its share of the fibre market has been declining from the 1960s.
- There has been a lack of clarity (of thinking and policy) in maintaining a distinction between the sub-division of the large farms, and the sub-division of the large camps. This failure has resulted in a common assumption which, following sub-division of the large farms, all that was required was that the same style of farming could take place - but on a smaller scale. The work of William Davies in 1938 proved that what was essential was the significant sub-division of the pastures, irrespective of the ownership and the size of the farms. As one farmer commented, in a pers. comm. the attitude was: "Let's buy our own part of the farm, and then carry on as before. We'll be the Boss and make the profits."
- In retrospect, in some cases, the original sub-division of the large farms has proved to be too small to have a chance of being economically viable. Falling wool prices have meant that the original advice that 3,000 sheep were needed to make a sufficient living has been shown to be seriously outdated. Current (2004) thinking suggests that the figure should be nearer to 10,000 sheep to have a chance at viability.
- Inter-farm co-operation and the sharing of resources could have ameliorated high capital costs, but this has occurred in only a few cases. Co-operation has proved to be very difficult in a culture which emphasises a 'stand alone' and self-reliant lifestyle.

There are two other major factors, (i) Management methods and (ii) The failure to implement change in the past, which must also be considered if sheep farming in the Islands is ever to have a chance of becoming viable again:

- i. Management methods:

Despite large-scale sub-division of farms and pasture since the 1980s, and considerable effort on the part of some farmers, agricultural management methods have remained largely unchanged since sheep farming in the Islands was established in the 19th century. Radical solutions (similar to those adopted by farmers in New Zealand and Australia in the 1960s) are needed. This will require consolidation of existing farms and a much greater degree of co-operation between farms. Scarce and costly resources will need to be shared. Pasture improvement is vital; a much more extensive rotational grazing system must be pursued, and although, by itself, fencing sub-division is probably not economic, no pasture improvement can take place without a commensurate increase in fencing. Research must continue on both the introduction of well-adapted pasture species, and also on new management techniques. Every effort to remedy the inherent soil infertility of the Islands, by the introduction of well-adapted legume species as forage for animals must continue. Species that are under investigation include Marsh Birdsfoot Trefoil (known as Greater Lotus), Caucasian clover, Tree Lupins and a wide variety of clovers. 'Lotus has been the outstanding legume.'<sup>3</sup> The problems of nitrogen fixation are well understood, and because of the acidity of the soil of the Islands all legume seed must be inoculated with the Rhizobia before planting. Clover seed should be coated with lime (as a means of inoculation) and surface sowing should be avoided. Direct drilling, despite its associated mechanical difficulties in the rocky soils, appears to be the most practicable method. The infertility of the soil must be remedied by the application of naturally occurring fertilisers such as calcified seaweed.<sup>4</sup> Failure to improve the grasslands is not an option because by its nature extensive sheep ranching, as practised in the Islands, is nutrient extractive. Means have to be found to attempt to replace that which is lost as a result of wool production. In a recent (2001) Report James Cruickshank outlined the difficulties of soil improvement in the Islands:

The soils are most deficient in available phosphate and lime. Soil improvement for better grass or legume productivity must concentrate on these

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<sup>3</sup> *Falkland Islands Department of Agriculture Biennial Report 1997/99*; Stanley: Falkland Islands Government; p15.

<sup>4</sup> The proposal to use calcified seaweed was first made in: CSO0214/A; *Final Geological Report on recent limestone at Shell Point, Fitzroy area, East Falkland* by Adie, R J; Falkland Islands Government Archive; May 1950.

chemical properties, and the correction of their deficiencies, if improvement is considered worthwhile in the economic conditions of the time ... The cost-benefit arguments will figure very strongly but improvement of lowland soil is possible - and is happening now - encouraging the growth of better pasture grasses, oats and legumes. This is nothing short of a miracle in a place with such a hostile climate for the cultivated plant, and in a place which was dealt such a bad hand in rock and soil types.<sup>5</sup>

David Broughton has suggested the need to develop a joint management and conservation plan<sup>6</sup> based on the recognition that the condition of the heathlands of the Islands continues to deteriorate. Broughton argues for a reduction in livestock numbers, while at the same time at the same time making continuing efforts to increase per capita productivity. Broughton argues for 'controlled grazing of the range ... year-long grazing has to be avoided and rest introduced either by rotation, or deferred grazing systems.'<sup>7</sup> With effective fencing pasture yield can increase significantly. Stocking density should be determined and strictly adhered to. Broughton suggests that:

The ingress of unwanted dwarf shrubs is mainly the result of overgrazing, therefore control should be through a reduction in overgrazing, [with] more active measures to reduce shrub cover.<sup>8</sup>

No new management plan can succeed without a recognition that the grasslands of the Islands have deteriorated. There must be a willingness to admit, and learn from, previous failures. Frank Mitchell has consistently doubted the validity of the claim that there has been over-stocking and that the grasslands have thus seriously deteriorated. Even if the maximum figure shown in Figure 8 is inaccurate to a degree, nevertheless the trend shown in Figures 8 & 9 show that the population of sheep carried at the end of the 19th, and at the beginning of the 20th century, were much

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<sup>5</sup> Cruickshank, J; (2001) *Falkland Soils - origins and prospects*; Belfast: Department of Agriculture of Northern Ireland.

<sup>6</sup> Broughton, D; (1999) *A review of the biology of the shrub taxa and associated dwarf shrub heathlands of the Falkland Islands*; an unpublished M.Phil. Dissertation; Queens University of Belfast; p248ff.

<sup>7</sup> *ibid.*; p246.

<sup>8</sup> *ibid.*; p247.

higher than at present. Figure 9 also shows evidence that during the first half of the 20th century there was a consistent decline. The evidence for this decline in sheep numbers, and the degradation of the grasslands, has existed since the days of Mowat (1895) and Munro (1924). William Davies' analysis remains as true for today as it did for the situation in 1939. Tim Blake,<sup>9</sup> states that the figure of 800,000 for the total number of sheep carried is "probably accurate and not apocryphal", and that undoubtedly some "sensitive areas of grassland" have been damaged. Blake also stated that the warnings about poor camp burning practices have gone largely unheeded, and that "burning makes a rich father, but a poor son."

Any future plan will require the closer integration of cattle production and sheep farming. In the past cattle have only been tolerated as necessary for the production of milk and meat for the farmsteads; cattle have also been regarded as nuisances that destroy fences. As outlined above, Reg Pole-Evans showed in the 1930s that cattle could improve pastures. With modern electric fencing the use of cattle for pasture improvement and meat production is a practical possibility for all farms. As well as the use of cattle for pasture improvement, a decrease in the reliance on wool production and an increase in beef production should also be part of any plans to improve the rural economy. The Chief Executive of the Islands stated, in 2001, that "it is a priority to engineer a change from wool to meat."

The grasslands of the Falkland Islands show a wide geographical variation. Not all parts of the Falkland Islands are appropriate for profitable sheep farming because the underlying soil and rock are unsuitable for grassland improvement. David Broughton challenged much of the received wisdom about grassland improvement in the Islands when he stated:

Agricultural productivity seems more likely to be a function of parent rock type than of the vegetation. Therefore, efforts to modify the vegetation are

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<sup>9</sup> Tim Blake (b. 1935) was the last Manager of the Holmstedt Blake farm at Hill Cove before subdivision of the large farms; he subsequently became the owner of The Peaks Farm, West Falkland. Blake is a grandson of Robert Blake (Senior) who founded the farmstead based at Hill Cove, and he has been a member of Legislative Council. He was appointed the first Speaker of Legislative Council in 2002.

likely to be ineffective in increasing productivity, as well as being undesirable from a biodiversity conservation standpoint.<sup>10</sup>

Research into rotational grazing techniques on the whitegrass is also continuing. Kerr and McAdam have suggested that ‘resting’ whitegrass camp from grazing during late summer appears to allow sufficient increase in biomass to provide higher quality forage during winter.<sup>11</sup> Tim Blake has suggested that farming in the Islands must always assume that the land has limited resources. “The first priority is to improve the lambing grounds; the current average of lambing survival rates is 60% and this is not sufficient, either to maintain the flock size or improve the breeding.”<sup>12</sup>

ii. The failure to implement change in the past:

There can be no radical re-ordering of the farming industry without an honest assessment of why the history of farming in the Islands is largely the history of a failure to implement change. Why has change been so difficult to implement? The lessons of missed opportunities and past failures need to be learnt. As can be seen from the account detailed above there has been no lack of advice, and undoubtedly some the advice has been mistaken. However it cannot be disputed that the work of Hugh Munro and William Davies are two major examples of the failure to seize the opportunity to restore, change and adapt. Munro’s work was dissipated because of the ignorant interference of Governor Hodson; the loss of the Experimental Farm was a grievous one. The public life of the Islands has often suffered from a lack of consistent leadership, particularly with changes in Governors. The increase in the authority of elected Councillors, taken with efforts to enhance the Civil Service and to strengthen the Agricultural Department will significantly attenuate this problem. The labour of William Davies was lost as the result of the combination of the intransigence of vested interests, and the exigencies of a wartime economy. Davies’ Report remains the most important general statement about the grasslands of the

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<sup>10</sup> Broughton, D; (1999); op.cit.; p247.

<sup>11</sup> Kerr, J A and McAdam, J H; (2000) *Rotational and continuously grazed whitegrass pastures in the Falkland Islands*; Department of Agriculture, Falkland Islands Government/Department of Applied Plant Science, The Queen’s University, Belfast.

<sup>12</sup> Tim Blake’s words echo those of David Weir made 65 years earlier at a farming conference held in May 1937: ‘Hoggets are deserving of special care, and should be given the best possible camp, and the question of providing them with some form of supplementary fodder during their first winter is one of paramount importance.’ From a speech made by David Weir to a Farmer’s Conference in May 1937. CS83/37; *Farmer’s conferences*; Falkland Islands Government Archive; 13 May 1937.

Islands, and it is therefore appropriate that the Director of Agriculture in 2001 regarded it as seminal.

Why has it been so difficult to implement change in the Islands? There are a number of factors, which have combined to make change difficult, and sometimes impossible. These factors can be divided into two main 'areas.' There are structural factors, and there are factors attributable to human attitudes and activities:

Structural factors:

- There are limits to the physical environment, and the resources available for exploitation, in the Islands *e.g.* soil fertility, climatic problems, the distance of any commodity produced from the market. There are only a small number of agricultural practices which will be effective in the Islands because of these limits.
- The rise and consequences of 19th century capitalism, which among other things has resulted in natural resources being viewed only as a commodity to be exploited for profit. The subject of the 'commoditisation of nature' will be returned to later in this dissertation, but at this stage it is sufficient to state that how natural resources are viewed strongly effects how they are used - or abused. Capitalism has sometimes been characterised by a materialist individualism, which can be brutal and exploitative. A desire to make a quick profit for a minimum investment does not encourage change to the established revenue producing system.
- The geo-political structure of British colonial rule. Change and adaptation has been difficult in many former British colonies, especially those which have had monocultural economic base *e.g.* Malaya and rubber, the West Indies and bananas or sugar cane. British colonies tended to have a centralised administrative system, and they were expected to be at least financially self-sufficient - preferably able to contribute to the British exchequer.

- The demands of a mercantile economy have made change and adaptation difficult. The need to make a profit for shareholders, and the fact that most income generated by the farming enterprises, before farm sub-division, found its way north made changes to the established pattern almost impossible. For some farming companies financial gain became the only motivation. This is not true for all farming companies, but the effect of an exclusively profit-centred business ethic resulted in little incentive to change and in inadequate inward investment.
- When profits were high (*e.g.* during the Korean War) there was little impetus to alter farming methods, and when profits were negligible there were not the resources to make any changes however desirable those changes might be. The production of wool was what Islands farms and farmers knew how to do; it was relatively cheap to produce, and until recently it was inexpensive to handle and ship. As one farmer commented in 2001: “We knew what we knew; it worked, it was what we were used to, so why change it? ... “If it isn’t broke, don’t fix it!” Other agricultural products such as cattle/meat required slaughtering and refrigeration, and thus they were much more expensive to transport and market. As outlined above a variety of other agricultural products have been tried throughout the history of the Islands with only a moderate degree of success, but their associated costs usually made for their eventual demise.
- All life on the Islands both politically and economically has to reckon with the issue of sovereignty over the Islands and the claims of Argentina to that sovereignty. The behaviour of the Argentine Government since the creation of the Crown Colony, and the occasional duplicity of the British Government (particularly during the 1970s) has been a constant strain on the economic life of the Islands. The failure to resolve this issue has been had a considerable dampening effect on development. It is remarkable how much has been achieved despite the attitudes of both the British and

Argentine Governments, but this issue has not encouraged or affirmed change and adaptation in the farming industry.

Human factors:

- Farmers world-wide tend to be conservative and are reluctant to change from a tried and tested system. Jane Cameron, The Falkland Islands Government Archivist commented on the difficult task of introducing farm reforms: “I think farmers world-wide are a pretty conservative breed ... I don’t suppose it would be really harder here than anywhere else, except that Falkland farmers probably have an additional streak of independent stubbornness inherited from their pioneering backgrounds.”
- Ranching methods of farming wherever they are established, are resistant to change. The problems of sheep farming in the Islands have their parallels with the sheep farming in Australia and New Zealand, which have also found change difficult.
- The philosophy of the ‘frontiersman’ is still deeply ingrained in farming culture of the Islands. Living ‘on the edge’, the thrill of the daily challenge against the elements, the excitement of hard-won achievement, the sense of personal fulfilment, can make adaptation and openness to new ideas difficult. One farmer commented, in 2001: “It is akin to the ‘Cecil Rhodes’ attitude - men should be men; the need for men of action to make decisions; the need for men of action and not reflection; the need for fewer Reports and more hard work.”
- Attitude and opinions in the farming community can become deeply entrenched. A former Agricultural Advisor <sup>13</sup> to the Islands Government commented in 1937: ‘One cannot escape from the impression that there is reluctance in some quarters to make any radical alteration in farming methods.’

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<sup>13</sup> CS83/37; *Farmer's conferences*; Falkland Islands Government Archive; 13 May 1937.

- The farmers of the Islands have not lacked for advice. As the above account shows there have been a large number of Reports and Conferences. The Shackleton Report of 1976 rightly commented that ‘an island is a piece of land entirely surrounded by advice.’<sup>14</sup> Much of this advice has been perceived as being too academic and remote from the ‘real’ world. Many of the earlier Reports got no further than the desk of the farm manager; there was little ‘trickle down’ to those actually working with the flocks. This is not the situation today; the policy of the Grasslands Trials Unit since the mid-1970s and the Agricultural Department since the 1980s has been to involve all sections of the farming community with research and development. ‘Farmers Weeks’ and the Agricultural Department newsletter *Wool Press* are essential parts of a strategy to promote change and the adoption of best practice. But within the Islands there remains a deep suspicion of ‘experts’ - “They come and go; they write reports and leave us to pick up the pieces; they cost us money for little results.” - and these observations are sometimes justified. However when these attitudes are combined with an antagonism towards ex-patriate contract officers working for the government the atmosphere of suspicion created can sometimes make the acceptance of change very difficult.
- The Islands have always been home to strong-minded and determined individuals. Governors such as Allardyce, Middleton, Hodson, Henniker-Heaton, Cardinall, and Clifford, have all left their mark on the Colony. Managers of the Falkland Islands Company - especially F E Cobb - have had an enormous influence on the development of the farming industry. Some Farm Managers and Owners - the Camerons, the Blakes, the Deans, the Luxtons, the Millers and the Bonners held absolute sway over their farms and employees for many years. In a small community like the Islands the domination of a small number of closely-knit families did not always encourage innovation and variation.

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<sup>14</sup> Shackleton, E; (1976); op.cit.; volume 1; p ii.

- The Boards of Directors of the farming companies were often inflexible and conservative. The pattern of the membership of the Boards being largely drawn from family members and/or former farm managers, who had returned from the Islands to Britain for retirement, did not tend to promote new thinking and adaptation. Some farm managers were frustrated in their attempts to develop the agricultural industry because of the reluctance of their Boards of Directors to give the managers authority to implement change. David Weir in 1937 summed up his hopes for the future of sheep farming with a mixture of optimism and pessimism; optimism that farm managers would grasp the opportunity for change, and pessimism that the owners would thwart any alteration to traditional practices. ‘I am sure that the managers are thoroughly capable of putting into effect any improvements authorised by the owners and it is to be hoped that they will be given every opportunity in the future.’<sup>15</sup> Reference has already been made to the intransigence of some owners to reform with the reaction to the Reports of Hugh Munro <sup>16</sup> and William Davies.<sup>17</sup>

#### § c. Future challenges

What are the challenges which farming in the Islands faces in the 21st century? The key word in any discussion about the future for rural life and the agricultural industry in the Islands is sustainability.

There are no easy or ‘quick-fix’ solutions to the problems facing those who wish to farm in the Islands. The problems are not unique; extensive and ranching farming methods are also to be found in Australia and New Zealand.

Recent experience in Australia warns that:

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<sup>15</sup> CS83/37; *Farmer's conferences*; Falkland Islands Government Archive; 1937; op.cit.

<sup>16</sup> CS638/24; *Stock Commissioner forwards report on the sheep farming industry in the Falkland Islands*; Falkland Islands Government Archive; 4 October 1924.

<sup>17</sup> CO78/212/2; Colonial Office Records; Public Record Office; Kew; 1939. see also: C/18/38; Falkland Islands Government Archive; 14 December 1938.

The task to design and develop practices that are more sustainable should not be trivialised. It is going to be difficult. Much will be demanded of our scientific skills to overcome the numerous fundamental constraints to development of sustainable farming practice.<sup>18</sup>

The problems may not be unique, but the solutions will be. The challenge is to find a sustainable way of life for humans and wildlife in the Islands, and which respects and enhances the natural environment.

i. Sustainability from a human perspective:

- The sheep industry must continue to come to terms with the fact that is no longer the dominant wealth-creating source of the Islands. In view of the diminishing world demand for wool products, it is likely that sheep farming in the Islands may well continue to decline and that it can never again be in the ascendant.
- There must be the political will and financial support to enable farmers to remain on the land. Camp - like any other natural resource - must be properly managed. 'Farmers must be encouraged to see themselves as conservation and landscape managers, and make it worth their while financially to do so.'<sup>19</sup>
- There must be the political will and financial support to enable those who wish to leave the land to do so with dignity. This has implications for housing and employment.
- The future of farming may well be a combination of medium-sized family farms and also contract managed farms. There can be no dogmatic assertion as to the optimum size of a farmstead. The consolidation of small

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<sup>18</sup> Williams, J; (1990) [CSIRO Division of Soils; Canberra, Australia] *Search for sustainability: Agriculture and its place in the natural ecosystem*; Linnaean Society of London.

<sup>19</sup> O'Toole, C. (2000) *The Red Mason Bee: Taking the sting out of beekeeping*; Cambridge: Osmia Books; p20.

farming units will continue. On Lafonia there is no reason, in principle, why the four farms of Falkland Landholdings cannot be run as one unit as part of strategic farming plan. All farming in the Islands is likely to require government support for the foreseeable future.

- Governor Cardinall's proposal (1942) of co-operative tenancy deserves detailed examination, as a possible model for some current farming enterprises,<sup>20</sup> and as an alternative to freehold ownership.
- The issue of a declining manpower willing/able to work in agriculture must be resolved. In a pers. comm. Tim Blake commented: "There are no young people coming through the system." The community needs to re-affirm its esteem of farming and encourage its young people to make a career of farming. Governor Cardinall's proposal of a 'Farming Institute,'<sup>21</sup> to prepare students for a career in agriculture, should be re-examined.

ii. Sustainability from an environmental perspective:

- The issue of the depletion of soil nutrients caused by farming must be resolved. The long term aim of a sustainable farming system in the Islands must be to balance inputs and outputs as far as possible. There must be a recognition that the current system of farming is far from sustainable:

A nitrogen balance for a cropping enterprise will show if inputs of fertiliser, nitrogen fixation and atmospheric accession are balanced against outputs of nitrogen ... in animal products, soil erosion ... The search for sustainable agricultural practice will require the Agricultural Scientist to radically change his focus from short term productivity to the integrated functioning of the agro-system.<sup>22</sup>

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<sup>20</sup> CO78/216/8; Colonial Office Records; Public Record Office; Kew; 1942; paragraphs 208-245.

<sup>21</sup> CO78/216/8; Colonial Office Records; Public Record Office; Kew; 1942; paragraphs 208-245.

<sup>22</sup> Williams, J; (1990) *Search for sustainability: Agriculture and its place in the natural ecosystem*; CISRO Division of Soil; Canberra; op.cit.; pp. 21-33.

- David Broughton has emphasised the importance of maintaining the biodiversity of the Islands,<sup>23</sup> and that the greatest threat to that biodiversity comes from introduced mammalian herbivores:

The challenge is to sustainably manage and conserve this important biodiversity within the current agricultural framework, and if necessary to develop more appropriate (*i.e.* more sustainable) management practices that fit in with a comprehensive biodiversity conservation strategy ... Although the flora and fauna of the Islands is still largely intact there are causes for concern.<sup>24</sup>

- Not all the degraded land is worth restoring; some land can only be rehabilitated in the very long-term - but this is not likely to be economic. Choices have to be made and priorities agreed upon. Hodgkinson has suggested that a good analogy for doing this is the triage system used in hospital casualty units.<sup>25</sup>

iii. Sustainability from a developmental perspective:

- The research and development work of the Agriculture Department should be enhanced. Rural development cannot take place in a sustainable way without scientific research. The high costs of such work need to be regarded by the community as a whole as an investment in the future. The story of the failed Experimental Farm in the 1920s should stand as a warning of the consequences of short-term cost savings.
- Tim Blake's maxim "Assume you have limited resources" means those resources must be concentrated in key areas of camp. This should be done in light of the fact that the problems of West Falkland, East Falkland and

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<sup>23</sup> Broughton, D; (1999) *A review of the biology of the shrub taxa and associated dwarf shrub heathlands of the Falkland Islands*; an unpublished M.Phil. dissertation; Queens University of Belfast; op.cit.

<sup>24</sup> *ibid*; p238.

<sup>25</sup> Hodgkinson, K; (1992) *Elements of grazing strategies for perennial grass management in rangelands; Desertified Grasslands: The biology and Management*; The Linnaean Society; p78.

the small islands are distinctively different. East Falkland Island's farms have much easier access to Stanley; the running costs of West Falkland farms are higher than that of East Falkland; the small island farms may not be able to sustain an economically viable sheep farming industry in the future.

- Rural development must be seen as more than just agricultural development. The agriculture industry must see itself as part of the rural scene, and not dominating it. Camp and rural property can be used for other purposes; *e.g.* for retirement homes and as a base for non-farming rural industries.
- Farming must stop seeing itself as the sole industry in a 'rural preserve'. The aim should be to create a rural infrastructure with people engaged in other activities to produce income in addition to farming, *e.g.* the Scottish crofters.
- Diversification should continue: the potential for goats, pigs, reindeer, local sea fish products and cattle must be fully explored. Tourism can play a part in providing supplementary income for some farms.
- A former Islands Chief Executive, Dr Michael Blanch, suggested that greater emphasis should be placed upon 'niche marketing' of Islands products. The relative 'cleanness' of Islands' wool should be marketed. Organic accreditation should be sought for the products of Falkland Islands' agriculture,<sup>26</sup> especially meat products.

The understanding of appropriate farming practice in the Islands has come a long way since the first sheep were landed in 1840. Sustainable sheep farming must co-exist

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<sup>26</sup> *The Islands Plan 2001-2003*; The Falkland Islands Government; 6 December 2000. Organic farming is the preferred option by the Falkland Islands Development Corporation and the Department of Agriculture. Currently (2004) a number of farms are certified as being fully organic. See: *Branding the Falkland Islands*; (2000) Stanley: Falkland Islands Government.

with the natural environment of the Islands and not seek to dominate it.<sup>27</sup> The management of livestock must work with the soil and the natural pastures, and also with the prevailing climatic conditions. For farming to have a future in the Islands the agricultural industry has to work with nature, and not against it. Respect for the land, and its inherent characteristics, is the only durable option for Islands farming.

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<sup>27</sup> Kerr, J; (2002) *Environmental and management factors affecting the sustainability of native pastures under sheep grazing in the Falkland Islands*; Ph.D. Thesis; Faculty of Agriculture and Food Sciences, the Queen's University of Belfast.