1933. Kenya

No. 3155.

SUBJECT C0533/436

Rowett Institute Experimental Farm at Naivasha.

Previous
18320/1/32.
Subsequent
28157/34.

FILE C.

1 Mr. H. Holm 3/o ——— 24 March 33

Encls. a copy of a minute to the Colonial Secy. giving detailed of staff arrangements for the Experimental Farm in consequence of the resignation of Mr. Farquhar.

2 To Acting Director of Agriculture 3/o – 1 annexd – 18 April 33

3 Governor Byrne 296 ——— 10 May 33

Gives details of arrangements for the relief of Mr. Gunn in consequence of Mr. Farquhar's resignation & also estimated expenditure 1933-34 & 1934-35.

4 Dr Orr 3/o ——— 30 May 33.

Encls. report on the work of the Nawasha Experimental Farm 1932 & suggests it be submitted to the Council.

Mr. Stockdale.

I understand that you wish to talk over certain of the matters referred to in Nos. 3 and 4 with Mr. Holm next Tuesday.

No.3.

The Governor's despatch confirms the information given in the enclosure to Mr. Holm's letter to you dated the 24th March, (No.1), with this difference, - that Mr. Watson's salary is to be borne by the Naivasha Fund instead of Mr. Graham's, - and the expenditure for the year ended 31st March, 1934 is put at £1,417 as against £1,300. (Financially,) There would appear to be no objection to this, since in either case the amount is less than the amount of the C.D.F. grant.

No.4.

It is difficult to compare the Annual Report transmitted by Dr. Orr with the printed report

(encl: to (13) in 18320/1/32)

report for the year 1931 prepared by Mr. Liversage and Mr. Gunn, because they are drawn up on rather different lines. It would, however, seem that the value of live-stock, equipment and supplies has increased from Sh.59552 at 31.12.30 and Sh.69559 at 31.12.31 to Sh.76725 at 31.12.32. Butter-fat sales realised Sh.7327 net as against Sh.8512 gross for the previous year. Wool sales realised Sh.2555 net against Sh.1443 net for the previous year.

In the despatch dated the 26th January, 1932 (No.26 in 17050) the Governor was asked to send an Annual Report on the work carried out at the Station together with an audited Statement of Account made up to the 31st March in each year, the Statement of Account for the year ending 31st March, 1932 being prepared by the Rowett Institute. The Rowett Institute were asked and agreed to do this (Nos.38 and 40), but it was finally arranged that the Statement of Account should be prepared and transmitted to the Kenya Government by Mr. Gunn (Nos.44 and 45). We do not appear to have received any subsequent information in regard to this Account.

paragraphs 9 and 5.

X

So far as the Colonial Advisory Council are concerned, I would suggest that the following documents should be laid at the next meeting on July 6th.

(1) Mr. Liversage's and Mr. Gunn's Report for the year 1931.

(2)

(2) The Report for 1932 sent by Dr. Orr, - unless a despatch from the Governor is received in the meantime transmitting a copy, in which case the Governor's despatch could be laid, - or unless Mr. Freeston considers that the Governor's despatch should be awaited.

(3) The Governor's despatch of the 10th May, 1933 (No.3).

[illegible signature]

2. [illegible]. 33.

I would suggest that it might be discussed with Mr Holm when he comes to the office next Tuesday. I agree that (1) (2) & (3) might be put before the Council at its next meeting, unless you think that the official copy of (2) should be awaited.

[illegible signature]
2/6

I agree. Mr. Holm may be able to say whether Gov. is likely to send home the 1932 Report with or without comments.

[illegible signature]
2/6.

This matter was discussed with Mr. Holm today. He said that he expected that the Gov. of Kenya would send along in due course a copy of this Report on Naivasha together with audited statement of accounts. He ~~would~~ could see no reason why the Report should not be placed before the Advisory Council even if their meeting took place before the receipt of the official copy of it and

said

A | said that Kenya would raise no question as to such a procedure.

He was unable to say why the reconciliation statement, when the Rowett Institute handed over to the Kenya Department of Agriculture, had not been sent but suggested that if it is not received with the official

A | despatch sending the 1932 Report and the financial statement to March 31st, 1933, enquiry for it should be made from Kenya. Such a statement had been prepared by the Accounting Officer of the Kenya Department of Agriculture.

F. A. Stockdale
6. 6. 33.

Then, with regard to 'A' above, I think we might wait another fortnight before the pp. are circulated to the Advisory Council.

The files 3155/33 - 18320/1/32 and 17050/31 might be recirculated to me on the 21st June.

In the meantime Dr. Orr's letter of the 30th May ought to be answered. I submit dft.

J. G. Hibbert
7/6/33

F. A. Stockdale
7/6

[illegible] 7 June

5 To Dr. Orr (4 encl.) (with 3) 9/6/33

4

Mr Hibbert.

Brought up in accordance with your minute of 7 June 33.

21.6.33

Reg 297

6 Crown Agents 22 June 33
DESTROYED UNDER STATUTE
Details of leave of Mr H. Gunn

4 Governor Byrne 336 1st June 33
Trans. in dupl. Annual Report of the Naivasha Livestock Research Station 1932 & furnishes accounts thereon.

No.7. The first of the two accounts shows that £1,273 was expended out of the first annual grant of £1,500 made from the Colonial Development Fund to cover the salaries and travelling expenses of the officers employed at the Station. The second account deals with the ordinary running expenses of the Station with which the Colonial Development Fund is not concerned, and shows that the balance handed over by the Rowett Institute on the 31st March, 1932, was depleted by some £142 during the year.

I am sorry that when writing 'X' of my minute of the 2nd June, I overlooked the fact that the Governor had, in fact, notified us of the amount of the balance handed over by the Rowett Institute, namely, £1,049 2s. 9cs. (No. 56 in 17050/31)

When sanctioning the Colonial Development Fund, the Treasury stipulated that arrangements should be made for any ~~returns~~ reports to be promptly and widely disseminated (No.24 in 17050/31). In the despatch

despatch to the Governor (No.26), he was told that it was contemplated that the reports from the Station should be submitted in the first instance to the Colonial Advisory Council, and that they should be subsequently printed in London at the expense of the Naivasha fund and widely distributed in all quarters likely to be interested. The Governor in reply asked for an estimate of the cost of printing and duplicating in the manner suggested (No.41). He has not yet been furnished with this.

The report will be laid before the Colonial Advisory Council next Thursday, and the Council will also be informed of the Governor's comments. The Council are not concerned, I think, with the accounts. I have, however, sent a copy of the latter to Dr. Orr.

The next step, I suppose, is to decide upon the form which the printed report should take, and the number of copies that are likely to be required, and then to ask Printing Dept. to obtain an estimate. Presumably, we should telegraph the figure to the Governor, and obtain his approval before the order is placed with the Stationery Office.

With regard to numbers, I am somewhat at a loss to suggest a figure, and perhaps Mr.Stockdale will advise in this connection. The report should certainly go to the bodies in this country which I have marked on the enclosed copy of the standard distribution list. Twenty copies will also be required for the Colonial Development Advisory Committee, and also copies for the Economic Advisory ~~Committee~~ Council Cttee, and, presumably, a certain number each for Colonial Governments that are likely to be interested. Perhaps a good idea would be to get Printing Dept. to ascertain what would be the cost of printing 125, 250, 375, and 500 copies respectively.

20
6
11
45
8
53
22 R.
75

I do not know what papers have been circulated to the Colonial Development Advisory Committee since the despatch of the 26th January, 1932, (No.26 in 17050). There is no indication that ~~they~~ the Cttee have received any further papers, but, subject to Mr. Williams' views (the papers might be sent to him later), it would not seem that circulation of any of the despatches issuing since that date is necessary.

A

? Duplicate of despatch, with original enclosure, should be sent to D.C.A. forthwith LF ref. 29 in 17050.

J. G. Hibbert

7th July, 1933.

If distribution is made to the Depts. concerned an issue of ~~[illegible]~~ 250 copies should suffice. I would suggest that distribution in the U.K. be done from here & the balance copies being sent to Kenya for distribution from there. This is the policy adopted for the Amani reports.

We might send Kenya a list of institutions to which copies should be sent, asking them to add to it and allowing say 50 copies for distribution locally in Kenya.

F. A. Stockdale

7/7

Received 10/7/33 CAG.

An idea of the size of the Report, in print, can be obtained from Appendix X to the Kenya Agric. Dept. Report 1931. (pages 324–338). Kenya has been told that the Report is to be presumably printed in London, but no doubt it will be suggested in Kenya that the Report could be printed cheaper locally. (The Amani Report has a large distribution, 1125 copies are ordered.)

? P.D. to obtain an estimate for 250 copies, as proposed. & Copy of 7 with encls in orig to D.C.A. Ref. of 29 on 70507/31. Duplicate encls to be filed.

C.A. Grossmith 10/7/33

Mr. Christian

If you can give us an estimate of the cost of printing in London, we can ask the Colony by tel whether they agree

[signature] 11/7

Mr Freedom

We estimate the cost of 250 copies at about £13.

[signature] 19/7/33 P.D.

[signature] 17/7/33

6

D.L. Then dupls to D.C.A. as proposed by Mr. Grossmith

[signature] 17/7

X

To Govr. Kenya Tel No 154 – conf – 17.7.33

D.C.A. (with 7 & encl. in orig) [initials] 21/7/33

4 to D.C.A. [initials]

No O.A.G. Tel 145 — 21 July 33

DESTROYED UNDER STATUTE

Agrees to cost of printing of Annual Report.

? Now ask P.D. to arrange for the printing of 250 cop. of the Report. Size 8vo. or Royal 8.vo. (i.e. usual Annual Report size)

I suggest that there should appear on the cover:–

A

Kenya Colony and Protectorate.
Department of Agriculture.

Naivasha Livestock Research Station.

Annual Report 1932

Unless it is considered desirable to give the title shown on Appendix X of the Dept of Agric Rept 1931:–

"Experimental work and investigational work at Government Farm, Naivasha (in collaboration with Rowett Research Institute Aberdeen)."

C.A. Grossmith 25/7/33

As at A.

[signature] 25

Recd 6 Mr J.R. Williams

Mr Parkinson

For authority to print: the idea is to get the S/O to do it as an annual report, Kenya to pay. Cost about £13.

J.E.W. Flood
27.7.33.

acct
27.7.33
Stone

Report detached
[signature]
27/7/33

11 Extract from minutes of the 18th meeting of the C.A.C. of Agriculture & Animal Health 13th July 33.

? Now send copies of 11 to D.A.S.
I submit draft desp to Kenya

C.A. Grossmith
2/8/33

Please [signature] if you agree

[signature]
3/8

[signature]
3/8

12 To Kenya 589 (w/c 11) 3 + 7 amended 9 AUG 1933

Proof of the Report herewith for approval

? Print off
[signature]
21/8/33

C.A. Grossmith
22/8/33

[signature]
22/8

J.E.W. Flood
23.8
Stone

Mr Grossmith

Copies of the Nairobi Report have now been received

I have sent copies to

Sec of State	Mr Fawcela
Earl of Plymouth	Mr Stockdale
Sir S. Wilson	Mr Hibbal
Mr Parkinson	E Rea.

There is a copy x attached for [illegible] [illegible]

x 124 x The balance of the 250 copies are with the Despatch Section.

Action as to distribution is required

[signature]
31.8.33

Distribution:—

19 copies for distribution to Institutions in this Country — see list flagged.

done 8 Copies for Office distribution

22	Reserve
20	C.D.A.C.
6	E.A.C.C.
175	Kenya for distribution to such Dependencies & Institutions as may be interested
250	

Mr Stockdale has agreed to this distribution C.A.G.

1 copy sent to Miss Walker, Richmond Terr.

Shewn to Library

I submit draft desp.

C.A. Grossmith
2/9/33

[signature]
4/9

[signature]
4/9

in distribution first note on [illegible] 8/13

Reserve, go to second note on [illegible] 8/13

Mr G.B. Williams [illegible] 8/4/7

13 To Kenya 677 (w/175 c/s Report) 7 SEP 1933

14 To 18 Institutions (w/copies of Report indicated) [illegible] 12/9/33

15. A/Govs. Deputy. 434 ——— 11th July. 33.

Trans. copy of the certificate signed by the Auditor & Mr Gunn regarding the transfer to Kenya of the credit balances of the Rowett Inst. Farm Acct. at 31st March, 1932.

No action [illegible] ag/13

No. 15. ? Put by

It still remains —
(a) to send copies of the Report to the E.A.C. This might be done L.F. "for the info. of the Sub-Com. on the Mineral Content of Natural Pastures" regd No. 17 on 18320/1/32 Ke.
(b) to distribute to C.D.A.C. ? To Mr. J.B. Williams for this purpose. He has still to see A in Mr. Hibbert's minute of July 7th above.

[signature] : 20 Sept

Mr. Williams will perhaps say whether CDAC want copies.

[signature] 20 Sept

16 To E.A.C. (with Report) B/1b 22/9/33

Mr. J.B. Williams to see (a) & min. of 7/7 and min. of 20/9.

A copy of the Report on the Station for 1932 will be registered on the C.D.A.C. file (I have taken one for this purpose), but I don't think anything need be circulated to the Cttee.

J.B. Williams
22.9.33

295 Note in Index Card placed [illegible] 1/10

Mr. Gunn, one of the officers at the Naivasha Research Station, called to see me on the 26th September prior to his return to Kenya.

He gave me an account of his work at the Station, and intimated that he felt somewhat discouraged by the fact that several of the experiments on which he had embarked had had negative results because the soil on the lands of the farm was particularly fertile, and the herbage did not possess any marked deficiencies in mineral content. He seemed to think that far more useful work could be accomplished if the Station were situated on land more closely approximating to that of the stock-raising districts. As an example of an experiment which was likely to prove valueless for the above reason, he instanced a suggestion recently made by the Deputy Director, Animal Industry, that feeding trials should be undertaken at Naivasha to attempt to ascertain whether mineral deficiency in pasturage had any pronounced bearing on the fecundity of cattle, - sterility being a serious problem in Kenya.

I said that these were matters which I would recommend him to bring to the notice of the new Director of Agriculture when he visited the Station, as no doubt he would do in the early part of next year.

He has seen Dr. Orr. J. Hibbert

27th September, 1933.

Put by.

[signature] 27 [illegible]

17. O.A.G. Tel. 207 ——— 23 Oct. 33

Reports death of Mr. Gunn & requests that Dr. Orr, Rowett Institute may be asked to inform next-of-kin. Despatch follows.

Mr. Gunn has no f.j. & I can find no address. ? Tel. to Dr. Orr as in dft h/w. Mr. Hibbert should perhaps see after action.
T.W. Davies 23/X

18. To Orr. Tel. 23.10.33

Dr. Orr called on me to-day, and said that Mr. Gunn's father and mother were both dead, and that he was endeavouring to trace his relatives.

He said that owing to Mr. Gunn's death, he felt somewhat anxious as to the future of the Naivasha Research Station. It seemed to ~~me~~ him that there might be a possibility of the Station merely becoming an appendage of the Kenya Department of Agriculture, whereas the original intention was that it should develop as a Central Animal Husbandry Research Station for the Tropical Colonial Empire, somewhat on the lines of Amani. I said that any ~~pro-posed~~ changes proposed in the policy of the Station would, of course, have to be sanctioned by the S. of S., who would most certainly refer the matter to the Colonial Advisory Council of Agriculture and Animal Health for their advice. Similarly, in the event of any adjustments to the grant made from

from the Colonial Development Fund being required, the C.D.A.C. would naturally wish to be assured that the proposed changes were endorsed by the S. of S's. advisers. I asked Dr. Orr what his own ideas were about the personnel, and he intimated that he thought a fully qualified Veterinary Officer ought to be trained for two years in this country at various Institutions specializing in different sides of animal husbandry, such as the Rowett Institute, the Ministry of Agriculture's Veterinary Laboratory at Weybridge, and Cambridge University, with the idea of his proceeding to take charge of the Station, and that the second officer might be an officer of the Kenya Department of Agriculture as at present. In the meantime, he thought the Station could be carried on by the Kenya Dept. of Agriculture. If, however, there was any risk of the Station merely developing into a local subsidiary of the Kenya Agricultural Dept., then he thought it might as well be closed down altogether. I asked him to let me have a letter embodying his views in detail, which he said he would do.

J.G. Mitchell

25th Octr., 1933.

This question is one which might usefully be brought to Dr. Walter's notice before he sails. (He promised to call at the Office in November).

Noted

Wait Dr. Orr's letter. [signature] 26 Octr.

19. Dr. Orr (S.O.) ______ 1st November '33.
Furnishes his views as to the future of the Naivasha Research Station.

Mr. Freeston.

This is the letter referred to in my minute overleaf.

I think you will agree that the future administration of the Naivasha Station is a question which will have to be referred to the Colonial Advisory Council eventually, but we must surely await the Governor's proposals before the matter is referred to the Council. The C.D.A.C. would have to be advised of any change which would involve an alteration inthe work of the officers whose salaries are met from the C.D.Fund, and the C.D.A.C. would require to be satisfied that such changes had the support of the S. of S's. expert advisers. The telegram registered as No.17 states that a despatch is coming, but this, I imagine, will probably merely deal with the circumstances of Mr. Gunn's death. Perhaps it would be as well to telegraph the Governor asking him to forward his proposals in order that they may be considered by the Colonial Advisory Council? If you agree, would you kindly send such a telegram, and let me have the file back in order that I may inform Dr. Orr of the action taken.

I have been trying to arrange a meeting between Dr. Orr and Mr. Waters for some few weeks past, but Mr. Waters has recently been ill with influenza, and has gone abroad for a short holiday. I hope ultimately to be successful, and should be very grateful if you would attend the meeting when arranged.

J.G. Hibbert

2nd Novr., 1933.

Mr. Hibbert

We want to avoid, if possible, a clash of opinion between Dr. Orr & the Kenya Govt. Would it not be possible to suggest to Dr. Orr that he shd. write to, e.g. Mr. Wolfe by an early Air mail, so that his views may be known to the Kenya Govt. before that Govt. makes up its mind?

Alternatively, we could send out No. 19 by next Tuesday's A/Mail in a brief desp.

S. Freeston 3/11

Mr. Freeston

I would suggest the latter alternative, and submit draft.

J.G. Hibbert 3/11/33

By Air mail 7/11/33

20 To Kenya 838 (w/Extract from 19) 1/9 annexed — 6 NOV 1933 6/2/34 Ans.

21 To Dr. J. B. Orr. S.O. (19 annexed) — 6 Nov. 33

See min. of 26/10 as to [illegible] with Mr. Waters

22 E.G. Bruce (S.O) ——— 3rd Nov. '33.

DESTROYED UNDER STATUTE Gives particulars of next of kin of the late Mr. H. M. Gunn.

23 To E.G. Bruce (S.O) — 22 annual — 4th Nov. '33

DESTROYED UNDER STATUTE

Issued as to Mr. Freeston's minute of 26th October 33

7.11.33

Reg. 477.

Mr. Hibbert's minute of Nov. 2. shows he is trying to arrange for a meeting between Dr. Orr & Mr. Waters on the subject. ? We may put the file by.

7/11

24 E.G. Bruce (S.O) ——— 9th Nov. 33

States Miss Gunn has been informed of the death of DESTROYED UNDER STATUTE a copy of a letter giving particulars of the accident forwarded to her.

Put by

15/11

25 Dr J. B. Orr (S.O) ——— 13 Nov. 33

Encloses letter from Acting Director of Agriculture DESTROYED UNDER STATUTE asking that steps may be taken to secure the arrival of a successor to Mr. Gunn as early as possible.

Mr. Freeston.

Please see the attached letter and enclosure from Dr. Orr about the Naivasha Station. It is interesting to note that the Acting Director of Agriculture has himself suggested that a suitable officer shall be sent from this country.

This is a matter which must evidently await the receipt of the Governor's reply to the recent despatch which was sent by Air mail, but in the meantime it will be useful to discuss the question with Dr. Orr and Mr. Waters.

In a separate letter Dr. Orr has told me that he can come here to meet Mr. Waters at 4.30 on Thursday, 23rd November. I have asked Mr. Waters to come at that time and should be very grateful if you would also be present.

J. G. Hibbert

14. 11. 33.

Mr. Hibbert

Seen, thanks; I will gladly attend. ? You will keep pp. till then.

15/11

26 I attach a short note of the meeting referred to above. I have also filed a note regarding Mr. T.Y. Watson, which was shown to Mr. Waters and Dr. Orr.

J. G. Hibbert

24th Novr., 1933.

Dft. tel. herewith

24

27 To OAG tel 247 — 25. 11. 33

Mr. [illegible]

You shd. see pencil marks in red in No. 26.

The proposal is covered by the terms of the Lovat Report which recommends (para 37) that one type of Vet. scholarship awarded shd. be to holders of the Dip. of M.R.C.V.S to enable them "to undertake research at an approved institution."

[signature] 28/11/33

Seen, thanks. I gather that it is suggested that a M.R.C.V.S. shd. be selected in 1934 so that adequate special training could be given in a year. The field of M.R.C.V.S. candts. for scholps was very weak this year and would not have provided a good enough man for work of this sort. If the idea is proceeded with Dr. Orr might be asked to make soundings of a purely provisional kind of course - at the Vety Colleges so as to ensure our receiving applns from one or two really suitable men. They wd. come along, in all probability, if they knew that this was in the wind. [signature] 28/11/33

I think Dr. Orr could probably provide a suitable candidate for training. [initials]

I have placed in this file a letter and enclosures which I received from Dr. Orr today, together with copies of my subsequent letters, which were shown to Mr. Freeston.

[signature]

28. 11. 33.

28 Dr. J. B. Orr (S.O.) ——— 24th November 33

Encls. a copy of a letter from Mr. H. Wolfe & reply thereto regarding appointment of a successor to the late Mr. Gunn & the future of the Naivasha farm

29 To H. Wolfe (S.O.) – Air Mail ——— 28 November 33

30 To H. B. Waters (w/e 26 & 28) ——— 28 November 33

31 To Dr. J. B. Orr (S.O.) ——— (w/e 26) 28 November 33

DESTROYED UNDER STATUTE

32 To Dr. J. B. Orr (S.O.) — (w/e 29) ——— 29 November 33

33 J. Young ——— 27th November 33

Requests information regarding terms & conditions of appt. of Mr. Gunn & enquires whether any compensation is payable to his representatives

Mr. Gunn's agreement was made with the D. of Agric. (see para 7 of No. 26 & para 4 of No. 41 in [illegible]). We have been furnished with no copy of an actual agreement, tho' the 2nd encl. to No. 28 on this file is a copy of his letter of appointment.

[Subject to Mr. Hibbert's views] I inform Mr. Young that Mr. Gunn's engagement was with the Director of Agriculture in Nairobi with whom he should communicate upon any matters in question. Meanwhile enclose for his infn. a copy of the letter of ~~agree~~ appt.

[signature] 2 Dec

[signature]

No. 34 To J. Young (encl. as apt.) [illegible] 11/12/33

35 A/Governor Moore 642 ——— 11th Nov. 33

Trans. copies of letters & documents in connection with the death of Mr H. M. Gunn.

? It will be sufficient to transmit copies of annexures (a) and (b) of No 35 to Mr Gunn's next of kin whose name & address are given in No 22, with a covering letter stating the findings at the Enquiry, conveying the sympathy of the S of S (or perhaps the letter should go to the solicitor)

[signature] 13/12

We had better write to the solors (33), enclosing copies of (a) & (b) & (c) and (d) in orig. Ask them, in communicating with the next-of-kin, to be so good as to convey an expression of S of S.'s sympathy &c.

[signature] 13/12

36 To J. Young (a, b, c & d in orig. in no. 35) 30/12/33

37 J. Young ——— 13th Dec. 33

DESTROYED UNDER STATUTE

38 Extract from minutes of 19th meeting of C A C of Agriculture & Animal Health 5th Dec 33

? Put by

[signature] 3/1

[signature] 4/1

39 J. Young ——— 4 January 34

Acks No 36.

DESTROYED UNDER STATUTE

? Put by.

[signature] 6.1.34.

S. F. Whitehouse 6.1.34

40 Crown Agents ——— 6 Jan 34

States have been advised by the Public Trustee of death of Mr Gunn & that solicitors acting for next of kin are in communication with the Public Trustee regarding the estate.

DESTROYED UNDER STATUTE

? Put by

[signature] 8/1

[signature] 8/1

RFO

14

Library,

Please say how many copies of No. 12a you have in stock, & pass to

Mr Hibbert,

for consideration as to retention of type after the 6 months during which it is kept standing free of cost has expired, i.e., sometime in February.

[signature] 13.1.34.

Mr Hibbert.

We have 42 copies in stock.

E. A. Reed.
Library 15/1/34.

The stock held by Library presumably consists of the 22 copies allocated to Reserve in Mr Fossmith's minute of 2.9.33 & the 20 copies allocated to C.D.A.C. which Mr Williams later stated were not required for circulation to that Committee.

I think that the type can be dispersed after the 6 months standing period has expired? The printing of the report was paid for by Kenya.

[signature] 15.1.34

So advised accordingly [initials] 2/2/34

[signature] 15th

Mr Fenton.

I would suggest that sufficient time has elapsed for a reminder to be sent to Kenya regarding No. 20. [illegible]

[signature] 15.2.34.

Not until [illegible] 17/2

A 1934 file might be opened?

Yes – ask (by airmail desp.) when a reply may be expected.

[signature] 16/2

21/5

By air mail 26/2/34

To Kenya 130 — Cons 26 [illegible] 34

42. Crown Agents ——— 24 March 34

DESTROYED UNDER STATUTE

Encl. account from H.M.S.O. in respect of printing of Naivasha farm report.

The Estimate was £13 & Kenya agreed – see (8) & (10) & minutes below (7). Printing to be at the expense of the Naivasha Fund.

? Authorise payment from Kenya funds & send copies of Corres to Kenya C.A.

[signature] 4th

[signature] 4/4

43 To C.A. (42 amd. & encl. ...) 12/4/34

44 To Kenya, 272 (w/cos 42+43) N/1 17 APR 1934
10 answd

EXTRACT FROM THE MINUTES OF THE NINETEENTH MEETING OF THE COLONIAL ADVISORY COUNCIL OF AGRICULTURE AND ANIMAL HEALTH. ______________ 5th December, 1933.

1. Minutes of the Eighteenth Meeting. - (a) Livestock Research Station, Naivasha. - The Council were informed that

Mr. H.M.Gunn, the officer in charge of the Station, had recently died, and that the question of the future work and staffing of the Station would be considered by the Secretary of State, as soon as the views of the Governor of Kenya were received.

3155/33 Kenya

C. O.

16 36

Mr. Nicholls 13/12

Mr. Venning 15/12/33

Mr.

Mr. Parkinson.

Mr. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Permt. U.S. of S.

Parly. U.S. of S.

Secretary of State.

Ackd. (39)

16 DEC

30 December, 1933

DRAFT.

J. Young, Esq.

Sir,

With reference to the letter from this Dept. of the 11th of December, I am etc. to transmit to you the accompanying documents relating to the death of Mr. H. M. Gunn, late Manager of the Government Farm at Naivasha.

2. ~~I am to ask that~~ Sir Philip Cunliffe-Lister would be obliged if, when communicating with the late Mr. Gunn's next-of-kin, you ~~will~~ would be so good ~~enough~~ as to express ~~to them the~~ ~~Secretary of State's~~ his sympathy with them in their sad loss.

Copies of (a) (b) & (c) ~~[illegible]~~ with (d) in original (Verboath's signature ~~[illegible]~~ identified)

Encl. in 35

FURTHER ACTION.

(Signed) J. E. W. FLOOD

I am etc.

KENYA

NO 6 of 2

GOVERNMENT HOUSE
NAIROBI
KENYA

1 November 1933.

Sir,

I have the honour to refer to my telegram No.207 of the 23rd October, reporting the death of Mr.H.M.Gunn, Manager of the Government Farm, Naivash as the result of a motor car accident, and to enclose for your information copies of the undermentioned papers:-

Papers.

(a) Letter dated 24th October addressed by the Acting Director of Agriculture to Dr.Orr of the Rowett Institute, Aberdeen:

(b) Obituary Notice which appeared in the Official Gazette:

(c) Finding of the Resident Magistrate, Nairobi, who enquired as to the cause of death:

(d) Death Certificate.

I have the honour to be,
Sir,
Your most obedient, humble servant,

ACTING GOVERNOR.

THE RIGHT HONOURABLE
MAJOR SIR PHILIP CUNLIFFE-LISTER, P.C., G.B.E., M.C., M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET, LONDON S.W.

XXX 250

AN/1/99
24th October, 1933.

Dear Dr. Orr,

In the absence of information as to the names and addresses of any relatives of the late Mr. Gunn, it was decided to cable you the news of his very sad and sudden death which took place within a few hours of his return to Kenya from home leave.

His death occurred early on Sunday morning the 22nd October, on the Limuru Road about three miles from Nairobi, and was due to the overturning of the car in which, with two others, he was being driven to his station at the Government Farm, Naivasha. The accident was caused by the greasy state of the road resulting from heavy rain, at a sharp turning at which the car skidded and left the edge of the road.

His friends are glad to know that he did not suffer at all, as death was instantaneous. The accident, however, threw a deep gloom over the Department as he was well known to almost the whole of the staff, to whom he had endeared himself by his calm equable disposition and never-failing courtesy and good humour.

I shall be most grateful, dear Dr. Orr, if on behalf of his many friends in the Department you will tender to any relatives or near friends of whom you may know our profound regret at so sad and untimely an end to the life of a loveable colleague, and to a scientific career so full of promise, as well as our sympathy with his relatives in the loss which they have themselves sustained.

Yours sincerely,

Dr. J.B. Orr, D.S.O., M.C., M.A., M.D., D.Sc.,
Imperial Bureau of Animal Nutrition,
Reid Library,
Rowett Institute,
Bucksburn,
ABERDEEN.

GOVERNMENT NOTICE NO.678

OBITUARY.

His Excellency the Acting Governor regrets to announce the death of Mr.H.M.Gunn, M.A., B.Sc., B.Sc. (Agric.), which occurred in Nairobi on 22nd instant, as the result of a motor accident.

The late Mr.Gunn was attached to the staff of the Department of Agriculture as Manager of the Government Farm, Naivasha. He was a keen and highly qualified scientific worker and first came to Kenya in September, 1926, in connexion with the local pastural experiments undertaken by the Rowett Research Institute, Aberdeen, on behalf of the Imperial Committee of Civil Research, in which capacity he rendered very valuable service to both Government and the farming community.

He possessed a charming personality and through his untimely death he will be greatly missed by a wide circle of friends.

SUBORDINATE COURT FIRST CLASS NAIROBI COLONY & PROTECTORATE OF KENYA

Criminal No. 91

COLONY AND PROTECTORATE OF KENYA

[redacted] MAGISTRATE

In the [redacted] Court

at

INQUEST

[redacted] No. 18 of 1933.

Prosecutor

INQUIRY INTO THE DEATH OF:-

Accused

H. GUNN.

Date of Issue 25-10-33.

Date of Hearing 2-11-33.

Charge

[redacted] Finding: Death by misadventure.

25-10-33 Griffin.

W. 1. Kanneth Seymour Smith sworn:-

Employed at Government Farm, Naivasha. Knew late H. Gunn - have known him about 3 years. On morning 21-10-33 I came from Naivasha to meet him on his return from leave. I met him at the station. Then we went to the New Stanley Hotel. There we separated, meeting again later. We remained in Nairobi till early hours of next morning. Then we left for Naivasha - deceased myself, Mr.Romer and Mr.Haselden - about 2-30 a.m. on 22-10-33. We went by car. I was driving. We went over Ainsworth Bridge and on to Limuru Road. At a left hand bend in the road just past the City Park the Car skidded. I did not realise anything more till I found myself pinned under the car. The car had overturned. The other occupants of the car were also, as far as I know, under the car. I got out from under the car & heared Romer calling. I went and helped him to pull out Haselden from under the car. We called to Gunn, who was also under the car, but received no reply. We tried to lift the car, but could not manage it. Romer went off to get assistance, and returned with 2 men. We lifted the car and got Gunn out. The Police Ambulance arrived. Gunn and Haselden were taken to Hospital. Romer and I also went there. The car was a Ford Light Delivery model. Before it skidded I was travelling about 30-35 m.p.h. approximately. The road is of asphalt. It was wet at the time. It had been raining quite hard earlier in the evening, but it was not raining at time of accident. The car was in good mechanical order, but the lights were not very good. I have had a driving licence for 7 years. I do not know that road well, but I have been over it a few times. On 21-10-33 I had several drinks. I consider that I was fit to drive a car when I left Nairobi. On arrival at Hospital I was examined by Dr.Harley Mason, who also examined the other members of the party. Gunn was sitting next to me in the car, Romer and Haselden behind.

By Court: I did not realise that there was a bend in the road till I was on top of it. I tried to turn round the

to turn round the bend. I do not think I applied my brakes. The car skidded, I think, because I tried to take the bend too sharply.

A. Phillips.

W. 2. Arthur Gerald Romer sworn:-

Farmer, Naivasha. On 21-10-33 I came to Nairobi with Smith (W.1), Haselden, to ~~receive~~ meet Gunn. We met Gunn and remained in Nairobi till about 2-30 a.m. next morning. Then we started to return to Naivasha. Smith was driving the car, with Gunn beside him. Haselden and I were sitting in the back. I was more or less dozing, when I felt the car skid towards the right. Next thing I knew was that the car had overturned. I found myself half under the car. I got out and called to the others. There was no answer at first, then Smith answered. Haselden was under the car at the back. Smith and I got him out. Gunn was pinned under the car. We tried to lift the car but could not. I went for assistance, saw a light approaching. 2 Europeans arrived, and they lifted the car, and I got Gunn out. Gunn was still breathing. He died practically at once. He could not speak. Someone went for the ambulance. The ambulance arrived and we all went to Hospital. There we were examined by Dr. Harley Mason. The car was travelling at not more than about 30-35 m.p.h. before it skidded. I consider that Smith was perfectly fit to drive the car when he left Nairobi. I think the car skidded mainly on account of the wet road. The car appeared to be mechanically sound. Gunn was aged about 35, and was employed on Government Farm, Naivasha. He had just arrived that day on return from leave.

A. Phillips.

S.O. for date to be fixed for further hearing.

A. Phillips. 25/10/33.

SUBORDINATE COURT FIRST CLASS NAIROBI COLONY & PROTECTORATE OF KENYA

25-10-33.

W. 3. David Francis Haselden. sworn:-

Farmer, Naivasha. On 21-10-33 I came from Naivasha to Nairobi with Smith & Romer to meet Gunn. We remained

another
of the men, identified to me as Mr. Smith. He was suffering from a shock and was in a dazed condition. I examined him specially with a view to observing whether he was sober. He admitted he had had a few drinks, and his breath smelt of alcohol. He was, however, sober. When I examined him, he was, apart from his dazed condition, fit to drive a car. I cannot give an openion as to whether or not he would have been fit to drive at 2-30 a.m. I gave instructions for Gunn to be taken to Municipal Mortuary.

A. Phillips.

W. 6. William John Russell sworn:-

Live at Limuru Road, near house of W.4. My house is opposite Mr. Lucy's Road. On 22-10-33 about 2-30 to 2-45 a.m. I was disturbed by the sound of tyres screaming on the road. Then I heard a crash, and later W.4 came to my house and gave me certain information, in consequence of which I went out and found a car upside down about 10 yards from the corner of Mr. Lucy's road. I helped to lift the car while a man was removed from under it. That man was later identified to me as Mr. Gunn. When we lifted the car off him, he gave a gasp and seemed to expire. He had been pinned down by the windscrean frame, which was resting on his head. I saw a man whom I understood to be called Smith and to be the driver of the car. He seemed a little dazed, but otherwise normal. I saw another man, called Romer, injured in the head, and other man lying unconscious on the ground. W.4. went to Police. I was present when A.I. Mackintosh arrived with ambulance. All 4 occupants of the car were taken away in the ambulance. The road at the time of the accident was just drying after rain. I have lived there for 12 years and am very familiar with the road at that point. It would be possible for a person not knowing the road well to mistake the turning at that point and to imagine that the road went straight on up what is actually Mr. Lucy's turning. There are no street lights there. Next morning I examined the scene. I saw some marks on the road, which are accurately represented in the Plan, (Ex. I). In my openion the

The crooked line marked A-A' was caused by a Motor Lorry, not by the car involved in the accident. It was different in appearance from the other marks found on the road and apparantly caused by the car.

A. Phillips.

W. 7. Francis William Vint sworn:-

Bacteriologist, Medical Research Laboratory. On 22-10-33 at 9-15 a.m. I held Post-Mortem examination on a body of adult male European, which I recognized as that of Mr. Hector Gunn, whom I had known since 1927. He was employed as a research worker on Government Farm, Naivasha. I found a bruise over back of head, a small wound over left eye, diffuse bruising of front and back of chest, bruising over liver and spleen. Left arm and left side of the body were blistered. Left lung was ruptured, and left side of chest full of blood. Surface of liver and spleen were torn. 2 fractures of skull - one above left eye, the other in posterior portion of skull on right side. Brain was covered with blood. Cause of death was haemorrhage, following fracture of skull and rupture of lung. The blistering of the left arm and side was probably caused by acid from the battery. The injuries were consistant with being caused in a motor accident.

A. Phillips.

W. 8. Graham Buchan Mackintosh sworn:-

A.I.Police. Traffic Office, Nairobi. On 22-10-33 about 3-10 a.m. as result of information received I went with ambulance to Limuru Road. There I found a Ford Car T 354 upside down in the ditch on the right hand side of the road, just past entry to Mr.Lucy's house. I found 4 Europeans who appeared to have been involved in the accident. One was lying under the front part of the car and appeared to be dead. I later discovered that his name was Gunn. I asked who was the driver, and another man gave me his name as Smith. He appeared to be suffering from shock, but not from alcohol. He was in the condition in which I should expect to find a person after

after a serious accident. I went with all 4 to the Hospital, and there W.S. examined Gunn and also Smith. About 8-45 a.m. I returned to the scene on Limuru Road, and took measurements. I later made a plan which I now produce (Ex.I) It is drawn to scale and accurately represents the marks which I found on the road, and the position of the Car. The 3 lines A-A', B-B', C-C' represent tyre marks. D is the position of the car. The 2 parallel lines B-B' and C-C' appeared to have been caused by the car in question, but I could not say definately that they were. The other mark A-A' appeared to me to have been probably made by a Lorry, not by a car. It was of greater depth than the other marks, and I do not think it can have been caused by the car. I examined the car. It was lying at an angle of about 30 degrees across the ditch. Front part of car was on the road, the back ~~cover~~ corner was resting on the other side of the ditch. The car was upside down, and the hood was completely flattened. The off back wheel of the car had collapsed. The road was wet at the time when I first arrived on the scene. About 9-30 a.m. I attended Town Mortuary and was present at ~~xxx~~ Post-Mortem examination carried out by Dr. Vint on body of Mr.Gunn.

Ex.I.

A. Phillips.

S. O. 2-11-33 10-oo a.m. for finding.

A. Phillips.

Scene of accident visited with A.I. Griffin and A.I. Mackintosh at 3 p.m. on 30-10-33.

A. Phillips.

(for finding see next page.)

FINDING:

This is an inquiry into the death of Mr. Hector Gunn, which occured in the early hours of the morning of 22-10-33 as a result of a Motor accident on the Limuru Road, near the Nairobi City Park.

Mr. Gunn, who was employed as a scientific research worker at the Government Farm, Naivasha, had arrived in Nairobi on his return from overseas leave on 21-10-33. Three of his friends had come to Nairobi to meet him, and about 2-30 a.m. the following morning the party of four started off for Naivasha in a car which was driven by Mr. K. S. Smith.

At a bend in Limuru Road the car left the road, overturned, and came to rest in the ditch on right hand side of the road. The deceased who was sitting in the front seat beside the driver, was pinned underneath the car. He was extricated within a few minutes, but died almost immediately, as a result of haemorrhage following fracture of the skull and rupture of the left lung.

Mr. Smith, the driver, is the only one of the surviving occupants of the car who is able to give a description of how the accident happened. He states that he was travelling at about 30 to 35 m.p.h., and that he did not observe the bend in the road till the last moment. He then tried to turn the car, but it skidded to the right and overturned.

The evidence does not in my opinion show Mr. Smith to have been guilty of culpable negligence. He admits having had a number of drinks during the evening, but I see no reason to doubt that at the time of the accident he was sober and in a fit condition to drive a car.

I consider that the accident is to be attributed to a combination of circumstances which have been mentioned in the evidence.

It had been raining earlier in the night, and the road which had a macadam surface, was still wet. This would increase the tendency of the car to skid.

78

The headlights of the car were not good, according to Mr. Smith, and there were not street lamps.

Mr. Russell (W.6.) has pointed out that Mr. Lucy's private road makes a junction with the main road at the commencement of the bend, in such a way as to form an almost direct continuation of the main road; and that it is very easy for a person driving out from Nairobi to imagine that the main road runs straight on, instead of curving to the left.

I have inspected the scene, and consider it very probable that Mr. Smith made this mistake, and on discovering it, tried too late to correct it.

The advisability of erecting a warning notice or otherwise directing attention to the need of caution at this point will, no doubt, receive due consideration from the Municipal road authorities. I would say, however, that I do not think there is the slightest ground for attributing neglect to those authorities in not having taken such action hitherto. The place in question is not a danger-point of the kind which would make the erection of warning signs an obvious necessity.

I consider that this unfortunate accident occurred as a result of an error of judgment not amounting to culpable negligence, and I find that deceased died by misadventure.

A. Phillips.
2-11-33.

Finding read in open court on 2-11-33.

A. Phillips.

SUBORDINATE COURT
8
COLONY & PROTECTORATE OF KENYA

Certified a true copy of the original.

A. Phillips.
A. RESIDENT MAGISTRATE
NAIROBI
4.11.33

December 3

3155/33.

Sir,

I am directed by Secretary Sir Philip Cunliffe-Lister to acknowledge the receipt of your letter of the 27th of November addressed to Mr.W.G.Hibbert, and to inform you that the late Mr.H.M.Gunn, Manager of the Government Farm at Naivasha, was serving under an agreement with the Director of Agriculture of Kenya Colony. No copy of the actual signed agreement has been forwarded to this Office, but I am to enclose a copy of a letter addressed to Mr.Gunn by the Director of Agriculture in which the conditions of his engagement are set forth.

15.7.32.

2. I am to suggest that you communicate with the Director of Agriculture at Nairobi concerning any questions which may arise in regard to Mr.Gunn's estate.

I am, Sir,
Your obedient servant

(Signed) J. W. FLOOD

J.YOUNG,ESQ.

End.

31 33

James Young.
Solicitor.

Telephone N°21.

RECEIVED
30 NOV 1933
C. O. REGY

27th Novr. 1933.

J.E. [redacted], Esq.,
Colonial Office,
[redacted] Terrace,
[redacted] Hall,
[redacted], S.W.1.

ACKD BY P.C.

Dear Sir,

Hector M. Gunn, deed.

I act for the Executrix on the Estate of the late Mr. Hector M. Gunn, who was killed in Kenya Colony on 22nd ulto.

I communicated with the Rowett Research Institute, Aberdeen, as I understood he had been engaged by the Institute for research work in Kenya Colony, but the Secretary has informed me that his agreement with them terminated and that a new agreement was made with the Colonial Office. Perhaps you would be good enough to let me know the terms and conditions of his appointment and what if any remuneration is due to him.

From the letters which has been received from the Colony it appears he was killed while in your employment. You might also let me know whether in the circumstances any compensation is payable to his representatives. If it would not be too much trouble perhaps you would let me have a copy of his Contract of Service.

Yours truly,

James Young

32 32

2, Richmond Terrace,

Whitehall, S.W.1.

28th November, 1933.

Dear Orr,

Thank you for your letter of the 27th October enclosing copies of recent correspondence with Wolfe about the Naivasha Station.

I enclose a copy of a letter which I have sent to Wolfe by air mail.

Yours sincerely,

(Sgd.) J. G. Hibbert.

Dr. J. B. Orr, D.S.O., M.A.

30/33

2, Richmond Terrace,
Whitehall, S.W.1.

28th November, 1933.

Dear Waters,

As promised, I enclose a note of the discussion last Thursday on the Naivasha Station.

I also enclose ~~a copy~~ Copies of a letter from Wolfe to Orr, and reply, which I have just received from Orr.

I am merely informing Wolfe that the Colonial Office propose to defer detailed consideration of the future and staffing of the Station until the views of the Governor of Kenya are received, and that we have sent a telegram to the Governor suggesting that he should defer his reply until you have arrived in the Colony.

Yours sincerely,

(Sgd., J.G.HIBBERT.

H, B, WATERS, ESQ., B.A.

Sent by Air Mail

34

2, Richmond Terrace,

Whitehall, S.W.1.

28th November, 1933.

Dear Mr. Wolfe,

Dr. Orr has sent me copies of your letters of the 27th October and 17th November regarding the Naivasha Station, together with a copy of his reply dated 27th November. As he states, a meeting was held in the Colonial Office last Thursday at which he and Mr. Waters were present. It was fully realised that detailed consideration of the future and staffing of the Station would have to be deferred until the views of the Governor of Kenya had been received, and the object of the meeting was merely to discuss the qualifications required by the staff needed to carry on the work of the Station on the lines originally contemplated.

A telegram was sent to the Governor of Kenya on the 25th November suggesting that he should defer a reply to the Secretary of State's despatch of

H. Wolfe, Esq., M.Sc.

35 28

University of Aberdeen and The North of Scotland College of Agriculture.
(JOINT COMMITTEE ON RESEARCH IN ANIMAL NUTRITION.)

Director: JOHN BOYD ORR, D.S.O., M.C., M.A., M.D., D.SC.
Secretary and Treasurer: EDWARD G. BRUCE, M.A.
In reply please quote Ref. No ....

The Rowett Research Institute,

BUCKSBURN, ABERDEEN.

Telephone No.: BUCKSBURN 8.
Railway Stations: GOODS—BUCKSBURN. PASSENGER—BANKHEAD. (L.N.E.R.)

27th November, 1933.

Entered

J.G. Hibbert, Esq.,
2, Richmond Terrace,
LONDON, S.W. 1.

My dear Hibbert,

Enclosed herewith is copy of letter received from Wolfe, Acting Director of Agriculture in Kenya, and copy of my reply.

It is obvious from Wolfe's letter that the work of the Station is appreciated in Kenya. It would be a great pity if it should be necessary to terminate it.

Yours sincerely,

Orr

JBO/MBR.
Encls/

Copy 2nd encl. to J. Young (34)

of the 6th November, in which he was asked for his views in regard to the future work of the Station, pending the arrival of Mr. Waters in the Colony.

Yours sincerely,

(Sgd.) J. G. Hibbert.

COPY

Department of Agriculture,
P.O. Box No. 338,
NAIROBI

36

BY AIR MAIL.

17th November, 1933.

No. Gras/6/IV/88.

Dear Dr. Orr,

I have your letter of 6th November and am replying by this first air mail. With regard to the immediate future of the Naivasha station you will have my letter of the 27th October, requesting that the appointment of a successor to the late Mr. Gunn may be expedited.

You will realise that the temporary arrangements for the conduct of the work at Naivasha have been inconvenient and dislocating to the normal work of the Animal Husbandry Division and I trust there will be no necessity for unduly prolonging the present position. The late Mr. Gunn's able conduct of the investigations has been so much appreciated that I hope the standard of the work will be maintained by the appointment of an equally able successor.

As the present term of three years ends on 1st April, 1935, I realise that it might be difficult to procure a suitable man for the remainder of the period, but in these days the salary attached to the post, namely, £ 650 per annum, should, I think, be more than sufficient to attract one of your more able post-graduate students. I enclose for your information a copy of the Letter of Appointment held by the late Mr. Gunn; paragraphs 1 and 3 would require amendment, as regards period of tour and leave. It is hardly necessary for me to say that the appointee would receive the fullest co-operation and help from the officers of the Department and he would have the valued assistance of Mr. K.S. Smith who, during his two periods of residence on the farm, has proved himself to be a competent farm manager. In view of Mr. Smith's intimate knowledge of the farm, its flocks and herds, it is proposed to continue his engagement.

While this year has proved a most difficult one for the station, for the climatic reasons of which you are aware, with the recent improvement in the rainfall the greater part of the programme contemplated for the year will be nevertheless completed. It is I think, therefore desirable that the new officer in charge should be at Naivasha in time for initiating the programme for 1934. The Naivasha fund account which is responsible for the payment of salaries, passages, etc. is well in hand and an estimated approximate saving of £ 280 will be effected this year.

It is hoped during 1934 that the long range work on pastures will have better conditions for its prosecution and that work on the nutritional aspects of breeding and disease problems will be commenced. These two investigations are regarded as of especial importance not only to Kenya but to British Africa and the Empire generally.

The future of the station, after April, 1935, is too big an issue to be dealt with in this letter. The general view of my officers is that it will be highly desirable to continue the work. The station is very well suited to this valuable research work, which is likely to be of considerable economic value to the Empire. The farmers of the Colony take a great interest in the station, and would certainly regret any decision to break off the investigations before their completion.

Yours sincerely,

(SGD) H. WOLFE,

Ag. Director of Agriculture.

COPY

Department of Agriculture,
P.O. Box No. 338,
NAIROBI.

37

15th July, 1932.

LETTER OF APPOINTMENT.

H. Gunn, Esq.

Sir,

You are appointed as Manager, Government Farm, Naivasha, in this Colony for three years commencing 1st April, 1932, and terminating 31st March, 1935.

2. Your salary will be at the rate of £650 per annum without liability to the levy on official salaries now in force or that may from time to time be imposed on such salaries.

3. You will be eligible for six months leave on full salary, inclusive of the period of the voyage via Suez to England and of the voyage via Suez to Kenya should you be returning to the Colony.

Such leave shall be taken at such time within the period of your engagement as the Director of Agriculture may decide.

4. A free first-class return passage (B4 grade, Union Castle line or equivalent by other line) will be provided within the period of your leave.

5. When travelling on duty away from your station you will be provided with transport or be paid travelling expenses in accordance with the scales applicable to members of the Kenya Civil Service.

6. You will be directly responsible to the Director of Agriculture for the satisfactory discharge of all duties allotted to you, and for the proper care and custody of such monies, stock, stores and the like as may from time to time be in your charge.

7. If you shall at any time neglect or refuse or from any cause (excepting ill-health not caused by your own misconduct) become unable to perform any of your duties or to comply with any order, or shall improperly disclose any information respecting the affairs of the Government to any person not in the employment of the Government, or shall in any manner misconduct yourself, you may be dismissed forthwith and on such dismissall all rights or advantages reserved to you by this agreement shall cease.

8. In all other respects you will be required to conform o the regulations in force for the members of the Kenya Civil Service.

I am, Sir,
Your obedient Servant,

DIRECTOR OF AGRICULTURE.

I agree to accept the appointment and conditions set out above.

Signature: _____ Date: _____

COPY

38

27th November, 1933.

H. Wolfe, Esq.,
Ag. Director of Agriculture,
P.O. Box No. 338,
NAIROBI,
KENYA COLONY.

Dear Mr. Wolfe,

Thanks for your letter of 17th November. We had a meeting about this very subject last Thursday at the Colonial Office, and were fortunate in having Mr. Waters, the new Director of Agriculture, present at the discussion. Mr. Hibbert, Secretary of the Colonial Agricultural Research Council, is sending you a letter by air mail giving you the results of our deliberations.

I am exceedingly sorry that we have not got a man here whom we could spare and who would be good enough to send out to Kenya to take over straight away. We are hoping that you will be able to allow Mr. Smith and Mr. Watson to carry on in the meantime, debiting their salary to the grant which leaves that amount in your vote for the payment of someone to second to Mr. Smith's or Mr. Watson's regular work. If that arrangement can carry on until Mr. Waters arrives, he will be able to discuss the position with you in the light of the provisional decisions arrived at at the informal conference at the Colonial Office last Thursd

We all appreciate the importance of the work, and we at this end are as anxious that the Station should be continued as you are in Kenya, and every effort is being made to that end.

With kind regards,

Yours sincerely,

(SGD) J.B. ORR.

JBO/MER.

3155/37

Kenya

27

39

C. O.

Mr. Freeston m

Mr. Flood 25 ? at once

Mr. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Sir G. Grindle.

Permt. U.S. of S.

Parly. U.S. of S.

Secretary of State.

C.O.
R 25 NOV
B 27

Coded sent 1.45 p 25/11

DRAFT. Tel.

Gov. Nairobi

No. 347 ~~Your~~ My desp. 6 Nov. 838

I suggest that your reply should be deferred pending arrival of new Director of Agriculture who has discussed question with ORR and my advisers.

SECER

and after

The position arising from the death of Mr. H. Gunn, of the Naivasha Livestock Research Station, was discussed by Mr. Freeston and Mr. Hibbert with Dr. Orr and Mr. Waters on the 23rd November, 1933.

It was fully realised that detailed consideration of the future work and staffing of the Station would have to be deferred until the views of the Governor of Kenya had been received, but whatever views were expressed by the Governor, the fact that the Colonial Development Fund grants were authorised to assist what was intended to be an Imperial scheme of work would have to be borne in mind. Neither the Colonial Development Advisory Committee nor the Secretary of State would agree to the money being used for researches of purely local interest.

It was thought that the present programme of work could probably be carried on during the remaining period of the Colonial Development Fund grant, i.e. until the end of March 1935, by Mr. T.Y. Watson, Agricultural Officer, (who had been posted to the Station in March 1933 to assist Mr. Gunn on the departure of Mr. Farquhar), with the aid of Mr. J. Anderson, the Stock Instructor in the Animal Health Division of the Kenya Department of Agriculture. The salaries of these two officers would amount to less than the sum authorised from the Colonial Development Fund to provide for the salaries of Mr. Gunn and Mr. Farquhar.

On the assumption that the work of the Station would be continued and developed after March 1935, the suggestion was made that a suitable officer holding the Diploma of Membership of the Royal College of Veterinary Surgeons should be trained in the meantime at the Rowett Research Institute, with a view to his proceeding to replace Mr. Anderson after that date. It was considered that this training might be given in the form of a scholarship under the Colonial Veterinary Scholarship Scheme.

Any proposals affecting the future of the Station would have to be notified to the Colonial Development Advisory Council, which would certainly wish to know whether they had the approval of the Secretary of State's Advisory Council of Agriculture and Animal Health.

It was agreed that the immediate action required was the despatch of a telegram to the Governor of Kenya suggesting a postponement of his reply to the recent despatch from the Secretary of State (in which he has been asked) for his views on the future of the Station, pending the arrival of Mr. Waters in the Colony.

THOMAS YIRRELL WATSON.

Present age 27. Single.

Mr. Watson's father was Manager of one of the largest cattle-breeding establishment in Scotland, and consequently Mr. Watson acquired practical experience of a high order during his early youth.

He was educated at Aberdeen Grammar School and Aberdeen University (B.Sc. Agriculture, 1929), and whilst at the University was President of the University Agricultural Society.

He applied for and was awarded a two-year Colonial Agricultural Scholarship in 1929. The first year of this Scholarship was spent at Cambridge University where he was very favourably reported on by the authorities of the School of Agriculture who especially stressed his sound practical and theoretical knowledge of animal husbandry. They added that he was a careful and painstaking experimenter and could be trusted to design and carry out thoroughly animal experiments.

In 1930 the Director of Agriculture, Kenya, intimated that he would like to be provided with an Assistant Livestock Officer, if the financial position permitted of the necessary provision being made in the following year's estimates. He said that if a Colonial Agricultural Scholar was selected for this appointment he would like him to spend some time in South Africa on suitable farms and at agricultural colleges, and in particular to attend the advanced courses given by Professor Bosman at the Transvaal University College, Pretoria. Information was at the same time received that there was room for a candidate of this type in the Nigeria Department of Agriculture.

In these circumstances arrangements were made for Mr. Watson to spend the second year of his scholarship in studying animal husbandry. From October, 1930, to January, 1931, he was attached to the Imperial Dairy Expert at Bangalore, India, who arranged for him to visit a number of other centres in that country where animal breeding and nutrition investigations were in progress. From January, 1931, he was attached to Transvaal University whose authorities reported very favourably on his ability, industry and personality.

In January, 1931, information was received that the post of Assistant Livestock Officer in Kenya would not be created, but eventually a vacancy for an Agricultural Officer in Kenya was offered to and accepted by Mr. Watson in October, 1931.

The Director of Agriculture formed a very favourable opinion of Mr. Watson's ability during the first year of his service in Kenya.

In

In March, 1933, Mr. Farquhar, one of the two Rowett Institute officers at the Naivasha Livestock Research Station, resigned his appointment, and, with the concurrence of Dr. Orr, the Director of Agriculture arranged for Mr. Watson to be seconded to the Station to take charge of it during the absence on leave of the other Rowett Institute officer, Mr. Gunn. Prior to this, another officer, Mr. K. Smith, had been engaged temporarily to assist Mr. Gunn during Mr. Farquhar's absence, and, so far as is known, Mr. Smith is still at the Station. The salaries of both Mr. Watson and Mr. Smith are at present defrayed from the Naivasha Farm Fund.

Mr. Watson was stationed at Kisii at the time of his secondment, and was replaced by Mr. M. D. Graham, an officer engaged on a temporary basis, whose salary is being met from the Agricultural Department's estimates.

P.C. 7.P.43
21

C. O.

Mr. Hibbert 3/11/33
Mr. Fraser 3/11
Mr.
Mr. Parkinson.
Mr. Tomlinson.
Sir C. Bottomley.
Sir J. Shuckburgh.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

DRAFT.

DR. J.B. ORR, D.S.O., M.C.

(2 drafts)

Qto. for Mr. Hibbert's signature.

2, Richmond Terrace,
Whitehall, S.W.1.

6 November, 1933.

Dear Orr,

Thank you for your letter (No.19) of the 1st November about the Naivasha Station.

It will, of course, be necessary for us to ascertain the views of the Governor before the matter is submitted to the Colonial Advisory Council. We have asked him to let us have his opinion as soon as possible, and have at the same time notified him of your present views on the subject.

Yours sincerely,

(Sd) J. G. HIBBERT.

25.44

C. O.

Mr. Hibbert 3/11/33

Mr. Freeston

Mr.

Mr. Parkinson.

Mr. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Parnl. U.S. of S.

Parly. U.S. of S.

Secretary of State.

DRAFT.

KENYA

No. 838

Govr.

TO GO BY AIR MAIL TUESDAY 7th NOVR.

Downing Street,

6 November, 1933

Sir,

I have the honour to acknowledge the receipt of your telegram No.207 of the 23rd October, (No.17) from which I learned with much regret informing me of the death of Mr. H.M. Gunn, of the Naivasha Livestock Research Station, and to inform you that this information was conveyed to the Director of the Rowett Research Institute, Aberdeen, ~~for communication to Mr. Gunn's relatives~~

2. I enclose for your information an extract from a letter which has been received from the Director, in which he raises the question of the future work of the Station.

3. I should be glad to receive at an early date your views on this matter.

Extract of 'A' in No.19.

an expression of

A draft.

~~matter, which~~ I propose to refer the question

~~later~~ to the Colonial Advisory

Council of Agriculture and Animal

Health; and if may also be necessary

~~I have, etc.,~~

to consult the C.D.A.C.

(Sgd.) P. CUNLIFFE-LISTER.

45/19

University of Aberdeen and The North of Scotland College of Agriculture.
(JOINT COMMITTEE ON RESEARCH IN ANIMAL NUTRITION.)

Director: JOHN BOYD ORR, D.S.O., M.C., M.A., M.D., D.SC.
Secretary and Treasurer: EDWARD G. BRUCE, M.A.
In reply please quote Ref. No.

The Rowett Research Institute,

BUCKSBURN, ABERDEEN.

Telephone No.: BUCKSBURN 8.
Railway Stations: GOODS—BUCKSBURN. PASSENGER—BANKHEAD. (L.N.E.R.)

1st November, 1933.

J.G. Hibbert, Esq.,
2, Richmond Terrace,
Whitehall,
LONDON, S.W. 1.

JC.

Dear Hibbert,

As requested, I am sending you these notes giving my views on the problem of Naivasha Government Stock Farm arising from the death of Mr. Gunn, who was in charge of the Station.

You will remember that it was decided that the Station should be run at the lowest possible level of expenditure for a few years, its work being confined to straightforward practical experiments of direct interest to Kenya, and that while this was being done there would be built up large groups of animals of known past history, which would be available for a systematic investigation on nutrition in relation to disease under tropical conditions, if and when funds were forthcoming. It was also considered probable that the Station might develop into an experimental stock station for the investigation of stock problems of the Colonial Tropical Empire.

The Station is being run as had been arranged, and the late Mr. Gunn with the co-operation of the Agricultural Department in Kenya was doing excellent work. Now that he is dead the whole position should be reviewed.

It seems to me that there are two possibilities. First, to abandon the idea of developing Naivasha into a central experimental stock station, and hand it over to the Kenya Agricultural Department to utilize in the interests of Kenya. The second is to adhere to the more ambitious programme of working towards a permanent experimental stock station to deal with problems of common interest to all the tropical Colonies. In that case we ought to begin now to make arrangements for having a young veterinary officer specially trained in animal husbandry and in the recent advances in the science of nutrition. Even in the case of a man who had a B.Sc. in pure science plus a veterinary qualification a minimum of two years' intensive training would be necessary to enable him to carry out a programme of research at the Station under the guidance of the X Colonial Agricultural Research Council and with the assistance of the Agricultural and Veterinary Departments of Kenya.

Ansd. (21)

'A'

Extract 'A' to Kenya (20)

X he means the Colonial Advisory Council of Agriculture & A. Health
JGH.

I believe it would be worth while training a man of that kind, even though the Station were never developed.

Probably the best course meantime would be to ask the Kenya Government to do its best to carry on the Station on the present lines, and at the same time get a man trained on the lines suggested. If at the end of two years it were found possible to develop the Station, he could be sent out there. On the other hand, if on account of the lack of funds or for any other reason, it were decided inadvisable to develop the Station, it could be left in the hands of the Kenya Government, and there would be no difficulty in finding employment for the veterinary officer with a special training in animal husbandry and nutrition.

These are only my views at the present moment. They might be considerably altered after discussing the matter with Mr. Walters, the new Head of the Agricultural Department in Kenya, and with Dr. Andrews.

Yours sincerely,

JBO/MHB

KENYA.

No 434

GOVERNMENT HOUSE,
NAIROBI,
KENYA

7 July, 1933.

Sir,

With reference to the first paragraph of Kenya despatch No. 337 of the 18th July, 1932, I have the honour to transmit a copy of the certificate signed by the Auditor and Mr. H. Gunn relative to the transfer to this Government of the credit balances of the Rowett Institute Farm Account at the 31st March, 1932.

2. It is regretted that a copy of this certificate was not enclosed with the despatch under reference.

I have the honour to be,

Sir,

Your most obedient, humble servant,

ACTING GOVERNOR'S DEPUTY.

THE RIGHT HONOURABLE,
MAJOR SIR PHILIP CUNLIFFE-LISTER, P.C., G.B.E., M.C., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON....S.W.1.

ROWETT INSTITUTE FARM ACCOUNT.

Certified that the Credit Balances of the Rowett Institute Farm Account with the National Bank of India Ltd., Nairobi, as at 31st March, 1932 and as shewn in the Bank Pass Book on that date are as follows :-

		SHS. CTS.
Current A/C	(Shillings Eleven thousand, six hundred and ninety and Cents nine)	11,690: 09
Deposit A/C	(Shilling Nine thousand, Two hundred and Ninety two).	9,292: 00

The above Balances are hereby handed over to the Government of Kenya as from 1st April, 1932.

Certified by Mr. H. Gunn. (SGD) H. GUNN. 5/4/32.

Certified by the Colonial Auditor. (SGD) W.H. SMITH.

3155/33

C. O.

Mr. Grossmith 4/9/33
Mr. Freeston 4
Mr. Stockdale 4/9
Mr. ~~Parkinson.~~ [illegible] 5/9
Mr. Tomlinson.
Sir C. Bottomley.
Sir J. Shuckburgh.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

C.O. R D 5 SEP

DRAFT.

Kenya.
No 677 [illegible]
OAG.

No 12

Report. 175 copies in despatch [illegible]

7 September. 193[illegible]

Sir,

With reference to my despatch No. 589 of the 9th of August, I have etc to transmit to you 175 copies of the Naivasha Stock Farm Annual Report for 1932 and to request that you will find enough to arrange for distribution of copies to the various Colonial Governments and to Institutions outside the United Kingdom that are likely to be interested in Animal Husbandry.

(2) Copies of the Report are being distributed to the following Instit[illegible]

FURTHER ACTION.

Copies of the Report to be sent to the Institutions marked in the list flagged. [illegible]

Remit as to C.O.R.C. & C.A.F.C. distribution.

Institutions in this Country:—

The Empire Marketing Board

The Imperial Institute

The Ministry of Agriculture & Fisheries.

The Board of Agriculture for Scotland.

The Ministry of Agriculture, Northern Ireland.

The School of Agriculture, Cambridge.

The Imperial Bureau of Animal Genetics.

The Imperial Bureau of Animal Health

The Imperial Bureau of Animal Nutrition

The Animal Nutrition Research Institute, Cambridge.

The National Institute for Research in Dairying.

I have etc.

(Sgd.) P. CUNLIFFE-LISTER.

KENYA COLONY AND PROTECTORATE
DEPARTMENT OF AGRICULTURE

NAIVASHA LIVESTOCK RESEARCH STATION.

REPORT FOR THE YEAR 1932

CONTENTS

NAIVASHA LIVESTOCK RESEARCH STATION

ANNUAL REPORT FOR 1932

The Naivasha Stock Farm, depending for its maintenance on revenue accruing from the sale of animal products, shared in 1932 the effects of general depression experienced on farms throughout the Colony engaged in the livestock industry. The year was marked by a fall in prices. Butter fat showed a decline from 95 cents to 70 cents per pound. Slaughter steers which could be sold at Shs.100/- in January were, by the end of the year, a drug on the market at half that amount, while a similar condition governed the disposal of slaughter wedders. The return from the sale of wool showed a perceptible increase.

The annual rainfall was below average, 17.5 inches only being recorded. Under normal conditions this amount, though inadequate for the growth of fodder crops, would have ensured ample growth of pasture to meet the requirements of the stock carried by the farm, as the herbage reacts quickly to rain, and exhibits a useful carrying capacity in periods of drought. Unfortunately, on every occasion when new growth made its appearance, depredations by locusts followed; thus the rainfall effects were rendered practically negligible.

Further, it was impossible to carry out to a satisfactory conclusion the field work in connexion with grassland improvement which was contemplated in the experimental programme, and the results of feeding tests with animals on locust-ridden grazing must be considered in the light of the conditions by which they were governed.

In this report the progress of the various classes of livestock is dealt with generally, while a statement on the experimental work attempted and of the financial transactions is appended.

Milk Production.

The total number of grade cows carried throughout the year was 119. These are mainly Grade Shorthorn and Friesian; 40 per cent. of the herd appear to be of more improved breeding than first cross.

Seventeen cows, on account of consistently low-milk-yield, were used as foster-mothers, to each of which were allotted two calves to rear, neither the dam nor the calves receiving any supplementary feeding. Milk production, therefore, was the function of 102 cows.

Grazing conditions, for reasons already outlined, were most unfavourable to milk production, a stage being experienced in October and November when the pasture was not sufficient for maintenance requirements. The expenditure on supplementary feeding-stuffs was consequently high and, as the revenue from milk was entirely derived from the sale of butter fat to the Kenya Co-operative Creamery at the average price of 78 cents per pound, the net profit per member of the herd was necessarily small.

The total amount of milk produced during the year was 30,068 gallons, an average yield of 294 gallons per cow, and the cost involved, exclusive of grazing, was 17 cents per gallon, of which the charge against supplementary food-stuffs, grown and purchased, amounted to 8 cents, labour charges 4 cents, the remaining 5 cents covering depreciation of the herd, maintenance of bulls, and dipping and dairy charges.

The output of butter fat was 9,211.5 lb. or 90 lb. per cow.

Further details of milk production costs appear in Appendix I.

The birth-rate in the herd for the year, excluding still-born and premature calves, was 75 per cent.

Calves.

Calves were hand-reared with the exception of those suckled in pairs by foster-mothers. A general improvement in the health of young calves followed the subdivision of calf-houses into individual pens, which has practically banished the early gastric disorders and attacks of bacillary necrosis. As it has been found unprofitable to rear steer calves, these are now slaughtered at birth or disposed of at an early age for slaughter when this is possible. Owing to the deplorable condition of the grazing towards the end of the year, hand feeding of heifer calves was continued until they reached the age of 10 months. An account of experimental work in calf-rearing appears on page 7.

Steers.

The rearing of grade steers for ultimate disposal as slaughter stock has proved an unprofitable side-line in the internal economy of the farm. In 1932, hand-reared calves were transferred to steers at a capital charge of Shs.55/-, their cost of maintenance from birth to one year old. The herd of steers incurred an expenditure for the year of 4.33 per head, exclusive of any charge for the grazing they occupied. Thus, at the age of 3-4 years, when these animals are marketable, their cost of production will have greatly exceeded their anticipated market value; hence it appears to be more profitable to slaughter bull-calves at birth and concentrate on female stock, from which the financial return should at least cover the outlay they have incurred.

Sheep.

Climatic conditions in 1932 were favourable to the general well-being of the flock, except during periods of severe locust infestation, when young stock experienced a set back and there was a high death-rate among the newly-weaned lambs.

The wool clip for the year was satisfactory, breeding ewes averaging 7.5 lb. per head for 12 months growth, hoggets over 12 months averaging 8.0 lb., while lambs shorn for the first time when 9 months old yielded 4.0 lb.

A further improvement in the quality and yield of wool may be anticipated from the addition to the flock of four Merino rams, imported from South Africa and landed at Mombasa at the moderate price of £10 per head. They are well-covered rams of flock standard, and, on being shorn of eighteen months growth of wool, cut an average of 28 lb.

The wool clip marketed in 1932 was exported in two consignments, approximately equal in quality and weight, one lot being sold on the London market and the other on the Continent, for purposes of comparison. The account sales of each consignment are summarized in Appendix II, the average net return per pound f.o.r. Naivasha being 33.3 cents.

The estimated profit on the flock, making no charge for grazing, in which there were in December 750 sheep over 12 months old, amounted to £157 for 1932.

Pigs.

No feeding experiments were undertaken with pigs in 1932, attention being given to establishing foundation stock from which to secure cross-bred pigs of uniform type with which to carry out feeding tests in the near future. Large white boars are being used on large black sows to obtain cross-bred litters suitable for bacon production, and the middle-white-large-white cross has been bred to test its merits in the pork market. It may be mentioned that the white breeds have suffered from sun scald to a considerable extent and would appear to require well-shaded surroundings except in the morning and evening.

Surplus breeding stock comprising eight large white boars and two large white gilts were sold to pig-breeders during the year.

Experimental.

Supplementary Feeding of Dairy Cows for Milk Production.

Only in exceptional years is the rainfall recorded on the farm more than 20 inches per annum, being in 1932 extremely low,

viz., 17.5 inches. Thus, for at least nine months of each year the cows in milk must receive supplementary feeding. Concentrates fed at the rate of 2 lb. daily for each gallon of milk produced have failed to maintain a yield approximating to that experienced when the herd has access to green grass, and in 1932 certain feeding tests were carried out to observe the effect of ensilage and green fodder, added to the concentrates ration, on the individual milk-yield.

I. *Maize ensilage in addition to concentrates.*—This test was carried out over a period of eight weeks, January-March, 1932, under drought conditions, with two groups of 10 cows, of approximately equal milk-yield at the beginning of the test.

Feeding.

Group 1. 2 lb. of concentrates (simsim cake 2 parts, wheat bran 1 part) daily for each gallon produced.

Group II. 30 lb. ensilage daily, plus concentrates as above, less 2 lb. per head, daily.

	Group I. Concentrates only.	*Group II. Concentrates plus ensilage, 30 lb. daily.*
Average initial daily yield per cow	19.2 lb.	19.0 lb.
Average daily yield over eight weeks' period	14.9 lb.	18.2 lb.
Concentrates consumed per head	185 lb.	116 lb.
Cost of concentrates	Shs.8.51	Shs.5.33

Increase per head in yield in group II over group I ... ... 3.3 lb. daily.

II. *Green forage.*—A test to observe the influence of green forage on milk production was begun on 15th July and was in progress at the end of the year. Two groups of cows, seven in each, were treated as follows:—both groups received concentrates as in Test I above, while group 2 were fed 10 lb. kale and 10 lb. green lucerne for the first six weeks and 20 lb. green lucerne daily for the remaining four months. The ration of group 1 had to be doubled in October and November as the grazing, owing to locust depredations, could barely supply their maintenance requirements.

Average milk-yields during the period were as follows —

Periods

Pre-period July 1st-15th. Experimental Period 16th July-31st December

Feeding

Group 1 concentrates only. Group 2. concentrates plus 20 lb. green forage daily

Average yield per cow

	July 1–15.	*July 16–31*	*Aug*	*Sept*	*Oct*	*Nov.*	*Dec.*
	lb	lb	lb	lb	lb	lb	lb.
Group 1 ...	400	411	657	528	365	309	384
Group 2 ...	417	443	738	636	558	510	569

Total production per cow during 5½ months (169 days) experimental period { Group 1... 2,654 lb. Group 2 ... 3,454 lb.

Difference in favour of Group 2 = 800 lb., or approximately one half-gallon per cow per day.

III. *Green lucerne.*—A short trial to observe the reaction of milch cows to restricted grazing and a liberal allowance of green lucerne, with no concentrates, was carried out over a six-weeks period, 1st October to 15th November, when grazing conditions were deplorable.

Twelve cows were run during the forenoon and at night in a 2-acre paddock, with practically no available herbage. Each morning they were fed green lucerne, an average quantity of 20 lb. per head, and an additional 35 lb. in the afternoon, a total daily supply of 55 lb. per head.

A fairly uniform yield of milk was obtained throughout the period with little fluctuation, amounting to an average of 21 lb. per day per cow, the best yield being an average of 34 lb. per day for the period.

This test serves to indicate the value of easily digestible green forage fed in quantity, with the minimum of dry fibrous herbage in the daily ration.

CALF-REARING.

Until the end of 1931, all calves bred on the farm were hand reared, according to the following method of feeding:—

First month—whole milk increasing daily to 9 lb. maximum at 14 days old.

4-6 *weeks*—gradual change over from whole to separated milk, 12 lb. daily. Concentrates, maize meal, and wheat bran offered.

6 *weeks to* 6 *months*—separated milk, average 15 lb. daily; total 200 gals. Concentrates, 100 lb. over period per calf.

Thus each calf received

35-40 gallons whole milk;

200 gallons separated milk;

100 lb. meal mixture: cake, 1 part; maize meal, 1 part; wheat bran ½ part.

The calves treated as above were thrifty animals when 6 months old, but afterwards, in spite of their rations being diminished daily towards the end of the feeding period, growth was slow and erratic in the succeeding 6 months.

Accordingly, 10 Shorthorn grade calves received extra feeding until 9 months old, 5 being fed one gallon separated milk and 5 being fed meal mixture at the rate of 1 lb. per head daily. Ten calves of equal birth weight, but fed for 6 months only, were under observation as a control group. The following figures on live weight increase were recorded:—

	Average Birth Weight. lb.	*Average weight at 6 months* lb.	*Average weight at 9 months.* lb.	*Average at 12 months.* lb.
Group 1.—6 months period.	63·0	228	270	329
Group 2.—9 months period.	62·4	243	310	346

Average increase in lives of Group 2 *over Group* 1:—At 9 months—40 lb., at 12 months—17 lb.

Cost of extra feeding:—5 calves on separated milk, Shs.9 per head; 5 calves on concentrate mixture, Shs.4/50 per head.

Daily rate of live weight increase from birth:—Group 1 at 9 months—0.76 lb.; at 12 months—0.73 lb. Group 2 at 9 months—0.91 lb.; at 12 months—0.77 lb.

The total cost of hand rearing per calf until 12 months old, when calves are transferred to steers or heifers, was:—

Group 1—Shs.46/-.

Group 2—Shs.55/- when fed separated milk for 3 additional months, and Shs.55/50 when fed concentrate mixture for 3 additional months.

The above cost of production is excessive for steer calves, which must be grazed from 2 to 3 years before marketing as

slaughter animals, and for which the price rules at Shs.60/- to Shs.70/- on the hoof in a glutted market.

Alternative method.—In view of the relatively high cost of production of yearling calves when hand rearing is practised, an alternative method of suckling two calves on foster-mothers was given a trial in 1932. Cows which had consistently low milk-yields over two consecutive lactations were used for the experiment, and, on calving, each cow was given a recently-born calf to rear along with her own. Neither the dams nor the suckling calves received any additional feeding, although grazing conditions were critical at one period of the year.

Four pairs of suckling calves have now reached the age of 12 months, and the relative data concerning their progress in growth and cost of production may be set down to afford a comparison with the corresponding data for hand-reared calves cited above. Calves reared in pairs are charged with the maintenance and depreciation of their foster-mothers for one year, and also with whatever costs they themselves incur in attendance, vaccines, and sundries up to the age of 12 months

Suckling Calves.

	Average birth weight	*Weight at 6 months.*	*Weight at 9 months*	*Weight at 12 months*
	57·5 lb	245 lb.	329 lb.	401 lb.
Average daily gain	—	1·03 lb.	1·0 lb	0·97 lb

Cost per head for 12 months = Shs.32/-.

From the foregoing data it will be observed that in growth-rate up to 12 months of age, the advantage rests with the suckling calves, and their all-in cost per head for the period may be estimated at Shs.20/- less than the hand-reared calves.

Sheep.

Records of the rate of growth of young stock bred on the farm show that the period of least progress occurs between weaning from their dams, at 6 months of age, and 12 months. Thereafter their progress would appear to be uniform. A feeding test with lambs weaned in June, 1932, was begun in July, three groups with 40 lambs in each being employed. These were grazed together, but penned separately at night, when one group received a salt mixture *ad lib*; the second group were fed a concentrate mixture rich in protein, in addition to this, while the third group got no extra feeding.

The lambs were weighed when supplementary feeding was begun and at monthly intervals thereafter, the average for which appear below :—

——	*Group I. Grazing alone.*		*Group II. Cattle salt 50 parts, bone meal 50 parts.*		*Group III. Cake 60 parts, bran 20 parts, maize 10 parts* } *plus 10 parts mineral mixture.*	
	Wedders. lb.	Ewes. lb.	Wedders. lb.	Ewes. lb.	Wedders. lb.	Ewes. lb.
Average initial weight— July ...	53·6	53·6	53·4	48·8	52·15	51·9
Average weight— August ...	56·7	56·3	55·3	51·5	56·2	55·1
September...	54·2	55·5	56·8	53·3	57·5	55·6
October ...	51·2	51·2	50·3	47·7	53·4	53·7
November...	53·4	53·3	54·8	51·1	58·2	56·5
December ...	57·5	57·7	58·4	54·2	62·26	61·0
Average increase per head ...	3·9	4·1	5·0	5·4	10·11	9·1

Cost of feed per head for period :—group II 50 cents; group III Shs.1/42.

All animals suffered a set-back during October, when grazing conditions were at their worst, and at the end of the year, when the pasture had recovered to a certain extent, group III were superior to the other two groups, but the latter showed no indication of stunted development. The cost of feeding even a small concentrates ration would scarcely appear to be justified from the above results, having regard to the present market value of sheep products.

Improvement of Masai Sheep.

A flock of Masai ewes is carried by the farm. To date, these have been crossed by rams of the following breeds :—Masai, Suffolk, half-bred Masai-Suffolk, Black-headed Persian. The progeny of these matings and figures indicating their rate of growth are discussed below.

Unimproved Masai.—Lambs were vigorous, and at 18 months attained the weight at which they are generally sold for slaughter.

Suffolk-Masai half-bred.—This cross showed the highest birth-weight, exhibiting to a marked degree the body conformation of the sire. The wethers were marketable for mutton at 18 months.

Quarter Suffolk-Masai cross.—Lighter at birth than the half-bred, this cross retained something of the Suffolk body outline, grew a coat in which hair and wool were intermingled, and was favoured by natives who purchased ram lambs for breeding.

Persian-Masai cross.—Equal in birth-weight to the unimproved Masai lamb, this cross showed a uniform rate of growth during its first 12 months. The Persian markings of the coat predominate, and the cross-bred is not so narrow of body as the unimproved type.

Average Live Weight (lb.).

——	*Average birth-weight.*		*Weight at*		
	Ewes.	Wethers.		Ewes.	Wethers.
Masai lambs ...	5·8	6·3	18 months	84·2	92·1
Half-bred Suffolk-Masai.	8·0	8·5	"	104·6	110·0
Half-bred Suffolk-Masai.	6·6	6·9	8 months	58·6	62·4
Half-bred Persian-Masai.	5·8	6·3	12 months	65·2	69·2
Half-bred Persian-Masai.	5·9	6·5	7 months	45·5	48·6

In view of the response of the unimproved Masai sheep to good conditions of grazing, the flock will in future be utilized to breed by selection and culling a uniform flock of the Masai type, without improvement from any other breed.

Pasture Investigation.

In collaboration with the officer of the Agricultural Department in charge of the improvement of grassland, certain preparatory field work was carried out with the aim of recording data on the following aspects of pasture management :—

(1) Seasonal yield in nutrients of individual local species of grasses.

(2) Reaction of pasture to different degrees of intensity of grazing by cattle.

(3) Reaction of natural grazing to (1) the application of artificial fertilizers, (2) the application of farmyard manure, (3) rejuvenation by cultivation.

Dealing with the progress of (1), four local species, *Cynodon plectostachyium*, *Themeda triandra*, *P ennisetum clandestinum*, and *Chloris gayana*, were planted and the imported species *Digitana eriantha* (woolly finger grass) were planted out in replicated plots during the long rains of 1932.

Themeda triandra, which is widely distributed throughout the Colony, failed to become established on being transplanted, while the imported species made little progress. Of the other three local species, *Chloris gayana* (Rhodes grass) showed the most vigorous growth. Owing to lack of rain and continued ravages by locusts, there was never sufficient growth to enable cutting, and estimations of yields could not therefore be carried out.

With regard to (2), paddocks were fenced off for this work, but the condition of the pasture did not suggest that any significant data could be derived by stocking with cattle.

As to (3), excepting an apparent vigorous growth following (*a*) the application of farmyard manure and (*b*) rejuvenation of the sward by cultivation with peg-toothed harrows, the plots remained as sparsely covered as the adjoining veld. Locusts again were the controlling factor in the situation.

Mineral Deficiency—Feeding Test.

On a certain area adjoining Lake Naivasha, where the soil is of laval origin, the natural pasture is reputed to be unsound grazing for livestock. In 1930, when the herbage was rank and abundant, there was a high percentage of unthrifty animals in the herds; their condition, in the opinion of their owners, being due to some dietetic deficiency. The appearance of the soil and herbage supported this opinion, being similar to the area in the Nakuru district where lack of sufficient iron salts in the pasture results in the general debility of the grazing animal. Accordingly, it was decided to carry out an observational test over a period of 12 months, on a farm where malnutrition had caused some mortality in cattle, to find if a dietetic deficiency did exist and whether it could be corrected by the feeding of certain mineral salts. Pasture was abundant but dry, with a high fibre content, when the test began in September, 1931.

Three groups, ten in each, of two-year old steers not previously grazed on the farm and three groups of six cows with calves at foot, in poor condition, which had been brought on to the farm 18 months earlier were run as a separate herd for observation purposes, mineral mixtures being offered to two groups, while the third group had no supplementary feeding :—

Group 1.	*Group* 2.		*Group* 3.	
No mineral supplement.	Cattle salt 30 Bone meal 50 Muriate of Potash. 10 Iron oxide 10	ad lib.	Cattle salt 65 Iron oxide 35	ad lib.

During the first three months the condition of all animals remained stationary, but after the November rains a definite recovery in condition was observed, irrespective of feeding, which did not seem to appeal to the animals which had free access to the mineral licks. A slight falling-off was noticeable in several instances during a period of scanty grazing in February, 1932, but this was remedied when new grass appeared in the wake of the April rains, and again no group showed to advantage over the others.

In February and June, the Livestock Officer inspected these cattle and pronounced them in thrifty condition, stating that there was no apparent difference when groups were compared.

The steers were weighed after 12 months' grazing on the farm, and the average increase in live weight showed little variation for the three groups.

Average Live Weight of Steers.

	Group 1. *Not fed.*	*Group* 2. *Salt mixture.*	*Group* 3. *Salt mixture.*
Sept., 1931, average weight	684 lb.	681 lb.	679 lb.
Sept., 1932, average weight	824 ,,	833 ,,	840 ,,
Average gain in weight ...	140 ,,	152 ,,	161 ,,

By September, 1932, all three groups were falling off in condition owing to scarcity of pasture, hence the relatively small gain in weight over 12 months. As the average increase in weight of steers of the same age as those used on experiment, grazed on Government Farm from September 1931 to September, 1932, was only 175lb., the rate of increase recorded for the experimental steers may be considered normal on locust-ridden grazing.

As no symptoms of malnutrition were evident during the period of the above experiment, it is presumed that the new grass which appeared after the first locust infestation may have been superior in chemical composition to the parched fibrous herbage on which the stock had been grazing previously. This view was supported to some extent by stock-owners on neighbouring farms, who made no mention of a qualitative deficiency in their pastures after the November rains of 1931.

Native Heifers.

A herd of 25 native heifers of the type belonging to the Lumbwa district of Kenya were purchased in January, 1932. It was proposed to give these animals equal conditions of feeding and management as the grade herd on the farm, and later to employ the data recorded of their performance as milk producers for purposes of comparison on the economic basis.

Ten heifers calved shortly after arrival, and the highest daily yield recorded was 5 lb., while the longest lactation period was 5 weeks. Two heifers were allowed to suckle their calves, but their yield was not sufficient to keep their offspring alive.

The calves were weak at birth, their birth-weights averaging 24 lb. The heifers on the whole showed stunted development, particularly those which arrived in calf, which were obviously culls out of native-owned herds. There has been a certain amount of growth and development among the younger heifers in the herd, which have now been mated, and it is possible that they may show some improvement on those which have already calved. The experience would indicate that in attempting to utilize the native cow as a dairy animal, only animals which have been secured as the result of rigorous selection should be employed.

APPENDIX I.

Milk Production—Summary of Costs.

Numbers of cows in herd	102
Total production, 1932	30,098 gals.
Average milk-yield per cow in herd	294 gals.
Amount of milk separated for butter fat	27,116 gals.
Total butter fat sold	9,211.5 lb.
Total butter fat sold per cow	90 lb.
	Shs. cts.
Total charges against herd, excluding grazing, foodstuffs, wages, sundries, depreciation of herd, maintenance of bulls, etc	5,277.54
Cost of production of milk per gallon	0.17
Total revenue from butter fat sold from 27,116 gallons of milk separated	7,327.53
Return per gallon of milk separated	0.27
Net profit per gallon of milk sold as butter fat (no charge for cows' grazing included).	0.10

N.B.—The above return does not include the separated milk by-product fed to calves and pigs on the farm, amounting to 26,393 gallons, which, charged to calves and pigs at 10 cents per gallon, raises the return per gallon of milk separated to 33.8 cents.

APPENDIX II.

Marketing of Wool, 1932.

Two consignments of wool, 9 bales in each of approximately equal quality, were exported to the London and Continental markets, respectively, in August, 1932.

SUMMARY OF ACCOUNT SALES.

I.—*Consignment sold in London—9 bales—3,597 lb. net.*

	Shs. cts.		Shs. cts.
To gross receipts...	1,733.75	By freight to coast...	107.03
To freight rebate ...	24.94	By shipping charges at coast	98.63
		By ocean freight ...	302.42
		By consolidate rate, brokerage, commissions, etc.	109.25 / 8.25
		By balance	1,133.11
Shs.	1,758.69	Shs.	1,758.69

	Shs. cts.
To balance b/d, being net return...	1,133.11
To net return per lb. f.o.r. Naivasha ...	31. 5

II.—*Consignment marketed in France—9 bales—3,474 lb.*

	Shs. cts.		Shs. cts.
To gross receipts ...	2,363.50	By freight to coast	103.84
To freight rebate ...	27.58	By shipping charges at coast	114.08
		By freight to Antwerp	359.08
		By sorting, washing, etc.	593.66
		By exchange, telegram charges ...	18.18
		By balance	1,222.24
Shs.	2,391.08	Shs.	2,391.08

	Shs. cts.
To balance b/d, being net return...	1,222.24
To net return per lb. f.o.r. Naivasha ...	35. 1

APPENDIX III.

Revenue.

The revenue to meet recurrent expenditure involved in the maintenance of the farm is derived from the sale of produce, viz., butter fat, wool, and livestock. A summary of the output for 1932 and of the cash return is given below.

Butter fat. — Amount sold = 9,211.5 lb. Cash return = Shs. 7,327.53.

Wool.—Amount sold = 7,071 lb. Cash return = Shs. 2,355.35 (net).

STOCK SALES.

Breeding Stock.			*Slaughter Stock*		
Cattle—		Shs. cts.			Shs. cts.
1 bull	...	700.00	26 steers	...	2,460.00
1 cow	...	200.00	8 calves	...	98.00
Pigs—					
8 boars	...	1,255.00	2 weaners	...	56.40
2 gilts	...	500.00			
Native Sheep—					
2 rams and 23 ewes.		495.50	20 wedders	...	300.00
Grade Merino Flock—					
13 ram lambs		260.00	95 wedders and culled ewes.		1,666.00
Total	Shs.	3,410.50	Total	Shs.	4,580.40

Total proceeds from above sources in 1932.

	Shs. cts.
Butter fat	7,327.53
Wool	2,355.35
Breeding Stock	3,410.50
Slaughter Stock	4,580.40
Total	Shs. 17,673.78

APPENDIX IV.

Valuation of Livestock and Equipment, December 31st, 1932.

I. Livestock on hand :—

	Shs. cts.	Shs. cts.
Cattle ...	45,947.00	
Sheep ...	21,207.00	
Pigs ...	2,570.00	
Horses ...	760.00	
		70,484.00
II. Implements and Equipment		5,380.26
III. Sundry Stores		356.55
IV. Food-stuffs on hand		504.34
Total Valuation		Shs. 76,725.15

Farm Operating Account, 1932.

1932.		Shs. cts.	1932.		Shs. cts.
Jan. 1.	To balance b/f.	8,707.92	Dec. 31.	By sundry payments.	14,271.97
	To cheques paid in.	16,935.19		By balance	11,371.14
		25,643.11			25,643.11
1933.					
Jan. 1.	To balance b/d.	11,371.14			

Fixed Deposit Account with National Bank of India, Ltd.

1932.		Shs. cts.	1932.		Shs. cts.
Jan. 1.	To balance	9,292.00	Dec. 1.	By balance	9,665.00
Aug. 22.	To interest on above.	373.00			
		9,665.00			9,665.00
1933.					
Jan. 1.	To balance on fixed deposit.	9,665.00			

(30458—2) Wt. P.1461—3071 250 8/33 P. St. G. 3.

NAIVASHA STOCK FARM.

ANNUAL REPORT OF 1932.

The Naivasha Stock Farm, depending for its maintenance on revenue accruing from the sale of animal products, shared in 1932 the effects of general depression experienced on farms throughout the Colony, engaged in the livestocked industry. The year was marked by a fall in prices. Butter fat showed a decline from 95 cents. to 70 cents. per pound. Slaughter steers which could be sold at Shs.100/- in January were by the end of the year a drug on the market at half that amount, while a similar condition governed the disposal of slaughter wedders. The return from the sale of wool showed a perceptible increase.

The annual rainfall was below average, 17.5 inches only being recorded. Under normal conditions this amount, though inadequate for the growth of fodder crops, would have ensured ample growth of pasture to meet the requirements of the stock carried by the farm, as the herbage reacts quickly to rain, and exhibits a useful carrying capacity in periods of drought. Unfortunately on every occasion when new growth made its appearance, depredations by locusts followed, thus the rainfall effects were rendered practically negligible.

Further, it was impossible to carry out to a satisfactory conclusion the field work in connection with grassland improvement which was contemplated in the experimental programme, and the results of feeding tests with animals on locust-ridden grazing must be considered in the light of the conditions by which they were governed.

In this report the progress of the various classes of livestock is dealt with generally, while a statement on the experimental work attempted, and the financial transactions, is appended.

MILK PRODUCTION.

The total number of grade cows carried throughout the year was 119. These are mainly Grade Shorthorn and Friesian, 40 per cent. of the herd appear to be of more improved breeding than first cross.

17 cows, on account of consistently low milk yield, were used as foster mothers, to each of which were allotted two calves to rear, neither the dam nor the calves receiving any supplementary feeding. Milk production therefore was the function of 102 cows.

Grazing conditions forreasons already outlined, were most unfavourable to milk production, a stage being experienced in October and November when the pasture was not sufficient for maintenance requirements. The expenditure on supplementary feeding stuffs was consequently high, and as the revenue from milk was entirely derived from the sale of butter fat to the Kenya Co-operative Creamery at the average price of 78 cents per pound, the nett profit per member of the herd was necessarily small.

The total amount of milk produced during the year was 30068 gallons, an average yield of 294 gallons per cow, and the cost involved exclusive of grazing was 17 cents per gallon, of which the charge against supplementary foodstuffs, grown and purchased, amounted to 8 cents., labour charges 4 cents. the remaining 5 cents. covering depreciation of the herd, maintenance of bulls, dipping and dairy charges.

The output of butter fat was 9211.5 lbs. or 90 lbs. per cow.

Further detail on milk production costs appears in Appendix I.

The birth rate in the herd for the year, excluding still born and premature calves was 75 per cent.

CALVES.

Calves were hand reared excepting those suckled in pairs by foster mothers. A general improvement in the health of young calves followed the subdivision of calf houses into individual pens, which has practically banished the early gastric disorders and attacks of bacillary necrosis. As it has been found unprofitable to rear steer calves, these are now slaughtered at birth or disposed of at an early age for slaughter when this is possible. Owing to the deplorable condition of the grazing towards the end of the year, hand feeding of heifer calves was continued until they reached the age of 10 months. An account of experimental work in calf rearing appears in the appendix.

STEERS.

The rearing of grade steers for ultimate disposal as slaughter stock has proved an unprofitable side line in the internal economy of the farm. In 1952, hand reared calves were transferred to steers at a capital charge of Shs.55/-, their cost of maintenance from birth to one year old. The herd of steers incurred an expenditure for the year of 4.55 per head, exclusive of any charge for the grazing they occupied. Thus, at the age of 3-4 years, when these animals are marketable, their cost of production will have greatly exceeded their anticipated market value, hence it appears to be more profitable to slaughter bull calves at birth and concentrate on female stock from which the financial return should at least cover the outlay they have incurred.

SHEEP.

Climatic conditions in 1952 were favourable to the general well being of the flock, except during periods of severe locust infestation, when young stock experienced a setback, and there was a high death rate among newly weaned lambs.

The wool clip for the year was satisfactory, breeding ewes averaging 7.5 lbs. per head for 12 months growth, hoggets over 12 months averaging 8.0 lbs; while lambs shorn for the

first time when 9 months old yielding 4.0 lbs.

A further improvement in quality and yield of wool may be anticipated from the addition to the flock of 4 Merino rams, imported from South Africa and landed at Mombasa at the moderate price of £10 per head. They are well covered rams of flock standard, and on being shorn of eighteen months growth of wool, cut an average of 28 lbs.

The wool clip marketed in 1952 was exported in two consignments, approximately equal in quality and weight, one lot being sold on the London market, the other on the Continent, for purposes of comparison. The account sales of each consignment are summarised in the appendix; the average net return per pound F.O.R.N Sivasha being 55.5 cents.

The estimated profit on the flock, making no charge for grazing, in which there were in December 750 sheep over 12 months of age, amounted to £157 for 1952.

PIGS.

No feeding experiments were undertaken with pigs in 1952, attention being given to establishing foundation stock from which to secure cross bred pigs of uniform type with which to carry out feeding tests in the near future. Large white boars are being used on large black sows to obtain cross bred litters suitable for bacon production, and the middle white-large white cross has been bred to test its merits in the pork market. It may be mentioned that the white breeds have suffered from sun scald to a considerable extent, and would appear to require well shaded surroundings except in the morning and evening.

Surplus breeding stock comprising 8 large white boars and two large white gilts were sold to pig breeders during the year.

EXPERIMENTAL.

Supplementary Feeding of Dairy Cows for Milk Production.

Only in exceptional years is the rainfall recorded on the farm more than 20 inches per annum, being in 1952 extremely low,

17.5 inches. Thus for at least 9 months of each year, the cows in milk must receive supplementary feeding. Concentrates fed at the rate of 2 lbs. daily for each gallon of milk produced have failed to maintain a yield approximating to that experienced when the herd has access to green grass, and in 1932 certain feeding tests were carried out to observe the effect of ensilage and green fodder added to the concentrates ration, on the individual milk yield.

I. Maize ensilage in addition to concentrates.

This test was carried out over a period of 8 weeks January-March 1932, under drought conditions, with two groups of 10 cows, of approximately equal milk yield at the beginning of the test.

Feeding. Group I - 2 lbs. of concentrates (simsim cake 2, wheat bran 1 part) daily for each gallon produced.

Group II - 30 lbs. ensilage daily plus concentrates as above, less 2 lbs. per head, daily.

	Group I. Concentrates only	Group II. Concentrates plus ensilage, 30 lbs daily
Average initial daily yield per cow	13.2 lbs.	13.0 lbs.
Average daily yield over 8 weeks period ..	14.9 "	18.2 "
Concentrates consumed per head	185 "	116 "
Cost of concentrates ...	Shs.8.61	Shs.5.35

Increase per head in yield in Group II over Group I .. .. .. 3.2 lbs. daily.

II. A test to observe the influence of green forage on milk production was begun on 15th July and was in progress at the end of the year. Two groups of cows, 7 in each, were treated as follows:- Both groups received concentrates as in Test I above, while Group 2 were fed 10 lbs. kale and 10 lbs. green lucerne for the first six weeks, and 20 lbs. green lucerne daily for the

66

for the remaining four months. The ration of Group I had to be doubled in October and November as the grazing, owing to locust depredations could barely supply their maintenance requirements.

Average milk yields during the period were as follows:-

Milk Yield - Pre-period July 1-15th: Experimental Period 16th July-31st December.

Group I, concentrates only: Group II, concentrates plus 20 lbs. green forage daily.

Average yield per cow	July 1-15th	July 16-31st	August	September	October	Nov.	Dec.
	lbs.		lbs.	lbs.	lbs.	lbs.	lbs.
Group I	400	411	657	528	565	309	384
Group II	417	445	758	656	558	510	569

Total production per cow during 5½ months (169 days) experimental period.

Group I ... ... 2654 lbs.

Group II ... ... 3454 "

Difference in favour of Group II = 800 lbs., or approximately one half gallon per cow per day.

III. A short trial to observe the reaction of milch cows to restricted grazing and a liberal allowance of green lucerne, with no concentrates, was carried out over a six week period, 1st October - 15th November, when grazing conditions were deplorable.

Twelve cows were run during the forenoon and at night in a 2-acre paddock, with practically no available herbage. Each morning they were fed green lucerne, an average quantity of 20 lbs. per head, and an additional 35 lbs. in the afternoon, a total daily supply of 55 lbs. per head.

A fairly uniform yield of milk was obtained throughout the period with little fluctuation amounting to an average of 21 lbs. per day, per cow, the best yield being an average of 34 lbs. per day for the period.

This test serves to indicate the value of easily digestible

green forage fed in quantity, with the minimum of dry fibrous herbage in the daily ration.

CALF-REARING.

Until the end of 1951, all calves bred on the farm were hand reared, according to the following method of feeding:-

First month - whole milk increasing daily to 9 lbs. maximum at 14 days old.

4-6 weeks - gradual change over from whole to separated milk - 12 lbs. daily. Concentrates: maize meal and wheat bran offered.

6 weeks to 6 months - separate milk; average 15 lbs. daily; total 200 gals. Concentrates: 100 lbs. over period per calf.

Thus each calf received 35-40 gallons whole milk;
200 gallons separated milk;
100 lbs. meal mixture:-
Cake - 1 part
Maize meal - 1 part
Wheat bran - ½ part

The calves treated as above were thrifty animals when six months old, but afterwards, in spite of their rations being diminished daily towards the end of the feeding period, growth was slow and erratic in the succeeding 6 months.

Accordingly, 10 Shorthorn grade calves received extra feeding until 9 months old; 5 being fed one gallon separated milk and 5 being fed meal mixture at the rate of 1 lb. per head daily. Ten calves of equal birth weight, but fed for 6 months only, were under observation as a control group. The following figures on live weight increase were recorded:-

	Average Birth Weight	Average weight at 6 months	Average weight at 9 months	Average at 12 months
Group 1.	lbs.	lbs.	lbs.	lbs.
6 months period	65.0	228	270	329
9 months period	62.4	245	310	346

Average increase in live of Group 2 over Group 1:-

At 9 months - 40 lbs.
At 12 " - 17 lbs.

Cost of extra feeding:-

5 calves on separated milk - Shs.9/- per head

5 calves on concentrate mixture - Shs.4/50 per head

Daily Rate of Live Weight Increase from Birth.

Group I at 9 months - 0.76 lbs. At 12 months - 0.73 lbs.

Group II " 9 " - 0.91 " " 12 " - 0.77 "

The total cost of hand rearing per calf, until 12 months old, when calves are transferred to steers or heifers, was for:-

Group I - Shs.46/-
Group II - Shs.55/- when fed separated milk for 3 additional months, and
Shs.55/50 when fed concentrate mixture for 3 additional months.

The above cost of production is excessive for steer calves, which must be grazed from 2-3 years before marketing as slaughter animals, and for which the price rules at Shs.60/- to ~~xxx~~ 70/- on the hoof in a glutted market.

ALTERNATIVE METHOD.

In view of the relatively high cost of production of yearling calves when hand rearing is practised, an alternative method of suckling two calves on foster mothers was given a trial in 1952. Cows which had consistently low milk yields over two consecutive lactations were used for the experiment, and on calving each cow was given a recently born calf to rear along with her own. Neither the dams nor the suckling calves received any additional feeding, although grazing conditions were critical at one period of the year.

Four pairs of suckling calves have now reached the age of 12 months, and the relative data concerning their progress in growth and cost of production may be set down to afford a comparison with the corresponding data for hand reared calves cited above. Calves reared in pairs are charged with the maintenance and depreciation of their foster mothers for one year, and also with whatever costs they themselves incur in attendance, vaccines and sundries up to the age of 12 months:-

Sucking Calves.

	Average birth weight	Wt. at 6 months	Wt. at 9 months	Wt. at 12 months
4 prs. 8 calves	57.5 lb.	245 lb.	329 lb.	401 lb.
Average daily gain	-	1.05 lb.	1.0 lb.	0.97 lb.

Cost per head for 12 months - Shs. 52/-

From the foregoing data it will be observed that in growth rate up to 12 months of age, the advantage rests with the suckling calves, and their in all cost per head for the period may be estimated at Shs. 20/- less than the hand reared calf.

SHEEP.

Records of the rate of growth of young stock bred on the farm show the period of least progress to occur between weaning from their dams, at 6 months of age, and 12 months. Thereafter their pgoress would appear to be uniform. A feeding test with lambs weaned in June 1932 was begin in July, 3 groups with 40 lambs in each being employed. These were grazed together, but penned separately at night, when one group received a salt mixture ad lib., the second group were fed a concentrate mixture rich in protein in addition to this, while the third group got no extra feeding.

The lambs were weighed when supplementary feeding was begun and at monthly intervals thereafter, the average for which appear below:-

	Group I Grazing alone		Group II Cattle salt 50 parts Bone meal 50 parts		Group III Cake 60 parts) Bran 20 parts) Maize 10 ") plus 10 pts. Mineral mixture	
	Wedders lbs.	Ewes lbs.	Wedders lbs.	Ewes lbs.	Wedders lbs.	Ewes lbs.
Average initial weight - July	55.6	53.6	55.4	48.8	52.15	51.9
Average weight - August	56.7	[illegible]	55.5	51.5	56.2	56.1
do. - Sept.	54.2	[illegible]	56.6	55.5	57.5	55.5
do. - Oct.	51.2	[illegible]	50.3	47.7	55.4	55.7
do. - Nov.	[illegible]	[illegible]	54.6	51.1	54.2	56.5
do. - Dec.	[illegible]	[illegible]	58.4	[illegible]	62.25	61.0

Cost of feed per head for period:- Group II 50 cents. Group III Shs. 1/42

All animals suffered a set back during October when grazing conditions were at their worst, and at the end of the year, when the pasture had recovered to a certain extent, Group III were superior to the other two groups, but the latter showed no indication of stunted development. The cost of feeding even a small concentrates ration would scarcely appear to be justified from the above results, having regard to the present market value of sheep products.

IMPROVEMENT OF MASAI SHEEP.

A flock of Masai ewes is carried by the farm. To date these have been crossed by rams of the following breeds:-

Masai, Suffok, half-bred Masai-Suffolk, Black-headed Persian.

The progeny of these matings and figures indicating their rate of growth are discussed below.

Unimproved Masai. Lambs were vigorous, and at 18 months attained the weight at which they are generally sold for slaughter.

Suffolk-Masai half-bred. This cross showed highest birth weight, exhibiting to a marked degree the body conformation of the sire. The wethers were marketable for mutton at 18 months.

Quarter Suffolk-Masai Cross. Lighter at birth than the half-bred, this cross retained something of the Suffolk body outline, grew a coat in which hair and wool were intermingled, and was favoured by natives who purchased ram lambs for breeding.

Persian-Masai Cross. Equal in birth weight to the unimproved Masai lamb, this cross showed a uniform rate of growth during its first 12 months. The Persian markings of the coast predominate, and the cross-bred is not so narrow of body as the unimproved type.

Average Life Weight (lbs.)

		Ewes	Wethers	Weight at	Ewes	Wethers
Masai lambs	Av. birth weight	5.8	6.5	18 mths	84.2	92.1
¼ bred Suffolk-Masai	do.	8.0	8.5	do.	104.6	110.0
¼ bred Suffolk-Masai	do.	6.6	6.9	8 mths	58.6	62.4
¼ bred Persian-Masai	do.	5.8	6.5	12 mths	65.2	69.2
¼ bred Persian-Masai	do.	5.9	6.5	7 mths	45.5	48.6

In view of the response of the unimproved Masai sheep to good conditions of grazing, the flock will in future be utilised to breed by selection and culling, a uniform flock of the Masai type, without improvement from any other breed.

PASTURES INVESTIGATION.

In collaboration with the officer in charge of the improvement of grassland of the Agricultural Department, certain preparatory field work was carried out with the aim of recording data on the following aspects of pasture management.

(1) Seasonal yield in nutrients of individual local species of grasses.

(2) Reaction of pasture to different degrees of intensity of grazing by cattle.

(3) Reaction of natural grazing to (1) the application of artificial fertilisers; (2) the application of farmyard manure; (3) rejuvenation by cultivation.

Dealing with the progress of (1), four local species Cynodon plectostachyum, Themeda triandra, P ennisetum clandestinum and Chloris gayana were planted and the imported species Digitaria eriantha (woolly finger grass) were planted out in replicated plots during the long rains of 1952.

Themeda triandra, which is widely distributed throughout the Colony, failed to become established on being transplanted; while the imported species made little progress. Of the other three local species, Chloris gayana (Rhodes grass), showed the most vigorous growth. Owing to lack of rain and continued ravages by locusts, there was never sufficient growth to enable cutting, and estimations of yields could not therefore be carried out.

(2) Paddocks were fenced off for this work, but the condition of the pasture did not suggest that any significant data could be derived by stocking with cattle.

(3) Excepting an apparent vigorous growth following (a) the application of farmyard manure, and (b) rejuvenation of the sward by cultivation with peg-toothed harrows, the plots remained as sparsely covered as the adjoining veld; locusts again were the controlling factor in the situation.

MINERAL DEFICIENCY - FEEDING TEST.

On a certain area adjoining Lake Naivasha, where the soil is of laval origin, the natural pasture is reputed to be unsound grazing for livestock. In 1930 when the herbage was rank and abundant, there was a high percentage of unthrifty animals in the herds, their condition, in the opinion of their owners, being due to some dietetic deficiency. The appearance of the soil and herbage supported this opinion, being similar to the area in the Nakuru district where lack of sufficient iron salts in the pasture results in the general debility of the grazing animal. Accordingly it was decided to carry out an observational test over a period of 12 months, on a farm where malnutrition had caused some mortality in cattle, to find if a dietetic deficiency did exist, and whether it could be corrected by the feeding of certain mineral salts. Pasture was abundant, but dry with a high fibre content, when the test began in September, 1931.

Three groups, ten in each, of 2-year old steers not previously grazed on the farm, and three groups of six cows with calves at foot, in poor condition, which had been brought on to the farm 18 months earlier, were run as a separate herd for observation purposes; mineral mixtures being offered to two groups while the third group had no supplementary feeding.

Group I	Group 2		Group 3	
No mineral supplement	Cattle Salt	80	Cattle Salt	95
	Bone meal	50	Iron oxide	55
	Muriate of Potash	10		
	Iron oxide	10	ad. lib	

During the first three months, the condition of all animals remained stationary, but after the November rains a definite recovery in condition was observed, irrespective of feeding which did not seem to appeal to the animals which had free access to the mineral licks. A slight falling off was noticeable in several instances during a period of scanty grazing in February 1952, but this was remedied when new grass appeared in the wake of the April rains, and again no group showed to advantage over the others.

In February and June, the Livestock Officer inspected these cattle, and pronounced them in thrifty condition, stating that there was no apparent difference when groups were compared.

The steers were weighed after 12 months grazing on the farm, and the average increase in live weight showed little variation for the three groups.

Average Live Weight of Steers.

	Group 1 Not fed	Group 2 Salt mixture	Group 3 Sale mixture
Sept. 1951 - Av. Wt.	684 lbs.	681 lbs.	679 lbs.
" 1952 - do.	824 "	833 "	840 "
Av. gain in weight	140 "	152 "	161 "

By September, 1952, all three groups were falling off in condition owing to scarcity of pasture, hence the relatively small gain in weight over 12 months. As the average increase in weight of steers of the same age as those used on experiment, grazed on Government Farm from September 1951-September 1952, was only 175 lbs., the rate of increase recorded for the experimental steers may be considered normal on locust-ridden grazing.

As no symptoms of malnutrition were evident during the period of the above experiment, it is presumed that the new grass which appeared after the first locust infestation may have been superior in chemical composition to the parched fibrous herbage on which the stock had been grazing previously. This

view was supported to some extent by stockowners on neighbouring ffarms, who made no mention of a qualitative deficiency in their pastures after the November rains of 1931.

NATIVE HEIFERS.

A herd of 25 native heifers of the type belonging to the Lumbwa district of Kenya, were purchased in January 1932. It was proposed to give these animals equal conditions of feeding and management as the grade herd of the farm, and later employ the data recorded of their performance as milk producers for purposes of comparison on the economic basis.

Ten heifers calved shortly after arrival, and the highest daily yield recorded was 5 lbs., while the longest lactation period was 5 weeks. Two heifers were allowed to suckle their calves, but their yield was not sufficient to keep their offspring alive.

The calves were weak at birth, their birth weights averaging 24 lbs. The heifers on the whole showed stunted development, particularly those which arrived in calf, which were obviously culls out of native-owned herds. There has been a certain amount of growth and development among the younger heifers in the herd, which have now been mated, and it is possible that may show some improvement on those which have already calved. The experience would indicate that in attempting to utilise the native cows as a dairy animal, only animals which have been secured as the result of rigorous selection, be employed.

APPENDIX I.

MILK PRODUCTION - SUMMARY OF COSTS.

Numbers of cows in herd	= 102
Total production, 1932	= 30,068 gals.
Average milk yield per cow in herd	= 294 gals.
Amount of milk separated for butter fat	= 27,116 gals.
Total butterfat sold	= 9,211.5 lbs.
" " " per cow ..	= 90 lbs.

	Shs. Cts.
Total charges against herd, excluding grazing, foodstuffs, wages, sundries, depreciation of herd, maintenance of bulls etc. ..	= 5,277.54
.·. Cost of production of milk per gallon	= 0.17
Total revenue from butterfat sold/ex 27,116 gals. milk separated	= 7,327.55
Return per gallon of milk separated ..	= 0.27
Net profit per gallon of milk sold as butter fat (no charge for cows' grazing included)	= 0.10

N.B. The above return does not include the separated milk by-product fed to calves and pigs on the farm, amounting to 18,595 gals. which, charged to calves and pigs at 10 cts. per gallon, raises the return per gallon of milk separated to 28.6 cents.

MARKETING OF WOOL, 1952.

Two consignments of wool, 9 bales in each of approximately equal quality, were exported to the London and Continental markets respectively, in August, 1952.

Summary of Account Sales.

I. Consignment sold in London - 9 Bales - 3497 lbs.with

	Shs. Cts.		Shs. Cts.
To gross receipts	1753.73	By freight to coast	107.05
" freight rebate	94.94	" shipping charges at Coast	98.65
		" ocean freight ...	302.42
		" consolidate rate, brokerage, commissions etc.	109.25 8.25
		By balance	1135.11
	1758.69		1758.69

To balance b/d Net amount return 1135.11

Net return per lb. f.o.r. Malvern 31.5 cents.

II. Consignment marketed in France - 9 bales - 3474 lbs.

	Shs. Cts.		Shs. Cts.
To gross receipts	2391.80	By freight to Coast	103.8
" freight rebate	97.88	" shipping charges at Coast	114.0
		" freight to Antwerp	538.0
		" sorting, washing etc.	598.6
		" exchange, telegram charges	18.1
		By balance	1222.9
	2391.08		2391.0

To balance b/d Net return 1222.94

Net return per lb. f.o.r. Malvern 35.1 cents.

REVENUE.

The revenue to meet recurrent expenditure involved in the maintenance of the farm is derived from the sale of produce:- butter-fat, wool and livestock. A summary of the output for 1952, and the cash return, is given below.

Butter-fat. Amount sold - 9211.5 lbs. Cash return - Sh. 7527.55

Wool. " " - 7071 lbs. " " - Sh. 2555.35 (nett)

Stock Sales.

Breeding Stock	Shs. Cts.	Slaughter Stock.	Shs. Cts.
Cattle.			
1 bull	700.00	26 steers	2480.00
1 cow	200.00	8 calves	96.00
Pigs.			
8 boars	1255.00	2 weaners	56.40
2 gilts	500.00		
Native Sheep.			
2 rams and 25 ewes	495.50	20 wedders	500.00
Grade Merino Flock.			
15 ram lambs	260.00	95 wedders and culled ewes	1456.00
	3410.50		4580.40

Total proceeds from above sources in 1952.

	Shs. Cts.
Butter-fat	7527.55
Wool	2555.35
Breeding Stock	3410.50
Slaughter Stock	4580.40
	17073.78

Valuation of Livestock and Equipment December 31st, 1952.

		Shs. Cts.	Shs. Cts.
I.	Livestock on hand:-		
	Cattle	45947.00	
	Sheep	21207.00	
	Pigs	2670.00	
	Horses	760.00	70404.00
II.	Implements and Equipment		5380.20
III.	Sundry Stores		356.41
IV.	Foodstuffs on hand		504.54
	Total Valuation		76735.15

Farm Operating Account, 1952.

1952 Jan.1	To balance b/f	8707.92	1952 Dec.31	By sundry payments	1427.87
	To cheques paid in	16935.19		By balance	11371.14
		25643.11			25643.11
1953 Jan.1	To balance b/d	11371.14			

Fixed Deposit Account with National Bank of India Ltd.

1952 Jan.1	To balance	9290.00	1952 Dec.1	By balance	9665.00
Aug.22	To interest on above	375.00			
		9665.00			9665.00
1953 Jan.1	To balance on fixed deposit	9665.00			

COLONIAL DEVELOPMENT FUND:

NAIVASHA FARM FUND ACCOUNT.

STATEMENT OF RECEIPTS AND EXPENDITURE FOR PERIOD 1st APRIL, 1932 to 31st MARCH, 1933.

79

RECEIPTS.

1933.		£. s. cts.
31st March	Total Grant for period 1st April, 1932 to 31st March, 1933.....	1,500 - --
	TOTAL.....	£1,500 - --

EXPENDITURE.

1933.		£. s. cts.
31st March	Salaries of workers.....1,214	3
31st March	Travelling of workers to & from England.....	59 5
31st March	Bank Charges.....	- 5
31st March	Balance at Bank	226 6
	TOTAL.....	£1,500 -

ALEX HOLM.

Signed.....
CHAIRMAN,
NAIVASHA FARM ADVISORY COMMITTEE.

Certified correct

Ag. COLONIAL AUDITOR.

C. O.

Mr. Grossmith 2/8/33
Mr. Fiennes
Mr. Hillock 3/8
Mr. Parkinson
Mr. Tomlinson.
Sir C. Bottomley.
Sir J. Shuckburgh.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

DRAFT.

KENYA.
NO. 589
O.A.C.

No. 11
(Spare copies taken)

3155/33.

C.O.
R- 5-AUG
D 9

9 August ~~July~~, 1933.

Sir,

I have etc. to acknowledge the receipt of ~~your~~ Sir Joseph Byrne's despatches Nos.296 and 336 of the 10th of May and 1st of June respectively, regarding the Livestock Research Station at Naivasha, and to inform you that the despatches and the Naivasha Stock Farm Annual Report for 1932 were considered at a meeting of the Colonial Advisory Council of Agriculture and Animal Health on the 13th of July. Copies of an extract from the minutes of the meeting are enclosed.

2. Steps are being taken for the printing of the Naivasha Stock Farm Annual Report for 1932, and I will address you further with regard to the distribution of copies when printing has been

been completed.

I have, etc.

(Sgd.) P. CUNLIFFE-LISTER.

EXTRACT FROM THE MINUTES OF THE EIGHTEENTH MEETING OF THE COLONIAL ADVISORY COUNCIL OF AGRICULTURE AND ANIMAL HEALTH, 13th July, 1933.

4. Livestock Research Station Naivasha. - The Council had before them a report on the work of this Station during the year, 1932, which had been received from the Governor of Kenya, (Council Paper No.160).

MR. HOLM stated that the programme of work laid down for the Station had been and was being carried out according to plan, apart from setbacks which could not be foreseen. As an example of the latter, he referred to the fact that the whole of the pigs at the Station had had to be destroyed in 1931 on account of an outbreak of swine fever. Prior to this occurrence, however, the variable factor in respect of the different animals was very great, and the Station had in the meantime concentrated upon breeding animals with a known uniform history of breeding, so that in future greater reliance might be placed upon the experimental data. Progress had also been arrested in the work connected with grass improvement, owing to locust infestation and exceptionally severe drought. He said that during the current year there had been a marked drop in the prices obtainable for butter fat, and this was bound to affect adversely the finances of the Station.

DR. ORR briefly reviewed the work of the Station, which had been established as an experimental centre in regard to livestock problems, with the object of ascertaining by means of practical experiment and costings the directions in which animal husbandry methods obtaining in temperate countries, such as the United Kingdom, should be modified to suit tropical conditions such as those of Kenya.

He

Kenya (12)

He considered the Report generally as highly satisfactory.

MR. STOCKDALE said that he was much impressed by the information given in the Report in regard to the rearing of calves by foster mothers, which he considered to be most valuable. This view was endorsed by MR. SMITH and DR. ORR.

The Council felt generally that very valuable work had been accomplished, and expressed the hope that all possible publicity would be given to the report.

The Council also took note of a Report on the economic results of the commercial side of the Station during the year 1931, which had been prepared by the Manager of the Station in conjunction with the Agricultural Economist of the Kenya Department of Agriculture, and of a despatch from the Governor of Kenya, dated the 10th May, 1933, dealing with certain changes in the staff.

C. O.

Q.D.
R. 17 JUL
D. 18

3155/33

Kenya

84

Mr. Freeston 17/7

Mr.

Mr. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Sir G. Grindle.

Permt. U.S. of S.

Parly. U.S. of S.

Secretary of State.

Answered by No 10 Code sent 17.7.33 4.15

DRAFT. Tel.

Gov. Nairobi

No. 154 your desp. 12 March 1932

No. 119 para 5. Estimated in London cost of printing 250 copies of enclosures to your desp. 1 June 336 is £13. Tel. whether you agree

SECCR.

Fur. action.

KENYA.

No. 336

GOVERNMENT HOUSE,
NAIROBI,
KENYA

RECEIVED
23 JUN 1933
C. O. REGY

20th June, 1933.

Sir,

With reference to paragraphs 5 and 9 of your despatch No. 72 of the 26th January, 1932, I have the honour to transmit, in duplicate, the Annual Report of the Naivasha Livestock Research Station for the year 1932, prepared by Mr. H.M. Gunn, together with audited statements of receipts and expenditure under the Farm Fund and Farm Operating Accounts for the period 1st April, 1932 - 31st March, 1933. These show that during a period of considerable difficulty the farm operations have been carried out in a very satisfactory manner. The investigational work has proceeded on the lines laid down as far as facilities have permitted and there appears to be every promise of considerable value being derived from the results of this work. In the opinion of the Acting Director of Agriculture the general conduct of the farm has demonstrated that the application of accepted animal husbandry methods to Kenya conditions is both practicable and under normal conditions highly profitable.

I have the honour to be,
Sir,
Your most obedient humble servant,

BRIGADIER GENERAL
GOVERNOR.

THE RIGHT HONOURABLE
MAJOR SIR PHILIP CUNLIFFE-LISTER, P.C., G.B.E., M.C., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON...S.W.1.

COLONIAL ADVISORY COUNCIL OF AGRICULTURE AND ANIMAL HEALTH.

C.A.C.160.

Livestock Research Station, Naivasha.

(Previous paper - C.A.C.115)

I circulate copies of the following papers, which the Council will be asked to consider at the next meeting.

Encl. to (13) in 1832/1/32

(i) Report by Mr. V. Liversage and Mr. H. Gunn on the Economic Results of the Commercial Side of the Station during 1931.

(ii) Annual Report for 1932.

(iii) Despatch from the Governor of Kenya dated the 10th May, 1933 relating to certain changes in the staff employed at the Station.

(Signed) J. G. HIBBERT,
Secretary.

COLONIAL OFFICE.
23rd June, 1933.

PRECIS OF ANNUAL REPORT OF NAIVASHA STOCK FARM.

Experimental work undertaken during 1932 included.

I. Feeding for milk production.

(1) The addition of maize ensilage at the rate of 30 lbs. per day to the concentrates ration, increased the individual yield by one third of a gallon daily during the drought period - January-March, 1932.

(2) The addition of green forage, maize and lucerne, fed at the rate of 20 lbs. per cow daily, to the concentrates ration increased the individual yield by approximately one half gallon daily over the period July-December, 1932.

(3) Green Lucerne alone, fed in quantity up to 55 lbs daily to cows on very restricted grazing maintained a full milk yield over a 6 weeks period, comparable to yield obtained when pasture is succulent.

II. Calf Rearing.

Extension of the period of hand feeding from 6 to 9 months resulted in increased live weight of 40 lbs. per head at 9 months old, at an additional cost per calf of 9/- per head.

The rearing of calves in pairs on foster mothers was found to be quite successful, this method producing better growth rates at a lower cost per head then was experienced in hand rearing.

III. Sheep Feeding.

The supplementary feeding of (a) a mineral mixture; (b) a mineral and concentrates mixture, to weaned lambs resulted in a small but definite increase in live weight,

which however scarcely justified the outlay, having regard to the market value of sheep products at the present time.

IV. Presumed Iron Deficiency.

An observational test to throw light on the nature of unthriftiness in cattle grazed on an area of laval origin in the Naivasha districts was carried out. Throughout the period 12 months no signs of malnutrition were noted, nor were any beneficial effects apparent as the result of feeding iron-rich salt mixtures.

V. Grassland Improvement.

No significant results were obtained from the work attempted under this heading, the growth of herbage throughout the year being, on account of continued locust depredations, negligible in quantity and of short duration.

Statements on milk production costs and the marketing of wool clip in 1932 are included in the appendix.

NAIVASHA STOCK FARM.

ANNUAL REPORT OF 1932.

The Naivasha Stock Farm, depending for its maintenance on revenue accruing from the sale of animal products, shared in 1932 the effects of general depression experienced on farms throughout the Colony, engaged in the livestocked industry. The year was marked by a fall in prices. Butter fat showed a decline from 95 cents. to 70 cents. per pound. Slaughter steers which could be sold at Shs.100/- in January were by the end of the year a drug on the market at half that amount, while a similar condition governed the disposal of slaughter wedders. The return from the sale of wool showed a perceptible increase.

The annual rainfall was below average, 17.5 inches only being recorded. Under normal conditions this amount, though inadequate for the growth of fodder crops, would have ensured ample growth of pasture to meet the requirements of the stock carried by the farm, as the herbage reacts quickly to rain and exhibits a useful carrying capacity in periods of drought. Unfortunately on every occasion when new growth made its appearance, depredations by locusts followed, thus the rainfall effects were rendered practically negligible.

Further, it was impossible to carry out to a satisfactory conclusion the field work in connection with grassland improvement which was contemplated in the experimental programme, and the results of feeding tests with animals on locust-ridden grazing must be considered in the light of the conditions by which they were governed.

In this report the progress of the various classes of livestock is dealt with generally, while a statement on the experimental work attempted, and the financial transactions,

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In this report the progress of the various classes of livestock is dealt with generally, while a statement on the experimental work attempted, and the financial transactions,

is appended.

MILK PRODUCTION.

The total number of grade cows carried throughout the year was 119. These are mainly Grade Shorthorn and Friesian. 40 per cent. of the herd appear to be of more imporved breeding than first cross.

17 cows, on account of consistently low milk yield, were used as foster mothers, to each of which were allotted two calves to rear, neither the dam nor the calves receiving any supplementary feeding. Milk production therefore was the function of 102 cows.

Grazing conditions for reasons already outlined, were most unfavourable to milk production, a stage being experienced in October and November when the pasture was not sufficient for maintenance requirements. The expenditure on supplementary feeding stuffs was consequently high, and as the revenue from milk was entirely derived from the sale of butter fat to the Kenya Co-operative Creamery at the average price of 78 cents. per pound, the nett profit per member of the herd was necessarily small.

The total amount of milk produced during the year was 30068 gallons, an average yield of 294 gallons per cow, and the cost involved exclusive of grazing was 17 cents. per gallon, of which the charge against supplementary foodstuffs, grown and purchased, amounted to 8 cents., labour charges 4 cents., the remaining 5 cents. covering depreciation of the herd, maintenance of bulls, dipping and dairy charges.

The output of butter fat was 9211.5 lbs. or 90 lbs. per cow.

Further detail on milk production costs appears in Appendix I.

The birth rate in the herd for the year, excluding still born and premature calves was 75 per cent.

CALVES.

Calves were hand reared excepting those suckled in pairs by foster mothers. A general improvement in the health of young calves followed the subdivision of calf houses into individual pens, which has practically banished the early gastric disorders and attacks of bacillary necrosis. As it has been found unprofitable to rear steer calves, these are now slaughtered at birth or disposed of at an early age for slaughter when this is possible. Owing to the deplorable condition of the grazing towards the end of the year, hand feeding of heifer calves was continued until they reached the age of 10 months. An account of experimental work in calf rearing appears in the appendix.

STEERS.

The rearing of grade steers for ultimate disposal as slaughter stock has proved an unprofitable side line in the internal economy of the farm. In 1932, hand reared calves were transferred to steers at a capital charge of Shs.55/-, their cost of maintenance from birth to one year old. The herd of steers incurred an expenditure for the year of 4.33 per head, exclusive of any charge for the grazing they occupied. Thus, at the age of 3-4 years, when these animals are marketable, their cost of production will have greatly exceeded their anticipated market value, hence it appears to be more profitable to slaughter bull calves at birth and concentrate on female stock from which the financial return should at least cover the outlay they have incurred.

SHEEP.

Climatic conditions in 1932 were favourable to the general well being of the flock, except during periods of severe locust infestation, when young stock experienced a

set-back, and there was a high death rate among newly weaned lambs.

The wool clip for the year was satisfactory, breeding ewes averaging 7.5 lbs. per head for 12 months growth, hoggets over 12 months averaging 8.0 lbs; while lambs shorn for the first time when 9 months old yielded 4.0 lbs.

A further improvement in quality and yield of wool may be anticipated from the addition to the flock of 4 Merino rams, imported from South Africa and landed at Mombasa at the moderate price of £10 per head. They are well covered rams of flock standard, and on being shorn of eighteen months growth of wool, cut an average of 28 lbs.

The wool clip marketed in 1932 was exported in two consignments, approximately equal in quality and weight, one lot being sold on the London market, the other on the Continent, for purposes of comparison. The account sales of each consignment are summarised in the appendix, the average net return per pound F.O.R.Naivasha being 33.3 cents.

The estimated profit on the flock, making no charge for grazing, in which there were in December 750 sheep over 12 months of age, amounted to £157 for 1932.

PIGS.

No feeding experiments were undertaken with pigs in 1932, attention being given to establishing foundation stock from which to secure cross bred pigs of uniform type with which to carry out feeding tests in the near future. Large white boars are being used on large black sows to obtain cross bred litters suitable for bacon production, and the middle white-large white cross has been bred to test its merits in the pork market. It may be mentioned that the white breeds have suffered from sun scald to a considerable extent, and would appear to require well-shaded surroundings

except in the morning and evening.

Surplus breeding stock comprising 8 large white boars and two large white gilts were sold to pig breeders during the year.

EXPERIMENTAL.

Supplementary Feeding of Dairy Cows for Milk Production.

Only in exceptional years is the rainfall recorded on the farm more than 20 inches per annum, being in 1932 extremely low, 17.5 inches. Thus for at least 9 months of each year, the cows in milk must receive supplementary feeding. Concentrates fed at the rate of 2 lbs. daily for each gallon of milk produced have failed to maintain a yield approximating to that experienced when the herd has access to green grass, and in 1932 certain feeding tests were carried out to observe the effect of ensilage and green fodder added to the concentrates ration, on the individual milk yield.

I. Maize ensilage in addition to concentrates.

This test was carried out over a period of 8 weeks January-March 1932, under drought conditions, with two groups of 10 cows, of approximately equal milk yield at the beginning of the test.

Feeding. Group I - 2 lbs. of concentrates (simsim cake 2, wheat bran 1 part) daily for each gallon produced.

Group II- 30 lbs. ensilage daily plus concentrates as above, less 2 lbs. per head, daily.

	Group I. Concentrates only	Group II. Concentrates plus ensilage, 30 lbs. daily.
Average initial daily yield per cow	19.2 lbs.	19.0 lbs.
Average daily yield over 8 weeks period ..	14.9 "	18.2 "
Concentrates consumed per head	185 "	116 "

	Group I. Concentrates only	Group II. Concentrates plus ensilage, 30 lbs. daily.
Cost of concentrates	Shs.8.51	Shs.5.33.

Increases per head in yield in Group II over Group I .. .. 3.3 lbs. daily.

II. A test to observe the influence of green forage on milk production was begun on 15th July and was in progress at the end of the year. Two groups of cows, 7 in each, were treated as follows:- Both groups received concentrates as in Test I above, while Group 2 were fed 10 lbs. kale and 10 lbs. green lucerne for the first six weeks, and 20 lbs. green lucerne daily for the remaining four months. The ration of Group I had to be doubled in October and November as the grazing, owing to locust depredations could barely supply their maintenance requirements.

Average milk yields during the period were as follows:-

Milk Yield - Pre-period July 1-15th: Experimental Period 16th July-31st December.

Group I, concentrates only: Group II, concentrates plus 20 lbs. green forage daily.

Average yield per cow	July 1-15	July 16-31	August	September	October	Nov.	Dec.
	lbs.		lbs.	lbs.	lbs.	lbs.	lbs.
Group I.	400	411	657	528	365	309	384
Group II.	417	443	738	636	558	510	569

Total production per cow during 5½ months (169 days) experimental period.

Group I	2654 lbs.
Group II	3454 "

Difference in favour of Group II - 800 lbs., or approximately one half gallon per cow per day.

III. A short trial to observe the reaction of milch cows to restricted grazing and a liberal allowance of green lucerne, with no concentrates, was carried out over a six week period.

Accordingly, 10 Shorthorn grade calves received extra feeding until 9 months old; 5 being fed one gallon separated milk and 5 being fed meal mixture at the rate of 1 lbs per head daily. Ten calves of equal birth weight, but fed for 6 months only, were under observation as a control group. The following figures on live weight increase were recorded:-

	Average Birth Weight	Average Weight at 6 mths.	Average Weight at 9 mths.	Average Weight at 12 mths.
Group I.	lbs.	lbs.	lbs.	lbs.
6 months period	63.0	228		
9 months period	62.4	243	2[illegible]0	329
			[illegible]0	346

Average increase in live of Group 2 over Group I:-

At 9 months - 40 lbs.
At 12 " - 17 lbs.

Cost of extra feeding:-

5 calves on separated milk - Shs. [illegible] per head

5 calves on concentrate mixture - Shs. 4/50 per head.

Daily Rate of Live Weight Increase from Birth.

Group I at 9 months - 0.76 lbs. At 12 months - 0.73 lbs.

Group II " 9 " - 0.91 " 12 " - 0.77 "

The total cost of hand rearing per calf, until 12 months old, when calves are transferred to steers or heifers, was for:-

Group I - Shs.46/-
Group II - Shs.55/- when fed separated milk for 3 additional months, and
Shs.55/50 when fed concentrate mixture for 3 additional months.

The above cost of production is excessive for steer calves, which must be grazed from 2 - 3 years before marketing as slaughter animals, and for which the price rules at Shs.60/- to 70/- on the hoof in a glutted market

ALTERNATIVE METHOD.

In view of the relatively high cost of production of yearling calves when hand rearing is practised, an alternative method of suckling two calves on foster mothers was given a trial in 1932. Cows which had consistently low milk yields over two consecutive lactations were used for the experiment, and on calving each cow was given a recently born calf to rear along with her own. Neither the dams nor the suckling calves received any additional feeding, although grazing conditions were critical at one period of the year.

Four pairs of suckling calves have now reached the age of 12 months, and the relative data concerning their progress in growth and cost of production may be set down to afford a comparison with the corresponding data for hand reared calves cited above. Calves reared in pairs are charged with the maintenance and depreciation of their foster mothers for one year, and also with whatever costs they themselves incur in attendance, vaccines and sundries up to the age of 12 months:-

Suckling Calves.

	Average birth weight	Wgt. at 6 months.	Wgt.at 9 months.	Wgt. at 12 months
4 prs. 8 calves	57.5 lbs.	245 lbs.	329 lbs.	401 lbs.
Average daily gain	-	1.03 lb.	1.0 lb.	0.97 lb.

Cost per head for 12 months - Shs.32/-

From the foregoing data it will be observed that in growth rate up to 12 months of age, the advantage rests with the suckling calves, and their in all cost per head for the period may be estimated at Shs.20/- less than the hand reared

calf.

SHEEP.

Records of the rate of growth of young stock bred on the farm show the period of least progress to occur between weaning from their dams, at 6 months of age, and 12 months. Thereafter their progress would appear to be uniform. A feeding test with lambs weaned in June 1932 was begun in July, 3 groups with 40 lambs in each being employed. These were grazed together, but penned separately at night, when one group received a salt mixture ad lib., the second group were fed a concentrate mixture rich in protein in addition to this, while the third group got no extra feeding.

The lambs were weighed when supplementary feeding was begun and at monthly intervals thereafter, the averages for which appear below:-

	Group I. Grazing alone		Group II. Cattle salt 50 parts Bone meal 50 parts		Group III. Cake 60 parts) plus 10 pts. Bran 20 parts) mineral. Maize 10 ") mixture	
	Wedders lbs.	Ewes lbs.	Wedders lbs.	Ewes lbs.	Wedders lbs.	Ewes lbs.
Average initial weight - July	53.6	53.6	53.4	48.8	52.15	51.9
do. - Aug.	56.7	56.3	55.3	51.5	56.2	55.1
do. - Sept.	54.2	55.5	56.8	53.3	57.5	55.5
do. - Oct.	51.2	51.2	50.3	47.7	53.4	53.7
do. - Nov.	53.4	53.3	54.8	51.1	58.2	56.5
do. - Dec.	57.5	57.7	58.4	54.2	62.26	61.0
Average increase per head	3.9	4.1	5.0	5.4	10.11	9.1

Cost of feed per head for period:- Group II 50 cents. Group III Shs.1/42

All animals suffered a set back during October when grazing conditions were at their worst, and at the end of the year, when the pasture had recovered to a certain extent, Group III were superior to the other two groups.

but the latter showed no indication of stunted development. The cost of feeding even a small concentrates ration would scarcely appear to be justified from the above results, having regard to the present market value of sheep products.

IMPROVEMENT OF MASAI SHEEP.

A flock of Masai ewes is carried by the farm. To date these have been crossed by rams of the following breeds:-

Masai, Suffolk, half-bred Masai-Suffolk, Black-headed Persian.

The progeny of these matings and figures indicating their rate of growth are discussed below.

Unimproved Masai. Lambs were vigorous, and at 18 months attained the weight at which they are generally sold for slaughter.

Suffolk-Masai half-bred. This cross showed highest birth weight, exhibiting to a marked degree the body conformation of the sire. The wethers were marketable for mutton at 18 months.

Quarter Suffolk-Masai Cross. Lighter at birth than the half-bred, this cross retained something of the Suffolk body outline, grew a coat in which hair and wool were intermingled, and was favoured by natives who purchased ram lambs for breeding.

Persian-Masai Cross. Equal in birth weight to the unimproved Masai lamb, this cross showed a uniform rate of growth during its first 12 months. The Persian markings of the coat predominate, and the cross-bred is not so narrow of body as the unimproved type.

Average Live Weight (lbs.)

		Ewes	Wethers:	Weight at	Ewes	Wethers
Masai lambs	Av. birth weight	5.8	6.3	18 mths.	84.2	92.1
¼ bred Suffolk-Masai	do.	8.0	8.5	do.	104.6	110.0
¼ bred Suffolk-Masai	do.	6.6	6.9	8 mths.	58.6	62.4
¼ bred Persian-Masai	do.	5.8	6.3	12 mths.	65.2	69.2
¼ bred Persian-Masai	do.	5.9	6.5	7 mths.	45.5	48.6

In view of the response of the unimproved Masai sheep to good conditions of grazing, the flock will in future be utilized to breed by selection and culling, a uniform flock of the Masai type, without improvement from any other breed.

PASTURES INVESTIGATION.

In collaboration with the officer in charge of the improvement of grassland of the Agricultural Department, certain preparatory field work was carried out with the aim of recording data on the following aspects of pasture management.

(1) Seasonal yield in nutrients of individual local species of grasses.

(2) Reaction of pasture to different degrees of intensity of grazing by cattle.

(3) Reaction of natural grazing to (1) the application of artificial fertilisers; (2) the application of farmyard manure; (3) rejuvenation by cultivation.

Dealing with the progress of (1), four local species Cynodon plectostachyium, Themeda triandra, Pennisetum clandestinum and Chloris gayana were planted and the imported species Digitana eriantha (woolly finger grass) were planted out in replicated plots during the long rains of 1932.

Themeda triandra, which is widely distributed throughout the Colony, failed to become established on being transplanted; while the imported species made little progress. Of the other three local species, Chloris gayana (Rhodes grass), showed the most vigorous growth. Owing to lack of rain and continued ravages by locusts, there was never sufficient growth to enable cutting, and estimations of yields could not therefore

be carried out.

(2) Paddocks were fenced off for this work, but the condition of the pasture did not suggest that any significant data could be derived by stocking with cattle.

(3) Excepting an apparent vigorous growth following (a) the application of farmyard manure, and (b) rejuvenation of the sward by cultivation with peg-toothed harrows, the plots remained as sparsely covered as the adjoining veld; locusts again were the controlling factor in the situation.

MINERAL DEFICIENCY - FEEDING TEST.

On a certain area adjoining Lake Naivasha, where the soil is of laval origin, the natural pasture is reputed to be unsound grazing for livestock. In 1930 when the herbage was rank and abundant, there was a high percentage of unthrifty animals in the herds, their condition, in the opinion of their owners, being due to some dietetic deficiency. The appearance of the soil and herbage supported this opinion, being similar to the area in the Nakuru district where lack of sufficient iron salts in the pasture results in the general debility of the grazing animal. Accordingly it was decided to carry out an observational test over a period of 12 months, on a farm where malnutrition had caused some mortality in cattle, to find if a dietetic deficiency did exist, and whether it could be corrected by the feeding of certain mineral salts. Pasture was abundant, but dry with a high fibre content, when the test began in September, 1931.

Three groups, ten in each, of 2 - year old steers not previously grazed on the farm, and three groups of six cows with calves at foot, in poor condition, which had been

brought on to the farm 18 months earlier, were run as a separate herd for observation purposes; mineral mixtures being offered to two groups while the third group had no supplementary feeding.

Group 1.	Group 2.		Group 3.	
No mineral supplement.	Cattle Salt	50	Cattle Salt	65
	Bone meal	50	Iron oxide	35
	Muriate of Potash	10	ad lib.	
	Iron Oxide	10		
	ad. lib.			

During the first three months, the condition of all animals remained stationary, but after the November rains a definite recovery in condition was observed, irrespective of feeding which did not seem to appeal to the animals which had free access to the mineral licks. A slight falling off was noticeable in several instances during a period of scanty grazing in February 1932, but this was remedied when new grass appeared in the wake of the April rains, and again no group showed to advantage over the others.

In February and June, the Livestock Officer inspected these cattle, and pronounced them in thrifty condition, stating that there was no apparent difference when groups were compared.

The steers were weighed after 12 months grazing on the farm, and the average increase in live weight showed little variation for the three groups.

Average Live Weight of Steers.

	Group 1. Not fed	Group 2. Salt mixture.	Group 3. Sale mixture.
Sept. 1931 - Av.Wt.	684 lbs.	681 lbs.	679 lbs.
" 1932 - do.	824 "	833 "	840 "
Av.gain in weight	140 "	152 "	161 "

By September, 1932, all three groups were falling off in condition owing to scarcity of pasture, hence the relatively small gain in weight over 12 months. As the average increase in weight of steers of the same age as those used on experiment, grazed on Government Farm from September, 1931 - September, 1932, was only 175 lbs., the rate of increase recorded for the experimental steers may be considered normal on locust-ridden grazing.

As no symptoms of malnutrition were evident during the period of the above experiment, it is presumed that the new grass which appeared after the first locust infestation may have been superior in chemical composition to the parched fibrous herbage on which the stock had been grazing previously. This view was supported to some extent by stockowners on neighbouring farms, who made no mention of a qualitative deficiency in their pastures after the November rains of 1931.

NATIVE HEIFERS.

A herd of 25 native heifers of the type belonging to the Lumbwa district of Kenya, were purchased in January, 1932. It was proposed to give these animals equal conditions of feeding and management as the grade herd on the farm, and later employ the data recorded of their performance as milk producers for purposes of comparison on the economic basis.

Ten heifers calved shortly after arrival, and the highest daily yield recorded was 5 lbs., while the longest lactation period was 5 weeks. Two heifers were allowed to suckle their calves, but their yield was not sufficient to keep their offspring alive.

The calves were weak at birth, their birth weights

averaging 24 lbs. The heifers on the whole showed stunted development, particularly those which arrived in calf, which were obviously culls out of native-owned herds. There has been a certain amount of growth and development among the younger heifers in the herd, which have now been mated, and it is possible that they may show some improvement on those which have already calved. The experience would indicate that in attempting to utilise the native cows as a dairy animal, only animals which have been secured as the result of rigorous selection, be employed.

APPENDIX I.

MILK PRODUCTION - SUMMARY OF COSTS.

Number of cows in herd	- 102
Total production, 1932	- 30,068 gals.
Average milk yield per cow in herd	- 294 gals.
Amount of milk separated for butter fat	- 27,116 gals.
Total butterfat sold	- 9,211.5 lbs.
" " " per cow ..	- 90 lbs.

	Shs.	Cts.
Total charges against herd, excluding grazing, foodstuffs, wages, sundries, depreciation of herd, maintenance of bulls etc. .. -	5,277.	54
.. Cost of production of milk per gallon -	0.	17
Total revenue from butterfat sold ex 27,116 gals. milk separated .. .. -	7,327.	53
Return per gallon of milk separated .. -	0.	27
Net profit per gallon of milk sold as butterfat .. -	0.	10

(no charge for cows' grazing included)

N.B. The above return does not include the separated milk by-product fed to calves and pigs on the farm, amounting to 18,393 gals. which, charged to calves and pigs at 10 cts. per gallon, raises the return per gallon of milk separated to 33.8 cents.

APPENDIX II.

MARKETING OF WOOL, 1932.

Two consignments of wool, 9 bales in each of approximately equal quality, were exported to London and Continental markets respectively, in August, 1932.

Summary of Account Sales.

I. Consignment sold in London - 9 bales - 3597 lbs. nett.

	Shs. Cts.		Shs.Cts.
To gross receipts	1733. 75	By freight to coast	107.03
" freight rebate	24.94	" shipping charges at Coast	98.63
		" Ocean freight ...	302.42
		" consolidate rate, brokerage, commissions etc.	109.25
		By balance	1133.11
	1758.69		1758.69

To balance b/d net return 1133.11

Net return per lb. f.o.r.Naivasha 31.5 cents.

II. Consignment marketed in France - 9 bales - 3474 lbs.

	Shs.Cts.		Shs.Cts.
To gross receipts	2365.50	By freight to Coast	103.84
" freight rebate	27.58	" shipping charges at Coast	114.08
		" freight to Antwerp	339.08
		" sorting, washing etc.	593.66
		" exchange, telegram charges ...	18.18
		By balance	1222.24
	2391.08		2391.08

To balance b/d net return 1222.24

Net return per lb. f.o.r.Naivasha 35.1 cents.

APPENDIX III.

REVENUE.

The revenue to meet recurrent expenditure involved in the maintenance of the farm is derived from the sale of produce:- butterfat, wool and livestock. A summary of the output for 1932, and the cash return, is given below.

Butterfat. Amount sold - 9211.5 lbs. Cash return - Shs.7327.53

Wool. " " - 7071 " " " - Shs.2355.35 (nett.)

Stock Sales.

Breeding Stock	Shs.Cts.	Slaughter Stock	Shs.Cts.
Cattle			
1 bull	700.00	26 steers	2460.00
1 cow	200.00	8 calves	98.00
Pigs.			
3 boars	1255.00	2 weaners	56.40
2 gilts	500.00		
Native Sheep.			
2 rams and 23 ewes	495.50	20 wedders	300.00
Grade Merino Flock.			
13 ram lambs	260.00	95 wedders and culled ewes	1666.00
	3410.50		4580.40

Total proceeds from above sources in 1932.

	Shs.Cts.
Butterfat	...7327.53
Wool	...2355.35
Breeding Stock ...	... 3410.50
Slaughter Stock ...	...4580.40
	17673.78

APPENDIX IV.

Valuation of Livestock and Equipment December 31st, 1932.

		Shs.Cts.	Shs.Cts.
I.	Livestock on hand:-		
	Cattle	45947.00	
	Sheep	21207.00	
	Pigs	2570.00	
	Horses	760.00	70484 .00
II.	Implements and Equipment		5380. 26
III.	Sundry Stores		356. 55
IV.	Foodstuffs on hand		504.34
	Total Valuation		76725. 15

Farm Operating Account, 1932.

1932 Jan.1	to balance b/f	8707.92	1932 Dec.31	By sundry payments	14271.97
	To cheques paid in	16935.19		By balance	11371.14
		25643.11			25643.11
1933 Jan.1	To balance b/d	11371.14			

Fixed Deposit Account with National Bank of India Ltd.

1932 Jan.1	To balance	9292.00	1932 Dec.1	By balance	9665.00
Aug.22	To interest on above	373.00			
		9665.00			9665.00
1933 Jan.1	To balance on fixed deposit	9665.00			

KENYA. Government House,

No.296. Nairobi,

Kenya.

10th May, 1933.

109

Sir,

With reference to Kenya despatch No.337 of the 18th July last, I have the honour to address you on the subject of staff arrangements for the Livestock Research Station at Naivasha.

2. Mr. Farquhar proceeded on six months leave on the 1st October, 1932, with the intention of returning to the Colony in March to enable his fellow worker, Mr. Gunn, to proceed on leave in April. For various reasons, however, Mr. Farquhar decided not to return to the Colony and resigned with effect from the 4th March. It was therefore necessary to make other arrangements for the relief of Mr. Gunn, who proceeded on leave to England on the 15th April. I would refer in this connection to paragraph 5 of Kenya despatch No.119 of the 12th March, 1932.

3. The Director of Agriculture consulted Dr. Orr and proposed, with his agreement, that Mr. T.Y.Watson, Agricultural Officer, then stationed at Kisii, be seconded to take charge of the farm during Mr. Gunn's absence, Mr. Watson being replaced at Kisii by an officer engaged on a temporary basis. This proposal has been approved. Mr. K. Smith, who was engaged temporarily to assist Mr. Gunn in Mr. Farquhar's absence, is being retained for the present and paid from the Naivasha Farm Fund.

4.

THE RIGHT HONOURABLE,
MAJOR SIR PHILIP CUNLIFFE-LISTER, P.C., G.B.E., M.C., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S.W.1.

4. Mr. Watson's salary will be reimbursed to the Government by the Naivasha Farm Fund, and the cost of the temporary relief at Kisii, Mr. M.D.Graham, will be met from the Estimates of the Department of Agriculture. The expenditure from the Fund Account for the first twelve months (1st April, 1932 to 31st March, 1933) amounts to £1274 against the grant of £1500 for that period from the Colonial Development Fund. The estimated expenditure for the present year ending the 31st March, 1934 under the above arrangements is £1417, and that of the succeeding year £1100.

5. I would add that Mr. Graham has already proved his ability whilst serving as Agricultural Officer on Temporary appointment at Embu, in which capacity the Chief Native Commissioner formed a high opinion of him.

6. I would suggest that the contenth of this despatch might be communicated to the Colonial Advisory Council of Agriculture and Animal Health and to Dr. Orr.

I have, etc.

(Sgd.) J. A. BYRNE.
Brigadier General,
GOVERNOR.

3155/33

C.O.

C.O. R 7-JUN 8

Mr. Hibbert 7/6
Mr. Stockdale 7/6
Mr. Freeston 7/6
Mr. Parkinson.
Mr. Tomlinson.
Sir C. Bottomley.
Sir J. Shuckburgh.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

Qr. for Mr. Stockdale's signature

2, Richmond Terrace
Whitehall, S.W.1

DRAFT.

Dr. J. B. Orr
M.C., M.A., M.D.

Dear Orr, 8 June, 1933.

(4)

Many thanks for your letter of the 30th May, enclosing a copy of the Annual Report of the Naivasha ~~Stock Farm~~ Livestock Research Station for the year 1932.

It is proposed to circulate copies of this report to the Colonial Advisory Council for consideration at their next meeting on July 6th, but this action is being deferred for a fortnight, as we have not yet received a copy of the report from the Governor of Kenya, and it is ~~possible~~ conceivable that his covering despatch may contain observations which the Council may also be required to consider.

In the meantime I send you a copy of a despatch from the Governor dealing with the changes in staff at the ~~Station~~ Station consequent upon the resignation of Farquhar.

Desp. Govr. 10 May 1933 (3) (Duplicate)

Farquhar. This despatch will also be laid before the Advisory Council.

Yours sincerely

University of Aberdeen and The North of Scotland College of Agriculture.
(JOINT COMMITTEE ON RESEARCH IN ANIMAL NUTRITION.)

Director:
JOHN BOYD ORR.
D.S.O., M.C., M.A., M.D., D.SC.

Secretary and Treasurer:
EDWARD G. BRUCE, M.A.

In reply please quote
Ref. No.

The Rowett Research Institute,

BUCKSBURN, ABERDEEN.

Telephone No.
BUCKSBURN 8.

Railway Stations:
Goods—BUCKSBURN.
Passenger—BANKHEAD.
(L.N.E.R.)

112 4

30th May, 1933.

(5)

F.A. Stockdale, Esq.,
2, Richmond Terrace,
LONDON, S.W. 1.

Dear Stockdale,

Enclosed herewith is report on the work of the Naivasha Experimental Stock Farm for 1932. Either the report itself, or if it is too long, some statement of the report, should be submitted to your Council, and the report should be filed in your office for reference.

The work has evidently been interfered with by the plague of locust which descended upon Kenya. In spite of that, however, it seems to me a very good show. The work done was along the lines laid down, i.e. practical experiments of immediate economic interest. The costings are probably as interesting as the experimental work.

In spite of the terrible slump in prices, and the plague of locusts, the Station continues to be more than self-supporting apart from Mr. Gunn's salary.

Yours sincerely,

JBO/MBR.

Encl/

PRECIS OF ANNUAL REPORT OF NAIVASHA STOCK FARM.

Experimental work undertaken during 1952 included.

I. Feeding for milk production.

(1) The addition of maize ensilage at the rate of 30 lbs. per day to the concentrates ration, increased the individual yield by one third of a gallon daily during the drought period - January-March, 1952.

(2) The addition of green forage, kale and lucerne, fed at the rate of 20 lbs. per cow daily, to the concentrates ration increased the individual yield by approximately one half gallon daily over the period July-December, 1952.

(3) Green lucerne alone, fed in quantity, up to 55 lbs. daily to cows on very restricted grazing maintained a full milk yield over a 6 weeks period, comparable to yield obtained when pasture is succulent.

II. Calf Rearing.

Extension of the period of hand feeding from 6 to 9 months resulted in increased live weight of 40 lbs. per head at 9 months old, at an additional cost per calf of 9/- per head.

The rearing of calves in pairs on foster mothers was found to be quite successful, this method producing better growth rates at a lower cost per head than was experienced in hand rearing.

III. Sheep Feeding.

The supplementary feeding of (a) a mineral mixture; (b) a mineral and concentrates mixture, to weaned lambs resulted in a small but definite increase in live weight, which however scarcely justified the outlay, having regard to the market value of sheep products at the present time.

IV. Presumed Iron Deficiency.

An observational test to throw light on the nature of unthriftiness in cattle grazed on an area of laval origin in the Naivasha districts was carried out. Throughout the perio 12 months no signs of malnutrition were noted, nor were any beneficial effects apparent as the result of feeding iron-rich salt mixtures.

V. Grassland Improvement.

No significant results were obtained from the work attempted under this heading, the growth of herbage throughout the year being, on account of continued locust depredations, negligible in quantity and of short duration.

Statements on milk production costs and the marketing of wool clip in 1952 are included in the appendix.

KENYA.

No. 296.

GOVERNMENT HOUSE,
NAIROBI,
KENYA.

115

RECEIVED
29 MAY 1933
C. O. REGY

10th May, 1933.

Sir,

With reference to Kenya despatch No. 337 of the 18th July last, I have the honour to address you on the subject of staff arrangements for the Livestock Research Station at Naivasha.

No 56
17050/31

2. Mr. Farquhar proceeded on six months leave on the 1st October, 1932, with the intention of returning to the Colony in March to enable his fellow worker, Mr. Gunn, to proceed on leave in April. For various reasons, however Mr. Farquhar decided not to return to the Colony and resigned with effect from the 4th March. It was therefore necessary to make other arrangements for the relief of Mr. Gunn, who proceeded on leave to England on the 15th April. I would refer in this connection to paragraph 5 of Kenya despatch No. 119 of the 12th March, 1932.

No 44
17050/31

3. The Director of Agriculture consulted Dr. Orr and proposed, with his agreement, that Mr. T. Y. Watson, Agricultural Officer, then stationed at Kisii, be seconded to take charge of the farm during Mr. Gunn's absence, Mr. Watson being replaced at Kisii by an officer engaged on a temporary basis. This proposal has been approved. Mr. K. Smith, who was engaged temporarily to assist Mr. Gunn in Mr. Farquhar's absence, is being retained for the present and paid from the Naivasha Farm Fund.

4. Mr. Watson's

THE RIGHT HONOURABLE,
MAJOR SIR PHILIP CUNLIFFE-LISTER, P.C., G.B.E., M.C., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON...S.W.1.

4. Mr. Watson's salary will be reimbursed to the Government by the Naivasha Farm Fund, and the cost of the temporary relief at Kisii, Mr. M.D. Graham, will be met from the Estimates of the Department of Agriculture. The expenditure from the Fund Account for the first twelve months (1st April, 1932 to 31st March, 1933) amounts to £1274 against the grant of £1500 for that period from the Colonial Development Fund. The estimated expenditure for the present year ending the 31st March, 1934 under the above arrangements is £1417, and that of the succeeding year £1100.

5. I would add that Mr. Graham has already proved his ability whilst serving as Agricultural Officer on temporary appointment at Embu, in which capacity the Chief Native Commissioner formed a high opinion of him.

6. I would suggest that the contents of this despatch might be communicated to the Colonial Advisory Council of Agriculture and Animal Health and to Dr. Orr.

I have the honour to be,

Sir,

Your most obedient humble servant,

BRIGADIER GENERAL,

GOVERNOR.

TELEGRAMS: "AGRICOLA"
TELEPHONE: No. 246

DEPARTMENT OF AGRICULTURE,
P. O. BOX 358,
NAIROBI,
KENYA

WHEN REPLYING PLEASE QUOTE:—
No. FAR/1/58.

24th March, 1933.

Dear Stockdale.

Thanks for your letter of the 4th instant. The position is shown in my minute to the Colonial Secretary of even date, copy of which I enclose, so that you may know the details in case you have discussions on the matter with people at home.

Yours sincerely,

F.A.Stockdale Esq., C.M.G.,
2 Richmond Terrace,
LONDON, S.W.1.

AH/MVA/D

DEPARTMENT OF AGRICULTURE

P.O.BOX NO. 358,

NAIROBI. 21st March, 1933.

No. FAR/1/56

The Hon'ble the Colonial Secretary,
NAIROBI.

ROWETT INSTITUTE INVESTIGATIONS.
Government Farm, Naivasha:- Research Worker -
Mr.R.W.Farquhar.

Mr.Farquhar proceeded on six months leave on 1st October, 1932, with the intention of returning to the Colony in March to enable his fellow worker, Mr.N.Gunn, to proceed on leave in April.

2. For various reasons, however, Mr.Farquhar decided not to return to the Colony and has resigned from his position as research worker with effect from 4th March inclusive. A difficult situation has therefore arisen with regard to the carrying on of the investigations at Government Farm during the next six months while Mr.Gunn is away, and it is of the first importance that competent staff be provided which would be acceptable to the authorities at home who sanction the grant for the investigations.

3. The work at Naivasha calls for two workers. A temporary worker, Mr.K.Smith, was engaged to assist Mr.Gunn during Mr.Farquhar's period of leave, Mr.Smith's salary being met from the Naivasha Farm Fund.

4. After correspondence with Dr.Orr, of the Rowett Research Institute, Aberdeen, it is now proposed to second Mr.T.Y.Watson, Agricultural Officer, of this Department, at present stationed at Kisii, to take charge of the farm during Mr.Gunn's absence and to employ Mr.M.D.Graham, as a temporary Agricultural Officer, to take over the duties of Mr.Watson in the Department as from 20th March, the cost of the temporary officer to be met from the Naivasha Farm fund account. Mr.Watson's salary is provided for under

110 END

Native Betterment Fund, Agricultural Department, Item No.1.

5. Dr.Orr agrees that this arrangement is in the best interests of the Station and the proposal to meet the salary of the departmental relief staff from the Naivasha Farm Fund account is reasonable and in order. This salary is considerably below that paid to Mr.Farquhar. The position would therefore be that the emoluments of Mr.Graham, namely £25 per month, would be met from the Naivasha Farm Fund account and the travelling expenses incurred by Mr.Graham in the performance of his departmental duties would be met from the appropriate departmental vote. I would add that Mr.Graham has already proved his ability while serving as an Agricultural Officer (temporary) at Embu, and that Mr.Watson is highly trained in Animal Husbandry and has had the necessary experience of this class of work.

The expenditure for the first twelve months (1st April, 1952, to 31st March, 1953) is £1,274 against the contribution of £1,500 for that period, and under the foregoing arrangement the estimated expenditure for the second year will be £1,300, and that of the third year £1,100.

6. In view of the urgency of the matter, I would be glad of your early approval to the above proposals, and would request that the Secretary of State be informed of the action taken.

DIRECTOR OF AGRICULTURE.

WDJ/MM/MVA