

Confidential.

MONTEVIDEO.
March 8th, 1940.

The Honourable Colonial Secretary,
Stanley,
Falkland Islands.

Sir,

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With reference to your telegram addressed to me at Punta Arenas and received from His Britannic Majesty's Consul at Montevideo on the 1st. instant, I have the honour to submit for the information of His Excellency the Governor a summary of work as Agricultural Adviser in the Falkland Islands for a period of three and a half years.

I arrived in the Colony on September 10th, 1936 and after a few days in Stanley proceeded on a tour of inspection of the Camp visiting Fitzroy, Darwin Harbour, Green Patch, Port Louis South and Port Louis.

While it was still early spring, one gained an excellent impression of the large area of camp between Fitzroy and Darwin, which was amply borne out by the size and condition of the sheep which had wintered there. At once the most striking feature about these properties as well as all others subsequently visited was the need for closer subdivision and controlled grazing. It soon became apparent that any attempt to put into effect, under the present system of large scale sheep-farming, a long range Agricultural Policy extending over a period of fifteen years, as indicated by His Excellency the Governor soon after my arrival, would be futile. The support given by prominent farmers to the closing of the experimental farm while still in its infancy very largely justified the foregoing conclusion.

Hitherto an Agricultural Department did not exist in the Colony, the work of Stock-Inspection, Administration of Quarantine Regulations etc., being carried out by a Stock-Inspector who attended to his own clerical work assisted on occasions by the staff of the Colonial Secretariat. It therefore occurred to me

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that as a prelude to any large scale development in the Colony such a department organised on sound lines became necessary. His Excellency agreed and the Agricultural Department came into being on the 1st. day of January 1937.

As head of the Department my designation was changed from that of Stock Adviser to Agricultural Adviser, a clerk was appointed and a Stock-Inspector was brought from New Zealand to act as Assistant to the head of the Department. Offices were allocated in the old Secretariat building and later permanent offices were secured in Ross Road near the Public Jetty.

Prior to the establishment of the Department, and during the period September 10th. to December 31st, 1936, I made extensive tours of the remainder of East Falklands, West Falklands and outlying islands, and everywhere found striking evidence of pasture deterioration due to the existing system of uncontrolled grazing, or to put it more plainly the huge unwieldy paddocks often ranging from 15,000 to 20,000 acres in area permitted selective grazing or over-grazing of the best pasture and the non-grazing of the poorer pasture which would in every case have benefited from controlled grazing.

Speaking generally and in view of the fact that almost the whole of the income derived from the sheep farms, comes from the sale of wool, the unevenness of the fleeces in individual flocks was most noticeable, to say nothing of the variety of breeds or cross-breeds of sheep in the Colony as a whole.

Taken in conjunction with pasture improvement it is evident that a great deal could be done to improve the standard of quality and quantity of wool by a determined process of selection and line breeding. Good type ewes with robust constitutions exist in most flocks and a great deal could be accomplished if suitable pure bred flock rams were introduced to mate with these ewes. At present one or two farmers breed pure bred sheep in a small way, but beyond this, pure bred flocks do not exist even on the largest and best sheep farms. This aspect is difficult to understand in a Colony

so well adapted for the breeding of sheep, as not only within the Colony itself is there a ready and profitable market for well bred animals of both sexes, but the proximity to Patagonia leads one to visualise an unlimited market for stud stock in that vast country.

I can see no reason why Falkland Islands farmers should remain content to import from Chile, cross-bred rams of doubtful breeding, when this Colony should in effect become the stud farm for at least the southern portion of South America.

The designation "Stud Flock" used on most Falkland Islands farms, from which rams bred on the farms are selected, is a misnomer, as frequently neither the ewes nor the rams in these flocks are pure bred. The difficulty of disposing of surplus sheep possibly accounts for many inferior sheep remaining in the flocks until called for age.

If a profitable market could be found these inferior animals would be disposed of as lambs or two tooth, and the resultant grading up of the standard of the flocks which would thus be accomplished can be visualised.

Short of the establishment of a freezing works in the Colony it is difficult to foresee in any other direction a permanent and satisfactory market for surplus sheep and cattle. The question of establishing a freezing works has I believe been discussed from time to time for many years and early in 1937 I re-opened discussions on the subject at a meeting of farmers at Hill Cove, emphasising the benefits which in my opinion would accrue from such a venture. Two farmers appeared to support these views, but the remainder were somewhat sceptical and up to the present nothing further has been done.

During 1938 and 1939 shipments of sheep were made to Tres-Puntas freezing works for slaughter in transit to the United Kingdom, but the returns were poor as compared with those which could be expected from a local freezing works. Many farmers continue to slaughter old sheep on their farms and in some cases the skins are not even saved. Runners, tongues, livers, are all

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valuable and other by products which could be turned into fertilisers in a suitable factory are wasted.

Diseases.- Sheep are remarkably healthy and beyond isolated cases of Caseous-Lymphadenitis and Mycotic Dermatitis which have been met with, no serious disease exists. Quarantine regulations are strictly enforced to ensure that such diseases as Foot-and-Mouth, Sheep Scab etc. are not allowed to enter the Colony.

Diseases of dietetic origin, such as Pulpy Kidney in lambs and Ant~~e~~-Partum Paralysis in ewes, have been met with in isolated cases, but the losses have been so small as to render preventive measures not economical under present conditions of farming.

There is no death rate from internal parasites and foot-rot does not exist, due, it is claimed, to some antiseptic properties existing in the peat soil. Rickets have not been observed, but on most farms a certain number of young sheep each year become "piners" and are killed. It is not unlikely that the chief cause of this trouble is mis-mothering at lamb marking time or even earlier, as well as weaning at shearing time, which is too early for late born lambs. However, there is room for further investigation along these lines. Some experiments were carried out in 1938 drenching typical "piners" with "limonite solution" but there was no appreciable result.

Sterility does not appear to exist in ewes, all of which appear to have lambs. Disappointing results occurring at lamb-marking time are in part due to the fact that ewes which have wintered badly are weak and have little or no milk at lambing time in October.

The weather is often bad in that month and the writer has made many post-mortem examinations of young lambs found dead, and in nearly every case the empty stomach has disclosed that the lamb has never sucked its mother which has abandoned it to die. A number of lambs are also lost in ditches and much might be done to fence off lambing camp which is free from bad ditches, that is, if it is considered too costly to keep such ditches cleaned out.

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~~Internal~~ parasites.- It can be fairly claimed that sheep lice and ticks are now almost non-existent in the Colony.

Diseases of Cattle.- Many more cattle could to advantage from a pasture point of view be carried on all farms. Generally speaking cattle are healthy. Ringworm in a fairly bad form exists on some parts only of East Falklands, while West Falklands and Islands are entirely free from this disease, which could be entirely eliminated if suitable measures were adopted by the owners.

Milk-Fever.- This trouble is fairly common, particularly amongst the dairy cows owned by residents of Stanley. All cases taken in time respond to the usual treatment of udder inflation.

Tuberculosis.- The writer applied the intradermal tuberculin test to some two hundred dairy cows on East and West Falklands and Islands, and in no case was a re-actor found. It may be assumed with certainty that animals affected with tuberculosis would very soon die under the hard winter conditions in this Colony, where supplementary winter-feeding does not exist, therefore the risk of human infection of bovine origin may be said to be nil.

Eating of Kelp by cattle.- Wherever they have access to the sea beach cattle display voracity for the eating of kelp in large quantities. In order to overcome this seeming depravity it is desirable that access be given to a salt lick composed of 50% Agricultural Salt and 50% sterilised bone meal. Experiments carried out by the writer with this salt lick on dairy cows in Stanley showed that the animals consumed it greedily and showed much less inclination to go to the beach for kelp. This is all to the good, as cows are from time to time caught in the tide on the somewhat rough coast-line and drowned while struggling for access to kelp.

Breeds of Cattle.- There is a great deal of scope for improvement in cattle breeding, both from a dairying and beef production point of view, but, doubtless the advent of a freezing works would automatically bring this about in the case of the latter. During the period 1936/40 one only beef bull (Aberdeen Argus) was imported. One Welsh Black Bull was imported in the same period for dairying

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purposes, and the Agricultural Department brought from New Zealand two Friesian Bulls of the best blood obtainable in that Dominion, and these animals have acclimatised very well and have sired good crops of calves, when mated with the locally bred dairy cows. Specially selected cows are kept by the Agricultural Department to maintain milk, cream and butter supplies for Government House, and these animals should breed well to the Friesian Bulls, one of which has been sent to the West Falklands to introduce the blood there. The writer visited Uruguay and Argentina in August 1938 to explore the possibility of acquiring dairy cattle from these countries, but this was found impracticable as foot-and-mouth disease is endemic in both countries.

Horses.- While it is possible to breed excellent horses in the Colony most farmers prefer to import from Chile or Argentina, but it is hoped that the increasing difficulties in the way of arranging shipments from these countries will help to stimulate the breeding of horses locally.

Developmental work.- At the beginning of 1937 the absorption of surplus labour comprising some 60 men in Stanley became the responsibility of the Department, and these men were used to carry on experimental and developmental work on the Stanley Common. To begin with, this area of some 6,000 acres was divided into blocks of approximately 500 acres, and a scheme of rotational grazing was instituted, using for that purpose the dairy cattle and horses depastured on the common and owned by the General public. Yorkshire Fog, Cocksfoot, ryegrass clovers etc. were surface sown and the two first mentioned have done remarkably well, the Yorkshire Fog in particular showing much promise as a grass to be used in the first phase of any scheme of general improvement of pastures. The controlled grazing of the Common has produced obvious results, and it is contended that the grazing of sheep on the area along with the cattle and horses would have shown even better results - this was not possible however, as it is not permitted to graze sheep on the Public Common.

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Draining.- A considerable number of miles of surface draining of peat lands on the Common was carried out to advantage at a cost of one penny three farthings per yard run. The pasture has improved considerably on the drained areas, which are now comparatively dry and consolidated.

Poa Flabellata.- This tussac which is indigenous to the Falklands is a valuable fodder plant which grows well on Rincons near the sea. Some 350,000 plants were put in at Surf Bay, Cape Pembroke and Navy Point on waste lands in order to provide a regular fodder supply for horses and cattle in Stanley. This will prove a great benefit to the community as supplies of tussac brought in by private vendors from the Islands in Port William are irregular.

Agricultural Station.- A suitably equipped agricultural work station has been established to the East of the town of Stanley and adjacent to this station plots have been cultivated and turnips, oats and hay have been very successfully grown. Sheep Kale and Rape are also easily grown and there is no trouble with blight or insects of any kind, as is the case in other countries.

The results of experiments to date point to the facts (1) that it is useless to sow seeds without fertilisers; (2) that phosphate alone does not give much result; (3) that nitrogen alone does not give much result; (4) that lime alone does not give much result; (5) that phosphate and nitrate of soda together give excellent results. Top dressing of Government House paddocks with mineral rock phosphate and basic slag has shown excellent results and clovers in particular have been stimulated.

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Hitherto work has been done by hand cultivation, but now that the war has absorbed the surplus labour the Department requires implements to carry on its work.

The following have been the subjects of separate reports, and should be read in conjunction with this more or less general summary.

- 1. Recommendations made by the Agricultural Adviser 28th. June 1938 for the Subdivision of land with a view to closer settlement

- 2. Report on Erosion in the Colony by Agricultural Adviser.
- 3. Report on experimental flock of sheep kept at Stanley.
- 4. The report of Mr. William Davies M.S.C. 1939, treats fully with the grasslands of the Falklands.
- 5. Particulars regarding situation, area, climatic conditions of the Colony are shown in Memorandum on the Sheep Farming Industry in the Falkland Islands and in other reports, therefore it is unnecessary to deal further with these aspects.

✓ Live Stock Show.- A most successful Live Stock Show was held in Stanley in February 1939, the second of its kind to be held in the history of the Colony. A show of this nature is difficult to organise owing to transport difficulties, but in spite of this the number of entries, particularly in the sheep classes, made the effort well worth while. Farmers were unanimous in their decision that the venture was of considerable educational value in its relation to the sheep farming industry.

In conclusion and to sum up the situation in the Falkland Islands as the writer sees it:-

Certain types of camp are overstocked, while other types proportionally greater in area are very much understocked.

It is obvious that this state of affairs has existed since the beginning of sheep grazing in the Colony. The proper use of the land is the only solution to the problem of the inevitable decline in sheep numbers. It has been proved that the proper control and utilisation of the indigineous herbage (with which the Colony is particularly well endowed) is not feasible, while a few people monopolize the land, which is held by them in areas quite unmanageable in size.

It is not intended that any section of the farming community (whether absentee or resident) should be held responsible for the present state of affairs. It is the system of farming that is wrong and this will have to be altered before any real progress can be envisaged.

Given an opportunity, there is ample room for the development

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of a thriving community in the Colony, which after all, enjoys a climate healthy to man and beast alike, and the soil is capable of being farmed to much greater advantage.

When Colonisation takes place in the true sense of the word, sheep farming for the production of wool alone, will not be the only industry, and nowhere will there be found a superfluous collection of able bodied men and women.

Roads and communications, better educational facilities, freezing works, etc. will follow in the wake of closer settlement, just as they have done in other countries.

It will be possible in this Colony to keep the expenditure on roads down to an absolute minimum, as for many years to come, much of the land is capable of being opened up for settlement with frontages to the many excellent and at present unused bays and harbours which exist at such convenient intervals along the coast line.

Smaller holdings will mean more intensive farming, and a greater production of wool, meat, milk, butter, cheese, eggs, bacon, vegetables, small fruits etc.

Closer supervision which invariably takes place on a smaller holding will eliminate very largely if not entirely the present heavy death rate in sheep. Some of the more enterprising small farmers would undoubtedly take up seriously, the breeding of pure-bred sheep, beef and dairy cattle, pigs and poultry, all of which would for a considerable time at any rate, find a ready sale within the Colony and eventually a lucrative export trade would be developed.

If the managers of large flocks have been more willing than the so called small scale wool growers to improve their flocks this has not borne fruit to any marked extent, if at all. How many of the large farms maintain a pure-bred stud flock?

It is the duty of the Government to adopt suitable measures to prevent further deterioration of the farm lands of the Colony, and the policy of the Agricultural Department would be planned on modern scientific lines with a view to the prevention of
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animal diseases, overstocking etc., and not the least important of its functions would be the giving of sound instruction in the arts of Animal Husbandry and Pasture Management, etc.

In other countries a suitably constituted Land Board is set up to deal with the question of land settlement, in conjunction with the Government, and presumably the same thing ^{WOULD} ~~will~~ be done in the Falklands. Stanley maynot be the only town and the necessary officials ^{WOULD} ~~will~~ be stationed where required.

Experienced men, who would make excellent peasant farmers, are to be found on the farms. Their selection would of course be a matter for the Land Board. Eventually there would be room for many more settlers than would be available within the Colony and these would come from overseas, along with the additional farm labour which may be required. Experience has shown that the successful small farmer employs necessary labour quite as readily as the Rancher and frequently pays better wages.

There is no doubt at all, that the Falkland Islands can be developed along the same successful lines as the provinces of Otago and Southland situated in the Southern part of the South Island of New Zealand. These provinces in spite of comparatively adverse climatic conditions, are well to the fore in the production of wool, fat lamb and dairy produce, since the former system of ranching has given way to closer settlement with its more intensive farming methods.

While the establishment of a freezer would play a prominent part in the successful development of any comprehensive closer settlement plan, it is submitted that a freezer alone would not solve the problems confronting the Colony to-day.

Every care should be taken to safeguard and improve the finances of the Colony and the present land-owners, who after all, ^{WOULD} ~~will~~ still have large holdings, ^{WOULD} ~~will~~ be given an opportunity to assist in this direction.

It must be admitted, with the advent of closer settlement the Camp will offer more employment and will become a more attractive

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place in every conceivable way, and it will cease to be a huge waste of country with a few isolated and lonely settlements.

The unbounded hospitality and assistance given to me by everyone during the three and a half years of my stay in the Colony has been very much appreciated.

I have the honour to be,

Sir,

Your obedient Servant,

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Agricultural Adviser.