C.S.

CONFIDENTIAL.

No. C/23/36.

General

1936

Agricultural Adviser.

SUBJECT.

1936.
26th September.

PROGRESS REPORTS OF AGRICULTURAL ADVISER,
1936/1937, 1940/41

Previous Paper.

MINUTES.

1-7. Report from agricultural adviser, 26/9/36.

Y.E.
Submitted.
I understand from Mr. Weir that a copy has already been left with Y.E.

[illegible] 5/x/36

A very interesting report

2. The only sheep which is of proved value suitable to the country is the Romney and I doubt whether any farm except the H.F.C. could afford the costly experiment of a pure bred Merino flock. In this connection our pure Cambrey percentages and heavy death rate are important factors.

Subsequent Paper.

C/16/40.

3. Will you please put A on f. 4 extracted to a new file entitled Establishment Form — proposed re-establishment and also open a new file on that part marked X — X and B on f. 2 for the organisation and staff of the Department

230/36.

231/36.

5/12/36

Stock advises.

To see HE's minute.

Extracts have been made and the files will be minuted to you today.

7/12/36

Hon Col. Sec noted, thank you. 8/12/36

P.A. 7/12/36

Report from Stock advisers, 24/11/36 8-35.

Y.E.

Report & the Stock advisers submitted a duplicate is forwarded for the retention of Y.E.

24/11/36

Excellent.

1. I have discussed conditions of farming in the W/T generally with the Stock Adviser.

2. The question of communicating impressions

C.S.O. No. C/23/36

Inside Minute Paper.

Sheet No. 2

of individuals forming the managers was mentioned by the The Stock Adviser considers that it would be premature at present and I concur

4. The duplicate copy does not appear to have been forwarded to us

25/11/36

Y.E.

Duplicate report is now forwarded. It is regretted that the above copy of the report was not forwarded in the first instance

26/11/36

Thanks

26/11

(36-46)

Report from Stock Adviser 4/1

Y.E. Submitted together with duplicate copy. Does Y.E. desire to see the A.A. regarding his Report.

MCH

C.

S. I. S.)

Duplicate withdrawn. There is no point at which Y.E. should see the A.D. immediately on this illuminating report.

6/1/37

Agric. Adviser.

To note Sir H's minute.

MCH
C.S.
6. 1. 34.

Hon. Col. Sec.

H.E's. minute noted thank you

DAW
6.1.34

Report from Agriculture Adviser 11/3/37. 47-58.

Y/R.

Submitted. The duplicate was sent to Y/R. under separate cover.

MCH
C.S.
16. 3. 37.

Most interesting.

I should like to see some general observations embodied in a memorandum which could go out to the farmers at the same time before the Conference when they could discuss any matters in it

[illegible] 4/3/37

Agric. Adviser.

For necessary action please.

MCH
C.S.
17. 3. 37

C.S.O. No. 123/36.

Inside Minute Paper.

Sheet No. 8

The Hon. Col. Sec.

I have spoken with H.E. in regard to this and his Excellency agrees that the matter can be brought up for discussion at the conference without the necessity of forwarding a memorandum to farmers — in any case the time is now limited

Asst
12/4/37

Submitted.

MCH
C.S.
12.4.37

13/4/37

Agri. Adviser.
To note.

MCH
13.4.37

Hon. Col. Sec.
Noted thank you.

Asst.
A.A. 16/4/37

54-36. Report from Agricultural Advisr. 3/5/37.

Submitted.

MCH
C.S.
3.5.37.

4/5/37

Report from Ag. Adviser of 22/10/37. (57)

Y.E.

Submitted.. ack. & thank the A.A.?

2. This is the first time the A.A. has visited either some of these areas and I think it might be interesting if a record was kept showing the recommendations made by the A.A. and a check made on his next visit noting what action has actually taken place since the recommendations were made.

3. For instance in red (57) (58) (59) (60) & (62) sub division of areas is recommended & it would be interesting to know if these subdivisions, as provided for the system of rotational grazing as recommended by the A.A., has been made.

4. There is a statement of lack of shepherds & the loss of many sheep while shepherds are cutting peat etc.. The lack of shepherds may be due to lack of housing construction sufficient to be in keeping with the increased number of married families.

5. Sub. division fencing & even house building for staff might come into the scheme after check & suggested for development

Yes

29/x/37

Hon. C.S.

Please thank the Agric: Adviser for his interesting report.

2. If such a record were kept it would be of value in showing whether farmers are trying to improve in accordance with the advice given them by the Agric. Advisers. I think however larger stations such as the F.S. by should take the lead in carrying out improvements. For instance Sub division of area. is badly needed on every farm for better control of grazing. Mr Davies D.Sc. may have something to say about this. I think he should see these reports.

3. Lack of Shepherds is due in many instances to lack of houses. More Sub division would mean more shepherds, in ch

C.S.O. No. C/23/36.

Inside Minute Paper.

Sheet No. 1

64. Minute to Agricultural Adviser of 5.11.37.

65-72 ditto Minute from Director of Agriculture of 10/6/41.

Y/E.

Submitted.

O.J. for C.S.

11/6/41

P.A.

(7)

Stanley,

26th September, 1936.

CONFIDENTIAL.

Sir,

I have the honour to submit for the information of the Government the following interim report in connection with the sheepfarming industry of the Falkland Islands.

I arrived at Stanley with Mrs Weir and family by the s.s. "Lafonia" on the evening of the 10th of September, and proceeded at once to the Quarters which were in readiness for us.

The action of His Excellency H. Henniker-Heaton, Esq., His Majesty's Governor of the Colony of the Falkland Islands in directing that we should be comfortably established in our new home immediately on arrival was greatly appreciated by Mrs Weir and myself.

I was granted a formal interview by His Excellency on the morning of Monday the 14th of September, in connection with my duties. From the 15th to the 17th of September, both dates inclusive, I remained at Stanley taking over the Office, etc.

On the morning of Friday the 18th of September, I left Stanley on horse-back on my first tour of the Camp, making Fitzroy Settlement for the night; thence on the following day to Darwin remaining there for three days returning to Fitzroy on the evening of the 23rd of September; thence on the following day crossed the Wickham Heights and travelled via the Estancia and the former Experimental Farm Area to Port Louis returning to Stanley at 2 p.m. on Friday, the 25th of September, via "Saddle Backs" mountain, Turner's Creek, Long Island and Moody Valley.

THE HONOURABLE
THE COLONIAL SECRETARY,
STANLEY.

It/

(6)

It is well recognised that one is unable to make a detailed report until all the properties in the Colony have been visited, therefore it is respectfully submitted that this is in the nature of a progress report only, as far as the actual inspection of properties is concerned.

As far as I have gone, my views for the most part at any rate are very much in accordance with those expressed by the late Hugh Munro, Esquire, in his report of an investigation into the conditions and practice of sheep-farming in the Falkland Islands dated the 3rd of October, 1924, at the Quarters, Stanley.

Where camp is not overstocked, notably on Fitzroy and Darwin, sheep are very well grown, and hoggets looked particularly well considering the time of the year.

The mineral deficiency diseases which one may have anticipated do not appear to exist. At Port Louis on the property of Messrs Robson Brothers an impression was gained that poor farming methods were in existence and that the Camp was heavily overstocked. Hoggets here were under-sized and many showed marked evidence of an infestation of internal parasites. Considerable death rate has already occurred on this property, presumably fromtthis cause.

On all properties visited the sheep were of very mixed breeds with poor quality and quantity of wool, although in the case of Darwin the Manager is making a genuine endeavour to improve the quality of the wool by importing Corriedale Rams from the Patagonian Coast. This of course is a slow process on a large property, when suitable rams are avail-able in small numbers only, and when the ewes are such an uneven lot of mixed breeding.

The writer is definitely of the opinion that pure-bred Merino sheep should at least be tried on some of the Camp, but, it may be difficult to induce private individuals to

embark/

embark on an enterprise of this kind in view of the apparent-ly deep rooted belief which exists in the Colony that fine woolled sheep would not thrive here.

The Merino is most adaptable to varying climatic conditions. Pure-bred Romney Marsh (New Zealand type) and Corriedale Studs should also be established in the Colony.

The complete absence of cultivation is somewhat striking in a land, much of which is so admirably suited for mechanised cultivation and where turnips, mangolds, rape and oats, etc., might be grown to advantage for sheep fodder. Managers admit freely that much of the death rate amongst lambs is caused through lack of shelter during blizzards, yet here again little or no attempt has been made to establish shelter on a worth while scale.

The two plots each of half an acre in area sown at Darwin last year in accordance with the plan of Professor Stapledon of Aberystwyth, Wales, were inspected, and although very little spring growth has yet occurred, it was interesting to note that in the Gorse Wall Section which is on dry hard Camp, mineral rock phosphate is at present shewing an outstanding result.

Perennial Rye-grass is showing well in the super-phosphate area of this section, while clovers have been stimulated in the Basic Slag Area, but there is certainly more growth and less bare ground in the Mineral Rock Phosphate Area.

In the Horse paddock section which is still very wet, growth is backward, although fairly even over the whole section. Clovers have livened up considerably in the Basic Slag Area here.

Both sections were surface scratched only and are not fenced off from stock, and hares are continually nibbling back much of the young growth. While all the grass sown

may/

may not have germinated, a certain amount of fine native grasses are filling in the gaps. The Manager was not impressed with the progress of these plots during last spring and summer but he now sees a considerable and unexpected improvement. Both plots will be observed as closely as possible from now on.

At Swan Inlet I removed a tumour from the Lower Mandible of a young horse the property of Darwin Station. It had the appearance of an Epithelioma in which case it will recu but on the other hand it may be a tumour of a non-recurring nature. Unfortunately it was out of the question to bring it back for pathological examination.

It is clear to me that the closing down of the Experimental Farm has been a most regrettable disaster of th first magnitude to the Colony, in fact these words do not adequately emphasise the seriousness of this unfortunate happening, and, I would therefore most respectfully recommend that earnest consideration be given to its immediate re-establishment as an experimental and training farm. The Common can never be used to the same advantage as the beautiful and extensive area formerly known as the Experimental Farm, as it is insufficient in area and is so largely composed of peat banks and wet Camp, making it more of a reclamation proposition than an experimental farm in the meantime at least.

The two areas, however, could be worked very well in conjunction, for the general good of the Colony.

It is respectfully submitted that the establishment of the Department of Agriculture on a properly organised basis is of paramount importance in a primary producing Colony such as the Falkland Islands.

While it is desirable that there should be co-operation between Government Departments it is submitted that the Department of Agriculture should function quite independently and in the same way as other Departments and that the

Staff/

Staff be directly under the control of the Officer in Charge.

Briefly the organisation and functions of the Falkland Islands Department of Agriculture would embrace :

1. Investigation and control of diseases of animals.
2. Inspection of Live Stock, Meat, Slaughterhouses, and Town Supply Dairies
3. Animal Husbandry Advice to Stock-Owners.
4. Instruction in Wool-growing.
5. Operation of Live Stock Quarantine Station.
6. Registration of Live Stock Brands, Slaughterhouses and Dairies.
7. Agricultural Instruction embracing advice in Grass land management, top dressing Ensilage making, farm crops, etc.
   Direction of experimental areas and co-operative experiments.
8. The fostering of a farmers organization which would meet periodically and confer with the Officers of the Department in connection with the general improvement of farming; and possibly the formation of Boys and Girls or young Farmers Agricultural Clubs.

231/36.

STAFF REQUIRED - Assuming that the Experimental farm is resumed -

1. Officer in Charge of the Department of Agriculture who would co-ordinate the whole of the work of the Department, and, who would directly control all staff.
2. One Stock Inspector, who should be young and active and capable of being trained to attend to such matters as, administration of Quarantine Regulations, Inspection of Sheep for lice, Inspection of Registered Dairies and Slaughter-houses and the Registration of Brands.
3. Working Manager for Experimental Farm.
4. Assistant for Experimental Farm.
5. Foreman of Works for improvement on the Common at Stanley.
6. Clerk, general clerical work, and the keeping of a proper system of records and files.
7. Clerk of Works for Stanley Common, to issue tools, keep stores, etc., and time sheets.
8. Common Ranger who could be utilised as an assistant to other officers as required.

Local men to be used where possible, but, in the event of

suitable

suitable men not being available, one or two might be obtained from New Zealand for key positions at reasonable salaries.

The question of salaries can be discussed later.

Owing to its close contact with Farmers this Department could readily make a special feature of placing unemployed men at work on Camps, and, in fact could take over the whole of the Unemployment problem of the Colony, with the exception of those men required by other Departments.

The Experimental Farm would be ideally situated for the preliminary training of a certain number of youths who could be drafted from there to Camps as required.

Elaborate and expensive buildings would not be required to commence with.

Stud Flocks of say at least two pure breeds of sheep could be established on the Farm.

Cultivation could be carried out by Caterpillar tractor so that all fodder grown could be utilised for sheep and riding horses.

The farm should at least pay its way and indeed may even show a profit, and in any case it could be demonstrated whether or not some of the best areas in the Colony could be cultivated to advantage.

Whether the Experimental Farm is resumed or not, the same organisation as already outlined herein, less of course the Farm Manager and Assistant, is recommended. This of course would be the nucleus of the Staff of the Department and additions no doubt would be made if and when occasion arose.

My main reason, Sir, for making these somewhat early recommendations, is that in the event of their ultimate approval as a whole or in part, there will be as much time as possible for me to establish the Department on a thorough foundation, before my return to New Zealand on the expirat-

ion/

ion of my three years contract with the Falkland Islands Government.

In that time I would expect to have one or more of my Officers sufficiently trained, to be able to take control at least temporarily if not permanently.

I would also take this opportunity of recommending that ways and means of sending say a party of six selected farmers or managers on a subsidised tour to New Zealand at some future date, to gain some first hand knowledge of sheep-farming conditions in that Dominion, should be considered.

In conclusion, Sir, I wish to point out that I am fully alive to my obligations to the Colony of the Falkland Islands, in so far as the carrying out of my official duties is concerned, and if the recommendations embodied herein are approved as a whole or in part, the whole of my energies will be bent in the direction of putting them into effect, in a manner calculated to be of benefit to everyone.

I am,

Sir,

Your obedient servant,

D. S. A. Weir

Stock Adviser.

SUMMARY.

To sum up conditions to-day are little if any different then those which pertained when the late Mr. Hugh Munro visited the Colony in 1924 and much of the subject matter embodied in that Gentlemen's report is equally applicable today as it was then.

The only person who has made a whole-hearted endeavour to put into effect the recommendations of Mr. Munro is Mr. R. C. Pole-Evans of Port Howard, and it must be admitted that he has in a very large measure succeeded. Many Managers are agreed on this point, but, at the same time they convey the impression that they look on Pole-Evans as some sort of Superman, whose efforts have exceeded anything that they would themselves be capable of carrying out, in fact if I may say so with discretion, an inferiority complex almost exists in this direction. Every Manager might do well to endeavour to emulate the standard of sheep farm management set by the Manager of Port Howard. This is not to be attained however without unbounded energy and bulldog tenacity of purpose over a long period of years.

Some of course have not such suitable Camp on which to carry out an improvement plan, whilst others are favoured with even better camp than exists at Port Howard. The question too of a free hand and financial backing from the owners are not the least important factors attaching to the ultimate success of such a plan.

Experimental Farm.- I am more than ever convinced that the re-establishment of an experimental farm is necessary in the Colony to demonstrate sheep breeding and feeding experiments as it is beyond the scope of the average farmer to carry out worth while experiments on individual farms.

The original area would be the ideal place and the

management/

management could be undertaken by the Agricultural Adviser, with a foreman living on the farm to supervise operations.

QUARANTINE STATION, FOX BAY.

I was asked repeatedly by farmers on the West when the work on Fox Bay Quarantine Station was to be put in hand, and all were emphatic that they had not promised to do any of the work with the exception of Mr. W. Clement of Fox Bay, who said he promised to do the fencing if it were carried out while two fencing contractors were on his place - these two men have since left, but, he said he would still be prepared to erect the fence if he has good fencers available at some future date. Personally I believe a Quarantine Station at Fox Bay on the site originally intended is necessary for the best working of the West Falklands. It would also be in the interest of the Department of Agriculture to have a Station there where animals could be unloaded from any Steamer and held in Quarantine pending the arrival of an official of the Department to examine them.

I now realize that quarantining at Stanley and re shipping stock to the West Falklands with the existing erratic service to say nothing of extra cost is a definite obstacle in the way of those wishing to import stock. If it could be agreed that a Station should be established the Department of Agriculture to undertake the sup ervision of the erection. The provision of suitable fencing of the area should suffice for the first year and a dip and plain corrugated iron shed (not costly) could be erected as money became available. There is a convenient Tussac Island from which importers could arrange for fodder supp lies for stock if necessary.

Importers/

Importers would also have the advantage of inspecting stock from time to time during the period of Quarantine, which advantage they would not enjoy if the Stock was quarantined in East Falklands. The site is on hard diddle-dee Camp suitable for a Departmental grassing experiment. The importers would be required to pay for a temporary caretaker to look after stock in quarantine.

ENCROACHMENT OF SAND.

This is a serious menace on several farms notably Packe Brothers and Roy Cove and some useful contracts might be arranged for the planting of Sand Grass on these areas by unemployed.

Geese.- Upland Geese and Brent are a definite pest especially to those people trying to grow young grass and oats, etc., and a very serious campaign of destruction is necessary in order to reduce these destructive birds to a minimum. Coranchos and Turkey Buzzards are also responsible for a lot of damage and mortality among sheep and their destruction is a matter for more earnest consideration on the part of each and everyone.

Fertiliser.- It is evident that before much in the way of flock improvement can take place, pasture establishment must receive attention and in order that headway in this direction may be made, the provision of suitable fertiliser at a price which would encourage its liberal use is of paramount importance. Possibly this could be secured from the Whaling and Sealing industries or from the fish which must abound in the sea adjacent to our shores.

Gorse Hedges.- There is undoubtedly room for much extension of this very useful form of shelter hedge and it is pleasing to note that some farmers are doing excellent

work/

work in this direction.

Care of Sheep Skins.- This is an item worthy of greater attention than is given on many farms. Flenching or removing of fat is most important as well as the drying of skins indoors when possible.

Disposal of Carcases.- It is a pity to see carcases lying about on paddocks as top dressing when they may have been put through some form of crushing which would render them more suitable as plant food.

Cattle.- Many more cattle are required on the West Falklands to assist in general pasture improvement.

Books.- Camp books for the most part are well kept on the West.

Transport.- More frequent method of transport between East and West is desirable in order to facilitate the work of the Stock Department.

In conclusion I must say that the standard of Camp Managers on the West is very high and it is indeed fortunate both for the Government and the owners that such is the case. The unbounded hospitality extended to me in every instance was much app reciated.

There seems to be an underlying keeness on the part of every manager to do his best to improve the Camp for which he is responsible, and one and all were agreed that a meeting in Stanley in May next will bear useful fruit.

I am,

Sir,

Your obedient servant,

D. La Weir.

Stock Adviser.

(35)

Stanley.

24th November, 1936.

CONFIDENTIAL.

Sir,

I have the honour to submit for the information of the Government the following report on my recent tour of inspection of the West Falklands, exclusive of Saunders, Keppel, Jason, Carcass, New Island, Weddell and West Point and smaller islands. A certain amount of detail is given about each place inspected, but, it should be understood that the time available on each property was limited and that the matter contained in this report will be subject to modification or addition from time to time as the case may be. Further visits of longer duration on each property will be required in order to become familiar with the many problems confronting both the Government and the Farmers of the Colony before anything in the nature of a long range policy can be laid down with a view to their solution in a manner calculated to be in the best interests of everyone.

I left Stanley at midnight Sunday 25th October per s.s. "Fitzroy" on an extended tour of West Falkland Islands.

A call was made on the morning of the 26th October at Teal Inlet to disembark passengers and mails etc., and I made the acquaintance of the Hon. G. J. Felton who came on board the steamer to meet Mrs. Felton returning from Stanley. Thence to Douglas Station where passengers mails and cargo were disembarked.

Arrived/

The Honourable
The Colonial Secretary,
STANLEY.

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Arrived 7 p.m. at San Carlos and had tea at the invitation of Mr. and Mrs. J. F. Bonner, and returned to the ship: Steamed out of San Carlos 6 a.m. 27th October, and arrived Pebble 4 p.m. after much delay with fog during the day. Had tea at the invitation of Mr. and Mrs. Barton, and afterwards inspected Merino Rams from New-Zealand, (these appear to have acclimatised very well). Also visited plots laid down in accordance with last year's plans, Aberystwyth Seed and fertiliser and a wonderful strike has taken place particularly of perennial ryegrass and clovers. It should be stated however that the area in question has been treated from time to time in past years with scraps from sheep's carcases. The plots, three in number for this year's experiment were also shown to me by Mr. Barton and it will be interesting in due course to observe the results. Left Pebble towards dusk and steamed to Saunders Island to disembark Mr. and Mrs. Benney, who invited me to spend the evening ashore, which course was made possible through the s.s. "Fitzroy" having gone aground on a sand bank approaching Saunders jetty.

We steamed away from Saunders at 6 a.m. on 28th October anchoring at Hill Cove where I disembarked at 8 a.m. I met here for the first time, the Hon. W. H. Luxton, Mr. H. C. Harding and Mr. S. Miller.

The day was spent on horseback along with Mr. Harding making a general inspection of the Camp surrounding the Settlement.

Some very nice New Zealand ewes, which were imported

in/

in 1935 were seen here and appeared to be thriving very well in their new home, having of course the freedom of one of the best of the settlement paddocks, which by the way are rather a feature of this property, comparatively with other places. The imported ewes are giving promise of a reasonably good lambing. An Aberystwyth plot was sown here in November, 1935, and a good strike has taken place especially of perennial ryegrass, and some clover is showing. Over the fence from this plot is a stand of pure perennial ryegrass, Aberystwyth seed, which has been cut for hay for several years now and a splendid sole of grass exists. The men's quarters here are reasonably good and roomy and a bath and boiler, etc., is provided. Cheviot Rams have been used here a good deal on Romney cross ewes in the past, but, the present Manager, Mr. H. C. Harding who gives the impression of being an outstanding type of commonsense manager, is endeavouring to secure an improvement in the wool, by introducing a Corriedale strain, some of which as already mentioned are of New Zealand origin and some are rams from the Coast.

The ewes and in fact all the sheep appear to have wintered well on this property, although a small death rate occurred in one ewe flock from a disease of purely dietetic origin and known as Ante Partum Paralysis - in this instance brought about by a sudden change from one Camp to another at the critical period three weeks to a month before lambing. This matter was taken up with Mr. Harding who appeared to be quite convinced by the explanation and an endeavour will be made to avoid similar losses in future.

Lice/

32.

Lice and ticks are completely absent on the property and Kymac Paste Dip which has been used here for the past six years is apparently most satisfactory - one dipping per annum being sufficient to maintain the flock in its present clean condition, as against two dippings necessary when Kymac Fluid was used. The lambing gives promise of being above last year's percentage, and the lambs are of very good quality and thriving well.

82% of lambs were marked from picked Romney ewes by New Zealand Corriedale Rams and 102% were marked in Romney Cheviot ewes in dip paddock, by Corriedale Rams, these of course are only small lots, but it is of striking significance that whereas ewes in paddocks or blocks adjacent to the settlement average about 80% lambing the ewes in the main Camp average about 55% only. The explanation may be that the Camp near the settlement is naturally superior in addition to the fact that some of it bears English grasses and clovers, and a greater degree of consolidation has taken place in addition to a certain amount of rotational grazing which is often carried out sometimes unwittingly near a settlement. Closer watch is usually kept on ewes near a settlement and in addition the best and strongest ewes are usually selected to mate with good rams in the homestead blocks. Better shelter may also exist. The difference between 80% and 55% however is very wide and a closer study will require to be made of this aspect in order to satisfactorily explain it and if possible to effect a remedy, and with this end in view it is proposed in future to remain for longer periods on individual properties.

A/

31

A good deal of recent ditching work was observed and considerable new fencing.

The foresight displayed by the original owners in establishing gorse hedges, on a fairly comprehensive scale, is to-day conferring an immense benefit on those responsible for the running of the property, the saving in connection with the lambing of stud ewes alone being almost incalculable. This is a feature which might to advantage receive the attention of present day managers as there is ample room for the extension of already existing hedges.

Upland Geese and Brent are a menace on this property, where they are causing much damage to existing pastures and rendering it difficult to establish new pastures.

The plantations of Beech, Spruce etc., here are worthy of note since this is the most successful endeavour at growing trees I have seen so far in the Colony. It is also interesting to note that oats are easily grown the most successful variety being Storm King.

On the 29th October I crossed over the hill per horse and accompanied by Mr. Harding, from Hill Cove to Chartres.

The Hill Cove Hoggets which we inspected en route were lively and in good condition for springtime; piners were not in evidence, although some were perhaps a bit small. A flock of Hill Cove Ewes and lambs were also inspected on a block near the sea and opposite Dunnose Head, this being the first time ewes have been depastured here, a new sub-division fence having been erected for the purpose. The ewes in question were in fair condition and appeared to have a nice lot of lambs as yet unmarked. A flock of Gimmers showing a good deal of Cheviot strain were also passed through

on/

30

on the same property and looked very well, but, it is a pity these apparently hardy sheep make such a poor showing in the wool bale. A large area of white grass country on the Hill Cove property has been judiciously burnt and already a decided green tinge indicates the making of fresh and palatable growth. On leaving Hill Cove boundary some young Romney Ewes were passed through in Chartres Camp, and while the lambs looked fairly well the ewes looked a bit miserable and enquiry elicited the information that a recent fall of snow had lain for several days on that particular Camp, thus explaining the state of the ewes at the time of my visit. The older ewes at Chartres on Camp not affected by the snow looked much better. Pure Romneys have comprised the Chartres flocks for many years, but recently an endeavour to improve the wool has been deemed advisable and with this end in view some rather valuable New Zealand Corriedales have been imported. Personally I do not favour the purchase of a few high priced Rams, and more especially those of a separate breed from the ewes to which they are to be mated. The process of saturating such a large flock of ewes with the fresh blood is altogether to slow and costly. If on the other hand the imported pedigree rams were to be mated with pure bred ewes of their own breed, the best should then be obtained no matter what the price within reason.

The Chartres Romney wool might be more economically improved by the use of first cross Lincoln Merino half bred rams, returning to Romney Rams on ewes which are becoming too fine in the wool and losing size and consequently constitution. I took the matter up along these lines with

Mr./

Mr. K. Luxton, the son of the owner, but, it is doubtful whether the method will ever be tried or not.

The best half breds, out of pedigree merino ewes by pedigree Lincoln rams can be bought in New Zealand to-day for five guineas and this Colony would receive the benefit of the present exchange rate which would work out at under four guineas per ram, thus a large number could be used to bring about the desired effect quickly. This is where an experimental farm would would be of incalculable value to the Colony in that valuable breeding experiments could be undertaken by the Government, by way of demonstration to settlers who, probably with a certain degree of justification, are rather chary of any departure from what they have considered for so long to be the orthodox. On the other hand if Mr. Luxton is determined that his salvation lies in the direction of the introduction of Corriedale blood, his best plan would be to make wholesale importations of the best procurable Coast bred Corriedales, which are well grown well woolled sheep that can be purchased at prices representing good value for money expended. Generally I think the Chartres property is in capable hands. It is probably not the easiest property to handle, as, while there is a good deal of very fine camp in it, a very large proportion, probably two thirds is mountainous and owing to its peculiar situation in the centre as it were of several other properties, the maintenance of boundary fences etc., is probably a greater item to contend with than is the case with others. White grass camp receives the necessary attention by frequent and systematic burning. A genuine endeavour seems to have been made here to fence off the good country from the bad which practice is highly

commendable/

commendable in that the chance of the good country being ruined by the selective grazing of animals which invariable happens where good and bad camp are included in the same blocks, is considerably lessened. Mention might also be made of the good work which has been done on this property, by way of planting sand grass to counteract sand invasion.

Although fresh supplies of horses have to be bought from outside sources, a plentiful supply of splendid conditioned animals is here available for the working of the station. The men's quarters and living quarters are par excellence, even to the extent of a small billiard table. The two plots where Aberystwyth seeds and fertilisers are to be sewn were inspected one ploughed and one scratched. Owing to the light nature of the soil in the ploughed patch it was arranged that a covering crop of oats be sown as well, so that this should be a specially interesting plot to observe.

On 30th October left Chartres en route for Fox Bay to meet farmers at Doctors meeting.

Inspected Chartres Corriedale imported New Zealand Rams which cost ninety guineas each - very fine animals. Also inspected on the same station Romney Rams Chartres bred very ordinary and coarse. Passed through some very nice camp of Packe Bros: East Fox Bay, the management of which has recently been taken over by Mr. W. H. Clement. This camp is very free from mountains, but is scattered making management difficult, in that there are three distinct sets of settlements widely scattered, Dunnose Head, East Fox Bay and Port Howard. Sand invasion is a big problem here and unless dealt with by sand grass planting on a big

scale/

scale much good camp will be ruined in the course of time. The management has this matter in view. The sheep are an ill bred Romney type and there is scope for much improvement here. There is room for a great deal more subdivision, as the blocks are much too large to permit of efficient handling of this class of country. The intention is to use pure merino rams with a view to wool improvement - but here again, in my opinion first cross half breds would bring about a better and more economical result in the end, taking the class of ewes into consideration.

31st October at Fox Bay met West Falkland Farmers at Doctors meeting and discussed with them matters concerning unemployment etc., and arranged itinerary.

1st November proceeded from Fox Bay to Port Howard with Mr. R. C. Pole-Evans and others, through East Fox Bay, Chartres and Port Howard Camp. Immediately on entering Port Howard Camp the benefit of grazing large herds of cattle in addition to judicious burning of white grass was much in evidence. This is a well managed property and taking into consideration the fact that some of the camp at any rate is not the best in the Falklands, it is undoubtedly a credit to the zeal and industry of Mr. R. C. Pole-Evans the Manager.

2nd November with Mr. Evans proceeded to Green Hills, gathered and drafted sheep. Port Howard sheep are well nigh pure Corriedale and a high standard has been reached for such a large flock. The wool speaks for itself in quantity and quality and it is evident that in addition to the provision of well kept camp with which to maintain the sheep in good condition, a process of ruthless culling has

been/

been practised over a period of years. Many hundreds of fat wethers ranging in weight from 60 to 70 lbs were to been seen and handled.

The wool is clean and free from all vermin. Imported Rams and ewes from New Zealand are doing well here and in the case of Port Howard many useful ewes are available with which to mate the New Zealand Rams. Incidentally I inspected six Ram Hoggets bred at Port Howard from Port Howard Stud Ewes by New Zealand Rams, which have been sold to go to Montevideo. These Hoggets are splendid types, uniform and representative of the Corriedale breed, and it is indeed unfortunate that they should be leaving these shores - never-the-less it is refreshing indeed to see at least one manager sufficiently enterprising to breed animals which are sought after by overseas buyers; and it may be taken as proof that "where there is the will there is the way" even when it comes to sheep breeding in the Falkland Islands.

3rd November at Port Howard inspected the pastures in the vicinity of the settlement and found there, meadows equal to many of the best in New Zealand, such grasses showing to advantage as Perennial Kentish rye, timothy, Yorkshire Fog, Red Fescue, Dogtail, Cocksfoot, Lotus Major and large leafy white clovers. Gorse hedges are being well established and extended and more new ground is being brought under the plough. Geese are here a curse to a man who is endeavouring to improve and establish pastures as Mr. Evans is doing. I saw here a well rotted manure heap from the stables, sufficient to top dress about 30 acres. Stacks of well saved good quality meadow hay were seen here. The Port Howard

buildings/

buildings are extensive and well maintained and the men's quarters are excellent. A feature is the construction of several concrete meat houses and the slaughterhouse is quite a model for a station of this kind.

Provision is made for the crushing of bones before they are applied to the land as fertiliser.

A four horse team was seen harrowing a grass paddock and a three horse team was at work in a Cambridge Roller in another paddock. A large area of oats is looking very well indeed and should provide a good deal of fodder for horses and stud sheep. Two piner sheep were killed and examined and while some worms were in evidence this does not appear to have caused the sheep which were only two tooths to become piners. There was a complete absence of diarrhoea and inflammatory patches in the stomach and intestines as are usually met with when worms are the cause of the trouble. Further than this, the sheep gave the impression that had they not been killed they would have lived on indefinitely in a poor condition. The livers were dark in colour and noticeably friable or broken down. The dark colour however was seen in livers from wethers killed for mutton, but, I am assured that only a small proportion of the mutton wethers' livers are dark. The question then arises as to how soon some of these fat wethers with dark livers might become piners if not killed. The whole question of piner sheep is one of importance in this Colony and should be closely observed with a view to the collection of some reliable data in connection with it. With this end in view I have despatched to the Officer in Charge, Veterinary Research Station, Weybridge, Surrey, a liver and kidneys taken from a piner sheep killed by me at Port Stephens. It appears at first glance that piner sheep are

more/

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more in evidence on white grass camp than elsewhere, and it may be that even though the feed is plentiful it lacks nutriment and this coupled with exposure to cold winds and wet lying ground gradually undermines the constitution of a certain number of sheep. It is reasonable to expect where a large number of piners are in evidence, that a good many other sheep while not showing evidence of pining are in a condition bordering on it, hence poor lambing percentages and poor wool clip. This does not apply to any marked extent at Port Howard but certainly does at Port Stephens which will be mentioned later in this report.

4th November left Port Howard and proceeded with Mr. Pole-Evans to Many Branch Camp and saw wether hoggets drafted from wethers at the Gap Yards. A splendid lot of well grown well woolled healthy active hoggets which quickly made back to the hills as soon as they were free. Most of the wethers were fat heavy weights with good wool.

Saw here 20 acres of paddock scratched and sown with Port Howard grown mixture of grass seed, September, 1955, and a wonderful strike.

Outside this paddock on white grass camp evidence of Yorkshire Fog, Sweet Vernol, Chewings Fescue, clover, rye and cocksfoot growing where it had been sown some five years ago without fertiliser. It should be explained however that this is a good piece of Camp and was at the time of sowing fenced off from stock. Some splendid shearling ewes were seen on the way from Gap Yards to Port Purvis where the "Gentoo" was boarded for Pebble.

Some 1500 ewes first lamb Port Howard were also seen at Port Purvis and there appeared to be a good lambing.

5th/

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5th November at Pebble Island with Mr. Barton inspected ewe Camp where some 60 or 70 ewes had been lost from Ante Partum Paralysis which is the same trouble as mentioned earlier in this report in connection with Mill Cove. This loss should by suitable management be reduced to almost negligible numbers, if not entirely eliminated - further subdivision and a scheme of rotational grazing will be required in order to overcome these losses in so far as they concern Pebble, and possibly a reduction of the number of ewes on certain areas may have to be considered. My impression was that the ewes during my visit were having a fairly hard time owing to over-stocking. This is a place I would like to visit periodically throughout the year to further observe the conditions at present pertaining with a view to assisting the manager make some improvement. Mr. Barton conveyed to me the impression that he would welcome any assistance I might be able to offer him. Incidentally he made my arrival and departure from Pebble very convenient by placing the "Gentoo" entirely at my disposal. A fair number of lambs were also dead on this place from a trouble known as Pulpy Kidney - in every case the best lambs die, but, it may be possible if the percentage of death rate warrants it to inoculate lambs against it in future. Some very nice shearling ewes of Romney type were seen, and also 200 Romney ewes with lambs at foot by imported Merino New Zealand Rams were inspected, and some very nice lambs were seen, about an 80% marking expected.

The best Ram lambs will be used as Flock Rams later, and this process will be of interest to observe on this property. This Camp is easily the best I have yet seen and portions of it where the subsoil is of a shingle

nature/

nature gives the impression that lucerne might do well. The Hogget country is dry and hard, but hoggets were small and under nourished although healthy and well woolled.

Geese are a menace here also, when it comes to growing oats or establishing young grass. Sheep skins are hung outside to dry in careless fashion here, this is not economical, and advice was given. ~~about this~~.

The accommodation for men is poor and old and the manager is at present trying to arrange with the owners for a new building. The breeding of horses is being carried on here on a favoured Island and I think something in the nature of a World record was established here last year, in that twenty mares running with a Welsh Cob Stallion produced and reared nineteen foals: Stud breeders in other lands would be envious of a record of this kind.

6th November left Pebble accompanied by Mr. Barton and inspected Pebble Islet where brood mares are depastured - This islet is a valuable asset to Pebble, and already several of this season's foals were running with their Dams and apparently doing very well. As the islet is not at present over stocked it is interesting to note the revival of several native grasses such as Blue Grass and a small tussock similar to a variety common in New Zealand, and it may be reasonable to assume that some of the dry camp on the mainland bore a similar appearance in its virgin state.

Thence by the "Gentoo" made Shallow Bay on the Hill Cove property having steamed close into Keppel Island on the way. From Shallow Bay per horse to Hill Cove for the night, passing through West Lagoon Ewe Block, where a good

lambing/

lambing was indicated, both ewes and lambs looking very well, thence through East Lagoon Hogget Block, hoggets very lively and thriving. Thence by Sound Ridge and Homestead Blocks passing through ewe flocks.

7th November left Hill Cove and proceeded to Roy Cove where the night was spent. Very fine dry hard camp was passed over all the way and the sheep here which are very much of the half bred type showing much evidence of merino blood, were looking very well. Mr. S. Miller the manager showed me over the men's quarters which are reasonably good and in his office since taking over the management of Roy Cove he has provided himself with the best plan I have seen of a property showing location and boundaries of blocks number and description of sheep in each etc. The only other plan seen apart from the usual maps of the Colony was at Port Howard, but, this was not quite so good as the Roy Cove plan. Very few piner sheep if any are met with at Roy Cove and dark coloured livers are seldom if ever seen. Some rather nice half-bred ram hoggets were seen here bred from Roy Cove Romney Ewes (not exactly pure) and by New Zealand Merino Rams. Some very nice ewes bred on similar lines were also seen. The manager informed me that Roy Cove has a very suitable Island for the breeding of horses. West Point Island which I am told is a valuable piece of land has been resumed by the owners of Roy Cove and will in future be worked as part of that property, and is capable of carrying from 1500 to 1800 ewes. Gorse hedges and trees such as American Spruce apparently thrive at Roy Cove, which settlement is well sheltered owing to the contour of the ground. The

encroachment/

encroachment of sand on some of the pastures is a serious problem here, but, is being gradually overcome by the planting of sand grass - there is room however for almost endless work in this direction for some time to come. Recently the fencing of the property has been added to by ten miles separating good camp from a poor mountain area and a further fairly comprehensive fencing programme is in view. A fair amount of recent ditching work is in evidence and further contracts in this direction are planned for the near future. A telephone line to Hill Cove was almost completed at the time of my visit.

8th November with manager of Roy Cove came through to Chartres via Roy Cove Hill Cove and Chartres Camp. Roy Cove Gimmers looking very well indeed, very nice wool on these sheep, comparatively with other flocks in the Colony. Hill Cove wethers passed on the way were in fine strong condition. At Chartres a striking instance is seen of the improvement of white grass camp by hard grazing with cattle, in the cow paddock. Gorse hedges appear to do well here and more are needed. Portions of the bare hard camp on Chartres is showing signs of recovery as a result of light stocking - small tussock and blue grass being much in evidence.

9th November left Chartres and proceeded to West Fox Bay remaining there two nights. Came through Packe Bros: Fox Bay East property referred to in the early part of this report. A Romney flock is carried at Fox Bay West but the manager, Mr. M. Robson is desirous of introducing something to improve wool quality and quantity. My suggestion was to use New Zealand half bred rams as

mentioned/

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mentionnd previously in this report and he seemed much impressed, but of course he will be finally guided by the owners in this matter. At present he is using Cull Romney Rams from Chartres which practice is not giving him much of an opportunity to make any improvement - I inspected these rams which are a mediocre lot, coarse and open in the wool and showing much hairy britch. The majority of this Camp appears to be good and the following gives some indication of this - in March last 330 five and six year old wethers tried out 18½ lbs of tallow per head. Yorkshire Fog and clovers have taken a strong hold around the Homestead here and appear to be choking out white grass. Gorse hedges planted in earlier days have done well here. Oats are easily grown. Evidence of grass grub was seen in some of the pastures here. Shell lime gathered from the beach at West Fox Bay and used as a top dressing immediately rejuvinates pasture.

10th November with Fox Bay West manager inspected hoggets and ewes with lambs, and visited various parts of the Camp.

The Camp towards Port Edgar which is at present black ground and diddle dee looks as if it could be established in good pasture at a minimum of expenditure.

The Rincon near West Point is excellent Camp. The four tooth ewes here are running with the ewes of all ages and it is a pity they are not kept separate for their first lamb at any rate. Turkey Buzzards and Coranchos seemed to be taking toll of hoggets which were in weak condition in one block. A systematic campaign of destruction is necessary to control these birds.

New/

New blood is badly wanted here, either pure improved New Zealand Romney or half bred. More subdivisions and the use of cattle would also benefit this property.

The paddock where shorn sheep are put out here affords still another example of improved white grass camp as a result of consolidation and severe grazing. Horses are on this at other than shearing time. Sand encroachment has been fairly well controlled here by the planting of sand grass. The men's quarters are small but reasonably good.

11th November left West Fox Bay for Spring Point. Travelled via Race Course Ridge West Fox Bay Camp very good camp which should grow grass well. Thence through the gate into Spring Point, the whole of which appears to be very good camp although much of it bears signs of having been overstocked and burned out in years gone by in that much black ground and diddle dee exists. Some very nice Romney Gimmers were seen in the Spring Point Plains and Fish Creek Camp. Romney ewes of good type were running with lambs apparently a good percentage on Queen Point Camp. Incidentally sand has encroached considerably on this block and no steps appear to have been taken to check it by sand grass planting - further investigation will however be necessary to gauge the extent of the damage and to decide whether the encroachment has now ceased or not. In Eddy Creek Block some very fine ewes and lambs were seen. It should be here mentioned that it is amazing the way in which people in this Colony get away with lamb marking on old pens without losses from infection. Pond Valley Camp appears to be reserved for horses and mutton sheep; Fachine bushes are seen here in profusion. The manager

Mr./

(17)

Mr. S. Shannon informs me he is never short of fat wethers for mutton.

Ticks were fairly prevalent on hoggets here and the manager's attention was drawn to this. 12,000 sheep including 4,500 ewes are carried on 60,000 acres here, or in other words a sheep to five acres which is very good considering the amount of black diddle dee camp. Average lambing about 75% so altogether a most desirable little property. Some ten acres was shut off from animals by Mr. Shannon three years ago between the settlement and the men's quarters and a very fine object lesson is provided of the way some black diddle dee camp will recover and grow native grasses and tussocks - this I am sure will interest Mr. Davies when he arrives. I have arranged with Mr. Shannon to treat another block of say 20 acres in a similar manner. Finer sheep are seldom seen at Spring Point and no dark livers.

Spring Point wethers clip over 9 lb per fleece and the flock averages 7½ lbs although an average of 8 lbs was reached in 1955.

This is the only manager I have met who pays his men extra a shearing time, at the rate of 12s/- per hundred. He holds that he can make them do the job better and more quickly and thereby save his homestead paddocks from being eaten out by having sheep around indefinitely - certainly a sound argument. Lamb losses between marking and dipping are less than 5%. The manager agrees that heavy overstocking took place in the early days, in fact in his time he has seen the lambs so weak they had to be

assisted/

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assisted through the dip, but, nowadays they scamper through without any trouble. As a definite indication of early overstocking he explained that the Pond Camp alone which is about one quarter of the area of the whole place carried 13,000 sheep, whereas to-day the total is only 12,000.

12th November left Spring Point for Port Stephens via Lake Ammon, Poncho Valley and Double Creek. All the area is wet white grass camp fit for wethers only. The Six Hill Block between Double Creek and Port Stephens is also wet white camp.

The sheep seen en route were mostly of marked Cheviot strain and were in fair condition.

15th November left with the manager and men 5 a.m. to gather and lamb mark Cape Orford Camp. This is good hard Camp carrying selected ewes and a 90% marking was recorded. The Rodney Bluff Camp was also gathered and 111% of lambs were marked off 160 selected ewes here. These were magnificent lambs.

It is a great pity that Mr. Robertson who is an excellent manager and much respected by his men, has not a larger area of this class of camp to enable him to show a better lamb marking average. He appears to me to be making the best of a bad job.

He has systematically burned white camp until very little rank useless growth is anywhere to be seen. He was losing 18% of ewe hoggets on white camp at Host Inlet, but has now changed them to Black Camp, Ten Shilling Bay and Calm Head and the loss was reduced to 7% last year and appears to be even less this year. This is one of the many ways in which he is making an honest endeavour to improve matters generally.

White/

(15)

While there is still room for more fencing and ditching at Port Stephens, there has been in the past much of this useful work carried out and evidence of considerable expenditure in this direction is seen on all parts of this extensive Camp. Robertson assures me that more fencing and ditching will be put in hand wherever it appears that the expenditure thus incurred will be economically sound.

Wether Hoggets have been shifted from Centre Camp where formerly a loss of 20% was sustained to South Harbour Rincon and it is thought the losses here are no more than 9%.

Ewes are now running on Centre Camp and it will be interesting to see what the lambing percentage is here.

Practically the whole of the losses are from pinters and it certainly looks as if there is a deficiency in the food value on the white camp here, in spite of reasonably good management; this as already indicated is a matter for close investigation.

850 cattle are grazing on the Camp, but this number might easily be increased to 2,000 to advantage. As an indication of the above suspected deficiency, it is interesting to note that ~~the~~ TEMPORARY sterility exists in breeding cows many of which have calves only every second year.

More sheep could be carried in summer but they could not be wintered - the carrying capacity of a property is of course regulated by its winter carrying capacity.

It is evident that the best Camp at Port Stephens was heavily overstocked and eaten out in the days before subdivision fences were erected, the sheep just naturally crowding onto the best camp. No doubt some form of

improvement/

14.

improvement might now be effected on certain areas but I do not propose in the meantime making any hasty suggestions in this direction - further inspection and observations are called for in regard to Port Stephens both in connection with piner sheep and possible pasture improvement and I propose revisiting the locality at an early date with these ends in view. Mr. Davies will no doubt be also much interested in this area.

Mr. Robertson assures me that he is being given a free hand by the owner in all matters with the exception of horse breeding. Certain country at Port Stephens is admirably suited for this purpose and not for sheep raising and it is therefore a great pity that this profitable side line has been abandoned. There is still hope however that the owner may alter his views on this subject in the near future. 170 riding horses of a standard comparable with the best in any of our Dominions were inspected there. I feel that given reasonable opportunity by the owner Robertson will, if at all possible, effect much improvement at Port Stephens as the years go on, and especially if the wool prices keep up. His experience in Australia and New Zealand is already I am sure standing him in good stead. Amongst other things he is doing good work in the extension of gorse hedges adjacent to the settlement.

14th November gathering and lamb marking with managers at Cow Valley, Port Stephens. Ewes poor and 65% marking.

The Daroux New Zealand made bloodless emasculator is being used for the first time and it will be interesting to note the results later.

Robertson is endeavouring to get back into straight

Romney/

Romney instead of Cheviot and I think this is a wise move, from the wool point of view especially.

Here again geese are numerous and a menace to the establishment of pasture.

15th November with managers gathering and lamb marking Centre Camp, ewes here not in good condition but some good lambs.

Then came through Two Pond Valley and Host Inlet Mountains and Deep Valley to Albemarle and camped in hut with managers for night.

Two Pond Valley has in the opinion of the managers been so much improved of late years by heavy grazing with cattle and horses that he thinks he will soon be able to carry ewes there.

Saw hoggets and shearlings in Sweeneys Rincon, mixed sexes, some of them not thriving very well, apparently not recovered from the winter.

16th November with managers inspected Albemarle lease which is good Camp onwhich 2,500 ewes are depastured and are looking well with indications of a fair lambing percentage. Ewes at Cape Meredith are also looking well and have good lambs.

The tussock plantations at Cape Meredith are magnificent and horses running in them are quite fat.

Killed a piner two tooth and took liver and kidneys to send to England as previously indicated.

17th November waiting at Homestead for s.s. "Fitzroy". Inspected dip, yards, shed and men's quarters, all very good. Compared to North Camps there is little growth of grass around Port Stephens settlement probably due to exposed

situation./

(12)

situation. Even oats is very backward. The milk cows are fed on swedes in winter thus ensuring plenty of butter and milk for the settlement the year round and pigs are kept for bacon.

A surplus of potatoes are also grown.

18th November joined the s.s. "Fitzroy" 4 a.m. bringing with me a horse bred at Port Stephens.

Some 577 coast bred Corriedale Rams were onboard from Darwin having been purchased by Mr. G. M. Goddard, Camp Manager, who accompanied the sheep. The sheep stood the journey well no losses being incurred. They are on the whole splendid specimens of magnificently woolled Corriedales and should leave a beneficial mark on the Darwin flocks.

This New Zealand evolved breed of sheep apparently does verywell on the coast, and those in particular bred at Fenton Station would do credit to the stud of the best breeders anywhere. While I am inclined to be a little sceptical about the use of Corriedale Rams on other than Pure Corriedale Ewes, I feel certain that Mr. Goddard must benefit by the transaction in that he has numbers and quality at a price much below the average paid for ordinary flock rams mmom in New Zealand.

Further I doubt very much indeed, reluctant as I should be to say so, that, such a large number of really quality sheep of this breed could be procured in New Zealand, even at a very much higher figure than was paid for the above rams, even if they were wanted. The rams were landed at Bleaker Island for quarantine, the steamer being suitanly disinfected, e

19th Arrived Stanley midday. Two coast horses were also on board for my use.

(46)

Stanley.

4th January, 1937.

CONFIDENTIAL.

Sir,

I have the honour to submit for the information of the Government the following report on my recent tour of the North Camp, East Falkland Islands. I left Stanley 7 a.m. 10th December, 1936, and made the Sisters Mountain Pass per car thence per horse back and accompanied by the two daughters of His Excellency The Governor proceeded to Teal Inlet Station, via Estancia. As I had not previously been over this somewhat difficult route the very able guidance of His Excellency's daughters was much appreciated.

A good deal of wet white grass camp was traversed all the way to "The Marlow", a shepherds homestead on the Teal Inlet Station, but from there on to the main settlement the country improves until good hard camp is eventually reached. The shearing of young wethers was in full progress at Teal Inlet.

On the morning of the 11th. Friday, I proceeded at 6.30 a.m. to the shearing shed to watch operations. This shed is very much out of date and quite apart from the lack of convenience is scarcely becoming of a sheep station of this size. The wethers (Romneys) were rather small for this breed of sheep and the fleeces were somewhat light and open, and obviously much improvement could be effected here if more attention were given to breeding and feeding generally; the sheep appeared healthy, although a certain small percentage of piners were noticeable, these the owner slaughters. The incidence of intestinal worms here does not appear to be of much consequence. A reasonably good job is made of the shearing under the personal supervision of the owner MR. J. Felton. Mr Felton estimates that two thirds of his camp is wet, and this to some extent may be the reason for so many definitely undersized four tooth Romney wethers. This emphasises the

The Honourable
The Colonial Secretary,
STANLEY.

necessity /

necessity of making the best possible use of the hard camp, by closer subdivision, rotational grazing which would ensure the spelling of certain areas, and the growing of supplementary fodder for young sheep. This owner admits having grown oats for 20 years without fertilisers in one paddock near the settlement, and indicated that the recent crops are just as good as the earlier ones, this in itself gives I think some indication of what might be done on this land if it were well farmed.

On the morning of Saturday 12th, a visit was made to a plot sown in 1935 as per the Aberystwyth plan, and, I think the result is rather wonderful, taking into consideration that the plot is established in a portion of a field which has grown oats without fertiliser for many years. Rye grass and cocksfoot predominated, but some clover was also showing. The owner who is inclined rather to ridicule anything in the nature of progressive or scientific farming, admits that he has only once seen the plot in fourteen months. He points out that English grasses sown on cultivated areas, deteriorate and give way to native grasses in five or six years, quite overlooking the fact that this may be due, and no doubt is, to improper management of the established pasture. I may here add that utilisation of pasture is quite as important as establishment, and even in countries more favourably situated for the growing of grasses than the Falkland Islands, suitable grazing and top dressing methods must be adhered to in order to prolong the usefulness of English Pastures. Teal Inlet appears more favourably situated than many places for the establishment of pastures in that a considerable area of suitable camp, easy of access etc immediately surrounds the main settlement.

Gorse hedges planted in the early days have done well here and are well kept, but, little or nothing is being done

to /

to extend this very valuable form of shelters. Mrs Felton has been most successful in establishing here, one of the best if not the best vegetable and flower gardens in the Colony and trees which she has had planted adjacent to the settlement have made comparatively good progress although she was told by most people at the outset that she was wasting time. I mention this merely to indicate that where there is a will there is a way, and that the example set by Mrs Felton might well have been emulated, even in a lesser degree, by the men folk on the Station, in the growing of grass and fodder for sheep in the adjoining fields.

Cocksfoot appears to grow excellently here as indicated in unused gardens and other corners where stock are not allowed access. This also applies to other places in the Falklands and I am sure much valuable seed could be saved from these corners if people would only take the trouble to harvest it. Much evidence is seen here of harm done by geese in the robbing and fouling of pastures. The one redeeming feature of the management here is that, Mr Felton is determined to adhere to a Romney Flock, and in this I agree with him, on the principle that, whatever the breed, let it be a pure one, rather than attempt to use a so called dash of this or that "with a view to closing up the wool etc". The Teal Inlet Romney Flock however is capable of much improvement, which may be effected by drastic culling and the importation of well bred Romney Rams, and the attaching of more importance to the suitable feeding of young sheep.

Carcases of slaughtered sheep are wasted from a manurial point of view on this Station, simply being thrown on the beach where the flesh is consumed by gulls and other birds.

In /

In the afternoon I proceeded to Douglas Station accompanied by a Teal Inlet shepherd whose home is near Douglas. Good hard camp was traversed on the whole route between the two stations. The night was spent at Douglas, but, as the weather was stormy and the owner Mr. R. Greenshields was away I did not have a look around here, but propose returning if possible early in the New Year to inspect Douglas Station.

Sunday 13th December, left Douglas accompanied by Mr.N.K.Cameron and made Port San Carlos station arriving there 1.30 p.m. Came through some of the wether camp en route and wethers looked well. Also came through an area which is being spelled for the first time and it appears to be freshening nicely, and should provide good feed for some young sheep after shearing. In the afternoon with Mr Cameron culling Gimmers in the shearing shed and yards. These were nice Romney Gimmers, some of which were showing rather much britch, but otherwise were well grown and healthy sheep fairly well woolled which should mate well with suitable Romney Rams. Splendid wool sheds, yards and dip exist here, facilitating considerably the working of the flock, Walked round settlement paddocks and saw a very fine stand of English grass, rye, cocksfoot clover mixture which has been down five or six years and is cut for hay. Green oats are grown here for the grazing of ram hoggets and, it is indeed refreshing to see at last on one station an attempt to treat some of the sheep as they should be treated with a view to general improvement of the flock, and, I am sure Mr Cameron's efforts in this direction have indicated to him that it is worth while attempting on an even larger scale.

Inspected the Aberystwyth half acre plot which was

sown /

sown as per plan, in November twelve months past, and, the result is very fine indeed, although inclined to run to seed. The owner is arranging to feed it off at once and this should have a beneficial effect. Good grass is growing everywhere about the settlement paddocks and an extra good vegetable garden also exists. Run cattle are dehorned on this station and this is decidedly beneficial from many viewpoints.

Monday 14th Dec. with Mr Cameron spent most of the day in and around the shearing shed. This owner personally supervises the shearing and good work is insisted on rather than high tallies. Up to the present this is the only place where I have seen tar used on shear cuts (which practice is universal in New Zealand) the reason for its general non - use given here is that there is no risk of any infection - this may of course be all very well, but, the application of tar certainly tends to cleanse and quickly heal the wound, and further than this, the psychological effect on the shearer of having to call for the tar plus delay all tends to more careful shearing.

Tuesday 15th Dec. With Mr Cameron left the settlement at 4 a.m. and made a tour of the station as follows :- Came through the Picos block where shorn wether hoggets were seen on their own ground where they will be allowed to settle down until shepherds are available to look after them on a fresh block which is being saved for them, and thence we came through to Smellies Village and saw shorn ewe hoggets, and acress Foul Bay Sands into Cape Dolphin where ewes and lambs were looking very well on a splendid piece of camp:- thence to the Seal Rookery block where stud ewes were seen with Corriedale lambs at foot, then back through the Cape into Try Pot Block where ewes and lambs again looked well.

Then /

Then came through Little Creek Block where more ewes and lambs were seen, and stayed for the night at Elephant Beach House.

Wednesday 16th Dec. With Mr Cameron left Elephant Beach and returned to settlement, via Diddle-Dee and Sierra Montevideo, where wethers were running. This property is in the hands of an excellent manager in the person of Mr.N.K. Cameron and given reasonably good wool prices from now on it is anticipated that a carefully planned, sensible and progressive programme of improvements will be effected year by year until Port San Carlos might well become one of the model stations of the Colony.

During his few years of manager-ship of Port San Carlos Mr. Cameron has renewed where necessary existing fences and has constructed during difficult times a number of miles of new fencing, and contemplates adding a good many more miles in the near future, all of which tend to enable him to handle his sheep more efficiently and profitably and at the same time large areas of deteriorated pastures will enjoy a spell for the first time since the property has been stocked with sheep - the benefit from this alone will be of great value.

A programme of judicious burning of rank fibrous white grass is also being put into effect, and much ditching and planting of sand grass is contemplated in the near future. Mobs of cattle are judiciously scattered about this station and appear to be settled on their respective camps and undoubtedly are doing untold good. Greater numbers are perhaps desirable and this is the continual aim of the owner, and, while it is recognised that very large troops of cattle concentrated on a certain area may bring about a beneficial result more quickly than is the case with scattered troops, I prefer the latter method which is the one adopted at

Port /

Port San Carlos, as it is more practical for use in the Falklands than the former method, which involves the necessity of expensive fencing plus the extra cost and difficulty of herding unwieldy troops of cattle. This owner also contemplates the importation of Romney Rams from New Zealand in the near future. The accommodation for men appears to be rather congested here, although no complaints in this direction were heard.

Left Port San Carlos 2 p.m. and made San Carlos Station for night - came through shorn hoggets en route and they appeared to be very small for Romneys.

Thursday 17th Dec. At Bonners San Carlos Station where the shearing of some splendid 3 and 4 years old Romney wethers was in progress. This is the most even line of Romney wethers I have yet seen in the Colony and although some of the fleeces were a bit open on the backs the absence of ~~[illegible]~~ britch was noticeable and on the whole a rather nice clip was resulting. A trace of Corriedale which was infused some years ago was still in evidence in some of these wethers. The Romneys on this Station are on the whole fairly good and excellent results should ensue from the use of well bred New Zealand Romney Rams. Here again the manager is inclined to consider using fine woolled, Rams either half-breds, merinos or Corriedales with a view to wool improvement, but it would seem a pity to make an experiment of this kind, when much improvement might be made to an allready fairly pure flock by using pure bred Romney Rams; that is unless he intends to go right into one of the other breeds above mentioned, as pure breds, and discard Romneys which would be quite unwise in view of the fact that this breed is doing so well at San Carlos.

The shearing was very rough on this station in fact some of the worst I have ever seen, in so far as shear cuts

were /

were concerned, and, the manager appeared not to notice it. One boy only was picking up fleeces from the shearing board for eight shearers, which meant he very often had to carry two fleeces at a time, which caused a good deal of tearing and entanglement of each fleece, and he was quite unable to keep the shearing board properly swept of loose wool. Both matters were taken up suitably with the manager Mr.J.F.Bonner who appeared quite appreciative. As the manager was unable to accompany me on account of shearing I did not inspect the Camp to any extent, but will return to San Carlos for this purpose later. A 5 years old English pasture was inspected here and is still very good Ryegrass, Cocksfoot, suckling and white clovers were all in evidence, with however Danthonia predominating. An Aberystwyth plot sown in January 1936 was inspected and it was almost fit to cut for hay at that date, but it was difficult to see any difference from the various fertilisers.

A good crop of oats was also seen here, of the Storm King variety, but, unfortunately the seed which comes from the Coast to the Falklands carries a lot of Charlock seed, which gives a lot of trouble when it grows in the crops - it should be insisted that seed oats be freed from this weed before it is allowed to land in this Colony, as the process is not at all a difficult one. There is a very good working chart of San Carlos Station in the Manager's office. This is a nice settlement with good accommodation for men etc.

There is also a good sheep dip and well paved sheep yards.

Friday 18th Dec. Left San Carlos and made Darwin Station, riding through good hard camp all the way. Came through two stud flocks, Darwin ewes which were looking fairly well and some very nice lambs were at foot.

A splendid crop of seed was showing on short white

grass /

grass which had been well and judiciously burned last year.

Twenty-nine shearers were working on hoggets many of which were small and consequently clipping light fleeces. A fair number of piners were seen amongst these hoggets and the manager Mr. G.Goddard makes a point of slaughtering the worst of these, on the grounds that they will not grow into good sheep.

He is inclined to put the cause down to intestinal worms, but, in my opinion worms here are purely secondary to something else for in point of fact, even the heaviest infestation of worms detected on Post-Mortem examination was not sufficient to kill the animals.

Rather should I suspect 1. insufficient nourishment during the first year of life 2. exposure to inclement weather and continued lying on wet camp. 3. and possibly breeding on incorrect lines.

Some experiments were tried, dosing piners hoggets with Coopers Worm Drench and Copper Sulphate and water, three being given 5 ccs 10 ccs and 15 ccs respectively of Coopers and three $1\frac{1}{2}$ ounces of a Copper Sulphate solution of 2 ounces to 1 gallon of water and three others were used as controls. Two piner hoggets were slaughtered and P.M. examinations made :-

No 1. fair amount of true whip-worms Trichocephalus Affines were found in the Caecum, but none elsewhere.

No. 2. Very few worms in Caecum and none elsewhere.

Saturday 19th Dec. slaughtered and made P.M. examinations of seven piner lambs six of which had been dosed as above mentioned on the day previously, with the exception of one control.

No 1. no drench - few worms in caecum only.

No 2. 15 ccs Coopers drench, whip worms still active in Caecum.

No 3./

No 3. 1½ ounces Copper Sulphate Solution whip worms still alive in Caecum, and lung worm (Strongylus Filaria) fairly prevalent in bronchial tubes and still alive.
No 4. 5 c.c.s Coopers drench, whip worms alive in Caecum.
No 5. Copper Sulphate, whip worms still very much alive in Caecum and numerous small, reddish, thread like worms on the mucosa of the forth stomach (these worms not yet identified), but apparently did not seriously effect the sheep. This was the only one in which worms of any description were found in the forth or true stomach in quantity. Some lung worms were also found, but not in large quantities.
No 6. Copper Sulphate drench, whip worms alive in Caecum.
No 7. 10 C.C.S Coopers drench, many whip worms in Caecum and still very much alive. A few in forth stomach as in number 5 not identified, but specimens were secured for this purpose (possibly Ostertagia Circumcincta). A few Strongylus filicollis were also seen in this sheep.

It is contended that the small numbers of worms present in any of the above sheep were quite insufficient to cause the sheep to be piners.

Sunday 19th Dec. inspected bulls at Darwin for use on Stanley common, thence proceeded per motor car to Swan Inlet to pick up my horses to go to Fitzroy which place was reached at 9 p.m. owing to delay caused by a break down of the motor car.

Monday 20th Dec. at Fitzroy went to shearing shed for first run in the morning and saw wethers being shorn. These sheep looked a little uneven, accounted for by all ages being mixed, and in point of fact they were rather a good lot. If they were drafted off into lots of similar ages each lot would appear much more even in the wool. A good job was being made of the shearing under the personal supervision of the Fitzroy manager Mr.Langdon. Left Fitzroy

after /

after breakfast for Stanley which place was reached about 1 p.m.

In conclusion I would like to draw attention to one matter of outstanding importance to all sheep farmers in the Colony, that is the question of adequate shepherding of woolly sheep or for that matter all sheep out in the camp while shepherds are at the settlement shearing. Ample evidence of a considerable loss of valuable sheep through neglect of this important matter was seen by me on several stations during this comparatively short tour. A sheep heavy in the wool very easily becomes cast, or in other words gets into a position on its back which renders it unable to regain its feet and it either dies a lingering death or is killed by such birds as Turkey Buzzards or Caranchos. In addition to the loss of ewes in this way the lambs which are left motherless are apt to become piners.

Hoggets are rather prone to casting and the losses amongst these young and valuable sheep through lack of attention must be rather serious. These losses or many of them at anyrate should not occur, and it is up to every manager who is on his job to take the necessary steps to prevent them. It is only a matter of employing a few extra hands temporarily, during the shearing time.

The weather on the whole was very suitable for shearin, and a noticeable feature due no doubt to weather conditions also, was the wide spread seeding of native grasses in all parts of the camp, particularly was this the case with so called white grass.

I am,

Sir,

Your obedient servant.

D S a Mer

Agricultural Adviser.

(53)

Stanley.

11 th March, 1937.

CONFIDENTIAL.

Sir,

I have the honour to submit the following report on my recent visit to portions of East and West Falklands.

I left Stanley on the morning of 13th February, and made Teal Inlet for the night, via the Estancia. Sheep seen on the way were all in very good condition and there was much evidence of surplus native pastures so that animals should carry well through the winter, that is providing average normal weather conditions exist.

The Teal Inlet lamb marking worked out at about 70% with which the owner appeared to be well satisfied. An alarming feature however, is the death rate between marking and shearing, amounting in this case to 10%.

Incidentally the death rate at this period seems to be in close proximity to 10% on other properties, as well as Teal Inlet. All owners are inclined to say the loss is quite unaccountable and can offer no real reason for it.

No doubt a certain amount of mismothering occurs and ditches which are partly concealed by grass account for many deaths.

It is difficult however, to trace losses at Roy Cove to this cause as dangerous ditches are not much in evidence there. It is interesting to note however, that quite recently a ditch which was opened up by contractors at Chartres revealed countless skeletons of lambs, many of which were of recent date.

The question of deaths from actual marking does not appear to enter into it, as very few, if any, carcases are

ever /

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The Colonial Secretary,

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ever seen in the camp.

This rather serious aspect of the sheep farming industry here will be kept steadily in view with a view to solution. Doubtless however this loss will decrease as subdivision and closer shepherding takes place; Unfortunately for the Colony there is considerable apathy on the part of owners and managers in regard to the matters of closer subdivision and the employment of extra shepherds. It may be agreed by some of them that extra men are not available, but I am of the opinion that this is largely a question of wages, particularly the restoration of married shepherds wages to the original eight pounds per month. I am sure several good men would come forward if this were brought about, but up to the present I have met only one manager (The Honourable N.K. Cameron) of Port San Carlos who considers that increased wages are warranted.

On the 14th an early morning start was made from Teal Inlet and after breakfast at Douglas Station, the journey was continued to Port San Carlos which station was reached at mid-day. During the afternoon sheep were examined here and found to be free from lice, and a permit was given accordingly to drive sheep to Rincon Grande.

On the morning of the 15th a crossing was made to Many-Branch and thence by horse to Port Howard. The Port Howard property under the capable management of Mr.R.C.Pole-Evans is looking remarkably well and the sheep are in very fine condition.

On Monday 15th Feb., I left Port Howard in company with Mr Pole-Evans and party on horse back for Hill Cove, at which place I remained until the 20th. The annual sports and races of the West Falklands were in progress here, and this gave me an opportunity of meeting most of the managers and some of the owners, and it is hoped that the many discussions which ensued regarding their various problems may bear useful fruit.

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On the 20th Feb., proceeded to Roy Cove, passing through Hill Cove and Roy Cove Camps, both of which appeared to have plenty of feed, and the sheep were looking very well.

21st Feb., Sunday at Roy Cove for the day.

22nd Feb., with Mr. S. Miller the Manager of Roy Cove proceeded to Dunbar via Port North and thence by the Schooner "Golden Fleece" made Carcass Island, the property of Mr Jason Hansen.

This is normally a fine Island but at the moment owing to the continued dry weather, the pastures are rather withered and the sheep are having rather a bad time. The owner was inclined to attribute the falling away in condition of his lambs to internal parasites, but I am of the opinion that such is not the case, food shortage being the real cause. In order to effect an immediate improvement Mr Hansen has arranged to graze the lambs every second day on extensive sand grass and tussac plantations which immediately adjoin the paddock which the lambs are now in. It will be interesting to observe the results of this experiment. The lambs are not sufficient in number to unduly harm the sand grass and tussac. If suitable rail-fall comes in time it is reasonable to expect a certain amount of autumn growth on sheltered parts of Carcass and this together with the disposal of surplus sheep should greatly facilitate the wintering of the balance of the flock.

Mrs Hansen is anxious to have the tuberculin test applied to ten cows and this will be attended to first opportunity. Mr Hansen has kindly offered to forward towards the end of the winter a collection of plants of tussac and blue grass of different varieties which will be grown by this department on a suitable plot near Stanley, for experimental purposes.

Carcass Island has had lambings up to 127% in past years, but is now down to 72% which the owner attributes to his endeavour to breed from two tooth ewes. My opinion however

is /

is that he is overstocking and this aspect was brought under his notice by me.

23rd Feb., at Carcass completing inspection of this property.

24th Feb., left Carcass per 'Golden Fleece' and landed at West Point.

This also is a good Island, but this year is being adversely affected by dry weather in the same way as Carcass.

This will be remedied however in the near future as about 1,000 fat sheep will be sent away for freezing purposes.

It is the intention of Mr Miller of Roy Cove who will in future work West Point in connection with Roy Cove, to stock West Point with Roy Cove bred ewes in preference to the coarse woolled sheep formerly bred by the late Mr Felton.

One of the Aberystwyth plots sown last November was inspected here, but the result is disappointing owing to dry weather and late spring sowing.

25th Feb., at West Point examined and condemned a milking cow suffering from a bad and incurable form of mammitis.

An opportunity was also taken of observing at first hand the method of milk production which is universal in the Camp and for that matter in Stanley too, with perhaps slight variations in individual cases. Briefly the calves are shut up at night and in the morning the cows are brought in for milking. In order to encourage the cow to let her milk down freely, her calf is allowed to suck each teat until the milk is running freely, then the calf is tied up until the milker milks three of the teats, leaving one untouched for the calf which is then turned out with its mother during the day. The process of the calf sucking the teats to encourage the milk to flow also apparently serves as a method of cleaning the cows teats as water is not used, by the milker for this purpose.

The milk is strained through muslin and scalded and allowed

to /

to set in pans until the cream rises, say for 48 hours.

This method is terribly out of date and cumbersome, now that separators which are to be had in all sizes are very cheap and have reached a high standard of perfection. If separators exist in the Falklands they are few and far between, one manager questioned by me on the subject, informed me that his principals would not even consider letting him have a separator at the home settlement, much less the shepherds at their houses.

I am of the opinion that it would be to the advantage of everyone if all people milking more than one cow, made use of separators, instead of the old fashioned skimming process. Most dairies I have seen are not suitable for the setting of milk, in that the milk is more often than not exposed to flavors which it readily absorbs during the process of setting. This would not happen if a separator were used to extract the cream immediately after each milking, and while the milk is still warm. Calves should be taken right away from dairy cows as soon as they are born,and if it is desired that they should be reared this can be done quite well on separator milk to which a little whole milk or in lieu thereof some meat meal may be added. The cows would be milked twice daily as in other countries and would produce infinitely better results.

Cow-covers made of good quality canvas duck could be used to advantage on cows during winter months, and there is no reason why those people who have access to tussac plantations should not be able to feed their cows in such a way that they would have ample milk, cream, and butter for all requirements right through the winter, as well as at other times of the year. If separators were universally used in the Falklands a decided improvement in the quality of the butter produced

would be brought about - at present taking the average it is very poor, and often to my mind unfit for human consumption.

Incidentally some 50 years ago similar methods to those at present pertaining in the Falklands existed in New Zealand, but there is no likelihood of those methods being reverted to in that Dominion.

Further than this I am definitely of the opinion that if the people of the Falklands were cut off from an outside supply of dairy produce, they would in time so plan it, that they would become entirely self supporting in this respect - neither the climate nor the feed conditions for cows being such as to prevent this ultimate outcome. It is not however meant by this that they would ever become exporters of dairy produce.

26th Feb., 10 a.m. I left West Point by dinghy and made Roy Cove mainland, thence by horse to Dunbar, Roy Cove and Chartres which station was reached at 9.15 p.m.

It might be of interest at this stage to mention that one is much impressed during one's travels both on the mainland and Islands, by the wonderful asset as stock fodder which is so surely provided by the establishment of tussac and sand grass plantations. While some settlers are endeavouring to plant every inch of available suitable soil with these fodder plants, many others are apparently not inclined to take such energetic actions, and it is a great pity indeed that it is difficult to thoroughly convince these people that they are losing irretrievably many acres of their most valuable land, as a result of wind and water erosion, this being applicable in particular to the tussac points and Islands with which this Colony has been so richly endowed. As the process of erosion becomes complete only bare and useless rocks are left.

27th Feb., left Chartres 3 a.m. and rode to Port Howard

and /

and connected with the S.S. "Lafonia" for Stanley arriving at the latter place at 10 p.m.

D. S. A. Weir per K.H.P.

Agricultural Adviser.

15th March, 1937.

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CONFIDENTIAL.

Stanley,

3rd May, 1937.

Sir,

I have the honour to submit for your information my report on a recent visit for the first time to Rincon Grande and Salvador Stations.

I left Stanley per horseback on 19th April, and made Rincon Grande via Green Patch and Horseshoe Bay. The track was very wet and difficult for the horses as a result of recent heavy rains.

The Green Patch Camp, Fitzroy Station was looking very well and some very nice hoggets were seen grazing there.

Douglas Station, Horseshoe Bay Camp also looked well and sheep were already gathered for dipping at Horseshoe Bay. These sheep were in good condition, but were very uneven in regard to wool.

It was already dusk by the time Rincon Grande Camp was reached.

20th April, left Rincon Grande for Salvador per schooner, but had to turn back as a result of wind ripping the sails which were apparently old and rotten. Remainder of day at Rincon Grande, saw a flock of sheep gathered here for dipping, rather an ill bred lot, with a good many ticks showing but no signs of lice. This is very fine camp but the management does not appear to be satisfactory.

21st April, proceeded per rowing boat to Salvador early in the morning, and remained all day at this Station examining sheep for lice but none were found:-

The incidence of Caseous Lymphadenitis would appear however to be high as several discharging abscesses were observed,

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The Colonial Secretary,
STANLEY.

which gives indication that many sheep may be affected to a lesser extent.

From a wool point of view the Salvador flock is not of a high standard, many sheep carrying very coarse hairy fleeces.

The Manager, Mr. A. Pitaluga, is hopeful of making some improvement in the near future.

He spoke of losses in lambs after marking two seasons ago which reached the alarming figure of 600, this he attributed to blood poison as a result of men using their teeth. This may be to a certain extent correct, but the question of using the same yards for many years for marking may also enter into it.

The losses during the last season however were not great.

22nd April, assisted in the gathering of a flock for examination regarding lice at Salvador.

The sheep appeared to be thoroughly clean in this respect, as a result of dipping three times at intervals of ten days with Cooper's quick acting powder.

The gathering however, is most important in connection with lice eradication and control and the ideal would be the presence of competent officers of the Agricultural Department at the gathering of every property, say as many properties as possible at Shearing and the balance at dipping - or better still the presence of Officers at both the Shearing and dipping gathering of every property.

This would necessitate some increase in staff.

The Manager of Salvador reports that a considerable amount of sterility in ewes exists on this property and it will be of interest to investigate this as opportunity occurs. He states that the ewes concerned have definitely not had

lambs /

lambs, so that it is not a question of the lambs being lost at birth. Factors which may play some part in this are the conditions under which ewes are existing from a feed point of view at time of mating as well as the condition and age etc., of the rams. I would not suspect contagious abortion.

On every hand the need for ditching and closer subdivision was much in evidence.

The erosion of soil on some of the Pincons was also much in evidence, probably started by fire and completed by wind and water, no attempt being made to establish grasses or in any other way to stay this waste which eventually must become irreparable.

23rd April, spent the forenoon at Pincon Grande examining sheep at the station yards 'Foam Creek' when a good many ticks were seen but no lice.

The question of suitable dipping in order to eradicate ticks was taken up with the Manager.

The number of unshorn sheep in those seen would indicate careless gathering at shearing time, and there is no excuse for this on a property of this kind.

The question of clean gathering is undoubtedly a matter of utmost importance and should receive due attention by the Agricultural Department along the lines mentioned earlier in this report.

On the afternoon of 23rd April, returned to Stanley.

D A Niven
Agricultural Adviser.

(63) (37)

Stanley.

22nd October, 1937.

CONFIDENTIAL.

Sir,

I have the honour to advise that I made a tour of inspection of the North Camp as follows :-

15th September, left Stanley on horseback and made Rincon Grande via South Port Louis and Horseshoe Bay for night. Sheep seen en route still showing signs of having been through a hard winter.

16th. At daylight made Salvador Station per dinghy and proceeded with inspection and valuation of buildings etc. In the evening applied the intradermal Tuberculin Test to nine dairy cows and one bull.

Also condemned and destroyed a riding horse on this Station, suffering from Sarcoma or tumour of the bone on one hind leg.

17th. With the Manager, Mr. A. Pitaluga, Salvador, inspecting camp, fences and sheep in regard to valuation. Shag Island, Rhonda and Bold Point camps were inspected - mainly wet camp and high peat banks with a very narrow strip of hard camp along the sea coast.

18th. Took final reading of Tuberculin Test and found no reactors. Inspected Bougainville wether Camp, very wet and peaty. Saw wethers here looking very bad after the winter. Inspected Hoggs Bold Point, small but apparently healthy. Stud Ewes on Teremotos Rincon looked fairly well, this being a piece of very good camp.

Limpet Creek Camp, wet and peaty, Ewes here were looking fairly poor. Made Douglas Station for night, after passing through Hogg/

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Colonial Secretary,

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Hogg Camp and horse paddocks. Hoggs here very small but fairly healthy.

19th. Sunday, at Douglas examined Aberystwyth plots, and ground under preparation for turnips and grass, and general inspection of settlement paddocks.

20th. With R Greenshields, left Douglas per Horseback and came through Western Horse Paddock, and over the Cavada Mountain to New House, all ewes and hoggs seen were showing signs of having been through a hard winter and a considerable death rate had occurred in ponds and ditches. A fair amount of this camp has recently had rank white grass burnt off, and given reasonable weather conditions, a good growth of fresh green feed should result. So far however, the spring appears backward and frosts are preventing growth.

Proceeded down two Ponds Ridges and through Rat Castle Rincon to Bombellia Hill and across from there to Camerons Track near Teal Inlet Boundary, thence to settlement. This was my first tour of this extensive camp. Ewes were looking fairly well here, with the exception of about 10% which showed evident signs of having wintered badly. The lambing starts here on October 1st.

Several subdivisional fences are required here in order to control the grazing of the flocks. In the evening applied the Intradermal Tuberculin Test to 31 dairy cows and 3 bulls.

21st. Came through East horse paddock Douglas Station to top of Kings Ridge. Hoggs seen on this Camp were very small but lively. Returned to settlement in evening and inspected Discing of Turnip ground, four horse teams working here in blocks and chains.

22nd/

22nd. Inspected piner lambs which are being drenched with Limonite - 12 being drenched and 12 being kept as controls. Took final reading of Tuberculin Test and found no reactors. Left at mid-day for Teal Inlet, passing through Teal Inlet ewe camp where ewes are looking very well.
Saw Wethers gathered at Settlement looking very poor and miserable as a result of recent hard winter - in fact mutton sheep are simply not available on this Station at present.

23rd. Saw oat crop being sown here in morning. Inspected and assisted draft 3,500 hoggs which had just been gathered.- these sheep were small, poor and uneven in the wool. Several were seen with ticks but lice were not in evidence.

24th. With owner selected 20 of the poorest hogs for an experiment with Limonite Drench, 10 for drenching and 10 for controls. The owner also drenched 100 with Cooper's Oil Drench, but in my opinion it would have been good practice to have given the whole flock of 3,500, at least one dose, if not two. Left Teal Inlet and returned to Douglas in evening.

25th. Left Douglas and made Port San Carlos via New House and Moss Side.
Good many dead wethers seen in ditches on Port San Carlos Camp - These are being collected and skinned. This property had heavy losses of all classes of sheep during the winter, the actual total will not be known however until shearing time.

Port San Carlos Hoggs are a nice even well grown lot, in spite of the fact that they are still showing signs of having been through a hard winter. It may be of interest to note that a trouble known as Ante - Partum Paralysis in Ewes is in existence to a certain extent on all the properties mentioned. This trouble exists in New Zealand, Australia and United

Kingdom/

Kingdom and is the cause of death of many valuable ewes just prior to lambing. It is caused through lack of uniformity in feeding both in quantity and in quality during the entire period of pregnancy. Better farming does much to reduce the death rate from this cause to a minimum, by this I mean the subdividing of big areas of Camp and the adoption of a system of rotational grazing, in so far as this Colony is concerned. In other countries there is less difficulty in providing supplementary fodder, which also has a beneficial effect.

26th Sunday. At Port San Carlos, inspected new cattle yards designed for marking and shipping cattle, new addition to jetty, and Aberystwyth grass plots. Also saw Ram Hoggs, Romney and Corriedale which were looking rather poor. Corriedale Rams from the Coast and which were running in settlement paddocks looked well.

27th. Left Port San Carlos and returned to Douglas travelling through large areas of Port San Carlos and Douglas Camps en route. A good many poor sheep seen, also several dead ones in ditches.

28th Left Douglas 5 a.m. for Moro to catch launch for Rincon Grande, but had to return to Douglas as weather unfit for launch.

29th. Again left Douglas and proceeded to Moro on horse back, thence to Foam Creek, Rincon Grande by launch. Inspected settlement paddocks, buildings etc, Rincon Grande and saw Hoggs which were small and poor.

30th. With Mr. A. Pitaluga Inspected North Coast Wether and Ewe Camps, Rincon Grande for my first time. This appears to me to be one of the finest properties in the Falklands, but unfortunately it is without doubt the worst managed.

Dead/

Dead sheep were lying everywhere, without trouble having been taken to skin them or at least pluck the wool. Although this Years deaths appear to be heavy there are still signs of sheep dead from previous years and not even plucked.

This Camp which is limited in area could be seen every day, and much of the loss could be avoided if the owners were really sheep farmers in the true sense of the word.

Further than this, the property is being ruined by the overstocking with wethers for butchery supply, of all the good coast camp which might be more profitably used for breeding ewes. The ewes are confined to wet, poor camp, with resultant heavy death rate and poor lambings. Subdivision is also badly needed here, as it is impossible to control satisfactorily sheep and grazing on such large camps. The butchery TRADE could be discontinued to advantage on this property.

These matters were taken up with the Manager, but I am afraid one cannot expect much in the way of improvement. In evening proceeded to Port Louis.

1st Oct. With Mr. James Robson made an inspection of Port Louis Camp as follows :- 12 O'Clock and Hawk Hills, and wet camp and peat banks extending away to the North ~~Camp~~ COAST. Saw Ewes, Hoggs and Wethers which are of Corriedale strain and appear to be doing very well. More subdivision and shepherding would be of advantage here and to this view the owner Mr. J. Robson subscribes. Mr James Robson who is the son of Mr John Robson gives the impression of being a particularly keen young sheep farmer with progressive ideas, and certainly gets about his country

in /

in an energetic manner. He is looking forward to the arrival of Corriedale Rams from New Zealand in November. A death rate occurred in hoggets in this place last year from internal parasites, but this year there was no such loss, due probably to the hard grazing of the Hogg camp with older sheep before the Hoggs were put on, thus having the effect of destroying most of the parasites and eggs which are innocous to older sheep. Drenching with Cooper's oil fluid also helped. In the evening proceeded to Johnson's Harbour.

2nd Oct. With Mr Rodger Smith proceeded to Lochead and North Coast - much of the Camp on this property is wet but is reasonably good to get about on. Sheep here are very uneven and coarse in the wool and the hard camp on the North Coast gives the impression of being heavily overstocked. This was taken up with Mr. Smith who says he will put all his sheep on to wet camp in the summer and thus give the Coast a spell. More fences are needed on this property in order to reduce the area of the present Camps. Rams are bought from other farmers, and this is bad practice as only culls are secured in this way - this of course applies to many other places in the Falklands.

1. As a final note one might add that on all the properties sheep are not seen often enough, due to various reasons, such as shortage of shepherds, huge areas of undivided Camp, and in some cases lack of energy and interest. Undoubtedly many sheep are lost in this way, through neglect or want of attention.

2. Telephones are badly needed at some of the out-lying shepherds houses, where a shepherds wife and family may be

alone /

alone for a week at a time during the busy season of the year when the husband is at the Settlement shearing. Apart from thisn aspect there is the question of greater efficiency in connection with the management of properties where outlying employees are on the phone. Of course in these days of wireless Shepherds houses are not so isolated as in earlier years.

3. Many sheep are lost in the spring while the shepherd is cutting his peat supply, and is therefore unable to tend his flock. It would be sound economy on the part of the farmer, if he were to arrange for someone else to cut the shepherds peat. This peat cannot be cut earlier in the season on account of weather conditions.

4. It is worth noting that a trouble known as Seedy Toe is common in horses in the Camp, several cases having been seen by me on this and other tours. The peat swamp appears to be a primary cause of this trouble, which is rather difficult to treat satisfactorily, especially where horses are not shod.

3rd October left Johnsons Harbour and returned to Stanley same day via Port Louis.

D S A Kerr.
Agricultural Adviser.

(64)

No. C/23/36.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted.)

MINUTE.

5th November, 19 37.

From The Colonial Secretary,

Stanley, Falkland Islands.

To The Agricultural Adviser,

STANLEY.

Red. 57 to 63

I am directed by the Acting Governor to acknowledge the receipt of and to thank you for your Confidential report of the 22nd of October, relating to your recent tour of the north camp.

ACTING COLONIAL SECRETARY.

PART III - CONCLUSIONS

I believe that the Falkland Islands are capable of carrying at least twice as many sheep as they do at present and of supporting sufficient dairy cows to maintain the population in milk and butter. There seems no reason why sufficient eggs, potatoes and green vegetables should not be provided within the Islands to fill local requirements. These improvements would entail:-

(1) Provision of better feed for stock by

(a) Pasture Improvement

1. Subdivision into smaller paddocks
2. Increased cattle stocking for pasture management.
3. Drainage
4. Development of suitable pasture mixtures and methods of pasture establishment.
5. Manuring
6. Instruction in pasture management
7. Grass seed saving
8. Bee establishment especially to fertilize clover flowers.
9. Cultivation of clover nodule bacteria and seed inoculation.

(b) Growing special crops

1. Protection (fencing) and establishment of tussac areas
2. Tests of many varieties of crop plants to determine those best suited to the Falkland Islands.
3. Growing various cruciferous crops
4. Experiments with ~~cereals~~ seed production, e.g. ripening of oats for seed.

(c) Provision of more shelter

Establishment of shelter belts and plantations of trees.

(2) Improvement of Livestock and Livestock Products

(a) Establishment of pure bred stud flocks
(b) Improvement of dairy cattle
(c) Employment of scientific methods of breeding
(d) Improvement in wool classing
(e) Improvement in dairying methods
(f) Research on parasites and diseases of stock
(g) Research into merits of different dips and dipping practices.

(3) Introduction of Modern Methods of Poultry Keeping (with particular emphasis on the intensive system).

(4) Vegetable Production for Local Requirements

(a) Improvement of transport from the Camp (failing collaboration of the Falkland Islands Co., ~~in~~ the provision of suitable transport to gather potatoes, other vegetables, butter and eggs from the Camp).

(b) /

(b) The establishment of about one acre under glass to raise winter vegetables for Stanley.

(5) Betterment of Camp Life, Nutrition, Hygiene, and Avocation by appointment of Rural Sociologist.

It would take many years of investigation, during which discouraging setbacks would be encountered, to encompass such a scheme of work. To arrive at a successful conclusion would necessitate a continuity of policy. In the past this continuity of Administration from one Governor to the next has not been attained. - e.g. the Falkland Islands Experimental Farm and the work of the Government Forester in the early [illegible]. As plant growth in this climate is comparatively slow, and results would therefore accrue slowly, I would suggest that a long term policy be laid down with the approval of the Secretary of State, and that it be binding, in principle, on future Administrations. I believe that to ensure the fulfilment of such a policy it would be necessary to develop within the Colonial Office a branch of technical experts capable of weighing the merits of modifications proposed by the local Administration and charged with the responsibiltiy of maintaining a continuity of policy within the Colony, - at least as it applied to funds provided by the British Government as is proposed under the Colonial Development Scheme. I envisage that such a group of experts would co-ordinate very diverse activities throughout the Colonial Empire in the same way that the United States Office of Experiments Stations co-ordinates the work of the Federal Department of Agriculture the State Agricultural Experiment Station and the State Colleges of Agriculture.

PART II - C O N F I D E N T I A L

Since most stations appear to regard the sheep as an entity independent of the land and pasturage, the only form of permanent improvement that has been undertaken in recent years is importation of pedigree rams. Only four managers or owners are actively attempting to improve their land. Elsewhere no investments have been made during the past five years in permanent improvement of the camp; in fact, some, at least, of the managers do not differentiate between expenses of maintenance and those of permanent improvement.

This position appears to be associated with the following three points :-

(a) The maximum possible profits must be secured to maintain the owners and shareholders at present resident in Britain.

(b) Though some managers realise that better returns might accrue from greater enterprise they realise that this would involve themselves in more work and worry without additional remuneration.

(c) I believe that some of the managers are handicapped because their experience does not extend beyond conditions of farming in South America and the Falkland Islands. Some of the managers subscribe to stock journals, but very few are in a position to understand the methods and problems of pasture establishment. Like most farmers, many consider it a weakness to admit lack of knowledge of any phase of farming. I met one farmer who frankly admitted he could not differentiate between grass seed and husks or flowers of grasses. After this I met at least three others who were very uncertain on this point. All had previously attempted to save grass seed but without sufficient knowledge had gathered imature seed which was valueless. These men were grateful for the help I could give them. The point, however, indicates the difficulties with which the Government has to contend, and the method by which improvements may be introduced. Provided there are a few men willing to learn they will adopt any methods which can be demonstrated to be economically sound. Their more sceptical neighbours will

eventually /

eventually adopt the practices which they observe to be satisfactory on the more enterprising stations. It follows, therefore, that the Government must first investigate and demonstrate economic methods of improving the camp, pasturage and stock before the stations can reasonably be expected to follow the advice that may be given. Legislation may be necessary to encourage the owners to invest in such permanent improvements.

The stock records show a drop of 200,000 sheep since 1898 of which approximately 100,000 has occurred during the last 25 years. This I believe is attributable to uncontrolled grazing of tussac areas and finer grasses, both of which have disappeared on most of the sheep country. An improvement in the production of the Colony cannot be expected until more or better food is provided for the stock, especially during the winter.

REPORT ON TOUR OF CAMP
Spring 1940
Summer, 1941.

ITINERARY :

Wed. 5th February,	1941. Left Stanley for Teal Inlet on horseback.
Thu. 6th February.	At Teal Inlet
Fri. 7th February.	Left Teal Inlet for Douglas Station.
Sat. 8th February.	Left Douglas Station for Salvador
Sun. 9th February	Left Salvador for Douglas Station
Tue. 11th February	Left Douglas for San Carlos
Fri. 14th February	Left San Carlos for Port San Carlos
Sat. 15th February	Left Port San Carlos for Port Howard via Many Branch
Tue. 18th February	Left Port Howard for Hill Cove
Wed. 19th February	Left Hill Cove for Roy Cove
Sun. 23rd February	Left Roy Cove for Hill Cove, en route to Pebble Island
Fri. 28th February	Left Hill Cove for Pebble Island
Mon. 3rd March	Visited Pebble Islet and returned to Pebble Island
Fri. 14th March	Left Pebble Island via Narrow Is. for Main Point and Hill Cove.
Mon. 17th March	Left Hill Cove for Roy Cove.
Thu. 20th March	Left Roy Cove for Dunbar en route to Carcass Island
Sat. 22nd March	Crossed to Carcass Island in 'Golden Fleece'
Mon. 30th March	Left Carcass for Dunbar and to Hill Cove
Fri. 4th April	Left Roy Cove for Chartres
Wed. 9th April	Left Chartres for Fox Bay East
Thu. 17th April	Had arranged to leave for Port Stephens but prevented by weather and four inches of snow during the two following days.
Mon. 21st April	Left Fox Bay for Darwin via North Arm
Tue. 22nd April	Arrived at Darwin
Fri. 25th April	Left Darwin for Fitzroy
Sat. 26th April	Left Fitzroy and returned to Stanley.

PART I - THE CAMP.

To Teal Inlet the track is reputedly one of the wettest in the Islands. It crosses soft peat covered by white grass to the pass below Estancia Mountain, then skirts a stone run before again crossing wet soft slopes to the Estancia House. Thence the track is on firmer white grass camp with an occasional diddle dee ridge. It crosses three sea fords up to 400 yards long between Estancia and Malo. A track round the head of the sea arms is on softer camp, typically deep peat and white grass. The ride takes about five and a half hours in summer and upwards of eight hours in winter when horses may sink to their bellies. Broken stone runs (about one or two miles to the north of the riding track) extend most of the way from Stanley to Estancia house.

West of Teal Inlet the track follows hard camp (diddle dee or white grass on shallow peat over rotten rock subsoil) to Douglas. On this stretch Mr Felton has ploughed a pair of wheel tracks which permit the passage of a car or motorbicycle during the summer. The peat becomes heavier shortly before arriving at Douglas. I am told that the riding time is about two hours at any time of the year.

The track from Douglas to Salvador is on similar type of camp to within about two miles of the Douglas boundary. Thence it traverses softer camp, skirts the western shores of Salvador Waters and finally covers about six miles of peat (white grass) which was good riding at the time I passed but which would become very soft in wet weather. I do not recall any stone runs near this track. The riding time is from three to four hours in summer, but would probably be doubled during the winter.

From Douglas to San Carlos the track starts on firm white grass camp which changes after about six miles to a soft wet flat on which care must be observed even in summer to avoid bogging

the/

the horses. This type of camp continues almost to Third Corral house. After crossing the San Carlos river the white grass was firmer, and the camp better for grazing purposes. The track crosses three series of ridges probably 600 to 800 feet high, the middle one being hard and covered with a Balsam bog, diddle dee fine grass association. I do not recall seeing stone runs near this track, but a large part of that section on the San Carlos camp is underlaid by broken sandstone. The riding time in summer was about seven hours. I doubt if the track between Third Corral and Douglas would be passable in the winter.

Between San Carlos and Port San Carlos the track crosses two ranges of hills and a flat that becomes rather wet in winter. The majority of the track is on white grass and ends on the arm of the harbour opposite the Port San Carlos settlement, necessitating a swim of about 200 to 300 yards for the horses.

The track from San Carlos to Darwin crosses a very soft mountain on the southern side of which horses frequently sink in to their hocks. The camp becomes a little firmer near Port Sussex and thereafter follows hard ridges on rotten-rock and broken quartz subsoil to Darwin. A car track has been made along these ridges by removing six or eight inches of surface soil.

Between Darwin and Fitzroy a similar track extends most of the way to Mount Pleasant. It crosses two soft and wet valleys which are passable by car only in summer and unpleasant to ride over when the ground is soft. We did not follow the car track from Mount Pleasant to Fitzroy. The riding track traverses some very soft ground before rising to firmer ground near Fitzroy settlement. White grass is predominant along the majority of this track.

The track from Fitzroy crosses a high ridge to the bridge leading to Bluff Cove. The northern side of the ridge is firmer than the south. From the hill above Bluff Cove to a point somewhere near Port Harriet House the camp can be very soft and wet. A rock out crop appears intermittently a few hundred yards to the north of the riding track. The pasturage is typically white grass with occasional unaccountable patches of diddle dee and Christmas bush, unaccountable because the ground seems equally soft where these plants are present. The conformation of the land along this track and the Bluff Cove camp would make it ideally suited for draining experiments. I would expect that one or two large drains across the slopes would make the track very much drier and improve the grazing quality of the land considerably.

PASTURES AND SOIL TYPES : In general the association of pasture plants is governed by soil type, climatic conditions, and grazing practices. In the Falkland Islands grazing is usually so light that today it scarcely enters the picture. In the past many of the finer grasses may have been removed by excessive and uncontrolled grazing. The correlation between ecological associations and soil types appears to be as follows. - Goose grass (Aira spp.) is found on hard dry areas with shallow, light, black soil. Where similar ground is low lying and wet Juncus scheuzeroides becomes dominant. Balsam (Bolax) appears on a similar formation at higher altitudes usually overlying well drained subsoil. It is generally associated with native fescues. Diddle dee is found on the more spongy, fibrous soil, higher in organic matter. It is associated on wetter aspects with tall fern and on the drier aspects with short fern, Christmas bush and mountain berry. The short fern and mountain berry appear to replace the diddle dee when it is burnt off. In the valleys between diddle dee areas white grass is dominant. This grass occupies also a large area of the drier, more compact peat. It is also found on shallow peat overlying sandstone. On soft wet peat on which water lies throughout most of the year Astelia, rostkovia, and mosses occur amongst unthrifty white grass. This is usually deep, compact peat and would be difficult ground to handle. The Falkland Island tussock is found only in coastal areas frequented by penguins

and/

and seals but has disappeared from those areas to which sheep have had access in the summer. Tussock ground is composed of two layers of peat, the surface one being fibrous, reddish, and resistant to erosion; the lower one black, friable, and comparatively readily scattered by wind.

In settlement paddocks Brown top (Agrostis tenuis) and Poa pratensis are commonly found. Poa pratensis is widely distributed and may be found on diddle dee camp or on sand drifts. Both are productive grasses especially when associated with white clover; but with three or four exceptions there is very little white clover, even in the settlement paddocks. Cocksfoot (Dactylis glomerata) has become established as sporadic plants especially around shepherds' houses and was observed also along the tracks from Roy Cove station. Fog was sown on one property about 1917 and has taken charge of the settlement paddocks. Since Davies' visit in 1937 this species has been widely sown at from $\frac{1}{4}$ lb to 2 lbs per acre of dressed, or 10 lbs to 15 lbs per acre of undressed seed. This seed has been broadcast on scratched ground or after burning diddle dee, but frequently late in autumn or after the ash from the burned diddle dee had been dissipated by wind. Very often sheep are free to graze on the new grass from the day it is sown, an exceptionally severe handicap to pasture establishment.

The present association of plants, being dependent on soil fertility and environmental conditions, serves as a guide to the type of treatment which should be undertaken to improve the camp pasturage. This aspect will be referred to later in the report.

MANAGEMENT OF PASTURAGE : The best native grass is undoubtedly tussock (Poa flabellata). Through overstocking the majority of the natural plantations of this grass have been eaten out. In these islands, where one cannot rely on maturing a swede or turnip crop, this grass, which grows freely during the winter, produces a great bulk of unreplacable succulent winter food. On two smaller island holdings the tussock areas have been fenced so that grazing on them can be controlled. All the tussock within the fences has been planted. I would estimate that the limiting factor in the stocking of these properties is the amount of grass available in the summer rather than the lack of it in the winter. There appears no reason (other than the necessity to pay dividends to absentee shareholders) why similar tussock ground should not be fenced on all properties. Fencing and planting of such areas should be one of the first steps of improving the Falkland Islands stations.

According to statements of managers Aira praecox provides good spring grazing, but lasts only about six weeks. Thereafter ground supporting this grass is virtually useless. In general no attempt has been made to improve it, though there is evidence from Pebble Island that it responds better than any other soil type to seeding with cocksfoot, crested dogstail and clovers. White grass (Cortadera) produces a lot of 'burn' during the cold weather which is very unpalatable to sheep. This 'burn' (dead portions of leaves) accumulates from year to year so that in four years there appears practically no grazing for sheep. This is remedied by 'firing' the camp during the spring. During the past spring I found this wisely done. No apparent loss is caused and firing is not permitted when the peat is dry enough to burn. The usual disadvantage of burning unpalatable grass is the destruction of vegetation which might increase the organic content of the soil. This can scarcely apply to peat soils, providing the peat is not burned. Actually it was very rarely that I saw plants damaged by fire.

In another country the 'burn' of white grass might be prevented by increased stocking with sheep or by grazing with cattle

Here/

Here the paddocks are far too large to control the grazing of sheep, and cattle (with perhaps the exception of one farm) are far too few to be of any use in this connection.

No special management appears to be connected with the grazing of diddle dee, balsam or white grass areas, though it seems usual to spell the winter ewe camp during the period between shearing and dipping. There is evidence that lambs, placed on an island where only Christmas bush and diddle dee are available, graze both these plants and thrive satisfactorily.

Soil Erosion does not appear to be serious in the Falklands although on Roy Cove property there are several large areas of clay and evidence elsewhere that wind erosion has lowered the level of the ground by eight feet. During heavy rain there is slight movement of surface soil which I would consider rather advantageous if one were sowing imported grass seeds. Such soil erosion as there is in the Falkland Islands is limited to a few localities where drifting sand has buried pasture vegetation, or where excessive stocking and burning have weakened the turf so that the top soil has blown away. This latter has occurred on two types of camp, (1) hard goose grass (Aira praecox) diddle dee ridges, and (2) the coastal tussock (Poa flabellata) areas.

I am aware of fourteen areas of drifting sand. Of the nine I have visited six have been well planted with Marram grass (Psamma arenaria). The planting commenced about 1920 and is still proceeding. The problem, so far as it refers to sand, can be easily remedied by planting Marram grass (Pasmma arenaria) or native sand grass. The latter grass, though perhaps slightly more difficult to establish, reproduces from seed much more freely on these sand areas than does Marram.

Erosion of the hard goose grass diddle dee type is usually slow and frequently limited to small circular patches which reveal the subsoil of broken sandstone and clay. Where one such eroded area has been fenced for two years a native fescue has become established. I am confident that Agrostis tenuis and Poa pratensis with white clover would cover this ground in comparatively little time provided that grazing were reasonably controlled.

The greatest loss through erosion is on the coastal margins where uncontrolled grazing has killed out the native tussock - a most valuable fodder in winter. Individual farmers have demonstrated that the remedy lies in fencing these areas and replanting with tussock. Where this is not done erosion of the surface soil may take many years after which underlying crumbly peat is comparatively rapidly dissipated. Once this occurs the re-establishment of tussock would appear to become a slow process.

ABERYSTWYTH GRASS PLOTS : Plots laid down on lines suggested by Aberystwyth indicate that cocksfoot, crested dogstail, white clover, Yorkshire fog, timothy and yarrow are suited to these islands. In occasional plots perennial ryegrass may be found but it does not look healthy. In general white clover has appeared only on the basic slag plots though in two localities it may be found also on the plots treated with rock phosphate. Surface scratching before sowing appeared to have produced better results than ploughing and the preparation of a seed bed. Cocksfoot, crested dogstail and white clover seem particularly suited to Aira ground. Timothy appears in these plots only on one property where the plot was placed on low damp ground. Here it is doing very well. Yorkshire fog, which was sown at only 4 ozs per acre, appears equally with the better grasses on the fertilised plots. On the unmanured plots it is unusual to find any other than fog or red fescue. On unfertilised raw peat red fescue appears to establish better than fog. In only one case has superphosphate produced any beneficial result. In many places the take of English grasses on the superphosphate plot appears

poorer/

poorer than on the unmanured strips, (and that is poor enough!) The best take of grasses has occurred on the heavier basic slag treatment but there is no evidence as to whether this should be attributed to the phosphatic or calcic content of this fertiliser. Some of the other fertiliser treatments contained an equal phosphatic dressing but no other contained lime.

IMPLEMENTS AND CROPS : At least seven stations own tractors, varying from Fordson's to Caterpillars. In some cases they have been procured purely for bringing home the peat. Two other managers are in hopes of procuring tractors for this purpose after the war. On three properties the tractors have been used for preparing land in blocks of up to 100 acres for sowing grass seeds. Most of the others prepare a few acres for hay (usually oat) crops each year. Most, but not all, farms have the necessary implements to cultivate up to fifty or more acres annually, though few do it. The reason is no doubt largely due to the uncertainty of the resulting crop. On one property 30 acres had been sown to oats for each of the past three years without obtaining a satisfactory crop. Even in the third year several acres were left as not worth cutting. No apparent difference could be observed between soil on the good and poorer portions of the field, and even the slaughtering of several hundred cast sheep on the poor area has not improved the crop. This field was near the coast, and exposed to westerly wind blown sea spray. The soil was of a friable nature and was well tilled. Guano had been tried as a fertiliser but without appreciable result.

With the exception of the two islands with tussock plantations only one station provides special feed for sheep during the winter. There are no swede or turnip crops and the hay crops are used for horse and cow feed.

PASTURE ESTABLISHMENT : On one station ploughing and sowing of English grasses has been a subject of private experiment since 1926. Here about 600 acres of English grass pasture has now been established. Some of the fields are in pure grass - Red fescue (Festuca rubra), Brown top (Agrostis tenuis), Yorkshire fog (Holcus lanatus) - some in strips of pure grass, such as timothy (Phleum pratense), cocksfoot (Dactylis glomerata), perennial ryegrass (Lolium perenne) etc., and yet others have been sown with mixtures of grass. There is something unsatisfactory and lifeless in a sward composed of only one species of grass. It produces vigorously at one season of the year only and thereafter becomes dormant. The best looking areas are those containing a mixture of white clover, Lotus major, timothy, cocksfoot, crested dogstail, red fescue and perennial ryegrass. This mixture appears to have remained stable over a period of years. The grasses look green, healthy and vigorous.

Yorkshire fog is not considered to be a desirable grass on this station (and to my mind justly so). Neither other grasses nor clover thrive in association with fog; and when fog 'gets away' it becomes unpalatable and is difficult to graze.

The method of grass establishment appears to consist of ploughing native camp for two or three crops of spring sown oats, carcasses of sheep may be ploughed in during this period. The grass seed is usually sown with the last oat crop and the seed bed firmed up by treading with sheep. Manures, other than whale guano, are rarely used on account of cost.

Experiments have been made with meat refuse, basic slag, fish manure, tidal mud, peat mould, crushed bones, and guano broadcast in strips over English grass pastures. As a result the grass in each strip has taken on a characteristic colour and the strips can be seen from a distance during the spring. The meat has, I believe, produced greatest bulk of hay but there is less clover on this strip than on some of the others. Basic slag

seemed/

seemed to have produced the best turf and the greatest amount of clover.

Some of this improved ground was originally diddle dee camp and a large portion of it white grass. The fact that such plants as timothy, cocksfoot, crested dogstail and white clover appear permanent suggests that the fertility of the soil is comparable to that of the best second class country in New Zealand Gorse has been planted along most of the fence lines of these paddocks and is trimmed to about 3 ft. 6 ins.

On this property also about 100 acres was ploughed and sown in the Autumn of 1940 to grass seeds saved locally and white clover. There is a sprinkling of fescue, cocksfoot, timothy and white clover. If this area be not over grazed the introduced grasses should form a good sward in three or four years.

SHELTER : Sheep find shelter in the camp chiefly behind rocks, white grass bogs (tussocks), peat banks, and to some extent on leeward slopes and in small valleys. There are no trees or hedges in the camp. About the settlements many of the fence lines are planted with gorse but in no place have I seen trees planted as a shelter belt. Gorse usually takes about six years to form a hedge. In the early stages the plants may be eaten by sheep. This has been overcome by protective fencing or by placing largish stones over the young gorse plants as they are planted. The latter method is certainly cheaper and seems just as effective. These hedges become scorched during the spring by the strong sleet laden southerly wind. They recover during the summer and afford good shelter to stock and some shelter to the pastures. Broom is not common but where it has been planted shows definite possibilities and has produced bushes eight feet or more high.

An attempt at forest establishment was made at Hill Cove about 1926. The trees were planted in two fields one of which had been used for oats. In the lower paddock (which may not have been ploughed) are several specimens of Antarctic Beech, some Scots pines (Pinus sylvestris) and another two leafed pine with longer, emerald green needles. No trees in this block are more than 12 feet high, but those sixty or seventy trees which remain in the field do not afford each other very much shelter. There is a Scotch fir in the cemetery probably 15 ft. to 18 ft. high. The remaining part of Reed's plantings (about one acre, from which stock have been fenced out) is growing slowly but satisfactorily. Apparently three species of pine and one of spruce were planted in rows 3 ft apart. Two species of pine were unsuited and have died out leaving Scots pine and spruce in rows 6 ft apart and trees 3 ft apart in the row. These are now about 10 ft high and just commencing to 'self prune' at the base. These trees were all planted in holes apparently a foot below the surface of the soil. Some of these holes still become long standing pools of water. The root growth is fibrous and does not penetrate more than about six inches into the soil. It seems remarkably small in comparison with the size of the plants. Four specimens of Pinus radiata remain in the shelter of the Scots pine where they have grown about half as high again. No pines remain in the portion which has been open to stock, but the rows of spruce on this ground are intact though the trees are stunted.

At Hill Cove there are also two plantations of poplars mixed with occasional broad leafed South American birch. Both plantings are about 20 ft. high, one probably 25 years old, and the other perhaps 60. The boles would be about nine inches in diameter on the edge of the planting and up to six inches elsewhere at a height of 4 ft. These plantings appear to be on old garden patches and have produced good shelter and have demonstrated that the poplar will grow under forest conditions. At Teal Inlet Mrs Felton has established poplars, willows and

mountain/

mountain ash which give complete shelter to her flower and vegetable garden. Pines, spruce and Cupressus macrocarpa have been planted more recently and are thriving in the shelter of the older trees and gorse hedges.

The broad leafed South American birch does very well. The trunks, frequently branched at the ground, are 12 inches to 14 inches in diameter at four feet. This tree is not seriously damaged by the wind.

At Roy Cove a small plantation of Scots pine and Spruce in a sheltered valley is now growing at the rate of about one foot annually. On several places Cupressus macrocarpa has been introduced with notable success. Four year old trees ~~xkxPark Stephens~~ 4 ft. high have been observed on Carcass Island, and a stand of 10 year old trees at Port Stephens, planted originally on garden soil, is 15 ft. high and very healthy. Younger trees at Port Stephens have grown about one foot a year in the shelter of the older planting.

STOCK : The Lincoln, Romney, Corriedale, Polworth and Merino breeds of sheep are represented in the Colony. Lincoln, Romney and Merino hybrids may be found on some holdings and apparently in the one flock. The mutton breeds are absent. Sheep are grown exclusively for wool. Though it may be incorrect, I gaine the impression that wool per se so governed the farming outlook that all other matters such as constitution and frame of the animal, pasture establishment and grazing management, were but incidentals and, on some properties, almost ignored. I have come to this conclusion by the frequency with which a small framed animal has been pointed out as a good sheep, apparently because it was clothed with fine close wool. There were to my mind many better grown, though coarser woolled, sheep in the flock which were to be preferred, and which one would expect to be the more profitable to run.

Two managers possess the equipment for the Benzol test for kemp but I doubt if full use is made of it. In general the sheep are free from external parasites though ticks were observed on two stations. On two properties there was evidence of intestinal worms in the sheep droppings. 'Scouring' which is associated with internal parasites was more common on these properties; but on the whole the stock looked very fit and healthy. The managers appeared conscientious when gathering for dipping and usually double gathered to ensure that all sheep are mustered.

Shearing was in progress on four farms during my visit. I was interested in the methods of handling the sheep and of classing and preparing the wool.

Classing appears to be largely on 'bloom' rather than on 'count'. On some farms both fine and coarse wool could be found in the one bin but the general appearance (or bloom) of the wool in the bin was constant. This method of classing is quite different from that carried out elsewhere in the world. The 'count' of wool refers to its spinning quality. Manufacturers desire that the fleeces be classed primarily on this basis. This reduces their handling costs. Each fleece varies within itself to such an extent that manufacturers sort a single fleece into four or five classes. When the final classing is so fine one can imagine their difficulty in handling a bale of fleeces of varying count. Once fleeces have been classed according to 'count' there is room to erect sub-classes on 'bloom' or other characters of the fleeces. It seems probable that several pence per lb. are lost to Falkland Islands stations because of the re-classing that must be undertaken. It is quit possible that Falkland Islands wool is handled by speculators wh buy purely to reclass for their own profit. This re-classing

returns/

returns something more than 1½d per lb. to New Zealand speculators who can buy cheaply the wool that the Bradford buyers reject. Elsewhere in the world a farm with 1500 sheep can be classed the wool to the satisfaction of wool manufacturers. The plea that there are insufficient sheep on Falkland Islands stations to to justify better classing than is at present undertaken does not seem tenable.

Most farms appear to use Kymac dip which is particularly efficient in eradicating ticks (keds) but useless for lice. It has the disadvantage of removing the natural grease from the fleece and of being hygroscopic so that sheep become damp to the skin in wet or foggy weather for upwards to six weeks after dipping. The law of the Colony states that sheep be dipped between 1st March and 30th June annually. I cannot think of any reason for this restriction and propose to seek permission to experiment with the dipping of flocks off the shears. If this were done the fact that a sheep was shorn would be proof of its dipping. Immediately after shearing there is less wool cover for external parasites and these and the pupæ are more likely to be washed out of the wool than in the Autumn. There should be an advantage to the sheep in dipping when the weather is less vigorous. (I believe the present Ordinance is framed so that there will be at least six weeks growth of wool to 'hold the dip'. In practice this is not always obtained as shearing lasts well into February).

Sheepdogs on the Islands appear completely free from fleas. There are some very good working dogs and in some cases under good control. In several cases however the dogs could be better assisted by the shepherds and I feel that a slight difference in the methods of training the dogs would result in much better work. Practically all the dogs that I have seen would be considered as over-fed by New Zealand standards.

CAMP HOME LIFE : The labour on stations is classified as Navvy and Shepherd. The navvies are for the most part single and live in the cookhouse. Many of the shepherds are married and practically all occupy houses two or more hours ride from the main settlement. Practically all the shepherds' houses have telephon communication with the main settlement and I believe that all but two have wireless sets. Very few of the shepherds have any books. They commence work at 6 a.m. or earlier during the summer and appear to have no evening recreation. They maintain their own vegetable gardens in which potatoes are the chief crop; cabbage, carrots, swedes and cauliflower usually find a place. During the summer there seems to be an abundance of milk, cream, butter and mutton. Bread and cakes appear to be baked regularly

There is a general belief that butter will not keep because of the influence of pasturage (presumably on its composition). This prevents many house wives from salting the surplus summer butter for winter use. Another belief is that thunder causes the milk to sour. Both these beliefs are quite erroneous. On inquiries I have found that even in some homesteads cows are milked without any attempt to wash the udder, and in the words of one housewife - "The first few pulls are sometimes very blue." Such milk is full of bacteria which multiply rapidly. It is these which cause the milk to sour and prevent the butter from keeping. In addition there has been no instruction in butter making. Butter is often poorly washed and usually contains too much moisture. I am convinced that if a systematic effort were made to improve dairying methods that a lot of good quality butter could be prepared in the camp for sale in Stanley. There were two houses at which I stayed where the butter was equally as good as any I have ever tasted.

This is only one phase of what might be attempted by a travelling instructress in home management. Other aspects of the work would entail instruction in dress making, preservation of

foods/

foods (bottling, jam making, pickling etc.) dietetics, and possibly spinning and weaving, and gardening.

(72.)

No.

(It is requested that, in any reference to this minute, the above Number and the date may be quoted).

MINUTE.

10th June, 1941.

From Director of Agriculture,

Stanley, Falkland Islands.

To The Honourable,

The Colonial Secretary.

I submit herewith for His Excellency's information a report on my spring and summer (1940-41) tours of the Camp. You will note it has been prepared in 3 parts. Part I deals with my impressions of the camp, part II is confidential and not for publication, and part III is my conclusions and suggestions for improving farming conditions in the Islands.

J. G. Cobb

Director of Agriculture.