success, without indulging in costly experiments which so often result in extensive damage being done to flocks. The men who occupy responsible positions in connection with the sheep farming industry of this country have experience & sound judgment but it can hardly be claimed that the system of breeding which the great majority are following is either in accordance with recognised principles or that which will raise the flocks to a high standard of excellence. X X

Crossbreeding is practised extensively & in an aimless way. Mongrel sires are used extensively & in breeding is practised indiscriminately by the use of sires selected from within the flocks & by running breeding ewes & rams of all ages up to 11 years together. In the language breeder, the term pedigree, as applied to stock, indicates animals whose lineage can be traced back by a line of pure breeding for an extended period. The benefit which stud animals derive from such a long line of pure breeding lies in the added prepotency, or, in other words, the great power which it gives them of transmitting their type & individual excellence to their progeny. The Crossbred sire rarely possess this power in any marked degree, & when he does he is only a happy chance & seldom transmits the power to his progeny.

Nothing provides such good proof

of the value of a long line of pure breeding as the increased price which the Canny & experienced breeder will pay for a Pedigree Animal, as compared with a Crossbred of equal individual excellence; - when both are available. Say he buys the Pedigree Animal at £60 in preference to the Crossbred at £10 (which is quite a common occurrence) Under the circumstances he pays £10 for the Animals individual excellence & £50 for the Pedigree which provides the guarantee that the animal possessing it will have the power of transmitting his type & other desirable qualities to his progeny, as a result of the long line of pure breeding that lies behind him.

On more than one occassion when being shown Crossbred rams in this County men have remarked that some of them were better than a lot of the imported pure bred animals, but when considering them as sires the foregoing simple facts should be kept in mind.

The flocks on two stations which I visited provided particularly fine illustrations of the result that may be expected from using mongrel sires or sires bred within the flocks. In each of the cases referred to, the flocks will pass as half bred Cheviot. Although the managers imported as they had been endeavouring for 25 years to change over from the Cheviot to the Romney type, & that during that period no Cheviot rams had been used.

In both cases further inquiries elicited the information that the majority of the sires had been selected from within the flocks & that those introduced were local Crossbreds, & no doubt even these had Cheviot blood in the mixture flowing through their veins. In any Case the prepotency of these sires, which had been inbred to one strain for over 30 years would be much stronger than that of mongrel bred rams collected from different sources. Had pure bred Romney rams been used & the principles of breeding respected in other ways, very little trace of the Cheviot would have been discernible in the fourth generation following the Change. These flocks average about 5 1/2 lbs of wool, whereas good quality Romney sheep would easily have averaged 7 1/2 lbs. The value of the difference during the period required would have been sufficient to provide for all the fencing & other improvements required on the properties.

Each pure bred of sheep have been gradually evolved for some special purpose or to suit some special set of conditions & unless the purpose for which they are kept Can be attained by keeping them pure substantial benefit is derived by doing so. What the standard of a flock or herd Can never be raised above that of the sires that are used in it is an old saying that breeders in this County would do well to keep in mind

The Chief advantage of Crossbreeding sheep is the production of dual purpose animals with a view to obtaining at once a suitable Carcass for the butcher as well as a profitable fleece, in countries where both branches of the industry must be Considered, Crossbreeding on approved lines is practised extensively with great advantage - usually however the Crossbreeding in any one flock is confined to two breeds which will blend readily, while it is continued only pure bred Lines of one or other of the foundation breeds are used. At times these Crossbred ewes are bred to Down rams for the purpose of producing fat Lambs, but in such Cases none of the progeny is returned for breeding purposes. When the production of wool is the only Consideration, however, quality in the fleece are matters of first importance, & these Can be attained only by avoiding the necessary Confusion of types in the flock which always results from haphazard Crossing or the use of Crossbred sires.

While Crossbreeding is Carried on without having some well defined aim in purpose & the blood of many breeds is mixed indiscriminately & mongrel sires are used extensively the result will be nondescript flocks producing wool of many types & a wide range of quality, without any Compensating advantage being gained.

all of these abuses have been practised extensively on the majority of stations in this County with the result stated. In all flocks seen by me, with the exception of three the Romney marsh type predominates to the extent of giving them at a distance the general appearance of Romney flocks, but in all cases a closer inspection usually discloses a wonderful mixture of breeds. I had a particularly good opportunity of examining the whole of the hoggett flocks on two stations as they passed through the dips, in each case, besides the Romney type which predominated, the following also were strongly in evidence - Lincoln, Cheviot, English Leicester, Merino, Some of the short woolled breeds. The sorting of a clip from a flock bred in this way would keep a capable classer very busy, but when it is sold without any serious attempt at classing it presents great opportunities for profit to the speculator at the expense of the grower.

In the foregoing remarks I do not desire to convey the idea that there are no good sheep in the County, on the Contrary I have seen a lot of very useful sheep indeed & breeders will only apply modern methods of breeding the flocks can be rapidly improved from the local ewes, for of all domestic animals the sheep is the most plastic in the hands of man.

There has been some diversity of opinion regarding the suitability of the local sheep for the growing trade. I can only say that they would be accepted quite readily by growing wools in Australia New Zealand. — Their chief disadvantage would be unevenness. As a result of my long experience with Romney sheep & considering the environments in which the breed was evolved, I would expect them to be more suitable than any other for the Climatic & Soil Conditions of this County, & this opinion has been confirmed as a result of my inspection of the flocks. The superiority of the Romney was particularly noticeable among the young sheep. Those showing the strongest Romney characteristics being invariably the strongest looking & best developed, whereas those showing the strongest Merino characteristics were usually the smallest.

The Cheviot Breed also appear to be well suited Constitutionally to the Conditions here, but they are in no way superior to the Romney in this respect, while at the same time the latter are quite superior from the point of view of wool production. In fact the Romney when well bred & well fed produces the most marketable & best paying fleece of all long wooled breeds of sheep.

When wool is the only product to be considered it is of course

unwise to carry more breeding ewes than may be necessary to maintain a high standard in the flocks but it is still more unwise to carry less than is necessary for this purpose. At the moment the standard of even the best flocks falls considerably short of what is necessary in order to get the maximum return which the conditions will permit. I suggest that the proportion of breeding ewes to dry sheep could be increased with great advantage - according to the individual requirements of the different stations until such time as their flocks are raised to a standard comparable with the maximum return for wool. How many culling ewes is necessary & the extent to which it can be carried will depend on the annual increase.

The only way in which the flocks can be brought up to the standard which is desirable - & at which they will provide the maximum return which the conditions existing in the County will permit - is to grade them up by using successively pure bred sires of one breed or type, & selected ewes. The prepotency of the average pure bred ram is so superior to that of the average ewe of mixed breeding that in this way a common flock can quickly be improved to a standard approximating that of the pure bred selected, & they may even excell them in vigour.

"The breeder should select the breed which his county is best suited to develop, & when this is done he should never be turned from his purpose by the fads of others or by the changing fancy of the day. Those who periodically change their breed of sheep in order to cater for the market of the moment rarely succeed, while at the same time they can never attain that uniformity in their flocks, which, particularly in the case of wool is so essential to the production of the most marketable commodity.

When fine wools are in demand wool growers are naturally anxious to increase the supply, but they are business men, & when advising their clients to put a dash of Merino into a Romney Clip they rarely realise what the ultimate result of such advise may be if acted upon. Experience will tell a man what class of wool his county is best adapted for growing, & if he persists in growing that class he will come out right in the long run.

When grading up pure nondescript flocks it is a mistake to purchase high priced rams to start with. In this County I have seen rams which cost in England from forty to seventy pounds mated with very ordinary ewes & very

mixed breeding, I am informed that others costing up to £150 each, have been imported & used in the same manner. Infinately better value would be obtained by purchasing pure bred flock rams at about £10 each (new Zealand pure) for the reason that, when mated with this class of land, they will give equally good results & more can be imported for the money. There is no short cut to the improvement of a nondescript flock. They must be grooded up by each successive generation becoming better than the preceding one, by careful selection of the breeding ewes & the use of pure bred rams of a higher standard of quality than the ewes. A breeder is justified in paying from thirty pounds upwards for rams only when he has well bred good quality studewes to mate them with. Besides keeping pure bred rams of one breed it is also necessary to keep to rams of one type of that breed in order to secure & maintain uniformity in a flock. With this end in view, intending importers should first decide upon which County they can secure the type best suited to their purpose, & when this is done, confine their importations to sheep from that County & of the same line of blood, so far as this can be done without excessive inbreeding. The reason for this is that in different Counties

different types of the same breed have been evolved gradually, as a result of environment & breeding with different aims in view. For instance the most important consideration in determining the type of Romney sheep in England, has been to secure a good mutton carcass, whereas in New Zealand great attention has been given to improving the value of their wool, with the result that there is now a marked difference in the type of this breed in the Countries mentioned. I am of opinion that of the two the New Zealand type is most suitable for this County, particularly on account of the superior quality of their wool. The position at the moment in this County is to put a dash of Merino through the flocks in order to get increased density & fineness in the wool & some stations have of late been crossing & quality are used for this purpose provided this wool has the desired quality. While fully appreciating fineness in wool from the point of view of market value I am confident that the injury which the flocks will suffer by the present system of using mongrel Merino sires for this purpose will quite outweigh any advantage that may be gained as a result of the increased fineness in the wool. When considered solely from the point of view of value of wool the Merino is the most profitable of all breeds where the environment suit the

But graziers here should move slowly in the matter of their introduction until they are able to observe results. Earlier in this report I referred to the fact that all breeds of stock mature slowly in this Country & if bred for a number of successive generations without any infusion of imported blood they become much reduced in size. It may be found that the merino breed will be more affected than any other in this respect for the reason that even under favourable conditions they of all the principal breeds are the slowest to mature. Moreover they are indifferent mothers with a poor milk supply. If it is generally accepted - & I believe it is - that the pure Romney breed of sheep is suitable to the conditions here & that the pure merino breed is unsuitable then it can only be expected that the advantage the former possesses, will be reduced by crossing with the latter, according to the extent to which the cross is carried. What is known locally as Coast Corriedales have recently been imported rather extensively from the vicinity of St. Julian, on the Coast of South America, for stud purposes with a view to securing the increased density & fineness that is desired in the local wool. I saw a number of the rams at different stations & I maintain none of them have any claim to the distinction which the name Corriedale implies. Those seen by me were uneven & wellby & could only

be described as inferior Merino Comebacks. I saw one lind of stud ewes that had been imported under the same alias & for the same purpose. These were inferior & undesirable from every point of view & cannot but injure the flock into which they have been introduced. If the sheep referred to above are a fair sample of the best that can be imported from that locality, then breeders will be well advised to leave them alone — breeding from such animals can only result in an uneven combination of breeds, & in any case they already have much better sheep in the country.

The prospective buyer should be chary of touching anything under the name of Corriedale unless he has proof that its breeding entitles it to the distinction which the name implies.

In view of the interest which local pastoralists are taking in the Corriedale breed, & that little is known regarding their origin or breeding, the following information on the subject may probably be of interest.

The name Corriedale was adopted because the first successful experiment with a view to establishing such a breed was carried out on the Corriedale Estate, Otago, New Zealand.

Extensive experiments were carried out by a number of leading breeders over a term of years with a view to determining which of the long wooled breeds

would blend best with the Merino for the purpose of evolving a new breed to suit a particular class of country & all of conditions. English Leicester, Border Leicester, Romney, & Lincoln breeds all tried out extensively, & eventually this last breed was accepted as most suitable for the purpose.
Unfortunately I am unable to quote the definition of pure bred Corriedale for the purpose of entry in the New Zealand flock book, but it differs little from the Australian definition which is as follows:- (a) The foundation stock must be pure bred Lincoln or Merinos. (b) The sheep must be inbred half breeds for 20 years. (c) In event of a breeder starting this flock with pure bred Corriedales on one side it would only be necessary for the progeny from the half bred Lincoln - Merinos to be subsequently inbred for 15 years.
Good Corriedale sheep on average good County will clip about 10 lbs of wool ranging from 48 to 58 quality. Under New Zealand Conditions where the surface is always dry & hard they have proved very handy, thriving at altitudes ranging from 4000 to 7000 feet where the winters are very cold & snow is common. The pure bred Merino also thrives remarkably on the same County.
In neither the pure bred Merino nor the pure bred Lincoln

sheep are well suited for this County, it would be mist management to go slow on the Corriedale which has been evolved from these two, until results demonstrate that their introduction on a larger scale will prove safe & profitable. I quite agree that what is known as hard camps in this County will carry either Merino or Corriedale sheep but all stations have large areas of soft camps also, & the sheep that is carried on the former must be suitable for the latter also. Those who have definitely decided to increase the Merino strain in their flocks will be working on much safer lines by importing a few pure bred Merinos than they will by importing Merino Crossbreds of even good quality but doubtful origin.

The tendency in the leading sheep Counties is to breed more & more to one or other of the pure breeds, & I am satisfied that the pastoralists of this County will be studying their best interests by doing likewise.

The increased density & fineness which pastoralists here aim to secure by Crossbreeding has always been secured in the ~~flocks~~ of the New Zealand sheep to a marked degree as a result of selection in breeding, & although this is a slower process than Crossbreeding it is safer & the benefit will be more permanent.

If Crossbreds must be kept Coming the Crossing to two distinct breeds

which will blend - must pure breed lines of each breed alternately as may be found necessary. In Australia New Zealand many breeders continue crossing two breeds in this way for long periods with quite satisfactory results. The breeding flocks are divided into two classes - strong & fine wooled - the strong wooled ewes going to the fine wooled rams & the fine wooled ewes to the strong wooled rams.

Inbreeding

The terms that are commonly used to indicate different degrees of the breeding together of related animals are line-breeding, in-breeding, & in-in-breeding. The extent of related breeding which each term should indicate has never been clearly defined, but the following may be taken as substantially correct :- Line breeding means breeding within the members of one family but not closer than the third generation. Inbreeding means the breeding together at intervals of closely related animals such as father & daughter, mother & son, sister & brother & c. In. & in. in breeding means the breeding together of animals of the relationship mentioned in connection with inbreeding but for a number of successive generations in place of at intervals.

The two first mentioned systems

are practised by expert breeders, with great advantage, for the purpose of intensifying & rendering more permanent some highly desirable quality in their stock.
In-breeding when applied in moderation under careful management can be practised with great advantage in any flock of good breeding & quality.
In-breeding can be practised with advantage & safety only by very experienced & careful breeders & with animals of good constitution & a high standard of excellence.
In- & in-breeding is decidedly dangerous & is rarely practised to any extent excepting inadvertently.
It is in- & in-breeding that most concerns this report for the reason that the present unsatisfactory condition of the flocks in this County is due in no small degree to the fact that it has been practised on them for many years in the most intense form & without discrimination.
Rams are selected from within the flocks, animals of very inferior quality & weak constitution, but of the closest relationship, are bred together, & breeding ewes & rams of all ages up to 11 years are run together.
There is no need to go into details regarding the intensity of in-breeding which such a system permits.
~~Cases~~ In those stations where the paddock accommodation would enable breeding ewes of the same age to be

rum in separate flocks, even this precaution is not always taken.
Money expended on the purchase of valuable stud rams for use in this way is largely wasted.
What is required to remedy this evil is stud flocks separate from the main flocks, & to have paddock accommodation which will enable breeding ewes to be kept in flocks according to age &c
That is old rams must be kept they shall not be bred to their immediate relatives including their own progeny.
The evils to which inbreeding gives rise are many & important among them being delicacy of constitution, loss of reproducing power, & delayed maturity.
Wild Animals can breed among themselves without deterioration because they are of the original type of their kind & because of the great law of the wild Kingdom — the survival of the fittest — as a result of which only the most vigorous survive to reproduce their kind. Domestic animals, however, are an artificial production which must be constantly guarded by the influences which brought them into being, in order to prevent their deterioration.
Only about one half of the lambs that are born in this Country survive to reach maturity & it can be accepted that those are the most

vigorous. Hence the fact that the flocks have not suffered even more than they have, as a result of inbreeding is due quite as much to the law of the wild kingdom as to good husbandry. The most vigorous ewe lambs are those that develop & fatten most rapidly, & in countries which cater extensively for the fat lamb market, a very large percentage of these find their way into the freezing works in place of into the breeding flocks, & graziers have to rely on the second best for breeding purposes: when it comes to a question of breeding there is a great difference between the best & the second best, & when the latter must be relied upon for the purpose, constant vigilance is necessary in order to prevent deterioration of the flocks. This is only made possible by using purebred rams, & by respecting the fundamental principles of breeding in other respects.

In this County, as a result of the heavy mortality among young sheep, only the most vigorous ewes reach the breeding age & consequently if breeders will only use pure bred sires of good quality & respect the recognised rules of breeding to a reasonable extent in other respects, they cannot help but bring their flocks to a high standard of excellence. Had they been forced to practise the

present system of breeding with the less vigorous lines the flock would probably have disappeared.
The majority of managers realise that the present system of breeding is wrong, but they have not the facilities at their disposal which will enable them to alter it. It is in the interests of owners to see that these facilities are provided with the least delay possible.
There can be no doubt that loss of reproducing power, reduced constitution, as a result of intense inbreeding over a long period, has contributed very materially to the unsatisfactory natural increase, which condition is causing much inconvenience & loss to the pastoralists of this Country.
Wool.

An estimate which is based on the most reliable information available regarding the matter indicates that the average yield of wool per sheep over the flocks of the Colony is approximately 6½ lbs.
In view of the fact that the proportion of breeding ewes is under 40 per cent & that none of the light clipping breeds of sheep have to be carried in order to cater for a mutton or fat lamb trade, it would be quite possible to raise this average to 8 lbs by replacing the sheep that have passed the profitable age

by youngish ones, by applying more approved methods of breeding, particularly to those flocks that are now yielding an average of 5 1/2 to 6 lbs of wool. This extra 1 1/2 lbs. of wool from 647,000 sheep at the low value of 1/- per lb. would produce an additional fourty eight thousand five hundred & twenty pounds sterling (£48,5-2-0) per annum for the Colony which amount would be sufficient for development purposes. Judging from the information I have been able to obtain on the subject, the classing of clips into attractive parcels of uniform quality is not seriously undertaken, one station only, employing an efficient classer. In Australia & New Zealand, where there is nothing approaching the variety of type in single flocks that one sees here, great importance is attached to this branch of work, & the clips from all flocks of a size similar to those of the Falkland Islands stations are handled by professional classers.
A large proportion of small clips also, i.e. those under 30 bales, for which the services of a professional classer cannot be secured at shearing time, are unpacked & classed at the brokers stores, prior to sale, for which service brokers charge clients 1/2 per lb.
Intercalating also is practised extensively. This means putting

together a number of small lines of the same value & quality, but belonging to different Clients in order to get the benefit of competition from the principal buyers.
Those buyers who matter most want big lines, & only one Class of wool in each parcel, & when it is presented to them in this way they can afford to bid to its uttermost value because they have been able to gauge accurately its greatest yielding Capacity.
When they do buy mixed parcels they either base their value on the poorer fleeces in the parcel, or, at the least, they will allow ample margin for the trouble of sorting & disposing of the portion they do not require for their own use.
Usually however parcels of very mixed wool are purchased by speculators who own works where they sort & scour it for resale.
I quite realise that under existing Conditions an expert Classer cannot be secured by many of the local stations as the County does not offer them suitable employment during the remainder of the year. The foregoing remarks are made with a view to stressing the great value of Classing Clips into parcels as even as may be possible under the circumstances.
Already, earlier in this report, I have referred to the necessity for keeping to one type of sheep in order to get evenness

in the Clip.

Maintenance

With very few exceptions most of the things that matter in the way of permanent improvements on the Stations were done by the Pioneers of the Sheep farming industry during the period between 1860 & 1890 & those who have been responsible for the welfare of the industry since have not only failed to carry on the work of development at a normal rate, but they have actually failed - some woefully - to maintain that which was accomplished for them.

Not only are the Subdivisions wholly insufficient to provide for the efficient management of Stock & Pasture, but a large proportion of the fencing that does exist is in a very bad state of repair - in fact some of it has reached a stage when it is a misnomer to call it "fencing", as it has long passed the condition at which it was capable of filling the purpose of fencing, even to a minor degree.

On a well managed station there is always on hand a good supply of Posts, droppers, & fencing wire at the homestead, & also small depots of posts & droppers neatly stacked at convenient centres

on divergent parts of the property, ready for repair work to be carried out when the hands are not otherwise employed, or at any other time should circumstances demand it. It is unusual to find any fencing material whatever, either at the homestead or elsewhere, on Falkland Islands stations. Some stations do not even possess sheep proof paddocks in which to hold rams with the result that a lot of lambs are born out of season & have little or no chance of surviving.

It is not possible to manage either stock or pasture to any advantage without good fencing & I have known many capable managers who would decline to take over ~~control~~ the control of some of the properties here, unless funds were placed at their disposal for fencing & other repairs. The old adage "A Stitch in time saves nine" is very applicable to fencing, for when once animals commence breaking through a weak spot in a fence they strain the wires & make further weak spots in other places. They also acquire the habit of fence breaking, which, when once learned, they do not readily forget.

Quite apart from the annoyance & loss for which defective fencing is directly responsible, ~~it is bad~~ it is bad management from any

other point of view to let maintenance work accumulate, unless when compelled to do so during periods of low prices for produce when funds are not available.

When funds are provided for repairs which ~~have~~ have been allowed to accumulate, those that are responsible for its expenditure are apt to rush the work, with the result that material is often not brought to the best advantage, extra labour has to be engaged for work which could have been done by the regular hands, a great deal more red tape is necessary than would have been the case had the defects received prompt attention.

To enable a manager to work to advantage he must have a supply of material, for maintenance work on hand at all times, & he should have an appropriate idea as to the amount that is likely to be available for development & maintenance from year to year, in order that he may make his arrangements well in advance & to the best advantage.

The Standard of homestead conveniences, other than dwellings, is low as compared with those on stations running flocks of similar size in Australia & New Zealand.

The internal arrangement of the great majority of wool sheds is inconvenient & in a few cases very much so. The lighting as well

as the accommodation on the wool floors is usually insufficient to enable the wool to be handled to any advantage. Some sheds are so small as to be out of proportion to the size of the flock that have to be passed through them. There is also not sufficient accommodation in the way of homestead paddocks to enable sheep to be held during shearing without supplying a serious check. Stabling accommodation for horses has been very much neglected & only at one station did I see reasonable provision made in this respect. Horses are generally unhoused outside in all weathers, & when they reach a settlement hot & tired after a long day, instead of being able to rest & cool off under sheds in compound, the gear is pulled off & they are turned adrift without either a feed or a rug, notwithstanding that good paddocks can be produced cheaply. It is not surprising under the circumstances that that each shepherd requires about fifteen horses with which to do his work.

Shelter belts of any kind are valuable in any Country but in a Country with a climate such as that of the Falkland Islands they are extremely so. In New Zealand shelter fences in the aggregate,

run into many thousand miles. Where in localities where the climate is semi tropical they are planted extensively, with a protecting fence on either side, until they reach a stage of growth at which stock cannot do them serious damage. Gorse forms a large proportion of our hedges & it also grows quite well in this country, but the only gorse hedges I have seen are those planted by the Coaches & Pioneers, & in most cases even these are sadly neglected. Gorse hedges can be planted to great advantage, particularly on the windward side of homestead paddocks & paddocks where stud flocks are kept.
The condition that exists in the vicinity of a station homestead is usually a very good index to what one may expect to see elsewhere on the property & Falkland Islands stations do not fail in this respect. Although development has not proceeded at a normal rate even in the vicinity of the homesteads, the improvements that do exist are well cared for in most cases. The condition of a few homesteads however is certainly not a credit to the management & in such cases the condition of the outside fences, the pasture, & the flocks is much on a par with that around the

homesteads.

The average price received for wool during the past 25 years has been very satisfactory, & had a fair proportion of the profits which have been obtained from the products of this Country during that period been invested in development & maintenance work, it would have provided substantial progress & security of income in the future, but unfortunately this has not been done. There certainly have been periods of depression but these have been more than balanced by others of exceptionally high prices. Funds are urgently required to catch-up arrears of maintenance & also something for development. Practically all stations, & owners will be studying their best interests by making available for this purpose, for a number of years, all profits outside the amount required for reasonable personal expenses. Unfortunately those who own the land in this Country, with very few exceptions, live elsewhere, but besides protecting their own interests it is their clear duty to the Colony to do more in the future than they have done in the past to protect it to assist from which they derive their livelihood.

Experiments

I have met a number of people including farmers who contend that the conditions existing in these Islands are so different from those of some other countries, that the methods which are followed with such great success in the latter cannot be applied here. This statement has been made by people who have never seen the Countries referred to & know little regarding the conditions existing there.
I am informed also that there are those who hold that all the progress that is possible in connection with the sheep farming industry in this Country has already been accomplished & that all that now remains for farmers is to do the best possible with things as they now are.
Before dealing with the experimental work which I believe to be necessary in the interests of the Colony I wish to give a few reasons for dividing, emphatically, with these statements taking them in the order in which I have referred to them.
In New Zealand we have approximately 6,000,000 acres of tussock pasture, the land of which has about the same carrying capacity per acre as the Falkland Islands

but which is much more precipitous
than it is colder during winter
infinitely more dangerous owing
to snow. The total area of
the Falkland Islands is approximately
2,900,000 acres.
The result of injudicious burning
& overstocking of such pasture in
New Zealand is even more disastrous
than here for the reason that the
rainfall is much drier than the
sheep Camps in this Country.
The use of mongrel sires mating
the breeds promiscuously is
practised in Australia New Zealand
would have precisely the same
result as here. Indiscriminate in &
in-breeding is practised would be
quite as injurious to the flocks of
Australia & New Zealand as it has been
to those of this Country. Rough
handling of stock is permitted on
Australian & New Zealand stations
would do quite as much harm
as it does here.
Details of management may
differ but the fundamental principles
apply in all Countries alike. A
successful manager of hill
Country in New Zealand would
experience little difficulty in
taking over the management of
a property in this Country.
With reference to the statement
that everything possible has been
accomplished. I can only say

that I have been ~~surprised~~ disappointed with what has been accomplished, & surprised that so little effort has been made to accomplish.
In place of keeping their principal intact & living on the interest so that something will be left for posterity, the people who have owned the County during the past 60 years have been drawing steadily on their principal as represented by the soil & pastures & now that it shows pronounced signs of exhaustion it behooves them to get to work & replenish it.
To enable this to be done on a large scale & at the same time economically, experimental work on a small scale is necessary in order to determine the lines which the major operations should follow, as well as the cheapest & best methods to adopt in following them. In order to avoid waste, experiments should not be duplicated, & in order to obtain conclusive results they must be carried out by or under the control of a practical Agriculturist who is capable of both directing the work & arriving at reliable conclusions regarding the results obtained.
In this County this will be made possible only by the State Industrial Ring the experimental work.

& I strongly recommend this to suggest that a suitable area be provided for the purpose forthwith so that operations may be commenced with the least delay possible. I have inspected various Government reserves in what may be termed the Stanley district but none of these are suitable for the purpose, the principal reason being that the soil conditions are unlike those of the areas on which both Reclamation & Agricultural operations are most urgently required elsewhere i.e. the land Ramps which is now growing diddle-dee & other inferior vegetation. There is also the fact that no site so close to the Airport is practically the whole of the Stanley district as to obviously hamper Extensive Agricultural operations should such be deemed advisable at some future date.

It is nevertheless highly desirable that the experimental Area shall be as convenient to Stanley as circumstances will permit so that farmers from all parts may visit it & that a market shall be available for surplus products.

The country in the vicinity of Port Louis is typical of the areas which are most in need of Reclamation elsewhere for which

any agricultural operations also which may be found profitable will be conducted. In order that the experimental farm may be self supporting & that a small flock of stud sheep & herd of stud cattle may be carried the area provided for the purpose should be not less than 6000 acres. Each of the stations in the Port Louis district includes an area which would be suitable for the purpose but that which I consider most suitable is block 5 of the Falkland Islands Companies property known as "Green Patch". Approximately 6000 acres.

This is not by any means the best block of land in the Port Louis district my reason for recommending it is that it presents a variety of conditions which makes it very suitable for the purpose.

It includes an area of light stony camp, an area of camp covered with small ferns, an area covered with diddle dee, an area densely covered with balsam bog, & an area which is still carrying fairly good native pasture.

The cattle guessed have almost completely disappeared from the greater portion of the block.

It is also particularly well situated from the point of view of accessability, as it can be reached equally well from either Port Louis or Port Salvador, one of the main overland routes to & from Stanley passes through it.
The gibbet portion is exposed to the prevailing wind which will ensure that experiments will not be carried out under unduly favourable conditions. All stations in the Colony possess areas as good as this & the majority have much better.
Following are the experiments which I consider should receive first attention :- Regressing land ramp by cumpace sowing, growing roots & other forage crops on an extensive scale giving first attention to turnips, swedes, rape, & the different varieties of oats not forgetting Algerians & gautons. Carrots & parsnips also grow well in this County but these require a great deal more attention than those mentioned in the preceding paragraph.
Experiments could be carried out with stock licks also, if such is advised by the Rowett Institute.
Drainage is another matter requiring attention & the Dept recommends offers facilities for limited experiments in this direction also.

I believe that a very large proportion of what is known as wet Camps is undrainable from a practical point of view on account of their lying so close to the surface & the retentive nature of the peat but I am nevertheless convinced that great benefit would be derived by draining much of the low lying country. Many of the valleys that are at present in a waterlogged condition are naturally great stores of humus, but waterlogged land of any quality will not produce any of the more palatable nutritious grasses & it would only be a waste of money to apply either grass seeds or fertilisers to them until the physical conditions are altered as a result of drainage.

The first step towards the reclamation of such areas is to drain them so that the air may be admitted, that the peat may decompose & that the rains may pass through the soil instead of lying on the surface until removed by the process of evaporation.

I certainly think that an area of such country should be effectively drained & later, when it settles, portions should be surfaced down & portion cultivated.

Regrassing The first step towards regrassing is to ascertain which grasses will thrive & give

the best results under the conditions existing in the County, as well as the most favourable season for sowing, & the best method to adopt. It is unwise to endeavour to establish on any County grasses that are not suited to the environments simply because they are more palatable & nutritious than others that are suitable.
The habit of growth of all vegetation including grasses differs under different environments & whether any grasses that are sown will establish themselves & persist depends on the suitability of the environments, & to some extent, on their respective abilities to adapt themselves to fresh environments.
At two of the stations visited I was informed that considerable sums had been expended on grass seeds (Cocksfoot Rye & C) which had been sown with disappointing results.
This is not at all surprising, for in the first place the seed was selected without sufficient knowledge as to its suitability, & in the second place it was sown on County so heavily stocked with sheep that any varieties that may have been suitable had no chance to establish.
Not only is the money expended on experiments that are carried out in this way wasted but the pastures which are inevitable under the

circumstances serve to discourage further effort in this & other directions. In order therefore to avoid disappointment & waste of money, as well as to select in the shortest time possible, the grasses which can be sown with the greatest advantage, all that are likely to suit the different soil conditions should be tried out separately in plots of about 6 acres to each variety.

The area or areas comprising the plots should be securely fenced so that the stock that will have access to them may be properly regulated.

In this County, where the soil conditions cannot be considered favourable to the growth of the most palatable & nutritious grasses, the road to success is most likely to be travelled by exploiting those best fitted for the environment without giving undue consideration to their nutrition. Following are the grasses which I recommend should be given first attention:—

<u>For Surface Sowing Land Camp.</u>

Danthonia pilosa, Chewings fescue, Lotus corniculatus, White Clover, & Yorkshire fog.

<u>On Moist Camp.</u> (not wet Camp)

Brown top, meadow fescue, Lotus major, Crested dogstail, Yorkshire fog, White Clover & Suckling Clover

For laying down Pasture After Cultivation

Cocksfoot, Timothy, Crested dogstail, Perennial Rye-grass, Brown Top, Lotus major, Red Clover, Suckling Clover, Alsike Clover.

In order to determine the most suitable season for sowing it will be advisable to sow portion of each plot at different seasons, say half during Autumn at about the time the seed of the native grass falls, & the remaining half during early spring at the time the first growth is usually experienced.

The class of County which is most in need of regrassing & which will pay best for regrassing is the hard Carp & this class should have first attention, & land growing middle-dee & small fern should form the major portion of the experimental area for sowing. The middle-dee &c. should be burned off portion of the area & the land immediately harrowed & the seed sown immediately the ground cools. The remaining portion should be pulled about with strong harrows or some other implement that may be devised for the purpose. Probably the latter method will be found most suitable as the middle dee & small fern remaining will protect the young grass until it becomes established. Immediately the sowing is completed

a mob of sheep should be turned into the area to trample the seed into the surface soil & consolidate it.
"The different varieties of grass seed which I have recommended for trial vary greatly in the number of seeds per pound, & therefore the number of pounds that should be sown per acre will also vary accordingly.
It is desirable that a relatively heavy sowing should be applied in the case of the experimental plots & I recommend that the following quantity per acre (in pounds) of each variety be sown

Surface Sowing.

Danthonia pilosa 30, Chewings fescue 24, White Clover 15, Yorkshire fog 14, Brown top 16, Meadow fescue 35, Dogstail 23, Lotus major 16, Suckling Clover 16.

For laying down pasture after Cultivation

Cocksfoot 25, Timothy 18 dogstail 20, Perennial rye 35, Brown top 16, Lotus major 20, Red Clover 35, Suckling Clover 15, Subterranean Clover 15, White Clover 15.

"The grasses mentioned in the foregoing all provide permanent pasture & such grasses are usually slow to establish themselves. For this reason too much should not be expected from them nor should hasty conclusions be arrived at regarding their respective merits as a result of the first

years growth.
These plots, if once established, will continue to provide information for many years & it is quite possible that some of the grasses which make the poorest showing during the first year may eventually prove the most valuable.
The different plots should be carefully marked before the seed is sown, by driving stout stakes of an indurable timber firmly into the ground on the boundaries. A small notice board also should be erected on each plot bearing the name of the grass sown.
If danthonia can be successfully established on the hardest of the camp it will prove the most valuable grass which it is capable of producing. Danthonia is a native grass of New Zealand where it thrives on the poorest, driest & most stony country, & through its agency great areas that were once looked upon as of little if any value - because they were incapable of carrying English grasses - have been brought into very profitable use. It is also one of the very few grasses that can be burned periodically without injury & for this reason it has proved extremely valuable in reclaiming land from inferior vegetation such as bracken & scrub.
The seed is particularly well adapted for carrying in sheep

wool which accounts for its very rapid spread in New Zealand since its value on poor County has been fully recognised. The is practically the whole of the sowing of this grass is done by removing Stock, after the seed falls, from areas while it is already established onto areas where it is desired to introduce it. It is also carried by the wind for a considerable distance
There are two varieties - Danthonia Semiannularis & D - pilosa - the latter being much the better of the two. Danthonia is a perfectly permanent grass but is slow to establish itself.

Swedes & Turnips

In New Zealand Soft Turnips & Swedes are grown on an extensive scale & to great advantage for Stock food, the average area in this Crop being half a million acres per annum. All Classes of County are used for the purpose including Considerable areas on inlet. It is not found possible to establish grass without first cultivating it. The ground is usually ploughed from Sept to five months before the season for sowing & immediately prior to sowing it is disced & harrowed to the extent necessary to prepare a good seed bed. The seed & artificial manure are sown

at one down at one operation by a horse drawn machine which has a sweep of about 9 feet wide. The usual sowing is about 14 ounces of seed & from 3 to 4 cwts of Chemical manure to the acre.

When sowing is completed the crop receives no further attention until it is ready for feeding off by the stock. When the crop is ready for feeding a section is divided from the main crop by a temporary fence & when the stock finish this the fence is moved back & they are given a fresh section. When the stock are shifted onto a fresh section, the shells & roots of the turnips on that which they have left are brought to the surface either by grubbing or discing & other sheep, usually stock breeding ewes, are turned in to clean them up. Turnips are used extensively for wintering stock sheep including hoggets, for flushing breeding ewes before mating, & for fattening stock for slaughter. Fed in conjunction with hay they also provide about 90 per cent of the food, other than pasture, for wintering dairy cows stock running on turnips are always given access to rough pasture adjoining.

It is estimated that 20 acres of an average crop of turnips will feed one thousand sheep for one month. In New Zealand

a Crop of turnips grown in the manner described in the foregoing is worth from five to ten pounds per acre according to the season & weight of Crops. Rape & other fodder Crops also are grown extensively for fattening lambs & carrying hoggets & breeding ewes through the winter in good Condition. In New Zealand we have a great variety of Soil Conditions ranging from Ares that will carry one dairy Cow or eight sheep to the acre down to extensive areas poorer than any portion of these Islands are not Chemical manures on all. In fact great areas of our poorest County Could never have been brought into profitable use without them. We have inexhaustible supplies of lime in the County and important various other Chemical manures from all parts of the world to the value of appropinately half a million Pounds sterling per Annum. I do not mention the foregoing facts in Connection with my own County simply for the purpose of advertising what we are doing but to support my recommendation that action should be taken with a view to determining what Can be done Economically on similar lines in this County.

Different Soil Conditions require different Kinds of Chemical manures

while the result of the soil analysis which is at present being carried out by the Rowett Institute will provide a valuable guide as to those which are likely to be most advantageous in this county, finality in the matter can only be reached as a result of practical experiments. Lime is one of the fertilisers indicated but this may be required in such. but R. that others such as basic slag, superphosphate, Kainit &c. may be found more profitable:
The best methods of cultivation to apply also, can only be determined by practical experiments. Our experience with land of a peaty nature in New Zealand has been that deep ploughing encourages the growth of couch & other weeds & that it pays to keep the cultivated surface soil as near the top as possible, particularly during the early stages of development. In laying down pasture in County of a peaty nature consolidation of the surface soil is of vital importance & this can best be accomplished by grazing young pasture, ~~with Cattle~~ as much as possible, with Cattle in place of sheep. This also gives the young grass a better chance to establish.
When a crop of turnips has been eaten off by stock the ground is already fairly well ~~consolidated~~ & if this crop is to be followed by grass

& a seed bed can be prepared by discing & harrowing & harrowing in place of ploughing this method should be adopted. When laying down Postine turnips or rape seed is often added & this would certainly be worth a trial here as feeding off either of these crops with cattle would greatly hasten consolidation of the soil which is so essential to success when dealing with this class of County.

It would be beyond the scope of this report to go into greater detail in connection with experiments at this stage but if the Government decide to proceed with such a scheme I shall be pleased to forward, immediately on my return to New Zealand, printed matter which will provide the fullest possible information on all matters relating to stock & agriculture in that County, including particulars regarding experiments, which will no doubt be of assistance in connection with experimental work in this County also. Should the Government decide to proceed I recommend that the boundary fences should immediately be made secure & all sheep removed, & that it should not again be stocked with sheep for at least twelve months. During that period it would be

beneficial to carry any number of cattle up to one hundred & fifty on the block, although all or even any of them might not be the property of the State. Initiatory operations such as fencing could proceed during that period.

Before any expenditure is incurred on subdivision fences & other improvements a full plan of such should be carefully thought out, inserted on a large scale plan of the block, & rigorously criticised in order that everything may be done to the best advantage & that alterations, which mean waste, shall be avoided. The provision of shelter for stock is a matter of first importance in connection with the working of the farm. Besides being one of the matters in which the economics of the Colony requires a lead.

The places where it is intended to plant shelter should be shown on the plan viz a narrow strip can be ploughed at such places before the fences are erected it will save a great deal of manual labour later. Besides planting shelter along the windward side of subdivisions strips a few chains in length should be planted at intervals over the Run & protected with double fences.

At the moment gorse is the only shelter that can be relied upon & I suggest

that should the Government take over the block one of the first activities should be to cultivate & annually fence about one acre of the ground (Kolpsely) & sow it with gorse which will be available for planting out later as required. A good dressing of Chemical manure applied to both the nursery plot & the young hedges when planted out should be of considerable advantage.

Stock.

Whatever class of stock it may be found necessary to carry during the first few years, the ultimate aim should be as large a flock of pure bred sheep as the property is capable of carrying & a herd of pure bred cattle of one of the hill strains - Personally I would prefer Romney sheep & Aberdeen Angus Cattle.

I suggest that a start should be made with two separate flocks - No. 1 Comprising a small flock of imported ewes & No. 2 a larger flock of the best ewes that can be procured locally. Sufficient imported rams would be required to start both flocks but thereafter importations would be for No. 1 only which would provide the rams for No. 2. In this way the standard of No 2 would be steadily improved & right from the start the greater proportion of the surplus increase would be

of better quality than the majority of stations are now using for building purposes, so that a ready market should be available for these as well as for surplus rams from No. 1 flock.
A similar system could be adopted in connection with cattle.
Six heavy horses would be required (four for a team & two spares). I suggest that five should be mares & one a quiet stallion which could be used for dray work &c. as well as for stud purposes. Ordinary medium draught mares of good quality would be more suitable as well as much cheaper than very heavy well bred ones.

Fences.

All fences should be erected to hold cattle as well as sheep. In New Zealand the usual general utility fence consists of 6 plain no 8 wires with a barbed wire above, straining posts 10 chains apart, four posts to the chain & two droppers or standards between each post. Fences are usually about 3 ft 9 in high.
I suggest that the fences should be constructed on the contract system the Government providing the material & laying it on the lines.

Labour.

The labour that may be required from time to time will

depend largely on the development that may be considered advisable as a result of the initial experiments, but basing my estimate on our method of working such a property in New Zealand, I suggest that in the original estimates provision should be made for four regular hands as follows:—

No. 1 A Stockman with a sound general knowledge of sheep handling to act as manager - Salary Four hundred pounds per annum (£400) Pound.

No 2 A farm hand possessing a sound knowledge of practical Agriculture who would be capable of conducting all Agricultural operations - Salary Two Thirds hundred pounds per annum Pound.

No 3 A station hand who would assist in any direction required - wages according to the highest local rate of pay for such work, Pound.

No 4 A male Cook who would also attend to odd jobs about the Settlement - wages according to the highest local rate for such hand Pound.

An experimental farm can be either a great asset or an expensive luxury according to the efficiency of the management including the control of its finance as well as the actual farming operations. I am speaking from experience in recommending the Government of this Country, should it proceed with the

scheme, to instal a sound system of accounting & rigorous control of Government property, including the products of the farm right from the start. Even the smallest quantity of produce should not be removed without being recorded in the farm books. No issues should be done, either for private person or other Departments, without either payment or an account credit. What may appear tripling processes in such matters to start with have a habit of developing into extensive abuse whereas efficient control in such matters encourages a manager & tends to efficiency in other directions also. While guarding against waste however care should be taken not to stunt development; or experimental work that may benefit the Colony

Implements

The cost of the agricultural implements required would not amount to much & their selection would be best left to the manager.

Health of Stock

Judging both by my own observations & impressions gained in the course of conversation with managers during my tour of the camps it would appear that all classes of stock are very free from diseases of a contagious nature. Footrot & internal parasites are the troubles, which, from the nature

nature of the environments, one would expect to find very prevalent among sheep.
I think not had sufficient experience with the local sheep to express a definate opinion regarding the extent to which they are affected with internal parasites but it would not appear to be at all serious.
The total absence of footrot in such environments, however, is quite remarkable and would lead one to believe that the soil may possess some property that is deadly to the bacteria which causes this trouble in other Countries.
I am informed that sheep have arrived in this County suffering from footrot and recovered without any treatment.
I can assure owners that they have a lot to be thankful for in this respect for in other Countries I know, it would be almost impossible to Carry sheep on an extensive scale on what is known in this County as salt Comp.
The risk that the Colony may run & the advantage that is likely to accrue from importing Stock from South America are questions on which I am not prepared to express definate opinions with my limited knowledge of the conditions existing there.
I am informed by some in this County who have seen flocks in the Coastal area of South America, that good sheep can be procured there, but I can only say that any advantage the local

flocks are likely to derive from stud sheep such as I have seen, while I can from there, does not warrant any risk being taken in order to introduce them.

Judging from information which I have gleaned from the Official records, however, as well as from statements made to me regarding the prevalence of various diseases of a highly contagious nature by persons who are conversant with the conditions existing there, the importation of stock from the Coast entails considerable risk, & great care would require to be exercised in order to guard against the introduction of highly contagious diseases.

However, young flocks are urgently required in fairly large numbers even now, & unless the present very unsatisfactory position regarding the annual increase can be remedied in the immediate future, a stage will be reached at which this class of sheep must be imported from the cheapest most convenient source, even at no small risk.

In event of such a position arising, I suggest that the safest procedure to adopt would be to define the area or areas from which stock can be procured with the greatest safety, & to appoint some reliable person having a good knowledge of such areas, as well as a knowledge of stock, whose duty it would be to certify as to the correctness of health certificates & Reg

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the Government advised regarding outbreaks of disease.

Stock Inspection

Unless temporarily, such as in the case of a serious outbreak of disease, I am of opinion that one Officer should be able to attend, comfortably, to all duties in connection with Stock Inspection in the Colony.

Statistics

In view of the serious position which has developed in the Colony in consequence of the heavy mortality among young sheep, I am of opinion that, in order to keep in sufficiently close touch with the matter, the Government requires more detailed information than the annual return form at present in use provides for. I have drafted & submit herewith a form (Specimen No 1) which should provide all information required meanwhile.

Control of Wild Geese.

I am of opinion that a substantial reduction in the number of wild geese is highly desirable & would be very beneficial to the farming industry. While fully appreciating their value as a supplementary food, as well as from the point of view of a Sportsman, I am convinced that when considered in their relationship to the sheep farming industry of the Colony they constitute, in their present numbers, a pest & that they

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should be treated as such.
I suggest that the money which Government is at present paying for the destruction of wild geese would be more advantageously expended on experimental work, & that in place of continuing the present system legislation should be enacted providing that farmers must destroy wild geese on their land to the satisfaction of the Chief Inspector of Stock. Farmers can destroy wild geese at little cost & without Government assistance, unless they cannot carry out the experimental work which is necessary in their own interests to any advantage.
In any case a large proportion of the geese for which Government pays under the present system would be destroyed in the ordinary course of events, for food & sport.

Birds of Prey

During my tour of the Western Island I had several excellent opportunities of realising the loss for which the various kinds of prey can be responsible, particularly in respect of sheep that are rendered temporarily more or less helpless from any cause, & there can be no doubt that they are responsible for considerable loss of both ewes & lambs during lambing season.
I consider that, from various points of view, birds of prey present quite

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Live Stock Marks

The present system etc. etc. .... be replaced by ~~something~~ rules on the lines shewn in Appendix A to this Report.

Appendix A
Draft legislation for ~~[illegible]~~ Live Stock Marks

1. Mark means:– etc etc

to the end of section 18 on page 102

The ~~following~~ attached Live Stock forms ~~are~~ ~~[illegible]~~ are proposed ~~been prepared~~ in connection with the foregoing:–

(1) Live Stock form No. 2 "Certificate etc.
(2) Live Stock form " 3 " Notice etc.
(3) Live Stock form " 4 " Index

[Add here to body of Report.] from page 10

"Even should it not etc. etc." to "available

...ona made with

a different proplem to wild geese, & I am of opinion that Government could substantially increase the royalty for destroying them with great advantage, & I therefore recommend accordingly.

Live Stock Marks.

The present system of registering & recording live stock marks is not quite satisfactory & I suggest that the existing ordinance governing the matter could with advantage, be replaced by something on the following lines, which is really a modification of the system in force in Australia & New Zealand.:-

1 mark means

(a) In the case of cattle an earmark made by punching the ear with pliers so that in no case shall more than one fourth of the ear be removed, or a distinct or plain mark not less than two inches in length burnt with a branding iron into the skin, or bolt in conjunction.

(b) In the place of brands a distinct & plain mark not less than two inches in length burnt with a branding iron into the skin.

(c) In the case of sheep an earmark made by punching the ear with pliers, provided that in no case shall more than one fourth of the ear be removed, to which may be added in conjunction one or more of the following marks.:-

(1) A registered wool brand made with

paint, raddle, or lamp black mixed with oil or tallow or made with other approved material, in plain or distinct letters, figures or otherwise not less than 3 inches in length, on the side, back, shoulder, hips, or rump of sheep.

(2) A metal clip with a distinct registered mark stamped thereon.

(3) A registered pin mark distinctly & plainly made on the face.

2 The Chief Inspector of Stock for the time being shall act ex officio as Registrar of Live Stock Marks.

3 Every owner of stock who neglects to register a live stock mark shall be liable to a fine not exceeding five pounds.

4 Every owner who applies for a live stock mark shall deposit with the Registrar of Live Stock Marks two correct copies of his mark on the forms supplied for the purpose

5 The registration of a mark shall be considered to be complete when the forms referred to in the preceding section have been duly signed & dated by the Registrar of Marks. Such form shall not thereafter be altered in any way.

6 There shall be paid by the owner of a brand to the Registrar of Marks on application for registration of the registration, a fee of ten shillings in respect of the registration of such brand.

7 All sheep shall be distinctly & legibly marked with the registered mark of the

owner before the thirtieth day of April in each year & for every sheep not so marked the owner shall be liable to a fine not exceeding two shillings.

8 Any person having a mark registered may, by writing addressed to the Registrar of marks, relinquish his right to such mark & nominate some other owner of stock in whose name it shall be registered on payment of the prescribed fee.

9 The registered mark for sheep shall be on the off ear for males & on the near ear for females.

10 When it is proved to the satisfaction of the Registrar of marks that any registered mark has not been used by the owner thereof, or by his authority for at least two years previously such mark shall be considered to have been relinquished, & shall be cancelled forthwith.

11 After any owner of stock has registered a mark, no other person shall, without the authority of such stock owner, mark any stock with the same mark, or one so nearly similar as in the opinion of the Registrar to be not distinguishable therefrom.

12 The mark or impression of a registered mark on any stock shall be prima facie evidence of the ownership of the said stock by the person in whose name such mark is registered.

13 Every person who destroys, defaces, or alters

the mark on any stock, or is party to the destruction, defacement, or alteration thereof, unless he is the lawful owner of such stock, is liable to a fine not exceeding fifty pounds and not less than five pounds for each head of stock in respect of which such offence has been committed, or, at the discretion of the convicting magistrate, to imprisonment with hard labour for a period not exceeding two years.

14 Every person who wilfully removes more than one fourth of the whole ear of any stock, whether his property or not, is liable to a fine not exceeding ten pounds and not less than two shillings in respect of each head of stock so treated.

15 Every person who marks any stock with a mark which is not registered, or of which he is not the registered owner, without the authority of such owner is liable to a fine of ten shillings and not less than six pence for each head of stock in respect of which such offence has been committed.

16 In the case of strayglers or stray sheep not the property of the occupier, notwithstanding anything in this ordinance to the contrary, every owner on whose land or in whose shed any strayglers or stray sheep have been shown shall forthwith distinctly & legibly mark such sheep on the head with his registered mark, or, if he has no registered wool mark, with a distinguishing mark of paint or tar.

17 It shall not be lawful for any person—

(a) To cut off, remove, or destroy any ear on the skin of any Stock or Carcass; or

(b) To cut out, burn, or otherwise destroy or deface any brand upon any such skin or

(c) To be in possession of any such skin from or upon which the ear or brand has been cut, removed, burnt, or otherwise destroyed or defaced; or

(d) To knowingly purchase a raw hide or skin from which any brand has been cut or burnt out or destroyed or otherwise defaced, unless in every instance he is able to give a satisfactory account thereof, whenever called upon so to do by any Inspector, Justice, Police Officer, or Court.

18 Every person who commits or attempts to commit, or is concerned in committing or attempting to commit a breach or violation of the provisions of this Ordinance for which no special Penalty is provided is liable for every such Offence to a fine not exceeding One hundred Pounds not less than One Pound.

I have adapted & beg to submit herewith specimen Copies of the following in connection with the foregoing:—

(1) Specimen No 2 "Certificate of Registration of a Fire Stock Mark" for which provision is made in Section 4. "

(2) Specimen No 3 "Notice of Allotment

of a live Stock Mark".

(3) Specimen No 4 "Index to Remarks & Brands & Register of Owners".

Even should it not be deemed necessary to apply the whole of the proposed provisions meanwhile I suggest that it will be advisable to obtain the certificates as provided in section 4. "The best & safest method of filing these is to procure a strong bound book with dummy leaves in which to gum them.

"The purpose of obtaining the Certificate of Registration in duplicate is that copies may be kept in different offices so that in event of one lot being destroyed the other will be available.

Sheep Breeders Association

"Three things of which the Sheep farming industry of this Country stands very much in need are, Combination, Co-Operation, & Competition, Among those who are responsible for its welfare, but unfortunately each & all of these are conspicuous at the moment only by their Complete absence. In all leading Stock Countries there three R's are considered ~~as~~ almost as essential to the farming industry as the three R's are to primary education & although this is, relatively speaking, a small