

1931

Kenya

No. 17046

SUBJECT

CO 533/406

Working in Native Reserve

Previous

16324/30.

15987/30.

Subsequent

18223/32.

Orig. on
15324/30K-
Veterinary
Division in
1934

1 Gov. Grigg Conf. 135. 15th. Sept. 30.
Reports as to Water Boring operations in Masai
Reserve and enclosed copies of memorandum prepared
by A/Director of P.W.

vision, is very expensive and difficult in remote
areas.

X X X X X X

I think before taking any action we might

The previous report and see what reports as to expenditure on
report does
not help as native welfare come home with the Estimates.
regards details. There seems no real reason why we should have
(Intld.) Reports on water boring and veterinary services
H.T.A. rather than on education, and agriculture, etc.,
etc.

? Wait for the estimates.

(sgd.) C.G. Eastwood.

28. 10. 30

The water boring position certainly seems
satisfactory and it would seem unnecessary to
to ask for periodic reports.

X X X X X X

There seems no reason why these three distinct
questions should continue to be mingled and it
will be convenient to separate them in future.
(Sgd.) H.T. Allen - 23.10.30

1
Orig. on
16324/30K-
Veterinary
Services in
Masai Reserve

Gov. Grigg Conf. 133.15th. Sept. 30.
Reports as to Water Boring operations in Masai
Reserve and encloses copies of memorandum prepared
by A/Director of P.W.

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areas.

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satisfactory and it would seem unnecessary to
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There seems no reason why these three distinct
questions should continue to be mingled and it
will be convenient to separate them in future.

(Sgd.) H.T. Allen 28.10.30

Mr. Allen.

This file did not get dealt with when
29878/30 T.T. attached was disposed of.

Use now as to the water-boring p. 10 of the
Annual Report on the Masai Province for 1929

1929

1929

Perhaps in addition to the notice appeared
in your earlier minute we might say that the C.U.'s
attention has been called to this passage in the
Annual Report on the Masai Province for 1929 and
ask for further information regarding the proposal
to excise the Simba water supply from the reserve.

(Presumably any such proposal if not already
put into effect would have to go before the
Native Lands Trust Board.)

Srd. C.G. Eastwood.

22.12.30

This mixture of subjects with cross-references
to other papers is becoming somewhat exasperating.
Sir C. Bottomley has not yet considered the reply
proposed as regards Veterinary Services, (see
your minute of 1st. December,) and I therefore
now put up a draft for conson. on that point.
When that is disposed of, paper should return
to me, and if you agree I will arrange for sub-files
to be made as regards (1) Water-boring (2) Game
Reserve.

YES, PLEASE.
(Harris) A.C.C.P.

Mr. Allen 24.12.30
Mr. Bottomley 24.12.30
Mr. Eastwood 24.12.30

The above minutes have been copied
from 16324/30 which now deals
with veterinary services in
the Masai Province.

The paper was received some
ago for conson of action
taken as to water-boring
I have kept it back in case
I am satisfied by the Dept.
of Veterinary Services. It is not.

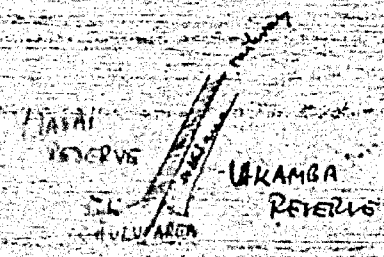
Perhaps we might now
write as in Off. Sec. ?
I think inquiry should certainly
be made on the Simba point.
It may ~~be~~ be connected
with the business referred to
16096/30 below, but if it is
we can leave things to explain

C. Eastwood
28.2.31

Acc. Parkhouse
12.5.37
above

2. No. Gov. Conf. - 1. Nairobi - Kenya - 17 MAR 1981 16/80 2/32

the Central Trust Board have recently reached decisions regarding both this area & the area known as the Nile Zone



which I have shaded on the above map, which show the partition as I understand it.

B. u. with the H^o as to that in a month's time if notice is or either.

James D. 1.10.81

See PWD Report 4930, Pt. 1394
See also minutes re that H^o regarding para. 2 of 10.2.

A report has been asked for on the Masai claim to land H^o. This shd. be brought up when it is received. Attached for J. James D. 1.10.81

1111

in Bartwood
above. Please see minute of 26/9/81
shown 30/9/81.

Para. 2 wants a reply as well as para. 3.

Para. 3 is concerned with proposals to excise the Simba water supply from the Masai reserve. This is the area known as the Chuku area & we have reason to believe that

* "Masai. Claims to land"

fairmail

1/11/81 on file sheet

C. O.

1. Westwood RD/C

2. 11/11/31

3. 12-3-31 JS

C.O.
R 13 MAR
O 14

54

DOWNING STREET

17, March, 1931.

Sir,

GOVERNOR.

I have the honour to

(1)

refer to Sir Edward Grigg's
Confidential despatch No.133 of the
15th September 1930 on the subject of
water-boring operations and
veterinary services in Native Reserves

I have already replied to this
despatch, so far as concerns
veterinary services in my Confidential
despatch of the 31st December 1930.

(2 on 16323/30)

2. As regards water-boring
services, I was glad to note the
progress.

more economical in the long ^{run} ~~run~~ so

to employ it even at some

additional cost to Government.

in view of the difficulty of

of the present urgency

economy, I trust that every effort

will be made to put the plan

the maximum possible

be glad to receive a further report

on the subject at the end of the

year.

3. My attention has also

been called to a paragraph on page

15 of the typed copy of the Report

for 1939 of the Provincial

Commissioner for the Masai Province,

from which it appears that bore-holes

have been made in the Simba district

in order to replace a water supply

at Simba which is to be excised from

the Reserve. I shall be glad to

learn whether the bore-holes there

referred

referred to are the same as those

(Signed) PAB-FILL

Orig on 16324/30 - Water boring & Veterinary Services in the Masai Reserves

17

KENYA

NO. 133

CONFIDENTIAL

15th September 1930.

My Lord,

I have the honour to refer to Your Lordship's despatch Confidential (3) of the 7th January 1930, on the subject of water boring operations and veterinary services in the Masai Reserves.

2. In regard to water boring, I append hereto a Memorandum from the Ag. Director of Public Works, which reviews the operations that have been instituted since the writing of my Confidential despatch No. 101 of the 10th August 1929. Your Lordship will observe that general success, fraught with considerable benefit to the natives concerned, has attended these operations. It is, however, proper to mention here that in some areas and in particular the Masai Reserves, the cost of transporting the heavy machines to remote parts in the reserves and the expense of drilling to a considerable depth or through hard rock has been considerable; and a recent conference of Provincial Commissioners has been debating the advisability of making use in the inaccessible areas of the cheaper methods of digging wells by hand, or by using hand-drills and Abyssinian tubes.

3. In ...

THE RIGHT HONOURABLE
LORD PASSFIELD, P.C.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S. W. 1.

Orig on 16324/30 - Water boring +
Veterinary services in local reserves

17

KENYA
NO. 133

~~CONFIDENTIAL~~

15th September 1930.

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I have the honour to refer to Your Lordship's despatch Confidential (S) of the 7th January 1930, on the subject of water boring operations and veterinary services in the Local Reserves.

2. In regard to water boring, I append hereto a Memorandum from the Ag. Director of Public Works, which reviews the operations that have been instituted since the writing of my Confidential despatch No. 101 of the 10th August 1929. Your Lordship will observe that general success, fraught with considerable benefit to the natives concerned, has attended these operations. It is, however, proper to mention here that in some areas and in particular the Local Reserves, the cost of transporting the heavy machines to remote parts in the reserves and the expense of drilling to a considerable depth or through hard rock has been considerable; and a recent conference of Provincial Commissioners has been debating the advisability of making use in the inaccessible areas of the cheaper methods of digging wells by hand, or by using hand-drills and Abyssinian tubes.

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HIS RIGHT HONOURABLE
LORD PASSFIELD, P.C.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S. W. 1.

3. In regard to the Kaimosi Reserve the progress of water-boring and reconditioning is being fully described in a separate despatch.

4. A further problem that requires solution is the difficulty and expense involved in the maintenance and supervision of pumping plant. Few officers have the necessary experience or technical knowledge to be able effectively to perform this duty, and local native funds seldom allow of the engagement of a European foreman for the purpose.

5. The present activities of the Veterinary Department in native areas are described in the accompanying memorandum of the 18th June, 1930, prepared by the Director of Agriculture. I regret that it has not been possible for the Director within the sanctioned Estimates of his Department, to initiate further schemes for the development of Animal Husbandry among the native tribes. The Chief Veterinary Officer prepared some months ago a comprehensive scheme which I have not forwarded to Your Lordship for the reason that in the opinion both of the Director of Agriculture, the Chief Native Commissioner and myself, the expenditure involved was unduly high, and out of all proportion to the benefits which would accrue therefrom. Since then the general financial position of the Colony has made it quite impossible to contemplate any extension of veterinary services in native or settled areas during 1931, but the question will be carefully borne in mind when the financial position improves.

I have the honour to be,

My Lord,

Your Lordship's most obedient humble servant

EDWARD GRIGG.

3. In regard to the Kansas Reserve the progress of water-boring and reconditioning is being fully described in a separate despatch.

4. A further problem that requires solution is the difficulty and expense involved in the maintenance and supervision of pumping plant. Few officers have the necessary experience or technical knowledge to be able effectively to perform this duty, and local native funds seldom allow of the engagement of a European foreman for the purpose.

5. The present activities of the Veterinary Department in native areas are described in the accompanying memorandum of the 12th June, 1930, prepared by the Director of Agriculture. I regret that it has not been possible for the Director within the sanctioned Estimates of his Department, to initiate further schemes for the development of Animal Husbandry among the native tribes. The Chief Veterinary Officer prepared some months ago a comprehensive scheme which I have not forwarded to Your Lordship for the reason that in the opinion both of the Director of Agriculture, the Chief Native Commissioner and myself, the expenditure involved was unduly high, and out of all proportion to the benefits which would accrue therefrom. Since then the general financial position of the Colony has made it quite impossible to contemplate any extension of veterinary services in native or settled areas during 1931, but the question will be carefully borne in mind when the financial position improves.

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Your Lordship's most obedient humble servant

EDWARD GHIGG.

9
COPY.

PUBLIC WORKS DEPARTMENT,

Head Office,

NAIROBI,

KENYA COLONY.

No. P. 222/117/B/2/14.

17th June, 1930.

The Hon. the Chief Native Commissioner,
Nairobi.

WATER BORING IN NATIVE RESERVES

Ref. your No. NRY. 4/2/29, dt. of 7-2-30

The following is a report on water borings undertaken in Native Reserves since the period referred to in Kenya Confidential Despatch No. 101 dated 10th August, 1929. One borehole in the Kikuyu Reserve was commenced before this date but was apparently not referred to in the above despatch.

10-1-30
15561/29

1. In the Simba Area (Masai Reserve), a second borehole was sunk at a distance of approximately 5 miles from the first borehole. This was taken to a depth of 402 feet and gave a tested supply of 70,000 gallons per day. Both the wells in this district have been fitted with windmill driven pumps which are both operating successfully. A further (3rd) borehole was sunk about 9 miles further on. This was sunk to a depth of 516 feet and a supply of water amounting to 14,000 gallons per day obtained. This well was fitted with a hand pump which gives all the water at present required at that point. A fourth well in the Simba Area was then commenced but was only taken down to a depth of 66 feet. Economic conditions governing transport led to further drilling at that point being abandoned.
2. In the Kikuyu Native Reserve (Mukoma's Location) three boreholes were sunk during 1929. One was commenced in May and taken to a depth of 835 feet, and a production of over 17,000 gallons per day was obtained. A second was commenced in August and taken to a depth of 390 feet, resulting in a production

MEMORANDUM.

VETERINARY SERVICES IN NATIVE RESERVES.

In addition the Veterinary Staffs are engaged in assisting in the establishment of training centres at Maseno and Bungoma, where the natives are taught the better system of animal management, and the production of marketable cream and ghee.

The training centres are being gradually built up and it is hoped in 1931 to be able to receive pupils at Maseno and 1932 at Bungoma for a practical training.

In addition, assistance is given in other ways, as the demonstration of the better preparation of hides and skins; the treatment of cattle trypanosomiasis; researches into obscure diseases and the establishment of field services. Uzoia Province: A Veterinary Officer, stationed at Eldoret, in the adjoining settled area, supervises the work of a Stock Inspector stationed in the Handi Native Reserve.

The Handi show confidence in immunisation processes, and during the past five years have brought in, voluntarily,

48,597 cattle for inoculation and have paid 123,051 shillings in fees.

A Veterinary training centre is being established in the Reserve which is being gradually built up and will be ready to receive pupils in 1932.

High Valley Province. A Veterinary Officer, stationed at Nakuru, in the adjoining settled area, supervises the work of a Stock Inspector stationed in the East Suk and Kamalia Native Reserves.

General inoculations have been carried out in the past five years and 59,100 cattle have been vaccinated during this time for which 148,359 shillings has been expended. In addition many thousands of cattle have been vaccinated free for pleuro-pneumonia and assistance given in outbreaks of Anthrax and trypanosomiasis. A campaign to assist in the better preparation of hides and skins has been undertaken.

The Stock Inspector will continue to meet the demands for inoculations.

Masai Province. A Veterinary Officer was stationed in the Masai Reserve. His duties had to be suspended temporarily on account of the attitude of the Masai towards Veterinary Services, but they have now been renewed.

At Ngong, in the Masai Reserve, a Veterinary Officer and an experienced stockman are stationed at a Veterinary Training Centre.

Valuable experiments on native cattle have been undertaken and fully reported on in the Annual Report of 1928 and 1929.

Facilities are now available to train pupils up to 40, in animal management and it is hoped to increase the number of pupils to 100 during the next two years.

Ukamba Province. A Veterinary Officer with a Stock Inspector and trained native personnel are stationed in the Machakos Native Reserve.

The demands for Veterinary Services in this Reserve are variable from year to year, although 171,185 cattle have been voluntarily inoculated during the past five years, for which the natives have paid K51,785 Shillings.

A Veterinary Training Centre was commenced last year in Machakos and will be completed to receive pupils late in 1931.

The Veterinary Officer visits the Kitui Native Reserve, Northern Frontier Province. A Stock Inspector is stationed at the Kitale Veterinary Training Centre, where sheep improvement services are being undertaken. For this purpose a pure bred flock of Persians (Black Head) was imported from South Africa. With rams of this breed, also Suffolk breeds crossing experiments are being made with ewes of several distinct types of native sheep. In addition, pure bred rams are available for use among native-owned flocks.

X
The Veterinary Centre also controls the movement of stock out of the Province for trade purposes.

Coastal Province. Provision was made to provide a Veterinary Service for this Province in this year's Estimates, and the staff are about to arrive to commence this Service.

The present activities which very fully occupy the time of the existing staff, will be continued and extended in accordance with funds available from Departmental votes.

Hides and Skins. Both Veterinary and Agricultural Officers are giving attention to the better preparation of hides and skins in Native reserves in pastoral areas.

Nairobi.
18th June, 1930.

of Gov. Moore 14 _____ 9 January
enclosed copies of minutes of first meeting of local
consultative committee, for information of sub-committee
of S.A.C. and of the S.P.B. Dept. Chief Veterinary
Officer and appointed a member of the committee

1/11/31
160

1/11/31

1/11/31

1/11/31

1/11/31

3/1/31.

(1) The sub-committee of the Dept. of
Agriculture and Fisheries
S.A.C.

(2) The sub-committee of the Dept. of
Agriculture and Fisheries
S.A.C.

Q. Gray
7-2-31

I send you as the first report:
It perhaps Mr Johnson will say
better (in the absence of any
Special reason) to avoid usual
base future reports

No, thanks
RBC

W. Allen

9/2/30

in C. Johnson

20 sec. day

to small future reports
of this case, please?

all Ballman
G. 2. 31

No, but I am glad to see that
that Gunn's work (the unknown =
= very and largely uncompleted
beginning of which I saw 4 years
ago) is well established.

W. Allen 10.2.31

~~DESTROYED UNDER STATUTE~~
To E.A.C. (w/2 c's included)
12 FEB 1931

~~DESTROYED UNDER STATUTE~~
To E.M.B. (— " —)

~~DESTROYED UNDER STATUTE~~
To Gov. Hise (2) — 24 FEB 1931 (Draft on 80189/1931 [203])

17 February 31

H. D. C.

Acknowledge to 2, with thanks.

DESTROYED UNDER STATUTE

~~DESTROYED UNDER STATUTE~~
To Gov. Hise — 1725c. Report — 12 MAR 1931 (Draft on 80189 Genl.)

~~DESTROYED UNDER STATUTE~~
To Gov. Hise on 80189/31 Genl. 24 March 31
(copy attached)

~~DESTROYED UNDER STATUTE~~
Dr. Hochler 10 April
Requests a copy of report by Lovell Institute in 1928
on mineral salts in Kenya factories or enquiries
where may purchase a copy.

W. Allen
What can he have?

J. Johnson
24.4.31

Mr. Eastwood.

Transmits copy of Report of Committee on the Mineral Content of Natural Pastures regarding Future of Nutrition Inst. at Naivasha, and commends Committee's recommendations for favourable consideration.

Mr. Freeston

This was discussed at a meeting yesterday on which I uttered a note, and it is unnecessary to minute at length. Authority should now be obtained for action to be taken as proposed at the end of the note.

In advance of authority being given Mr. Stockdale, who should see the note, is to be writing to Dr. Orr in order to arrange a discussion with him. It was also thought desirable that a copy of the Committee's report should be sent out to the Governor of Kenya at once by airpost in case it became necessary to telegraph to him. I submit draft herewith for consent accordingly.

I had a word with Stockton who says that he is not really concerned with the future of Naivasha, which is of agricultural (or animal husbandry) importance rather than of medical importance.

I should add that Dr. Skewington was distinctly "sticky" in preparing the memo for the EAC. We shall have to emphasize as much as possible that how much Kenya is of the necessity for keeping something in hand to meet possible urgent needs.

Information is to be sent to the Director of the Forest Research Institute, Aberdeen, Scotland.

And send copies of the correspondence to Dr. Orr, L.F., B/12a with my compliments.

G. Gray
24.4.31.

Draft has.

Freeston
27.4.31

at

Dr. Kochler (9 ans)

Dr. Orr (etc's 9+10)

B/12A

30 APR 1931

DESTROYED UNDER STATUTE

Freeston
23.4.31

Get off the dispatch, I remember to me

L. A. M. 25/10/31

13. Having a meeting on 27/10/31 to consider
best steps to be taken regarding the report
of the Economic Committee Advisory Council's Committee
on the Proposed Content of National Reserves

14. To Gov. Conf. (2) 27 OCT 1931

(w/e mail to 12)

To Mr. Allen

In approval of the proposal to
submit to the (Executive) committee of
the E.C.A.C. an application on behalf
of Messrs. J. & J. for £1,000 p.a. for 3 years
to enable the work at Nairobi to
be carried on.

Please see the E.C.A.C. Report in (12),
particularly the Summary on pp. 11-12; and
No. 13.

L. A. M. 27/10

I shall have to send this on to
higher authority but would it not be
well to await doing so until
the result of your discussion with
Mr. Orr. I presume that will not
take long & that it will be
possible to prepare a memo for
the C.O.A.C. (which would form a
submission) & set a decision

before the 21/10/31

J. A. M. Allen

28/10/31

Mr. Allen

Dear Sir

Thank you

for your

letter

of the 27th

inst.

and

in reply

to my

letter

of the 27th

inst.

will

be

sent

to

you

and

will

be

sent

to

you

and

will

be

sent

to

you

J. A. M. Allen

28/10/31

Sir J. Bottomley.

My idea was that it would be more
convenient to you to have this put up with ^{the}
draft ^{of a} submission ^{to} for the C.D.A.C.; but I
understand from Mr. Freeston that it will be
a complicated memorandum and in these circum-
stances ^{the} decision ^{whether} to put in the matter
to the C.D.A.C. ^{has better be taken} before the memorandum ^{is}
embarked upon.

I think it is quite clear that the
C.D.A.C. must be approached in view of No. 12
and the fact that other recommendations ^{the} recommended
by the Prime Minister (who I believe takes a

personal

* para 1
sent to 17

personal interest in this matter) contemplate
making both to the Capital Markets Unit and
the C.D. Unit to make ...
your ...

and ... (even
sending it in) Consider ...
Board the Gov. Whether, if help is
not available, he is prepared to
let the work drop.

No one wants it blind - my
point is that if we can be
challenged as to things' ability to
bring us shall want the Governor's
view, & it may be better to get it now.

Let. 29.10.31

To Mr. Kenya — Tel. 333. Conf. — 9/11/31
Cons.

DESTROYED UNDER STATUTE

Mr. Allen
Sir J. Campbell
Sir C. P. ...

(P. Please see also ... and
... on 8.10.29 (S. General).

The Draft memorandum submitted

will be available to attend
the meeting, if desired

17/11/31

As to Sir C. P. ...
- see ... (No 15). As he is
available (+ I understand without expenses)
& would be a good thing if it could be
arranged for him to be present.
I have amended the financial section
somewhat not because I wish to
minimise the unavailability of the
position but because I describe the
use of ... which may be
used against us in other
Director's.

17/11/31

18/11/31

a good memo: at the meeting, attention
may have to be drawn to the
consideration suggested in para. 26 of the

C. & L. report. This report - I think - present
is difficult. 12/11/51

12/11/51

Imperial D.A.C. 900. 21/11/51

E.M.B. 4/2 608. 22/11/51
Comments on the Current Report
of the Committee on the Imperial Funds
(to be discussed, City, 23/11/51)

19. for Kenya - Tel. 24/11/51
S.M. Conf.

Govt. of Kenya agrees with recommendation of
Committee on the "Mineral Content etc." and strongly
urges provision from Imperial Funds for cost of
maintenance. Maivasha trading profits up to October
1951 was only £2130 and total balance £767 now
available as a reserve against future abnormal
expenditure e.g. drought, locusts. Reduction in
estimated cost is not therefore considered possible.
Only alternative to support by E.M.B. or C.D.F.
is Colony's estimates. This will entail difficulties
and earnestly hoped that Imperial Funds will be
forthcoming.

Do you - I am afraid not to
say that he won't be able to
any on the work without
assistance from Imperial Funds.
I do think ^{it is} _{it is}
probably best not to give this
to the C.D.F. but to give them
to help at X only at the
meeting.

The final papers should be

kept with them for the present. The
fact - I think they might now be
brought to a ...

Have this off (and the report off the table)
as soon as possible when you see Dr. Orr
tomorrow morning.

W. Johnston
25/11

W. Johnston.

Dr. Orr seen today. He will be prepared
to speak at the meeting of the C.D.F. He will bring
out the point that this work is a break away
from the original scientific research connected with
pasture problems and will price for £1500
as he considers that it is very necessary
to have something in reserve against locust
attacks.

He is coming to see me again in the
morning of Dec 2nd. I did not draw him up
but for him only the position marked X.
F. A. Skiffington
25/11

Revised to Mr. Allen on 1st Dec.

checked

PH. 17

191

... the question of making the Report non-confidential now be taken up. The G. Report was published as a non-Parl. S.O. paper & distributed fairly widely - see notice on 6/18/31 - nos 1 to 17.

I imagine it will be decided to follow the same course in this case.

I understand that Mr. Heaming requires an official letter of some kind from this office. Would you be so good as to prepare a draft for Mr. Heaming's consideration?

W. Eastwood

... 23 Oct ... N.P.P. ...

W. Eastwood
3/11/31

I have discussed this with Mr. ... mentioned it to Mr. ... So long as the Report is in its present form it must be regarded as confidential.

But with very little trouble & expense it could be turned into a non-parliamentary publication. The cost would not be more than for the format would be the same.

It is now virtually certain that funds will be found both for the Heaming & the Carnochan work. It would be extremely convenient

from an administrative point of view to
have the report published

1911 Treasury - cons - 10 DEC 1931

9/12/31
STATUTE Akr. No 20

On 16/12/31

Commons Advisory Council 16/12/31

The P.M. has approved the
publication of House of Commons Report
on Commercial Control Committee, as a
Parliamentary publication.

24 Treasury 21/12/31

Sanction three annual grants
of £1500 for the C.F. in accordance
with the wishes of the Committee

25 Royal Naval Institute 22/12/31
Inspector reports from Lynn & Dargshan.

I am pleased to hear that you
are prepared to waive the embargo
on publication

Yes!
P.V. Varma 4/12

20 To E.A.B. - 12 amended - cons - 8 DEC 1931

(See COTAC letter No 19 B)

I read in as Sir C. B. Hanley
may like to see that there is now
a prospect of success in the case
of an appeal on behalf of Kenya

J.H. Allen 8/12/31

Good
15/12 8.12.31

Recd by H.P. Richards
10/12/31

I send on a draft for consideration
which has been prepared after discussions in
various quarters. It is important that it should
reach Kenya in good time, for the reason suggested
in paras. 4 - 8. The Stationery Office have
promised the prints of the Report by about
first January 14th, and the despatch should go by the air
mail after they are received.

I pass the draft through Mr. Foynton for
para. 5, Mr. Bent for para. 7, Mr. A.J. Harding for

para. 1), and Mr. Stockdale (who has already

By our name
11/1/32 Lb To Gov 72 (w/c EAC's & the Report) Comp
- 8. 17-19A 26 Jan. 1932

(w/ further copies of EAC's report) 1/12/26 JAN. 1932

(w/ our suggestions) 26 JAN 1932

H. J. Stockdale
14/1/32

A. J. Harding
26/1/32

I do not like the expression "Balance Sheet" used throughout paragraph 5 of the draft. The Annual Statements will presumably include Abstract Accounts of Receipts and Payments with opening and closing balances. I have accordingly altered "Balance Sheet" to "Statement of Account". A Balance Sheet in the ordinary sense of the term, viz. a statement simply of the balances of the Ledger accounts, may of course - and probably will - be necessary as well, but we can see about that when we know more of the operations of the Fund.

A. J. Harding

14/1/32

Director of Colonial Audit.

J. V. Allen 23/1/32 *at once*

44. Rowett Research Institute — 26/2/32
States that the Brimacha Spoke Farm No
as of 2/3/32, was (a) prepared by
the ...

17050731
Kenya.
Mineral Content of Natural Pastures
3
29/2/32
Notes for further copies of the 7th
Report of the Committee of the Com. Advisory

- 115. Tel. to ... (1206/11/32) 11/3/32
 - 116. ... (1206/11/32) 2/11/32
 - 117. To ... (1206/11/32) 4/11/32
- 8 April 1932

48 C.A.C. 115 — 29/3/32
Circulator copy of the programme
of experimental & research work
prepared 1932-1935. (enclosure in No 41)

DESTROYED UNDER STATUTE

-8-

Mr. Cooke

When send them 3/4/32?

22

4 copies
24/4/32

DESTROYED UNDER STATUTE
Ch. Sec N Rhoad 3/28 APR 1932
(w/8 cc Report 49 (amend))

57. Extract from the Draft Minutes of the
12th Meeting of the Col. Adv. Committee of
Agriculture and Animal Health - 20/10/32

11/5/32
3084

Th. Allen

I think we may now telegraph a
draft. Recollect to consult Dr Hubert
as to whether the extract from the draft
C.A.C.A.H. minutes (51) may be sent
out.

I may see, in regard to para 3
of 41, that I mentioned the Governor's
counter proposal at the C.A.C.A.H. meeting,
and that no exception was taken to it by
any of those present.

Para 7 cannot be ~~added~~ well be

4
Yes.
JGA
/35

draft with bill we know the size of the 1932
Report.

President
20/11

There is, I think, only one point with
which higher authority need be troubled.

Paragraph 6 of the Secretary of State's
despatch in No. 26 said that executive control of the
Institute would be vested in the Director of
Agriculture, with the assistance of a local advisory
committee composed of the Director as chairman, 3
members of the Animal Industry Department, and 3 non-
official members. But the Governor, in
paragraph 5 of No. 41, says that he agrees that a local
committee under the chairmanship of the Director of
Agriculture should exercise executive control of the
station, but suggests that in the event of the
proposals for reconstitution of the Board of
Agriculture being approved (approval has now been
given), the Animal Industry Committee of the Board,
consisting of 6 unofficial members representative of
the stock industry, might undertake these duties and
avoid a duplication of committees, the officers of the
Department of Agriculture attending the meetings and
being closely associated with the work. It is, of
course, to be inferred that the Director of
Agriculture as chairman will be additional, making 7
members in all, as originally proposed. The minutes
of the meeting of the Colonial Advisory Council of
Agriculture and Animal Health (51) make no reference
to this point, but I understand that no exception was
taken to the Governor's proposals, and in fact the
views expressed were that it would be a good thing
to adopt them, and avoid a multiplication of
committees. But in phraseology, even if not in
intention,

* For the constitution
of Committee of the
Board see para 8
not of 10/29/32
- JGA

... is a important distinction

I confess to a fear that a Committee of six
unofficial members will be unwieldy. Although the
programme for Malvaah appears simple or "practical"
and to be understandable to intelligent stockowners,
it must be accepted that no programme of experimental
work can be vigorously adhered to, and discussion
with non-technical members on any modification
proposed will probably entail much explanation of the
scientific fundamentals involved. I suggest that a
sub-committee of three, selected if desired from
the Animal Industry Committee when created, together
with one or two official representatives enumerated in
the Secretary of State's despatch of 20th January
1931, would be a completely adequate advisory body,
the Chairman of which should possess executive control

E. S. [Signature]

4.5.32.

R. Ad-

... of the ...
... of the ...
... of the ...
... of the ...

John

... of the ...
... of the ...
... of the ...
... of the ...

[Signature]
10/5

I confirm the statement made in the
second paragraph of Mr. Freeston's minute
of the 30th April. I did not make any
reference to this when drawing up the draft
minutes, because, (a) as Mr. Freeston states,
no comment was made in regard to the
proposed administrative arrangements; (b) the
Council had only been asked for their observations
on the programme of work in the programme
forming the enclosure to N. 41, and they
had not been asked to advise on the administrative
arrangements dealt with in the despatch itself.
Only the enclosure to the despatch had been circulated
to the Council. There is no objection to the extract
inserted as (51) being sent
as to Kingsford Hill.

[Signature]
3.5.32

This has been discussed with the
Minister of the Interior

The opinion given by the D of A
must be regarded as
loosely drafted, not a descent
from what was proposed. I
think we must stick to
the D of A as the Executive
authority - but, in political
grounds, the Govt might, if
the fact should be allowed to
try out the suggestion as to
personnel.

H. V. Allen
24/5/32

Sr. R. Hamilton

You should see the draft
despatch. I agree with the plan
but there is probably no significance
of view as to the advisory nature
of the Committee

C.L.S. 24.5.32

I agree
H.H.H.

24.5.32
53 To 201 390 (1/4/40 53) 28 Mar 1932
21 answered

13/5/32
53 To 201 390
H.H.H.

The Minister
has not to have
the right to do
this

I think it is time we let the Mineral
Pastures Committee of the Economic Advisory Council
know what has been arranged in regard to the
Heilscha Station. Our last communication is,
I see, dated the 12th February, 1931!

Draft for consideration herewith.

J. H. H. H.
21.7.32
H.H.H.

54 To E. A. C. - (1/4 26. 1/4 1931. 1/5 1931.) 27/5/32

H.H.H.
ESTABLISHED UNDER STATUTE

27/5/32
H.H.H.
1/4 1931
1/5 1931
11/13/32

States in reply to No 53 that the credit balances of the Howett Farm A/c as at 31/3/32 amounting to £1,049.2.09 have been signed over to Govt with effect from 1.4.1932, and credited to Heliopha fund. Commence on the annuities & ...

U

711-

~~S. H. M. ...~~ ~~Fr. B. ...~~
 Cashier in ... of a preliminary ...
 in connection with ... among cattle.

RECEIVED
13 AUG 1932
COL. OFFICE



KENYA.

GOVERNMENT HOUSE,
NAIROBI,
KENYA.

No. 53/

15 July, 1932.

Sir,

With reference to your despatch No. 390 of the 15th May, 1932, I have the honour to inform you that the credit balances of the Rossett Institute Farm Account as at the 31st March, 1932, amounting to £1,049: 2:09, have been signed over to this Government with effect from the 1st April 1932 and have been credited by the Director of Agriculture to the Malvesta funds.

With reference to paragraph 2 of your despatch, it was not intended that the Committee should have other than purely advisory functions and I regret that paragraph 3 of my despatch No. 110 of the 15th March did not make this clear.

As regards the composition of the Committee, I note that you will be prepared to acquiesce in my proposal on the understanding that it will be reviewed in the light of the first year's working. In this connection I enclose a copy of a memorandum submitted by the Director of Agriculture, and I do consider that the proposal to make the personnel of the Malvesta Advisory Committee identical with that of the Animal Industry Committee merits a year's trial. Executive control of the station, which, of course, remains in the hands of the Director of Agriculture.

I have the honour to be,
Sir,

Your most obedient, humble servant,

H. Wilson

GOVERNOR'S DEPUTY.

THE RIGHT HONOURABLE
MAJOR SIR PHILIP CONLIFFE-LESTER, P.C., G. S.R., M.C., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON....S.W.1.

COPY.

DEPARTMENT OF AGRICULTURE.

P.O. BOX NO. 523,

WASHINGTON 11th JULY, 1932.

NO. 2/STANS/EA/94.

RESEARCH STATION, NAIVASHA.

NO. 2/1/5/61 of 4th June,

It has been understood, that the committee is purely advisory. I submit with so little diffidence that, if the multiplication of committees and the amount of work which they create, were fully considered, the proposal that the committee should consist of the Animal Industry Committee of the Board of Agriculture would be approved. The advantage to be gained is that time and work could be saved, as the business of the Naivasha Farm could be disposed of with adequate attention at ordinary meetings of the Animal Industry Committee, and it therefore would not become necessary to convene another meeting of a separate committee. Again, economy of time and effort would be saved, as it would not then be necessary for a report of the Naivasha Committee to be prepared for submission to the Animal Industry Committee. As and when it may be desirable for the work at the farm to be inspected, the Animal Industry Committee would probably depute two or three of their non-official members to do so.

2. With regard to official membership, in actual practice there will be little difference between the two methods proposed as the constitution of the board of Agriculture provides for the technical and professional officers of the Department to attend the meetings, and it would always be arranged that when the Naivasha Farm work was under consideration the officers named would attend. I would add also that, in matters of this kind, it has never been a question of voting or voting strength. My desire is that while ensuring efficiency and the fullest consideration being given to this important work, a burdensome organisation should not be set up to direct and supervise the work of only two technical officers engaged thereon.

(Sd) ALEX HOLM.

DIRECTOR OF AGRICULTURE.

C. O.

17050/31.

19

Hubert

27/7

R

100
27 July, 1932.

To Gov. Kenya 26.1.32.
 ((26) without enclosures)

Fr. Gov. Kenya 12.3.32.
 ((41) with enclosures)

To Gov. Kenya 25.5.32.
 ((53) with enclosures)

to state for the information of the
 Sub-Committee that the Secretary of
 State decided to invite the Advisory
 Committee of the Colonial Development
 Fund to recommend a further grant of not
 exceeding £1500 per annum for a period
 of three years to enable the work at the
 Livestock Research Station at Naivasha,
 Kenya, to be continued.

This application was
 considered by the Advisory Committee
 last

53

Mr. Freeston 20
Mr. 17/01/32
17/01/32

Aswad

25 May, 1932.

25 MAY
D 25

10

I have, etc. to refer to your
despatch No. 119 of the 12th March

regarding the arrangements to be
made for the future management of
the Livestock Research Station at
Mauvaaha. In my telegram of the

No. 52

16th May I communicated to you my
approval of your proposals for the
financial procedure to be followed
and for the arrangements in regard
to the staffing of the Station.

As regards the balance of the account
to be credited to the Station on 1st
April 1932 you have no doubt ascertained
the position from Mr. H. H. Gunn in
accordance with the suggestion

No. 45

conveyed in my telegram No. 60 of the
29th March.

Copy Mailed. P.A.C. 27-7-32

Aswad
56

51
Copies which supply
Mr. H. H. Gunn
4/2/32

Cover

The grants were in due
course approved by the Lords
Commissioners of the Treasury.

I am to enclose for the
information of the Sub-Committee,
copies of the despatches noted in
the margin, which deal with arrange-
ments proposed for the further

administration and work of the
Station.

I am, etc.

(Signed) L. C. FREESTON

hydrating 6

Staves appear from para 3

2. I note from the second para.

of your report's under amended

ed as
have and you should

optimal

that
and the function of master
Committee may assist him ^{should} in be

in view, ^{should} adhere,

advisory only. I agree with you

in deprecating the ^{un}necessary

multiplication of committees, but

would point out that, although the

programme of work at Fairbairn may

appear simple and readily intelligible

by laymen, no programme of experimental

work can be rigidly adhered to, and discussion with
non-technical members ^{of}
any modification proposed will possibly probably

Regarding

entail the explanation of the

scientific fundamentals involved. It is
desirable, therefore, that non-technical
members should be ^{able to} ~~retain~~ ^{would}

Government with the
development of the work, and ²¹
with this object I

would suggest ^{that} a Committee with three

unofficial members, selected, if

desired, from the Animal Industry

Committee of the Board of Agriculture.

to be added with the four official

still of the opinion that the

personnel of the Livestock Advisory

Committee should be identical with

that of the Animal Industry

Committee. I shall be prepared to

acquiesce in the proposal on the

understanding that it will be

reviewed in the light of the ¹⁹¹⁴ ~~last~~ years

working.

3. The programme of work enclosed
in your despatch was discussed by the
Colonial Advisory Council of
Agriculture and Animal Health at

Consistent with the
development of the work, and
with this object I

would suggest ^{that} a committee with three

unofficial members, selected, if

desired, from the animal industry

Committee of the Board of Agriculture

to sit with the four official

It is the opinion that the

personnel of the advisory

Committee should be identical with

that of the animal industry

Committee. I shall be prepared to

acquiesce in the proposal on the

understanding that it will be

reviewed in the light of the ^{first} year's

working.

3. The programme of work enclosed
in your despatch was discussed by the
Colonial Advisory Council of
Agriculture and Animal Health at

their

their meeting of April 20th, and I

Command to your attention the

for 17050/16/16/16

RECEIVED
28 APR 1932
GOV. OFFICE

5/22

Extract from R. D. ...
by ...
Appendix ...

4 copies to Gov 29025 1932

4. Livestock station at Naivasha

The Council had before them a draft programme of work for the Naivasha Livestock Station. The general scope of investigation and the work to be carried out at the Station during the next three years was set out in a despatch dated the 14th January 1932, a copy of which had been circulated for the information of the Council. A.C. 110, the Government of Kenya had been notified of the Secretary of State's proposals for the future administration of the Station, and asked to submit this programme of work. The programme was based upon the recommendations formulated in the Seventh Report of the Mineral Content of Natural Pastures Committee of the Economic Advisory Council (E.A.C. 109), and upon certain further recommendations which had been made by Dr. Orr.

CHIEF
ANNOUNCER
INSTIT

could be... Station would then be able to continue... experiments... would not be undertaken...

DR. ARTHUR HILL strongly stressed the benefits which would be derived by the Station from close co-operation with Kew, and the importance of all relevant information regarding pasture plants being notified to the Royal Botanic Gardens. DR. ORR agreed that the work of the Station could be extended on the botanical side, and suggested that all communications from the Station with Kew and other institutions should be made through the channel of the Scott Laboratories. SIR R. HAMILTON said that it was desirable that copies of any technical communication addressed to the Station by the Rowett Institute or the Royal Botanic Gardens should be sent to the Secretary of State's Advisers on Agriculture and Animal Health for their information. SIR J. RUSSELL suggested that the Station should also keep in touch with any similar work which was being undertaken in other parts of the Empire, and instanced the work of Dr. Pola-Evans in South Africa.

The Council approved the programme of work, subject to the above recommendations.

Station would be able to carry out the experiments which would be undertaken to this end.

Dr. ARTHUR HILL strongly stressed the benefits which would be derived by the Station from close co-operation with Kew, and the importance of all relevant information regarding pasture plants being notified to the Royal Botanic Gardens. DR. ORR agreed that the work of the Station could be extended on the botanical side, and suggested that all communications from the Station with Kew and other institutions should be made through the channel of the Scott Laboratories. SIR R. HAMILTON said that it was desirable that copies of any technical communication addressed to the Station by the Rowett Institute or the Royal Botanic Gardens should be sent to the Secretary of State's Advisers on Agriculture and Animal Health for their information. SIR J. RUSSELL suggested that the Station should also keep in touch with any similar work which was being undertaken in other parts of the Empire, and instanced the work of Dr. Pole-Evans in South Africa.

The Council approved the programme of work, subject to the above recommendations.

P. O.

17250/31

4-5
 O.D.
 30 MAR
 30
 24

Copy to
 B/C
 Keweenaw
 1/10

That statement of ^{accounts} ~~history~~
 should be obtained direct
 from GUNN, who would
 sign over to you post-
 credit balance ^{if any} as certified
 by ^{Colonial} ~~address~~

Copy to ~~Robert Research~~ ^{Research} Int. LF ref. 44.

Copy 44 to ~~the~~ ^{the} E. A. LF ref. 43

SECB

RECEIVED

25

44

University of Aberdeen and University of Scotland College of Agriculture
COLLEGE OF AGRICULTURE, ABERDEEN

The Research Institute,

ADARDEEN.

ROSEBANK
Kilmany Station
Dunrobin - BUCKLEBURN
Pitcairnie - BARRHEAD
GLACROFT

26th March, 1932

Recd
P.C

I have received through receipt of your letter, NO. 17020/31 dated 23rd March, 1932, in respect of the balance in the Account Research Institute Account standing to the credit of the Malvasha Stock Farm on the 31st March 1932.

I am directed to inform you that an Account, showing the financial intrusions of the Malvasha Stock Farm, and bringing out the balance at debit or credit as at the 31st March, 1932, will be prepared by Mr H.M. Gunn, the Officer in charge of the Malvasha Stock Farm, and that a copy of this Account will be transmitted by Mr Gunn to this Institute as soon as possible after the 31st.

This information will not, however, be received here until possibly the beginning of May.

If the information is required earlier than this, it would be necessary to cable Mr Gunn to send the information by cable.

The information, however, could much more easily be supplied by Mr Gunn to the Governor of Kenya.

All the financial transactions have taken place locally, the funds are dealt with through a bank in Nairobi, and the Accounts are subject to local Government audit. All that requires to be done is for Mr Gunn to sign over to the Governor of Kenya the credit balance (if any) of the Account as certified by the local auditors.

The information regarding the balance and the balance itself could then much more quickly be conveyed to the Governor of the Colony.

At/

copy to the Secy 21/4/32

At the same time, the information, together with a copy of the audited Accounts could be sent by Mr Gunn to this Institute where it could be conveyed to you.

Perhaps you will be good enough to state how you would prefer to have the matter dealt with.

I am, Sir,

Your obedient Servant,

J. A. Gunn
Secretary.

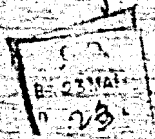
O. O.

17050/21

42 10 27

Mr. President 23/1/32
Mr.
Mr.

Kenya



Mr. T. Thomson
Sir C. Bellamy
Sir J. Shackleton
Sir G. Christie
Permd. U.S. of S.
Party. U.S. of S.
Secretary of State

24 Feb 1932

DRAFT.

The Secretary
The Rowett Research Institute

R/S
26 MAR 1932
44 copy to CA 4/10 26 MAR 1932

With reference to your letter
of the 15th Feb. (R/17/32), I
re. to state that he has
now been requested by the
Governor of Kenya to state
by telegram the amount of the
balance of the Rowett Research
Institute account standing to
the credit of the Nairobi
Stock Fund on the 31st March
next.

Receipt to me
A.

Copy to CA 1 LP

Mud

41 18



KENYA

GOVERNMENT HOUSE,
NAIROBI,
KENYA.

NO. 119

RECEIVED
21 MAR 1932
COL. OFFICE

72 March, 1932.

AIR MAIL.

Sir,

1626

I have the honour to acknowledge receipt of your despatch No. 72 of the 26th January, 1932, and to express my appreciation of the steps which you have taken in obtaining from the Colonial Development Advisory Committee a grant for the maintenance of the Livestock Research Station at Naivasha for a period of three years from the 1st April, 1932. I regret that it has not been possible to reply before owing to the number of points which required careful consideration. My observations follow the three headings in your despatch.

2. (a) FINANCIAL.

I note that a statement of account will be made up to the 31st March by the Rowett Research Institute and transmitted to this Government, together with any balance standing to the credit of the account, and that quarterly payments amounting to £375 will be made from the Colonial Development Fund into the Naivasha Fund which will be controlled by the Director of Agriculture. I have accordingly signed a Special Warrant for £1,125 to make the necessary provision under Head XXXIV for the expenditure of the three quarterly payments due this year, which will be credited to Revenue Head XIII. I should be grateful if I might be informed by telegram of

the

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.

the amount of the balance of the Rowett Research Institute account at 31st March, in order that the Treasurer may issue a cheque as early as possible in April in favour of the Director of Agriculture.

The Colonial Auditor will audit the account and the requirements of Lord Passfield's Circular despatch of the 9th November, 1930, will be observed.

It is desired to keep the Naivasha account under two heads, namely a Fara Fund Account and a Fara Operating Account. The former will be credited with the balance of the Rowett Research Account as at the 31st March, 1931, and the quarterly grant from the Colonial Development Fund, and from it will be met the salaries of the research workers and their travelling expenses between Kenya and England. The latter will be credited with the working receipts of the farms, and from it will be met the ordinary running expenses as hitherto.

3. (b) ADMINISTRATION.

I agree that a local Committee under the Chairmanship of the Director of Agriculture should exercise executive control of the Station, but would suggest that, in the event of the Board of Agriculture being reconstituted in accordance with the proposals which I recently made to you, the Animal Industry Committee of that Board consisting of six unofficial members representative of the Stock Industry, might well undertake these duties and thus avoid duplication of Committees. The officers of the Department of Agriculture would attend the meetings and be closely associated with the work of this body. Pending consideration by you of this proposal, no steps will be taken to appoint the Committee.

4. Staff.

With regard to the further employment of the

present

present research workers, I propose that in the special circumstances of this case Mr. Gunn should enter into an agreement with the Director of Agriculture as Chairman of the Administrative Committee to accept employment for the year ending the 31st April at a salary of £650 per annum, which approximates to his present rate of £700 per annum. Mr. Gunn during the term of engagement, at a time approved by the Committee of Management, leave on full pay for a period which shall not exceed six months in any one year. He shall be entitled to a free return passage by First Class. The proposed agreement is an extension of the existing terms of service of this officer, who is now on a month to month basis with no guarantee of leave, but is entitled to half salary during any leave which he does get. No more generous terms can be offered with the funds available, nor are they considered necessary for the work to be undertaken, and it will be the case that, under the form of agreement proposed, neither Mr. Gunn nor Mr. Farquhar will be liable to the levy which may be imposed from time to time under the Levy on Official Salaries Ordinance. It is not possible to discuss at this date the question of Mr. Gunn's employment after 31st March, 1935, but I am advised that there is little prospect of his being recommended to be absorbed into the service on a permanent basis.

5. It is a fact that Mr. Farquhar completes a tour of 30 months' service early this year, but in any case it was not intended that he should go on leave until towards the end of the year, and after careful consideration it is now suggested that his services be retained on his present terms, namely salary £600 per annum, less 7½%, with a First Class B.4 passage back to England, until he does go on leave, and that the advisability of his re-
engagement

present research workers, I propose that in the special circumstances of this case Mr. Gunn should enter into an agreement with the Director of Agriculture as Chairman of the Administrative Committee to accept employment for ~~the period~~ from the 1st April at a salary of £650 per annum, which approximates to his present rate of £700 per annum. Once during the term of engagement, at a time convenient to the Committee of Management, leave on full pay for a period which shall not exceed six months in any one year, a free return passage by First Class ~~to and from~~ provided. Such an agreement is an improvement on the existing terms of service of this officer, who is now on a month to month basis with no guarantee of leave, but is entitled to half salary during any leave which he does get. No more generous terms can be offered with the funds available, nor are they considered necessary for the work to be undertaken, and it will be the case that, under the form of agreement proposed, neither Mr. Gunn nor Mr. Farquhar will be liable to the levy which may be imposed from time to time under the Levy on Official Salaries Ordinance. It is not possible to discuss at this date the question of Mr. Gunn's employment after 31st March, 1935, but I am advised that there is little prospect of his being recommended to be absorbed into the service on a permanent basis.

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engagement

engagement should then be considered. The payment from the fund of his insurance premium should however cease. It may be advisable in order to ensure continuity at the end of Mr. Ferguson's term of service and also with a view to the exercise of economy, to second for the work of the Station an officer of the Agricultural Department who has a specialised training in animal husbandry to be the additional officer working under Mr. Gunn. Mr. Wilson, Agricultural Officer, who has so specialised training may be available towards the end of this year. It should be noted that the cost of relief staff during the period that officers are absent on leave will be met against the Nalvasha fund.

6. TECHNICAL.

A draft programme of work to be pursued at the Station during the next three years is enclosed as requested for reference to the Colonial Advisory Council of Agriculture and Animal Health.

7. ANNUAL REPORT.

The annual report of the work carried out at the Station will be submitted so as to reach you not later than June in each year, and I shall be glad if an Estimate of the cost of printing and distributing in the manner suggested may be furnished. As you are aware, this report has previously been included in the Agricultural Department Annual Report.

I have the honour to be,

Sir,

Your most obedient, humble servant,

BRIGADIER GENERAL.

GOVERNOR.

THE APPLICATION UNDER TROPICAL CONDITIONS OF THE RESULTS OBTAINED IN THE PASTURES INVESTIGATION UNDERTAKEN IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN OUR EARLIER

... continuation of the experiments to ascertain the effect on growth, milk yield and ... feeding to grazing animals supplementary substances deficient in the ... in the different areas, e.g. feeding ... supplements in areas where the ... are deficient in phosphorus ... feeding of iron salt licks in ... districts.

... under this heading will be continued and investigations on farms in other areas will be conducted as occasion arises.

- (8) Tests to ascertain the effect of mechanical treatment of the soil and the application of various kinds of fertilisers on natural pastures; also, botanical work to explore the possibility of using some of the many strains of pasture plants occurring naturally in Africa, for the improvement of Kenya pastures.

It is proposed to extend the work in progress at the Scott Agricultural Laboratories on individual indigenous species to the Haivasha Farm in the following manner:

- (a) 1/40th acre observational plots of pure species, including introduced species, particularly from other parts of Africa. Samples for chemical analysis to be taken from these plots to ascertain whether the species vary in composition under different climatic and soil conditions.
- (b) An experiment to determine the seasonal yields of both herbage and nutrients for the promising indigenous grasses. This test consists of plots of the pure species and it is a repetition of work at present in progress under different conditions at the Scott Laboratories.

Also grass management tests:

- (a) 6 core plots of natural pasture to be subjected in different intensities of grazing and also grass burning and light grazing. The first treatment i.e. burning and light grazing is intended to imitate native management of pasture.

This experiment is a repetition of the work done at Kachakos, but at Kachakos will be supplemented by a test in which the same area of stock will be kept on the same area of natural pasture and the effect both on the pasture and on the stock.

Work done with mineral fertilizers

- (b) The growing of forage crops and the preservation of these or of ordinary grass by haying or pit silos.

This item - forage crops - will receive more attention. An endeavour will be made to provide one group of cattle with succulent food throughout the whole year and to compare the results with groups receiving no such food, and a group receiving ensilage only during the dry season.

It is realised that the low rainfall at Naivasha may well prove to be the determining factor in limiting the scope of this work.

B. PRACTICAL FEEDING EXPERIMENTS WITH CATTLE, SHEEP AND PIGS TO TEST THE APPLICABILITY TO TROPICAL CONDITIONS OF THE DEFENSIVE METHODS OF FEEDING AND MANAGEMENT OF FARM ANIMALS.

Experiments under this heading will be continued and elaborated in the light of the results obtained under A.(3) above.

C.

C.

EXPERIMENTS TO DETERMINE THE RATES OF GROWTH AND PRODUCTION WHICH MAY BE OBTAINED FROM DEFICIENT NATIVE CATTLE AND SHEEP WHEN PLACED UNDER THE BEST CONDITIONS OF MANAGEMENT.

...the better cattle and sheep available
 ...the most favourable
 ...it is
 ...with that of Animal
 ...facilitating series for
 ...RESEARCH
 ...work will
 ...for placing
 ...the experiments are put in
 hand. As soon as opportunity permits some pig
 breeding experiments will be undertaken designed to
 discover the maximum rate of growth of different cross-
 bred pigs and inter alia whether a 120 lb. liveweight
 pork pig can be successfully produced at an economical
 cost.

The crosses suggested are:

Large White	x	Middle White.
" "	x	Large Black.
" "	x	Berkshire.
" "	x	Wessex Saddleback.

O. O.

1/25/51

Research
RESEARCH INSTITUTION,
ADDIS ABABA.

MA 2 40

To Hon. Secy for
(26)

Copy to Hon. Kenya (25)

...holder to enable, for your
information, a copy of a despatch
which he has addressed to the
Governor of Kenya on the subject
of the arrangements to be made to
ensure the continuance of the
investigation at the livestock
research station at Naivasha in that
...
2. ^{P.} Sir Philip Cunliffe-Lister
~~...~~
will be obliged if the
necessary measures may be taken to
give effect to the proposal in
para. 5 of the despatch
relating to the future financial

Copy, with copy comm: dft.
to Hon. Kenya LF ref. 26

17050, 31

Research
NO 277/INS/1976
APPROVED

Pr. 110

To ~~hon. Secy~~ (26)

Copy to Hon. Secy

Copy with copy conf. dft.
to Hon. Secy LF ref. 76

...the letter to ...
...of a despatch
...addressed to the
...
...of the arrange
...
...investig
...investig
...that

Sic ~~Pr. 110~~ Sanliffe - later

...will be obliged if the
...necessary measures may be taken to
...give effect to the proposal in
...para. 5 of the despatch
...relating to the future financ.

to consult from 1956 and onwards.

Further, the facilities at the Station should in future be available for investigations on nutrition in relation to disease which it may be desired to undertake in other parts of Tropical Africa". The attention of the Governor of Kenya has been drawn to this proviso and he has been instructed that the programme of work at Naivasha should be so framed as to permit, as far as possible, of the incorporation of such enquiries from other Colonial Govts. as are foreshadowed in the Committee's Report.

2, Richmond Terrace,

London, S.W.1.

4th February, 1938.

Dear Dr. Orr,

Thank you for your letter 22/31/38 of the
3rd February.

As you will see from the third interim
despatch to the Governor of Kenya which I have
to members of the Colonial Advisory Council, the
C.A.C. 119, the Treasury have sanctioned the grant
the Colonial Development Fund.

In regard to the circulation of the 7th Report
of the Committee of the Economic Advisory Council on the
Mineral Content of Natural Pastures, twenty copies have
been sent to the Kenya Government for distribution in such
a manner as the Governor deems necessary. The Secretary
of State has also decided, in view of the recommendation
made in paragraph 20 of the Report, to send copies to such
of the African Colonial Governments as are likely to be
interested, and ten copies of the Report are accordingly
being sent to the Governments of Uganda, Northern Rhodesia,
Nigeria, Nyasaland, the Gold Coast, and the Tanganyika
Territory.

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

6

It is further understood that the Dominions Office propose to send a few copies to each of the Dominions and Southern Rhodesia.

Yours sincerely,

(23) J. C. HIBBERT

Research Institute,
UNIVERSITY OF ABERDEEN

Telephone No.
BUCKLEBURN H.

Author's Address:
10077 - BUCKLEBURN
GLASGOW - BARRHEAD
GLASGOW

January, 1962.

Dear Sir,
I have been
... and it appears that the publication
... I think however, as the
... an application for a grant, it should be
... the administrative heads of departments, and to a
... interested in this work. We would
... about six months hence, another report
... the results of the investigation up to date.

Will you please let me know what arrangements you are
making for circulation through the Colonial Office with a list of the
people to whom you are sending copies of the report. I will then
consider what extra copies should be circulated through the Imperial
Bureau and send you a list of these. I have written to Mr. Hanning
for copies for circulation.

I have just the money to make the grant from the
Colonial Office.

Handwritten signature

Handwritten notes at bottom of page

Research Institute,

ABERDEEN

Telephone No. 2
BUCCARUM B.

Edinburgh Station
Glasgow - BUCHANAN
Perth - BUCHANAN
London - BUCHANAN

In January, I have been
... and it appears that the publication
... I think however, as the
... application for a grant, it should be
... basis of departments, and to a
... interested in this work. We would
... about six months before, another report
... of the investigation up to date.

Will you please let me know what arrangements you are
making for circulation through the Colonial Office with a list of the
people to whom you are sending copies of the report. I will then
consider what extra copies should be circulated through the Imperial
Bureau and send you a list of these. I have written to Mr. Manning
for copies for circulation.

Very yours,
The Secretary

[Handwritten signature]

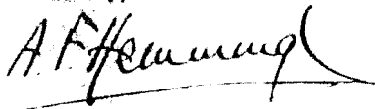
[Handwritten notes]

29th January 1932.

Dear Sir,

With reference to our telephone call
you have been advised herewith a copy of a letter
dated 15th Dec 1931 to you about the publication of
the proceedings of the Committee on the Mineral
Subject of Natural Gas.

Yours sincerely,



J. G. Hibbert, Esq.,
Colonial Office,
S.W. 1

12th January 1962.

I received this morning to the Hon. Secretary, regarding the report of the Economic Commission for Africa, in the light of the fact that you had written to me on November 17th last, and did not answer my letter. I naturally assumed that you had no comment to make.

I then told you, the main reason for publication was thereby to obtain added support for the application for a grant from the Colonial Development Fund. A further reason to which I did not then refer was that the Government of Kenya, who have given us great help at Nairobi, had asked for permission to lay this report before their Legislative Council, and this could not be done so long as it remained a confidential document.

I am, therefore, very satisfied that the decision to publish the report was well-founded. I agree, however, that the interest of this document is financial and administrative rather than scientific and that there would be no advantage in circulating it through your Bureau to research workers in the same way as adopted in the case of the 6th report of this Committee, especially if you are able in the course of the summer to prepare a report on the same subject. I think,

however,

J.B. Orr, Esq., D.S.O., M.C.,
M.D., D.Sc.,
Imperial Bureau of Animal Nutrition,
The Reid Library,
Rowett Institute,
ABERDEEN, SCOTLAND.

3/a

C. O.

GOVERNMENT OF KENYA

I have your letter of the 27th January regarding the publication of the 7th Report of the Mineral Content of Natural Pastures Committee of the Economic Advisory Council.

Copy for 50189/51 General.

As a matter of fact, the Report was published as a non-Parliamentary paper at the instance of the Colonial Office, because [a] publication was ~~essential to the support of the~~ ~~application~~ ~~which was made by the~~ ~~Government of Kenya for a grant from the~~

No. It was circulated to *copy before* publication!
AD

3/1a

G. O.

I have your letter of the 27th
 January regarding the publication of the
 7th Report of the Mineral Content of
 Natural Pastures Committee of the
 Economic Advisory Council.

Copy for 30189/31 General.

As a matter of fact, the Report
 was published as a non-Parliamentary
 paper at the instance of the Colonial
 Office, because [a] publication was
 essential to the support of the
 application which was made by the
 Government of Kenya for a grant from the

No. It was essential to *edit* before
 publication!
CHD

Colonial Development Fund, (b) in order
to enable the arrangements proposed
contained in the report to be carried
out in

of which ~~has been~~ ^{has been} ~~discussed~~ ^{discussed} ~~in~~ ⁱⁿ ~~the~~ ^{the} ~~report~~ ^{report}
above, as Council Paper No. 110. You will
see from the ninth paragraph of that despatch
that the recommendation of the Colonial
Development Advisory Committee for assistance
from the Development Fund was made on the
understanding that suitable arrangements were made
for the results of the experimental work at
Haivasha to be promptly and widely circulated.

make of 13. facilities
at Nairobi, as arranged
in para. 26 of the Report

In these circumstances, I assume that you will
be prepared to arrange for distribution of the
report to the Bureau's correspondents in the
Dominions and Southern Rhodesia?

46

Imperial Bureau of Animal Nutrition
The Red Library,
Howett Institute,
Aberdeen, Scotland.

27th January, 1938

Dear Sir, I received your letter of 22nd January addressed to the Director of the Economic Advisory Council on Pastures and I am sorry that the distribution of the 7th Report of the Council on Pastures has not yet been prepared. This report was not drawn up for publication and circulation. It is merely an interim report, the main features of which was the recommendations for a continuation of the work. In my opinion it should not have been released to the press. It is a confidential document. However, I am writing to Mr. Hemming, Secretary of the Economic Advisory Council, on this point, and also to ascertain whether or not, in his opinion, copies of it should be circulated to the Dominions. On the whole I think that it would be better to wait until we get a fuller report before circulating. I will write you further after hearing from Mr. Hemming.

Yours sincerely,

(Signed) J. S. ORR

By Her Grace

Handwritten:
To Mr. Hols
file
and
1911

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

26 January, 1952.

K.17050/51

My dear Hols,


A despatch is being sent to Kenya detailing the arrangements which will be possible through assistance from the Colonial Development Fund for the continuation of the livestock research station at Mbitani. It is desired that a draft programme of work at the station should be drawn up for consideration by the Colonial Advisory Council of Agriculture and Animal Health. This should be as detailed as may be found convenient and should lay down the general lines of investigation to be pursued during the next three years. In this connexion, I send to you the suggestions of Dr. Orr, based on the discussions which he had with you and Montgomery during last summer. He has elaborated the sub-headings which were agreed upon during your discussions, but it is possible that you may wish further to elaborate them in consultation with the local Kenya Committee. We should, of course, like to have the programme mentioned above as soon as possible, so that it may be considered by the Council here at their next

Alex. Hols, Esq., C.B.E.

meeting. I, personally, am very keen that
under A (a) should receive careful consideration.
You have already begun this work regarding
Edwards, and I have seen the results of
which have been made ^{in line} at Edinburgh.
analyses I would ask whether the samples were
at the same stage of maturity. You know that this
is most important factor when considering the nutritive
values of pasture grasses. Elaboration of Edwards'
work in collaboration with Maivasha should be of great
value to Kenya and Eastern Africa generally. Dependence
should be placed more on the analyses of individual
grasses and even on the analyses of strains of
individual grasses rather than on analyses of bulk
samples of natural pastures, and I assume that your
Committee will give careful consideration to this aspect
of the work when considering the programme.

I am,

Yours sincerely,

 A. A. STOCKDALE.

The Rowett Research Institute,
BUCKSBURN, ABERDEEN.

26th Dec., 1931.

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

Handwritten initials and date:
H.M.
J.M.
2/1/32

Dear Stockdale,

Enclosed herewith is the scheme of work for the Naivasha Station. I regret the delay in sending it. The fact of the matter is that the scheme drawn up to which I referred has, I am afraid, been taken out of the files by me for a meeting in London and lost. I quite realise now the extreme reluctance with which any of my staff will give me a document out of our files.

In these circumstances I went back over the original papers and have drafted a scheme of work which is the one Mr. Montgomery, Mr. Holm and myself agreed upon, though the phraseology may not be identical.

You will see that I have put in the sub-headings of each of the sections in capitals. These are taken from the 7th Report of the Committee of the Economic Advisory Council. The sub-heads are merely elaborations of these heads as agreed upon by Montgomery, Holm and myself.

With all the kindest regards,

Yours sincerely,

Handwritten signature:
H.M.

The Rowett Research Institute,
BUCKSBURN, ABERDEEN.

Telephone No. 1
BUCKSBURN B.
Railway Station
Codes - BUCKSBURN
Postcodes - BARRHEAD
GLASGOW

26th December, 1931.

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

Handwritten initials:
JMS
2/12/31

Dear Stockdale,

Enclosed herewith is the scheme of work for the Kaituma Station. I regret the delay in sending it. The fact of the matter is that the scheme drawn up to which I referred has, I am afraid, been taken out of the files by me for a meeting in London and lost. I quite realise how the extreme reluctance with which any of my staff will give me a document out of our files

in these circumstances I went back over the original papers and have drafted a scheme of work which is the one Mr. Montgomery, Mr. Holt and myself agreed upon, though the phraseology may not be identical.

You will see that I have put in the main headings of each of the sections in capitals. These are taken from the 7th Report of the Committee of the Economic Advisory Council. The sub-heads are merely elaborations of these heads as agreed upon by Montgomery, Holt and myself.

With all the best wishes,

I am sincerely,

Handwritten signature:
JMS

8, Richmond Terrace,

London, S.W. 1.

14th December

Dear Orr,

In reference to our last conversation, I am glad to hear of the continuance of the work at Nairobi. I have written to you that the details are now being worked out by the Kenya Department of the Colonial Office for the despatch to Kenya outlining the proposals for dealing with the work from April 1st next.

In this connexion, we shall set out proposals for relationship between the Local Committee and the Colonial Advisory Council of Agriculture and Animal Health along lines discussed with you. There are, however, certain other matters on which information is required as follows:-

- (1) Could you let us know the exact position of the two scientific workers vis-à-vis the Rowett Institute? Are they definitely members of your staff at Rowett and do they contribute to any superannuation fund at the Institute?

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

2, Richmond Terrace,

London, S.W. 1.

15th Dec 1951

Dear Orr,

In reference to our last conversation concerning the continuance of the work at Nairobi, I have told you that the details are now being worked out by the Kenya Department of the Colonial Office. A despatch to Kenya outlining the proposals for dealing with the work from April 1st next.

In this connexion, we shall set out proposals for relationship between the Local Committee and the Colonial Advisory Council of Agriculture and Animal Health along lines discussed with you. There are, however, certain other matters on which information is required as follows:-

- (1) Could you let us know the exact position of the two scientific workers vis-à-vis the Rowett Institute? Are they definitely members of your staff at Rowett and do they contribute to any superannuation fund at the Institute?

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

What he will not be required to do is to pay the next two years of leave. When is his leave due for leave and what obligations in respect of leave already earned should be asked for when his new agreement is being considered?

- (3) We also are not clear what your item of insurance means in the estimates submitted to the Colonial Development Advisory Committee. Does this mean insurance for superannuation under the Federated Universities Scheme and should this be continued? If so, what are the amounts due in respect of each officer individually? Could you let us have information on this point.

(4)

RE: [Illegible]
[Illegible]

Montgomery and I
let us have a copy of
for [Illegible]
this [Illegible],
to Kenya for [Illegible]
the Advisory Council here for [Illegible] and [Illegible]
and we would like to have this done as early as possible,
so that the work under the new arrangements can start
off with effect from April 1st next. We propose to ask
for meetings of the Local Kenya Committee at least four
times a year, and the submission of a report and
financial statement to the Council annually.

I am,

Yours sincerely,

UNCLASSIFIED

F. A. Stockdale, Esq.,
27, Richmond Terrace,
London, S.W.1.

Dear Stockdale,

Enclosed

Antenna Station

The fact of the letter is that I have been referred to you
which I referred to. I have also been referred to you
files by the... meeting of... results
reference... with a... of my
staff... of our...
... the original
... the one
...
... the... of
... from
... Advisor,
... of these
...
...

Yours sincerely,

(Signed) J. R. Durr.

STOCK FARM,

The paragraphs below given in capitals outline

work as approved by the Committee of the Board.

The following are the main lines of the work:

(1) To determine the effect of various types of

soil, irrigation, etc. on the growth of

(11) a combination of the experiments to determine the effect of various types of soil, irrigation, etc. on the growth of crops and the effect of various types of soil, irrigation, etc. on the growth of crops and the effect of various types of soil, irrigation, etc. on the growth of crops.

(12) Tests to ascertain the effect of mechanical treatment of the soil and the application of various kinds of fertilisers on native pastures.

(13) The growing of new crops and the preservation of these or of ordinary grass by drying or pit silage.

(14) It was also suggested that the work on pastures might be extended to include botanical work to explore the possibility of using for the improvement of the pastures in Kenya some of the hardy or pasture plants occurring naturally in Arica. Work of this kind is going on both in South Africa and in Australia, and it was thought that the station at Kenya could be used as a convenient centre for this work for tropical Africa. There would be no difficulty in getting the assistance of either Kew or Aberystwyth for this work.

STOCK FARM.

The paragraphs below given in capitals on 11.7.54
 work as approved by THE COMMITTEE OF THE BROMFIELD
 THE SURVEYS IN THE BROMFIELD DISTRICTS
 PARTIAL BURNING OF THE BROMFIELD DISTRICTS
 MAIN DIVISION OF THE BROMFIELD DISTRICTS

(1) A detailed survey of the distribution of species and their
 abundance in the various districts of 1953 and 1954 showing suitable
 slopes and conditions for the selection of the pastures in the
 different areas, including the use of pastures supplements in grass
 and the soils and pastures are deficient in phosphorus, or the
 feeding of iron as a means of 'hardening' districts.

(2) Tests to ascertain the effect of mechanical treatment of
 the soil and the application of various kinds of fertilisers on
 certain pastures.

(3) The growing of certain crops and the preservation of these
 or of ordinary grass by drying or piling.

(4) It was also suggested that the work on pastures might be
 extended to include botanical work to explore the possibility of
 using for the improvement of the pastures in Kenya some of the many
 strange pasture plants occurring naturally in Africa. Work
 of this kind is going on now in South Africa and in Australia,
 and it was thought that the station at Kenya could be used as a
 convenient centre for this work for tropical Africa. There would
 be no difficulty in getting the assistance of either Kew or
 Aberystwyth for this work.

B. PRACTICAL FEEDING EXPERIMENTS WITH CATTLE, SHEEP AND PIGS TO TEST THE APPLICABILITY TO TROPICAL CONDITIONS OF THE INTENSIVE METHODS OF FEEDING AND MANAGEMENT OF FARM ANIMALS.

Tests on the feeding of concentrates available in the country to milk cows and young stock with a view to a rate of growth and the level of milk production similar to that obtained in the European countries. The types of concentrates which are already available in the country, grown cheaply, would be tested and sufficient quantities used to ascertain the best methods of mixing such concentrates into a balanced ration.

C. EXPERIMENTS TO DETERMINE THE MAXIMUM MILK PRODUCTION WHICH CAN BE OBTAINED FROM NATIVE CATTLE AND SHEEP UNDER THE BEST METHODS OF MANAGEMENT.

Some work of this kind has already been done in Kenya at a training centre for natives, and the results were found to be most encouraging. It was intended that this would be continued on a larger scale on the Naivasha Stock Farm, native cattle being reared and fed according to the modern improved methods to determine the extent to which the rate of growth and the milk yield could be improved by proper handling and feeding. Experiments would be done with native cows and the offspring of the best animals kept for breeding. Experiments on similar lines would be done with native sheep.

It was decided that the animals at Naivasha which were used for the above experiments would be made available for any study which might be done on the influence of feeding on the incidence of disease. Any work of this kind carried out would be, of course, in association with the Veterinary Research Station at Embete.

For Air Mail of 26 Jan 32

O. O.

17050/51 Kenya.



- Mr. Freeston. 31/12/31
- Mr. Pympton 31/12/31
- Mr. A.T. Hudson 14/1/32
- Mr. Acker Sturtevant 14/1/32. Please see comments
- Mr. Deane (Reached on page 6)
- Mr. O. Baskin
- Mr. J. Shackburgh
- Mr. U. Granda
- Form U.S. of B.
- Part U.S. of B.
- Secretary of State

Amended 414 Not
3155/33
copy C.O.P. 27. 7. 32

DRAFT.

GOVERNMENT

KENYA

No 72

(Mr. Stoddard's letter
 this is letter same
 as usual)

circulation

orland
 Copy of end of for future

copy to JCA
 copy to P. J. H. H. H.

copy for H. P. J. H. H. H.
 20 copies for Mr. Hillman
 for circulation to C.I. Advisory
 Council)
 copy also sent to
 293 for G.D.A.C.

address you of the
 arrangements to be
 in connection with
 Research Station at Naivasha. As
 you are aware, the work at the station
 has hitherto been supported by a grant
 to the Royal Research Institute.
 This grant has now been
 extended to the end of March 1932.
 I recommend to your
 attention the Seventh Report of the
 Committee of the Economic Advisory
 Council on the General Content of
 Natural Pastures, of which a copy
 is enclosed; and further copies are
 being forwarded to you under separate
 cover. You will observe from this

Report

of the grants to provide the salaries

and expenses of the two research workers
at Naivasha for a period of three years.

3. After full consideration, I
decided to approach the C.D.A.C., and I
enclose a copy of the application laid
before them. From the Committee's letter
of 4th December (copy enclosed) you will
note that they recommended the desired grants
from the Fund; the recommendation has
subsequently received the approval of H.M. Treasury.

4. I have now to invite your
concurrence in certain detailed proposals,
drawn up in collaboration with my advisers,

which

in the appropriate Head of the Colonial

Estimates. The Colonial Auditor should

be invited to audit the accounts of the

Maivasha Fund, and an audited ~~Balance Sheet~~

Statement of Account

made up to 31st March in each year should be

forwarded to me in connection with the

Annual Report which I have requested in the

ninth para. of this despatch. It will no

doubt be convenient if this ~~Balance Sheet~~

Statement of Account

is so drawn up as to comply with the

requirements of para. 11 of Lord Passfield's

Circular despatch of 29th November 1930, and

if a copy of it is furnished to the
Colonial Treasurer for reference in
connection with the statement

required by para. 12 of that despatch

D. (b) Administration

After 1st April executive

control over the institute will be
vested in the Director of Agriculture

with the assistance of a local

advisory committee. This committee

should be composed as follows:-

- The Director of Agriculture (Chairman)
- As Deputy Director (Animal Husbandry)*
~~The Chief Veterinary Officer~~
- The Chief Veterinary Research Officer
- The Director of Fisheries
- Official members nominated by the Governor.

The committee should meet not less
frequently than four times in the
year, and its meetings would
normally be attended by one of the
scientific officers in charge of the
Station.

note
The appointment of
an CPO as deputy director
Animal Husbandry has
indicated now better
please J. S. [unclear]
[unclear]
[unclear]

in the appropriate form of the original
estimates. The Colonial Auditor should
be invited to audit the accounts of the
Statement of Account
Alivasha Fund, and an audited ~~Balance Sheet~~

made up to 31st March in each year should be
forwarded to me in connection with the
Annual Report which I have requested in the
para. of this despatch. It will no
Statement of Account
not be convenient if this ~~Balance Sheet~~

up
so drawn as to comply with the
requirements of para. 11 of Lord Passfield's
regular despatch of 29th November 1930, and

U. Technical

A draft programme of work

at the Station, laying down the general lines of investigation to be pursued during the next year. Agriculture and animal health in which time as will permit of its being returned to you with the Council's comments before 1st April 1932.

The programme should be based upon the recommendations of the Committee on the mineral content of Natural Pastures formulated in the 27th para. of their Seventh Report, and upon the suggestions of Dr. J.B. Orr, which are being communicated ^{semi-officially} direct to the Director of Agriculture. It should be so framed as to permit

if possible

I suggest this because the fortnightly will be away until May. I shall probably be away in the West Indies until May 24th. The next meeting of Council may in consequence not be before the end of May. In view of this you may like to consider expanding. Personally I think the wording of the despatch may elude. To cover the telegraph asking what to pursue, or lines suggested cover subject to alterations which might be found necessary when Council meets at end of May. P.H.

7. It will be necessary to consider the
 you will no doubt bear in mind the fact that
 funds have hitherto been used to defray an annual
 insurance premium of £15. 16s. on the life of
 Mr. Farquhar. It is understood that whereas
 Mr. Gunn was granted leave in the early part of
 1931, Mr. Farquhar will be normally eligible for
 leave early in 1932. The form of agreement
 should make appropriate provision for the leave
 and passage expenses of both officers. You may
 think it well to consider the propriety of
 intimating to ^{Mr} Gunn and ^{Mr} Farquhar the ^{what}
 prospect there may be
 possibility of their being absorbed, at the
 termination of the three year period, into the
 Agricultural Service of the Colony on a permanent basis.

7. It will be necessary to consider the

8. Technical

A Draft programme of work

of the Station, laying down the
general lines of investigation to
be pursued during the year, these

you will no doubt bear in mind the fact that the
funds have hitherto been used to defray an annual
insurance premium of £15. 16s. on the life of
Mr. Farquhar. It is understood that whereas
Mr. Gunn was granted leave in the early part of
1931, Mr. Farquhar will be normally eligible for
leave early in 1932. The form of agreement
should make appropriate provision for the leave
and passage expenses of both officers. You may
think it well to consider the propriety of
intimating to Messrs. Gunn and Farquhar the
possibility of their being absorbed, at the
termination of the three year period, into the
Agricultural Service of the Colony on a permanent basis.

of Agriculture and Animal Health in such
time as will permit of its being
returned to you with the Council's
comments before 1st April 1932.
The programme should be based upon
the recommendations of the Committee
on the mineral content of Natural
Pastures formulated in the 27th
para. of their Seventh Report, and
upon the suggestions of Dr. J.B. Orr,
which are being communicated to
the Director of Agriculture. It
should be so framed as to permit

If possible
I suggest this because the
work may well be away
until May - I shall probably
be away in the West Indies
until May 25th. The next
meeting of Council may in
consequence not be before the
end of May. In view of this
you may like to consider
rewording. Personally I think
the wording of the despatch
may stand. We could then
telegraph asking work to
be placed on lines suggested
and subject to alterations
which might be found necessary
in Council next at end of
May. P.H.

have referred in para. 5 above.

I contemplate that the Report will be submitted in the first instance to the Colonial Advisory Council of Agriculture and Animal Health, and will be subsequently printed in London at the expense of the Naivasha Station and widely distributed in all quarters likely to be interested.

fourth para. of their letter of 4th December, that suitable arrangements would be made for the results of the experimental work at Naivasha to be promptly and widely disseminated through the appropriate channels. With this end in view, I request that I may be furnished with a full Annual Report on the work carried out at the Station, and the results obtained, which should be rendered so as to reach me not later than June in each year. This Report should include the financial statement to which I

have

have referred in para. 5 above.

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have

C.D.A.C.

9/10

C.D.A.C. 906

Development Advisory Committee

Colonial Office,

Downing Street, E.W. 1

4th December 1951

The Secretary of the Colonial Development Advisory

Committee

is invited to state that, at their meeting on 27th November 1951, the Secretary of the Treasury and the Secretary of the Treasury, they had before them a Colonial Office memorandum applying for three annual grants of £10,000 to enable the Government of Kenya to pay the salaries and expenses of two scientific workers at the Naivasha Agricultural Research Station (C.D.A.C. 900).

2. The documentary information before the Committee was supplemented by personal testimony from Dr J.B. Orr, Director of the Rowett Research Institute, who was good enough to attend the meeting at the Committee's request. Dr Orr explained that scientific work on the animal industries of the Colonial Empire had hitherto been directed almost entirely to the eradication of disease, and little attention had been paid to the constructive possibilities of animal husbandry. The three-year programme for work at Naivasha which had been drawn up in collaboration with the Director of Agriculture, Kenya, provided for practical enquiries, based on the researches already carried out, into

problems

THE UNDER SECRETARY OF STATE,
COLONIAL OFFICE.
THE SECRETARY,
TREASURY.

... as the securing of forage crops during
 ... and the increase in milk supply of
 ... which would not fail to be of great importance
 ... of equal industries throughout the tropics
 ... the Governor of Kenya has stated that in view of
 ... of working profit will be maintained, and
 ... the remaining part of the
 ... of a smaller plant than the £1,500
 ... suggested in the Economic Advisory Council's
 memorandum. The Committee are satisfied that it would not
 be justifiable to press the Kenya Government to contribute,
 for the three year period in question, to the maintenance of
 the farm, regard being had not only to the present economic
 difficulties of the Colony but also to the generous capital
 grants made by the Colonial Government in 1929, which
 rendered possible the establishment of the station at
 Naivasha.

4. The Committee regard the proposals before them as
 experimental work, localised for convenience in Kenya, of
 primary importance to the Colonial Empire. They have no
 doubt that suitable arrangements will be made for the
 results of these experiments to be promptly and widely
 disseminated through the appropriate channels, and on this
 understanding they recommend that annual free grants of
 £1,500 be made from the Fund in 1932/33 and the two
 succeeding years, to be applied by the Government of Kenya
 to the purpose described in the application before them.

... as the securing of forage crops during
 ... and the increase in milk supply of
 ... which would not fail to be of great importance
 ... of animal industries throughout the Colony
 ... of Kenya has stated that in view of
 ... of carrying profit milk to rural areas
 ... for increasing the production of
 ... of amount of forage
 ... it is important to continue
 ... on the basis of a smaller grant than the £1,500
 per annum suggested in the Economic Advisory Council's
 memorandum. The Committee are satisfied that it would not
 be justifiable to press the Kenya Government to contribute,
 for the three year period in question, to the maintenance of
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 £1,500 be made from the Fund in 1932/33 and the two
 succeeding years, to be applied by the Government of Kenya
 to the purposes described in the application before them.

to being sent to the

of student servant,

S. B. PROUSTON

to the Committee.

The Rowett Research Institute,

111, ROYAL HIGHWAY, ABERDEEN.

Telephone No. 1
BUCCLEURH B.

Post Office Telephone
No. 111 (Aberdeen)
FARMERS' BANKING
(L.M.S.)

1931

... to the question raised in your letter. Messrs H. Clark and B.W. Farquhar.

... staff of the Rowett Institute ... They ... while engaged, are responsible ... for discipline ...

... it is assumed that ... the expiration of the present contract in March ... the two scientific workers would be prepared to accept the offer of ... agreement for the next three years.

... was made in the spring of this year and will not be eligible for ... leave for another two years. Farquhar has not been on leave since the early winter of 1929. In normal cases leave would be granted to him early in the New Year.

[3. As regards insurance, the decision reached by the Treasury and the Empire Marketing Board in May, 1930, was that the arrangements then existing should be continued i.e. that Clark himself should receive a basic salary, 1000, plus the Insurance Premiums due on his life and that the annual premium of £25, on the life of Farquhar should, while he is in hospital, be met out of the Empire Marketing Fund.

Farquhar is not insured under the ... as a ... policy on his life with the Royal Insurance Company.

The amount payable ... £25 per annum.

[4. The question of treating ... the same principle as Farquhar ...

CONTINUATION SHEET

It is suggested that, as there is every likelihood of the Government, if funds can be obtained, the whole position would be improved, the necessity for insurance mitigated, by extending to these workers a similar scheme operative in the case of specialist workers in the Colonies, and by establishing Burn and Farquhar in the Colonial

... is also advised, as requested.

... in sending this reply is regretted.

Very faithfully,

H. C. ...

I am sorry that a copy of the programme of work has not been found on the files in time to accompany this letter. It will be forwarded to you tomorrow.



TREASURY CHAMBERS.

December, 1931.

With respect to the Lord Commissioners of the Treasury's letter of the 10th December, 1931, signed by Philip Currie, in relation to the recommendation of the Committee on the Kenya Agricultural Station, I have the honor to inform you, in reply to the letter of the 4th instant, that annual free grants of £1,500 should be made from the Colonial Development Fund in 1932/3 and the two succeeding years to enable the Government of Kenya to pay the salaries and expenses of two scientific workers at the Naivasha Agricultural Research Station.

I am now to request you to inform the Secretary of State that My Lords sanction three annual grants of £1,500 from the Colonial Development Fund in accordance with the recommendation of the Committee.

My Lords note that the Committee recommended the

The Under Secretary of State,
Colonial Office.

the letter has been sent to the
Advisory Committee.

I am,

Sir,

Your obedient servant,

H Phillips

22 67
P. Richmond Terrace,

London, S.W.1.

16th December, 1931.

In reference to our last conversation about the
progress of the work at Maitland, I have to inform
you that the details are now being worked out here by
the Department of the Colonial Office for the
purpose of a Memorandum outlining the proposals for dealing
with the work from April 1st next.

In this connexion, we shall set out proposals
for relationship between the Local Committee and the
Colonial Advisory Council of Agriculture and Animal
Health along lines discussed with you. There are,
however, certain other matters on which information is
required as follows:-

- (1) Could you let us know the exact position
of the two scientific workers vis-à-vis the
Rowett Institute? Are they definitely members
of your staff at Rowett and do they contribute
to any superannuation fund at the Institute?

Dr. B. Orr, D.S.C., M.C.

... reasons that they would be prepared to
 ... offer of continued employment in
 ... agreement for the next three years
 ... obligations would have to be
 ... consideration in respect of
 ... is
 ...
 ... leave for the
 ... there is something
 due for leave and what obligations in respect
 of leave already earned should be asked for when
 his new agreement is being considered?

- (3) We also are not clear what your item of insurance means in the estimates submitted to the Colonial Development Advisory Committee. Does this mean insurance for superannuation under the Federated Universities Scheme and should this be continued? If so, what are the amounts due in respect of each officer individually? Could you let us have information on this point.

(4) Are there any other matters which should be considered when the proposed new agreements are being drawn up?

Mr. [Name] and I would also be glad if you could let us have a copy of the programme of work which was formulated during the discussions when Holt was on leave [Name], as it is proposed that this should be sent to Kenya for elaboration. It will then be submitted to the Advisory Council here for consideration and approval and we would like to have this done as early as possible, so that the work under the new arrangements can start off with effect from April 1st next. We propose to ask for meetings of the Local Kenya Committee at least four times a year, and the submission of a report and financial statement to the Council annually.

I am,

Yours sincerely,

A. [Name]

(4) Are there any other matters which should be considered when the proposed new arrangements are being drawn up?

Montgomery and I would also be glad if you could send us a copy of the programme of work which was contemplated during the discussions when Holt was on leave this summer, as it is proposed that this should be sent to the Council for elaboration. It will then be submitted to the Advisory Council here for consideration and approval and we would like to have this done as early as possible, so that the work under the new arrangements can start off with effect from April 1st next. We propose to ask for meetings of the Local Kenya Committee at least four times a year, and the submission of a report and financial statement to the Council annually.

I am,

Yours sincerely,

J. A. H. H. H. H.

Mr. Freeston
Mr. Allen

17050.

Downing St.

10 December 1931.

Sir,

I am etc. to refer to the letter of 4th December from the Secretary of the U.D.S. (U.D.S. 12/349) regarding a proposal that three annual grants of £1,500 should be made from the C.D. Fund to enable the Government of Kenya to provide the emoluments of two scientific workers at the Agricultural Research Station, Naivasha.

2. The Lords Commissioners of the Treasury have already, had before them the Memorandum containing the application to the Committee (L.D.S. 9000). In reply to the telegraphic enquiry to which reference was made in the 8th paragraph of that

that

that memorandum (page 4) the Governor

The amount suggested by the committee
of the Economic Advisory Council as a
grant in aid of the staff.

The Governor's views on this matter
were communicated orally to the
S.L.A.C. at their meeting.

The S. of S. find himself
in full accord with the views
expressed in the committee's letter
under reference, and trusts that he
may receive early expression of Their
Lordships' sanction for the proposed advances

from the S.L. Fund.

(Signed) H. T. ALLEN

C. O.

Mr. Eastwood 4/12
Mr. Stuchtle 4/12
Mr. [unclear] 11
Mr. [unclear] 9/12

8 Dec 1931

I am at to refer to your letter
of the 15th Oct in which
you refer to copies of the Journal
of the City of the Economic
Advisory Council which I have
sent you for your information.

Final 2/12
Following

It would perhaps
be possible that the funds
to enable the recommendations
made in this Report to be
carried out. ~~it would be~~

~~extensive~~ ~~convenient~~ ~~form~~ ~~an~~
inquiries would be made
administrative ~~part~~ ~~of~~ ~~it~~ if
the Report could be made
available as soon as possible
in a non-confidential
form.

I am therefore
opinion rather the Council
could see their way to publish the

Report at the early date.

s. ~~have to add that~~

so far ~~as this report is concerned~~

19A

11/19/1911

AGRICULTURE AND FORESTRY DEPARTMENT ADVISORY COMMITTEE 72

Colonial Office,
15 WINDING STREET,
S.W. 1.

11th Quarter 1911.

Copy to Orr (26)

2. The documentary information before the Committee was supplemented by personal testimony from Dr. J. B. Orr, Director of the Rowett Research Institute, who was good enough to attend the meeting at the Committee's request. Dr. Orr explained that scientific work on the animal industries of the Colonial Empire had hitherto been directed almost entirely to the eradication of disease, and little

attention

THE UNDER SECRETARY OF STATE,
COLONIAL OFFICE.

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CONFIDENTIAL.

M. R. / R. C. / 606
(1931/32)

As regards (ii), the Secretary of the Economic Advisory Council has advised that the Secretary of the Department of Agriculture for Scotland should confer with the Empire Marketing Board. In the attached letter dated the 2nd November 1932, the Secretary of the Department of Agriculture for Scotland has applied to the Committee for a grant from the Colonial Development Fund for the maintenance of the farm at Naivasha in Kenya. This need not, therefore, be considered by the Research Grants Committee.

As regards (iii), the Economic Advisory Council recommend that the Department of Agriculture for Scotland should confer with the Empire Marketing Board. In the attached letter dated the 2nd November 1932, from the Department of Agriculture for Scotland application is made for a grant from the Empire Marketing Fund for continuing the Carrochoran Farm. The estimate is as follows:-

Salaries.....	£1,070
Superannuation.....	£ 105
Travelling Expenses, etc.....	£ 235
Total	<u>£1,410</u>

The Economic Advisory Council recommend a grant for three years but the application from the Department of Agriculture for Scotland is for a grant for 1932/3 only.

E.M.A.L.

6/2/16.

As regards (ii), the Economic Advisory Council with the Secretary of the Colonial Office, advised that it is probable that a grant from the Colonial Development Fund for the purchase of the land at Nairobi in Kenya. This need not, therefore, be considered by the Research Grants Committee.

As regards (iii), the Economic Advisory Council recommend that the Department of Agriculture for Scotland should confer with the Empire Marketing Board. In the attached letter dated the 2nd November from the Department of Agriculture for Scotland application is made for a grant from the Empire Marketing Fund for continuing the Carboran Farm. The estimate is as follows:-

Salaries.....	£1,070
Superannuation.....	£ 100
Travelling Expenses, etc.....	£ 132
Total.....	<u>£1,302</u>

The Economic Advisory Council recommend a grant for three years but the application from the Department of Agriculture for Scotland is for a grant for 1932/3 only.

E.M.C.L.

9/2/36.

Printed for the Economic Advisory Council October 1931

CONFIDENTIAL

Copy No. 155

Annual Report

Annual Report

Annual Report

2, Whitehall Gardens, S W 1
October 1, 1931.

Printed for the Economic Advisory Council October 1931

CONFIDENTIAL

Copy No. 155

seventh Report

2, Whitehall Gardens, S W 1.
October 1, 1931.

SEVENTH REPORT.

I.—INTRODUCTORY.

(A) Composition and Terms of Reference.

The Committee was constituted on the 23rd July, 1925 (C.R. (C.) 6) covering a memorandum giving the substance of the scientific results achieved up till that time and containing a short questionnaire indicating the lines on which further information was required. On our recommendation, this questionnaire was communicated through the Departments concerned to the Government of India, the Dominion and Colonial Governments and the Government of the Anglo-Egyptian Sudan.

Members of the Committee:—

Mr. J. B. Orr, D.S.O., M.C., Director, Rowett Research Institute, Aberdeen.

Dr. A. T. Stanton, C.M.G., Chief Medical Adviser to the Secretary of State for the Colonies.

Mr. F. A. Stockdale, C.B.E., Agricultural Adviser to the Secretary of State for the Colonies.

Mr. C. L. Stocks, Assistant Secretary, Treasury.

Mr. A. F. Hemming, C.B.E., Joint Secretary, Economic Advisory Council, Secretary to the Committee.

Dr. J. B. Orr, D.S.O., M.C., Director, Rowett Research Institute, Aberdeen.

Dr. A. T. Stanton, C.M.G., Chief Medical Adviser to the Secretary of State for the Colonies.

Mr. F. A. Stockdale, C.B.E., Agricultural Adviser to the Secretary of State for the Colonies.

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Mr. C. L. Stocks, Assistant Secretary, Treasury.

Mr. A. F. Hemming, C.B.E., Joint Secretary, Economic Advisory Council, Secretary to the Committee.

(b) History of the Investigations.

3. In September 1925 we presented a first Interim Report (C.R. (C.) 6) covering a memorandum giving the substance of the scientific results achieved up till that time and containing a short questionnaire indicating the lines on which further information was required. On our recommendation, this questionnaire was communicated through the Departments concerned to the Government of India, the Dominion and Colonial Governments and the Government of the Anglo-Egyptian Sudan.

*NOTE.—By Treasury Minute dated January 27, 1926, the Committee of Civil Research was absorbed in the Economic Advisory Council, of which this Sub-Committee became a Committee.

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Details of Grants Recommended.	

SEVENTH REPORT.

I. INTRODUCTORY.

(a) Origin and Terms of Reference.

At a meeting held on 27 July, 1923 (C.R. and Meeting-
... ..) the Committee decided to appoint a

... .. of Natural

... .. Treasury

... .. Professor of

... .. Secretary.

... .. Secretary for

... .. Scientific Adviser,

... .. Head Investigator

... .. of the Department of

... .. Secretary

... .. Professor of Physiology,
Aberdeen University.

Mr. R. E. Montgomery, M.B., V.S., Adviser on Animal Health
to the Secretary of State for the Colonies.

Sir Thomas Middleton, K.C.L.E., K.B.E., C.B., Vice-Chairman,
Development Commission.

Dr. J. B. Orr, D.S.O., M.C., Director Rowett Research Institute,
Aberdeen.

Dr. A. T. Stanton, C.M.G., Chief Medical Adviser to the
Secretary of State for the Colonies.

Mr. F. A. Stockdale, C.B.E., Agricultural Adviser to the
Secretary of State for the Colonies.

Mr. C. L. Stocks, Assistant Secretary Treasury.

Mr. A. P. Hemming, C.B.E., Joint Secretary Economic
Advisory Council, Secretary to the Committee.

(b) History of the Investigations.

5. In September 1925 we presented a first Interim Report
(C.R. (C.) 6) covering a memorandum giving the substance of the
scientific results achieved up till that time and containing a short
questionnaire indicating the lines on which further information was
required. On our recommendation, this questionnaire was communi-
cated through the Departments concerned to the Government of
India, the Dominion and Colonial Governments and the Government
of the Anglo-Egyptian Sudan.

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III.—The Department of the Investigations	31
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(a) Conclusions	42
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Appendix—
Details of Grants Recommended.

4. In March 1926 we were in a position to consider the replies received to the questionnaire, and we had before us also a report by Dr. J. B. Orr (a member of our Committee), Director of the Rowett Research Institute, who had recently returned from a visit to South Africa and Kenya. The information contained in these communications showed that the subject was one of great economic importance. It also indicated that considerable progress had been made, particularly within a relatively short time, in the study of the practical value of the various methods of feeding.

It was also pointed out that the results of the investigations carried out in the United Kingdom, which had been reported in our First Report, were of considerable interest, and that the information obtained from the work in Kenya would be of great value in the interpretation of the results of the work in the United Kingdom. We recommended that the Government should continue to support the work in Kenya, and that the results of the investigations should be made available to the public.

5. In our Second Report we recommended that the Government should continue to support the work in Kenya, and that the results of the investigations should be made available to the public. We also recommended that the Government should continue to support the work in the United Kingdom, and that the results of the investigations should be made available to the public.

6. In our Third Report we recommended that the Government should continue to support the work in Kenya, and that the results of the investigations should be made available to the public. We also recommended that the Government should continue to support the work in the United Kingdom, and that the results of the investigations should be made available to the public.

6. In October 1928 we submitted a Fourth Report (C.R. (C.) 49), in which we reported that, in order to mark the interest of Kenya in this work, the Governor had offered to hand over to the Rowett Research Institute, Aberdeen, part of the Government farm at Naivasha, comprising approximately 4,000 acres and valued at approximately £25,000, and to make a contribution of £5,000 for the purchase of stock and other accessories. We recommended that this generous offer should be accepted; and that the investigations should be continued for another period of three years as from November 1928 and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far secured by feeding to animals small amounts of substances contained in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £11,000 and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

7. In July 1929 we submitted, for the information of the Committee of the Rowett Research, a Fifth Report (C.R. (C.) 40), in which we reviewed the progress made during the previous twelve months and recommended that, for the purpose of maintaining the existing whole-hearted co-operation between research workers in Kenya and the Kenya Agricultural and Veterinary Departments, arrangements should be made for the appointment in Kenya of a representative local committee under the chairmanship of the Director of Agriculture.

8. In November 1929 we submitted for the consideration of the Economic Advisory Council a detailed report written by Dr. J. B. Orr in association with Mr. Alexander Hain, C.B.E.,

Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberdeen, to be furnished with additional copies for distribution to suitable workers in this field.

9. In our Sixth Report we recommended that the Government should continue to support the work in Kenya, and that the results of the investigations should be made available to the public. We also recommended that the Government should continue to support the work in the United Kingdom, and that the results of the investigations should be made available to the public.

10. In our Seventh Report we recommended that the Government should continue to support the work in Kenya, and that the results of the investigations should be made available to the public. We also recommended that the Government should continue to support the work in the United Kingdom, and that the results of the investigations should be made available to the public.

11. The general control of, and the financial responsibility for, the research work has continued to rest with the Director of the Rowett Research Institute, but the actual work in Kenya has been carried out under the immediate general supervision of a local Committee under the chairmanship of the Director of Agriculture, which has been constituted in accordance with the recommendations contained in our Fifth Report (see paragraph 9 above). In addition, authority has been given to the Director of Agriculture to publish in Kenya the results of such tests carried out at the Naivasha station as he considered of special local interest. Several such reports have already been published.

(b) The Work in Scotland.

(i) The Garrochoran Sheep Station.

12. In accordance with the recommendation contained in our Fourth Report (see paragraph 8 above), arrangements were made in 1929 for the purchase of a sheep farm at Garrochoran, in Argyllshire,

4. In March 1926 we were in a position to consider the replies received to the questionnaire, and we had before us also a report by Dr. J. B. Orr (a member of our Committee), Director of the Rowett Research Institute, who had recently returned from a visit to South Africa and Kenya. The information contained in these communications showed that the subject was one of great economic importance. It also indicated that co-ordinated research effort would be most likely, within a relatively short time, to yield results of great practical value to the animal husbandry industry in Kenya.

5. In April 1926 we submitted a First Report (C.R. (C.) 1) to the Committee of the Government of Kenya, which had been brought into existence by the Government of Kenya in order to investigate the conditions of the industry in Kenya. We recommended that the investigations should be carried out in whatever way the Government might see fit, with a view to ascertaining the conditions of the industry and the extent to which the Government should be concerned in the industry. We recommended that the Government should be asked to secure a grant of £10,000 for the purpose of carrying out the investigations.

6. The Report was approved at the meeting held on the 21st of April 1926 (Conclusion B). A grant of £10,000 was approved by the Empire Marketing Board.

7. The Imperial Milk Producers' Association in Kenya on August 1926 had previously proposed a grant of £10,000 for the purpose of carrying out the investigations. An interim report showing the results of the investigations carried out in Scotland. The results of the investigations carried out in Scotland in November 1926 we submitted a Second Report (C.R. (C.) 2) to the Committee of the Government of Kenya, in which we recommended that the investigations should be continued for a period of three years for which they had been approved. We recommended that the expenditure did not exceed the sum approved by the Empire Marketing Board.

8. In October 1928 we submitted a Fourth Report (C.R. (C.) 4), in which we reported that, in order to carry the interest of Kenya in this work, the Government had offered to hand over to the Rowett Research Institute, Aberdeen, part of the Government farm at Naivasha, consisting approximately of 4,000 acres and valued at approximately £25,000, and to make a contribution of £5,000 for the purchase of stock and other accessories. We recommended that this generous offer should be accepted, and that the investigations should be continued for another period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far obtained by feeding to animals small amounts of substances obtained in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

9. In July 1929 we submitted for the information of the Committee of the Government of Kenya, a Fifth Report (C.R. (C.) 5), in which we reviewed the progress made during the previous twelve months and recommended that for the purpose of maintaining the existing wide-hearted co-operation between research workers in Kenya and the Kenya Agricultural and Veterinary Departments, arrangements should be made for the appointment in Kenya of a representative local committee under the chairmanship of the Director of Agriculture.

10. In November 1929 we submitted for the consideration of the Economic Advisory Council a detailed report written by Dr. J. B. Orr in association with Mr. Alexander Hain, C.B.E.,

Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberdeen, to be furnished with additional copies for distribution to scientific workers in this field.

11. In our Sixth Report (C.R. (C.) 6) we reported that the results of the investigations carried out in Scotland in November 1928 we submitted a Sixth Report (C.R. (C.) 6) to the Committee of the Government of Kenya, in which we recommended that the investigations should be continued for a period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far obtained by feeding to animals small amounts of substances obtained in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

12. In our Seventh Report (C.R. (C.) 7) we reported that the results of the investigations carried out in Scotland in November 1928 we submitted a Seventh Report (C.R. (C.) 7) to the Committee of the Government of Kenya, in which we recommended that the investigations should be continued for a period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far obtained by feeding to animals small amounts of substances obtained in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

13. In our Eighth Report (C.R. (C.) 8) we reported that the results of the investigations carried out in Scotland in November 1928 we submitted an Eighth Report (C.R. (C.) 8) to the Committee of the Government of Kenya, in which we recommended that the investigations should be continued for a period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far obtained by feeding to animals small amounts of substances obtained in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

14. The general control of, and the financial responsibility for, the research work has continued to rest with the Director of the Rowett Research Institute, but the actual work in Kenya has been carried out under the immediate general supervision of a local Committee under the chairmanship of the Director of Agriculture, which has been constituted in accordance with the recommendations contained in our Fifth Report (see paragraph 9 above). In addition, authority has been given to the Director of Agriculture to publish in Kenya the results of such tests carried out at the Naivasha station as he considered of special local interest. Several such reports have already been published.

15. In accordance with the recommendation contained in our Fourth Report (see paragraph 8 above), arrangements were made in 1929 for the purchase of a sheep farm at Garrochoran, in Argyllshire, Scotland, for the purpose of carrying out the investigations recommended in our Fourth Report. The farm was purchased for the sum of £10,000, and the purchase was approved by the Empire Marketing Board. The farm is situated in the parish of Garrochoran, in the county of Argyll, and consists of approximately 1,000 acres of land, including a large area of moorland. The farm is well equipped with stock and implements, and the present value of the stock and equipment likely to be required from time to time in connection with the experimental work. Further, the present value of the animals, implements and foodstuffs now on the farm exceeds the amount originally spent thereon. Failing, therefore, some disaster, such as an epidemic carrying off a large part of the stock, it may be confidently hoped that, if arrangements can be made for the payment from other funds of the salaries of the two workers, it will be possible in all other respects to maintain the station on a self-supporting basis.

(b) The Work in Scotland.

(i) The Garrochoran Sheep Station.

15. In accordance with the recommendation contained in our Fourth Report (see paragraph 8 above), arrangements were made in 1929 for the purchase of a sheep farm at Garrochoran, in Argyllshire,

with the existing stock of sheep for the purpose of studying the results of feeding to animals small amounts of substance deficient in the pastures on which they normally feed. In order to make the farm suitable for experimental work, a number of additional fences were erected and the farm was divided into four sections.

19. In the present experiment the level of serum calcium and inorganic phosphorus in the blood of sheep on the best and on the poorest pastures was determined. The calcium level in the blood of sheep on the best pasture was 11.5 (mg. per 100 c.c.) in October and 6 in May. This was accompanied by a less marked decrease in inorganic phosphorus of from 5.0 to 4.4. Hemocytological examination showed that there appeared to be a progressive anemia from October to May. Serological tests showed changes in certain immunological reactions which were roughly parallel with the clinical findings and the calcium level of the blood.

20. In the winter of 1930-31 it was found that feeding of maize reduced the loss in weight, but did not materially affect the drop in serum calcium. The feeding of a calcium salt and cod liver oil tended to maintain the serum calcium at a higher level, and also to some extent tended to prevent the loss in weight.

(iii) Work at the Rowett Research Institute, Aberdeen.

20. In the same period experiments were carried out at the Rowett Research Institute, Aberdeen, with groups of sheep under experimental conditions. These were fed on a ration of a composition chemically similar to that of the pastures at Garrochran during the winter months. It was found that the animals on this ration developed symptoms similar to those noted in the sheep at Garrochran in the spring. The addition of calcium salts to the ration was associated with maintenance of health and vigour; the addition of cod liver oil with maintenance of health and with growth; the addition of protein accentuated the signs of malnutrition and led to the appearance of bony deformities. The following table shows the

influence of these on the calcium and phosphorus level of the blood:—

Blood Calcium and Inorganic Phosphorus.

Mgms. per 100 cc.

	Calcium.	Phosphorus.
Pre-experimental level in all groups (app.)	11.5	5.0
Basal	7.06	10.53
Basal + protein	6.46	11.82
Basal + calcium	9.90	6.84
Basal + C.L.O.	10.09	7.29
Basal + protein + calcium	8.60	7.68
Basal + protein + C.L.O.	9.85	7.76
Basal + calcium + C.L.O.	9.68	6.73
Basal + protein + calcium + C.L.O.	9.54	6.83

21. The serological tests showed a general parallelism between certain immunological reactions and the calcium level of the blood. It is interesting in this connection to observe that, in so far as they cover the same ground, these observations on sheep confirm those made in connection with the Nikiyu trials described in the report prepared by Dr. Orr in conjunction with Dr. Gilks, the Director of Medical and Sanitary Services, Kenya, on the Physique and Health of Two African Tribes, submitted with the Ninth Report of the Committee on Distastes of the Economic Advisory Council (United Paper E.A.C. 10) 63).

22. This work can at present only be regarded as being in the preliminary stages, but from the indications so far obtained there are grounds for thinking that it may be possible to correlate certain deficiencies in the diet with changes in the chemical composition of the blood and with measurable changes in certain immunological reactions. By the end of the present year it is hoped that sufficient data will have been collected to show whether these changes can be correlated with the mortality rate.

(a) Subsidiary Investigations.

(i) Availability of Mineral-Poor Pastures.

23. At the suggestion of the late Professor T. B. Wood, F.R.S., who was a member of our Committee, a supplementary investigation was carried out to ascertain whether in natural grassings, low in minerals, the nutritive value of the herbage was affected by their palatability or digestibility. It was thought that the malnutrition noted might be due, in part, to these factors. This work which, on our recommendation, was carried out at Cambridge, has now been completed and the results published (Journal of Agricultural Science, 1931 XX, 614). These show that malnutrition on pastures of sub-normal mineral content is due directly to failure of the diet to supply the necessary inorganic nutrients for constructional purposes.

(ii) Effect of Diet on Wool.

24. In the course of the experimental work described in the preceding paragraphs, observations were taken on the influence of diet on the growth of wool. This work was carried out in co-operation with the Wool Industries Research Association at Leeds, and the most striking result obtained was the marked increase that was found in the weight of the fleece when a protein-rich concentrate was added to a diet of composition similar to the winter hill pastures in Scotland. It was found, however, that as the weight increased the quality became coarser.

with the existing stock of sheep for the purpose of studying the results of feeding to animals small amounts of substance deficient in the pastures on which they normally feed. In order to make the farm suitable for experimental work, a number of additional fences were erected and the farm was divided into four sections.

The first biochemical examination of the blood of the experimental flock was the fall in the level of serum calcium from 11.8 (mg. per 100 c.c.) in October to 6 in May. This was accompanied by a less marked decrease in inorganic phosphorus of from 5.9 to 4.4. Haemocytological examination showed that there appeared to be a progressive anemia from October to May. Serological tests showed changes in certain immunological reactions which were roughly parallel with the clinical findings and the calcium level of the blood.

19. In the winter of 1930-31 it was found that feeding of maize reduced the loss in weight, but did not materially affect the drop in serum calcium. The feeding of a calcium salt and cod liver oil tended to maintain the serum calcium at a higher level, and also to some extent tended to prevent the loss in weight.

(ii) Work at the Rowett Research Institute, Aberdeen.

20. In the same period experiments were carried out at the Rowett Research Institute, Aberdeen, with groups of sheep under experimental conditions. These were fed on a ration of a composition chemically similar to that of the pastures at Garrochmore during the winter months. It was found that the animals on this ration developed symptoms similar to those noted in the sheep at Garrochmore in the spring. The addition of calcium salts to the ration was associated with maintenance of health and vigour; the addition of cod liver oil with maintenance of health and with growth; the addition of protein accentuated the signs of malnutrition and led to the appearance of bony deformities. The following table shows the

influence of these on the calcium and phosphorus level of the blood:—

Blood Calcium and Inorganic Phosphorus.

	Mgms. per 100 cc.	
	Calcium	Phosphorus
Pre-experimental level in all groups (S.P.)	11.5	5.0
Basal	7.06	10.53
Basal + protein	6.46	11.53
Basal + calcium	9.00	6.84
Basal + C.L.O.	10.00	7.29
Basal + protein + calcium	8.50	7.68
Basal + protein + C.L.O.	9.85	7.78
Basal + calcium + C.L.O.	9.44	6.79
Basal + protein + calcium + C.L.O.	9.44	6.23

21. The serological tests showed a general parallelism between certain immunological reactions and the calcium level of the blood. It is interesting in this connection to observe that, by so far as they cover the same ground, these observations on sheep confirm those made in connection with the Kikuyu trials described in the report prepared by Dr. Orr in conjunction with Dr. Gilby, the Director of Medical and Sanitary Services, Kenya, on the Physics and Health of Two African Tribes, submitted with the Sixth Report of the Committee on Dietetics of the Economic Advisory Council (Council Paper P.A.C. (C) 62).

22. This work can at present only be regarded as being in its preliminary stages. But from the indications so far obtained there are grounds for thinking that it may be possible to correlate certain deficiencies in the diet with changes in the chemical composition of the blood and with measurable changes in certain immunological reactions. By the end of the present year we anticipate that sufficient data will have been collected to show whether these changes can be correlated with the mortality rate.

(c) Subsidiary Investigations.

(i) Availability of Mineral Poor Pastures.

23. At the suggestion of the late Professor T. B. Wood, F.R.S., who was a member of our Committee, a supplementary investigation was carried out to ascertain whether in natural grasses, low in minerals, the nutritive value of the herbage was affected by their palatability or digestibility. It was thought that the malnutrition noted might be due, in part, to these factors. This work which, on our recommendation, was carried out at Cambridge, has now been completed and the results published (Journal of Agricultural Science, 1931, 11, 616). These show that malnutrition on pasturage of subnormal mineral content is due directly to failure of the diet to supply the necessary inorganic nutrients for experimental purposes.

(ii) Effect of Diet on Weight.

24. In the course of the experimental work described in the preceding paragraphs, observations were taken on the influence of diet on the growth of wool. This work was carried out in cooperation with the Wool Industries Research Association at Leeds, and the most striking result obtained was the marked increase that was found in the weight of the fleece when a protein-rich concentrate was added to a diet of composition similar to the winter hill pastures in Scotland. It was found, however, that as the weight increased the quality became poorer.

III—THE DEVELOPMENT OF THE INVESTIGATIONS.

25. On scientific grounds we attach great importance to these investigations, and we regard it as of a high degree desirable that arrangements should, if possible, be made for their continuance. We

the application of the results obtained in the past investigations undertaken in accordance with the recommendations contained in our earlier reports.

- (b) Practical feeding experiments with cattle, sheep and pigs to test the applicability to Tropical conditions of the intensive methods of feeding and management of farm animals.
- (c) Experiments to determine the rates of growth and production which may be obtained from selected native cattle and sheep when placed under the best conditions of management and feeding.

In addition, we recommend that the animals at the station should be made available for investigations by the Veterinary Research Division in Kenya on local diseases thought to be the result of malnutrition provided that any net additional expenditure so incurred is defrayed by the Kenya Government.

(b) The Work in Scotland.

28. During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. This is in accordance with the original purpose for which this research was planned. When the investigation was undertaken, on our recommendation, into the mineral deficiencies of natural pastures in Kenya and when the survey of diet and disease in two African tribes was planned by the Dietetics Committee of the Economic Advisory Council, with which throughout we have worked in the closest contact, the chief interest did not lie in the one case in the pastures *per se* or in the other in the actual diet of the natives; but rather in the influence of food on the health of animals and human beings in the ordinary dietary conditions obtaining in the districts where the investigations were carried out.

29. We are satisfied that the scientific results of these investigations warrant the continuation of the inquiry on the connection between food and immunity from disease. The special organisation which has been evolved in accordance with recommendations contained in our successive Reports contains the following features of special value for the study of this subject:—

(a) The farm of Garrochoran has about 500 animals living in their natural habitat and continuously suffering throughout a part of the year from the results of an inadequate diet. The animals are kept under almost as close supervision as experimental animals in a laboratory, and with such large samples of blood can be obtained as to allow of a wide range of clinical and pathological tests making them more useful for the study of the fundamental problems of diet and immunity than any other small laboratory animals.

(b) The staff engaged in the research include agricultural and veterinary research workers who are of a high standard of scientific interest in these three

branches of inquiry, the main importance of which is to be found in the light that it throws on the problem of the influence of diet on the incidence of disease in animals. The results obtained have been of considerable practical bearing on sheep husbandry in other parts of the Empire where the sheep are grazed on natural pastures. In Scotland, the sheep which are grazed on natural pastures which are not so heavily laden with manure as those in the pastures of the Garrochoran farm have shown a progressive decline in the number of lambs born, less than in 1930. In 1931 the number of lambs born had fallen to a level which has not been reached since 1926. The results of the investigation have been of such interest in that the results of the feeding trial at Garrochoran, where the grazing is typical of the hill areas of Scotland, show that the feeding in sheep of the natural pastures found to be deficient in winter in the natural pastures has increased the fertility of the ewes by about 15 per cent, and has decreased the mortality rate by over 45 per cent. In addition, the increase in the market value of the cast ewes and male lambs from the experimental lots which received the supplementary feeding as compared with that of those in the control lots which did not, was sufficient to defray the cost of the material used in these experiments. Arrangements have been made to carry out, with the help of funds supplied from a private source, a further test with 800 sheep under conditions free from the complications resulting from the frequent handling of sheep for blood-drawing, clinical examinations and weighing. If this test confirms the experiment already carried out, the Garrochoran farm will have succeeded in obtaining at a very small cost a scientific result of considerable and immediate economic importance for the whole of the black faced sheep industry in Scotland.

30. For these reasons we are strongly of opinion that on scientific and practical grounds it is highly desirable that the work should be continued for a further period. The investigation should, in the main, be directed to problems of nutrition in relation to immunity and should be carried out on the lines indicated in the preceding section (Section II), and of such other lines as may appear profitable as the work proceeds. A portion of the farm at Garrochoran will, however, be available for the application to local conditions of results obtained in the pastures investigations in Kenya.

31. Professor J. R. Macleod, F.R.S., of Aberdeen University, one of our members, would be available to continue the special assistance and guidance which he has rendered in connection with the work on blood chemistry. Further, Professor T. J. Mackie, of Edinburgh University, would be available to give continued help in connection with serological work, and Professor H. G. Stapledon, of

Aberystwyth, in connection with work on pastures. We contemplate that, as in the past, the Rowett Research Institute at Aberdeen and the Nutrition Institute at Cambridge would continue to be available for the investigation of any class of problems on the nutrition of sheep and the composition and digestibility of pastures.

96. As regards the Garrochoran sheep farm, we estimate that if the investigations are reduced to the minimum the expenditure involved would amount to the sum of £2,080 per annum apart from part-time services of some of the senior staff of the Rowett Research Institute. Particulars are given in Appendix I (b).

97. Of this sum, we hope that with the approval of the Department of Agriculture for Scotland, it may be possible to arrange for the salary of a bio-chemist and the expenses of chemical and other laboratory work, to be borne by the Rowett Research Institute out of its ordinary revenue, and for certain other expenses connected with the feeding of experimental animals to be debited to the account of the Sheep Department of the Duthie Experimental Stock Farm, which in the past two years has shown a profit sufficient to carry this burden. The transfer of these expenses to the Rowett Research Institute and the Duthie Experimental Stock Farm would reduce the net sum required from other sources to maintain the station to the sum of £1,500 per annum.

98. Existing funds are sufficient to enable both the Kenya and Garrochoran stations to be maintained until the 31st March, 1932, but if the work at these stations is to be continued the sums indicated above will be required from that date.

99. As regards the provision of those funds, we recommend—

- (a) That the Secretary of State for the Colonies should be invited to endeavour to secure the continuance of the Naivasha Station either—
 - (i) by inviting the Empire Marketing Board to make a further grant at the reduced rate of £1,500 per annum for a period of three years; or
 - (ii) by inviting the Advisory Committee of the Colonial Development Fund to make a grant of a like sum.

(b) That, as regards the financing of the work in Scotland (estimated at £1,500 per annum), the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(b) Administrative.

100. It is the responsibility of the Executive Committee of the Rowett Research Institute to arrange for the financing of the work in Scotland.

(c) Conclusions.

(i) On scientific grounds we attach great importance to the investigations both in Kenya and in Scotland, and we regard it as in a high degree desirable that arrangements should, if possible, be made for their continuance.

(ii) The Station at Naivasha constitutes, in effect, a Research Station of Animal Nutrition, the only one of its kind in any part of the Tropics. Through the generosity of Kenya in providing the farm and a grant of £5,000 with which to stock and equip it, it has been possible to establish this Station at a very small charge. If, through lack of funds, it was found necessary to close this Station, it would be a great misfortune to Colonial Administrations in Africa which are confronted with many pressing problems of nutrition in relation both to their native populations and to the cattle on which they depend for their livelihood.

(iii) During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. If the test which we recommend confirms the experiment already carried out, the results of the first year's test at Garrochoran, which is typical of much of the grazings in the Western Highlands of Scotland, indicate that the feeding of sheep of substances found to be deficient in the natural pastures in winter has increased the fertility of the ewes by about 15 per cent. and has decreased the mortality rate by over 25 per cent., and, in addition, has increased the market value of the animals sold.

Aberystwyth, in connection with work on pastures. We contemplate that, as in the past, the Rowett Research Institute at Aberdeen and the Nutrition Institute at Cambridge would continue to be available for the investigation of any arising problems on the nutrition of sheep and the composition and digestibility of pastures.

Government of Kenya
Department of Agriculture and Veterinary Services

85. In regions the Government sheep farms, Scotland, and if the investigations are reduced to the minimum, the expenditure involved would amount to the sum of £3,000 per annum apart from part-time services of some of the senior staff of the Rowett Research Institute. Particulars are given in Appendix I (b).

87. Of this sum, we hope that with the approval of the Department of Agriculture for Scotland, it may be possible to arrange for the salary of a bio-chemist and the expenses of chemical and other laboratory work, to be borne by the Rowett Research Institute out of its ordinary revenue, and for certain other expenses connected with the feeding of experimental animals to be debited to the account of the Sheep Department of the Duthie Experimental Stock Farm, which in the past two years has shown a profit sufficient to carry this burden. The transfer of these expenses to the Rowett Research Institute and the Duthie Experimental Stock Farm would reduce the net sum required from other sources to maintain the station to the sum of £1,500 per annum.

88. Existing funds are sufficient to enable both the Kenya and Garrochoran stations to be maintained until the 31st March, 1952, but if the work at these stations is to be continued the sums indicated above will be required from that date.

89. As regards the provision of those funds, we recommend:—

- (a) That the Secretary of State for the Colonies should be invited to endeavour to secure the continuance of the Naivasha Station either—
- (i) by inviting the Empire Marketing Board to make a further grant at the reduced rate of £1,500 per annum for a period of three years; or
 - (ii) by inviting the Advisory Committee of the Colonial Development Fund to make a grant of a like sum.

(b) That, as regards the financing of the work in Scotland (estimated at £1,500 per annum), the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(b) Administrative.

10. Higher to the executive control of and financial responsibility for the Station in Kenya has rested with the Rowett Research Institute, which is controlled by a local Committee of the Station, which is composed of the following members:—

GOVERNMENT OF KENYA
DEPARTMENT OF AGRICULTURE AND VETERINARY SERVICES
(a) Conclusions

12. We summarise our principal conclusions as follows:—

- (I) On scientific grounds we attach great importance to the investigations both in Kenya and in Scotland, and we regard it as in a high degree desirable that arrangements should, if possible, be made for their continuance.
- (II) The Station at Naivasha constitutes, in effect, a Research Station of Animal Nutrition, the only one of its kind in any part of the Tropics. Through the generosity of Kenya in providing the farm and a grant of £8,000 with which to stock and equip it, it has been possible to establish this Station at a very small charge. If, through lack of funds, it was found necessary to close this Station, it would be a great misfortune to Colonial Administrations in Africa which are confronted with many pressing problems of nutrition in relation both to their native populations and to the cattle on which they depend for their livelihood.
- (III) During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. If the test which we recommend confirms the experiment already carried out, the results of the first year's test at Garrochoran, which is typical of much of the grazings in the Western Highlands of Scotland, indicate that the feeding to sheep of substances found to be deficient in the natural pastures in winter has increased the fertility of the ewes by about 18 per cent. and has decreased the mortality rate by over 28 per cent., and, in addition, has increased the market value of the animals sold.

(12) We realise that, in the circumstances of the present time, the provision of grants for the continuation even of highly promising lines of scientific research must be a matter of anxious consideration to grant-making bodies such as the Empire Marketing Board and the Advisory Committee of the Colonial Development Fund. While on scientific grants we are satisfied that the work at Nalvasha is of a high standard and of a type which is of interest to the United Kingdom, we are not in a position to recommend that the Government should make a grant to the Station.

(13) That, as regards the financing of the work in Scotland, the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(14) That any future grant for the continuation of the work at Nalvasha should be made direct to the Government of Kenya; and that there should be established in Kenya a separate fund into which such grants from the United Kingdom should be paid and also any receipts that may accrue from time to time from the sale of stock or otherwise on the farm, this fund to be used for the payment of the salaries of the two Rowett Research Institute workers engaged at Nalvasha, for the purchase from time to time of additional stock and equipment and for meeting all other expenses incidental to the work at this Station.

(Signed) WALTER E. ELLIOT, *Chairman.*

(Signed) A. F. HEMMING,
Secretary to the Committee.

2, Whitehall Gardens, S.W. 1,
October 1, 1951.

APPENDIX

DETAILS OF GRANTS RECOMMENDED

The Nalvasha Research Station, Kenya

Continued

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(iv) We realize that, in the circumstances of the present time, the provision of grants for the continuation even of highly promising lines of scientific research must be a matter of anxious consideration to grant-making bodies such as the Empire Marketing Board and the Advisory Committee of the Colonial Development Fund. While on certain occasions we are satisfied that the best grants available are of a type that has already been considered by the Board and the Committee, it is our duty to recommend that the Board and the Committee should be invited to consider the continuation of the work at Nanyasha.

(ii) by inviting the Advisory Committee of the Colonial Development Fund to fund a grant of £10,000.

(iii) That, as regards the financing of the work in Scotland, the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(iv) That any future grant for the continuation of the work at Nanyasha should be made direct to the Government of Kenya; and that there should be established in Kenya a separate fund into which such grants from the United Kingdom should be paid and also any receipts that may accrue from time to time from the sale of stock or otherwise on the farm, this fund to be used for the payment of the salaries of the two Rowett Research Institute workers engaged at Nanyasha, for the purchase from time to time of additional stock and equipment and for meeting all other expenses incidental to the work at this Station.

(Signed) WALTER E. ELLIOT, *Chairman.*

(Signed) A. F. HEMMING, *Secretary to the Committee.*

2, Whitehall Gardens, S.W. 1,
October 1, 1961.

APPENDIX.

DETAILS OF GRANTS RECOMMENDED.

(i) The Nanyasha Research Station, Kenya.

Ref. 63074/b.

EDINBURGH.

2nd December, 1931.

Posters - Panache

is contained in the Seventh
 Advisory Council (Council Paper
 No. 10) and the instructions regarding the
 proposed scheme for the Posters Research

Secretary to the Economic
 Committee of the Report and that
 of the Department the
 Committee in paragraph 41(1)(b)

center with the
 of the Department.

It is proposed that provision should be made in their
 accounts for 1932 for a grant from the Empire Marketing Fund on the basis
 recommended by the Committee, subject to a reduction in salaries in
 accordance with the general reductions made in the case of Civil Servants
 in receipt of inclusive salaries. The effect of this reduction is shown in
 the following statement:

	<u>Estimate as shown in Appendix A of Committee's Report.</u>	<u>Estimate on basis of reduced salaries as indicated above.</u>
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Salaries.

Mr. Fraser
Miss Anderson
Mr. Jamieson

Intercommutation. 100

Travelling Expenses, etc. 181

Total. £1,400 £1,421

It will be understood, of course, that the sum of £1,421 is proposed only for
 the purpose of making provision for the scheme in the 1932 Estimate and
 may be subject to adjustment after further discussion of the matter between
 the Departments concerned.

I am,

Sir,

Your obedient servant,

(Sgd.) Chas. Weatherill.

Secretary,
 Empire Marketing Board,
 2, Queen Anne's Gate Buildings,
 LONDON, S.W.1.

so severely affected

remote. It seems highly probable that the locust invasion which has ~~affected~~ the country during the current season will be repeated next year, ~~and~~ it is, of course, impossible to predict ~~the severity of the invasion~~ ^{whether in that case} ~~the~~ ~~invasion~~ ~~results~~ ~~will~~ ~~be~~ ~~equally~~ ~~severe~~ ~~as~~ ~~is~~ ~~anticipated~~ ~~by~~ ~~those~~ ~~qualified~~ ~~to~~ ~~judge~~ ~~all~~ ~~the~~ ~~crop~~ ~~of~~ ~~Kenya~~ ~~are~~ ~~devoured~~ ~~by~~ ~~locusts~~ ~~both~~ ~~revenue~~ ~~pendent~~ ~~being~~ ~~consequently~~ ~~lost~~ ~~to~~ ~~the~~ ~~country~~ ~~and~~ ~~the~~ ~~effect~~ ~~on~~ ~~revenue~~ ~~will~~ ~~be~~ ~~enormous~~ ~~and~~ ~~the~~ ~~country~~ ~~is~~ ~~so~~ ~~severely~~ ~~affected~~ ~~from~~ ~~this~~ ~~cause~~ ~~cannot~~ ~~be~~ ~~ignored~~ ~~by~~ ~~the~~ ~~Secretary~~ ~~of~~ ~~State~~ ~~Trusts~~, therefore, that the Committee

will agree that in the circumstances it would be unreasonable to expect the Kenya Government to make any contribution towards the present proposals.

3. A statement is attached showing the capital expenditure, maintenance costs and revenue on the farm at Naivasha since it was started in September 1929.

An approximate estimate is also appended of the revenue and

Handwritten notes at top of page, including a signature and illegible text.

and expenditure during the year 1911
(The amount of the total expenditure for the year 1911 is \$1,000,000)

continued on the following page

The Government of the United States

is required to

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MAVADA MILK FARM 1957

Statement of Expenses

1952 to 1957

Capital Expenditure

1. Buildings - Repairs, etc.
2. Livestock
3. Implements and equipment

Administrative Expenses

1. Salaries and Insurance of Research Workers	...	...	...	...
2. Travelling expenses of Research workers between Kenya and Scotland	...	...	...	100
3. Livestock	...	...	...	80
4. Feedstuffs	...	...	...	435
5. Native Labour	...	...	...	278
6. Freights and travelling expenses in Kenya	...	...	...	326
7. Sundries	...	...	...	171
				<hr/>
				£3,880
				<hr/>

REVENUE

Credits from sales of cream, pigs, wool, slaughter bullocks etc. ... £1,415

1.	Gasoline for transport	
2.	Insurance of equipment	
3.	Insurance of stock	
4.	Revolving of equipments	100
5.	Freight charges and travelling expenses in Kenya	500
6.	Feedstuffs	300
7.	Native labour	150
8.	Sundries	100
		<hr/>
		£2,100
		<hr/>

Estimate of Revenue in each of the next
three succeeding years.

At £75 per month £ 900

Estimate of Revenue

1.	Expenses for ...	
2.	Income of ...	
3.	Purchase of ...	
4.	Renewal of ...	
5.	Freight charges and travelling expenses ...	200
6.	Feedstuffs	300
7.	Native labour	150
8.	Sundries	100
		<hr/>
		£2,100
		<hr/>

Estimate of Revenue in each of the next three succeeding years.

At £75 per month £ 900

5. It is your wish that
the Report is at present Confidential;
I shall however, be prepared to consider
the ~~for~~ any request which you
may desire to put forward for
its being made ~~public~~ available
to the general public in Kenya

(SIGNED) J. I. THOMAS.

Note of a meeting in the Colonial Office on the 23rd October to consider the next steps to be taken regarding the report of the Economic Advisory Council's Committee on the Mineral Content of Natural Pastures.

Present:

- Mr. Freaston
 - Mr. Lloyd
 - Mr. Mildred
 - Mr. Dennington
 - Mr. Stockdale
 - Mr. Hibbert
 - Mr. Eastwood.
- (in the presence of the Secretary, Treasury, and the Director, Empire Marketing Board, Colonial Office.)

Consideration was confined to the proposals regarding the Malvanna ~~Land~~. It was agreed by all concerned that the proposals regarding Garrachoran could be treated as altogether separate.

The position was fully discussed and conclusions were as follows -

When the work of the mineral content of natural pastures was started five years ago, it was work of a purely scientific character carried on concurrently in five different countries, one of which was Kenya. That work had been largely financed by the Empire Marketing Board, but Kenya had made contribution towards the Kenya part of £5,000 and a farm free of rent.

The pure research work was now completed and it remained to apply the results to practical farming

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farming. Ideally the stage had now been reached at which the Local Governments or unofficial organisations themselves undertake this further work.

Arrangements had already been made for this to be done in the case of the work in New Zealand and Palestine.

In the case of Kenya it is quite impossible for them to incur fresh expenditure at present. Equally, it is quite impossible for the Secretary of State to ask other tropical African Governments who might benefit from the results to make any contribution.

If, therefore, money cannot be found from an imperial source, the work would have to stop. All were agreed that this would be a calamity, and it was noted that the Prime Minister had commended the recommendations of the Committee of the Economic Advisory Council to the favourable consideration of the Secretary of State.

Mr. Lloyd said that in the circumstances of the Empire Marketing Board had had the money they would probably have considered very favourably the making of a further grant. In present circumstances, however, the money simply was not available.

The Colonial Development Fund, however, still had the funds available and the project was of a type expressly mentioned in the Colonial Development Act. If a contribution were, in fact, made from the Colonial Development Fund this would not violate the principle that the Empire Marketing Board and the Colonial Development Fund should not both be used for the same project, ^{since} ~~it~~ already

stated.

73
stated, this project could be shown to be ~~an~~ ^a new project, i.e. for applying the knowledge resulting from the former scheme.

Mr. Skevington said that he was prepared to suspend judgment on the proposed ~~project~~ ^{project} that the Treasury were extremely anxious to avoid fresh commitments on the Imperial ~~Account~~ ^{Account} and that it was desirable ~~and~~ ^{and} be suggested, the ~~possibility~~ ^{possibility} of reducing the cost might be ~~considered~~ ^{considered}.

It was ~~agreed~~ ^{agreed} that the ~~project~~ ^{project} should be ~~discussed~~ ^{discussed} by the ~~Committee~~ ^{Committee} and that no approach should ~~be~~ ^{be} made to the ~~Board~~ ^{Board}, but that Mr. Stockdale should get in touch with Mr. Orr, in order to obtain from him further details regarding the possibility of economy and information regarding ^{the} accounts of the farm in the past.

(U.K.) After discussion with Dr. Orr, it might prove necessary to refer to the Government of Kenya, ~~but it was hoped in any case to be able to submit an application to the Development Committee at their meeting to be held at the beginning of December.~~

stated this project could be shown to be substantially a new project, i.e. for applying the knowledge resulting from the former scheme.

Mr. Skerington said that he was not prepared to suspend judgment on the proposal. He said that the Treasury were extremely anxious to avoid fresh commitments on the Imperial Trust which was desirable, and he suggested that the possibility of raising the cost might be considered.

It was decided to submit the proposal to the Board, but that Mr. Stockdale should get in touch with Dr. Orr, in order to obtain from him further details regarding the possibility of economy and information regarding accounts of the farm in the past.

(and after discussion with Dr. Orr it might prove necessary to refer to the Government of Kenya.) ~~but it was hoped in any case to be able to submit an application to the Development Committee at their meeting to be held at the beginning of December.~~

fin

Any further communication on this subject should be addressed to —

THE SECRETARY,
ECONOMIC ADVISORY COUNCIL,
2, WHITEHALL GARDENS, S.W. 1,
and the following number quoted.

ECONOMIC ADVISORY COUNCIL

2, WHITEHALL GARDENS,
LONDON, S.W. 1.

E.A.C./889 RECEIVED
14 OCT 1931
COL. OFFICE

13th October 1931.

131110556 (3) 1/2/33 9 2/2/33

Sir,

I am directed by the Economic Advisory Council to transmit herewith to be laid before Mr. Secretary Thomas a copy of the Report which they have received from their Committee on the Mineral Content of Natural Pastures (Council Paper E.A.C.(C) 69) containing recommendations regarding the future of the Nutrition Institute at Naivasha in Kenya.

The Prime Minister has approved this Report, and directs me in forwarding it to your Department to commend to the favourable consideration of the Secretary of State the recommendations submitted by the Committee as summarized in paragraphs 43 (iii) & (iv) of their report.

All copies of the report are being sent to the Secretary of State for his information.

Yours faithfully,

A F Hemmings

131110556 (3) 1/2/33 9 2/2/33

Printed for the Economic Advisory Council. October 1931.

Copy No. 10

ECONOMIC ADVISORY COUNCIL.

COMMITTEE ON THE MINERAL CONTENT OF
NATURAL PASTURES.

Seventh Report.

2 Whitehall Gardens, W. 1
October 1, 1931

In March 1929 we were in a position to consider the replies received in the questionnaire, and we had before us also a report by the Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberdeen, to be furnished with additional copies for distribution to selected workers in this field.

Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberdeen, to be furnished with additional copies for distribution to selected workers in this field.

As regards the farm at Naivasha made available for this work by the Government of Kenya (see paragraph 8 above), we were able to report that the farm was then in working order, the necessary repairs having been carried out and the stock bought. The financial position of the farm was satisfactory, those being for the first six months working a credit balance arising from the sale of milk, and, in addition, the stock obtained had not yet been sold. On the scientific side prospects were equally promising, as a large amount of work was reported to have been obtained.

II. PROGRESS OF THE INVESTIGATIONS.

(a) The Work in Kenya Colony.

In accordance with the report submitted to us by Dr. Orr, the work was reported to the farm at Naivasha as satisfactory. In the period under review results of the various working on different parts of the farm are being tested not only at Naivasha, but also in several other experimental areas. In this we reported that, as a result of this experimental work, further valuable knowledge has been obtained. In addition a large amount of practical experimental work has been carried on at the station in relation to such questions as milk production, calf-feeding and pigs.

The financial position of the station is also satisfactory. During the period under review the salaries of the two research workers have been met from the unexpended portion of the voted grant from the Empire Marketing Board for all other expenses at the station have been met from revenue, and in addition there remains a small surplus in hand available for the purchase of further stock and equipment likely to be required from time to time in connection with the experimental work. Further, the present value of the animals, implements and buildings now on the farm exceeds by a considerable margin the amount of the existing mortgage, which is an excellent assurance of a large part of the stock being so satisfactorily kept that if arrangements can be made for the payment from other funds of the balance of the mortgage it will be possible to allow other workers to make use of the station as a well-equipped farm.

The general nature of the work and the financial responsibility for the research work has remained as before, with the Director of the Research Institute, Aberdeen, but the actual work in Kenya has been carried out under the immediate personal supervision of a new committee under the Chairmanship of the Director of Agriculture, who has been constituted in accordance with the recommendations contained in our Fifth Report (see paragraph 8 above). In addition, authority has been given to the Director of Agriculture to publish as he sees fit the results of work carried out at the Naivasha station, as well as the results of special work referred to above, and reports have already been published.

(b) The Work in Eastland.

The Eastland Sheep Station.

In accordance with the recommendations contained in our Fourth Report (see paragraph 9 above) arrangements were made in 1928 for the purchase of a sheep farm at Eastland in Argylshire.

In October 1928 we submitted a Fourth Report (C.R. (C.) 32) in which we reported that, in order to mark the interest of Kenya in this work, the Governor had offered to hand over to the Rowett Research Institute, Aberdeen, part of the Government farm at Naivasha, consisting approximately of 4,000 acres and valued at approximately £25,000, and to make a contribution of £5,000 for the purchase of stock and other accessories. We recommended that this generous offer should be accepted; and that the investigations should be continued for another period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Eastland to demonstrate more fully the results so far secured by feeding to animals small amounts of substances deficient in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

In October 1928 we submitted a Fourth Report (C.R. (C.) 32) in which we reported that, in order to mark the interest of Kenya in this work, the Governor had offered to hand over to the Rowett Research Institute, Aberdeen, part of the Government farm at Naivasha, consisting approximately of 4,000 acres and valued at approximately £25,000, and to make a contribution of £5,000 for the purchase of stock and other accessories. We recommended that this generous offer should be accepted; and that the investigations should be continued for another period of three years as from November 1928, and should consist, in the main, of a series of three-year tests to be undertaken in Kenya and Eastland to demonstrate more fully the results so far secured by feeding to animals small amounts of substances deficient in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

In July 1929 we submitted, for the information of the Committee of Civil Research, a Fifth Report (C.R. (C.) 40), in which we reviewed the progress made during the previous twelve months and recommended that, for the purpose of maintaining the existing whole-hearted co-operation between research workers in Kenya and the Kenya Agricultural and Veterinary Departments, arrangements should be made for the appointment in Kenya of a representative local committee under the Chairmanship of the Director of Agriculture.

In November 1930 we submitted for the consideration of the Economic Advisory Council a detailed report written by Dr. J. B. Orr in association with Mr. Alexander Holm, C.B.E.

4. In March 1929 we were in a position to consider the replies received to the memorandum, and on 17.3.29 we also report by the Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberystwyth, to be furnished with additional copies for distribution to scientific workers in this field.

Director of Agriculture, Kenya, on the influence on Animal Health of Minerals in Diet as disclosed by the scientific work carried out in the previous five years. In accordance with our recommendations, this report was subsequently published by the Stationery Office and arrangements were made for the Bureau of Animal Nutrition, Aberystwyth, to be furnished with additional copies for distribution to scientific workers in this field.

11. As regards the farm at Naivasha made available for this purpose by the Government of Kenya (see paragraph 8 above), we were pleased to find that the farm was then in working order, the necessary arrangements having been carried out and the stock bought. The financial position of the farm was satisfactory, there being for the first six months working a credit balance arising from the sale of milk, and, in addition, the land obtained had not yet been sold. On the whole, the results were equally promising, as a large amount of scientific work had been obtained.

II. PROGRESS OF THE INVESTIGATIONS.

(a) The Work in Kenya Colony.

10. According to the report recently submitted to us by Dr. Orr, the work carried out on the farm at Naivasha remains satisfactory, the necessary arrangements having been made for the further working on improved pastures and the pastures are being treated as such at Naivasha, but some of the other reports are awaited. Dr. Orr is hopeful that a number of the reports will be further valuable material data may be obtained. In addition, a large amount of practical experimental work has been carried out at the station in relation to such questions as milk production, cell-tearing and pigs.

12. The financial position of the station is also satisfactory. During the period under review the salaries of the two research workers have been met from the unexpended portion of the current grant from the Empire Marketing Board, but all other expenses of the station have been met from revenue and in addition there remains a small surplus of funds available for the purchase of further stock and equipment which will be required from time to time in connection with the experimental work. Further, the present value of the animals, implements and fixtures on the farm exceeds the amount originally spent thereon. Further, therefore, some transfer need as an expedient, a large part of the current grant be confidently hoped that of any surplus, it will be available for the purchase of other stock of the nature of the two workers in the pastures and other reports on the station and the station is a well equipped station.

13. The general progress of the work is satisfactory, and the results of the research work has been reported to the Director of the Rowett Research Institute, but the work in Kenya has not yet been agreed upon under the immediate general supervision of a committee under the chairmanship of the Director of Agriculture, which has been constituted in accordance with the recommendations contained in our Fifth Report (see paragraph 8 above). In addition, authority has been given to the Director of Agriculture to publish in the monthly results of all tests carried out at the Naivasha station as the memorandum of special local interest. Reports and reports have already been published.

(b) The Work in Scotland.

14. (a) The Work in Sheep Station.

15. In accordance with the recommendations contained in our Fourth Report (see paragraph 8 above), arrangements were made in 1929 for the purchase of a sheep farm at Garrochhead, in Argyllshire.

7. In December 1927 we submitted to the Committee of Civil Research a Third Report (C.R. (C.) 26), in which we recommended that the investigations should be continued beyond the period of two years for which they had been authorised provided that the total expenditure did not exceed the sum approved by the Empire Marketing Board.

8. In October 1928 we submitted a Fourth Report (C.R. (C.) 32) in which we reported that, in order to mark the interest of Kenya in this work, the Governor had offered to hand over to the Rowett Research Institute, Aberdeen, part of the Government farm at Naivasha, consisting approximately of 4,000 acres and valued at approximately £25,000, and to make a contribution of £5,000 for the purchase of stock and other accessories. We recommended that this generous offer should be accepted, and that the investigations should be continued for another period of three years as from November 1928, and should consist, in the main, of a series of comparative tests to be undertaken in Kenya and Scotland to demonstrate more fully the results so far secured by feeding to animals small amounts of substances deficient in the pastures on which they feed. We estimated that the cost of these investigations would amount to approximately £15,000, and, on our recommendation, a grant of this amount was approved by the Empire Marketing Board.

9. In July 1929 we submitted, for the information of the Committee of Civil Research, a Fifth Report (C.R. (C.) 40), in which we reviewed the progress made during the previous twelve months and recommended that, for the purpose of maintaining the existing whole-hearted co-operation between research workers in Kenya and the Kenya Agricultural and Veterinary Departments, arrangements should be made for the appointment in Kenya of a representative local committee under the Chairmanship of the Director of Agriculture.

10. In November 1930 we submitted for the consideration of the Economic Advisory Council a detailed report written by Dr. J. B. Orr in association with Mr. Alexander Holm, C.B.E.,

with the existing stock of sheep for the purpose of studying the results of feeding to animals small amounts of substance deficient in the pasture...

influence of these on the calcium and phosphorus level of the blood:

The sheep which were kept on good pasture grazed, and the percentage of lambs born and reared is less than half.

18. In the Biochemical examination of the blood the most outstanding finding was the fall in the level of serum calcium from 11.5 (mg. per 100 c.c.) in October to 6 in May. This was accompanied by a less marked decrease in inorganic phosphorus of from 5.9 to 4.4. Haemocytological examination showed that there appeared to be a progressive anemia from October to May. Serological tests showed changes in certain immunological reactions which were roughly parallel with the clinical findings and the calcium level of the blood.

19. In the winter of 1930-31 it was found that feeding of maize reduced the loss in weight, but did not materially affect the drop in serum calcium. The feeding of a calcium salt and cod liver oil tended to maintain the serum calcium at a higher level, and also to some extent tended to prevent the loss in weight.

(iii) Work at the Rowett Research Institute, Aberdeen.

20. In the same period experiments were carried out at the Rowett Research Institute, Aberdeen, with groups of sheep under experimental conditions. These were fed on a ration of a composition chemically similar to that of the pastures at Garrochoran during the winter months. It was found that the animals on this ration developed symptoms similar to those noted in the sheep at Garrochoran in the spring. The addition of calcium salts to the ration was associated with maintenance of health and vigour; the addition of cod liver oil with maintenance of health and with growth; the addition of protein accentuated the signs of malnutrition and led to the appearance of bony deformities. The following table shows the

It is probable that the incidence of these diseases is correlated with the mortality rate. It is probable that the incidence of these diseases is correlated with the mortality rate. It is probable that the incidence of these diseases is correlated with the mortality rate.

(c) Subsidiary Investigations

1. Digestibility of Mineral Poor Pastures

23. At the suggestion of the late Professor J. B. Wood, F.R.S., who was a member of our Committee, a supplementary investigation was carried out to ascertain whether in natural grazings low in minerals, the nutritive value of the herbage was affected by their palatability or digestibility. It was thought that the malnutrition noted might be due in part to these factors. This work, which our recommendation was carried out at Cambridge, has now been completed and the results published *Journal of Agricultural Science*, 1930, XX, 614. These show that malnutrition on pastures of low normal mineral content is due directly to failure of the diet to supply the necessary inorganic nutrients for constructive purposes.

ii. Effect of Diet on Wool

24. In the course of the experimental work described in the preceding paragraphs, observations were taken on the influence of diet on the growth of wool. This work was carried out in co-operation with the Wool Industries Research Association at Leeds, and the most striking result obtained was the marked increase that was found in the weight of the fleece when a protein-rich concentrate was added to a diet of composition similar to the winter hill pastures in Scotland. It was found, however, that as the weight increased the quality became coarser.

III—THE DEVELOPMENT OF THE INVESTIGATIONS

25. On scientific grounds on which great improvements in arrangements should be made. In view of the fact that the reasons for the above findings are not yet known. We deal with this aspect of the problem in the present section which we consider first in the light of the work done in Kenya and in Kenya.

(a) The Work in Kenya

M. T. Young
providing the means
to work out the
results in Kenya
Instructions
Tropical
feeding
The application
to the
practical
to determine
which may be
obtained from
selected native
cattle and
feeding.

After careful consideration of the light of the reports which have been submitted to us by the various stations during the past period the main lines of work at the Nairobi station should be as follows—

- (1) The application under Tropical conditions of the results obtained in the pasture investigations undertaken in accordance with the recommendations contained in our earlier reports.
- (2) Practical feeding experiments with cattle, sheep and pigs to test the applicability to Tropical conditions of the intensive methods of feeding and management of farm animals.
- (3) Experiments to determine the rates of growth and production which may be obtained from selected native cattle and sheep when placed under the best conditions of management and feeding.

In addition we recommend that the animals at the station should be made available for investigations by the Veterinary Research Bureau in Kenya on local diseases thought to be the result of malnutrition provided that any additional expenditure so incurred is defrayed by the Kenya Government.

(b) The Work in Scotland

During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. This is in accordance with the original purpose for which this research was undertaken. When the investigation was undertaken, our recommendations, into the mineral deficiencies of natural pastures in Kenya and when the survey of diet and disease in two African tribes was planned by the Dietetics Committee of the Economic Advisory Council, with which throughout we have worked in the closest contact, the chief interest did not lie in the one case in the pasture per se or in the other in the actual diet of the animals, but rather in the influence of food on the health of animals and human beings in the ordinary dietary conditions obtaining in the districts where the investigations were carried out.

26. We are of the opinion that the scientific results of these investigations...

...in the hill area of Scotland, the results of the first year's test at Garrochoran, where the grazing is typical of the hill area of Scotland, show that the feeding to sheep of the chemical substances found to be deficient in winter in the natural pastures has increased the fertility of the ewes by about 15 per cent. and has decreased the mortality rate by over 25 per cent. In addition, the increase in the market value of the cast ewes and male lambs from the experimental lots which received the supplementary feeding as compared with that of those in the control lots which did not, was sufficient to defray the cost of the whole of the material used in these experiments. Arrangements have been made to carry out, with the help of funds supplied from a private source, a further test with 800 sheep under conditions free from the complications resulting from the frequent handling of sheep for blood-drawing, clinical examinations and weighing. If this test confirms the experiment already carried out, the Garrochoran farm will have succeeded in obtaining at a very small cost a scientific result of considerable and immediate economic importance for the whole of the black-faced sheep industry in Scotland.

27. For these reasons we are strongly of opinion that on scientific and practical grounds it is highly desirable that the work should be continued for a further period. The investigation should, in the main, be directed to problems of nutrition in relation to immunity and should be carried out on the lines indicated in the preceding section (Section II), and on such other lines as may appear profitable as the work proceeds. A portion of the farm at Garrochoran, will, however, be available for the application to local conditions of results obtained in the pasture investigations in Kenya.

28. Professor J. J. R. MacLeod, F.R.S., of Aberdeen University, one of our members, would be available to continue the special assistance and guidance which he has rendered in connection with the work on blood chemistry. Further, Professor T. J. Mackie, of Edinburgh University, would be available to give continued help in connection with serological work, and Professor R. G. Stapledon, of

Abereystwyth, in connection with work on pastures. We contemplate that, as in the past, the Rowett Research Institute at Aberdeen and the Nutrition Institute at Cambridge would continue to be available for the investigation as they arise of problems on the nutrition of sheep and the composition and digestibility of pastures.

IV.—RECOMMENDATIONS.

(a) Financial.

23. We realize that, in the circumstances of the present times, the provision of grants for the continuation even of highly promising lines of scientific research must be a matter of serious consideration to grant-making bodies, such as the Empire Marketing Board and the Advisory Committee of the Colonial Development Fund. The reasons explained in the earlier part of this Report, we believe, on scientific grounds regard it as a matter of great importance if these investigations were brought to an abrupt termination. Such a step would not mean merely the postponement of this research to a more favourable time. Much valuable work would be avoided and, in addition, it would not be possible at a later date to reassemble the scientific staff if ever it was dispersed.

24. For these reasons, therefore, we recommend that the following grants should be made, if possible, for the longest period practicable and in Kenya to be continued for a further period of three years on a care and maintenance basis and that of a similar nature.

25. The Station at Naivasha to still existing against the cost of the salaries of the scientific staff, and a grant of £1,000 per annum would be sufficient to maintain a scientific staff which would be engaged at a later date when circumstances become more favourable. Particulars are given in Appendix I (a). The above figure should be regarded as a maximum, and if, owing to financial stringency, it proves impossible to obtain a grant for this sum, the only alternative that remains is to close the station and return the farm to the Government of Kenya.

26. As regards the Garrochoran sheep farm, we estimate that if the investigations are confined to the narrowest limits the expenditure involved would amount to the sum of £3,000 per annum apart from part-time salaries of some of the senior staff of the Rowett Research Institute. Particulars are given in Appendix I (b).

27. Of this sum, we hope that with the approval of the Department of Agriculture for Scotland, it may be possible to arrange for the salary of a bio-chemist and the expense of chemical and other laboratory work to be borne by the Rowett Research Institute out of its ordinary revenue, and for certain other expenses connected with the feeding of experimental animals to be debited to the account of the Sheep Department of the Dalziel Experimental Stock Farm, which in the past two years has shown a profit sufficient to carry this burden. The transfer of these expenses to the Rowett Research Institute and the Dalziel Experimental Stock Farm would reduce the net sum required from other sources to maintain the station to the sum of £1,500 per annum.

28. Existing funds are sufficient to enable both the Kenya and Garrochoran stations to be maintained until the 31st March, 1932, but if the work at these stations is to be continued the sums indicated above will be required from that date.

29. As regards the provision of these funds, we recommend:—

- (a) That the Secretary of State for the Colonies should be invited to endeavour to secure the continuance of the Naivasha Station until—
 - (i) by joining the Empire Marketing Board to make a further grant at the reduced rate of £1,500 per annum for a period of three years; or
 - (ii) by inviting the Advisory Committee of the Colonial Development Fund to make a grant of a like sum.

(b) That, as regards the financing of the work in Scotland (estimated at £1,000 per annum), the Department of Agriculture should be invited to make a grant of a like sum.

V. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS.

(a) Conclusions.

12. We summarise our principal conclusions as follows:—

(I) On scientific grounds we attach great importance to the investigations both in Kenya and in Scotland, and we regard it as in a high degree desirable that arrangements should, if possible, be made for their continuance.

(II) The Station at Naivasha constitutes, in effect, a Research Station of Animal Nutrition, the only one of its kind in any part of the Tropics. Through the generosity of Kenya in providing the farm and a grant of £8,000 with which to stock and equip it, it has been possible to establish this Station at a very small charge. If, through lack of funds, it was found necessary to close this Station, it would be a great misfortune to Colonial Administrations in Africa which are confronted with many pressing problems of nutrition in relation both to their native populations and to the cattle on which they depend for their livelihood.

(III) During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. If the test which we recommend confirms the experiment already carried out, the results of the first year's test at Garrochoran, which is typical of much of the grazings in the Western Highlands of Scotland, indicate that the feeding to sheep of substances found to be deficient in the natural pastures in winter has increased the fertility of the ewes by about 15 per cent, and has decreased the mortality rate by over 25 per cent., and, in addition, has increased the market value of the animals sold.

(15) We realize that, in the circumstances of the present time, the provision of grants for the continuation even of highly promising lines of scientific research must be a matter of anxious consideration to grant-making bodies such as the Empire Marketing Board and the Advisory Committee of the Colonial Development Fund. While on scientific grounds we are satisfied that the work should continue, we are of opinion that on grounds of economy the work both in Kenya and in Scotland should, for the present, be confined within the narrowest possible limits, both stations being placed on a care and maintenance basis and run at a minimum cost.

(b) Recommendations.

14. In the light of the foregoing conclusions, we recommend:—

(1) That, in view of its great scientific value, arrangements should, if possible, be made on the expiry of the present grants by the Empire Marketing Board, i.e., after the 31st March, 1932, for the work in Kenya and Scotland to be continued for a further period of three years on the most economical basis possible, namely:—

(a) a grant at the rate of £1,500 per annum for the continuation of the work at the Nairobi station in Kenya; and

(b) a grant at the rate of £1,200 per annum for the continuation of the work at the Corruvohra sheep station and at the Rowall Research Institute, Aberdeen.

(2) That the Secretary of State for the Colonies should be invited to endeavor to secure the continuance of the Nairobi Station either:—

(a) by inviting the Empire Marketing Board to make a further grant at the reduced rate of £1,500 per annum for a period of three years; or

(b) by inviting the Advisory Committee of the Colonial Development Fund to make a grant of the same.

(3) That, as regards the financing of the work in Scotland, the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(4) That any future grant for the continuation of the work at Nairobi should be made direct to the Government of Kenya; and that there should be established in Kenya a separate fund into which such grants from the United Kingdom should be paid and also any receipts that may accrue from time to time from the sale of stock or otherwise on the farm, this fund to be used for the payment of the salaries of the two Rowall Research Institute workers engaged at Nairobi, for the purchase from time to time of additional stock and equipment and for meeting all other expenses incidental to the work at this Station.

Signed: WALTER E. ELLIOT, Chairman.

Signed: A. F. HARRIS,
Secretary to the Committee.

1, Whitehall Gardens, S.W. 1.
October 1, 1931

APPENDIX.

LISTING OF GRANTS DISBURSED.

(a) The Nairobi Research Station, Kenya.

Mr. G. H. D. J. S. S.
Mr. F. H. S. S.
Messrs. G. H. S. S. S.
Messrs. G. H. S. S. S.

(b) The Corruvohra Sheep Station, Scotland.

Mr. A. H. S. S. S.
Mr. H. S. S. S.
Mr. H. S. S. S.
Messrs. G. H. S. S. S.
Messrs. G. H. S. S. S.

Note.—The above estimate is subject to the approval of the Secretary of State for the Colonies, which is to be given in full only if the Government of Kenya Research Institute, Nairobi, is approved by the Secretary of State for the Colonies.

(Summit) Salary and remuneration £
Cost of feeding staff and other expenses £
In excess of revenue £

500
200
300



KENYA.

GOVERNMENT HOUSE.

NO. 17

RECEIVED
SECRETARY
COLONIES

Committee held on the 29th August 1920.

The Chief Veterinary Officer has now been appointed a member of the Committee in accordance with the instructions contained in Your Lordship's despatch.

I have the honour to be,

My Lord,

Your Lordship's most obedient, humble servant,

A. H. Williams

ACTING GOVERNOR.

TO.
THE RIGHT HONOURABLE LORD PASSFIELD, P.C.
SECRETARY OF STATE FOR THE COLONIES,
DOWLING STREET,
LONDON.. S.W. 1.

*copy to
10.10.20
10.10.20
10.10.20*

GOVERNMENT FARM, NAIROBI.

ROBERT HAWKINS TRUSTEES

COMMITTEE REPORT

Minutes of Meeting held

August, 1930.

PRESENT: Hon. Alex. Hoin, M.P.

Messrs. E. Powys Cole,
J. E. A. ...
H. ...

with Mr. W. D. D. Jardine, Livestock Officer.

The Chairman reported that the ...

exception of Mr. Powys Cole, had ...
Sunday, 24th August, and noted the work which had been
carried out during the past year of working, viz. ...
to fences and buildings, installation of a water supply
and the stock purchased. Approval was expressed of the
work accomplished, and the work to be done ... consist
of the erection of a milking shed and dairy.

A memorandum, setting out the ... of the ...
and the agreements reached between the ...
Empire Marketing Board and the Government of Kenya, having
been previously circulated, was ... considered the
programme of experimental work ...

It was agreed that ...
programme be adhered to ...
Milk cows. 2. Daily feeding.

This is not of primary importance and may ...
Calves. 3. Feeding of Whey.

No proper facilities exist for carrying out this
experiment.

Fig. 4. Feeding of Khey.

No proper facilities exist for carrying out this
experiment.

... to demonstrate results which are
 ... at present the supplementary
 ... increase in milk,
 ... of feeding.
 ... planted, some of which
 ... made into ensilage.
 ... experimental work on Figo, the
 ... be made to ascertain
 ... from the Bacon Factory
 ... was asked to confer with Mr.
 ... experiments and arrange for
 the supervision of personnel at the Bacon Factory.

FINANCE: A statement showing the expenditure from the Capital grant of £5,000 was submitted. Appendix 2.

It was recommended that the outstanding balance should be earmarked for future special purchases and development work, and that as from 1st September, 1930, the ordinary monthly recurrent expenditure should be met from the revenue account.

Mr. Gunn reported that he had opened a Revenue Account which at date was 8942 Shs. 14 cts. in credit. He estimated the monthly revenues at £48 and the monthly recurrent expenses at £35, and undertook to forward a statement of accounts, including Revenue, with his monthly report.

As to the period over which the scheme of work would be carried on, it was agreed that further consideration should be given thereto in the light of experience and development.

Shankar B. Baddocking varma homas.

...to demonstrate results which are
...at present the supplementary
...a 10% increase in milk,
...of feeding.
...planted, some of which
...the remainder made into ensilage.
...experimental work on Figs, the
...be made to ascertain
...of the carcasses from the bacon factory
...was asked to confer with Mr.
...feeding experiments and arrange for
...of carcasses at the Bacon Factory.

MEMORANDUM: A statement showing the expenditure from the Capital grant of 25,000 was submitted. Appendix 2.

It was recommended that the outstanding balance should be earmarked for future special purchases and development work, and that as from 1st September, 1930, the ordinary monthly recurrent expenditure should be met from the revenue account.

Mr. Gunn reported that he had opened a Revenue Account which at date was 8942 Shs. 14 cts. in credit. He estimated the monthly revenue at 248 and the monthly recurrent expenses at 235, and undertook to forward a statement of accounts, including Revenue, with his monthly report.

As to the period over which the scheme of work would be carried on, it was agreed that further consideration should be given thereto in the light of experience and development.

APPENDIX I.

Malvadah Stook Farm,

Institutional Programme of Experimental Work.

Feeding Tests to determine the value in milk product-

of various types produced in East Africa,

and green crops grown on the farm, with

a view to determining the most economical and effective

method of milk sale as suggested in the Report

of the Agricultural Commission, 1929.

Hand-rearing of calves with a view to reducing

the quantity of milk normally fed, and its substitution

by concentrate mixtures of high protein and ash content.

2. Hand rearing of calves without meal mixtures.
3. The substitution of whey in lieu of separated milk in hand rearing.

(3) Store Cattle.

Observations on the growth rate of bullocks from the time of weaning until maturity, correlated with the grazing conditions throughout the year.

B. Pigs.

1. Feeding Tests to determine the comparative values of various locally grown cereals in pork and bacon production.
2. The substitution of a meal mixture rich in protein and ash constituents to replace separated milk in the rations of fattening pigs.
3. The feeding value of whey.

C. Sheep.

1. Feeding Tests with mineral supplements to determine their effect on the growth rate and wool production.

APPENDIX I.

Matvasha Stock Farm.

Annual Programme of Experimental Work.

A. Dairies:

(1) Milk House.

1. To determine the value in milk production of the various concentrates produced in East Africa.

2. To determine the value of the various green crops grown on the farm, with a view to determining the most economical and effective method of feeding.

3. To determine the value of milk cows as suggested in the Report of the Agricultural Commission, 1929.

4. To determine the value of hand reared calves with a view to reducing the quantity of milk normally fed, and its substitution by concentrate mixtures of high protein and ash content.

- 2. Hand rearing of calves without meal mixtures.
- 3. The substitution of whey in lieu of separated milk in hand rearing.

(3) Store Cattle.

Observations on the growth rate of bullocks from the time of weaning until maturity, correlated with the grazing conditions throughout the year.

B. Pigs.

- 1. Feeding Tests to determine the comparative values of various locally grown cereals in pork and bacon production.
- 2. The substitution of a meal mixture rich in protein and ash constituents to replace separated milk in the rations of fattening pigs.
- 3. The feeding value of whey.

C. Sheep.

- 1. Feeding Tests with mineral supplements to determine their effect on the growth rate and wool production.

of grade lambs.

2. Observations on the condition and progress of sheep run in paddocks compared with those penned in pens overnight.
3. Observations on the growth rate of lambs, the progress of Suffolk-Masai cross; and a comparison with similar data recorded for Masai lambs.

D. Pastures.

1. Fertilizer Experiments on the farm to act as a basis to any further tests which may be undertaken in areas where there are marked deficiencies in the pasture.
2. Analysis of individual grasses occurring in association on the farm.

E. Any further work on animal nutrition which may be suggested during the progress of the various operations on the farm, or any investigations for which there are facilities which may be suggested from time to time by the staff of the Department of Agriculture.

of grade lambs.

2. Observations on the condition and progress of sheep run in paddocks compared with those penned in "houses" overnight.
3. Observations on the growth rate of lambs, the progress of Suffolk-Masai cross; and a comparison with similar data recorded for Masai lambs.

T. Pastures.

1. Fertiliser Experiments on the farm to act as a guide to any further tests which may be undertaken in areas where there are marked deficiencies in the pasture.
2. Analysis of individual grasses occurring in association on the farm.

Any further work on animal nutrition which may be suggested during the progress of the various operations on the farm, or any investigations for which there are facilities which may be suggested from time to time by the staff of the Department of Agriculture.

Appendix 1 (Contd).

Experimental Work already done.

A. Cattle.

1. Test to determine the increase

by feeding skim milk, with

production of the increased

relation of the cost to the

creamery for milk and butter

2. Calves: Test with hand

whoy and separated milk

by a protein and mineral

B. Pigs.

The cost of production per lb. live weight gain in

pigs fed (1) malle meal, (2) ground barley as the

main cereal of their daily ration.

C. Sheep.

Mineral feeding experiment with weaned lambs.

D. Pastures.

A fertiliser experiment has been laid down, and

individual grasses on the farm are being collected

for chemical analysis.