

1928

Kenya

No. *12277*

SUBJECT

C0533/379

*Report of special committee on
the organization of agricultural
Education for Africans*

Previous

*See X 10355/27
(Edn. Report)*

X. 10394/27 (agric. Dept)

Subsequent

*15690/29
(African Education)*

Secretariat of the Govt. of Madras
278 May 1928
Two copies of Report of Special Committee on the
Organisation of Agricultural Education for Africans.

(Spare copies to library)
Returned

In para. 12 of the Report and the Annual
Report of the Dept. of Agric. the Govt.
promises a despatch on this report.

Meanwhile ?

Mr. Vischer to see

fratins
27/5/28

Mr. Vischer
Mr. Parkin

? Send a despatch saying this
has been received. That it is
concerned to the report referred to
in para 12 of the Govt. despatch
of 31.10.27. (No 4 on N0394/27)
say that Govt. intend to refer
it to the Advisory Ctee on Native
Education for their consideration and
therefore be glad to receive Govt's
comments as promised in the
despatch referred to. And - unless
Mr. Vischer has received extra copies -
ask for a further 6 copies of the report
for their purpose.

include this
in all reports

P.T.O.

Govt. has had this report
(1st of October)
S. J. S.
27/5/28

Sapir
Hammerton
6.7.28

Recd
6.7.28
10/11

2 to SW, 484 - Hand Cms - 13 JUN 28

DESTROYED UNDER STATUTE

Transmits six copies of the report of the Committee on the organization of agricultural education for Africans.

Here are the 6 copies
asked for but where are
the comments?

Mr. Vischer may like
to cover the C. U. C. with out
Gaiter, any longer.

But G. U. 10 Dec. if
no comments received for
copy to G. U.

3/11/28

It may be well to
send receipt
for comments.

Let

Pl. answer the other copies received
a pass. to Mr. Vischer

Mr
Knevel
for

Mr. Vischer

You will handle the other copies
Also, I will receive 3 to
say it is assumed that Govt's comment
on the report will follow shortly as
requested in No 2.

Office
10.11.28

Mr. Sub.

I have circulated copies of the report
to the Agents for the next meeting are already
very full I propose that the report be discussed
fully at the meeting after which members
will have had time to study it.

Hammerton
13.11.28

3/11/28
also receive
to Mr. G. U.

Office
14.11.28

DESTROYED UNDER STATUTE

1917/20
Col Sec 3 p 3 and 11 NOV 1920

In Feb

circulated with minutes available

K.E.A.

After

You should see

Understand the next meeting

of the Voucher's Ctee in fixed for Jan 10. It will be as well to

have this receipted in form 15 months

noted

some see of Gov's comments are received, & it is to make sure that the Report is not put on the Agenda for the Ctee's meeting.

S Steel

1.11

W Allen

of it

at all

noted

It has been arranged that this will not appear on the Agenda for the next meeting of the Education Ctee (i.e. the Jan meeting)

noted

B.U. 1 Feb. if working

S Steel

3/12

Amie

B.U. as directed

A

W Jordan

11.2.20

Re Report

The Gov's comments are not yet in

This will not go on the Education Ctee's Agenda in the meantime.

S Steel
12.2

No

W Allen
13/12

noted

B.U. 15 Nov for remainder (3 hrs)

if working in

S Steel

13.2 at all

B.U. as directed above

W Jordan

11.2.20

Comments and six additional copies of the Special Committee's Report were asked for in the Secretary of State's despatch of the 11th July, and the only notice which has been taken is to send the extra copies (3 p.n. dated 18th

October

October,) in spite of the fact that we reminded them in our reply (3 pgs.) dated 19th November, of our request for comments at an early date. There therefore seems no need for it but to telegraph as in draft herewith.

H. V. Ch...

10/13

at mel

UNDER STATUTE

cons

20 March 1929

UNDER STATUTE *Old Telegram.*

27

Has deferred comment pending consideration by Director of Education. Will endeavour to send despatch during April

in file

Nothing for it but to wait.

in some cases see; as the report did not refer to the Council's views as the mentioned

Ch. Chaffin

See

July 28/29

to Vischer et al.

28 11 29

H. V. Ch...

20/1/29

return

hoko

Jamm Vischer

2.4.29

4/10

6
ORGANISATION OF AGRICULTURAL EDUCATION FOR AFRICANS.

REPORT OF THE COMMITTEE.

The Committee appointed by His Excellency the Acting Governor was finally constituted as follows:-

Chief Native Commissioner - Chairman.

Director of Education.

Acting Director of Agriculture.

Hon. W.F.G. Campbell, Acting Provincial
Commissioner, Ukamba.

Hon. Conway Harvey.

Hon. F.O'B. Wilson.

V. MacLellan Wilson, Esq.

A.R. Barlow, Esq.

2. The terms of reference were:-

*to consider and advise as to the lines to be pursued for the better organization of Agricultural Education for Africans, and the funds from which such assistance should be given.

3. Owing to the many calls upon the time of individual members and the distance from Nairobi at which some of the unofficial members of the Committee reside, it has been very difficult to arrange meetings, and in no case was it possible to secure a full attendance, but every member has attended two or more meetings.

4. The Director of Education furnished a memorandum, of which a copy is attached to this Report. The Committee is in general agreement with the conclusion, and with the recommendations contained in paragraph 11 of the memorandum.

5. Mr. J. J. Dougall, Headmaster of the Jeanes Teachers' Training School, Kabete, and Mr. G.A. Grievs, Principal of the Alliance High School, were good enough to attend before the Committee and express their views.

6. The present position is that specialised training in Agriculture is not given at any Government school or at any assisted school under the control of the Education Department, and the education at present given in such schools tends to divorce natives from the land by reason of the present demand, particularly/

particularly in non-native areas, for carpenters, masons, clerks and teachers. The only places in which special agricultural training is given at present are the Scott Laboratories in Nairobi, and the Native Agricultural Farm at Bukura, North Kavirondo, both of which institutions are controlled and staffed by the Agricultural Department for the purpose of training native instructors in Agriculture. A note by the Acting Director of Agriculture on the work done at these institutions is attached hereto.

2. The native population of Kenya Colony contains probably 250,000 above ordinary school age, and it is therefore necessary to realize (and above all to make the people realize) that only a very small proportion of that number can be absorbed into clerical posts or technical professions. The destiny of the majority must be that of an agricultural and pastoral people, making a living by the cultivation of the soil and by the use of their hands, and the principal means by which an income above the average will be secured will be by the acquirement of a superior skill in the use of the land, as in manual occupations generally. Therefore the education to be provided for the improvement of the mass of the people must be adapted to these conditions, and the "three Rs" are of importance primarily in so far as they are auxiliary to practical industry.

6. It is essential that this practical teaching should commence at the earliest age, and the Committee therefore recommends unanimously that agricultural instruction should form an integral and compulsory part of the curriculum in all elementary schools for Africans in rural areas. That is to say, schools in which pupils will, under a complete scheme of Education, receive instruction up to the age of about 12 years. Up to this point agricultural instruction should be given equally to both boys and girls, an appropriate division of labour being effected where necessary between the sexes in the practical field work. Beyond this stage, agricultural instruction for girls will be necessary only in the case of those being trained

Recommendation
No. 1

C.O. 583
979
K. C. O.
K. C. O.
K. C. O.

trained as school teachers'. It is an obvious corollary to this recommendation that all native teachers to be trained for work in village schools must be qualified to give instruction in simple agriculture, and to conduct a demonstration plot, and therefore agriculture, up to that point, must form part of the training of every native teacher.

9. Schools are divided by the Educational Department into the following classes:-

Normal and Below 6 7 8 9 10 11 12 13 14 15 16 17 18

Standards	Sub-Standards	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
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Grade of School

Grade of Education

4													

10. The normal school is intended to train teachers for the primary schools. It is a school of 12 years' duration, and is intended to give a general education rather than a technical one. The curriculum is similar to that of the primary schools, but includes a more extensive study of the subjects of English, History, Geography, and Science.

11. The normal school is intended to train teachers for the primary schools. It is a school of 12 years' duration, and is intended to give a general education rather than a technical one. The curriculum is similar to that of the primary schools, but includes a more extensive study of the subjects of English, History, Geography, and Science. Agriculture is given for the first time in the normal school, and is given for the first time in the normal school. The period of normal training commences with the beginning of vocational training given at such schools consists only of carpentry, masonry or commercial book-keeping, and does not include agriculture. At the Church of Scotland Mission School at Kikuyu the work of hospital stewardship is also taught.

11. The questions that have, therefore, presented themselves to the Committee are:-

- (a) is it necessary that agricultural instruction be given to African boys beyond that which they receive during their two years in a secondary school;
- (b) if so, what should that instruction consist of, and by whom and how should it be given;
- (c) what should be the cost involved in giving such instruction;
- (d) should it be given at the expense of the State or community or at private expense of the pupils.

Report No. 12.

12. After considerable discussion, the committee unanimously came to the conclusion that agricultural instruction should be retained in the secondary schools, remain in function of the Educational Department, and be given to the age group of 12 to 18 years. It is the responsibility of the native population, with the assistance of the Government, to provide the necessary instruction in agriculture, and to instruct the native population in the use of modern agricultural methods, and to encourage the native population to utilize modern methods of crop production and animal husbandry. It is the responsibility of the Government to provide the necessary instruction in agriculture, and to encourage the native population to utilize modern methods of crop production and animal husbandry. It is the responsibility of the native population to provide the necessary instruction in agriculture, and to encourage the native population to utilize modern methods of crop production and animal husbandry. It is the responsibility of the Government to provide the necessary instruction in agriculture, and to encourage the native population to utilize modern methods of crop production and animal husbandry.

13. With the customary system of land tenure among the agricultural tribes, whereby occupations are exercised over comparatively small holdings by families and individuals, it seems manifest that, in exceptional cases, an individual native can conduct farming operations on his own land on a scale of any magnitude, and that for many years to come the agricultural instruction which could

to be given at a secondary school should, therefore, suffice to enable any native, who is really anxious or willing to do so, to raise crops and livestock with a degree of skill and economic value superior to that which is to be found in any native reserve at the present

Recommendation No. 3

time. The Committee, therefore, recommends that agricultural instruction at all secondary schools for native boys should be given by qualified European instructors whose functions will be:-

- (a) to give more advanced agricultural training to boys between the ages of about 14 and 17 years of age who have been selected for it;
- (b) to give the necessary instruction in agriculture to native teachers who are in training, in order that they may take charge of elementary schools;
- to inspect the agricultural work done at elementary schools in the neighbourhood.

The Committee would emphasize that the instruction background of such instructors should be a good study of local conditions and a knowledge of the existing native methods of agriculture.

Recommendation No. 4

14. It would not be possible for all the European instructors to give personal attention to all the boys in a particular district. It is recommended that simple agricultural instruction to children between 10 and 14 years of age should be given by native teachers who have been passed as competent.

Recommendation No. 5

15. The Committee, with one exception, considers that the practical agricultural work at elementary and secondary schools should be confined to demonstration and instruction in methods and crops which have been tried, and of which the success is under normal conditions, assured. In view of the opposition which has to be met with from conservative natives, both male and female, of the older

generation, who have an innate antipathy to all innovations, we feel that it would be a mistake to conduct agricultural experiments, the failure of which might give rise to doubt in the minds of young pupils as to the competence of the instructor, and would be quoted by the old-fashioned villagers as proof that the white man's new-fangled methods were inferior to the time-honoured native customs of cultivation.

Mr. Barlow is of the opinion that simple experimental work, carried out with discretion, is a necessary and desirable accompaniment of agricultural instruction in schools, both for its educative value and as being the means of ascertaining what methods and crops are best suited to local conditions, and of progressively improving the same.

16. It is clear that all education must be subordinate to a definite project, and that it must aim at rendering the pupil more efficient to take his proper share in the development of the Colony and to become a more useful member of society, whether he serve his own community in a native reserve or enter into the wider life of the Colony in a non-native area.

17. The Committee is satisfied that the example afforded by crops grown under instruction has had the effect of improving agriculture generally in the neighbouring native reserves.

18. Under the scheme now proposed by the Committee the native boy would receive the rudiments of literary education, combined with simple practical agriculture at a village school. At the age of about 12 he should go on to a secondary school at which he would receive general vocational training, with appropriate literary instruction up to the age of about 14. That training would

10

would embrace not only agriculture, but simple carpentry and perhaps masonry. At the age of 14, if he desires to continue his education, he must enter upon some form of vocational training, either agricultural, industrial or commercial. Where the training is of a kind to which apprenticeship is appropriate, we consider that the pupil should be required to apprentice himself for a term not less than 3 years.

Recommendation No. 5.

19. It is, therefore, necessary that every secondary school be provided with a sufficient area of agricultural land and with the necessary equipment for practical husbandry.

20. The boy who leaves school at 14 or 15 should by that time have developed into an intelligent worker who would be a useful apprentice in any industry, whether under a private employer or in a Government Department such as the Public Works Department, Railway or the Forest Department.

Recommendation No. 7.

21. We consider that in order to carry out the policy advocated in this report the Education Department should employ the necessary qualified European agricultural instructors in secondary schools. In devising the scope of such training and the work to be done in such schools the Director of Education should act in consultation with the Director of Agriculture.

Recommendation No. 8.

22. The Committee is of opinion that all boys remaining on in school after the age of 14 should not only be apprenticed, but should also pay fees, for it is the only method by which a native can be made to attach proper value to the service that is being rendered to him. Where no fees are paid boys would in some cases remain on at school merely to put in time and avoid having to work for their living, and others, after remaining for a short time, would run away if they found the discipline irksome. If the parent of a boy over 14 is unwilling to pay a small fee for his son's education, it means that neither he nor his son is going to attach any real value to his schooling, and the time and labour/

labour devoted by the school authorities to such boys will be wasted. Any intelligent boy should be capable of absorbing all that is necessary to the ordinary native in the way of simple education by the time he is 14, and the State will, therefore, have fulfilled its duty. Any who desire special training after that age should receive it, if available, at their own expense. It may be that Local Native Councils will be willing to vote money either for scholarships or for contributions to schools, which will enable the fee payable by the pupil himself to be quite a small one, but we are definitely of the opinion that the pupil himself or his parent must pay a specific fee, however small.

23. Up to this point we have dealt only with the native who desires to fit himself for private enterprise or for more efficient work as an employee. It is pointed out, however, by the Acting Director of Agriculture that for the improvement of agriculture generally in the native reserves it is necessary to continue provision for the training of natives for work as agricultural instructors in the reserves. The duties of these instructors are to tour the native reserves, giving advice on agricultural subjects, and cultivating demonstration plots for exhibiting improved methods of cultivation and crops raised from issues of selected seed. For this purpose the Committee is of opinion that an institution, or institutions, should be conducted by the Agricultural Department at which a far higher standard of agriculture, both theoretical and practical, would be taught, and that there should only be admitted to that institution boys of the age of about 17 who have satisfactorily completed their full 5 years' course at a secondary school. In no other way could a suitable class of native boy be found likely to achieve results in any way compatible with the expense involved in the specialised training which would

Recommendation
No. 9

C.O. 533
3/9
LONDON

be given there.

Recommendation No. 10

24. We desire to stress the importance of teaching natives the economic side of agriculture. They must learn to calculate cost of production, costs of marketing, including transport, and to work out what crop will yield the greatest profit per acre. It follows from this that the produce raised on a farm-school should go far towards paying all the overhead charges, other than those which would not occur on an ordinary farm. It is, therefore, essential that pupils should cultivate individual plots as well as general school plots, and they should themselves keep careful accounts of all costs of production and of all produce harvested, whether for food or for sale.

Recommendation No. 11

25. We are of the opinion that fees or a definite premium should be charged to all pupils who enter a higher agricultural training institution, but at the same time we consider it essential that the salary attached to the posts for which these natives seek to qualify should be such as

Recommendation No. 12

will attract a good class of native and give him an object worth working for. At present, native agricultural instructors are paid as low as 2/- per month, whereas the regulations recently issued, governing the conditions of service of the Arab and African Clerical Service for the Colony and Protectorate of Kenya assign a salary of 20/-, rising to 65/- for a learner clerk of between 14 and 16 years of age, and a salary of 150/- per month for grade I clerk. We fear that unless agricultural instructors are paid on scales of salary at least equal to those of other native teachers, the native population will take these widely differentiating rates of pay as an indication that Government considers that clerical and teaching posts are of the highest importance, and that agriculture is only a subject to be taken up as a last resource by the native who is not fit for anything else. Nothing, we are sure, could be farther from the

the intention of Government, and we therefore urge the necessity of placing the posts of agricultural instructors on a basis which will give them the value, dignity and importance which they deserve.

26. In view of our recommendation that agriculture should form part of the curriculum in the ordinary secondary schools, we do not make any special recommendation as to finance, for that will be governed by the general policy of Government relating to all native secondary schools. The Committee is given to understand that the general principle is that native funds will bear the capital costs connected with such schools, and that Government will provide the equipment and teaching staff, but not clothing or food. We have, however, in paragraphs 22 and 25 made definite recommendations for the payment of fees.

The Committee, however, considers that the whole cost of the institution for higher agricultural training, to be conducted by the Agricultural Department, should be provided on the Colonial Budget, and that natives who desire the training should be charged suitable fees, which would be credited to General Revenue.

G.V. MAXWELL.
Chief Native Commissioner.
Chairman.

J.R. ORR.
Director of Education.

E. HARRISON.
Acting Director of Agriculture

W.F.G. CAMPBELL.
Acting Provincial Commissioner
Ukamba.

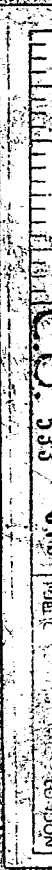
C. HARVEY.

F.O'B. WILSON.

W. MACLELLAN WILSON.

A. RUFFELL BARLOW.

Nairobi, 1st October, 1927.



AGRICULTURAL EDUCATION.

At a recent meeting of the Government Committee appointed to advise on the best methods of improving agricultural education, the question was asked: "Is it not a fact that the effect of education is to draw people away from rural into urban areas?" The answer was unanimously given in the affirmative. The reason is not far to seek. It is found in the allocation of values. It is in the town and not in the country that the best of human endeavour - the best of literature, of science and of art - is found. It is in a garret rather than in a cottage that famous writers have commenced their careers, it is in the well equipped laboratories of University towns that scientists have won their fame; it is in the studios of Chelsea or the Latin quarter of Paris that art has been nurtured. Man seeks the best in all his learning and in art and selects in education those arts which will give him a place among the learned and cultured of his kind.

2. There is an old saying: where the treasure is, there will the heart be also, and no treasure is greater than the prize of achievement. If therefore a child's mind is directed to a literary education as the path which leads to distinction, if he is taught to take pride in literary success, so long will he sit a vainglorious upon abstract learning and despise practice. The rein has the key to the situation - the mental direction of the child. Again, the great wish of every man is to escape from manual labour and to rule others by the power of his intellect. The ecclesiastic rose to power in the middle ages because he was a student; statesmen and politicians of today are often lawyers and philosophers who can sway the people by the logic of their arguments such as

Asquith

Asquith, Lloyd George, Balfour. Agriculture has always been associated with manual labour, with dulness of wit and gaucherie, as the word "clod hopper" shows. It is rarely shown in its true light - as a practical and at the same time a highly intellectual and scientific pursuit upon which a country's welfare is based.

3. In a country dependent entirely upon agriculture for its revenue, to allow education to give people a distaste for agricultural pursuits means ultimate ruin. A reconsideration of values is therefore required and a fresh direction of children's studies. A child will naturally prefer those subjects which in the opinion of the community constitute progress. In that will lie his treasure and upon these will his heart be set. So far these subjects have not included agriculture, but if agriculture is given the most important place in the curriculum of all schools, if it is the subject in which most hearts can be kindled and progress effected, then the minds of the coming generation will spontaneously turn towards agriculture. It must however be an essential and an important part of every school curriculum. If it is not, then the clever and most ambitious boys will turn to subjects upon which value is placed in the school and the Agricultural Department will get in their schools - as to their sorrowful state getting today - the stupidest boys who have not even learnt to read and write. Hence we are opposed to appointing schools under the Agricultural Department. We are opposed also to any divorce of agriculture from the school curriculum. We urge that it be made a compulsory subject and the most important subject in all rural schools. There should be a lesson in the school syllabus which cannot be derived from agriculture - botany, physics, chemistry, physical, political and commercial geography, history, arithmetic, geometry, economics.

planting and fruit planting (lemon, loquat). In Std. IV each pupil should have a Home Plot and a School Plot. The former are to be seen frequently by the teacher.

Sample Garden Experiments.

In these experiments only carefully selected seeds should be used. In fact, all the seeds planted at any time should be good selected seed. Careful measurement is necessary so that every plot may have the same amount.

1. Comparison of African and European Cropping.

(a)	(b)
Maize	Maize
Beans	Beans
Potatoes	Potatoes
Mixed	

Give out the same quantity of seed to (a) and (b). In (a) the seed is planted African way. In (b) it is planted in separate plots in rows at the proper intervals. (a) is cultivated African way (b) European way.

Measure the harvests and compare the two gardens.

2. Rotation.

- Plot 1. Beans following maize.
- 2. Beans following potatoes.
- 3. Beans following bush.

Do the same with maize and potatoes in all gardens, which is the best rotation.

3. Manuring.

This experiment is the same as No. 2 except that there are 18 gardens instead of 9 and one garden of each crop is planted without manure and the other with manure. The harvests are measured and results are compared. Each standard plot should be given 120 lbs. of manure.

Agriculture

Syllabus 2.

Syllabus of Agriculture and Nature study.

Standard II.

Plants that give us food. Plants that spoil our gardens (Weeds). Animals that help us. Animals that spoil our work. Insect pests. Study animals like

likely, use sample of maize stalk borer, cutworm
etc

Standard III

The soil: proper cultivation, i.e., deep digging
(a) to let the roots travel far (b) to let the rain go
far in (c) to prevent soil erosion (d) to destroy insect
pests. Rotation, manuring, seed selection.

Standard IV

Dry Farming etc. (a) deep cultivation (b) frequent
cultivation (c) weedless lands. Rotation, manuring,
selection, irrigation. Agricultural shows. Care of trees.
Note: All classes will take part in weather studies.
Each school there will be a rain gauge and an aneroid
barometer. A vane made by scholars is to be placed above gauge.
Diagrams will be hung up showing daily records of wind,
rain etc.

Seed - Tables.

Each school will have 2 diagrams of seed tables. 3
should be prepared thus:-

1. Long rains.

Crop	Seed per plot	Distance bet. rows.	Distance bet. plants.	Depth to plant
Maize	A. lbs.	B. ft.	C. ins.	D. ins.

Same for beans etc.

2. Short Rains.

As above, but crops cannot be planted so closely
Teachers make fresh tables



ELEMENTARY C SCHOOL CERTIFICATE

1st OR PREPARATORY CLASS THEORETICAL

I. PLANTS.

- 1) Parts of a plant and their functions.
- 2) Nutrition and reproduction.
- 3) Identification of economic plants.
- 4) Diseases and pests, including animals and birds.

II. SOILS AND TILLAGE.

- 1) Origin, formation and classification.
- 2) Tillage operations.
- 3) Farm tools, names and uses.
- 4) Farm implements, names and uses.

III. FORESTRY.

- 1) Identification of trees and their uses.
- 2) Establishment of woods, shelter belts and ornamental copses.
- 3) Benefits derived from trees.

IV. STOCK.

(Cattle, Goats, Sheep and Pigs).

- 1) Identification of breeds and their uses.
- 2) Improvement of native herds.
- 3) Identification of forage crops and grasses.

V. FOULTRY.

- 1) Breeds and identification.
- 2) Breeds and their uses.
- 3) Housing and feeding.

VI. FARM YARD.

- 1) Lay out of a court with house and stores.
- 2) Cattle-boma.

VII. SUBSIDIARY.

- 1) Preparation of hides and skins for market.
- 2) Bee-keeping.

JUNIOR SECONDARY SCHOOLS CERTIFICATE

1st OR SENIOR CLASS, THEORETICAL

I. SOILS.

- 1) Improvement by cultivation.
- 2) Conservation of natural moisture, etc.

II. MANURES.

- 1) Principles of manuring.
- 2) Bone and green manure.

III. CROPS.

- 1) Selection of crops for climate and environment.
- 2) Duration or period of crops.
- 3) Rotation of crops.
- 4) Sowing, care and harvesting.
- 5) Preparation for market and values.
- 6) Uses.

IV. WEEDS.

- 1) Identification, classification and eradication.

V. STOCK.

- (Cattle, goats, sheep and pigs).
- 1) Improvement of grazing and browsing areas.
 - 2) Care and management of livestock.
 - 3) Diseases and their treatment.
 - 4) Housing etc.

VI. DAIRYING.

- 1) Milk production.
- 2) Milking and care of milk.

VII. HORTICULTURE.

- 1) Identification of useful fruit trees.
- 2) Treatment and pruning.
- 3) Grafting and budding.

VIII. ROAD MAKING & BRIDGE BUILDING.

- 1) Simple methods.

It became evident to the Government some years ago that some form of agricultural encouragement might be given to the tribes of Kenya with the object of increasing the productivity of their land, increase the supply of a greater variety of better food and to improve the health of the natives as a result of the work entailed thereby.

Large numbers of natives have taken part in the development of European plantations and it has been possible for them to widen their outlook very considerably by such activities. It is however the case that such methods adopted by the European planters are not always applicable to the needs of the natives at their own homes, and the crops handled are not often those which the natives find it necessary to grow themselves for local use and sale.

It was thought advisable to undertake a system of training for selected boys who later on might be fitted to reside in the Reserves and teach their fellows by word and example.

Two centres were chosen for this work, one at the Scott Agricultural Laboratories and the other at Bukura in Kavirondo, and entrants for these schools are usually recommended by the Administrative Officers of their respective districts. It is our endeavour to have all districts represented so that trained boys may go back to all native agricultural parts and impart their knowledge.

The apprentices are indentured for three years and during that time they are acquainted with a very representative variety of work and crops in the trial and demonstration plots. All practical work in the land is performed entirely by the apprentices and such other operations which are entailed in the management of such places. They handle oxen from the breaking-in stage to the cultivation by large and small ploughs. They sow, tend, reap and thresh all crops which are

are commonly grown at their own homes. Nursery work, poultry keeping, silk culture, storekeeping, raddmaking and such other operations which are thought to be required in the Reserves. New crops and varieties of crops are regularly tried with the object of determining their suitability of Kenya.

It is preferred that boys who enter the school should first have passed the Government Vernacular Examination and having obtained this standard, they are more receptive to our teaching and able to devote a greater proportion of their time to the scientific study of the subject in the lecture room. Both in the classroom and the teaching in the field is framed to suit the peculiar conditions which prevail in the native areas.

Each pupil is allotted a school shamba and has to work it entirely during his own time in the evenings, and in this way he is able to apply his new knowledge. These gardens are also a valuable guide to the instructors of the progress being made by the individual boys.

The active regular life conducted at these schools, through the practical nature of the work and the drill, is a great asset to the physical condition of the boys and fits them better for the work which they have been trained for.

After completing this course of instruction the best boys are appointed as Native Agricultural Instructors to reserves and work generally under the direction of an Agricultural Officer who is stationed in or near the reserve.

The principles which we have to aim at are discussed in an article on Native Agriculture and Stock issued by the Agricultural Department (Bulletin No. 14).

Not alone have we to consider the Agricultural education of natives residing in agricultural reserves, but also the needs of those natives who live in pastoral areas. These needs are best met after education through training at native stock farms.

I am a little doubtful whether the ordinary education of a boy who is to return to his Reserve should continue after his fifteenth year, and I would most certainly advise that at about that age, if deemed suitable, he should enter on training at a Stock farm or at a Farm school if he is to be thoroughly grounded.

I attach syllabus of Instruction and a timetable as arranged for a Farm School. As yet no native stock farms are in operation.

(Egd) E. HARRISON
ACTING DIRECTOR OF AGRICULTURE

10th September, 1927.

SYLLABUS AGRICULTURAL SUBJECTS

JUNIOR LECTURE CLASS

1st Year.

1. Elementary Agricultural Botany.

Parts of the plant and their functions. Nutrition and reproduction. Identification of economic crops including, forage and grasses.

2. Soils and Tillage.

Origin, formation and nature of soils. Farm tools and implements, their cost, construction, adjustment, care and uses.

3. Animal Husbandry. (Cattle, goats, sheep & poultry)

Parts of the animals, various breeds, characteristics and uses. Feeds, care and maintenance. Improvement of native stock.

4. Farm Diseases and Pests.

Elementary instruction in plant diseases and pests, including insects, birds.

5. Field Engineering.

Elementary mensuration, field measurement, layout of land.

6. Forestry.

Identification of trees, their uses and advantages, nursery work and establishment of shelter belts and ornamental copses.

2nd & 3rd Years.

1. Crops.

Crops in relation to environment, climate and location. Planting, lining out and spacing of various crops. Crop rotations, improvement of seed by selection, period and duration. Preparation for market, and market value, uses and destination.

2. Weeds and Parasitic Plants.

Identification, classification, eradication and control.

3. Soils.

Composition, physical structure and classification.

4. Tillage and Soil Improvement.

Tillage and practice: Principles underlying practices of tillage, preparation of seed bed, conservation of soil moisture, surface mulch.

5. Manures.

Principles of manuring, animal, vegetable and artificial manures, their application and functions.

6. Field Engineering.

Construction of grain stores, culverts, drainage and measurement of land, layout of homestead.

7. Animal Husbandry. (Cattle, sheep, goats & poultry.)

Care, feeding and management of livestock, diseases and treatment, housing, control and improvement of grazing areas. Curing of hides. Milking, care and use of milk, how to make ghee, marketing of animal produce.

FIELD DEMONSTRATION AND PRACTICE - CULTURAL OPERATIONS AND ROUTINE.

Students are required to understand and conduct all field operations in use, such as delving, mulching, seeding, clearing, harvesting, threshing and storing, and each boy is allotted a certain period with operations such as ploughing with oxen, harrowing, rolling, cultivating, ridging and drilling. Handwork in the field includes digging, forking, weeding, sowing, lining out, planting of various crops, harvesting, threshing, selection of seed and seed storage, nursery work, the raising and transplanting of seedlings, reproduction by cuttings, grafting, budding, care of nursery and general horticultural practice, hedging, pruning and maintenance of trees. Lectures and demonstrations among crops in the field.

In the 4th year selected boys are put in charge of squads on the property to undertake all operations, and from time to time are used in the reserve. They study prices, money, forms of transport, markets, elementary economics, taxation, cooperation, development of reserves.

DEPARTMENT OF AGRICULTURE

TABLE & SYLLABUS

SCOTT LABORATORY AND BUKURA SCHOOLS

HOURS PER WEEK

	Drill	School Subjects, Reading, Writing Arithmetic, etc.	Agriculture Instruction in school or on shambas	Demonstration Practical work in shambas.
Junior Class	3	7		28
2nd Year	3	4	6	25
3rd Year	3	5	12	17

HOURS IN SCHOOL

	6.30 to 7	8 to 12	1 to 4
	Drill		
Monday	all	3rd year class	2nd year class
Tuesday	all	1st " "	1st " "
Wednesday	all	3rd " "	3rd " "
Thursday	all	2nd " "	2nd " "
Friday	all	3rd " "	3rd " "
Saturday	all	Routine - all classes	

K. 15277/28 Kenya

- Mr. Eastwood
- Mr. Allen
- Mr.
- Mr. Bottomley
- Mr. F. J. Harding
- Sir J. Skeneburgh
- Sir G. Grindall
- Sir O. Davis
- Sir E. Wilson
- Mr. Grimsby-Gore
- Lord Lovat
- Mr. Amery

Downing Street,

11 July, 1928.

Amery's

Sir

I have the honor to refer to the Colonial Secretary's ^{note} of the 28th May, 1928, (No. 11168) ^{note} to inform you that I assume that the Report of the Special Committee on the Organisation of Agricultural Education for Africans ^{is in accordance with the instructions} is the Report referred to in para. 12 of your despatch No. 702 of the 31st October, 1927.

DRAFT

KENYA

No. 1484

Gov.

(K. 10394/27
No. 4)

2. I propose to refer this

Report to the Advisory Committee on Native Education for ^{their} your consideration, and I shall therefore be glad to receive ^{at an early date} your comments ^{upon it} as promised in ~~your despatch already referred to~~

*sub copy of this
on 10.5.28*

I shall also be glad to be furnished with six further copies of the Report for

THE SECRETARIAT,

NAIROBI,

KENYA.

Pub. 1/1/68

28th May 1928.

The Colonial Secretary of the Colony and Protectorate of Kenya presents his compliments to the Under Secretary of State for the Colonies and has the honour to transmit twelve copies of the following papers:-

separate.

His Excellency the Governor's Speech to Legislative Council on the 18th May, 1928;

Summary of Local Native Funds Accounts for 1927;

Statement of the Colony's Financial Position as at the 30th April 1928;

Summary of Closer Settlement proposals 1928;

Report of a Special Committee on the Organization of Agricultural Education for Africans;

Statement of Colonial Loans - May 1928;

Report on the Fishing Survey of Lake Victoria 1927-1928, by Mr. Michael Graham and Statement of Cost of the survey.

REPORT OF THE COMMITTEE

The Committee appointed by His Excellency the Acting Governor was finally constituted as follows:-

Chief Native Commissioner - Chairman

Director of Education.

Acting Director of Agriculture.

Hon. W.F.G. Campbell, Acting Provincial Commissioner, Ukamba.

Hon. Conway Harvey.

Hon. E.O.B. Wilson.

M. MacLellan Wilson, Esq.

A.R. Barlow, Esq.

2. The terms of reference were:-

"to consider and advise as to the lines to be pursued for the better organisation of Agricultural Education for Africans, and the funds from which such assistance should be given."

Owing to the many calls upon the time of individual members and the distance from Nairobi at which some of the unofficial members of the Committee reside, it has been very difficult to arrange meetings, and in no case was it possible to secure a full attendance, but every member has attended one or more meetings.

The Director of Education furnished a memorandum, of which a copy is attached to this Report. The Committee is in general agreement with the conclusions and with the recommendations contained in paragraph 11 of the memorandum.

Mr. J.J. Dougall, Headmaster of the James Town Training School, Kabete, and Mr. G.A. Grievie, Principal of the Alliance High School, were good enough to attend before the Committee and express their views.

The present position is that specialised training in agriculture is not given at any Government School or at any related school under the control of the Education Department, and the education at present given at such schools tends to disorientate the natives from the land by reason of the transfer of the

particularly in non-native areas, for carpenters, masons, clerks and teachers. The only places in which special agricultural training is given at present are the Scott Laboratories in Nairobi, and the Native Agricultural Farm at Bukuru, North Rift valley, both of which institutions are controlled and staffed by the Agricultural Department for the purpose of training native contractors in Agriculture. A note by the Acting Director of Agriculture on the work done at those institutions is attached hereto.

The native population of Kenya Colony contains probably 250,000 boys of ordinary school age, and it is therefore necessary to realise (and above all to make the people realise) that only a very small proportion of that number can be absorbed into clerical posts or technical professions. The destiny of the majority must be that of an agricultural and pastoral people, making a living by the cultivation of the soil and by the use of their hands, and the principal means by which an income above the average is to be ensured will be by the acquirement of a superior skill in the use of the land, or in manual occupations generally. Therefore, the education to be provided for the improvement of the mass of the people must be adapted to these conditions, and the "three Rs" are of importance primarily in so far as they are ancillary to practical industry.

It is essential that this practical training should begin at the earliest age, and the Committee therefore recommends unanimously that agricultural instruction should form an integral and compulsory part of the curriculum in all elementary schools for Africans in rural areas; that is to say, in schools in which pupils will, under a complete scheme of education, receive instruction up to the age of about 12 years. Up to this point agricultural instruction should be given equally to both boys and girls, an appropriate division of labour being effected where necessary between the sexes in the practical field work. (Beyond this stage, agricultural instruction for girls will be necessary only in the case of those being trained

Recd. 1
 at
 No. 1

trained as school teachers). It is an obvious corollary to the recommendation that all native teachers to be trained for work in village schools must be qualified to give instruction in simple agriculture and to conduct a demonstration plot, and therefore agriculture, up to a certain point, must form part of the training of every native teacher.

9. Schools are divided by the Education Department into the following classes:-

Form	Age	Below 6	6-7	8	9	10	11	12	13	14	15	16	17
Standards	Sub- Standards			I, II	III, IV	V	VI, VII						
Grade of School			A		B		C						
Stage of Education			ELEMENTARY					SECONDARY					

Owing to the relatively advanced age at which Africans come to school, the classification according to age is rather than real, and does not correspond with the age of pupils now at school.

10. The Committee was informed by the Director of Education that in most secondary schools (that is to say schools in which pupils receive education between the ages 12 and 17) general instruction, which includes simple agriculture, is given for the first two years, after which period vocational training commences, but at present the vocational training given at such schools consists only of carpentry, masonry or commercial subjects, and does not include agriculture. At the Church of Scotland Mission School at Mkwinda the work of hospital orderlies is also taught.

11. The questions that have, therefore, presented themselves to the Committee are:-

- (a) is it necessary, that agricultural instruction be given to African boys beyond that which they receive during their first two years in a secondary school;
- (b) if so, what should that instruction consist of, and by whom and where should it be given;
- (c) what should be the object in view in giving such instruction;
- (d) should it be given at the expense of the State or community or at the private expense of the pupil.

Recommendation No. 2

12. After considerable discussion, the Committee unanimously came to the conclusion that agricultural instruction should be retained in the schools, and should remain the function of the Education Department for all boys up to the age of about 17 years. Unless made clear to the native population, which is still seeking education, that Government attaches equal value to agricultural training at least equal to that accorded to carpentry, masonry, or literary education, the native population will continue to regard manual work, such as crop production or animal husbandry as being suitable only for "uneducated" people, and the rising generation will be encouraged in what is their present tendency, namely, to regard all education largely as a means whereby the native may live a life of comparative ease, and may become an inferior being, characterized by the wearing of European clothes and a desire for authority, who is reluctant to put his hands by labour in the fields.

13. In view of the customary system of agriculture among the agricultural tribes, whereby occupation is exercised over comparatively small holdings by families and individuals, it seems manifest that only in exceptional cases can an individual native conduct farming operations on his own land on a scale of any magnitude, and that for many years to come the agricultural instruction which could

to be given at a secondary school should, therefore, suffice to enable any native, who is really anxious and willing to do so, to raise crops and livestock with a degree of skill and economic value superior to that which is to be found in any native reserve at the present time. The Committee, therefore, recommends that agricultural instruction at all secondary schools for native boys should be given by qualified European instructors whose functions would be:-

- (a) to give more advanced agricultural training to boys between the ages of about 14 and 17 years of age who have been selected for it;
- (b) to give the necessary instruction in agriculture to native teachers who are in training, in order that they may take charge of elementary schools;
- (c) to inspect the agricultural work done at elementary schools in the neighbourhood.

The Committee would emphasise that the essential background of such instruction should be a close study of local conditions and a knowledge of the existing native methods of agriculture.

14. It would not be possible for a single European instructor to give personal attention to all the boys in a secondary school. It is considered that the single agricultural teaching to the boys between 14 and 17 years of age should be given by native teachers who have passed as competent.

15. The Committee, with one exception, considers that the practical agricultural work at elementary and secondary schools should be confined to demonstration and instruction in methods and crops which have been tested, and of which the success is, under normal conditions, uncertain. In view of the opposition which has to be met with from conservative natives, both male and female, of the old generation.

Recommendation No. 4

Recommendation No. 4

Recommendation No. 4

generation, who have an innate antipathy to all innovations, we feel that it would be a mistake to conduct agricultural experiments, the failure of which might give rise to doubt in the minds of young pupils as to the competence of the instructor, and would be regarded by the old-fashioned villagers as proof that the white man's new-fangled methods were inferior to the time-honoured native customs of cultivation.

Mr. Barlow is of the opinion that simple experimental work, carried out with discretion, is a necessary and desirable accompaniment of agricultural instruction in schools, both for its educative value, as being the means of ascertaining what methods and appliances are best suited to local conditions, and of progressively improving the same.

16. It is clear that all education must be subordinate to a definite project, and that it must be at rendering the pupil more efficient to his share in the development of the Colony and to become a more useful member of society, whether he serves his community in a native reserve or enters into the life of the Colony in a non-native area.

17. The Committee is satisfied that the example afforded by crops grown under instruction has had the effect of improving agriculture generally in the neighbouring native reserves.

18. Under the scheme now proposed by the Committee the native boy would receive the rudiments of literacy education, combined with simple practical agriculture, at a village school. At the age of about 12 he would go on to a secondary school at which he would receive general vocational training, with appropriate literary instruction up to the age of about 14. That training would

would embrace not only agriculture, but simple carpentry and perhaps masonry. At the age of 14, if he desires to continue his education, he must enter upon some form of vocational training, either agricultural, industrial or commercial. Where the training is of a kind to which apprenticeship is appropriate, we consider that the pupil should be required to apprentice himself for a term not less than 3 years.

Recommendation
No. 5.

19. It is, therefore, necessary that every secondary school be provided with a sufficient area of agricultural land and with the necessary equipment for practical husbandry.

20. The boy who leaves school at 14 or 15 should by that time have developed into an intelligent worker who would be a useful apprentice in any industry, whether under a private employer or in a Government Department such as Public Works Department, Railway or the Forest Department.

Recommendation
No. 7.

21. We consider that in order to carry out the policy advocated in this report the Education Department should employ the necessary qualified European agricultural instructors in secondary schools. In devising the scope of such training and the work to be done in such schools the Director of Education should act in consultation with the Director of Agriculture.

Recommendation
No. 8.

22. The Committee is of opinion that all boys remaining on in school after the age of 14 should not only be apprenticed, but should also pay fees, for it is the only method by which a native can be made to attach proper value to the service that is being rendered to him. Where no fees are paid boys would in some cases remain on at school merely to put in time and avoid having to work for their living, and others, after remaining for a short time, would run away if they found the discipline irksome. If the parent of a boy over 14 is unwilling to pay a small fee for his son's education, it means that neither he nor his son is going to attach any real value to his schooling, and the time and labour

labour devoted by the school authorities to such boys will be wasted. Any intelligent boy should be capable of absorbing all that is necessary to the ordinary education in the way of simple education by the time he is 15. If the State will, therefore, have fulfilled its duty. Those who desire special training after that age should be trained if available, at their own expense. It may be that the Native Councils will be willing to vote money for scholarships or for contributions to schools, but to enable the fee payable by the public to be a small one, but we are definitely of the opinion that the pupil himself or his parent must pay a small amount.

23. Up to this point we have dealt with those who desire to fit himself for private enterprise or more efficient work as an employee. It is suggested however, by the Acting Director of Agriculture, that for the improvement of agriculture generally, it is necessary to continue provision for the training of natives for work as agricultural instructors in the reserves. The duties of these instructors are to tour the reserves, giving advice on agricultural subjects, cultivating demonstration plots for exhibition, and methods of cultivation and crops raised from selected seed. For this purpose the Committee suggest an institution, or institutions, should be established under the Agricultural Department at which a full course of agriculture, both theoretical and practical, should be taught, and that there should only be admitted to this institution boys of the age or about 17 who have completed their full 5 years' course at a secondary school. In no other way could a suitable class of native boys be found likely to achieve results in any way commensurate with the expense involved in the specialised training.

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given there.

We desire to stress the importance of teaching natives the economic side of agriculture. They must learn to calculate cost of production, costs of marketing, including transport, and to work out what crop will yield the greatest profit per acre. It follows from this that the produce raised on a farm-school should, for purposes of paying all the overhead charges, other than those which do not occur on an ordinary farm. It is, therefore, essential that pupils should cultivate individual plots as well as general school plots, and that they should themselves keep careful accounts of all costs of production and of the produce harvested, whether for feed or for sale.

Recommendation No. 12

Recommendation No. 13

25. We are of the opinion that fees or a definite premium should be charged to all pupils who enter the higher agricultural training institution, but at the same time we consider it essential that the salary attached to the posts for which these natives seek to qualify should be such as will attract a good class of native and give him an object worth working for. At present, native agricultural instructors are paid as low as 25/- per month, whereas regulations recently issued, governing the conditions of service of the Arab and African Clerical Service for the Colony and Protectorate of Kenya assign a salary of 22 -/- rising to 65/- for a learner clerk of between 14 and 16 years of age, and a salary of 150/- per month for a grade I clerk. We fear that unless agricultural instructors are paid on scales of salary at least equal to those of other native teachers, the native population will take these widely different rates of pay as an indication that Government considers that clerical and teaching posts are of the highest importance, and that agriculture is only a subject to be taken up as a last resource by the native who is not fit for anything else. Nothing, we are sure, could be further detrimental

Recommendation No. 14

the intention of Government, and we therefore urge the necessity of placing the posts of agricultural instructors on a basis which will give them the value, dignity and importance which they deserve.

26. In view of our recommendation that agriculture should form part of the curriculum in the ordinary secondary schools, we do not make any special recommendation as to finance, for that will be governed by the general policy of Government relating to all native secondary schools. The Committee is given to understand that the general principle is that native funds will bear the capital costs connected with such schools, and that Government will provide the equipment and teaching staff, but not clothing or food. We have, however, in paragraphs 22 and 25 made definite recommendations for the payment of fees.

The Committee, however, considers that the whole cost of the institution for higher agricultural training to be conducted by the Agricultural Department, should be provided on the Colonial Budget, and that natives who desire the training should be charged suitable fees, which would be credited to General Revenue.

- G. V. MAXWELL,
Chief Native Commissioner,
Chairman.
- J. R. OHR,
Director of Education.
- E. HARRISON,
Acting Director of Agriculture.
- W. F. G. CAMPBELL,
Acting Provincial Commissioner,
Ukamba.
- G. HARVEY.
- F. O. B. WILSON.
- W. MACLELLAN WILSON.
- A. RUFFELL BARLOW.

PARL. BY THE DEPT. OF AGRICULTURE
AGRICULTURAL EDUCATION.

At a recent meeting of the Government Committee appointed to advise on the best methods of improving agricultural education, the question was asked: "Is it not a fact that the effect of education is to draw people away from rural into urban areas?" The answer was unanimous, given in the affirmative. The reason is not far to seek. It is found in the allocation of values. It is in the city and not in the country that the best of human endeavour, the best of literature, of science and of art - is found. It is in a garret rather than in a cottage that famous writers have commenced their careers; it is in the well-equipped laboratories of University towns that scientists have won their fame; it is in the studios of Gilt Street or the Latin quarter of Paris that Art has been nurtured. Man seeks the best in wit, in learning and in art and selects in education those arts which will give him a place among the learned and cultured of his kind.

2. There is an old saying: Where the treasure is, there will the heart be also, and no treasure is greater than the pride of achievement. If therefore a child's mind is directed to a literary education as the path leads to distinction, if he is taught to value literary success, so long will he set a value upon abstract learning and despise practical. The main key to the situation - the mental direction of the child. Again, the great wish of every man is to escape from manual labour and to rule others by the power of his intellect. The ecclesiastic rose to power in the middle ages because he was a student; statesmen and politicians of today are often lawyers and philosophers who can sway the people by the logic of their arguments such as

Research, Lloyd George, labour. Agriculture is associated with manual labour, with dulness of mind and gaucherie, as the word "old farmer" shows. It is not shown in its true light as a practical and at the same time a highly intellectual and scientific pursuit, upon which a country's welfare is based.

3. In a country dependant entirely upon agriculture for its revenue, to allow education to give people a distaste for agricultural pursuits means ultimate ruin. Reconsideration of values is therefore required and a direction of children's studies. A child will naturally prefer those subjects which in the opinion of the community constitute progress. In these will lie his interests and upon these will his heart be set. So far these studies have not included agriculture, but if agriculture is to be the most important place in the curriculum of all schools it is the subject in which most marks can be gained and progress effected, the minds of the whole of the present generation will spontaneously turn towards agriculture. It must however be an essential and an important part of every school curriculum. If it is not, then the cleverest and most ambitious boys will turn to subjects upon which value is placed in the school and the Agricultural Department will get in their schools - as to their sorrow they are getting today - the stupidest boys who have not even made it to read and write. Hence we are opposed to placing schools under the Agricultural Department. We are opposed indeed to any divorce of agriculture from education. We urge that it be made a compulsory subject and the most important subject in all rural schools. There is hardly a lesson in the School syllabus which cannot be derived from agriculture - botany, physics, chemistry, physical, political and commercial geography, history, arithmetic, geometry, etc.

...and even the earliest subjects of manual writing.

4. In the public examinations held by the Ministry of Education, Kenya, agriculture is an optional subject from the village school to the School Certificate examination. For the organisation of curricula of the various schools the Department is indebted to Mr. Grieve of the Alliance High School and to Mr. Lyne Wat. of the Agricultural Department. Copies of these are attached. Some work has been made.

(a) Agriculture has not been made compulsory in Scottish schools of Kikuyu and Kamba areas alone.

(b) The practical work in the school-gardens is not carried out equally with other subjects. The school-gardens of individual schools are not well kept and the pupils do not take much interest in them. High marks, the importance of agriculture is not fully realized.

5. Agriculture at the Church of Scotland Mission, Kikuyu. - Apart from the bearers who are indentured to the mission or masonry, the day scholars of the Church of Scotland Mission Kikuyu are divided into two schools. The first has the large number of pupils attending. One school is held from 9 - 12 noon; the second from 1.30 - 4.30 p.m. Each school and girl has a plot the size of which is 10 x 10 or 11 yards by 11 yards. These plots are inspected by the European Agricultural Instructor and reports are given weekly.

6. Functions of the European instructor. - In view of the large number of classes the European instructor gives instruction to all the pupils. As an instructor he lectures only to the African teachers who give their lessons to their classes. Lessons are usually given on the crops of the season. He also visits the land...

schools attached to the Central School and gives areas for the plots.

8. Agriculture in Village Schools. - Where possible, pupils are allotted plots at the Village schools. Land, however, is not always obtainable and therefore pupils are encouraged to cultivate plots at their homes. These are inspected by the village school teacher and a record of progress kept.

9. Effect of Village School plots in improving agriculture. - In his evidence before the Committee, Mr. W.C. Dougall stressed the influence of the school plots in the Southern States of America on local agriculture. The next witness, Mr. G.A. Grieve, made a similar statement with regard to school plots among the kikuyu, and it would appear that school agriculture is closely related to that of the community. The plots are visible to all, the improvement is noticed and the teaching spreads. The following improvements have been noticed in communities neighbouring on Kikuyu Village Schools.

- (a) Mulching.
- (b) Banking up of potatoes.
- (c) The planting of one crop on an increased scale.
- (d) Planting each crop by itself.
- (e) Planting in straight rows.

From the evidence of both the above, it would therefore appear that the teaching of agriculture in the school has a far-reaching effect upon the agriculture of the surrounding community.

10. Size of plots. The size of plots varies according to the age of the pupils and may be 100, 80, 40, 20, 10, or 2 to the acre.

11. Conclusion and recommendations.

(a) Agriculture should be a compulsory subject in all schools of all grades and for all pupils other than those who specialise in a trade, e. g. carpentry.

(b) ...

(b) Agriculture should be a compulsory subject in all public examinations for candidates in rural areas.

(c) Practical work of the candidates on their plots should be inspected and marked equally with the paper on theory.

(d) Every Junior or Senior high school should have one European instructor who will

- (a) train teachers in agriculture.
- (b) teach pupils at the Junior High school.
- (c) Visit and award marks for plots at village schools.

(e) Local Native Councils should be advised to invite the agricultural Department to cultivate demonstration plots on a larger scale than is possible in schools.

(sgd) J. A. OAR.

DIRECTOR OF EDUCATION

2. 8. 1927.

SYLLABUS FOR STANDARDS I-IV IN AGRICULTURE
FOR CE-AT SCHOOLS

Size of Plots.

- Std. I. 5 1/2 yds x 5 1/2 yds = 160 plots per acre.
- Std. II. 5 1/2 yds x 11 yds = 80 plots per acre.
- Std. III. 11 yds x 11 yds = 40 plots per acre.
- Std. IV. 22 yds x 11 yds = 20 plots per acre.

Syllabus

Standard I.

Flower Gardens. Very young children in this class should be given flower gardens. These gardens should be near the school. At this stage children should be taught to plant in straight lines and circles. This will require much work by the teacher. The plants will be chiefly perennials, but annuals should also be planted; some gardens should be planted with vegetables and flower gardens will supply plants for school decoration for Nature Study and for Brackets.

Standard II.

Cultivation of local crops like maize, beans and potatoes; also introduction to the cultivation of European crops, like wheat, etc.

Standard III.

Continuation of the work of the previous class with the addition of experimental work of simple nature, e.g. rotation, manuring.

Standard IV.

Work of the previous class and carry out in rotation and manuring. Experiments should be taught where possible.

... and fruit planting (lemon, loquat), in a
... each pupil should have a Home Plot and a
School Plot, with directions to be sent frequently
by the teacher.

Sample Garden Experiments

In these experiments only carefully selected
seeds should be used. In fact, all the seed
planted at any time should be good selected seed.
If measurement is necessary so that every plot
may have the same amount.

1. Comparison of African and European Crops.

(a)	(b)
Maize	Beans
Beans	Beans
Potatoes	Potatoes
Mixed	Potatoes

Give out the same quantity
of seed to (a) and (b). In (a)
the seeds are planted African
way, in (b) they are planted in
separate beds in rows at
proper intervals. (a) is the
vated African way, (b) is the
European way.

Measure the harvests and compare the two systems.

2. Rotation.

- Plot 1. Beans following maize.
- 2. Beans following potatoes.
- 3. Beans following bush.

Do the same with
maize and potatoes in
all gardens, which
is the best rotation.

3. Manuring.

This experiment is the same as No. 2, except that
there are 18 gardens instead of 9 and one garden of
each crop is planted without manure and the other with
manure. The harvests are measured and results are
compared. Each standard plot should be given 10
lbs. of manure.

Agriculture

Syllabus 2.

Syllabus of Agriculture and Nature Study

Standard II

Plants that give us food. Plants that grow
in our gardens (weeds). Animals that help us. Animals
that spoil our work. Insect pests. Study this as

like rly, bee, trapels, etc. Maize stalk borer, etc.
etc.

Standard III.

The soil: proper cultivation, i.e., deep digging
(a) to let the roots travel far (b) to let the rain soak
in (c) to prevent soil erosion (d) to destroy insect
pests, Rotation, manuring, Seed selection.

Standard IV.

Dry farming i.e. (a) deep cultivation (b) frequent
cultivation (c) weedless lands, Rotation, manuring, Seed
selection, Irrigation, Agricultural Shows, Care of trees.

Note:- All classes will take part in weather studies. In
each school there will be a rain gauge and sun dial. The
stand made by scholars is to be placed above school.
Diagrams will be hung up showing daily records of rain,
rain etc.

Seed - Tables.

Each school will have a diagram of a field which
should be prepared thus:-

1. Long Plots.

Crop:	Seed per plot.	Distance between plots.	Distance between rows.
Maize	A. 100, B. 100	A. 10, B. 10	C. 10, D. 10
Sare (or) wheat, etc.			

2. Short Plots.

As above, but crop cannot be planted so
therefore make from tables.

ELEMENTARY SCHOOL CERTIFICATE

1st OR PREPARATORY CLASS. THEORETICAL

I. PLANTS.

- 1) Parts of a plant and their functions.
- 2) Nutrition and reproduction.
- 3) Identification of economic plants.
- 4) Diseases and pests, including animals and viruses.

II. SOILS AND TILLAGE.

- 1) Origin, formation and classification.
- 2) Tillage operations.
- 3) Farm soils, names and uses.
- 4) Farm implements, names and uses.

III. FORESTRY.

- 1) Identification of trees and their uses.
- 2) Establishments of woods, shelter belts and windbreaks.
- 3) Benefits derived from trees.

IV. STOCK.

(Cattle, Goats, Sheep and Pigs).

- 1) Identification of breeds and their uses.
- 2) Improvement of native herds.
- 3) Identification of forage crops and grasses.

V. Poultry.

- 1) Breeds, and identification.
- 2) Breeds and their uses.
- 3) Housing and feeding.

VI. FARM YARD.

- 1) Lay out of a farm with house and outbuildings.
- 2) Cattle barn.

VII. SUBSIDIARY.

- 1) Preparation of hides and skins for market.
- 2) Bookkeeping.

BOARD OF EXAMINERS, MEETING OF 25th JANUARY, 1927.

Minute 2 C and D. Syllabus drawn up by Messrs. Grieve and Lynde Watt.

JUNIOR SECONDARY SCHOOL CERTIFICATE

IInd OR SENIOR CLASS. THEORETICAL.

I SOILS.

- 1) Improvement by cultivation.
- 2) Conservation of natural moisture, etc.

II MANURES.

- 1) Principles of manuring.
- 2) Loma and green manure.

III CROPS

- 1) Selection of crops for climate and environment.
- 2) Duration or period of crops.
- 3) Rotation of crops.
- 4) Sowing, care and harvesting.
- 5) Preparation for market and values.
- 6) Uses.

IV WEEDS

- 1) Identification, classification and eradication.

V STOCK

- (Cattle, goats, sheep and pigs).
- 1) Improvement of grazing and browsing areas.
- 2) Care and management of livestock.
- 3) Diseases and their treatment.
- 4) Housing etc.

VI DAIRYING.

- 1) Milk production.
- 2) Milking and care of milk.

VII HORTICULTURE.

- 1) Identification of useful fruit trees.
- 2) Treatment and pruning.
- 3) Grafting and budding.

VIII ROAD MAKING & BRIDGE BUILDING.

- 1) Simple methods.

It became evident to the Government that some form of agricultural encouragement might be given to the tribes of Kavirondo with the object of increasing the productivity of their land, increasing the supply of a greater variety of better food and to improve the health of the natives as a result of the work entailed thereby.

Large numbers of natives have taken part in the development of European plantations and it has been possible for them to widen their outlook very considerably by such activities. It is however the case that the methods adopted by the European planters are not all applicable to the needs of the natives at their own homes, and the crops handled are not often those which the natives find it necessary to grow themselves for their own use and sale.

It was thought advisable to undertake a system of training for selected boys who later on might be fitted to reside in the Reserves and teach their fellows by word and example.

The centres were chosen for this work, one at the Scott Agricultural Laboratories and the other at Kevirondo, Kavirondo, and entrants for those schools are usually recommended by the Administrative Officers of their respective districts. It is our endeavour to have districts represented so that trained boys may be sent to all native agricultural parts and impart their knowledge to all native agricultural parts and impart their knowledge to all native agricultural parts and impart their knowledge to all native agricultural parts.

The apprentices are indentured for three years during that time they are acquainted with a very large variety of work and crops in the trial and demonstration plots. All practical work in the land is performed entirely by apprentices and such other operations which are essential in the management of such places. They are also given from the breaking-in stage to the cultivation by large and small ploughs. They sow, bind, reap and thresh all crops which

commonly grown at their own homes. Nursery work, poultry keeping, silk culture, storekeeping, roadwork and such other operations which are thought to be required in the Reserves. New crops and varieties of crops are regularly tried with the object of determining their suitability for Kenya.

It is preferred that boys who enter the school should first have passed the Government Vernacular Examination and having obtained this standard, they are more receptive to our teaching and able to devote a greater proportion of their time to the scientific study of the subject in the lecture room. Both in the classroom and the teaching in the field is framed to suit the peculiar conditions which prevail in the native areas.

Each pupil is allotted a school shamba and has to work it entirely during his own time in the evenings, so in this way he is able to apply his new knowledge. These shambas are also a valuable guide to the instructors of the progress being made by the individual boys.

The active regular life conducted at these schools, through the practical nature of the work and the drill, is a great asset to the physical condition of the boys and fits them better for the work which they have been trained in.

After completing this course of instruction the best boys are appointed as Native Agricultural Instructors in the reserves and work generally under the direction of the Agricultural Officer who is stationed at or near the Reserve.

The principles which we have to aim at are discussed in an article on Native Agriculture & Stock issued by the Agricultural Department (Their Bulletin No. 14).

Not alone may we consider the Agricultural Education of natives residing in agricultural reserves, but also the needs of those natives who live in pastoral areas. These needs are best met after education through training at native stock farms.

I am a little doubtful whether the ordinary education of a boy who is to return to his reserve should continue after his fifteenth year, and I would most certainly advise that at about that age, if deemed suitable, he should enter on training at a Stock farm or at a Farm School, if he is to be thoroughly grounded.

I attach syllabus of instruction and a timetable as arranged for a Farm School. As yet no native stock farms are in operation.

Sgd/ E. HARRISON

ACTING DIRECTOR OF AGRICULTURE

10th September, 1927

JUNIOR LECTURE CLASS.

1st Year.

1. Elementary Agricultural Botany.

Parts of the plant and their functions. Nutrition and reproduction. Identification of economic crops including forage and grasses.

2. Soils and Tillage.

Origin, formation and nature of soils. Farm tools and implements, their cost, construction, adjustments, care and uses.

3. Animal Husbandry. (Cattle, goats, sheep, poultry)

Parts of the animals, various breeds, characteristics and uses. Feeds, care and maintenance. Improvement of native stock.

4. Farm Diseases and Pests.

Elementary instruction in plant diseases and pests, including insects, birds.

5. Field Engineering.

Elementary manipulation, field measurement, layout of land.

Forestry.

Identification of trees, their uses and development, nursery work and establishment of shelter belts and ornamental copses.

2nd & 3rd Years.

1. Crops.

Crops in relation to environment, climate, planting, lining out and spacing of various crops, rotations, improvement of seed by selection, duration, preparation for market, and various uses and destination.

Weeds and Parasitic Plants.

Identification, classification, and methods of control.

3. Soils.

Composition, physical structure and classification.

Tillage and Soil Improvement:

Tillage and practice: Principles underlying structure of tillage, preparation of seed bed, conservation of moisture, surface mulch.

5. Manures

Principles of manuring, animal, vegetable and artificial manures, their application and rotations.

6. Field Engineering

Construction of grain stores, silos, etc., grain and measurement of land, layout of homestead.

7. Animal Husbandry (Cattle, sheep, goats & poultry)

Care, feeding and management of livestock, diseases and treatment, housing, control, improvement of grazing areas, culling of flocks, milking, care and use of milk, how to make, and marketing of animal produce.

FIELD DEMONSTRATION AND PRACTICE - JOURNAL OF THE
AND ROUTINE

Students are required to understand and conduct all field operations in use, such as ploughing, sowing, clearing, harvesting, threshing and storing, and each boy is allotted a certain period with operations such as ploughing with oxen, harrowing, rolling, cultivating, ridging and drilling. Handwork in the field includes digging, forking, weeding, sowing, lining out, planting of various crops, harvesting, threshing, selection of seed and seed storage, nursery work, the raising and transplanting of seedlings, reproduction by cuttings, grafting, budding, care of nursery and general horticultural practice, hedging, pruning and maintenance of trees. Lectures and demonstrations among crops in the field.

In the 4th year selected boys are put in charge of squads on the property to undertake all operations, and from time to time are used in the reserve. They study prices, money, forms of transport, markets, elementary economics, taxation, cooperation, development of reserves.

DEPARTMENT OF AGRICULTURE

TABLE 2. SYLLABUS

ECOTE LABORATORY AND BUKURA SCHOOLS

HOURS PER WEEK

	Drill	School Subjects Reading, Writing, Arithmetic, etc.	Practical Instruction in school or on stables	General Education work in stables
Junior Class	3			
2nd Year	3			
3rd Year	3			17

HOURS IN SCHOOL.

	6.30 to 7	8 to 12	1
	Drill		
Monday	all	3rd year class	2nd & 1st class
Tuesday	all	1st " " "	1st " " "
Wednesday	all	3rd " " "	3rd " " "
Thursday	all	2nd " " "	2nd " " "
Friday	all	3rd " " "	3rd " " "
Saturday	all	Routine - all classes	