

1928

Kenya

No. 15146

SUBJECT

C0533/377

Memorandum on Native
Progress 1927

Previous:



Subsequent:

Mr. B. H. ...
Dear Sir,

This is very interesting, I had
hitherto not seen it. But on a little
doubtful about taking the initiative
in circulating it freely among M.P.'s.
One of the main criticisms against
Kenya is that the natives are taxed
(a) to make the work & (b) that
the proceeds are not spent on the
or for their benefit.

Copy returned
to Mr. Cromley Govt.

10/3/28

Mr. ... said "the scope of
outside labor
would also cover
... the amount
has been so low."

"N.P.P. ... that
the pamphlet does
claim to cover for
Govt."

It is I think
concerned to
the point that
there is no
mention of
direct native
production.

On p. 12 there is produced
cogent evidence that direct taxation
is a high proportion of the amount
earned - wages and throughout the
pamphlet there is nothing said of what
the Government is doing to meet the
educational, medical, agricultural &
recreational needs of the natives. The
pamphlet is blandly unconscious
that the Govt is expected to have duties
in these directions - at any rate
labour opinion here. If the S.P.'s of his
own initiative circulates this he will be
regarded as imbued with the same
outlook, & as not recognizing that the
pamphlet does not cover the whole functions
of Government towards the native. But worse
than that - the pamphlet will fail to convey
as well as the Govt's attitude & will therefore
chiefly be used as material for further attack.

(Should like to see)

(We ought however to have further
... the ...)

18.2.28



4 3
GOVERNMENT HOUSE,
NAIROBI,
KENYA.

KENYA

No. 23

AS

18th April, 1928.

CONFIDENTIAL

RECEIVED
18 MAY 1928
C.L. OFFICE

Sir,

N^o 2
With reference to your Despatch
Confidential of the 9th March, 1928, I
have the honour to transmit, as requested,
six copies of the Colonial Secretary's
"Memorandum on Native Progress, 1927" -
dated the 16th January, 1928.

Memorandum
Separate

I have the honour to be,

Sir,

Your most obedient, humble servant,

J. W. D. L.

A GOVERNOR.

THE RIGHT HONOURABLE
LIEUTENANT COLONEL L. C. M. S. AMERY, P.C., M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON.



COLONY AND PROTECTORATE OF KENYA

MEMORANDUM
ON
NATIVE PROGRESS
1927

NAIROBI
PRINTED BY THE GOVERNMENT PRINTER
1927

The Progress of the Native
1927.

THE PROGRESS OF THE NATIVE 1927.

We hear so much to-day of the progress of European settlement that attention is perhaps not sufficiently called to the very remarkable progress which has taken place amongst natives during the last few years.

In the memorandum which has been prepared by the sub-committee of the Kaimondo Taxpayers' Welfare Association for presentation to the Closer Union Commission, it is stated that: "We would beg the Commission to believe that we are fully conscious of the many and great benefits which the British nation has brought to our land. It has taught us to aspire to better things than our fathers handed on to us; better housing; better cooking and better administration. We are now, through being natives of Kenya Colony, British subjects and had grown up in a white thirty-five year old there was a great deal of progress."

development in native life... are now... the last twenty years... that... the... people of... their... which... time... and... after... his own... rather... than...

The East African native has not so such traditions. In many respects he is still "a savage" and he has no past civilization which to compare that with which he is now connected. For him there is a complete gulf between consigning his dead to the hyenas and burying them in graves.

which can only be judged by the complete abandonment of all the traditions of the past. He is passing in the course of a year or two from what was practically primitive material to a few rough seams to a complete European costume. In the matter of decomposed flesh and grains to tinned foods and vegetables and from an age in which it was not safe for a child to step past his enemy should learn his residence from a sign posted in the road unattended on any road, to a state where his only visitor as a traveller throughout the country has a being, run to by motor transport possibly to visit a fellow tribesman.

It is doubtful whether in any age any race has more rapidly absorbed the ideas of civilization and one which presents a more rapid change of customs.

The material of the past is to be traced in the ethnology of the tribes. The material of the past is now the material of the future generation.

What are the conditions of life for the native are under the influence of the white man it is only to be expected that the native will be attracted as a natural and efficient force to the white man.

It is dealing with the practical aspirations of the native and the possible outcome of the future modern civilization may be useful to us on account of the changes which are taking place in the native conditions as evidenced in the progress of the past.

Material

It is to be expected that the material may be expected considerable changes in the material. Corrugated iron is rapidly becoming the material of the future. The first substitute for the material of the past were the first houses in the native villages. In the native villages some 20 houses in the native villages are built of mud or all or at least in most of the native villages of the last five years. In the native villages the material houses are constructed of mud or all or at least in most of the native villages of the last five years. The material houses are not infrequently undertaken by the white man. The material houses are going up in all directions. The material houses from Mombasa town it appears to be the material houses of the last five years as compared with the material houses of the last five years. The material houses are a noteworthy feature in native villages both in the towns and in the villages, is the construction

and living out of flower and vegetable gardens, while the material houses are built at a distance from the house.

In the District there has not been very much change from the old wattle and daub hut, but there are signs of improved ventilation, better flooring and increased accommodation. In the Kamiti district it is reported that in the native villages there are five stone houses with corrugated iron roofs—one double-storied—eighteen brick houses with corrugated iron roofs and forty wood and iron houses. The majority of these have cement floors and each has a latrine, a kitchen and a small flower garden. There are said to be approximately a thousand mud and wattle houses with reinvent of corrugated iron and windows.

From the Machakos reserve it is reported there are about three hundred houses, many of which are built of burnt bricks and most of which are roofed with corrugated iron or flattened kerosene tins and have at least four rooms.

In the Fort Hall district there is an increasing demand for bricks, and twenty natives, including eight prisoners, are now receiving training as brick makers. One Mission reports that it has a company of four natives who are turning out 11 hundred standard bricks (size 7 1/2 x 9 in x 1 1/2 in) for other natives at about 3 cents each and doing very well at it.

Housing most of course largely by the question of expense and presents a considerable item in expenditure for a villager, so that changes in this direction must necessarily be slow.

Furniture—Remarkable changes are taking place in the furnishing of houses which I think be best illustrated by giving here inventories which have been made of

at House of a Native Christian in Nairobi

- Four roomed house, with kitchen. Cement floor throughout.
- Living room, 3 chairs, 2 tables, gramophone, about 50 records, 6 pictures (including H.M. the King), 2 game heads on shields, 2 bangles, 1 book shelf, about 50 English novels, clock, 2 trinkets.
- Bedroom, Double 4 post bed, with mosquito curtain, 1 small table with white cloths, wooden trunk, accordion, 3 pictures, 2 pairs women's shoes, 2 pairs men's shoes.

a gulf which can only be bridged by the complete abandonment of all the traditions of the past. He is passing in the course of a year or two from what was practically primitive habits to a few rough signs of a complete European costume.

From a diet of decomposed flesh and grains to tinned foods and cereals and from an age in which it was not safe for a man to stop for the least his enemy should learn his residence long a way before he is reached unattended on any road, to a car which has only changed as a traveller throughout the country from a being run over by motor transport possibly a few yards a fellow tribesman.

It is doubtful whether in any age any race has more rapidly succeeded in the construction and one which presents a more rapid change in its habits.

The houses of the natives are made of mud. The Kumbungu houses are built of mud. The houses of the natives are made of mud. The houses of the natives are made of mud.

Some of the houses are built for the native are made of mud. The houses of the natives are made of mud. The houses of the natives are made of mud.

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A House of a South Christian in Nairobi

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Living room: 3 chairs, 2 tables, gramophone, about 50 records, 6 pictures (including H.M. the King), 2 game heads on shelves, 2 trunks, 1 book shelf, about 50 English novels, clock, 2 tumbler.

Bedroom: Double 4 post bed, with mosquito curtain, 2 small tables with white cloths, wooden trunk, accordion, 3 pictures, 2 pairs women's shoes, 2 pairs men's shoes.

... during the last few years have been of the kind and material formerly kind of European clothing, and at the same time. The uses of waxed and European material, as some at Nandi, look to be of a very high quality. One of the most interesting states that in 1921 he sold a pair of waxed shoes worth 10 shillings and had nothing to show for it but a pair of sandals.

clothing. The majority prefer shirts and shorts—some add shoes and stockings, and soft felt hats are in demand. From South Kavirondo similar changes are reported and it is stated that "Heathens say that their wives are always begging for garments." Umbrellas are reputed to have become very popular and there are probably a thousand of these in this district at the present time, while spectacles are also fashionable wear. There is practically no limit to the desire of the Nandi to dress up. Very few return from work with actually much hard cash, so all their earnings have been invested in European luxury. The clothes are used merely for show and are sometimes hired out to friends. Even among the pastoral tribes, such as the Lamelara and Nandi, it is reported that amongst the former the sale of caps and belts has more than doubled during the last few years, while 75 per cent of the Nandi own umbrellas, 40 per cent of the European clothes, and 20 per cent of the hats, and 10 per cent of the spectacles.

Customs figures show that imports of hats and shoes have tripled. Hats and shoes are stockings and hose quadrupled during the past five years and in 1922 the imported quantity of wool in blankets was used in the manufacture of 100,000 blankets. The quantity of blankets imported in 1922 was 100,000, a figure which has actually increased since 1914. Imports of hats and shoes have also increased eightfold during the same period.

The effect on the health of the natives of these changes in clothes is a matter to be very carefully watched. There is reason to believe that the material improvement in the increase of the natives no longer wrapping himself up in skins and animal skins, but wearing European-made clothes. The natives are generally very susceptible to cold, and the change to European-made clothes has been a great change to a frank and hearty one. It is now clear that when the natives first received clothes of thin cloth, cotton or wool, some died and many became ill.

From the changes which are taking place in the products of the natives, it is evident that a good effect on the physique of the native tribes, for as at diet is more becoming general and there is comparatively less work to do. While a person must for their life on at least once a week, while natives who can afford it obtain a rest daily. It is stated that the average unskilled labourer in Kavirondo consumes by spending a trifling amount of money a pair of staple food, such as maize meal and a little sugar, in a month an extra such as

advent of a car excites no comment. It might be either a patient for the Native Hospital or a chief on a visit, or a local shop-keeper bringing in supplies, or a passenger lorry loaded up with natives. It is reported that when the labour trains arrive at Kisumu, bringing back labourers from the Coast, there are often five or six lorries waiting to meet them and carry the occupants to their destinations in different parts of the district.

One effect of this increased use of motor transport amongst the natives has been to bring the tribes into much closer relationship with one another and to encourage natives to travel from one part of the Colony to the other. The numbers of native passengers on the Railway show a considerable increase. The Kenya and Uganda Railway give the following figures as representing the native passenger traffic in the Colony for 1922-1926:—

Native passengers conveyed by rail:

1922	449,848	1925	714,091
1923	563,898	1926	778,907
1924	646,273	1927	851,136

The figures which have been given above show that the purchasing power of the native must have very considerably increased during the past few years to enable him to satisfy the new standards of comfort and the demands of a civilization in which he is ever endeavouring to participate.

The Senior Commissioner, Nyanza, writes: "As regards native purchasing power one gets some idea from the native registration figures. The average number of natives of North Kavirondo shown as out at work for the first four months of 1927 was 30,000 out of a total population of 300,000, and for Central Kavirondo was 23,000 out of approximately the same number. Assuming that they earned an average of Sh. 10 per mensem wages, this means that the wage-earning inhabitants of North Kavirondo earned Sh. 300,000 per mensem or Sh. 3,600,000 per annum, and of Central Kavirondo Sh. 230,000 per mensem or Sh. 2,760,000 per annum. The estimated Hut and Poll Tax of North Kavirondo is Sh. 1,280,000 and of Central Kavirondo is Sh. 1,500,000—so that the wages alone would cover the whole direct taxation and leave a substantial balance.

"In Lumumba district the average number out at work is 9,000. Assuming an average wage of Sh. 10 this gives a monthly wages receipt of Sh. 90,000, and over a million

shillings annually. The actual Hut and Poll Tax collection is Sh. 250,000, leaving three-quarters of a million shillings for other purposes. Most of the money goes in goats and sheep. These calculations may be equally applied to other reserves supplying labour.

In an Appendix a statement is given of the number of Africans employed in Government Departments and in various trades and industries, as far as it has been possible to collate these figures; also the rates of wages paid to natives; the highest salaries at present drawn in Government Service by natives; and the amounts paid out in cash to natives generally and in domestic service in particular, in the Nairobi district.

Sport.—Another bond of fellowship between Africans is that of sport. Bishop Weldon once remarked that "Christianity and football would save Africa." It is certainly the case that Association football has now obtained a very strong hold on the African. An African Football Association was formed in 1922 and there are at present fourteen teams registered in Nairobi and seven in Kiamlū, while there are twelve clubs in Mombasa and it is not uncommon for as many as 2,000 natives to attend a game of football. Most missions have their football teams and one missionary reports that while camping out in a native reserve he was called upon to repair about twenty footballs brought in by Natives.

Olympic games are now held annually at Nairobi, which are open to Africans of all tribes and bring together a considerable number of natives.

Litigation.—In the East litigation is regarded as perhaps the most popular recreation and amusement which increased wealth allows the native. The engagement of a barrister, the expenditure of heavy costs in a law suit, an appeal to the Supreme Court and if possible the prolongation of a case over a number of years with the expenditure of a vast amount of oratory are regarded by natives in the East as evidence of wealth and as displays of ostentation and extravagance which give them a standing amongst their fellows well worth the trouble and expenditure involved.

Fortunately in Africa there are few signs of the native at present adopting this wasteful form of expenditure.

It is perhaps one of the best features in African life that the villager is to-day quite content to bring his *shauri* before a Council of Elders and to accept their decisions. The number

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It is perhaps one of the best features in African life that the villager is to-day quite content to bring his *shauri* before a Council of Elders and to accept their decisions. The number

of cases filed by natives in the Supreme Court in 1926 was six, while there were no land cases. In the Resident Magistrate's Court, Nairobi, there were 150 civil suits. There has been some increase in the number of civil cases instituted in the Mombasa Courts and in the Civil Court at Eldoret. The subject-matter of these cases appears to be usually petty debts and it is reported from Eldoret that no petitions or land claims have been preferred in recent years, while from Kiambu district it is reported that civil suits brought before native tribunals are decreasing yearly. There were 2,176 in 1920 and 391 in 1927.

Administrative officers however point out that the habit of litigation is strongly ingrained in the native mind and report that the Kikuyu, Kavirondo and in particular the Kisuu are essentially litigious. One of the gravest dangers likely to arise in Kivu Africa is the spread of litigation by the introduction of a system of individual land tenure. Communal holdings, though they may retard agricultural progress, keep many of the old customs of village life and prevent land disputes between individuals, which would lead to family feuds which are so disastrous to the peace of the country. Considerable attention has been given by the Government at all times to the improvement of the courts and to ensuring that the decisions of the African and the Elders are in accordance with the laws which at the present time govern the country.

The Government have organized a system of native tribunals which are held in the various districts and are presided over by the District Commissioners or their representatives. These tribunals are held in the districts in which the majority of the cases are brought and are held in the open air. The tribunals are held in the districts in which the majority of the cases are brought and are held in the open air. The tribunals are held in the districts in which the majority of the cases are brought and are held in the open air.

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The absorbing question of whether the Government should be brought into touch with civilization is to be decided by the Government or himself and it possible an education at Nairobi for his

children. He sees every avenue of progress closed to him unless he can get an education and every advance beyond a low standard shut unless he can understand and speak the language of the Government.

The general spread of education throughout the country may be evidenced by a few statistics showing the remarkable increase which have taken place in schools and scholars during the last four years. In 1923 statistics of the total number of natives actually attending school were obtained from the Phelps-Stokes Commission. The total was given as 31,719. At the commencement of 1927 the estimate was put at 62,731 or an increase of more than 200 per cent. The Education Department puts the number of male natives of school age in Kenya at approximately 260,000.

The elementary schools for natives have increased from 227 in 1924 to 1,253 in 1927.

Special attention has been paid to technical instruction and the number of instructors in technical schools has advanced nearly doubled in the last five years, increasing from 15 to 28. The number of students has also increased from 150 to 250.

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It is quite impossible to keep in touch with the requirements and any establishment which is opened for teaching English to Africans can obtain hundreds of pupils. The native is also very anxious to be able to read the newspaper and to be able to write a letter to a friend. It is becoming increasingly common for natives to congregate round any person who can read aloud an English newspaper to them and they appear to have a partiality for newspapers published in England, especially of the more startling variety. The "News of the World" it is understood, has a large circulation.

Correspondence has increased very largely and postal revenue has benefited therefrom. Two to three hundred letters arrive per week for natives at the District Commissioner's Office in Central Kavirondo and in all the districts in the Nyanza Province there is said to be a considerable postal service in letters to and from natives.

A considerable number of the better educated natives take advantage of the cash-on-delivery system when ordering goods through the post. Telegrams are also regarded as a complimentary form of address and as attaching importance to the sender and the recipient.

The following English words are stated to be in common use in the Fort Hall Native Reserve—the list is noteworthy as showing the principal objects of interest which European civilisation affords to the native and the points of contact between the races.

Bicycle, shirt (shirt), collar, sock, koti (coat), pekshen (inspection), rami (rounds), court (High Court), kee (case), katrol (character roll, police), jela (gaol), mision, skul (school), Council, camp, bengi (bangle), lory, motokaa, dokitari, hospital, dressar, chief, headman, kapiten wa itira (captain), posta (post), football, tennis, sriket, judgi (judge), kubad (cupboard), manwari, miali, atina (teasener—used for a power station pumping engine), lain (line), telephone, boy, office, kalabu (club), quinine, petrol, pump, spanner, pilesi (brace and bit), D.C., etc.

All the dangers attendant upon literary education may be anticipated in Kenya and have to be avoided, but with the experience of other countries it is to be hoped that the education of natives in East Africa will progress steadily but slowly—and as far as possible on a vocational basis.

It is, however, quite clear that the natives are prepared to go to any lengths or any distance to secure education. It will probably be found the wisest course to establish an education based on the scholarship system open to the most intelligent boys from the village schools, limiting as strictly as possible entrance to any school that goes beyond an elementary standard. The demand for education in the native reserves has been given practical effect to by the sums of money which the Native Councils have shown themselves willing to vote for expenditure on this account. In a memorandum from the Senior Commissioner of the Kikuyu Province he writes—

"How many educated natives were there in Kiambu and Fort Hall districts twenty years ago? They could almost be counted on the fingers of two hands. Who will venture to count them now? But we may with some certainty prophesy that in twenty years time the great majority of the men and a large number of the women will have some smattering of education and that all the children, as a matter of course, will be attending some form of school. In less than two years native thought in the Kyambu district jumped from an expenditure of £500 on all schools in the district to provide from native cesses £11,800 for the purposes of education."

This demand is not confined to the more sophisticated and town-influenced areas. In a remote district such as Meru a minute of the Local Native Council records that:—

"Muthoika stated that he had built a school and requested that a teacher be supplied."

Administrative officers have pointed out that no longer can missions be left inadequately to meet the demand of the people. As Mr. J. H. Oldham has stated, "the material and moral advancement of the people must be furthered by positive measures. A constructive policy of education is required. Its aims must be far wider than the provision of clerks for Government offices and mechanics for the Railways and public works. It must include measures for elevating the life of the community through the improvement of agriculture, the development of native industries, the promotion of health, the training of the people in the management of their own affairs and the inculcation of true ideas of citizenship and of service to the community. Above all it must aim at providing the people with capable, well-trained and trustworthy leaders of their own race."

In any principle of federation it must be recognised that an educational policy for the African must be clearly defined which will ensure to him due regard to the claims he is now making upon the governing race.

A question for consideration is whether such schools as the James School for training teachers in Kenya and the Makerere College for higher vocational training in Uganda and like institutions in the other territories may not be conducted on a hostel basis, which will provide for the training of teachers and higher education being given at centres by the best staff available, instead of being scattered over a number of different schools in different parts of East Africa.

The educational field presents all the problems in the study of the African and there is room in it for the skilled psychologist and for workers in native research.

Education is so closely connected with Religion that it may be of interest to give some figures showing the progress of Christian missions in this Colony as supplied by the different missions.

The Church Missionary Society gives the number of the baptised, including communicants, in 1926, as 25,509 throughout Kenya and under instruction 19,000—a total of 44,509 as compared with the total of 26,474 in 1921, while the Roman Catholic Mission in Nairobi shows an increase of nearly threefold in the last seven years. The Salvation Army claims attendance at Services in December, 1927, in Nairobi, of approximately 5,000 as compared with 378 in January, 1923.

On the Coast Christianity has proved less successful than elsewhere in the Colony, owing to the greater prevalence of Mohammedanism, nor has there been any marked success amongst pastoral tribes.

In the Kiambu district it is stated that there are approximately 4,000 Christians attending classes regularly and using Christian services for baptism, marriage and burials. It is reported that all natives of this district now bury their dead instead of throwing them into the bush as in the past and the influence of Native Councils in this respect has been very marked.

In South Kavirondo there have been considerable increases amongst the Roman Catholic and Seventh Day Adventists' Mission converts.

Hymn singing throughout the Nyanza Province is a popular recreation.

The influence of Christianity is also noteworthy in the improved position of women generally and the greater care given to the children.

It is through Christian missions that the most successful efforts are likely to be made in the training of African women for domestic service, for which a special sum has been provided in the Estimates for 1928, while the Welfare centres are also undoubtedly affecting remarkable improvements in the general care of children and of the mothers at childbirth.

It is obvious that when such changes are taking place in native habits and customs and in the general trend of native thought there must be a strong undercurrent of Political thought which, though at present not reaching the stage of political agitation, is undoubtedly one of those elements of "divine discontent" which are regarded as so necessary to the progress of a race.

The memorandum from the Kavirondo Taxpayers' Welfare Association which was put forward for the consideration of the Commission shows that the natives is well aware of what is happening around him and that he is kept in touch with all developments in the Colony. In this connection it will be of interest to record the vows taken by members of this Association when it was first formed. They were as follows:

- I promise to keep the rules of the Association which have been duly authorised.
- I promise to plant one hundred trees about my dwelling and to tend the same and replace any that die.
- I promise to dig a proper sanitary pit and to prevent the breeding of flies as far as possible.
- I promise to kill as many rats as I can about my dwelling and to report at once if I find dead rats about.
- I promise not to defile streams, wells or water-holes.
- I promise not to aid or abet the marriage of immature girls under sixteen years of age.
- I promise not to defile milk with cows' urine.
- I promise not to provide myself and family with adequate beds and bedding.
- I promise to clean my clothes decently and to keep my clothing clean.
- I promise not to abuse beer.

Undoubtedly these Native Councils are performing a very useful work in the political education of the native, but it must be borne in mind that they cannot be regarded as yet as in any way representative political institutions. The ordinary native regards their as a Council of headmen appointed by Government to act for him as the best means of taking the natives out of spending their money. Though it is the case that officials members were elected and that every effort was made to ensure freedom of election, it has been generally found that the headmen, perhaps naturally being the most developed natives in the district, take command and that the officials are apt to adopt the attitude that they are not paid to work and therefore why should they? One district officer describes the attitude as generally being "khopal" in support of proposals put up by their chiefs. However, it may be generally said that a keen desire for progress and for the betterment of local conditions has been shown and though the many may not have been led to any great degree the few certainly have acquired education and knowledge. The developments which are going on in the result of Native Council work must all have their origin in the district.

It will probably be through the Native Councils that native political education in this colony somewhat on the lines of the franchise movement in South Africa will be evolved, though I am sure it will be better than what I have learnt of the latter movement as it is in Kenya is not very far behind what has taken place elsewhere. Mr. Fazan, the District Commissioner of the same district that it is interesting to note that while the questions involved were in the case of the "Franchise" territories about twenty times as large as those in the territories for the Machakos district in Kenya, yet the proportion used for afforestation, sanitation and medical services was approximately the same, nor do I note any very great difference at any point. Like us they seem to have very little provision for directing staff.

It will probably be found that the federation of East African territories may evolve a system of central councils to which representatives will be sent from the Local Native Councils of the different territories and the Kenya native representation may eventually be evolved from the Native Councils. At the present time while there is every desire to afford Africans every opportunity of representation in the Councils of Government the difficulty lies in the fact that there are practically none of any standing in the community who

have a knowledge of English which would enable them to participate in any of the discussions. It may be possible, however, to select representatives of the Local Native Councils to be chosen by them and bring them together for conferences in Nairobi, if it can be so arranged, at the same time as those held for the Senior Commissioners; when legislation as affecting natives can be explained to and discussed with them. It might be possible by this means to obtain some expression of opinion from Africans through a Central Native Council in regard to legislation affecting their interests.

Remarkable as these signs of progress are, care must be taken not to regard them as altogether typical of the general progress of the native. They are found chiefly amongst natives in towns and in the districts adjoining the towns. There is also a marked difference between the ultra-conservative pastoral tribes and the more advanced agricultural peoples. Some districts in Kenya and most native women have been little influenced up to the present by European civilization and it will probably be another decade before facts and figures can be given with regard to them such as have been cited above in respect of more advanced natives of this Colony. Again, it must be remembered even in respect of the so-called civilized native that while he may be civilized to-day he may be quite uncivilized to-morrow. The interpreter who—in a perfectly good European suit, a stiff collar, with wrist watch and every outward mark of civilization—has interpreted with dignity and apparent effectiveness at a baraza may later in the evening be one of the principal figures in a native "ngoma" where he will be conspicuous in paint and feathers, dancing and leaping in the air, jingling bracelets and anklets and giving vent to discordant howls.

Again, the personal boy or the station hand, clad in shorts and shirt and consuming the same food as his master, on safari will probably be one of the first to plunge into the body of an expiring hippo and emerge reeking with blood, waving a slice of meat which he has cut from the dying animal and which he proceeds to gorge without any attempt to cook or carve it according to the fashion he adopts in his master's house. The native returning from the station carrying on his back a "shop" box containing African articles of jewellery, a small mirror and razors, belt, sock suspenders and gay stockings, may be found on the day after his return to the reserve taking part in all the rites of a circumcison ceremony. Again, a teacher who has earned the commendation of the mission by

his exposition of a Christian text book may be found wearing charms to protect him, from a witch-doctor and muttering spells to preserve him from an encounter with a rival or a wild beast.

All associations are not progressive from the point of view of the politician. The Abakuria Tanganyika border tribes have a meeting twice a year called the "Nchama." It is confined to the elders, headmen, and "unyapara" of "Mlango." *Youths and men wearing clothes are excluded.* The chief subject of debate is believed to be the weather and the crops.

It must be further realised that while the native is quick at assimilating he does not always absorb and a little knowledge may easily be a very dangerous thing, as is evidenced by the case of a native who recently applied for a post in Government service and stated in his application: "I was educated at a mission school so I know all about God. I now want to join a Government office so that I may know all about government."

Another point which has to be borne in mind in dealing with any question affecting the natives of East Africa as a whole is the very great difference between the development of different tribes. In some parts of the territories the position of the chiefs is very strong and in fact unassailable. In Kenya generally power lies with the elders, and chiefs only emerge on account of special qualities which they show or, in rare cases, on some hereditary basis where a family has established a hold upon the tribes either through the personal prowess of many of its members or their skill as witch-doctors.

A spirit of leadership has to be instilled—what is wanted throughout all the native schools of East Africa at the present time is some form of character training and there are considerable openings for a development of the Boy Scout movement amongst the natives.

It must also be realised that very little will be effected generally if the women are not brought into the scheme of things. It has only been in the last two or three years that African women have been employed in Government hospitals or in any working capacity which has brought them into contact with European civilisation.

Domestic service throughout Kenya is with very few exceptions a profession for males only.

In the Kenya Estimates for 1928 appears for the first time a vote for the training of African women. The stoutest conservative amongst the Africans is the African woman. Very few of the influences which have been described in this memorandum have at present affected her or her outlook on life. She retains the fashion of her people, she prefers to undertake work which modern civilisation would regard as men's work.

As is shown in the memorandum put up by the Kavirondo Taxpayers' Welfare Association, where considerable pains are taken to explain that all the work is not done by the women, this is perfectly true—a very large proportion of the work is not done by the men and falls upon the women.

Advancing civilisation will no doubt have its effect on the women—it will show them the value of labour-saving devices while such work as child welfare and maternity centres are proving that infantile mortality can be checked. An appeal is thus made to the women through their children and as has happened in the East a native woman will probably accept European dress, European food, European education, for her children, while she would not desire any of them for herself.

A rivalry in infants' weights and infants' under-clothing may well lead to the emancipation, as we believe it, of the African woman.

At the present stage in the progress of natives in East Africa it is essential that nothing should be done to weaken the power and influence of those Europeans with whom they are brought into closest contact—the administrative officers and the missionaries who work amongst them.

It will be a long time before Africans can evolve any government of their own and it is essential that if they are ever to govern themselves they should realise what government means. It is to be hoped that federation proposals will allow the closest union between the different administrations as such, while at the same time giving each administration its own opportunities and its own field of work.

The participation of any native in any form of government at the present time can only be secured through nomination—and nomination, if it is to be acceptable to any race as an alternative for election, must be nomination by the High Commissioner of the Government, as the case may be, with the advice of those persons who are brought most directly into touch with the natives whose interests are to be represented.

Changes in housing, food, clothing, transport, etc., are inevitable, but unless their utility can be proved to the native they cannot survive. No native will take food or medicine because it is European if it makes him ill, but unfortunately when it comes to British institutions, such as our natural pride and prejudice, we are inclined to believe that even if our clothes, our foods, our medicines, our houses, our means of transport or even our religion may not be suited to native tastes, there must be a universal desire to receive the benefits of a British Parliamentary system. It may be that education and training are equally necessary to appreciate this Gift of the Gods.

EDWARD DENHAM.

Colonial Secretary.

January 16th, 1928.

APPENDIX I

The following Schedule shows the average number of adult male natives employed in the Colony in various trades and industries. The figures are taken from the Report of the Labour Commission, 1926, and the Agricultural Census, 1927 (with amendments in respect of the Railway and Prison figures which have been brought up to date).

*Agricultural and Pastoral Holdings ...	76,898
Kenya and Uganda Railway ---	
Construction ...	4,000
Maintenance ...	11,203
Marine ...	428
Fuel Cutting for Railway ...	1,013
Mines (Magadi) ...	880
Government Departments ...	12,890
Domestic Servants ...	22,400
Timber Industry ...	5,658
Firewood Industry ...	278
Building Trade ...	750
Wharfage, Lighterage and Harbour Works ...	2,270
Public Works Department Contractors ...	500
Prisoners ...	2,527
Missions ...	3,000
Townships (less labour already accounted for; i.e. shops, hickshaws, office boys, messengers, etc.)	15,800
	<hr/>
	160,433

*NOTE.—There are about 30,000 women and juveniles also employed on agricultural and pastoral holdings.

NATIVES HOLDING POSTS OF SPECIAL RESPONSIBILITY IN GOVERNMENT EMPLOYMENT WHOSE SALARIES ARE Shs. 150 PER MONTH OR OVER.

DEPARTMENT	No.	Highest Salary (Exclusive of Allowance)
Administration and Native Affairs	5	360/- p. m. Clerk.
Public Works	6	360/- p. m. Typist.
Post Office	15	360/- p. m. 3rd (old) grade clerk.
Agricultural and Veterinary	2	185/- p. m. Clerk.
Government Press	1	140/- p. m. Asst. Linotype Operator.
Police	14	240/- p. m. Driver - Special Class.
Forestry	5	340/- p. m. Asst. Forester - 1st Grade.
Public Works	4	320/- p. m. Assistant Mechanic.
Public Works	5	375/- p. m. Asst. Clerk.
Public Works	3	240/- p. m. Steward.
Public Works	2	300/- p. m. Asst. Clerk.
Public Works	1	300/- p. m. Asst. Clerk.
Public Works	2	240/- p. m. Asst. Clerk.
Public Works	24	240/- p. m. Asst. Clerk.

These posts are held by natives in the Government employment whose salaries are Shs. 150 or over.

MAXIMA AND MINIMA SALARIES OF NATIVES IN GOVERNMENT EMPLOYMENT (Shilling per month)

DEPARTMENT	Maximum	Rate	Minimum	Post
Public Works	360/-	Typist	6/- and above	Apprentice Office Boy.
Survey & Registration	140/-	Photo Printer	10/-	
Post Office	360/-	3rd (old) Grade Clerk	12/-	Runners Office Boy
Registrar General	150/-	Office Boy	20/-	
Administration and Native Affairs	350/-	Clerk	16/-	Office Boy
Agricultural	135/-	Clerk	6/- and above	Apprentice
Government Press	210/-	Assistant Linotype Operator	20/-	Labourer
Treasury	5/-	Office Boy	16/-	Office Boy
Police Department	120/-	Head Constable		Foot
Public Works	100/-	Driver	10/-	Driver
Public Works	85/-	Messman		Office Boy
Public Works	80/-	Steward		Steward
Public Works	70/-	Asst. Clerk		Office Boy
Public Works	60/-	Asst. Clerk		Office Boy
Public Works	50/-	Asst. Clerk		Office Boy
Public Works	40/-	Asst. Clerk		Office Boy
Public Works	30/-	Asst. Clerk		Office Boy
Public Works	20/-	Asst. Clerk		Office Boy
Public Works	10/-	Asst. Clerk		Office Boy

EMPLOYMENT OF NATIVES IN NAIROBI DISTRICT.

(Taken from a Return furnished in November, 1927).

NATIVES EMPLOYED BY	Number	Cost per month		Approx. average monthly wage
		Shs.	Shs.	
Europeans	9,065	249,943	27/50	
Asians	4,701	110,743	23/80	
Goans	411	9,378	22/80	
Government Departments	6,064	160,311	26/35	
Nairobi Corporation	646	12,105	18/70	
Total	20,227	542,500	25/80	

Of these 10,534 receive rations in addition to pay.
15,026 are housed by their employers.

There are employed in addition to these 322 women and 1,330 juveniles.

Included in the above summary are domestic servants as follows—

EMPLOYED BY	Number	Cost per month		Approx. average monthly wage
		Shs.	Shs.	
Europeans	4,701	129,017	27/44	
Asians	991	20,963	21/15	
Goans	318	6,571	20/63	

The value of domestic servants ranges in the case of those employed by Europeans from 8/- to 160/- per month. In the case of those employed by non-Europeans from 6/- to 50/- per month.

The annual outgoings in wages to natives therefore approximates £325,500 per annum.

(The value of rations issued is estimated at £30,000 per annum. This figure has not been worked out exactly yet.)

Outgoings in wages to domestic servants alone approximate £08,930, say, £94,000.

APPENDIX II.

Extract from a despatch from His Excellency the Governor to the Secretary of State upon the working of the Local Native Councils in this Colony with a memorandum by the Chief Native Commissioner.

1. Legislative sanction for the establishment of Local Native Councils was given in 1924 by an amendment to Chapter 129 of the Revised Laws of Kenya—The Native Authority Ordinance.

Power to establish Local Native Councils is given to the Governor-in-Council who may appoint the Administrative Officers of the district, official headmen and other natives to the Council provided that the natives of the area concerned may nominate for the Governor's approval, any suitable person, other than official headmen, to represent their interests.

An Administrative Officer of the district is president of the Council and all appointments to the Council are ordinarily for three years, but are terminable at the Governor's pleasure.

2. Meetings are held quarterly and a Local Native Council before the 1st December in any year may make and pass a resolution for the imposition of the local rate to be collected during the ensuing year. Such resolutions of the Council must be submitted to the Governor-in-Council and after his approval the refusal, neglect or other failure to comply with the resolution may, upon conviction by a Magistrate or a native tribunal, be punishable with a fine not exceeding £7 10s. and in default by three months or rigorous imprisonment not exceeding two months.

Resolutions may also be made and passed for the welfare and good government of the natives of the area in respect of purely local affairs. In particular they may be passed for the provision, maintenance and regulation of food and water supplies, forests, outspans, cattle dips, roads and bridges, public health, the use of land, education, markets and agriculture. Definitely restrictive resolutions may be passed in connection with native liquor, noxious plants and poisons, the carrying of arms, provocative or disobedient conduct, water pollution, destruction of timber, payment of legal dues, migration within the area, infectious diseases of man and beast, stolen property, etc. Again, resolutions may be introduced for the making or maintenance of beneficial communal works for the urgent repair of roads or railways or Government buildings, etc.; for paid labour on works of a public nature, for the prevention of loss of life or damage to property due to unforeseen causes and for paid transport of Govern-

ment servants and stores, subject to the provisos which the Ordinance lays down in the case of labour, i.e., that the Secretary of State's sanction is necessary to declare a work to be of a public nature, that no able-bodied man may be required to work for a longer period than sixty days in the year and only provided that he is in no other occupation and has not been employed for three out of the preceding twelve months.

3. Consequent upon the power to levy a rate a Local Native Council may establish a fund consisting of local native rates collected under the Ordinance, monies subscribed by the natives of the area for their common benefit and any other monies which may be lawfully paid into the fund. Ordinarily a receipt for these monies is given by the District Commissioner; accounts are kept in proper form and are subject to audit by the Colonial Auditor and may only be expended in pursuance of a resolution approved by the Governor-in-Council. Each year an annual statement showing the receipts and expenditure of the funds is laid on the table of Legislative Council. Annual Estimates and all other financial resolutions of the Local Native Councils are examined by a standing Sub-Committee of Executive Council consisting of the Chief Native Commissioner, the Treasurer and the unofficial member appointed to represent native interests and when passed by this Sub-Committee are presented to the Governor-in-Council for statutory approval.

4. By the end of the year 1925 Local Native Councils had been established in the following areas:

Province	Areas of Local Native Council
NYANZA	North Kavirondo.
	Central Kavirondp.
	South Kavirondo—Kisi and Bakoria
	South Kavirondo—Luo.
	Kericho.
KIKUYU	Nandi
	South Nyeri
	Meru
	Bimbu
	Fort Hall
URAMBA	Kyambu
	Marakos (including Kikumbuu)
	Kitui.
COAST	Teita (including Taveta)
	Digo
MALINDI	Malindi
MASAI	Masai Province.
KERIO	Elgero
	Marakwet
	West Suk.
	Barango—Tuken North
	Tuken South
	Pokoot

It will be noted that normally the area of a Native Council is co-extensive with the administrative district (or with that part of the district which is native reserved in which the Council is established; but that in two districts, South Kavirondo and Baringo, wherein the native population is not homogeneous, separate Councils have been established for the separate tribal divisions.

It will be observed also that up to the present time Councils have not been established amongst the tribes of the Northern Frontier Province and the Turkana District. These areas are sparsely occupied by nomadic pastoralists and, in the case of the Northern Frontier Province, by tribes of a higher ethnological standing than the other tribes of the Colony. The area is great and the country is somewhat unsettled and it has not been possible to make much progress in the development of these peoples, mainly owing to the constant movement of tribes southwards owing to incursions from Abyssinia and to the fact that in many cases they are spread over large areas in very small groups. But, granted the success of the policy of veterinary assistance which is being inaugurated, I anticipate that the institution will appeal to the outspoken though contentious Hamiliti tribes as the Somali, Borai and their congeners; while the Samburu are now taking advantage in increasing measure of veterinary services.

5. The size of the Councils varies from fifteen members (Nandi) to eighty-one (North Kavirondo).

The presidents of the Councils of North Kavirondo (81), Central Kavirondo (72), South Kavirondo-Luo (66) and South Kavirondo-Kisi and Bakoria (36) all report that the membership is too large and that their Councils are in consequence unwieldy. The numbers will be gradually reduced. The obstacle in the way of reduction is local jealousy; every location considers that it should be directly represented, not only by its official headman, but also by one or two unofficial members. Indirect representative status is a concept inadequately grasped.

6. Of the Councils enumerated above, the most prominent in deliberative activity appear to be those of Fort Hall and Kyambu, while the most conspicuous for the completion of public works and the provision of public services are probably those of Machakos and Central Kavirondo. The least efficient are perhaps those of the backward peoples of Kerio Province; of these the Senior Commissioner remarks: "The great difficulty is the inability of the old men to think in numbers. Anything over fifty is meaningless to them. Consequently finance is hard to explain to them."

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KIKUYU	South Nyanza. Meru. Limbu. Fort Hall.
KYAMBIA	Kyambu. Machakos (including Kikumubue). Kiara. Teta (including Taveta).
COAST	Digo. Malindi.
MASAI	Masai Province.
KERIO	Egeryo. Marakwet. West Suk. Baringo—Tuken North. Tuken South. Pokoot.

It will be noted that normally the area of a Native Council is co-extensive with the administrative district (or with that part of the district which is native reserve) in which the Council is established, but that in two districts, South Kavirondo and Baringo, wherein the native population is not homogeneous, separate Councils have been established for the separate tribal divisions.

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6. Of the Councils enumerated above, the most prominent in deliberative activity appear to be those of Fort Hall and Kyambu, while the most conspicuous for the completion of public works and the provision of public services are probably those of Machakos and Central Kavirondo. The least efficient are perhaps those of the backward peoples of Kerio Province; of these the Senior Commissioner remarks: "The great difficulty is the inability of the old men to think in numbers. Anything over fifty is meaningless to them. Consequently finance is hard to explain to them."

Without such safety valves, these aspirations tend to find distorted expression by way of illicit meetings of individuals with grievances against the established tribal organization. But, convinced though they are of the value of these institutions, Administrative Officers have pointed out certain considerable defects which it is hoped that time and advanced education will remedy.

The cumbersome and unwieldy dimensions of some Councils have been referred to above, as has also the inability of certain others to visualize any number in excess of fifty. Most Councils are reported to be lagging in a sense of financial responsibility—their members are apt to vote large sums for their own personal benefit and for that of their employees disregarding the fact that they are extricated with the expenditure of not their own, but their constituents' money.

They are also charged with instability. There is for example no guarantee that the voting of a sum of money for the maintenance of a dispensary for 1927 will be followed by a similar vote for 1928. This problem of securing continuity of policy is one which needs consideration.

A complaint frequently is that the Councils lack initiative and will go easily to their presidents.

The president of the Machakos Council writes:—

The Machakos Council has been too easily led. During my time as president I have endeavoured to impress upon members individually and collectively the supreme necessity of carefully weighing every point which comes before them and of being really the representatives of their people.

It is only fair, however, to say that on occasions a certain sturdy independence has been displayed by the Councils of the Masai, the Kikuyu and the Kavirondo.

Another criticism of the tribal institutions is usually articulated. The president of the Meru Council reports —

Unfortunately the elected members so far from being an Opposition are often of no influence and are even essentially inferior to the nominated members and acquiesce chorally to any suggestion that is put forward from any quarter.

The above mentioned defects are due to the limitations of the personal character of the Councilors and there is every reason to suppose that they will, to a certain extent, be remedied by experience and natural processes of development. There are, however, other directions in which also there is room for improvement. Recently there has been some dis-

satisfaction at the delay consequent upon (a) the statutory necessity of referring every resolution to the Governor-in-Council for approval, and (b) the interrelation of the Expenditure Estimates of Local Native Councils with those of the Colony. These restrictions the Councils are unable to comprehend and they have consequently on occasions been disappointed at what appears to them to be inexplicable inaction on the part of Government, when, for instance, having voted a sum of money for the building of a hospital or school they have learned that no advantage could be taken of the offer because the Colony's Estimator did not provide for the staffing and maintenance of the building if erected.

The problem is how to combine the contributions of these Local Councils with the increasing expenditure from Colonial Revenue on native services or the reserves. Reference to Schedule C of the first enclosure to this report shows such amounts as £3,690 contributed by the Machakos Local Native Council for the construction of roads, of £1,000 in the Central Kavirondo District for the reconstruction of bridges, of £300 for the building of dams in the Kipui District.

The total sum already voted by these Native Councils for further works such as the erection of schools, dispensaries, hospitals, the construction of roads and bridges and dams, etc., amounts to approximately £31,254 11s. (vide Schedules B and C). The value of all these contributions has to be carefully assessed in relation to the public works for the district and it is necessary to guard against any wasteful expenditure merely to satisfy a local native demand while on the other hand the advice and assistance of the Local Councils may be useful in determining the works to be undertaken.

Action is being taken to evolve a scheme for the expenditure of funds voted by Native Councils in conjunction with votes by Government for approved works. The whole question is involved in that of definitely allocating the proceeds of direct native taxation to works undertaken in the reserves which I now have under consideration.

REPORT ON LOCAL NATIVE COUNCILS.

A general report on Local Native Councils is given in Chapter III of my Annual Report for 1926, and a similar report will be found in Chapter III of my Annual Report for 1925.

2. The amendment of the Native Authority Ordinance, under which the Local Native Councils were established, was passed in 1924. Section 24 of the Ordinance (as now embodied in the bound volume of the Laws of Kenya) prescribes specific subjects for special consideration, but does not debar any other subject so long as it is one of purely local native administration. Section 25 authorises the levying of rates, subject to the approval of the Governor in Council, for general or special purposes.

3. During 1925 Local Native Councils were established in most native areas, and have proved remarkably successful on the whole. It has been especially noticeable how willing most Councils are to levy rates, particularly for medical and educational purposes. It has also been possible, through the medium of these Councils, to get agreement and support to measures for general social advancement which had previously been steadfastly opposed. By 1926, the Councils were getting more accustomed to their new duties, and the attached Schedules demonstrate the genuine appreciation of the responsibilities which devolve on them, and an honest desire to fulfil them.

4. There are now 23 Local Native Councils which have passed in an aggregate 174 resolutions—financial or otherwise—which have been submitted for approval by the Governor in Council. The law requires that every resolution passed under sections 24 and 25 shall be submitted to the Governor in Council, but in order not to take up the time of Executive Council unnecessarily over resolutions of an indefinite nature, it is the custom, where a subject merely comes up for discussion, to record on the minutes the general feeling of the Council, and to restrict the formal resolutions to those matters on which a definite authority of the Governor in Council is necessary to enable proper action to be taken. For instance, where a Local Native Council brings up a matter of some small difference of opinion between a native and a neighbouring landowner, and requests the District Commissioner to look into it, there is no need to trouble the Governor in Council in the matter, because the District Commissioner will take the necessary action under the authority which is already vested in him.

5. Three schedules are appended in which are shown, for His Excellency's information:—

- (a) resolutions which amount in effect to by-laws of a progressive nature;
- (b) money offered by Local Native Councils towards medical and educational services;
- (c) progressive works undertaken from Local Native funds.

G. V. MAXWELL,
Chief Native Commissioner.

SCHEDULE A.

RESOLUTIONS AMOUNTING TO BY-LAWS OF A PROGRESSIVE NATURE.

Nature of Resolution	Name of Councils passing Resolution
1. Restriction of female circumcision	Embu, Kyambu, Teita, Kitui.
2. Registration of native pagan marriages	C. Kavirondo, Fort Hall, Kitui, Teita.
3. Control of venereal disease	C. Kavirondo, S. Kavirondo (Luo and Kisii-Bakoria).
4. Conservation of Forests, tree planting	C. Kavirondo, S. Kavirondo (Luo and Kisii-Bakoria), Nandi, SeLumbwa, Machakos, Meru.
5. Controlling native reserve roads	Kyambu (Other Councils in Kikuyu Province are contemplating passing similar resolutions).
6. Enforcing burial of the dead	Fort Hall, Embu, Kyambu.
7. Ensuring the regular attendance of children in Government and Local Native Council Schools	Machakos, Teita, Kitui.
8. Opening of Trading Centres	Masai, Embu, Machakos.

REPORT ON LOCAL NATIVE COUNCILS.

A general report on Local Native Councils is given in Chapter III of my Annual Report for 1926, and a similar report will be found in Chapter III of my Annual Report for 1925.

2. The amendment of the Native Authority Ordinance, under which the Local Native Councils were established, was passed in 1924. Section 24 of the Ordinance (as now embodied in the bound volume of the Laws of Kenya) prescribes specific subjects for special consideration, but does not debar any other subject so long as it is one of purely local native administration. Section 25 authorises the levying of rates, subject to the approval of the Governor in Council, for general or special purposes.

3. During 1925 Local Native Councils were established in most native areas and have proved remarkably successful on the whole. It has been especially noticeable how willing most Councils are to levy rates, particularly for medical and educational purposes. It has also been possible, through the medium of these Councils, to get agreement and support to measures for general social advancement which had previously been steadfastly opposed. By 1926, the Councils were getting more accustomed to their new duties, and the attached Schedules demonstrate the genuine appreciation of the responsibilities which devolve on them, and an honest desire to fulfil them.

4. There are now 23 Local Native Councils which have passed in an aggregate 174 resolutions—financial or otherwise—which have been submitted for approval by the Governor in Council. The law requires that every resolution passed under sections 24 and 25 shall be submitted to the Governor in Council, but in order not to take up the time of Executive Council unnecessarily over resolutions of an indefinite nature it is the custom, where a subject merely comes up for discussion, to record on the minutes the general feeling of the Council, and to restrict the formal resolutions to those matters on which a definite authority of the Governor in Council is necessary to enable proper action to be taken. For instance, where a Local Native Council brings up a matter of some small difference of opinion between a native and a neighbouring landowner, and requests the District Commissioner to look into it, there is no need to trouble the Governor in Council in the matter, because the District Commissioner will take the necessary action under the authority which is already vested in him.

5. Three schedules are appended in which are shown, for His Excellency's information:—

- (a) resolutions which amount in effect to by-laws of a progressive nature;
- (b) money offered by Local Native Councils towards medical and educational services;
- (c) progressive works undertaken from Local Native funds.

G. V. MAXWELL,
Chief Native Commissioner.

SCHEDULE A.

RESOLUTIONS AMOUNTING TO BY-LAWS OF A PROGRESSIVE NATURE.

Nature of Resolution	Name of Councils passing Resolution
1. Restriction of female circumcision	Embu, Kyambu, Teita, Kitui.
2. Registration of native pagan marriages	C. Kavirondo, Fort Hall, Kitui, Teita.
3. Control of venereal disease	C. Kavirondo, S. Kavirondo (Luo and Kisi-Bakoria).
4. Conservation of Forests, tree planting	C. Kavirondo, S. Kavirondo (Luo and Kisi-Bakoria), Nandi, S. Lumbwa, Machakos, Meru.
5. Controlling native reserve roads	Kyambu (other Councils in Kikuyu Province are contemplating passing similar resolutions).
6. Enforcing burial of the dead	Fort Hall, Embu, Kyambu.
7. Ensuring the regular attendance of children in Government and Local Native Council Schools	Machakos, Teita, Kitui.
8. Opening of Trading Centres	Masai, Embu, Machakos.

40
SCHEDULE B

MONEY OFFERED BY LOCAL NATIVE COUNCILS TOWARDS MEDICAL AND EDUCATIONAL SERVICES

Name of Council	Amount voted	Purpose	Action taken
Machakos	Shs. 44,000	To build schools	Work in progress.
	35,000	To build dispensaries	do.
Kitui	12,000	To build schools	No action taken yet.
	6,000	To build dispensaries	Work in progress.
Masai	62,000	To build schools	Work completed.
	7,000	To build dispensaries	do.
N. Kavirondo	20,000	To build schools	Under consideration.
	4,000	Maternity Home	Under consideration.
S. Kavirondo	2,000	To build school	Under investigation.
C. Kavirondo	2,000	Yaws hospital	Started.
	40,000	Central school	Under consideration.
South Lunenburg	22,000	To build dispensaries	Work in progress.
	2,000	School, common room and refectory	Materials being purchased.
Nandi	12,000	Improvement to school buildings	Work in progress.
* Elgyo Marakwet	4,720	To build school	Under consideration.
* Fort Hall	40,000	Technical school	do.
Embu	9,340	Hospital	do.
* Kvaumbu	10,000	Agricultural school	Work in progress.
	30,000	Central school	Under consideration.
Meru	20,000	Dispensaries	Work in progress.
	20,000	do.	Four completed, two in hand.
* South Nyeri	20,000	Hospital	Under consideration.
Mahudi	13,700	Dispensaries and Motor Ambulance	Work in progress.
Digo	5,350	Dispensaries	do.

*NOTE: Schemes are being worked out with the Director of Education and Director of Medical and Sanitary Services with regard to monies voted or to be voted for educational and medical purposes, respectively.

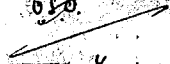
41
SCHEDULE C

WORKS OF PROGRESSIVE NATURE UNDERTAKEN WITH LOCAL NATIVE COUNCIL FUNDS

Name of Council	Amount voted	Nature of work	Progress report
Digo	Shs. 2,780	Construction of Dams	Work in progress.
Barigo III	2,000	do.	Report awaited from Hydraulic Engineer.
Machakos	2,000	do.	Work in progress.
Malindi	2,000	do.	do.
West Suk	2,000	do.	do.
Kitui	16,000	do.	do.
Masai	8,000	do.	do.
N. Kavirondo	12,951	Construction of Bridges	Work in progress.
S. Kavirondo	10,000	do.	Work to commence now.
Nandi	4,000	do.	Work in progress.
C. Kavirondo	20,000	do.	No action yet taken until scheme worked out in conjunction with Government funds.
C. Kavirondo	3,000	Construction of roads	Much useful work completed.
Machakos	73,000	do.	do.
Masai	12,000	do.	do.
Nandi	1,000	do.	do.
Tena	6,000	Construction of cattle dip	In progress.
S. Kavirondo (Kisii)	1,000	Construction of 'Factories'	Factory built.
Meru	3,000	do.	do.
Machakos	4,500	do.	Work closed down as uneconomical.
Masai	10,000	do.	Work in progress.
Kitui	4,600	do.	do.
West Suk	2,200	do.	do.
N. Kavirondo	3,200	do.	do.
Barigo III	2,350	Construction of flour mills	No action taken yet as Senior Commissioner has failed to evolve a practical scheme.
Nandi	10,000	do.	In progress.
Meru	1,000	do.	do.
Most Councils have voted money for the construction of Council Houses.		Council houses	In most cases complete.

5th March 1928
13th March 1928

050



You have the notes referred to?

If so will you please send them to me?

Edward

Compared to 05 Sept file

1923

~~Handwritten scribble~~

Not sent
17/3/28

I have discussed with Mr Plant who has agreed that these letters addressed to the S.O. should be in the C.O. file. Mr Plant has put up the draft herewith for ^{the P.S.'s} your signature.

Col. Scott acquired a farm in the Kenya land settlement scheme of 1919. He has various grievances with regard to the farm itself and matters connected with it, & he has been told in X 10452/27 that the proper authority to deal with these matters is the Govt of Kenya (with whom he is already engaged in correspondence).

The two letters on this file, and that to Lord Lovat

on the O.S. Dept. file (1272/28)

(Copy of dfr. 1071
hereunder. My copy
of the 1919 O.S.O.
handbook does
not support him
- see page 6. but
I think there was
an earlier edition
giving £1000 as
the absolute
minimum)

are concerned with the fact that
the Kenya scheme stated that
£1000 was the minimum capital
required. Col. Scott has found
it necessary to spend a good
deal more & accuses the Govt.
of deliberately misleading applicants
so as to get them into its
clutches.

Of course the capital
required depends upon the
individual farm and farmer
& I do not see how we ever guaranteed
that an applicant with
£1000 would succeed. It would
be generally admitted that
having regard to subsequent
economic events, the amount
was too low. but it is
of course absurd to accuse
the Govt. of deliberately mis-
leading applicants, and it
has done what it can for
the persons concerned by making
a free gift of the farms (which
were

were originally to be purchased at 3
a fair market price by instalments)
and by providing railway communication

There is no hope of convincing
Col. Scott, but I am entitled to
a reply and refer to previous
cases. will hardly suffer. I submit
an alternative dfr. for comment.

[This Pleat would like to
see after action]

C. Jeffries
19.3.28

In Col. Scott's closing, a minimum of
£5000 or even £10,000 would all have
prevented failure in all cases.

The scheme was "rushed" (with long c) at
the end, & one of its main defects was that
the leases had not for some time
been properly paid. But its authors were
at all events not responsible for the
1922 slump nor for Col. Scott's loss
which was his own (though he
proceeded against the Government)
nor for his using a manager instead of
looking after things for himself -
other lies

He has now told us the details of

some reference to cable devious, though
doubtless the case was not well set
to be so hopeful as it is by Col
Scott! a letter by Major Gorman
copies of which were circulated to
applicants, did contain a reference
to the necessity for such dep. to
any case, people who invested
his money without making
enquiries as to local conditions
had only himself to blame.
As regards the amount of
capital required, it is true that
after the close of the scheme
it was considered advisable to
warn intending subscribers who
were going out ^{with} in their own
that it was desirable to have
at least £5000

Jeffrey 21. 8. 91

The memorandum this file is
Am. Porter. I am afraid
that our market here
Col. Scott and Gorman
now from Aberdeen

Naturally one has sympathy
with a man whose
plans have gone all wrong

and reference to cable charges, though
doubtless the case was not used as
to it in relation to it by Col
Scott & others by Major Hogan
after it which were circulated to
applicant, did contain a reference
to the necessity for such help in
any case, anyone who insisted
his money without making
inquiries as to local conditions
had only himself to blame.
Considering the amount of
capital required it is true that
the close of the scheme
is considered advisable to
avoid untoward matters which
may give rise to their own
that it was desirable to have
at least £5000.

Jefferson

The number on the file is
the number. I am afraid
that will never be heard
Col. Scott & others
now for the sake
Naturally one has sympathy
with a man whose
plans have gone all wrong

but there is nothing which
we can do further to
help, & no reply which
we could send would be
of any value. If we did
reply we must protest
against the language
of the observations & it
seems best to treat
the so "unrepeated" conveyance
& partly I wd not
do when the matter is
well be done with each

All Partners

22. P. 24

Wd m/d/p

at once

RECEIVED
- 8 AUG 1928
COL. OFFICE

44 Minto Street

Edinburgh

3

30th July 1928

6

The Right Honourable L. C. M. S. Amery
The Principal Secretary of State, of Dominion Affairs and the
Colonies

No. 2

Sir,

Reference your letter 15/4/28, dated 26th March 1928.

I would have replied to that letter earlier but I have to work so hard and long hours every day, that I can find only a few minutes occasionally to write you.

In that letter you state - "It is a fact that applicants under the scheme were required to prove that they possessed at least £1,000 capital and that this sum was stated to be the absolute minimum required. It will, however, be realised that the amount of capital actually required in any individual case depends upon the farm and the farmer himself, and that there was no question of the Government holding out any guarantee of success to applicants who possessed £1,000 or any other amount." You certainly did state that £1000 was the absolute minimum required. And that statement was the greatest of all the truths told us ex-Soldiers in connection with the ex-Soldiers Settlement Scheme and the one that misled all of us. We believed those statements and trusted you implicitly, but you never trusted us. You demanded bank references and personal references, and you made certain that we had money. Our wives have proved that it was only our money you wanted. You purposely and cunningly kept from us information which we had a right to know, and had we been given that information the great seventh would have been detected in time and the ex-Soldiers Settlement Scheme a failure. You kept from us the following facts which were

- well known to Government Officials and many others in East Africa
1. After we had signed documents to take over the farms allotted to us, you let it be known that £5,000 would be necessary.
 2. That all our money might be lost.
 3. That the country was a hot-bed of disease for animals.
 4. That we might sustain serious losses through east coast fever, rinderpest, horse sickness, and other diseases which we never heard of.
 5. That "Dipping Tanks" were necessary on farms and expensive to erect.
- 7

The pamphlets and documents sent from your office to us were like prospectuses of a company. You can have had only one reason for making such misleading statements and withholding from us information we had a right to. That was to secure our money and draw us into your cruel clutches.

You state that "the amount of capital actually required in any individual case depends upon the farmer and upon the farmer himself". Those words are equally true of every calling in life. But when farms allotted are simply little islands upon which it is impossible for animals to live how is it possible for the best trained farmer in the world to live and succeed. Only last week I received a letter from one of the best trained farmers in Kenya Colony stating that after twenty-two years of great struggle he has been compelled to leave the country and go to another. He is an intense total abstinence and non-smoker. I stayed with him while in Kenya Colony. He had the best herds I saw and worked from 5 A.M. till 7 P.M. every day, yet he could not succeed owing to the murrain deaths amongst his cattle.

You state that "the position of applicants who took all land under the scheme was made difficult by economic conditions in East Africa which could not be foreseen at the time when the scheme was introduced". That statement is not true. The conditions were best known to many Government Officials, to farmers and

others who had been in East Africa for many years. One Government
Official of twenty four years experience in Uganda and East Africa
told me to prepare for disappointments. One asking him why the
Colonial Office had brought forward such a scheme. The answer was
'to get money'. Another of a still greater and longer experience in South
and East Africa wrote me saying "The Government of East Africa is
the richest in the world." So farmers who had tried farming in
East Africa informed me that they had been ruined through diseases
amongst the cattle and sheep. I have warnings came too late from

The conditions were well known and best known to Government
Officers and should have been communicated to us. The object they
obtained was to ruin the many millions of pounds to be
obtained from the East African soldiers. You see before the responsibility
is laid upon the Government and reflect upon the result.

The Government of Kenya has caused
my Government with a
awareness of the Government of Kenya has caused
my Government with a
re-look at the Government of Kenya has caused
my Government with a

You see - "The Government of Kenya is providing
me with the value of railways to those farmers who
have lost hundreds and in some cases all their cattle, and have
more to part on the railways. It is now eight years since I took
up my farm, I have spent over £6,000. All of it lost. I have
not earned one penny from my farm. In those eight years
only five animals have been sold, every one at a price less
than I paid. You are not yet satisfied with the ruin
and misery you have brought upon me and other settlers.
You demand payment of eight years rent whether or not
it is paid and would seek to inflict a penalty of 10% if not
paid. These are the actions of a most ungrateful Government
an inhuman monster. Can you say that I am in any

3
other who had been in East Africa for many years. One Government
Official of twenty four years experience in Uganda and East Africa
told me to prepare for disappointments. On asking him why the
Colonial Office had brought forward such a scheme. The answer was
'to get money'. Another of still greater and longer experience in South
and East Africa wrote me saying "The Government of East Africa -
the richest in the world." Two farmers who had tried farming in
East Africa informed me that they had been ruined through disease
amongst their cattle and sheep. These warnings came too late for me.
The conditions were well known and best known to Government
officials and should have been communicated to us. The object of the
scheme was to place the many millions of pounds sterling
at the disposal of the Government. You are placing the responsibility
of the success or failure of the scheme upon us the most
ignorant and inexperienced of men.

The Government of Kenya has deceived
my Government with a
promise of a price when they
intended to ruin the victims.

You state - "The Government of Kenya is providing
us with the value of railway to these farmers who
have lost hundreds and in some cases all their cattle, and have
none to put on the railways. It is now eight years since I took
up my farm, I have spent over £6,000. All of it lost. I have
not earned one penny from my farm. In these eight years
only five animals have been sold, every one at a price less
than I paid. You are not yet satisfied with the ruin
and misery you have brought upon me and other soldiers.
You demand payment of eight years rent whether or not
time and would seek to inflict a penalty of 10% if not
paid. These are the actions of a most ungrateful Government
an inhuman monster. Can you say that I am in any

way to blame. I have fulfilled my obligations more than six times over. Many of us admit that we were very great fools to believe your statements and trust you so implicitly. But the fact remains that we did so and in giving you our trust we conferred upon you the highest honour in our gift. Had we never trusted you we would not have been ruined and broken hearted men. Our trust has brought many millions of pounds to Kenya and given employment to thousands of Government Officials.

You will please remember that it is on account of our patriotism that you have been enabled to ruin so many. From fourteen years before the war I gave much of my valuable time and experience voluntarily to the Volunteer and Territorial Forces, studied hard and frequently attended courses of instruction in military medicine, and was successful in all my examinations. During the war I lost my practice that had taken me twenty years to build, and many thousands of pounds during my absence on foreign service. On my return home I had to begin life again with impaired health. Had I never taken any interest in the defence of the empire, but devoted all my time to my professional duties I would have been a much richer and happier man today.

You must see the great difficulties in inducing men to join any arm of the service. Do you imagine that parents are to allow their sons to sacrifice everything even their lives for the benefit of the empire; or ex-soldiers to advise men to join the forces when they themselves have been ruined and cast off. At a meeting of ex-soldiers (officers and men) held in Edinburgh last month the subject of recruiting was discussed. It was stated that three regiments which were 2,900 strong before the war are now represented by 450 men. Young men will not join the Territorial Force and devote their spare time voluntarily to drill. They see how we have been treated; You have destroyed the most valuable quality of man — Patriotism.

You are aware of the numbers of men emigrating to other countries outside the British Empire. Many emigrating to Canada and crossing the border into America and becoming American Citizens. Britain will again be in trouble and call upon her arms. Will they respond? No department of the British Government has done more to ruin the Empire than that under your command. You are creating a revolution which will one day burst out with most extraordinary force. Governments seldom take a warning in time. They go on in their selfishness and madness until they hear the shouts and bullets of an wronged and outraged and infuriated people. The recent revolutions in Russia, Turkey, Greece, Italy, and other countries have all been brought about through the injustices of Governments. Injustices can continue only to a day. When that day comes the leader arises and the revolution goes on to the death and until wrongs are righted. The revolutions mentioned were all predicted over thirty years ago.

The discussion in the House of Commons on the 13th inst on Kenya Land Ordinance in which you took part shows something of the dissatisfaction with the work of the Colonial Office. You have promised to reorganise that department. Things cannot possibly go on as at present. If masters in civil life were to conduct their business on similar lines they would soon be bankrupt.

You state in your letter of the 26th March 28 that
 "A large number of farms allotted were then in process of development by the original allottees who appeared by that time to be firmly established, and that in spite of the difficulties to which reference has been made the scheme was to be regarded as a distinct success." In reply to that statement I beg to say that I have read the East African Paper for eight years and never once have I read of a success. On the contrary I have read hundreds of letters of men who have been ruined, of letters sent to the Governor, to the Commissioner of Lands

CO 533 / 377

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 LONDON

criticising the scheme, and of some men who have been compelled to leave the country. One lost £26,000, others £9,000 and smaller sums. I myself lost one £6,000. Instead of the scheme being a success, it has been to every person I know a failure. I wish to God that I had never heard one word of that infernal, cursed scheme. Whoever are responsible for concocting such a fraud should be most severely punished and made a public example of. It is a shame that officials who pervert the number of the King's and Government had the same crimes been committed by civilians they would have been tried in civil courts and cast into prison.

I am a poor struggling doctor and you have caused me to work harder than ever I did to clear off debts which are really yours. I am not owing you anything.

In the attached letter from the Hon. Minister of Justice Nairobi dated 23rd June 1952, it is stated that the Government has decided with the object of the... that it is desirable to... your education of... you are satisfied with the... has been established upon... side would not be... cost. I call that the... our known. It is... upon us are to increase your happiness than proceed immediately. I know you will be assured for the law courts of Kenya Cal my own in a state of absolute corruption, which I know to be... cost.

Your state that - "Any case of special hardship in... brought to the notice of Government will be given full consideration on their merits". Could any hardship be greater than that into which you have so skillfully run us.

You have compelled me to borrow my money & can pay a high interest on my loan and income tax in addition. But, I thank God, no one demands the high interest (10%) that you do. You would seek to charge 10% on the rent of a farm that has been proved to be a lethal chamber for animals and upon which I have had over £5,000. I can truthfully say that I have made only two serious mistakes in life. The one of being patriotic; the other in trusting you; and as the second is consequent upon the first there is only one mistake.

Again referring to the discussion in the House of Commons on the 15th inst in which you promised to re-organise your department. Will you kindly allow me to make the following suggestions:—

1. Call in the assistance of men of great experience in large businesses in civil life. Men who have proved themselves to have organising ability.
 2. Dismiss three-fourths of the Government Officials under your charge and give a day's work to the remaining fourth.
 3. Let promotion be in every case by merit, not by seniority or age. Encourage officials to go in for post-graduate studies and examinations. Under the present system many even immediately become Government Officials begin to lose their initiative and gradually become automatons, and for a long year therefore in office fall on their knees in knowledge. You will then have men who will keep their interest in their work and in the empire alive.
- Place all Government Officials on the same terms of agreement as men in civil life. No paid servant has a right to security of

You have compelled me to borrow every penny I can, pay a high interest on my loan and income tax in addition. But, I thank God, no one demands the high interest (10%) that you do. You would seek to charge 10% on the rent of a farm that has been proved to be a lethal chamber for animals and upon which I have had over £6,000. I can truthfully say that I have made only two serious mistakes in life. Take one of being patriotic, the other in trusting you; and as the second is consequent upon the first there is only one mistake.

Again referring to the discussion in the House of Commons on the 15th inst in which you promised to re-organise your department. Will you kindly allow me to make the following suggestions:—

1. Call in the assistance of men of great experience in large businesses in civil life. Men who have proved themselves to have organising ability.
2. Give three-fourths of the Government Officials under your charge and give a day's work to the remaining fourth.
3. Let promotion be in every case by merit, not by seniority or age. Encourage officials to go in for post-graduate studies and examinations. Under the present system many men immediately they become Government Officials begin to lose their initiative and gradually become automata, and for every year they are in office fall one year behind in knowledge. You will then have men who will keep their content in their work and in the empire alive.

Place all Government Officials on the same terms of agreement as men in civil life. No paid servant has a right to security of

tenure of office. There are men and women Government Officers
 working only a few hours a day and only a few months a year
 being given larger salaries than many professional men who
 had to study in universities for from five to ten years or more
 and had no salary all those years, not until they reached the
 ages of twenty-seven or thirty. Some young girls in Govern-
 ment service have larger salaries than some professional men
 with wives and families. No one can understand why Government
 Officials should be so highly favoured. Some have obtained their
 post through influence, not by merit. One minister in Edinburgh
 called at a Government Office one day, to do business, he was
 three minutes late and the Official refused to see him, and
 the minister had to return the following day. The minister
 mentioned the fact in his sermon the following Sunday.
 What would any Government Official think if the same
 minister refused to see him after 3 or 4 P.M. or what
 would an official think of a doctor who refused to visit him
 after 4 P.M. if he were seriously ill. Yet we are taxed
 to death to pay the salaries and pensions of Government
 Officials - the spoiled and pampered children of the land.
 For over thirty years I have been a heavy tax-payer,
 and I have been vexed by the very men whose salaries
 I assist in paying. I have no one lady in a Government
 Office in Edinburgh who obtained her post through favouritism.
 She is paid £500 per annum. She was never accomplished for
 the post she holds. Many others occupy similar post. There are
 many men in civil life ^{who} possess higher qualifications than any Government
 Official and they have to struggle from early morning till late to
 earn a livelihood, and they are taxed to pay the salaries of
 officials who don't perform one fourth of a day's work.

I again say - I wish to God that I had never heard one word of that infernal, ~~execrable~~ scheme. I would have put my money to a very much better purpose; and the time that I have had to work so hard to pay off those debts which are eventually upon I would have devoted to the benefit of others. Life is quite hard enough without being made unnecessarily hard. I am most highly enraged and annoyed.

No person can regret the language of this letter more than myself. But when Nature is seriously wronged she speaks.

I am.

Yours faithfully.

James Scott.

Lieut-Col R.A.M.C.T.

LNK 23/2/3

The Secretariat,
Nairobi,
Kenya Colony
23rd April 1928.

Dear Sir,

Re L.O. 2888 Agri

I have to inform you that Government has

decided with the approval of the Secretary of State for the Colonies that it is unable to review the applications which have been made for reduction of rent.

It is, therefore, necessary that the amounts due to Government at the 31st December 1927, as set out on the accompanying notice, should be remitted without any delay. Failing payment by the 30th June 1928, a notice fee of Shs. 10/- in respect of each farm, together with a penalty of 10% of the total amount due to the 31st December, 1927, will be incurred, and I shall have no alternative but to proceed with Court action for the recovery of the whole amount due.

Any cases of special hardship in respect of arrears brought to the notice of Government will be given full consideration on their merits.

I am, Sir,

Your Obedient Servant,

R.W. Lambert,

for COMMISSIONER OF LANDS.

Encl.

H. Col. J. Scott
H. A. Minto School
Obiataruf
Scottland

DEPARTMENT OF LANDS,

17

NAIROBI,

KENYA COLONY.

1st January, 192

Chas. J. Scott
414 *Mingo Street*
Edinburgh Scotland

Your prompt attention is directed to the fact that the charges on your properties as detailed hereunder are due on the 1st inst.

2. To avoid unnecessary further correspondence it is respectfully requested that you remit to the Department of Lands, Nairobi, on receipt of this notice:

3. It is to be noted that rates and penalties as prescribed in the Crown Lands Ordinance, 1915, will be strictly enforced in all cases where payment is not made before the end of the current month: the relevant sections of the Ordinance are set forth on the reverse hereof for your ready reference.

4. Bank commission of 4% with a minimum of 50 cents, should be added to other than Nairobi, Mombasa, Nakuru and Kisumu cheques.

Farm or Plot No.	District	Particulars	Amount.		
			Shs.	Cts.	
2888	Myeri	Rent 1921	641	80	
		1922	641	80	
		1923	641	80	
		1924	641	80	
		1925	641	80	
		1926	641	80	
		1927	641	80	
		1928	641	80	
			Shs.	5137	80

PLEASE RETURN THIS NOTICE WITH REMITTANCE

44 Minto Street.

Edinburgh

Scotland.

30th July 1928

18

Copy of letter sent to The Commissioners of Lands.

Department of Lands.

P.O. Box N^o 389.

Nairobi.

Kenya Colony.

Sir,

Re L.O. 2888 Nyeri.

I am in receipt of your letter L.N.D. 23/2/28, dated 23-4-28. In which you demand £-shillings 5/132 = 80 by 30th June 1928, and failing payment you will proceed with Court Action and inflict a penalty of 10%.

In reply I beg to state that I have had my farm for eight years and not yet earned one penny from it, but on the contrary lost over £6,000. And those losses I attribute largely to you.

I will rather see you in Hell before I send you one penny of my hard earned money to keep you in your position of ignorance and indolence, danger and ruin to others. You are the only man in the world that has caused me a broken heart and brought ruin upon me. You will take action. Proceed with your action. I know you will succeed. The Law Courts of Kenya Colony are in a state of absolute corruption. Your happiness will never reach its summit until you have brought to total ruin every innocent ex-soldier that you succeeded in getting into your grasp.

(I repeat above)

You state that - "Any cases of special hardship in respect of arrears brought to the notice of Government will be given full consideration on their merits". In the history of the Empire was ever any hardship known to be greater

than that of a Government leading the ex-soldier who had
sacrificed everything and saved the Conspirators, into total ruin.

Please re-read my letters dated 30-6-27, 30-9-27.

19

I am,

Yours faithfully

James Scott.

Lieut-Colonel R. G. M. C. T.

Copies to His Excellency, The Governor.

Kenya Colony.

The Commissioner of Lands.

Nairobi.

capital actually required in any

individual case depends upon the

farm and upon the farmer himself,

and that there was no question of

the Government holding out any

guarantee to successful applicants

who possessed 11,900, or any other

4. Mr. Amery realises that

the selection of applicants who took

part in the scheme was made

in view of economic conditions in

the country and could not be fore-

seen at the time the scheme was

introduced. The Government of

the day, however, done its best

to assist the ~~participating~~ settlers by

the purchase of large

holdings under the scheme, and by

granting railway concessions.

The Government reported three years

ago that the initial disabilities

(11556/25)

under

under which the settlers suffered
 and largely disappeared, that a
 large number of the farms allotted
 were then in process of development
 by the original allottees who
 appeared by that time to be firmly
 established, and that in spite of
 the difficulties to which reference
 has been made the Scheme was to be
 regarded as a distinct success, both
 from the point of view of the
 Colony and from that of the settlers
 themselves.

I am, etc..

(Signed) STEPHEN L. HOLMES

RECEIVED
13 MAR 1928
COL. OFFICE

44 Minto Street
Edinburgh.

12th March 1928.

1928 23

(3)

- The Right Honourable L. C. M. G. Amery.
The Principal Secretary of State for Dominion Affairs
and the Colonies.

N^o 2161

REC^D 16 MAR 28

Sir

I am in receipt of your reply dated 7th March 1928 to my letter addressed to you dated 5th March 1928. In your reply to state that my letter is being considered. I wish to thank you most sincerely for your great kindness in promising to consider my letter. In order that you may have data upon which to base your consideration I beg to submit the following facts.

In 1919 while I was on foreign service in Egypt the book "General Information as to the East Africa Protectorate" compiled by the Colonial Settlement Office, 57-9 Victoria St, London, S.W.1. 1919, in which it was stated "without special qualifications, however, £1000 to £1500 is the absolute minimum of capital advisable." That statement and several others of a similar nature contained in Government documents of African (East) N^o 7071. One document stated that £1000 was sufficient. These books and documents were sent to soldiers with the intention of inducing them to apply for allotments. Several meetings were held and thinking that the Government was offering us something of value to reward us for our losses and sacrifices we applied for allotments. We placed our implicit trust in the Government, but most, perhaps, all of us have found to our bitter cost, and in many cases, ruin

1.
that these statements were most deliberate, calculated, and cruel
contracts. These same statements have brought many millions of
pounds to Kenya Colony, most of them totally lost.

2A.

While on my farm in 1919-1920 I had erected some
improvement buildings - house, huts, stores, barns &c at a cost
of several hundreds of pounds. In 1921 some Government officials
were passing through my farm and set fire to those buildings.
Everything including stores, farm and dairy implements and
utensils, ^{was burned,} the claim was sent into the Government of Kenya but
no notice was taken of it. Within twelve months I had spent
over £1000 and up to the present I have spent over £6000,
nearly all of that sum totally lost.

Before I heard of that ex-soldiers' scheme I
had my capital so carefully invested in Government stock
that it was bringing me in £250 annually in interest, now
my capital is lost, I have been compelled to borrow every
penny I earn, am paying a high interest and income tax
in addition. You will realize the most gigantic swindle
such schemes are. Ex-soldiers played a part in saving
the British Empire from ruin; brought Kenya as a colony
and now they find that their patriotism has brought them
misery and ruin.

The Government (Overseas Settlement Department
and the Government of Kenya Colony) never told us that
fatal diseases such as Coat Coat Disease, Rinderpest,
Horn Disease &c were so prevalent in Kenya Colony; nor did
they mention that a dipping tank was essential on farms.
In 1923 I had over two hundred cattle on my farm and
according to the laws of cattle breeding I should have
had by this time over seven hundred cattle on my farm.
Since 1923 I have lost through these diseases several
expensive pedigree bulls and several hundreds of my
cattle. I have no finer cattle on my farm to-day than
in 1923. Only one has been sold.

Many of my cattle died as a consequence of a Government official inoculating with a vaccine that had not been sufficiently attenuated. In 1920 while in Kenya I saw an official preparing a vaccine without any regard as to the virulence of the organism. The result was that many animals died. One farmer wrote me saying that he had lost over three hundred cattle as the result of inoculation,

I think I know a little of what I am writing - I possess the M.B.C.M., M.D., B.Sc. (Public Health), D.P.H., Certificate in Tropical Medicine, and several other qualifications both civil and military. I have also carried out research work in bacteriology, chemistry, and many diseases.

I have been compelled to sell everything I own, borrow money to keep my farm going in the hope that it will yet give me a return, but I cannot see any sign of a return so long as such ignorance and carelessness exist. You send out men to the colonies too young and insufficiently trained to Government Posts. Consequently they go on making many mistakes at the ruin of others. Many of them never learn. Immediately they become Government Officials their initiative begins to diminish and continues until they become Automotons. Some of them are excellent imitators. No business man in civil life could succeed if he conducted his business on lines similar to those of Government Official. As a doctor I am compelled to work at least sixteen hours every day, five days a week in order to clear off the debts that your department has led me into. I wish that I had never heard one word of that cursed scheme. I have not yet heard of one or soldier who has succeed, on the other hand, all have lost.

You asked for men between the age of eighteen and twenty-six to emigrate. That is the period when men trust most and if that trust be broken it never heals and without trust progress is impossible.

I hope I have given you sufficient data to
go upon. And I shall be glad to hear the results of your
considerations. 26

I have the honour to be

Your Obedient Servant

James Smith
Lieut Col R. I. M. A. T.

5th d. 44 Minto Street.
No. 1816
Recd. 6 MAR 28

Edinburgh.
5th March 1928 (2)

The Right Honourable L. C. M. S. Amery
The Principal Secretary of State of Dominion Affairs
and the Colonies.

Sir
In the recent discussion on Emigration in the
House of Commons 24th February 1928, it was stated
that the numbers of people emigrating to the British
Colonies had been much less than was anticipated
and that you were greatly disappointed.

I must say that I am not in the least dis-
appointed when I think of the large numbers of the best and
noblest blood of Britain, of ex-soldiers and others who have
been totally and cruelly ruined by the many ex-soldiers
Settlement Schemes and Other Government Schemes that have
been brought forward since the war. I consider many of
these schemes are the most gigantic swindle ever known in
the history of the British Empire. Some of the statements
published by your department are great truths for the main purpose
of misleading the innocent and taking mean advantage of them.
You succeed in getting them into your clutches from which
they cannot escape. The sums of money you published as
necessary are misleading. In many cases men have spent
ten times more and yet that is not enough. Had you only
made it clear to us at the outset that ten times and more
would be necessary, very few ex-soldiers or others would have
thought of such schemes. I refer in particular to the ex-soldiers
Settlement Scheme of British East Africa (Kenya Colony) of
1919. In your book you stated that £1000 - £1500 would
be sufficient. Already I have spent over £6000 all of
that sum is lost. £10,000 will not be enough.

Intern. coll. Ser. - 71798
26 MAR 1928

One of my friends has lent over £24,000,
another £8,000, and many, ^{but} smaller sums. Some are ruined
and broken hearted, others cannot get home. All have spent and many
lent more money than you published would be sufficient. Such
schemes are great frauds and succeed in bringing to the country
many millions of pounds. You want young men between the ages
of eighteen and twenty-five with several hundreds or thousands of
pounds. How can men of that age have so much unless they
borrow it, and then it has to be repaid. When they fail the
Government's never lose but evict them and again succeed in
misleading others.

You cannot have anything without a cause and if the
numbers of immigrants are declining you will find the cause in
these dishonest schemes.

I gave over fourteen years of my valuable time to the
Volunteer and Territorial Forces without reward before the war.
I sacrificed a medical practice that had taken over twenty years
to build up. Lent many thousands during my foreign service in
the war. Lent over £6,000 through that most imperial scheme. Now I
find myself a meek man struggling like a slave to clear off
these debts which are virtually yours.

On my return home after being six and a half years
away, I learned of men who never had and never will do one
day's work for the empire, had made many thousands of pounds,
some hundreds of thousands.

Your department has done much to destroy patriotism - the
most valuable virtue of man. You cannot expect men that you have
so deliberately tried to do anything again for the empire or to
advise others to do so. On every time that I have written on this subject
to your department or the Government of Kenya Colony I have been
cut off with a few words and treated as if I were a criminal.
Most disgraceful and shameful conduct.

I have the honour to be

Sr.

Your Obedient Servant.

James Grant.

Direct - Cal R.A.M.C.T.

States that it is not considered that sisal and maize waste would be useful in production of power alcohol, but suggests that authorities of Imperial Institute be asked whether it is possible to determine the value of bamboo for the purpose. Has given Major MacDonald, who has discovered a means of producing power gas from charcoal and water, letters of introduction.

(r) Ask Imperial Institute question as at A., explaining shortly the context in which the question has arisen.

(a) Substance of par. 2 and copies of all encl. except the last to Mr. Smith s.o. refce. 3 on X.10382/27.

(3) Duplicate of desp. ^{Call on} to Dept. of Scientific and Industrial Research reference 7 on X.10382/27 and as regards par. 5 refce. s.o. corres. on X.25030/28.

(4) A copy of the last par. together with the last encl. should be registered on X.25030/28.

(5) See Mr. Bottomley's minute of 1.12.27 on X.10382 at X. It does not appear that the pp. has ever gone to G.D. It should do so, after action on this despatch.

Cham
2/5

It would seem desirable to keep distinct (a) the use of sisal and maize waste and (b) the production of power gas from charcoal and water, especially in view of the confidential nature of the latter.

(1) The Imperial Institute analysis referred to in paragraph 2 of the despatch will be found in 35028/21, and it will be seen from the correspondence in 27156/22 that the question of the production of alcohol from bamboo had been considered by the Fuel

Fuel Research Board who were informed that the question of making the concession then under consideration a pulp plus alcohol proposition, was considered and negatived on the ground that the extraction of alcohol from bambon had not yet reached the commercial stage, and it was feared that any such extension would defer tenderers. In writing to the I.I. as proposed, reference should be made to 55028/21.

(2) It would not seem necessary to revive so. corres. with Mr. Smith, and I think this action might be omitted.

(3) The corree. to be sent to the Research Dept. in view of 'A' above should not include the last para. of the despatch and the last enc. - a but a copy of the I.I. analysis in 350... should be sent, saying that enquiry is be... the I.I. as suggested, and add that no... has yet been received from the T.I.

(4) Copies of ^{the last} paragraph and ^{last} enclosure should, as proposed, be registered with X.25030/28 and copies sent s-o to the Research Dept. in continuance of the s-o corree. in 25030/28 from which it will be seen that Major Macdonald has already arrived, ^{and} that action has been taken on the lines suggested by Sir E. Grigg.

(5) A good deal of action of a general character was taken on 10382/27, and the point raised by Mr. Bottomley was whether the memorandum in No.9 of that paper was appropriate for communication

Action taken - 25030/28

communication to the Mechanical Transport Committee. On this Mr. Ormaby-Gore remarked that he gathered that the E.A.B. Research Grants Committee were proposing that the W.O. should take over the proposed research, and this was being discussed with Dr. Thaysen.

G.D. should see, but is rather late in the day. Also there is nothing to indicate that the further circulation mentioned by Mr. Jeffries in his minute of the 6th of January was ever carried out.

J.H. Allen

27/3/28

Proceed as proposed

R.H. ... 30/3/28

These are the papers in the subject of Town ... 50102/28 ... 15 or 16 ... (9) ... 410382/27 ... the paper ... the letter ... attached to 50102/28

have attached to 50102/28 Z file

now R. Claven ...

... Transport Council ...

... Division ...

604 Gowers, Uganda. 99. ----- 18th April 1928
Transmits copy of memorandum by Director of
Public Works on effect of the use of power
alcohol on the cylinders of internal combustion
engines.

The Board

10
18th April 1928
Enclosure ought to go to the
Director of Public Works
as it is in his file
on power alcohol
22/5

to 50102/28
7

G. M. Cannon
24/5/28

C. Jeffries
26.5.28

Edwards general opinion of Committee of Council
Production of power alcohol

Copy 30/5/28
29/5
G. M. Cannon
20/5
25/5

Copy 10/11
25/11/28

10/11/28

subject of power alcohol
Eastwood
21/5
(copy 5 + 10)

DESTROYED UNDER STATUTE

10/11/28
21/5
24 JUN 28

12
John Williams 24 August 1928
Reports that he is London agent for the
British process of obtaining power alcohol
from waste paper and will be glad to
furnish further information should
apparently you know nothing of this;
the S.A.T. Ed. J. also knows nothing of
it officially but the gentleman who
answered me on the telephone thought
he had heard something about it
? all say that the S. N. has at
present received no such communication
as he mentions but that this
offer of paper waste & played
has services will be found
in mind.

I have copy covered E.T. 21.0

27/5/28
Eastwood
25/8

SD 21/11/28
25/11/28
1/11/28

There is nothing in the General
app. about this particular process.

A. K. Ashworth
21/9/28

Draft

Article

2/6

stage

DESTROYED UNDER STATUTE

(No 12 amend) 6 SEP 1928

14. To C.I. & D.C. (in copies) 12/9/28 15 SEP 1928

Information Office 10 Sept.
Acknowledges No. 14: Any information received
on the subject will be forwarded.

? put by

A. Jordan

11/9/28

A. K. Ashworth

12/9/28

at once

16. OS & IR 29 Sept. 28.
In re. comm. addressed to G.A. re shipment of bamboo. G.A. considers that
there is nothing to be gained by further
laboratory experiments, request C.A. be instructed
re disposal of consignment.

DESTROYED UNDER STATUTE

No. 4904 7 Sept. 28

(State that two bundles of bamboo have been
shipped to G.A. for delivery to Dept. of Scientific
& Industrial Research.)

have run up C.A. (correspondence)

file has not to Dept. of S.I.R. have

no use for the bamboos. I can
submit it to Gov. asking what
is to be done with them. The
C.A. suggest nothing better than
using them as kindling wood. &

copy of report to Gov.

Dept. of Sci. & Ind. Research

C.A. 1. 29.

A. K. Ashworth

9/10

18. To Gov. Conf. 17 Aug. 28 w/ C.A. 16

12 OCT 1928

19. To Dept. of Scientific & Industrial Research
(in copy of report to Gov.)
20. C.A. (in copy 15) to

21. Deputy Governor Martin 224. 25 Sept. 28.
The copy comes regarding the Tongue process of
extracting alcohol from molasses waste, request names
of Fuel Research Board, Imperial Institute and
Dr. A. Thompson, as to Colony proceeding to adopt the
process.

G. Ashworth

Could you please say before I write
further on this whether you know
anything of the C.A. "See Distillers"

African
American mentioned on the
flagged page of the me²² - or
of the Tongue process for
that matter?

G. Davidson

23.X

What they mean by the "Upper Gold Coast (UGC)"
I do not know. Obviously, given the
UGC is in the Gold Coast plantation at Accra.
We have heard nothing of a company being
formed to produce alcohol from the
local refuse there. As we have had a
number of recent reports on the
plantation and its prospects, I think
we would have heard. J. P. Walker
26.10.22

The envelopes to the Dept.
are voluminous & rather confusing.
I gather that the Agricultural
Dept. took the matter up at
the instance of the Social
Growers Association, & that
Messrs Hunter & Nicholson (who
are I imagine the local agents
of Messrs Dalgety*) act for the

info we given in the telephone
with a "Australian
merchant"

An action Halleyworth & Beatty
act in support for Mr Douglas. But
it is all very obscure.

Mr Buckley's minutes (flagged)
& his more detailed memo below
also flagged since the case is about
it is all about

2 saw notes file
2 with the
duplicate

4 copies of the enclosure memo
have been received. I send 2 copies of
Dept. & 2 sets of encs to Dept.
of the 2nd Branch, which will
I am sure may be continued
to the Dept. I send one copy of
the set to the 11th Div.
and that the other has had copies.
But there is no information
to the Dept. of the 2nd Branch
which is said to be working in
the Gold Coast. I have made
also include a copy of the 2/10
memo (file/flagged). Ask for the
2nd copy of Dept. 11/10/22

we can lead to... accept no. 12 to Kenya
L9 info

We might also tell the SA

T&O ref's no. 15 that
we have now received
from Kenya...
copies of which are being referred
to the D.S.I.R. &
the I.I. for their advice

all we can
wait till we
a reply
D.S.I.R.
Orel
9.11.28

Dept. of course

By may perhaps
papers
29x28

Idrott
1/10

The question of the use of sisal waste
for producing power alcohol was referred to in
Mr. Ormsby-Coré's minute of the 1st of July
1927 - the first minute on 10382/27 - and there
is a good deal on the subject in the other corre-
pondence in these papers, including correspondence
with Kenya to which no reference is made in this
despatch.

despatch. I don't think it is any use referring this
to the Imperial Institute in view of No. 5 in which the
institute stated that the question of the production
of power alcohol has not been investigated specially
by them, and the suggested reference (in the case of
bamboos) to the Fuel Research Board.
Also as regards reference to Dr. Thayson he prepared
the memorandum in No. 3 which shows that his investi-
gations were carried out on behalf of the Fuel Re-
search Board.

In the circumstances, it would only seem
necessary to send these papers to the Department of
Scientific and Industrial Research, so send a copy
of this despatch and the enclosures to that Dept.
requesting that the Secretary of State may be
favoured with the advice of the Fuel Research Board
as desired by the Governor. Explain that in view of
the terms of No. 5 no communication is being made to
the Imperial Institute, and also that as it appears
from No. 3 of 10382/27 (a copy of which was sent to the
Department on No. 7 on that paper) that Dr. Thayson's
previous investigations were carried out on behalf of
the Fuel Research Board, no communication has been
made to him, and it is assumed that the Fuel Research
Board will consult him if this is thought necessary.
Add that there is no information in the Colonial
Office with regard to the trials in the District re-
ferred to in par. 2 of this despatch, and also enclose
for information a copy of Nos. 12 and 13 in this file.
The correspondence with Mr. Graham Williams who
states that he is the agent in London for the fuel
process, and has offered to answer questions or
supply

supply further information if desired.

W.M. (to S. of S. as proposed)

3/11

The upshot of this is that the prospects of producing power alcohol from Kenya wood at a commercial figure are not very bright, but that the matter is worth pursuing.

I agree that we should send to the D. S. I. R. as proposed, but it would be premature to say anything about this to the British K. T. Club at present.

4c.

C. L. W. (signature)

6/11

As proposed by the letter

Recd

8.11.28

22/12

22. To Dept. of Scientific and Industrial Research
1 Nairobi - in 2 copies
21 (encl. in dupl.) Nairobi

NOV 1928

23. DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

13. DEC. 1928

Tr. copy memorandum prepared by the D.S.I.R. and of a Memo. by Dr. A.G. Thayer regarding the Fougue process for the production of alcohol from sisal waste.

Evidently the Department of Scientific and Industrial Research do not think that there is much in the Fougue process.

Unfortunately, they have only sent one copy of the enclosures and Mr. Tizard's Secretary tells me that they can spare no more. The enclosures must therefore be copied, as G.D. will presumably wish to have a copy and one must, of course, go to Kenya.

? Send copy of 2 and 23 to Kenya in short-numbered despatch; and it will also be necessary to send a Conf. despatch explaining that the letter of the 18th April referred to para. 2 of No. 22 was sent in the S. of S.'s Conf. despatch No. 2 of the 4th June. Also enclosed is No 3 11038748.

A copy of 22 with enclosures and 23 without enclosures might also go to the Trade and Information Office, ^{Kenya} inf. ref. No. 15.

It will be necessary to ack. and thank the Dept. of Scientific and Industrial Research for the considerable trouble which they have taken.

G. Easton

14.12.28

I think that it would be worth while to send the enclosures as proposed but the first enclosure, particularly Annex 3, which seems to be of singularly little value. Dr. Thayer's memo. is much more valuable & puts the thing in a different light so that the...

I think think 22
will need to be copied
for the S. of S. will
be sufficient to
send copies of the
memo. to 23.
1/11/28

DESTROYED BY THE Dept. of Scientific and Industrial Research (23amod) 15 JAN 1929

DESTROYED UNDER STATUTE 39-21-1014
(Confidential 12, 18, 22, 23)

DESTROYED UNDER STATUTE Conf (2) - 1/24/29 30/10382/27 18 JAN 1929

DESTROYED UNDER STATUTE To Gov. T. T. 29
Confidential 29-21-1014

DESTROYED UNDER STATUTE Government leaf 119 23 Nov 28

Suggest that the bamboo should be offered to Imperial Institute or to Imperial Forestry Institute, Oxford.

Later
to have a copy
made at Oxford;
but the copy left as
being sent to East Africa
See new memo on
15/10/29

Mr. Weston
Will you like to require immediately
of Mr Brown, whom you know
at the S.I., whether he
will wish to run over these
bamboo?

all?
1-2-29

Mr. Pauline
See filing of letter to I.I. Institute, I.I. Institute
I have found your memo

Plenary
6.2.29

Plenary
all?
6.2.29

29 to know (all) so
6.2.29

Mr. Allen
order minute a 1/11/29 no. 25

to submit it to a Def. Com. a. c.

... of ...
... sugar in
... method
... on
... basis.

not with which
I think
Rev

Let Mr. May
see the notes in
case he wishes to let
the K. T. C. know
about it.
G. L. W. Cannon
29/1/29

See
Plenary
3/11/28

Rev
28/12

(Let T. T. Dept see in
case they have not
Copies of the memo: 6 31/12/28
To the D. T. T. office
1 as a copy of the memo
no 3 of (10382/29)

Mr. Pauline

I return attached to you as the T. T. is
agreed it will be sufficient to send
them copies of 21 with its enclosures
and a copy of the memorandum enclosed
in 23 - my note of 10/2/29

Will do a despatch too.

Plenary
9/1/29

Mr. Pauline

I agree. But I do not think we
need send T. T. C. copies of 21

You may like to see how
No 2

Equatorial
9/1/29

Franklin has now sailed.

Edmond

~~30~~ 30. to 20. 8 4 26
(w. encl. in 23)

14 FEB 1829

15753
30
11

12 FEB
1924

- Mr. [unclear]
- Mr. Allen
- Mr. Bottomley
- Sir E. Harding
- Sir J. Sturtevant
- Sir G. Grindle
- Sir C. Davis
- Sir S. Wilson
- Mr. Ormsby-Gore
- Lord Levis
- Mr. Amery

No 2 m
15604/29

Handwritten signature or initials

DRAFT.

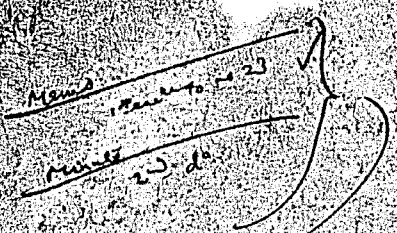
The Deputy Comptroller
 H. M. S. Eastern Office
 Depend on trade &
 1/1/24

(Notes)

O.S. 067/125 of the 10/1/24

I am & to transmit
 to you ^{copies} ~~the~~ paper of a
 memo prepared in the Dept
 of the ^{1st} ~~1st~~ Research &
 of a ^{memo} ~~memo~~ in D. A. C.

There is a regarding the
 Fouque process of
 producing power alcohol
 from coal waste



a spare copy in the house

2. I am to explain
that the matter was referred
to the D.S. & R. as the result
of a request from the Governor
& Kenya for their advice
as to the advisability of any
proceeding with any proposal
to adopt the process - the
change

3. Copy of the enclosed
memorandum has been
communicated to the
Governor & Kenya
the P. T.

Saunders

WILLIAM PARKINSON.

29/12

Acad. 44
15/1/29

Downing Street.

6th February, 1929.

Dear Mr. Brown,

You may remember that in April last year we had some correspondence with the Imperial Institute regarding the possible value of Kenya bamboos as a source of power alcohol; vide our letter of the 10th April, and your reply No. B2078 of the 18th April.

You will see from your letter that a sample of the Kenya bamboo was being forwarded to the Imperial Institute by the Acting Conservator of Forests, and that this on arrival was to be transmitted to the Fuel Research Board. Some months later, the Department of Scientific and Industrial Research told us that two packages of bamboo (weighing approximately 65 lbs each) had been despatched from Kenya for them, but they did not want them, as they felt that there was nothing to be gained by further laboratory experiments in this country, and that in any case they were not then in a position to carry out such experiments. On this we

asked

HAROLD BROWN, ESQ.

asked the Governor what his wishes were as to the disposal of the bamboos, and we have now received a reply asking that they may be offered to the Institute for the Exhibition Galleries, or, if not required there, that they may then be offered to the Imperial Forestry Institute at Oxford.

Would you let me know whether the Institute would wish to take over these bamboos, in which case we will arrange for their delivery to you by the Crown Agents, who are at present keeping them in store.

Yours sincerely,

(Sgd) G. Gray

DEPARTMENT OF SCIENTIFIC & INDUSTRIAL RESEARCH

Telephone: Victoria 7940.
Telegrams: Resciendus, Parl. London.

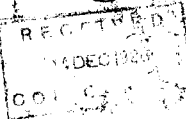
Any reply to this letter should be
addressed to "THE SECRETARY"
and the following number quoted.



16 OLD QUEEN STREET,
WESTMINSTER, S.W.1.

1293
24th December, 1929

F.R.B.18/4/6.



Sir,

70.22

In reply to Mr. Parkinson's letter (X.15156/20) of 15th ultimo, I am directed by the Committee of the Privy Council for Scientific and Industrial Research to enclose, for the information of Mr. Secretary Amery, and for transmission, if desired, to the Governor of Kenya, a copy of a memorandum, prepared in this Department, on the subject of the Kouque process for the production of alcohol from sisal waste. I am also to enclose a copy of a memorandum on the same subject by Dr. A.O. Thaysen, who has been consulted in accordance with the suggestion contained in the second paragraph of Mr. Parkinson's letter.

18 JAN 1929

I am, Sir,

Your obedient Servant,

H. T.izard

The Under Secretary of State,
Colonial Office,
Downing Street,
S.W.1.

Copy Kenya - 39 -
Copy circles 70.22 -
Copy will be sent to S.C. 14.1.29

18 JAN 1929

Lee

MEMORANDUM
ON
THE PRODUCTION OF ALCOHOL FOR POWER PURPOSES FROM SISAL WASTE.

INDUSTRIAL AND
AGRICULTURAL RESEARCH
DEPARTMENT
WASHINGTON, D. C.

December 1928.

14

Memorandum

on

The Production of Alcohol for Power Purposes from Sisal Waste

The question of the possible production of alcohol for power purposes from the waste pulp resulting from the decortication of the sisal plant had been considered for some years, notably in Mexico and Yubatan, the original home of the plant, but owing mainly to the presence of inhibitory substances in the pulp, fermentation difficulties have been experienced.

According to the report of the Mission of M. H. Fouque to study the production of alcohol in Algeria from sisal waste and other alcohol producing substances, the difficulties would appear to have been overcome. A translated extract from the report is attached (Annex A).

In a later report on semi-industrial scale experiments carried out by the Fouque Mission in the Sudan during the winter of 1926-27, it is stated that the distillation of the wash presented some difficulty owing to frothing. A translated copy of this report is also attached (Annex B). The particulars and details of working of the Fouque process that are available in literature are very meagre, and there are no particulars of the results of commercial working, which, so far, does not appear to have been attempted.

The economics of the Fouque process, in so far as Kenya is concerned, based on the data contained in the Memoranda that accompanied the despatch of the Governor of Kenya, dated the 25th September 1928, have been dealt with by Mr. V. A. Beckley, the Government Agricultural Chemist, who considers that, in the zones from which he received samples, the production of alcohol from sisal waste would not be an economical proposition.

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15

Mr. Beckley's calculated alcohol yields were very low however, averaging about one gallon per ton of leaves, whereas Messrs. Hollingsworth and Beatty, in the Memoranda referred to above, give $6\frac{1}{2}$ gallons in one place, and $6\frac{1}{2}$ gallons in another place as the yield of alcohol from a ton of leaves.

In the report on the Fouque Mission of the winter of 1926-27, already mentioned, it is stated that 85 per cent. of refuse is obtained from the decortication of the leaves and that its sugar content is 8 per cent; based on these figures, and assuming the waste constitutes 96 per cent. of the leaves, a yield of 8.8 gallons of alcohol per ton of leaves is obtained.

Paul Baud in Comptes Rendus (1926, 182, 1631) estimates the yield of alcohol at 5.2 gallons per ton of leaves. H. Boulard however calculates on a yield of 13.2 gallons of alcohol per ton of leaves as obtainable in Kenya, but he assumes the sugar content of the juice at the unusually high figure of 12 per cent. (Chim. et Ind. Special Number, September 1925, p. 234).

Dr. C. S. Dolley in a report forwarded by the Governor of the Bahamas to the Colonial Office in a despatch dated the 20th February 1922, estimates a yield of 9 gallons of alcohol per ton of leaves.

There is nothing to show, however, that any of the yields are anything but calculated ones based on the possible sugar content of the pulp, and on a practical yield of 6 gallons of 95 per cent. by volume alcohol per one hundred pounds of sugar, a figure which is by no means always reached on a technical scale.

The process suggested by Dr. Thaysen, referred to in his "Memorandum on the Production of Power Alcohol from Vegetable Waste," dated the 15th July 1927, and transmitted by the Admiralty to the Colonial Office, is almost certain to give equal if not higher yields of alcohol which has the advantage of containing 10 per cent. of acetone, since it makes use of the waste fibre as well as of the sugar in the pulp which is fermentable by yeast. Even so the Kenya authorities came to the conclusion that his process would not, at present, be profitable in

16

Kenya. (Despatch from the Governor of Kenya to the Colonial Office dated the 25th February 1928).

For these reasons it would seem to be undesirable for the Government of Kenya to consider the matter of the introduction of the Fouque process in the Colony.

7. 12. 28.

Extract.

From the Report of the Fonque Mission

The production of Alcohol for Power Purposes in Algeria
From Sisals and other Alcohol producing materials.*

Fermentation of the Juice. Sisal juice, at least in Algeria, does not give rise to a spontaneous alcoholic fermentation, owing to the presence of gums, albuminoids and especially of acid and toxic bodies.

On the other hand a very intense aerobic fermentation develops in the fresh juice; lactic and mannitic predominating, and microscopic examination shows their presence in the fresh juice, and a few hours afterwards they have overrun the liquid.

It was necessary therefore to sterilise the juice at 120 C. and an attempt was made to set up an alcoholic fermentation of the sterilised juice by seeding it with various yeasts; the yeasts did not develop.

M. Misse of the Algerian Pasteur Institute fortunately offered his great fermentation experience and his collection of yeasts, in order to try to acclimatise them to sisal juices either sterilised or fresh; he did not succeed. Twenty kinds of very vigorous yeasts, including the yeast of Madeira wine, and distillery yeasts capable of withstanding a high percentage of acidity, were seeded in a mixture of 80 per cent. of a wort of sweet malt and 20 per cent. of sterilised sisal juice; no single yeast developed. It is not putting it too high to say that sisal juice is a powerful antiseptic to ordinary yeasts.

We therefore attempted the direct isolation of sisal yeasts, either by washing the leaves, crushing the rhizomes, or even by

* Annales de l'Office National des Combustibles Liquides,
1926, 1, 259.

18
notching a Pulque (a kind of sisal used in Mexico for making a wine of the same name), and making the juice ferment in the wound.

After many trials, M. Moreau (the chemist of the expedition) was able to cultivate in solid media certain yeasts isolated with great difficulty, and gradually obtained pure cultures.

These yeasts developed very well in sterilised sisal juice and brought about alcoholic fermentation under favourable industrial conditions. A certain number of fermentations were carried out and, when the aseptic condition had been approximately reduced (which is very difficult with insufficient material) a fermentation of close on one hundred per cent. of the total sugar given by analysis was realised.

The fermentation was carried out at 37°, lasted 48 hours (after seeding with only some yeast cells), and gave a yield of 88 per cent. of the Pasteur yield, notwithstanding a distinct infection.

These remarkable results can no doubt be improved by practice on an industrial scale.

By operating in a Fernbach yeast cultivator for seeding the juice from the steriliser and aseptically cooled to 37°, the fermentation will be quickened and infection will be prevented by cooling in enclosed fermenting vessels.

Annales
De l'Office National des Combustibles Liquides.
1928, 3.63.

Production of Alcohol from Agave Sisal.

Report of the Scientific Committee on Petroleum to the Administrative Council of the National Bureau for Liquid Fuels concerning the work carried out by the Fouque Mission.

As a result of a first mission to Algeria and in order to originate an industrial process for the manufacture of alcohol from sisal fibre waste, the Committee considered it necessary to continue the investigation begun by M. Fouque in Algeria, and to carry out in North Africa, and in the Sudan on the agave plantation at Diakandapé, semi-industrial trials under conditions as nearly as possible resembling those to be encountered in the industry to be set up.

We shall not deal with the laboratory tests carried out in Algeria in the course of the last two missions. These tests formed the subject of reports examined at the sittings of the Committee on 20th April and 26th October 1926.*

These researches were directed towards determining the sugar content of the sisal leaves and to establish the quantity of alcohol which could be produced by a suitable fermentation treatment.

In so far as the Sudan experiments are concerned we shall examine in turn:-

- (1) The research programmes.
- (2) The results obtained.
- (3) The conclusions to be drawn.

I. The Research Programme.

20

The following is M. Fouquet's proposal approved by the Committee:-

A mission of 5 months including travelling from November 1926 to March 1927 in the Sudan for semi-industrial work on the production of alcohol from fibrous refuse and a more perfunctory study of other alcohol bearing substances which may appear of interest to the mission.

Expanding this proposal the work includes study of the following:-

(1) A comparative study of the waste according to the different defibrating machines employed, as regards its sugar content and fermenting capacity.

The Diakandapé Company uses two kinds of defibrator; the American Prieto which does not employ water during separation, and the German Corona which operates with injection of water. These latter machines are of advantage in producing a white fibre which does not need to be washed before sun-drying but from the point of view of distillation they possess the disadvantage of diluting the juice.

(2) An examination of the possibility of creating a fuel alcohol industry using refuse to be treated at the site.

From the point of view of the semi-industrial trials properly so called it was considered that the material furnished by the Fouquet Mission was

(a) A study of the culture of the plant in the Sudan and the possibility of its cultivation in other parts of the Sudan.

(b) A study of the fermentation of a greater quantity of juice in open or closed vessels and the various conditions of sterilisation. The distillation was to be carried out in a small apparatus allowing a distillate of 50° strength to be produced.

(c) Sugar content and production from stems and sprouts.

The "ligotie" of the stems which are full of sugar at the time when they are sprouting may prove of interest on a plantation like that of Diakandapé where the plants are of short life.

II. Results obtained by the Mission.

1. Comparative study of the wastes according to the different defibrators employed.

The trials were made on residues treated in the Corona machine in which the water injector had been closed. M. Fouque believes that any considerable dilution of the juice is not to be recommended in the Sudan in view of the relatively low sugar content. Some other method of washing the fibres should be employed.

2. The possibility of creating an alcohol industry by using the waste in situ.

This should be examined from three points of view:-

- A. Cultural.
- B. Technical.
- C. Economic.

A. According to M. Fouque's report, numerous regions of the A. O. F. are suitable for sisal growing - Southern Senegal, Sudan, Upper Volta in the Upper Ivory Coast, Upper Guinea in Upper Dahomey. 75,000 hectares could be devoted to the growing of the plant.

B. Experiments have been carried out in the following directions:-

- a. Laboratory tests on sugar content.
- b. Semi-industrial tests of fermentation.
- c. Distillation of fermented juice to obtain low strength distillates.

a. The average of the tests carried out has given as sugar content:- direct 2.3% of reducing sugar; and after inversion 8.1% of total reducing sugar with an acidity of 7 per 1000.

b. The semi-industrial tests have shown the way to a method of treating the juice. This method consists of the following operations:-

1. Rough filtration of the juice.
2. Cooking and Sterilisation. The cooking serves to destroy the chlorophyll and to precipitate aluminous

matter.

22

3. Clarification, neutralisation and cooling of the liquor.

4. Fermentation.

By this course a fermented juice is obtained titrating at 3.7° , Gay-Lussac at 15° , and about 1% of the sugar contained in the leaves is not fermentable (pentose).

c. Distillation carried out in a discontinuous still gave rise to the formation of a frothy mass. It will be necessary therefore to devise special apparatus for the treatment of the fermented juice.

C. Economically speaking M. Fauque estimates that the cost will be from 75 to 80 francs a hectolitre according to the importance of the distillery.

3. Sugar content and production of alcohol from stems.

Trials have shown that the content (9 per 100) in sugar of the stems was not much higher than that of the leaves. This may be because the stems were not cut at the time when the sugar content was at its maximum.

4. Brief study of other substances yielding alcohol.

Among the numerous raw materials studied the banana alone promised to become a source of alcohol when its production is transformed.

III. Conclusions.

A certain number of conclusions may said to have been reached as follows:-

1. The cultivation of sisal over considerable areas in North and West Africa is possible.

2. The sale price of the fibre makes the cultivation remunerative.

3. Both in North Africa and in the Sudan the fibre waste contains at least 8% of sugar.

4. The refuse is easily treated by pressure - by this means

85% of juice is obtained.

23

5. The fermentation realised semi-industrially by the use of special yeasts and appropriate treatment of the juice enables a liquor to be obtained which titrates at 3.7° Gay-Lussac at 15° C. The distillation of this liquor could not be carried out at Diakandapo as the still which the mission had brought with them was not adapted for the distillation of worts giving rise to a frothy mass.

From the technical point of view it appears that the production of alcohol from fibre waste is quite practical, and the efforts made by the National Bureau for Liquid Fuels, open the way to a production of alcohol which will enhance the value of the Colonies and will at the same time provide them with considerable quantities of a substitute motor fuel.

Without discussing the cost price of the alcohol and even admitting that it will be considerably above the figure 45-60 francs per hectolitre indicated by M. Souque, it is reasonable to allow that it will be much less than the present price of petrol in the Sudan which varies between 400 and 900 francs the hectolitre.

What then is to be the part played henceforward by the Bureau thanks to the financial support which it has afforded. Interesting results have been obtained - certain details of the operation of production of the fermented liquor have been patented. For the rest this operation requires a certain amount of manual skill only to be acquired by personal experience. It also seems that the commercial exploitation of the process will demand important efforts of all kinds not covered by the ordinary routine of the Bureau. In sending these missions to Algeria and the Sudan to study the possibilities of alcohol production from agaves the Bureau has fulfilled its rôle of instigator of research. Its object is the production of substitute fuels. It is in no way exceeding this rôle, creating a precedent which might prove embarrassing to its resources should similar requests be

subsequently made to it.

24

So that as far as alcohol research from agaves is concerned the part played by the Bureau is concluded. It is now the duty of private enterprise to provide the industrial application of the researches so made. The Bureau however should not abandon the exploitation of this patent free of charge, in view of the financial sacrifices made by it. It is to say, without interfering directly in the affairs of a company formed to exploit this process, the Bureau should be indemnified for the effort it has made.

The simple way of arriving at this would be to enact that the Company should pay from its profits in any way agreed upon, the sum advanced by the Bureau, whilst the latter should be allotted a certain number of founder's shares.

As far as the actual construction of a factory in A. O. F. is concerned this would follow on the taking out of a permit on the part of the group concerned.

Allowing that the development of this industry is a matter of prime importance to the colony concerned the Society should, if it required financial assistance, address itself, not to the Bureau, but to the Government of the A. O. F. which seems best qualified to judge of the means of satisfying such a demand.

(The present report has been approved by the Scientific Committee at its meeting of 21st December, 1927, presided over by M. Bohal, member of the Institute).

Remarks on M. Fouque's process for the
preparation of power alcohol from
sisal pulp juice.

Dr. A. C. Thaysen.

The commentary given below of the economic and technical possibilities of the production of power alcohol from sisal pulp by the Fouque process is only partly based on personal experience of the subject, since little opportunity has been had to test the behaviour and properties of the raw material utilised in the process.

It is claimed by M. Fouque that some 83 per cent. of juice may be expressed from the sisal pulp which separates from the leaves of the *Agava rigida* in the decorticating machine without the use of water. The juice is stated to contain 8.5 per cent. of sugar, fermentable by a special type of yeast.

The figure of 8.5 per cent. of sugar, apparently, cannot be taken as a reliable average for the juice, and as not observed in any of the samples analysed by Beckley, the agricultural chemist of Kenya Colony. In one case Mr. Beckley found no more than 0.98 per cent. of sugar - in a juice totalling 69.9 per cent. of the leaves - and in another 2.54 per cent. In the latter case the juice represented no more than 33 per cent. of the leaves.

In trying to ascertain the economic possibilities of the Fouque process these observations are obviously of the greatest importance, since a factory working with a juice containing 2.54 per cent. of sugar, other conditions being as favourable as anticipated by M. Fouque, would yield 30 per cent. only of the alcohol stipulated from a factory running on a juice containing 8.5 per cent. of sugar, without a corresponding reduction in cost of production. On the contrary, in the case in point, where the output of juice was only 33 per cent., instead of 83 per cent., the cost of production could hardly be less than three times that suggested by M. Fouque for a "standard" factory, that is, 16 pence instead of $\frac{25}{8}$ pence per gallon.

Nor should it be overlooked that the various figures quoted by M. Fouque as the cost of running an alcohol factory do not leave a sufficient margin of safety to be accepted as correct; the expenditure on staff for instance does not appear to be sufficient, and would probably have to be doubled. It is noteworthy also that M. Fouque omits all expenditure on water consumed in the process, an item which is of very real significance in a distillery, not only for the cooling of the distillate but also for the cooling of the defecated mash and for various cleaning operations.

Expenditure on fuel is assumed in M. Fouque's memorandum to be limited to the low figure of about 1 shilling a ton, calculated to secure the drying and handling of the solid pulp substance remaining after removal of the juice. Though the utilisation of this material for fuel purposes is an interesting feature of the process and might suffice to supply the 350 million B.T.U. required daily by a "standard" factory, it is hardly likely to do so at a cost of one shilling a ton. Five shillings would probably be a more reliable minimum figure and this would add at least one penny per gallon to the price of the alcohol.

Finally it is to be noted that no charge is made against raw material, a procedure which is not usually followed in methods of estimating cost of production.

On the question of the economic aspect of alcohol production from sisal pulp the evidence contained in M. Fouque's memorandum does not set at rest any doubts as to its reliability.

In the matter of the technical procedure the memorandum is no more reassuring. The sterilised juice is stated to be fermented by a special type of yeast, which is claimed to be unique in its property of converting the sugars of sisal juice into alcohol. The experience of the writer does not support the view that it should be necessary to employ special yeasts for the conversion of the yeast fermentable sugars of sisal juice. On the contrary, the samples of sisal pulp which it has been possible

to test in the writer's laboratory, have been exceptionally easy to ferment. It is possible therefore that in this respect simplifications could be introduced which would favourably affect both the economic and the technical aspects of a method for producing power alcohol from sisal juice. Should additional investigations confirm that S-M-ary yeast can be used, the one outstanding technical feature of the Fouque process would fall to the ground, and the question would arise whether a simpler process, such as carried out in ordinary distilling, practice might not successfully replace it, assuming the juice to contain a sufficiency of fermentable carbohydrates to justify the adoption of a fermentation process, that is a minimum of 2 per cent.

(Sgd.) A. C. PHAYSEN.

6. 12. 28.

Bacteriological Laboratory, R.N.C.F.

the 18th of April, a copy of which
was transmitted to you in the letter
from this Department of the 25th of
April, no communication is being made
to the Imperial Institute, ^{to Semmely} ~~as~~ ^{no communication has been made to}
it appears, from Mr. ⁴⁴⁷ P. E. Smith's
semi-official letter to Mr. Ormsby Gore
of the 30th July, 1927 (a copy of which
was sent to you in the letter from this
Department, G.10362/27 of the 19th August,
1927,) that ^{his} ~~Dr. Ormsby~~ previous
investigations were carried out on behalf
of the Fuel Research Board, ^{no communication}
~~has been made to him either~~
It is assumed that the ~~Fuel Research~~
Board will consult him if it is thought
necessary.

I am to add that there is no
information in the Colonial Office with
regard to the previous trials of the
process, ~~which are stated by the Governor~~
~~to have taken place, nor as regards either~~

no 5

106

Dr. Thomsen as
Trayser

no 7 enclosed

97

refers to it
of the companies which are stated
from 2 the Savonri
to have been formed for its exploita-

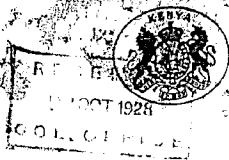
Dispatch
I am, ^{*also*} however, to enclose a copy
of correspondence with Mr. Graham
Williams, who states that he is ~~an~~ *the*
agent in London for the *Touque* Process,
~~and will be pleased~~ *but he is willing* to answer questions
and supply information if desired.

I am

etc.

21/30

KENYA



GOVERNMENT HOUSE,
NAIROBI,
KENYA

No. 524

25th SEPTEMBER, 1928.

Copy (with in dupl.) to Dept of the Interior 15 NOV 1928

Vide Schedule annexed.

Sir,

I have the honour to transmit the accompanying copy of correspondence on the subject of the extraction of Alcohol from Sisal waste by the Fouque process.

2. The position is briefly as follows:-
Mr. Fouque, a French Engineer, with the assistance of the French Government appears to have evolved a method of producing Alcohol from Sisal refuse on a commercial scale.

Successful trials of the process are said to have taken place under Government supervision in the French Sudan and two companies have been formed for the exploitation of the process in the Ivory Coast and in the Gold Coast Colony. It is claimed that the process is commercially practicable and it is understood that the French Ministry of Commerce has made a declaration to the French Chamber to that effect.

3. It will be observed that three samples of local Sisal Juice have been analysed by the Agricultural Chemist and from his report it is noted that in the samples analysed the sugar content/

THE RIGHT HONOURABLE
LIEUTENANT COLONEL L. C. M. S. ALERY, P.O., M.P.
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON S.W.

Copy to Secy to Govt - 29 - 16 JAN 1929

content has been found to be below that of juices treated by the Fouque process.

There appears to be a possibility that the treatment of the juice may lead to hydrolysis of certain glucosides in the juices which may raise the proportion of Sugar in the juice, and that in the analytical method employed these glucosides were precipitated and so not taken into account, but further investigations will be made on this point and a further report submitted in due course.

4. I should be grateful, provided you see no objection, if this despatch and enclosures may be communicated to the Fuel Research Board of the Department of Scientific and Industrial Research, the Imperial Institute and to Dr. A. Thayson of the Royal Naval Cordite Factory, together with a request for the advice in general of these authorities as to the advisability of proceeding with any proposals to adopt the Fouque process in this Colony.

I have the honour to be,

Sir,

Your most obedient, humble servant,

H. J. Martin
GOVERNOR.

SCHEDULE

ALCOHOL FROM SISAL REFUSE.

1. Letter from Hollingsworth and Beatty.
2. Notes on Fouque process.
3. Extract from "Le Journal" dated 21st February.
4. Letter from Hollingsworth and Beatty.
5. Memorandum "A".
6. Memorandum "B".
7. Letter from Hollingsworth and Beatty.
8. Memorandum "C".
9. Memorandum "D".
10. Letter No. 21/221 of 26th June from the Agricultural Chemist to the Director of Agriculture.
11. Letter No. AL30/L of 6th July from the Director of Agriculture to Messrs. Hunter and Nicholson.
12. Letter No. 109/1 of 18th July from Messrs. Hunter and Nicholson to the Director of Agriculture.
13. Report by the Agricultural Chemist on three samples of Sisal Juice.

HOLLINGSWORTH AND BEATTY,

4 Rue Auber,

PARIS.

8th March 1928.

Messrs. Dalgety & Co. Ltd.,
65/68 Leadenhall Street,
E.C.3.

Dear Sirs,

ALCOHOL FROM SISAL REFUSE.

This will confirm the call of our Mr. E. C. Parent on your C. I. Ball in London last week when it had been arranged for Mr. Parent to meet one of your managers. This unfortunately it proved impossible to carry out as our friend Mr. Graham Williams advised you on the same day by telephone.

In order to refresh your memory, we would say that the above matter was put by our friend Mr. Graham Williams to your Mr. Hunter previous to the latter's sailing to South Africa. Mr. Hunter carried with him principal data and was to submit same to the General Meeting of the Sisal Producers of Kenya, which was to take place last November or December. We have not however since heard on the matter.

In case copy of the documents taken by Mr. Hunter should not have been left on file with you, we enclose herewith a ~~new~~ summary of the business which we are sure you will find of considerable interest. The subject has elicited a great deal of comment in French business and Government circles and the scheme has had the official support of the French Ministry and official organs appointed to deal with the question of fuel of National production as the enclosed cutting will show.

An amply capitalised French Company has been formed with the support of powerful French financial groups for the purpose of starting sisal alcohol production in the Ivory Coast and also of the Upper Gold Coast (U.W.A.)

We should feel obliged by your letting us know whether any information has since been received from Mr. Hunter and if not, by your writing or better still calling for an answer, as the French Group controlling the process is obviously anxious to know your decision, the matter having been placed before you as far back as August last.

Yours very truly,

HOLLINGSWORTH & BEATTY.

ALCOHOL PRODUCTION FROM SISAL REFUSE.

FOUQUE PROCESS.

The French Government has since long given attention to the program of fuel production from home or French Colonial resources. It has financed the studies and trials of Mr. Fouque, a French Engineer, who has developed a process for the production of alcohol from Sisal Refuse. Operations on a semi-industrial scheme have been carried on with successful results by Mr. Fouque under Government supervision in the French Soudan.

Sisal leaf yields only about 3% of fiber, the remainder forms a pulp which has hitherto been not only useless, but an item of expense, due to the necessity for its removal. Out of this valueless waste, the Fouque process distills alcohol, at the rate of about 1200 liters of alcohol for each ton of fiber. The residue from distillation is used as fuel at the distilling factory.

The following are the approximate capital requirements and working cost for an average size plant and for a smaller plant respectively: (Full details of these figures are available).

AVERAGE SIZE PLANT.

Treating 330 tons of leaves per day for an annual yield of 480000 gallons.

Cost of plant plus working capital	£27,500
Cost of alcohol.....	5d. per gallon.

SMALLER SIZE PLANT.

Treating 100/120 tons leaves per day for an annual yield of 160000 gallons.

Cost of plant plus working capital	£14,250
Cost of alcohol.....	8d. per gallon.

ALCOHOL PRODUCTION FROM SISAL REFUSE.

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Sisal leaf yields only about 3% of fiber, the remainder forms a pulp which has hitherto been not only useless, but an item of expense, due to the necessity for its removal. Out of this valueless waste, the Fouque process distills alcohol, at the rate of about 1200 liters of alcohol for each ton of fiber. The residue from distillation is used as fuel at the distilling factory.

The following are the approximate capital requirements and working cost for an average size plant and for a smaller plant respectively: (Full details of these figures are available).

AVERAGE SIZE PLANT.

Treating 330 tons of leaves per day for an annual yield of 480000 gallons.

Cost of plant plus working capital	£27,500
Cost of alcohol.....	5d. per gallon.

SMALLER SIZE PLANT.

Treating 100/120 tons leaves per day for an annual yield of 160000 gallons.

Cost of plant plus working capital	£14,250
Cost of alcohol.....	8d. per gallon.

LE JOURNAL.

February 21st 1928.

A L'OFFICE NATIONAL
DES COMBUSTIBLES LIQUIDES.

"Le conseil d'administration de l'office national des combustibles liquides, reuni sous la presidence de M. Loucheur, a poursuivi son etude sur la production d'alcool colonial provenant de la distillation de l'agave et d'autres plantes alcooligenes, Il a adopte les conclusions du rapport du comite scientifique de petrole sur les missions effectuees a ce sujet par M. Fouque du Senegal.

"Le conseil a decide en outre de participer a la poursuite de divers sondages en Alsace, dans la region de Mulhouse et de Selestat."

HOLLINGSWORTH & BEATTY

4 Rue Auber,

PARIS.

April 21st 1928.

Messrs. Dalgety & Co. Ltd.,
65-68 Leadenhall Street,
LONDON, E.C.3.

Dear Sirs,

Alcohol from Sisal Refuse.

Mr. Rene Fouque having been occupied recently with the formation - which is now an accomplished fact - of two Companies for the exploitation of his process in the French Africa, we have been delayed in answering further your letter of March 9th, acknowledged by ours of March 16th.

Mr. Fouque has studied very carefully your report on the question, as well as the contents of the memoranda annexed thereto and has asked us to give you the following information:-

1. In the memorandum of November 23rd 1927 signed by the Department of Agriculture of Kenya, to your Company, they speak mostly of the production of alcohol from dry solid vegetable waste which contains hydrates of carbon which must be preably liquefied and saccharified before being submitted to fermentation.

This is quite different from what must be done with Mr. Fouque's process concerning sisal, since it is there a question of production of alcohol from the juice of sisal soluble sugar which his processes render susceptible of fermentation with the appropriate yeast.

In the first case, in order to utilize dry cellulosic waste, it is necessary to use very important quantities of chemicals and furthermore the tests for the production of alcohol under these conditions which have been made in different countries have not so far permitted to realise an acceptable cost price. Nevertheless, should the question interest you, Mr. Fouque could give you some information concerning the latest method applied in France and which seem to bring an interesting element to the question.

In the case of solid vegetable waste composed of starch as basis, alcohol can be manufactured at reasonable cost price, if these vegetable products are cheap enough. In such a manufacture, it is preferable in the Colonies not to operate with process applying acid (which is costly) ~~nor~~ nor salt (which does not keep well in hot countries) but it is better to use the process of saccharification by starch by special mouldiness (mucorro) as does the powerful company DES DISTILLERIES DE L'INDO CHINE with rice and with the ~~Amly~~ Amylo process.

Therefore, the summary of the question such as is set out in the above mentioned memorandum does not concern the production of alcohol with sisal juice, but with numerous dry solid vegetable wastes.

2. Mr. Fouque's process covers the production of alcohol by utilizing the juice expressed from defibring waste.

The modern sisal decorticators throw out an extraction of fibre 97% to 95% of the weight of the leaves treated, under the form of pulp. By pressing this pulp a juice is obtained and it is from this juice that alcohol is extracted. The quantity of alcohol thus obtained is about 30 liters = 6 1/4 gallons per ton of leaves treated, which correspond to about 100 gallons per acre.

We will admit that an acre gives about 16 tons of leaves per annum.

Let us take for instance a standard distillery treating the waste of 330 tons of leaves per day during 240 days of 10 hours - i.e. the production of 5,000 acres of plantation and a production of 484,000 gallons of alcohol at 100° per annum. The price of the factory is about Frs. 2,870,000 = £23,150/- i.e. with the working capital, an invested capital of Frs. 3,400,000 = £27,500/- and the cost price of alcohol is Frs. 0.55 per liter = 4-7/8d. per gallon.

For a more important plant supplying for example the double (4,400 gallons per day) corresponding to 15,000 acres of plantation, the cost price would come down to Frs. 0.43 per liter, 3-3/4d. per gallon.

For a small distillery treating the waste of 100 to 120 tons of leaves per day during 240 days of 10 hours i.e. the production of 5/700 hectares - 1250 to 1750 acres of plantation and able to produce 7200 hectoliters = 158,400 gallons of alcohol at 100° per annum, the price of the distillery would be £11,625/- - i.e. with the working capital £14,100/- and the cost price of alcohol would therefore be Frs. 0.89 per liter - i.e. 8d. per gallon.

Above figures would however be reduced for the following reasons :-

1. There would be one common power plant for the defibring plant and the distillery, henceforth saving of material and exploitation, which, in the case of a standard factory, would lower the cost price down by Frs. 5 per hectoliter.
2. The distillery wastes give a fertiliser which permits to increase the output of the sisal plantation.

The application of the process and the study of the cost price are explained more at length in the memoranda annexed hereto.

The smaller type of distillery ought to be able to yield 5,000 hectoliters of alcohol per annum, which corresponds normally to a small plantation of 1000 to 2000 acres, according to the output of a sisal estate.

There must be in Kenya a certain number of sisal estates of about such size and besides as is explained in the memorandum annexed on the organisation of the sisal estates, it is perhaps possible in certain cases to group the productions.

3. The cakes resulting from the pressing of the pulp constitute the fuel for the decorticators.

In the memorandum of Dr. A. Thayer of July 15th 1927 addressed by the Acting Director of Agriculture under date of November 23rd 1927 to your company of Nairobi, we find that:

".....Mr. Bursell of the Kalimoni Estate, near Nairobi, pointed out that throughout the year there is produced daily on the estate 20 tons of sisal hemp pulp (dry) or 6,000 tons yearly....."

This is very interesting information because the quantity of juice corresponding to 6,000 tons of dry pulp is about 30,000 to 40,000 cubic meters which would yield about 2,000,000 to 220,000 gallons of alcohol.

Already Mr. Bursell's estate can be provided with a factory and according to other information, which we have on the decorticating machines at present in operation in Kenya, there exists some estates which can supply immediately more important distilleries because they use themselves several decorticators.

Mr. Bursell estimated that the Colony of Kenya and protectorate of Tanganyika would have available yearly a minimum of 150,000 tons of sisal refuse. If we understand that to refer to dry pulp, this would mean a corresponding quantity of 750,000 to 1,000,000 cubic meter of juice which would give 200,000,000 gallons of power alcohol per year.

As soon as an agreement will be arrived at concerning the acquisition of the patents Mr. Fouque will be in a position to start one or several plants and would go personally to the place to assure on the spot the starting of said factories of which he would also guarantee the output.

Finally, we can give all indications for the simultaneous use of alcohol and petrol in any quantities according to the supply, by using a new carburettor (patented in Great Britain) called Hydrocarburettors. The official tests with the same made by the French War Office have given remarkable results. With such a carburettor it is possible to use in France 80% of alcohol at 80° and 20% of petrol. In hot countries it could be possible to use 90% or more of alcohol at 85° and 10% of essence. The efficiency is increased because the motors remaining cool, consume less oil and last longer.

The inventor, Mr. René Fouque, is a French Engineer attached to the Ministry of Commerce in the Office of Liquid Fuel. Mr. Fouque had received a subsidy from the French Government to start a trial factory in a French Colony of French Africa. This factory has been in operation and the results obtained showed that the process can be applied industrially. Recently the French Ministry of Commerce has made a declaration to the French Chamber to that effect.

THE COMITE SCIENTIFIQUE DU PETROLE (Scientific Committee for Oil Fuel) which is an official institution, have recently issued to the National Office for Liquid Fuel their report on Mr. Fouque's process and the conclusions of their report raise the question of obtaining from the Government of African Colonies their financial assistance on account of the consequences of the development of this industry and the vital interest which it offers for said colonies.

For the exploitation of his process in East Africa, Mr. Fouque would consider the following scheme:-

1. To form a company in England to which Mr. Fouque will give an exclusive license of his process in the Colony of Kenya and the Protectorate of Tanganyika.
2. The object of the Company to be formed -
 - (a) to build immediately a distillery in Kenya and to exploit same with a sisal grower, and also to sell sub-licenses of exploitation of the process to other growers.
 - (b) possibly to form later on a subsidiary company for the distribution of the alcohol throughout the colony and for the organisation of means of transportation in the Colony.
3. The conditions of the contract between the inventor, Mr. Fouque, and the new company for the apportionment of his process will be made under the following general conditions:-
 - (a) payment of a cash lump sum to Mr. Fouque.
 - (b) Mr. Fouque and/or his nominee shall be allotted, free of charge, a part to be determined upon of the issued shares capital of the Company in shares of the same class or classes as those issued. Upon any future increase of capital, the company shall likewise allot to Mr. Fouque and/or his nominee, free of charge, a number of shares ~~subscribed in cash~~ in a proportion to be determined to the number of shares subscribed in cash.
 - (c) A convention shall be made fixing the part coming to Mr. Fouque (or his assignees) on the advantages, and especially on the royalties for the sale of the sub-licenses to other exploiters.
 - (d) A personal contract to be made between the Company and Mr. Fouque, appointing him as Counsel for the company.
 - (e) Mr. Fouque shall be entitled to nominate two directors.
 - (f) Mr. Fouque will engage himself to start the first distillery and guarantee its proper operation and efficiency.

Two French companies have been recently formed for the exploitation of Mr. Fouque's process:-

- (a) A company, LES DISTILLERIES AFRICAINES, who have been granted the exclusive license for the French West African Colony and the British Gold Coast.
- (b) LE SISAL SOUDADAIS, which is a sub-licensee of the above company.

We trust that the information conveyed in this letter, as well as in the enclosed memoranda, will enable your Kenya Branch to put the matter clearly before the Sisal Growers' Association, and that the latter will decide upon the adoption of the process in the Colony.

Mr. Fouque would thank you to kindly request your Kenya Branch to cable you as soon as possible what they have decided in principle, so that negotiations on the patents could be pursued here with you without delay. Mr. Fouque is prepared to give you then an option for acquiring his patents against a certain payment by you, in case you should not exercise the option within the time specified.

We are at your entire disposal for any further information you may require.

Yours very truly,

HOLLINGSWORTH & HEATY.

MEMORANDUM.

(A) 41

★ GENERAL METHOD OF OPERATION AND MACHINERY USED FOR THE MANUFACTURE OF ALCOHOL FROM DECORTICATING WASTE FROM SISAL AND OTHER VEGETABLE SUBSTANCES.

The modern sisal decorticators reject after extraction of fibre 97% to 95% of the weight of the leaves treated, under the form of a waste at present thrown away.

The devices described below are relative to the treatment of such waste in order to extract them:-

1. Alcohol
2. A solid product used as fuel.
3. A compound rich in mineral matters constituting a fertiliser. The decorticating is supposed to be

effected with machines where the injection of water during the decortication is not expected or foreseen
modification to the arrangement for washing can be made in the following sense which permits to begin the washing on the decorticators by combing same with a double pressing of the sisal cakes.....

.....In the treatment of sisal refuse, there are the following essential operations, all the details of which will be furnished - extenso to the interested parties:

1. Extraction of the sugar juice by the pressing of the waste, and filtering through a scrapper sieve, "epulper" machine of the type used in distillery of sugar beets.
2. Heating of the juice and sterilization at 120° C. in an apparatus of special metal of large heating surface, for avoiding caramelisation and permitting the precipitation of albuminoid matters. Recuperation to bring to 80-90°C. the juice escaping.

The special sterilizing heaters described in the process, constitute one of the new elements of the method of treatment of juice of sisal plants.

3. Clarification of the wort (after heating and neutralization at right degree) by use of closed aseptic press-filters or aseptic closed turbines.
4. Loading of the different vats (barm vessels) and fermentation vats (large and sterilisable). Cooling in the vats at the proper temperature, ventilation with sterilization air in the barm vats.
5. Making of the barm or leavens and fermentation of the vat by use of the special algerian yeast (yeast of sisal plant separated by M. Moreau). The use of a pure culture of special yeast is also one of the principal new elements of the manufacture of alcohol from sisal.

This yeast is called by us "Levure Moreau" (Moreau yeast) (from the name of our chemist who has made the work of microbiology and of culture necessitated by these researches) is at present cultivated and kept in a solid mass with sisal juice as basis.

6. Distillation and rectification of fermented wort.
7. Treatment of the trunks by scraping, heating with acid water, pressing and clarification.
8. Use of the solid waste of pressing for feeding the wood gasogene giving the power and the heat necessary for the distillery operations. Recuperation of the ashes of gasogene.
9. Manufacture of a liquid fertiliser by use of distiller washers used with lime or CO_2 Ca mixed up with the ashes of gasogene.

Treatment of the trunks for supplementary production of alcohol. In the exploitation of a sisal plantation there is not only to take into account the waste of decortication of the leaves as raw material of distillery, but also the sisal plant trunks at the moment of the growing of their stem.

At the end of the life of the plant, all the leaves will be cut as well as the trunks.

In a properly conducted exploitation of this culture for the largest production of fibre^{and}/of alcohol, and for permitting a good keeping of the soil, one should operate by sectors of plantation where all the plants will be of the same age in each sector.

In the Soudan, the sisal plant come to maturity generally grow their stem at the end of the winter. When in a sector a great number of plants begin to grow their stem, all the plants of the sector will be cut down to be renewed, the leaves will go to the decorticators and the trunks will be cut right at the bottom and directed to the distillery.

The trunks will be treated for the production of fuel alcohol and fertilisers, according to a method heating indicated.

In the future, one can hope the defibring of the trunks themselves, as a special machine for this purpose is being studied, which machine would permit the decortication of the trunks previous to their passage to the distillery.

The fibre obtained would be rather short, rough, but nevertheless commercial.

Use of solid waste to give power - Use of wood gasogenes.

Each ton of leaves would furnish after double or triple pressing of the waste of decortication, a solid sisal cake, cellulosic and ligneous, weighing about 160 kilos at 40% water.

When trunks will be treated, there will be obtained a cellulosic and ligneous waste still more important - i.e. a cake of about 300 kilos at 40% water.

All these cakes can be directly treated for the gasification in wood gasogenes (reversed combustion preferably) in order to permit the transformation of water into water gas which will enrich the gas.

The efficiency can beⁱⁿproved by allowing these cakes to dry partially prealably, either in air, or in the sun, or preferably in dry ovens or where lost heat can be utilized.

These cakes will represent, besides all the fuel necessary for the operation of distillery, at least half of the fuel necessary for the operation of the decorticators or other accessories.

In fact, in the gasogenes are loaded 6 tons of cakes at 40% water for one ton of wood^{dried} in the air or 2 700 kilos of wood coal. By using for this ~~mass~~ excess of fuel dry products, the operation of the gasogenes will be much improved.

In the conditions of exploitation at the same time of fibre and of alcohol, there will be an advantage by utilizing immediately this gas of gasogene still hot in gas turbines easily regulated and very simple in operation. The steam produced would be used for the power and the distillery. This solution is preferable to gas motors, since it is necessary to produce steam for distillery and that it is possible for the latter to utilize the vapours escaping from the motors.

Utilisation of ashes and residues of distillery for the manufacture of fertilizers.

It is a mistake to believe that in all the soils it is possible not to use any fertiliser for the culture of sisal: in Mexico evidently, there are some sisal plantations which since many years have been renewed without fertilisers; a certain number of them, however, produce comparatively little per hectare, but these sisal plants can ~~be~~ only continue to produce because the soil of Yucatan is particularly rich in mineral matters necessary to sisal. In other countries such as French Occidental Africa (Soudan) where mineral matters are not numerous, it could not be the same. In fact, the first generation in these regions is spontaneously very beautiful and there is a degeneration if nothing is given back to the soil.

Each ton of leaves cut on an estate takes away from the soil about 15 kilos of mineral matters and 5 kilos of nitrated matters (this production is often doubled in certain countries) each year

3000 / 311

there is exported from the soil per hectare about 500 kilos of mineral substance (potassium, phosphates, lime etc.) and 200 kilos of nitrate matters.

The present exploitation of sisal where all the waste is generally thrown away in the river, leads very rapidly to exhaustion of the soil, especially (as in the case in West Africa for lime) the soil is already among one of the matters essential to life and development of sisal.

We therefore consider as necessary to each generation to give to the soil a quantity of mineral matters at least equal to what has been taken by the crop. Our processes of manufacture of alcohol will permit this result (by giving back to the soil, the ashes, the distillery washes and products of filtering.) They will permit even of the progressive increase of useful elements, thanks to the adjunction of these matters coming from the manufacture of alcohol (lime of neutralisation of the Juices and distillery washes, phosphate of ammonia etc.)

In Soudan, from the second generation, ~~mm~~ no more than 500 kilos of fibre per hectare of estate could be realised without fertiliser, and with our methods, we can affirm that 800 to 1100 kilos and perhaps more, may be obtained. 100 kilos of sisal leaves contain from 1 K.500 to 2K.500 of mineral and nitrate matters. For an average yearly crop of 35,000 kilos per hectare of leaves, this represents an average of 750 kilos of mineral or nitrate matters exported from the soil, per annum, and per hectare, of which 270 kilos about of lime, 300 kilos of nitrate matters, 50 kilos of phosphoric acid and 60 kilos of potassium. By these figures, the necessity is obvious of putting back these fertilisers when the soil is poor.

COST OF INSTALLATION AND COST PRICE OF SISAL ALCOHOL.

The cost of installation and the cost price of alcohol will be examined in two cases as follows:-

1) The case of a factory which we shall call standard factory. By this, we mean that a smaller factory should not be considered, except in case of absolute necessity. The cost of installation and the cost price of alcohol are more reduced in the case of more powerful installations.

Such a distillery corresponds to an estate of 7,500 occupied acres of which 5,000 acres are production each year, supplying 80,000 tons of leaves i.e. for 8 months full, a tonnage of 330 tons leaves daily.

2) The case of a small factory which we consider as less advantageous, but of which we must show the characteristics, because some estates would not justify a more powerful installation.

Such a factory would correspond to an estate of 1250 to 1750 acres under production according to the output and would treat 100 to 120 tons of leaves daily, if we suppose the factory to be in operation during 8 months full.

Still assuming that an estate is to be created, we do not at present take into consideration the trunks which are cut at the end of the life of each sisal plant and which ought to furnish to the distillery an important quantity of alcohol. From the 8th year, the trunks are cut regularly and the production of alcohol shall be increased by 25% without large supplementary expenses.

We figure on a non diluted juice containing 8.5% of sugar in total. It can be expected and hoped to have sisal richer in sugar (in Algeria, we have found up to 12% of sugar). In such a case, the costs of installations etc. remaining about the same the cost price of alcohol shall consequently be reduced.

STANDARD FACTORY.

47

1) Yearly production - 22,000 hectoliters - 2,200,000 liters = 484,000 gallons per annum of alcohol at 100°.

The raw material used is the waste of decortication of 350 tons of leaves treated per day of 10 effective hours.

The volume of juice obtained, taking into account the dilution of about 1/10th made between the two pressings, is 2,800 hectoliters per day & 280,000 li - or 61,600 gallons.

The alcohol obtained will be at 96° Gay-Lussac.

The storage equipment will correspond to about the production of one month i.e. 300,000 liters = about 66,000 gallons.

The extraction of the juice is effected in the day i.e. during 10 hours, as well as heating and clarification, said operations are effected at the same speed as the decortication machines. Of course, the fermentation and distillation operate without stopping during 24 hours each day.

Cost of Installation.

- Buildings,
- Material,
- Motive power,
- Laboratory.

Total, including mounting and starting of the factory Frs. 2,870,000.

Working capital:-

For payment of the staff, overhead expenses, chemical products, about	- 530,000
Total of the capital to be invested	- Frs. 3,400,000
	= £27,500.

NOTE. In figuring above cost of installation, we have assumed that the distillery was not combined with the decortication plant. In fact, for the water, the steam, the motive power and the light, there would be a service common to both plants, and thus the cost of installation of these services would be reduced by about 30% i.e. a reduction of about Frs. 100,000.

Cost price per 100 liters of alcohol at 100°.

- | | | |
|---|--|------------|
| There being 240 working days | = 22,000 hectoliters | |
| per annum = 2,200,000 liters | = 484,000 gallons. | |
| 1. Building and material Fr. 2,870,000 | which we suppose to be amortized in 10 years - per hectoliter of alcohol = 22 gallons | Frs. 13.00 |
| 2. <u>Maintenance repairs and improvements.</u> | Material and buildings, we suppose that Frs. 100,000 are spent on same per annum - per hectoliter. | 4.55 |
| 3. <u>Fuel.</u> | Drying of the cakes and handling per hectoliter. | 2.50 |

4. Raw material of distillery (as reminder) Frs. 0.00
5. Staff (officers and workmanship)
 Frs. 300,000 - for 22,000 hectoliters
 of alcohol
- | | | | | | | | | | | | | | | | | | |
|-----------|--|---|--|---|-----------|---|-----------|---|------------|---|-------------|---|-----------|---|------------|---|------------|
| per annum | { Europeans
Frs. 225,000
including
holiday trips
natives
specialists
Frs. 70,000 | { | 1 sub-manager | { | 1 chemist | { | 3 foremen | { | 1 mechanic | { | 1 assistant | { | 1 chemist | { | 5 watchmen | { | 10 workmen |
| | | | 30 helpers
(at Frs. 6.-
per 100 litres.....) | | | | | | | | | | | | | | |
- during the 240 days (Frs. 70,000) 15.45
6. Chemical products-
 (Acid, lime, soda, phosphate of ammonia) etc. per hectoliter..... 6.00
7. Various general expenses:-
 Accidents in work, insurances, bank charges,
 office expenses etc. per hectoliter..... 7.00
8. Unforeseen expenses, about 12.5% per hectoliter 6.50
- Total of the price of alcohol in storage at the factory
 (taken at 100^o) per 100 ~~liters~~ liters..... 55. 0

100 gallons = 40/3d.

per gallon = 4-7/8d.

We wish to point out that the cost price would really be reduced and this for several reasons.

1. The power in plant would be common to the decortication plant and to the distillery. Thus a saving of about Frs. 5.- per hectoliter (the purchase price of material being diminished) could be realised (cost of exploitation also reduced).
2. The distillery supplying the decorticators with fuel (cake), the reduction of the cost of exploitation obtained thereby would normally be applied to diminishing the cost price of the hectoliter of alcohol.
3. The distillery produces a fertiliser which permits the recuperation of the mineral matters of sisal and of the chemical products employed in the distillery. The cost price of alcohol produced should be reduced by said amount.

On the other hand, in a more important factory furnishing for example double the quantity (200 hectoliters per day = 4,400 gallons) corresponding to an estate of 6,000 hectares - 15,000 acres, the cost price would be brought down to Frs. 43 - per 100 liters (alcohol figured at 100^o)

= 31/6 per 100 gallons

= 3-3/4d. per gallon

21

SMALL FACTORY.

Yearly Production - 7,200 hectolitres = 720,000 litres - 158,400 gallons per annum of alcohol at 100°.

There must be treated during 24 hours 100 to 120 tons of leaves giving about 830 hectolitres = 18,260 gallons of juice containing approximately 3.5% alcohol after fermentation.

The extraction of the juice will be effected by day i.e. during 10 effective hours.

The fermentation will take place in closed vats.

The continuous distillation-rectification will produce an industrial alcohol at 96° Gay-Lussac.

We have figured on a stock of alcohol corresponding to one month of production.

Cost of Installation.

Buildings,
Material,
Motive power,
Laboratory.

Total, including mounting and starting of the factory -
Frs. 1,442,000.--

Working capital.

For payment of the staff, overhead expenses, chemical products, about 300,000.--

Total of the capital to be invested Frs. 1,750,000.--

= £14,100.

i.e. about half of what is necessary to make a distillery three times more important.

NOTE. By utilising the motive power already existing for the decorticators, there would be a saving of Frs. 50,000 - about £500.--.

Cost price per 100 litres of alcohol at 100°.

There being 720 working days - 7,200 hectolitres per annum = 720,000 litres = 158,400 gallons.

1. Buildings and material, Frs. 1,440,000 which we suppose to be amortized in 10 years - per hectolitre of alcohol Frs. 19.70
2. Maintenance, repairs and improvements Material and buildings we suppose that Frs. 50,000 are spent on same per annum per hectolitre..... 6.90
3. Fuel Drying of the cakes and handling per hectolitre..... 2.50
gross

4.	<u>Raw material and distillery</u> (as reminder).....		0.00
5.	<u>Staff (officers and workmanship)</u>		
	Europeans (1 sub-manager Fr. 190,000. chemist per annum 2 foremen including 1 mechanic trips		
per annum	Natives 1 assistant Specialists chemist Fr. 58,600 4 watchmen 8 workmen		

during the (18 helpers at Frs. 6.- = Frs. 27,000
240 work-
ing days

Total:	Fr. 275,600 - per annum. Per hectolitre.....	38.30
6.	<u>Chem. products.</u> per hectolitre.....	6.00
7.	<u>Various general expenses.</u>	10.00
8.	Unforeseen expenses, about 8% per hectolitre.....	3.60
Total of the cost price of alcohol in storage at the factory (taken at 100°)	Per hectolitre.....	89.00

Per 100 gallons = 65/-

Per gallon = 8d.

This cost price would be reduced in view of the reasons laid
out above and could be brought down practically to Frs. 80.- or
7-7/8d. per gallon.

This figure will show you that the cost price of alcohol of
such a factory is decidedly higher than the cost price of alcohol
in a standard factory, it is about the double.

In both cases, the cost price leaves rather large margin
for the distal alcohol as fuel.

HOLLINGSWORTH AND BEATTY.

HOLLINGSWORTH AND BEATTY

4 Rue Auber,
PARIS.

April 23rd 1928.

Export Department.
Your Ref. CDM/MJS.

Messrs. Dalgety & Co. Ltd.,
65/68 Leadenhall Street,
E.C.3.

Dear Sirs,

ALCOHOL FROM SISAL REFUSE.

Referring to our letter of April 21st, we beg to send you herewith memorandum "C" mentioned in paragraph 7 of page 3 as being annexed and which has been omitted.

We suppose that the Sisal Growers' Association has full data on the different sisal estates of Kenya and Tanganyika with information as to their location and their yearly production.

With such information, it could be possible to lay out a general plan showing first the estates which could instal a distillery immediately, and second the estates susceptible of being grouped together.

Mr. Fouque would be ready also to make a personal study on this subject and give it to you if you could give him all the information in question.

Should you wish Mr. Fouque to report and make his recommendation in connection with alcohol production in some definite plantation, it is desirable that besides information as to the importance of the estate and its yearly yield in sisal leaves, he should be put in possession of a specimen of the juice derived from the sisal waste of the plantation in question.

We enclose herewith a memorandum (D) giving full instructions in this respect. If the same are carefully followed and particularly if the sterilization is ~~being~~ thoroughly effected, then the bottles and juice would surely arrive intact and enable Mr. Fouque to state exactly the quantity of alcohol which could be produced by the plantation.

Yours very truly,

HOLLINGSWORTH & BEATTY.

MEMORANDUM.ORGANIZATION OF DISTILLERIES IN SISAL ESTATES.

It appears from the industrial study which we have made for the installation of distilleries treating the juice from the pressing of waste from decortication of sisal, that the yearly production of alcohol from the factory should not be much lower in each case than 140,000 gallons of alcohol (figured at 100°). In order to reduce the cost price, it is better even to build a unit producing 440,000 gallons and more of alcohol per annum. In such conditions, the cost price would be reduced to below 5-1/3d. per gallon of alcohol.

The question now is: How to proceed for the creation of distilleries of the types indicated above, in sisal estates already in existence?

First, let us observe that the minimum production per factory which we have fixed 140,000 gallons per annum, corresponds normally to a small estate of 1,000 to 2,000 acres, according to the output of the sisal estate.

Estates of this importance are frequently in existence and justify a small type of distillery near their decorticators.

A Modern decorticator, in order to operate regularly needs a daily supply of 70 to 80 tons of sisal leaves, and this corresponds to a production of alcohol of about 550 gallons per day i.e. for 240 days of operation, 132,000 gallons of alcohol per annum.

At a lower regime, neither the machines nor the staff are made good ~~use~~ use of. A study made by us and various specialists of sisal shows that the cost price of the fibre increases considerably in these bad conditions of exploitation and can even leave no profit from the sale.

If the decorticating factory do not operate under these conditions, it is better, in order to realise a more rational

operation to group the small estates together and have them supply a common decortivating factory.

Major L.A. NOTCUTT in his study "SIBAL ECONOMICS" (1) and ourselves also, have examined the bearing that the transportation of the leaves (by barrow gauge railroad or other mode of transportation) from the estates to the decortivating factory, has on the cost price of the ton of leaves delivered in a factory and upon the cost price of the ton of fibre produced.

Our opinion is formal: that by using a narrow gauge railroad from the estates to the decortivating factory, there is advantage in having only one central factory for the decortivation of several small estates, instead of scattering the decorticators in each estate. Every time that the distance from the estate to the factory does not exceed 20 kilometres, this advantage is very obvious.

Therefore, there would be a decided advantage in the case of small plantations of say 250 to 250 acres. In grouping them together by two, three or more around a central factory which they would supply, and the cost price of the fibre produced would be materially reduced.

If these estates belong to different owners, it would be very advisable to make an understanding on this basis, because it would be profitable to all concerned.

With regard to the distillery, the same organisation would have the same consequences and would permit the creation of distilleries at an advantageous cost price.

It is even probable that in countries such as Kenya, this organisation of decortivating factories would permit the creation of distilleries of at least 330,000 gallons of alcohol per annum, i.e. of an excellent efficiency.

Furthermore, in certain cases it is possible to modify or complete this organisation for distilleries, by utilising the following method which does not require any displacement of the decorticators:-

The moist waste coming out of the decorticators should not be transported because it gets rotten very quickly, but the pressing machines should be placed near the existing decorticators, and the juice obtained, which is the product that interests us, ~~will be~~ ^{will be} measured and directed by small pipe lines to the distillery where it will be sterilised and treated for the fermentation. We are in a position to avoid the infection of the juice during said transportation.

In France, certain sugar factories receive juices from the scraping factories located at a distance from the plant of about 19 miles; the sugar factory of Ham, for example, is supplied by a scraping mill located 19 miles away which sends it juices to another scraping mill at a distance of about 7½ miles and the latter evacuates the same together with its own to the sugar plant of Ham located 1½ miles further away.

You can see by this example that the circulation of the sugared juices by small pipe-lines is a possible thing, and in certain cases, such means could be used for the sisal distilleries.

To sum up, in order to install distilleries in a country having sisal estates, we recommend the three following points:-

1. To instal distilleries near the decorticators only when the latter can supply a distillery of at least 110,000 gallons of alcohol per annum.
2. In case of small estates at a certain distance from each other and which could be grouped around a central factory of decortication located 12½ miles minimum from each one of the estates, form such a group and erect a distillery near the central factory.
3. In order to complete this organisation if need be, send the juice from the pressing sisal waste to a central distillery.

In all cases, it is recommended to group to the maximum possible the installations of decortication and of distillery in order to cut down the cost price of the fibre and of the alcohol.

INSTRUCTIONS RE PREPARATION OF SAMPLES SISAL JUICE.

1. Collect the pulp waste from the decorticator (if the decorticator works with water on the raspadores, stop the water at least 15 minutes previous to defribing dry and during the whole of such operation). Press the same in a sheet or in a small meat press (so that the juice runs out easily).
2. Fill immediately ten champagne bottles with the juice. Place same in any kind of pot which can be heated over fire and which has been previously filled with water. Boil that water for 40 minutes.
3. Withdraw the bottles from the water. Close them with good corks tightly tied up with string, allow the same to cool, then place them in the pot and leave them 20 minutes to boil.
4. Each bottle should have tied to it a memorandum showing the date when the sample was taken (dry or wet season) the conditions under which it has been taken, length of the leaves, exposure and age of plants, nature of the soil and, if possible, the variety of agaves (sisal plant) cultivated.

Forward at the same time say ten leaves carefully packed in cotton, each leaf bearing the indication of its weight at the time of being harvested.

TO:

DIVISION OF CHEMISTRY,
SCOTT AGRICULTURAL LABORATORIES,
DEPARTMENT OF AGRICULTURE,
NAIROBI, 26th June, 1928.

R/ No. 21/22

The Hon. Director of Agriculture,

NAIROBI.ALCOHOL FROM SISAL WASTE.

I have studied the memoranda supplied by Mr. Hunter on the method evolved by H. Fouque for the production of alcohol from sisal waste. There is no doubt but that the process depends upon the fermentation of the soluble sugars in the pulps. On p. 1 of Memorandum B it is stated that the calculation of the output of the distilleries are based on a sugar content of 8.5%.

The process in short is as follows: The pulp from the peacocks which must be run without water, is passed through filter presses or a centrifuge. The solid is washed twice with small amounts of water and is used as fuel; in the process outlined in gas producer; the gas being used to produce steam in a gas turbine (sic) The liquid is sterilised 90% Alkalified, certain chemicals being used in the process. The mass of the solid is passed into the fermenting tank where it is inoculated with a special yeast. (Memo. A.p. 2.) The fermenting liquor is distilled to give, what I take to be, alcohol. The ash from the producer, the spent wash, the ash & from the filter presses are combined to form a manure to be used on the estate. It is also suggested that, if one estate cannot supply sufficient liquid to maintain a distillery, the liquid after centrifuging be pumped through pipe lines to a central distillery, as is being done in France today in sugar factories.

There/

There must be no miscomprehension regarding the running of the distillery. It cannot be the spare time occupation of the estate manager. A trained man is essential to maintain the reaction of the light to ensure the purity of the cultures and to maintain optimum conditions throughout the distillation. In the scheme outlined provision is made for a chemist, who manages the distillery, and an assistant chemist.

In Kenya, under the provisions of the Industrial Alcohol Ordinance, an excise duty must also be provided; the spirit produced will most certainly be taxable.

Details of the cost of production are indefinite, but considering the cost of chemicals this is taken as Krs. 6 per hectolitre, about 50 cts. per gallon. Dr. Payson postulates in his method when lime is Shgs. 40/- per ton the cost per gallon is almost 8 cts. per ton, in addition there is the cost of the acid, soda and phosphate of ammonia needed. Lime will be needed for neutralization and defaction. The estimate appears to me to be most optimistic. My personal opinion is that the estimate of the cost of production of a gallon of 95% alcohol in the "small" factory can safely be doubled, making the cost about Shs. 1/40.

The crux of the whole matter is the sugar content of the juice. This will most certainly have to be determined before any decision regarding the possibility of the scheme can be made. A plan of work to determine this is considered in the accompanying minute No. 8/222.

Sd. V.A. BECKLEY,
 AGRICULTURAL CHEMIST.

6th July, 1928.

ALCO/1.

Messrs. Hunter & Nicholson,
Nairobi.

KENYA SISAL GROWERS' ASSOCIATION.

Gentlemen,

Reference to the meeting on the 25th ult., and your letter of the 26th ult., enclosing copies of certain correspondence and memoranda, I now transmit for the information of your Association copy of minute addressed to me by the Agricultural Chemist (Mr. Beckley).

2. I should be glad to have any observations your Committee would care to make on that minute, also to know whether you now confirm the proposal made by me at the meeting referred to above that the particulars now available regarding the Fouque process should be transmitted to the Colonial Office with a request that the subject be reviewed by authorities - e.g. Fuel Research Board and Dr. Thaysen, and that their advice should be sought generally on the subject; also as to the advisability of proceeding with any proposals that may be made to adopt the Fouque process.

3. It will be possible for the Chemical Branch of this Department to undertake an enquiry with the object of determining if the juice of the sisal leaf contains sufficient sugar to allow of profitable fermentation and distillation and to a limited extent of should what variation exists in sisal of any one a given time. That work would not be of a protracted nature and should furnish useful information in the preliminary stages of consideration of the question, but a fuller investigation involving a study of variation in composition of the sisal leaf and correlation with the age of the leaf, climatic conditions and possibly soil conditions, would probably occupy the whole time of an officer for more than a year. It will not be possible for this Department to undertake this later service with its present resources of staff.

I have the honour to be,
Gentlemen,
Your obedient servant,

(sd) ALEX HOLM
DIRECTOR OF AGRICULTURE.

P.O. BOX NO. 96,
Sixth Avenue,
NAIROBI.

59

18th July, 1928.

Quote No. 199/1.

The Hon. Director of Agriculture,
P.O. BOX No. 323,
NAIROBI.

Dear Sir,

THE KENYA SISAL GROWERS' ASSOCIATION.

We beg to refer to your letter reference ALCO/1 of the 6th July last on the subject of extraction of Alcohol by the Fouque process.

Your letter and the Minute addressed to you by the Agricultural Chemist was placed before a Meeting of the Committee of this Association held on the 16th July. We are asked by the Committee to express to you their thanks for the letter and the Minute enclosed therewith and to ask that you will be good enough, as suggested by you, to transmit such particulars as are now available regarding the Fouque process to the Colonial Office with a request that the subject be reviewed by the authorities - e.g. Fuel Research Board and Mr. Trayson and that their advice should be sought generally on the subject, also as to the possibility of proceeding with any proposals that may be made to adopt the Fouque process. The Committee further note with pleasure your statement that it will be possible for the Chemical Branch of your Department to undertake enquiries with the object of determining if the juice of the Sisal leaf contains sufficient Sugar to allow of profitable fermentation and distillation and to a limited extent of showing what variation exists in Sisal

of varying age at a given time.

The Committee would be most grateful if your Chemical Branch would undertake this enquiry immediately and further ask whether it would be possible for the result of this enquiry to be submitted for the next Quarterly General Meeting of this Association to be held on the last Monday in August.

The Committee ask us to state that in their opinion the fact that dry desiccation would have to be undertaken would be no real obstacle to the adoption of any process for the extraction of Alcohol, provided the financial inducement offered by any scheme which is adopted proved to be sufficient.

Thanking you for the trouble you have taken in this matter.

We are, Sir,

Your obedient servants,

for and on behalf of W.C. Hunter & R. Nicholson

(Sd) W.C. Hunter.

of varying age at a given time.

The Committee would be most grateful if your Chemical Branch would undertake this enquiry immediately and further ascertain whether it would be possible for the result of this enquiry to be submitted for the next Quarterly General Meeting of this Association to be held on the last Monday in August.

The Committee ask us to state that in their opinion the fact that dry distillation would have to be undertaken would be no real obstacle to the adoption of any process for the extraction of Alcohol, provided the financial inducement offered by any scheme which is adopted proved to be sufficient.

Thanking you for the trouble you have taken in this matter.

We are, Sir,

Your obedient servants,
for and on behalf of W.C. Hunter & R. Nicholson
(Sd) W.C. Hunter.

61

ALCOHOL FROM HIGEL.

The proposed Kouque process for the production of alcohol from distal waste depends for its success upon the quantity of sugar in the juice as obtained in dry carbonization and pressing the pulp. Under the conditions obtaining here 7% of the weight of the leaves can be obtained as juice.

It is difficult to reconcile the various figures given in the memoranda of the Kouque process. In the standard factory a daily juice production of 55,000 gallons is expected. This on a basis of 2.5% sugars should give a daily production of 2800 gallons alcohol or in a working year of 240 days an annual production of about 670,000 gallons. The estimated production is only 432,000 gallons per year and this includes the sugars washed out of the pulp. Does this mean that all the sugars are not fermentable? In my later calculations I have taken all the sugars as being fermentable.

The annual working cost of a small distillery is given as 25250 (129,400 gallons at 8c. per gallon). This, I fear, is rather low. The salaries and wages of the staff of the distillery are given as 875,000 francs or 22,200. A fairer estimate for Kenya would be 23,800, in addition to this the salary of an Inspector under the Industrial Alcohol Ordinance will have to be provided. On the whole I consider that a fairer estimate of the annual running cost would be 28,000. This estimate is being used in later calculations.

Samples have so far been obtained from Mr. A. Burcell, Kaituma Estate; Mr. H. D. Nuttall, Ford, Kunda Killa; Mr. J. Walker, Long Croft Ltd. In the first case disarticulators are used, in the second an experimental rolling disarticulator and in the third another form of roller. Each sample will be discussed separately.

1. Sample from Kaituma Estate.

100 lbs of leaves were run through the disarticulator without water. 21 lbs. of wet pulp were obtained.

89% of the leaf appeared as pulp.

2257 grams of pulp were removed with press.

2156 grams of juice were obtained.

i.e. 89.8% of the original pulp was expressed as juice.

The green cake was then dried without washing and was found to contain 76% moisture. In the Kaituma process a press cake containing 40% moisture is obtained. In order to obtain this state of dryness 100 lbs of juice would be extracted giving in all 111 lbs of pulp or 76% from the leaf.

After filtering off the small amount of juice water in the juice its specific gravity was 1.042.

100 gms	of the juice contained	1.00 gm.	sugar.
100 gms	"	0.80 gm.	sugar.

Considering as a basis 100 tons of leaves per day, there would be in the juice 1250 lbs sugar. This would give a yield of about 100 gallons of alcohol, an annual output of 20,000, taking, as is possible in Kenya, a working year of 300 days.

Assuming Mr. Burcell's output of 100 tons

of fibre last month to be an average, the annual production of alcohol would be 40,000 gals., and the cost per gallon would be Uha.5/53.

2. Sample from Messrs. Swift, Rutherford
Ltd., Funda Hills.

103 lbs of leaves were passed through the experimental rolling machine, 12 lbs of wet fibre were obtained.

The machine was such that a fair sample of the pulp could not be obtained, only a fairly dry sample could be taken. This on pressing gave 86% juice and left a cake containing 87% moisture. If all the pulp were collected it is safe to assume that as much juice would be obtained as from the decorticator pulp. However, this would not be easy so an estimate of 50% juice is being made.

The specific gravity of the juice was 1.054.
100 c.c. contained 1.30 grams sugar.
100 grams " 1.4 " " "

On the basis of 100 tons of leaves per day the total amount of sugar available per day is 1000 lbs, giving an annual output of 22,800 gallons an uneconomical amount.

If ordinary decorticators were used it is probable that as much juice would be obtained as in the case of Kalironi. The annual production of alcohol, per 100 tons of leaves per day, would be only 43,000 gallons, also an uneconomical amount.

The rolling machine treats pulps giving a short fibre. A sample of the juice taken. The specific gravity was 1.061 and the sugar content on weight was 3.65%. At this content the production of alcohol would be just feasible

3. Sample from Longport Ltd.

A sample of juice as obtained in the experimental crushing plant was examined. In this process it is estimated that 33% of the leaves is expressed as juice.

The juice had a specific gravity of 1.037.

100 c.c. contained 8.64 grams sugar.

100 grams " 8.64 " " "

Machine Longport Ltd., when running fully, will be treating 600 tons of leaves per day. This will give 150 tons or approximately 37,500 gallons of juice per day. This quantity is more than the smaller plant could cope with and about half the capacity of the large plant. However, assuming that extra large ~~engines~~ to meet this surplus were installed at an extra cost of £5000. The ~~reduction~~ allowance would not greatly affect the actual cost of running.

This amount of juice would contain about 40 tons of sugars. The daily production of alcohol would be rather more than 800 gallons or nominally about 170,000 gallons. The cost per gallon would be 1/- at which rate the manufacture would be approaching an economic basis.

I consider that the production of alcohol for power purposes would not be economical unless it can be produced for rather less than 10/- per gallon. Before use it would be necessary to condense the alcohol and to add something to assist combustion, either ether or petrol. This would increase the cost of the motor spirit. The cost of distribution must also be taken into account. The sale of the spirit at 15s.0/- per gallon would then not leave much in the way of profit.

In my work.....

In my work I have used fresh untreated juice. There is more sugar than my figures show but this extra sugar is present in a combined state and, unless in the processes, involved in the fungus process, was liberated, it would not be fermentable. Perhaps the discrepancy I have noted in the beginning of my report is traceable to this combined sugar. Nevertheless, with the data now at my disposal I consider that, in the ^{fruit} from which I have received samples, the ^{total} amount of sugar from ^{total} starch would not be an ^{exaggerated} representation.

J. V. ^{W.} ^{W.}
 AGRICULTURAL CHEMIST.

66/18

Mr. Eastwood

Mr. Seel

Mr.

Mr. Bollowley.

Sir E. Harding.

Sir J. Shuckburgh

Sir G. Grindle.

Sir C. Davis.

Sir S. Wilson.

Mr. Ormsby-Gott.

Lord Lovat.

Mr. Ainery.

9/10/28
Answer 10/28
S. J. [Signature]

10 OCT
1928

Downing Street,

13 October, 1928.

Sir,

I have etc. to acknowledge the receipt of your despatch No. 494 of the 7th September, 1928, in which you inform me that two bundles of bamboo have been shipped by the Acting Conservator of Forests to the Crown Agents for the Colonies for delivery to the Fuel Research Board, Dept. of Scientific and Industrial Research, and to enclose for your information a copy of a letter which has been received on this subject from the Dept. of Scientific and Industrial Research. A copy of the Department's letter of the 21st May, to which the Department now write reference is made in para. 2 was

for coupon,

DRAFT.

KENYA

Confidential

Gov. Grigg.

From Dept. of Scientific and Industrial Research 29th Sept. (15)

without enclosure

A

(10)

L.F.F. required.

enclosed

6 Oct. 1929
to Dept. of Sci. and Ind. Res. (15)

X.15156/28 Kenya.

66/18

Mr. Eastwood

Mr. Seel

Mr.

Mr. Boltonley.

Sir E. Harding.

Sir J. Shuckburgh

Sir C. Grindle.

Sir C. Davis.

Sir S. Wilson.

Mr. Ormsby-Coxe.

Lord Lovat.

Mr. Amery.

9/10/28
Amery 10/28
St. J. Shuckburgh
10 OCT 1928

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Confidential

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without enclosure

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(10)

L.F.F. required.

enclosed

to CA 1. 2/29
to Dept of Sci Ind Res

Copy to Dept of Sci Ind Res

enclosed in my Confidential despatch (2).

of the 4th June.

2. In view of the contents
of the letter, ~~the C.A. Agents~~
~~have been authorized to dispose of~~
~~the two consignments of bamboo~~

~~I have, etc.~~

I am ^{as to the} not clear ^{for what}
purpose ^{for which} ~~this~~ consignments
has been forwarded, & I
shall be glad to ^{be informed in} ~~receive~~
of due course whether you
consider ~~that they can be~~
be of your ^{wishes} ~~wishes~~ as to
their disposal, & ~~to~~ ^{to} ~~the~~
^{meaning} ~~in~~ the C.A. ^{for}
are being requested to
keep the bamboo in store.

Chandra

enclosed in my Confidential despatch (2)
of the 4th June.

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of that letter, ~~the bamboo consignments~~
~~have been authorized to dispose of~~
~~the two consignments of bamboo.~~

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purpose ~~the~~ consignments
have been forwarded, & I
shall be glad to ^{be informed in} ~~receive~~

of due course whether you
consider ~~that they can be~~
left of your ^{wishes} ~~wishes~~ as to
their disposal. & ~~to be left~~

~~meanwhile~~ the C.A. ~~for~~
are being requested to
keep the bamboo in store.

[Handwritten signature]

(10)
the Department's letter of 21st May the Committee of Council consider that there is nothing to be gained by further laboratory experiments in this country, and the Department is, in any case, not now in a position to carry out such experiments.

I am therefore to request that the Crown Agents may be instructed as to the disposal of the consignment referred to in the letter of 1st September. I am to add that, in view of the somewhat uncertain address given in the communication to the Crown Agents already referred to, enquiry has been made of the Imperial Institute to ascertain whether the Institute was expecting to receive the consignment. It is understood however that the Institute has no knowledge of this consignment.

I am, Sir,

Your obedient servant,

R. S. Hoey

68
C O P Y .

1st September, 1928.

The Crown Agents for the Colonies,

4, Millbank, Westminster,

L O N D O N . S. W. 1.

Gentlemen,

I have the honour to inform you that I have shipped two packages bamboo marked as under per S.S. "Madura" on account of the Ag. Conservator of Forests, Nairobi, Kenya Colony and shall be glad if you will kindly take delivery of the packages and forward them to The Fuel Research Board, Department of Scientific and Industrial Research, Imperial Institute, London, S.W. 7.:-



London No. 253/4

I enclose herewith Bill of Lading in duplicate, Customs Export Free entry in original, and my Transport Way Bill in triplicate and shall be glad if you will kindly sign and return one copy of the last named to me on the receipt of the above.

I have the honour to be,

Gentleman,

Your obedient servant,

(Sgd) J. DOHERTY.

Government Coast Agent.

69 12

GRAHAM WILLIAMS
AMBASSADOR 1928

19, BERKELEY STREET
LONDON, W.1

24th August 1928.

The Under Secretary of State,
Kenya Department,
Colonial Office,
Downing Street, S.W.1.

SEP 1928
WOM
5
39-16 JAN 1928

Sir, I have the honour to inform you that I am the agent in London for the Fougere process of obtaining power Alcohol from Sugar refuse. My friends Messrs Dalgaty & Co. Ltd sent details of this process to the Sugar Growers Association in Kenya, and I have just heard that after discussions with the Honble. The Director of Agriculture, this gentleman has sent particulars to your office for further inquiry to be made on the matter.

I shall be pleased to answer any queries that may arise at any time, or supply you with any further information in my power, and hold myself entirely at your disposal.

I have the honour to be,
Sir,
Your obedient Servant,

Graham Williams

vegetable materials including bamboo, there is no possibility of furthering the commercial exploitation of these methods in the Empire by additional laboratory experiments in this country. The Committee of Council decided, therefore, some months ago not to continue the experiments, and after careful consideration see no reason to change their decision.

The Committee of Council has seen from the enclosures to the letter from the Governor of Kenya forwarded with your letter of the 10th April, that the high cost of transport and difficulty of collection make it extremely unlikely that any process can be developed for treating grasses, straws and waste vegetable materials successfully in that Colony. They also see no reason to suppose that the use of bamboo as a prime source offers any great advantage in these respects. If, however, it were ever possible to use bamboo successfully as a source of pulp for paper making on a large scale, then the Committee of Council think that there might be a greater chance of the production of alcohol as a by-product at the pulp factory.

74

The general opinion of the Committee of Council is, that if it is considered important to explore these matters further it is absolutely necessary to make a careful survey in the country of origin of the materials in order to be assured that there is a prima facie case that the cost of collection and carriage will not in any case rule out the production of alcohol as a commercial possibility. If the result of such a survey appeared promising, then the next step would undoubtedly be to arrange for a large scale trial in the country of origin. Should such a trial be contemplated, the Committee of Council would be glad to advise and assist in any other way, but they have no funds which they could use for the furtherance of such work.

I am, Sir,

Your obedient Servant,

R. S. Knight

furnished with the view
of the Fuel Research Board
as suggested in the fourth
para. of the letter.

2. You will, no doubt,
be able to deal with
the various points for
the comparison of the sample
... which is being
... in this connection
... when
... Fuel Research
Board.

A. WISPMAN.

RECEIVED
19 APR 1928
COL. OFFICE



IMPERIAL INSTITUTE
LONDON S.W.7.

15 April, 1928.

Sir,

I have to acknowledge the receipt of your letter No. 15156/28 of the 10th April with reference to the possible value of Kenya bamboos as a source of power alcohol.

The question of the production of power alcohol from vegetable materials has not been investigated specially at the Imperial Institute in view of the attention which has been devoted to this subject by the Fuel Research Board of the Department of Scientific and Industrial Research.

In the course of their investigations the Fuel Research Board have carried out a series of experiments to determine the possibility of utilising various straws and grasses (including bamboo) for the commercial production of power alcohol, and the results obtained are summarised in the fourth Memorandum on Fuel for Motor Transport which is referred to in your letter.

In the circumstances it would be desirable to refer the question raised by the Governor of Kenya to the Department of Scientific and Industrial Research with a view to obtaining an authoritative opinion from the Fuel Research Board.

It is noted that a sample of the Kenya bamboo is being forwarded to the Imperial Institute by the Acting Conservator of Forests and this on arrival could be transmitted to the Fuel Research Board.

It

The Under Secretary of State,
Colonial Office,

S.W.1.

Revised to S.O. 25 APR 1928

Copy to Sir - C. 10 - 1 JUN 1928

15156/28

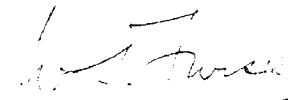
73

no
55024
21

It may be mentioned that the Imperial Institute report dated the 4th November 1921 on "Bamboo (Arundinaria alpina) from Kenya Colony", to which reference is made in your letter, dealt solely with the possibilities of the bamboo as a paper-making material.

I am, Sir,

Your obedient Servant,



Director
(Lt. Col. W. F. F. F. F.)

United States No
X 15756/28 Kenya

475

- Mr. Eastwood 7/4
- Mr. Jefferys 4/4
- Mr. Brown 4/4
- Mr. E. W. Hargrave
- Mr. G. Strachey
- Mr. J. S. Macdonald
- Mr. G. Grindle
- Mr. A. Davis
- Mr. S. Wilson
- Mr. Ormby (Clare)
- Lord Lovat
- Mr. Amery

R - 5 APR
D 9

10 APR 1928

Sir,

DRAFT

(no. 9 on X15756/28)

The Secretary
Dept. of L. and R. Council

2 Apr 28

For Sec. T.F. 23 Feb. D
no. 1 on file

For Sec. Kenya Const. 14 Feb
no. 1 on file
The 1st on file only
The 1st, 2, 3 on file only

Encl. (1) to Report on the
under 'Encl. list of letters
on CO. 57028/21

With ref. to letter J.R.B.
18/4/28 of November last, I am
to transmit to you to be
laid before the committee of
the King Council for Scientific
& Industrial Research the
and a copy of a report which
from the Gov. of the T.F.
together with enclosure, regarding
D. Thompson's ^{suggestion for} ~~researches into~~ the
use of residual waste for the
production of power alcohol.

A copy of the report to which
this is a reply was sent to

You in the letter from the date of
the 1st August last
I am ^{pleased} to enclose
herewith a report from a ~~report~~
desp. from the Gov. of Kenya
together with the relative enclosures &
in addition a copy of the analyses
of the Kenya bamboo made in 1921
of the Imperial Institute
to the Gov. in the 3rd part
of his desp. This inquiry is
being made of the Imperial Institute
as suggested by the Gov. in para. 4.

I am etc

(Signed) H. A. WISEMAN:

Mr. Earlson 74

Mr. Jeffries 11/4/21

Mr.

Mr. B. J. Hanfing

Mr. D. Shuckley

Mr. J. Shuckburgh

Mr. G. Grindle

Mr. C. Davis

Mr. H. Wilson

Mr. Ormbydale

Lord Lovat

Mr. Amery

DRAFT

The Director
Imperial Institute

2 July 21

~~for enclosures~~

X 15256/12 Kenya 3
August 1921 76

under cover the question
of ~~obtaining~~ the production
of power alcohol from
vegetable matter available
locally, & in this connection he
Sir. has

I am so to inform you that the
Gov. of Kenya has requested that
an advisory may be addressed
to you as to whether it is
practicable to determine the value
local
of the Kenya bamboo as a source of
power alcohol. The Gov.
states that with this object
in view he has instructed the
Acting Commissioner of Forests in
Kenya to forward a ~~few~~ small
sample of Kenya bamboo to the

direct to you.

2. In this connection I

am to refer to Sir Wyndham

Dunstan's letter 44857 of

the 22 Nov. 1921, enclosing

copy of a report on the Bamboo

(*Arundinaria Alpina*) from

Kangy Colony. I am also to

invite reference to

~~2. This question has ^{not} been~~

~~raised by the Governor in the~~

~~course of comments on a memo.~~

~~prepared by Dr. A. Hayden of the~~

~~Royal Naval College, Dartmouth.~~

~~The substance of this memo has~~

~~since been introduced in the Fourth~~

~~Memo. on Fuel Fuel for Motor~~

~~Transport, published by the Dept.~~

~~of Scientific & Industrial Research.~~

3. The S. I. will be glad to receive

your observations in

London and

(S. I. 1926) R. A. WISEMAN

TANGANYIKA TERRITORY.

GOVERNMENT HOUSE,

No. 173

RECEIVED
26 MAR 1928
CO. 101

DAR'ES SALAAM. 77

25 February, 1928.

15/36
2

Sir,

X
10382/27/K.
not.

With reference to your despatch No. 528 of the 19th August, 1927, transmitting a memorandum on the production of power alcohol from waste vegetable matter, which has been prepared by Dr. A. Thaysen of the Royal Naval Cordite Factory, I have the honour to forward, herewith, a copy of a report written by Mr. Wolfe, when acting as Director of Agriculture, who considers that the process of manufacture described by Dr. Thaysen would not, at present, be profitable in this Territory.

No. 1/5138
19th October, 1927.

Copy to D.S.I.R 10 APL 1928
Arch. 29. 16 Jan 29.

2. The Comptroller of Customs, as Chairman of the Tanganyika Trade and Information Local Advisory Committee, has communicated with the various Planters' Associations and Chambers of Commerce in this Territory and so far as he has been able to ascertain, it is improbable that private capital will be forthcoming to take up Dr. Thaysen's process in this Territory.

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

Donald Cameron

G O V E R N O R

THE RIGHT HONOURABLE
L.C.M.S. AMERY, P.C., M.P.;
&c., &c., &c.,

DOWNING STREET,

S. W.

173 25.2.28.

78

DEPARTMENT OF AGRICULTURE

DAR ES SAALAM

No. 1/5138.

October 19th, 1927.

The Honourable
The Chief Secretary,
Dar es Saalam.

The only possibility that may exist in the Territory for the utilisation of the process is on the Tanga Railway, where extensive sisal plantations exist and are rapidly increasing in number and size, (export of sisal fibre from this area in 1926 was 17,384 tons: estimated export, in 1927, 20,000 tons); and where maize production is similarly increasing but will not attain proportions adequate for the requisite supply of waste material until Arusha is reached by rail. In regard to sisal waste, a competing factor is to be noted, that of the increasing use of the dried, pressed pulp as fuel for the estate factory. It is possible that this would be replaced by the locally-manufactured power alcohol, but certainly not for some years, in view of the replacement of power plant that would be necessary; and it is at least doubtful if the use of the alcohol would be an economy in itself, since the factor of transport is eliminated in the use of the sisal briquette. Additionally, it is believed that the cost per ton of the waste would exceed the maximum figure (30/-) shown in Table I of the Memorandum. An estimate, received from the largest estate on the Central Railway, on which labour costs are no higher than

79

than on the Tanga Railway, gives the figure of Shgs. 170 per ton as the cost of drying and baling the refuse; though this appears excessive, the further costs of railage and handling would, it is judged, certainly bring the total cost of the waste to Shgs. 50 or Shgs. 60 per ton at the factory. Estate labour costs on the Tanga Railway are substantially higher than in Kenya.

It is considered, however, that the present cost of the waste is not excessive, and that the only benefit to be derived from it is the revenue derived from the sale of the waste as a fertilizer subsequent to the completion of the railway to Arusha.

(Sd/-) H. W. ...
 GENERAL MANAGER.

~~W. Mackie~~

Do you want to see this.

The up part the acha
effecting to 0. diff. the
last line or two under (3)

in 2 minutes

~~has been~~
(seen)

(I don't think I
need to see)

to see

23/3

23/3



KENYA

GOVERNMENT HOUSE

NAIROBI

No 9

KENYA

CONFIDENTIAL

RECEIVED
14 MAR 1928
OFFICE

14 the 30th 1928

Memorandum
BY THE ACTING
DIRECTOR OF
AGRICULTURE

10/11/1928

382/17
1005

D.S.I.R.

Note by the General
Manager of the Kenya
and Uganda Railway

Copy 1st 10 paragraphs
2 1st 1000 encl

Sir,

With reference to your Despatch No. 719 of the 19th August, enclosing a memorandum on the production of power alcohol from waste vegetable matter prepared by Dr. A. Thaysen, I have the honour to transmit for your information copies of comments thereon by the Acting Director of Agriculture and by the Government Analyst. I also enclose a note by the General Manager of the Kenya and Uganda Railway on the freight rate which would be applicable to the residues in question.

You will observe that neither the Acting Director of Agriculture nor the Government Analyst has any objection in regard to the use of residual waste, nor does the General Manager consider that the reduction of the present railway rates would be possible.

Y

THE RIGHT HONOURABLE,
LIEUTENANT COLONEL L.C.M.S. AMERY P.C., M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON. S. W.

Chid. Conf (2) E. J. W.

I have received no communication from the Sisal Producers' Association to whom the Acting Director of Agriculture referred the memorandum, but understand it is receiving the serious consideration of that body.

3. In regard to the possible use of bamboos for the purpose of manufacturing power alcohol I would refer to the chemical analysis which was made by the Imperial Institute at the time when it was proposed to use ample resources of bamboos in the Colony for the purpose of paper making, vide enclosure to Mr. Churchill's Confidential Despatch of the 22nd November, 1921.

I would suggest that the authorities of the Imperial Institute be asked whether it is possible to determine the value of the bamboo as a source of power alcohol. With this object in view I am instructing the Acting Conservator of Forests to forward a further small sample direct to the Imperial Institute.

4. It would appear that, if this material is suitable, its exploitation for this purpose would present a greater opportunity of success than the utilisation of waste from sisal and maize in view of the greater quantity available in a comparatively small area and to the fact that water and fuel in the bamboo areas are readily available.

5. In this connection I enclose a memorandum from the Acting Director of Agriculture relative to the discovery by a Major Macdonald of Nakuru of a means of producing a power gas from charcoal and water. Major Macdonald has proceeded to England/

no 58028/21

JO
58012
21

A.

X
Copy of this para.
to be made in original
regd. on 23036/28 EA

83A

3.

and I have given him a letter of introduction to you. He has also been supplied with letters of introduction to the Chairman of the Empire Cotton Corporation, and to Sir John Davson, M.P., Empire Marketing Board. His discovery would appear to open another avenue for exploring a solution of the problem of the necessary provision of fuel for mechanically propelled vehicles.

I have the honour to be,

Sir,

Your most obedient, humble, servant,

Edward Gigg.
GOVERNOR.

DEPARTMENT OF AGRICULTURE,

P.O. BOX NO. 325,

HAIROBA, 25th October, 1927.

No. J-10/11/1657

838

The Hon'ble the Colonial Secretary.

RE: PRODUCTION OF POWER ALCOHOL IN EAST AFRICA

Ref: Your No. S/O.AG.16/1/15 of 17.9.27.

I have read carefully through the memorandum on the production of Power Alcohol from vegetable waste, and have ascertained railway rates for such material as is suitable for conversion into alcohol. Even were the material carried free on the Railway, I doubt whether it could be delivered at the factory at a price which would enable the production of power alcohol at a cheap rate.

On page 2 of the memorandum, after table 3, it says "the question whether the vegetable waste could be supplied at prices not exceeding 10/- a ton, and in quantities sufficient to insure continuous running, etc." had been discussed with the planters.

If the material had to be sent by rail to the factory then I am certain that the cost would be not less than Shs.20/- per ton, delivered at the factory. The proposition appears to be one for a large estate, or a group of contiguous estates, laid out to handle products expeditiously and cheaply. The price of sulphuric acid would be slightly in excess of the quotation of £30 per ton, but that figure may be taken as a working price. The price of unslaked lime would be greater than £2 per ton, i.e., it is about 25 per ton at Kallinohi Estate. It is therefore clear to me that the cost of production per gallon would be high, if the material has to be drawn from points up to 25 miles away from the factory.

In the memorandum I can find no reference to the size of the unit which would be recommended as one which could be economically installed and worked.

It is doubtful whether in this Colony one could find a group of Sisal producers who are continuously producing within economic radius a quantity of waste sufficient to keep a plant running.

In regard to Maize. The waste material without storage is available over about four months of the year. An accumulation of the waste either on farms or elsewhere would have to be made to meet the demands of the plant during the other months. This would add to the cost.

The prospect of using Papyrus with Sisal to augment the quantity of material available is of advantage in the Ruiru-Thika District chiefly.

I would enquire whether Bamboo would be of use in the making of alcohol. In the past efforts have been made to utilise this material for other purposes, but to-day the Bamboo areas are not utilised for any purpose.

I have taken the liberty of referring a copy of Dr. Thaysen's memorandum with a copy of railway rates quoted to the Sisal Producers' Association of which Mr. Bursell is a member. They may give it further and more fruitful consideration.

H. E. MANNING.

ACTING DIRECTOR OF AGRICULTURE.

EH/NOH

P.O. Box No. 141

No. 8557/84/27 85

GOVERNMENT ANALYST'S OFFICE

Nairobi.

Copy.

12th December, 1954.

The Hon. Director of Agriculture,
Nairobi

Production of Power Alcohol in East Africa.

I have read Dr. Thaysen's Memorandum and there is very little I can add to your report thereon.

I understand that for the next year you will be working the smallest distilling unit which can be set in one producing 2 - 4 gallons of alcohol per day.

From Dr. Thaysen's figures it appears that the output of such a unit is 2 tons of molasses and 1 ton of stillage. The stillage will be available in any one hour. The most serious waste from surrounding factories is a large quantity of stillage.

As regards the cost of production, I think it would be better to compare the price at which petrol could be obtained at 1/6 per gallon at Nairobi with the charges, rather than the cost of 3/- per gallon.

Yours faithfully,
GOVERNMENT ANALYST

Copy to the Hon. The Colonial Secretary.

CO 588 31

COPY.

86
EW

Kenya & Uganda Railway.
General Manager's Office,
Nairobi.
5th October, 1927.

The Hon. The Acting Director of Agriculture,
P.O. Box 323,
Nairobi.

Re. PRODUCTION OF POWER ALCOHOL IN EAST AFRICA.
Your No. J.10/46096 of 27th ultimo.

The Administration would be agreeable to apply the rates in force on fodder, forage, etc., vide page 122 of the Official Tariff Book to the offals, and residues referred to in Mr. Thaysen's letter, and the rates for 5 and 10 tons lots, also smaller quantities are quoted hereunder:-

	Miles.			
	100	150	200	250
Maize cobs				
Local hemp residues				
Local husks	Class 1.			
Straw per 100 lbs.	.70	1/11	1/48	1/80
per ton	17/03	24/87	33/16	40/32
Wheat straw	Class 1. - 50%			
Coffee pulp per 100 lbs.	.38	.56	.74	.90
per ton	8/52	12/44	16/58	20/16
Grasses including papyrus				

- These rates are on a low basis, and the reduction of them could not be favorably considered.
- I also subjoin particulars of the rates applicable to sulphuric acid, unslaked lime and soda:-

	Miles			
	100	150	200	250
Sulphuric Ac.	215/44 per ton MSA-NRB.			
Unslaked lime, C.P. small quantities and 10 ton lots.	8/52	12/44	16/58	20/16
Soda Imported, Class 5.	147/84 per ton MSA - NRB.			
Raw, lump, C.P.	17/03	24/87	33/16	40/32
Washing, C.P.	30/02	44/30	58/24	71/68

I have no comment to offer and return your enclosure's herewith.

(Signed) S.N. Faulkner.
for GENERAL MANAGER,
KENYA & UGANDA RAILWAY.

1928

Kenya

No. 15159

Enclosure to CO 533

SUBJECT

377

Railway Stores Fund.

Previous

*Dec X 1914 88/27
(20th. Est. 1915)*

Subsequent

16.24.5/30.

1926-27
1927-28
1928-29

The figure of £42,547 for the Stores
Fund is that given in the Balance Sheet
as at 1926. (31 Dec). - See Art. 11 of the
1926 report. In that balance sheet the
figures for the Renewals & Settlement
funds respectively are

Renewals £1,739,605
Settlement £2,200,000

The approximate position in respect of Renewals
Settlement Funds (Railway) is stated
in the 1926 vol. page 102. 15th
Report. The figures are
Renewals £1,739,605
Settlement £2,200,000
This is the position at the end of 1926
taken in the account on these figures

S. C. St. Louis

To the other place
for file

7/3/28

Mr Allen

Please see minute attached

H. Cr. Grigg
16. 28th January 1928

Mr. Allen,

3

The proposed transfer appears to be open to serious objection.

In accordance with the recognized system of store accounting the full value of the stock in hand, pending allocation to works, has been already charged in full against a suspense account for unallocated stores, and accounting requirements do not permit of a second charge being made in the accounts, in connection with the same purchases, under the heading Renewals and Betterments.

A further difficulty arises in regard to the proposal to transfer money to the Stores Fund. The sum of £242,347 now standing in this fund, so far as I am aware, is not used for financing the purchase of stores, the cost of which is met in the ordinary way from available cash balances, but represents money which was paid out from the funds of the Colony and Protectorate of Kenya prior to the creation of a separate Railway Administration, and which ceased to be a liability of the Railway Administration when authority was obtained for waiving repayment to Kenya funds. The retention of this fund in the liabilities of the Railway Administration appears to be unjustified, and I consider that, instead of proceeding further with the proposed transfer from the Renewals and Betterment Fund to the Stores Fund, action should be taken by the Railway Accountant with a view to eliminating the above mentioned sum of £242,347 from the liabilities of the Railway Administration.

by

by means of a transfer from the Stores Fund to the Railway (Net) Revenue Account.

I attach to these papers copies of correspondence (+) between the Auditor of Kenya and this Office, on the above questions and, in connection with the General Manager's minute of the 14th January, 1928, I propose to inform the Auditor that, for audit purposes, in the absence of explicit legal opinion to the contrary, it would be advisable for him to act on the principle that an estimate should be submitted to the Legislature, as well as to the Secretary of State for all charges against the Betterment and Renewals Funds including any charge which is made with the object of transferring money from those funds to a special reserve fund (vide the "Kenya and Uganda (Report) Order in Council, 1925," paragraph 1)

Auditor to D.C.A. 6.8.26.
D.C.A. to Auditor 23.11.26.
Auditor to D.C.A. 17.2.28.
Gen. Manager's Minute 9.1.28.
" " 14.1.28.

(in Fisher)

I am afraid I don't follow A in your minute. Moreover I don't understand how you propose that the £475,000 of stores should be financed. Do you propose a bank overdraft or a loan? I should have thought available balances would have been better, but I don't mean by that to support the High Commissioner's proposal. Surely however some way other than accounting against a fund of £45,000 or so required

Be permanently locked up in stores can be returned by the Govt, when it has got it, in order to finance the 4 operation instead of disposing of it & being thrown back on to an overdraft or a loan.

R. P. Wiseman
7.4.28

Mr. Wiseman

I do not understand paragraph 3 of the High Commissioner's despatch where it is apparently suggested that the stores fund is required for financing the stores stock.

In accordance with the recognized principles governing the suspense system of store accounting, all stores and materials for railway works are estimated and accounted for as part of the cost of the works (compare the approved memorandum on Public Works Store Accounting in E.A. 47344/1908) and, for this reason, the financing of the stores stock becomes in practice but part of the process of financing expenditure on works. It follows that the funds which are available from time to time for meeting expenditure on works are available also for the purpose of buying all necessary stores in advance. In view of these conditions, when purchasing stores, the Accounting Officer of the Railway is justified in making use of the receipts which accrue to the revenue account, or to the Renewals and Betterment Funds, and, following similar principles, it is open to him to draw on the unexpended balances of loan funds where works are chargeable to a loan.

In

*Mr. Felling wanting to conceal the
out of works by making them
from other funds than the real
the change.*

Sample 2 To H.C. Transport - 37. 1928 - 5 MAY 1928

3 To R.C. (to office) - 1928 - 5 MAY 1928

Handwritten notes, possibly a list or summary of items, including references to 'copy' and 'explaining'.

A D.A. for done

Handwritten initials and dates, including '1928' and '1926'.

Dr. Allen

When in January 1928 (No. 1) the H.C. asked for the S. of S's. approval of this transfer of £200,000 from the Renewal and Betterment Funds to the "Stores Fund", he did not mention that the transfer had already been made. In the late General Manager's minute of the H.C. of 9th January 1928 he asked

asked "if the H.C. will take the necessary steps "to obtain the sanction of the S. of S. to action "being taken to give effect to this Resolution". It appears from the Auditor's Report on the Kenya and Uganda Railway Accounts for 1927 that this transfer was actually made in the 1927 accounts, the "Stores Fund" being thus increased to £442,347, at which figure it stands in the Balance Sheet on page 36 of the General Manager's Administration Report for 1927.

I shall have to comment on this transaction in my report on the Accounts for 1927.

Mr. Smith 25.6.28
enclos. 20.6.28.
Mr. Smith 2.8.28

I annex copies of two letters on the subject from the Auditor. In the second letter (dated 2nd August) Mr. Smith deals with the arguments advanced by the late General Manager.

Mr. Felling was evidently desirous of making the Balance Sheet afford less material on which those who are inclined to press for a reduction of railway rates or an increase of railway expenditure (capital or recurrent) can support their case.

The course which has been adopted is one which I cannot regard as legitimate accounting. The value of the Stores belonging to the Railway which have been bought and paid for either by the Railway Administration or the Kenya Government was an undoubted asset, against which, now that the Kenya Government has waived its claim to be refunded the cost of the stores for which it had paid when the Uganda Railway belonged to Kenya, the Railway has no corresponding liability.

If the Railway Administration wishes to set up a General Reserve Fund and to transfer some of the surpluses of revenue over expenditure to that Fund,

Fund, there is of course no objection from the accounting point of view, so long as the ~~amounts~~ transferred are duly ~~recorded~~ ^{subv. 1000 16} ~~passed~~ ^{passed} the Railway Council, and approved by the S. of S. and reported to the Legislature concerned. But to cloak the building up of a Reserve Fund by the pretence that it is necessary or desirable for the purpose of financing the purchase of stores is not a policy which I think the S. of S. should countenance.

A. Purpose of Transfer. The ostensible reason was to finance the purchase of stores, but as the D.C.A. points out that reason will not hold water.

Also in spite of Section 13 of the Railway Ordinance which includes a Stores Reserve Fund as one of the purposes to which earnings may be devoted, there is really no place in the accounting system for a Stores Fund at all, whether devised with a view to financing the stores stock or merely intended to serve as a Reserve Fund in connection with stores transactions. The D.C.A. points out, however, that if the Railway Administration wishes to set up a General Reserve Fund and to transfer to it some of the surpluses of revenue over expenditure, there is no objection from an accounting point of view, provided that the transfer is effected in a duly authorised manner.

B. Method of Transfer. As pointed out, this was done by means of bookkeeping transfers and this is defended on the ground that no expenditure was involved and therefore Article 17 of the Order-in-Council did not apply. But money transferred from the Renewals or Betterment Funds is expended so far as those funds are concerned, and as the D.C.A. points out in his minute of the 29th May 1929, it is not desirable that expenditure quite outside the scope of those funds should be charged against them even if duly authorised by including the service in the Expenditure Estimates. The D.C.A. also points out that it would be better to admit the fact of the funds being raised, transfer the amount in question back to Revenue, and charging the service to Revenue in the proper way. When recently they set up an Interest Reserve Fund, they adopted the correct

A. Harding

3/12/28

This basket is to be the income account - correct. a transfer from the Net Revenue Account.

L.H. Allen
19/1/30

5 Sep. 2 Co. Transport 43 26 June 1929
Refers to No. 4 and will be glad to receive final decision in due course.

Briefly the point at issue is the transfer to the Stores Fund, 1927 by a mere bookkeeping transaction of £50,000 and £50,000 from the Renewals and Betterment Funds.

A. Purpose

Handwritten notes:
As this does not press
I am keeping it in the debate
his 1929 Co. Transp
includes a proposal (with apologies
to an interest reserve for the
fund.
L.H. Allen
24/12.

General Reserve in connection with the Loan discussions; and, in their bearing on the question of rate reductions, these Reserve Funds enter very much into local politics.

The matter, therefore, involved more than a mere accounting question, important though that may be, and, in all the circumstances, it seemed better to go slow, especially as for many months there seemed every prospect of a new

General Manager being sent out from here. In that case the discussion of the whole question with him would have been a reasonable initial step. Later, when General Rhodes was appointed,

I had in mind the fact that he was, in normal circumstances, short of leave, and, as a matter of fact, it now seems probable that he will come to this country before very long. I

therefore now send the paper on hoping to escape blame for the prolonged delay, which has been at least well intentioned.

I would suggest that the best course would be to maintain the views of the D.C.A.; to state that the desirability of reconsidering the whole question of these Reserves; say that the B. of S. proposes that it should be discussed with the General Manager when he arrives, adding that, in the meantime, the B. of S. will refrain from issuing any directions in regard to the particular transactions which have given rise to this correspondence.

I submit draft accordingly.

J.M. Allen

18/3/30

W. J. ...
3-20

16/3
to H.C. Tsp. 36-4 and - 31/3/30

all L.F. ...
D.C.A. (w/c 6) 18/1/30
4-APR 1930

(ii) Recurrence
for ... 18/9/29
out ...
J.M.A.

16/3/30

Further the explanation of the purpose of the Stores Reserve Fund on the same page of the Estimates is also open to objection since as has already been pointed out such a fund is not required for financing the Stores stocks.

I am therefore, of opinion that the time has now arrived to reconsider the whole question of these Reserve funds and the substitution for them of a General Reserve Fund, the establishment of which by authorized transfers would act as
my predecessor
37 of the 15th May 1928, not
be open to objection from an accounting
point of view. I understand that
is possible that General Banker will
shortly be proceeding to his country
and I propose that
the matter should be discussed with him
while

(402)

while he is here. In the meantime I shall refrain from giving any instructions in regard to the transaction which has given rise to this correspondence.

I have, etc.

(Signed) PASSFIELD

13

Director of Colonial Audit.

May I put a point merely of method arising out of "A" of Mr. Fisher's minute of 16th April 1928?

As I understand it they wished, for motives of which you are fully aware, to reduce the amounts in the Renewals and Betterment Funds by transferring £200,000 to the Stores Fund and this they did (statement 8 of the General Manager's Report 1927) by a mere book-keeping transfer of £150,000 from the Renewals fund and £50,000 from the Betterment Fund.

In the case of the Interest Reserve Fund set up in this year's estimates this showed the £100,000 for that purpose in the Net Revenue account and approval has therefore been obtained in a regular manner.

If they had waited for the 1928 Estimates and adopted the same course as regards the £200,000 transfer to the Stores Fund, I take it they would - to arrive at the same result - have reduced the Renewals (or Depreciation provision) by £150,000, shown the £200,000 in the Net Revenue Account, thus reducing the balance for Betterment by £50,000.

I understand why they didn't do this. For certain reasons I am glad they didn't, and the point I want to put is this: Could they not have adopted an alternative method by including in Abstract A of the Estimates for 1928 £150,000 and £50,000 for transfers to the Stores Fund as

expenditure

expenditure from Renewals and Betterment Funds respectively. This would have had the effect of taking the money out of the balances on those Funds without affecting the Net Revenue Account for the year, the year's provision for Renewals or the balance available on the year's working for betterment. Also the transfers (instead of being merely unauthorised book-keeping transfers) would have been shown as expenditure from the Renewals and Betterment Funds and as such would, under Section 17 of the 1925 Order in Council, require to be submitted to Railway Council for consideration, to the High Commissioner for approval and to the Secretary of State for sanction. And if no objection had been made the Secretary of State's approval of estimates, which covered the expenditure from Renewals and Betterment Funds, would have covered the transfers.

H.T. Allen
27.4.29.

Mr. Allen,

I discussed this with you at some length last week. As I told you, when a Fund or Account with a special purpose has been constituted like the "Renewals Fund" or the "Betterment Fund", it is not desirable that something which is quite outside its scope should be charged against that Fund or Account, even if such charging is duly authorised by including the service in the Expenditure Estimates. It would be better to admit the fact that the Fund is being raided, transfer the amount in question back to Revenue and

providing for it in an ordinary Abstract or Head of Expenditure. K

And in the present case, so long as the Unallocated Stores Suspense Account system is used for stores, the creation of a Stores Fund or Stores Reserve Fund (or Account) as a liability is simply unintelligible - unless they are going to buy a lot of stores which they do not intend to use. If it is allowed to remain in the accounts, they may try to use it for the purpose of concealing excess expenditure on works - i.e. by charging to the voted head of expenditure the amount provided under that head for the service, and charging any excess expenditure, not to the voted head but to the "Stores Reserve Fund". This of course would not be legitimate.

*I really don't think
it was attempted
in any of the
Betterment Fund
of 3rd July 1928
C.T.N.*

C.T.N.
Director of Colonial Audit
29th May 1929

15

Kenya and Uganda Railways and Harbours

Interest or General Reserve

No. 29 of 15006/
23 Kenya.

Treasury letter 20th April 1928 paragraph 10.

"There is no general reserve fund to meet a deficit and those in prospect must occasion drafts on the Betterment Fund balance as indeed is foreseen in the reference on page 8 of the Governor's despatch or be provided by the Colony".

No. 11 of 15526/
79

Treasury letter 28th March 1929 paragraph 9.

"My Lords advert for a moment to the Interest Reserve Fund noted above. They are in agreement with the principle of an interest or general reserve, the absence of which was noted in Treasury Letter of 20th April 1928. But as a call is not imminent on present forecasts they would have advocated the provision of a smaller sum in 1929 with additions year by year. It is important that some provision should be made in this respect not only to meet a severe but isolated reduction in the revenue of any one year, but for the purpose of paying the addition to loan charges in respect of the original capital which may fall to be made in 1934. Exceptional measures would be necessary to meet a charge which may reach £350,000 per annum and it would be desirable to anticipate the call on revenue by maintaining rates and setting aside the temporary surpluses to tide over the transition period.

16 5



HIGH COMMISSIONER
FOR TRANSPORT.

OFFICE OF THE HIGH COMMISSIONER FOR TRANSPORT,
GOVERNMENT HOUSE,
NAIROBI,
KENYA.

No. 93

RECEIVED
27 JUL 1929
COL. OFFICE

26th June, 1929

Sir,

No. 4

I have the honour to refer to Sir Edward Grigg's despatch No. 98 of the 25th of June, 1928, concerning the transfer of a sum of £200,000 to the Stores Reserve Fund.

2. The Auditor has made frequent enquiries as to the position of the Fund at the present time, and is anxious to learn whether your formal sanction has yet been obtained.

3. I should be grateful to receive your final decision in due course.

I have the honour to be,

Sir,

Your most obedient,
humble servant,

Await
for HIGH COMMISSIONER

THE RIGHT HONOURABLE SIDNEY WEBB,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S.W.1.

Assistant, Kenya Railway, to Director of Colonial Audit

No. 117/22

25th June, 1928

Sir,

K.U.R. Stores Fund.

With reference to your letter No. 117/22 dated 29th May, I have the honour to inform you that a copy of the Secretary of State's despatch No. Transport 37 dated 5th May, had already been sent to me for my comments, together with a memorandum from the General Manager in which he expressed the belief that I was in complete agreement with his view on the question of the Stores Fund. A copy of my reply is enclosed.

(Signed) W. H. SMITH

COPY.

Auditor, Kenya to the High Commissioner for Transport,
Nairobi.

No. 817.

20th June, 1928.

Stores Fund.

I agreed entirely that it was desirable from a financial point of view to set these funds aside, but I am still doubtful whether the accounting procedure is defensible or whether the title "Stores Fund" is a correct description.

2. In a letter to the Acting Auditor dated the 23rd November, 1926, the Director of Colonial Audit expressed his concurrence in the view that it would be correct to transfer the original sum of £242,347 to the Renewals and Betterment Funds. Having regard to that opinion and to paras. 3, 4 and 5 of the Colonial Office despatch I think it will be very difficult to obtain the Secretary of State's sanction to the transaction in its present form. A possible alternative would be to inform the Secretary of State that with his concurrence and the consent of the legislature, as suggested in the last two paras. of the despatch, you propose to increase the amount to a round £500,000 and set it aside as an "Emergency Reserve", putting a very strict interpretation on the word "emergency".

(Sgd) W.H. SMITH.

Auditor.

COPY.

Auditor, Kenya to the High Commissioner for Transport,
Nairobi.

No. 817.

20th June, 1928. 18

Stores Fund.

I agreed entirely that it was desirable from a financial point of view to set these funds aside, but I am still doubtful whether the accounting procedure is defensible or whether the title "Stores Fund" is a correct description.

2. In a letter to the Acting Auditor dated the 23rd November, 1926, the Director of Colonial Audit expressed his concurrence in the view that it would be correct to transfer the original sum of £242,347 to the General and Betterment Funds. Having regard to the Commission and to paras. 3, 4 and 5 of the Colonial Office despatch I think it will be very difficult to obtain the Secretary of State's sanction to the transaction in its present form. A possible alternative would be to inform the Secretary of State that with his concurrence and the consent of the legislature, as suggested in the last two paras. of the despatch, you propose to increase the amount to a round £500,000 and set it aside as an "Emergency Reserve", putting a very strict interpretation on the word "emergency".

(Sgd) W.H. SMITH.

Auditor.

COPY.

Auditor, Kenya Colony, to Director of Colonial Audit. 19

No: 1035.

2nd August, 1928.

Sir,

With reference to my letter No: 830 of the 25th of June, and previous correspondence, on the subject of the Kenya and Uganda Railway Stores Fund, I have now the honour to transmit for your information a copy of a despatch, No-Transport 98 of the 25th of July, addressed by the Government to the Secretary of State.

2. I find it difficult to discover how section 13 of Ordinance No.15 of 1927 (Gazette of the 15th November, 1927) applies to the question. That section divides the earnings of the Railway to a sum sufficient for certain objects. The first of these objects is "outlays for working and maintenance", is met by provision sanctioned by the Legislature and it is not clear why the second, "contributions to reserve funds for stores and other purposes", should be exempt from their control. It is also far from clear how the fund could be used to finance stores stock and how the entries would be passed through the account, and further in what possible circumstances the existence of this fund could enable an adequate stock of stores to be maintained which could not be maintained otherwise.

3. The real object of the transfer is sufficiently clear from the General Manager's minute and from para.4. of the despatch, and, as the question will doubtless be referred to you before a final decision is arrived at, I propose to take no further action except on receipt of your instructions.

I have, etc.

(Sgd) W.H. SMITH.

Auditor.



4
10

HIGH COMMISSIONER
FOR TRANSPORT.

OFFICE OF THE HIGH COMMISSIONER FOR TRANSPORT,
GOVERNMENT HOUSE,
NAIROBI,
KENYA.

No. 98

25th July, 1928

Sir,

I have the honour to acknowledge the receipt of your letter No. 37 of the 5th of May, 1928, regarding the transfer of the sum of 2200,000 to the Reserve Funds as at the 31st of December, 1927.

I have also had the General Manager explaining in greater detail his reasons for the action taken.

I am in accord with the General Manager's view that the time has not yet come of the Railway Council.

As no expenditure is involved it does not appear to be necessary to submit the matter to the Legislature. In this connection I would invite attention to the fact that Article 17 of the Transport Order in Council refers to expenditure only, and that Section 13 of Ordinance No. 15 of 1927 covers the establishment of reserve funds for stores, etc.

I feel sure that you will appreciate the advisability of discouraging the growing tendency on the part of local public opinion to press for further reductions in tariffs and extension of branch lines on

the...

THE RIGHT HONOURABLE
LIEUTENANT COLONEL T. C. M. S. ALGERY, M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET,
LONDON, S.W.1.

Impd 36-1-30

the plea that the Betterment and Renewals Fund is in such a satisfactory position. In consequence I venture to express the hope that you will sanction the transaction which has been recommended by the Railway Council without insisting on a vote of the Legislative Councils.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

Edward Guinness

HIGH COMMISSIONER.

No. E.F.970.

5th June, 1928

The High Commissioner for Transport,

NAIROBI.

STORES FUND.

With reference to the High Commissioner's memorandum No. T/Fin/A.1 of the 29th ultimo, enclosing copy of Colonial Office despatch No. 37 of the 5th ultimo, I think the transfer is misunderstood, probably because my memorandum to the Railway Council was deliberately bald.

2. On young or small railways, stores are financed as far as practicable from current balances. As railways grow it often becomes necessary to have working capital for stores. This is, of course, avoided as long as possible.

3. On this Railway we have now a Capital Account and Balance Sheet. To complete the latter, some years ago an item had to be provided on the Liability side to cover the corresponding Asset representing the value of stores on hand. I gather that no exception is taken to this procedure which, I think it will be agreed, was correct accounting.

4. What has been done recently, however, is to increase this item by a transfer from Renewals and Betterment Funds to a sum more closely approximating stores on hand, thus definitely earmarking accumulated revenue for this necessary purpose.

5. It is, of course, fully understood by the Management that balances in Renewals and Betterment Funds are available for financing stores purchases, but what is unfortunately not understood by a critical local public, or appreciated by officers submitting recommendations for works, or frequently even..

even by members of the Railway Council, is how large a proportion of what is described as available for Renewals and Betterments must be necessarily reserved for stores stock purposes, and apart from sound accounting I regarded it as wise policy to earmark the necessary funds openly and definitely on the Liability side of the Balance Sheet.

6. I trust the Secretary of State will approve.

7. His Excellency, from his knowledge of the local position, will appreciate that, if the amounts are re-transferred to Renewals and Betterment Funds, I would have to explain the need for keeping a sufficient reserve for stores in every Budget Statement, in every financial discussion, and over and over again at Railway Council meetings. As His Excellency is well aware, there is a strong tendency in this Colony to attack what are described as "Surpluses" or "Reserves" which are not understood and great pressure to dissipate these reserves is constantly being used.

8. The reference to the Chief Accountant's memorandum of the 3rd February, 1922, is not understood. That memorandum endeavoured to prove that £125,000 was available for further capital expenditure under the old Capital Grant. That has no bearing on the present case, as will be appreciated, I think, from the above.

(sd). C. L. N. FELLING.
GENERAL MANAGER.

R 2-MAY
D 5-1-28

Mr. Seel 27.4

Mr. H. D. Fisher 1/5

Mr. Allen 7/5

Mr. B. J. Harding 3.5.28

Mr. B. J. Harding 3.5.28

Sir J. Shackburgh

Sir G. Grindley

Sir O. Datta

Sir S. Wilson

Mr. Ormsby Gore

Lord Lovat

Mr. Amery

Answered

Downing Street

12 MAY 1928

5 May

DRAFT

TRANSPORT

ENC.

H. Or.

8 MAY 1928

copy to Dec. 8.4

I have etc. to acknowledge the receipt of your despatch No.16 of the 28th of January in which you ask my approval for the transfer of the sum of £200,000 to the Stores Fund as at the 31st of December, 1927, in the proportions of £150,000 from Renewals Fund and £50,000 from Betterment Fund.

2. It appears from para.3 of your despatch that it is suggested

take

that the Stores Fund is required for the purpose of financing the Stores stock. I am advised that in accordance with the recognised principles governing the suspense system of Store accounting, all stores

copy of Dec. 1 letter to S. C. for info etc.

it is open to him to draw on the unexpended balances of loan funds where works are chargeable to a loan.

3. In the circumstances above indicated, it would appear that there is no place in the accounting system for a Stores fund, whether devised with a view to financing the Stores stock or merely intended to serve as a Reserve Fund in connection with Stores transactions.

4. In 1914 sanction was given for the existing arrangement by which full financial responsibility was placed upon the Railway Revenue Account for maintaining a complete stock of stores for both revenue and capital requirements, and the same procedure was recognized by the Chief

Accountant

question, but I shall be glad if I may be advised if any action is necessary at the present time or whether the amount may still be retained in the accounts.

I have, etc.,

(Sgd) M.A.M. VAN DE VELDE.

Auditor.

question, but I shall be glad if I may be advised if any action is necessary at the present time or whether the amount may still be retained in the accounts.

I have, etc.,

(Sgd) M.A.M. VAN DE VELDE.

Auditor.

30
COPY

Director of Colonial Audit to Acting Auditor, Kenya.

No: 274/722.

23rd November, 1926.

Sir,

In reply to your letter No: 69/26 dated the 6th August 1926 regarding the amount of £242,347 which appears as a liability in the Balance Sheet of the Kenya and Uganda Railway against the item "Store Fund", I have the honour to inform you that I concur in your view that it would be correct to transfer the amount to the Renewals and Betterment Funds as part of the net Revenue of the Railway. The amount mentioned in your annual Report on the Railway accounts, no further action on your part is necessary with regard to this item.

I have, etc.

(Sgd) A. E. HARRISON.

COPY.

31

Auditor, Kenya, to Director of Colonial Audit.

No: 296.

17th February, 1928.

Sir,

With reference to your letter No.274/722 dated 23rd November, 1926, regarding the amount of £242,347 shown in the K.U.R. Balance Sheet as a liability under the heading "Stores Fund", I have the honour to enclose for your information copies of correspondence I have received from the General Manager, Kenya and Uganda Railway, in connection with further transfers to this Fund amounting to £200,000.

2. As the matter has been referred to the Secretary of State and I presume he will consult with you in the matter, no action on my part seems necessary beyond a reference to the transaction in my report on the Railway Accounts.

3. I may say, however, that the necessity for these transfers is by no means clear to me, and I have some difficulty in understanding what financial adjustments will be passed in using this fund to "finance the Stores Stock".

I have, etc.,

(Sgd) W.H.SMITH.

Auditor.

COPY.

General Manager to the High Commissioner for
Transport.

No: E.F.970.

9th January, 1928.

Stores Fund.

The Chief Accountant has suggested that, under the provisions of the Railway Order in Council, Resolution No.217 of the Railway Advisory Council held on the 21st and 22nd November is subject to the approval of the Secretary of State.

2. The Resolution in question reads:-

AGREED to accept the recommendation of the General Manager that the sum of £200,000 be transferred to the Stores Fund as at the 31st December, 1927, in the proportion of £150,000 from Renewals Fund and £50,000 from Betterment Fund.

3. I shall be glad if the High Commissioner will take the necessary steps to obtain the sanction of the Secretary of State to action being taken to give effect to this Resolution.

4. I particularly urged the necessity for making this transfer to the Stores Fund because of the difficulty which exists under present conditions of justifying the accumulation of large balances in the Renewals and Betterment Fund.

5. The Administration would, of course, be perfectly justified in securing Loan Funds for working capital purposes which would mainly comprise the financing of our Stores Stock, and the time may arrive when it will be forced to do so, but I do not think that at this stage when the loan funds ~~are~~ available are so limited and the demands

COPY.

General Manager to the High Commissioner for
Transport.

No: E.F.970.

9th January, 1928.

Stores Fund.

The Chief Accountant has suggested that, under the provisions of the Railway Order in Council, Resolution No.217 of the Railway Advisory Council held on the 21st and 22nd November is subject to the approval of the Secretary of State.

2. The Resolution in question reads:-

AGREED to accept the recommendation of the General Manager that the sum of £200,000 be transferred to the Stores Fund as at the 31st December, 1927, in the proportion of £160,000 from Renewals Fund and £50,000 from Betterment Fund.

I shall be glad if the High Commissioner will take the necessary steps to obtain the sanction of the Secretary of State to action being taken to give effect to this Resolution.

4. I particularly urged the necessity for making this transfer to the Stores Fund because of the difficulty which exists under present conditions of justifying the accumulation of large balances in the Renewals and Betterment Fund.

5. The Administration would, of course, be perfectly justified in securing Loan Funds for working capital purposes which would mainly comprise the financing of our Stores Stock, and the time may arrive when it will be forced to do so, but I do not think that at this stage, when the loan funds ~~are~~ available are so limited and the demands

demands upon such funds are so great, that we should obtain working capital.

23

6. In the circumstances, I consider that the course proposed in the Resolution of the Railway Advisory Council is the proper one to follow.

(Sgd) J.S. CONEY.

for General Manager.

E.F. 870 dated 10.1.28.

Copy forwarded to the Chief Accountant, Nairobi, reference his GAN.133/76 dated the 5th instant.

(Sgd) F.C. ASHDOWN.

for General Manager.

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obtain working capital.

33

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reference his GAN.133/76 dated the 5th instant.

(Sgd) F.C.ASHDOWN.

for General Manager.

COPY.

34

General Manager to the High Commissioner for Transport,
Kenya.

No: E.F.970.

14th January, 1928.

Stores Fund.

With reference to my minute of the 9th instant regarding the transfer of the sum of £200,000 to the Stores Fund in the proportions of £150,000 from the Renewals Fund and £50,000 from the Betterment Fund, and to the telephonic enquiry received as to whether this transfer should not be covered by a Supplementary Estimate to be submitted for the approval of the Legislative Council, I have to state that in my opinion such a course is unnecessary as no additional expenditure is being incurred and the transaction is merely one whereby a portion of the balances in the funds in question will be invested to finance Stores Stock, which otherwise must be financed from other sources.

(Sgd) C.L.N. FELLING.
General Manager.

No.E.F.970 dated 16th January, 1928.

Copy forwarded to the Chief Accountant, Nairobi, for information.

(Sgd) F.C. ASHDOWN.
for General Manager.

General Manager to the High Commissioner for Transport,
Kenya.

No: E.F.970.

14th January, 1928.

Stores Fund.

With reference to my minute of the 9th instant regarding the transfer of the sum of £200,000 to the Stores Fund in the proportions of £150,000 from the Renewals Fund and £50,000 from the Betterment Fund, and to the telephonic enquiry received as to whether this transfer should not be covered by a Supplementary Estimate to be submitted for the approval of the

Executive Council, I have to state that in my opinion such a course is unnecessary as no additional expenditure is being incurred and the transaction is merely one whereby a portion of the balances in the funds in question will be invested to finance Stores Stock, which otherwise must be financed from other sources.

(Sgd) C.L.N. FELLING.
General Manager.

No. E.F. 970 dated 16th January, 1928.

Copy forwarded to the Chief Accountant, Nairobi, for information.

(Sgd) F.C. ASHDOWN.
for General Manager.



HIGH COMMISSIONER
FOR TRANSPORT
No. 16

OFFICE OF THE HIGH COMMISSIONER FOR TRANSPORT,
GOVERNMENT HOUSE,
NAIROBI,
KENYA.

28th January 1928.

RECEIVED
14 MAR 1928
COL. OFFICE

Sir,

I have the honour to report that, subject to your covering sanction, I have approved the following minute of Railway Council which was passed unanimously at the meeting on the 22nd November 1927:-

27 MAY 1928
8 MAY 1928

"AGREED to accept the recommendation of the General Manager that the sum of £200,000 be transferred to the Stores Fund as at the 31st December 1927, in the proportions of £150,000 from Renewals Fund and £50,000 from Betterment Fund."

Ans d
1928

2. The balance standing ^{to} the credit of the Stores Reserve Fund is £242,347 whereas the value of stores on hand at present is approximately £15,000. It seems improbable that the value of stores on hand will decrease in the future and I consider that the Reserve Fund should be increased by the sum mentioned.

3. The use of Loan Funds for this purpose would, of course, be justifiable and it may be necessary in

THE RIGHT HONOURABLE
LIEUTENANT COLONEL L. C. M. S. AMERY, M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET, S.W.1.

36
E.D.

the means to finance the Stores stock in this way; but the demands on available loan funds are very heavy at present and I do not think it advisable to make use of them at this stage to increase working capital. In the circumstances I consider that the course proposed in the resolution of Railway Council is the proper one to adopt and I trust that your approval may be received in due course.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

Edward Gigg.

HIGH COMMISSIONER.

DESTROYED UNDER STAG

Feb 2 14 March 28
Reports death of Mr. W.S. Parker, from Blacksville
Texas. Relations have been confirmed. 2

We should send a letter to Mrs. Parker
at Biddeford conveying the Soc's sympathy
& inform C.A. adding that the matter
has been confirmed.

M. Jewell
19 3 28
H. Allen
1913
atance

DESTROYED UNDER STAG

T. W. Parker }
A. }
26 March 28
death

DESTROYED

DESTROYED UNDER STAG Parker 28 March 28
concerning construction of tomb on grave
as was the intention of the Soc's
reply that the Soc's officers
in the grave
handwritten leaf received officials and go on
as in No 12 in 17669 EA

M. Jewell
28 3 27
H. Allen
1913
atance

5 To Mrs Parker (no 4 ans) 8 0 MAR 1928

1000 To Soc 242 - copy 4 x 5 - 8 APR 1928

7 P.O. Waddington, H.Z. — 29 March 28
Two copy letters addressed to Mr. Parker by
Genl. Manager & copies of Death Report
& report by Medical Officer.

I hope they crossed out the
reading "for relatives" before sending
the doctor's report.

They say nothing about a
death certificate: one might
perhaps write as in the dft. hereunder.

J.P. Hill
24.4.

Yes. It will be well, I
think, also to write to Mrs
Parker saying we understand
that the G.M. has written
to her & sent the doctor's
report.

J.P. Hill
24.4.28
at home

Note on keep DESTROYED UNDER STATUTE Parker (some death) 27 APR 1928

To Hon. Capt. Conf. of Arms 30/8. 80 APR 1928
(w/ copy Dispatch Conf. 21/21 on file 1126/1000)

D/H Cr. Waddington. Conf. ----- 1st June 1928.
Instructions have been noted for future cases. Two
copy certificate of death of Mr. W.H. Parker.

1 Submit of papers

Patrol
3/7/28

Mr. Parker Parker (as at in O) 24 JUL 1928

ha

3

X. 15162/28 Kenya

Ans 10
4 9

Mr. Seel

Mr. Jeffries 24/4/28

Mr.

Mr. Bottomley

Mr. E. J. Harding

Sir J. Shackburgh

Sir G. Grindle

Sir C. Davis

Sir E. Wilson

Mr. Ormsby-Gore

Lord Lovat

Mr. Amery

Downing Street

30 April, 1928.

Sir

I have etc., to acknowledge the receipt of your despatch No. 42 of the 29th of March regarding the death of Mr. W. H. Parker, Works Foreman, Uganda Railway, and forwarding of a letter which has been addressed to Mrs. Parker and also of the death report and the report of the Medical Officer on Parker's illness.

I should be glad to learn whether a certificate of death has been forwarded direct to Mrs. Parker in this country. If not, you will no doubt arrange for one to be forwarded to me in communication to her as early

DRAFT

TRANSPORT

KENYA-UGANDA

Confidential

High Commission

To Gen. Keogh

flagged in 10267/28

for Carson
U. Grindle

67



HIGH COMMISSIONER
FOR TRANSPORT

OFFICE OF THE HIGH COMMISSIONER FOR TRANSPORT,
GOVERNMENT HOUSE,
NAIROBI,
KENYA.

No. 42

RECEIVED
20 APR 1928
COL. OFFICE

29th March 1928.

Sir,

I have the honour to refer to my telegram No. 2 of the 27th March 1928 reporting the death of Mr W. H. Parker, Weas, Kenya and Uganda Railway and to forward, for your information, a copy of a letter which has been addressed to Mrs. [Name] the General.

Copies of the Death Report and of the [Name] Medical Officer are enclosed.

I have the honour to be,

Sir,

Your most obedient,

Humble servant

P. Waddington

for HIGH COMMISSIONER.

THE HONOURABLE
SERJEANT COLONEL L. C. M. S. AMERY, M.P.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET, S.W.1.

KENYA AND UGANDA RAILWAY

7
K.U.R. 752

Telegraphic Address:
RAILWAYS, NAIROBI.

P. O. Box No. 131.

TELEPHONE No. 42.

In reply please quote ref.

No. SP/6807/120 date.

General Manager's Office,

NAIROBI, 29th March, 1926

KENYA COLONY.

Mrs. Parker,
23 Bridgeland Street,
Bickford,
North Devon,
ENGLAND.

Dear Madam,

In continuation of my cable of the 17th instant, I deeply regret to inform you that your son died in Mombasa European Hospital on the 16th instant from Blackwater Fever.

A report from the Doctor detailing the circumstances is attached.

The funeral took place at Mombasa Cemetery on the 17th instant, at which a number of the Construction Staff were present.

Mr. Parker had only been at Mangua Causeway Construction for a short time, but he had endeared himself to the Staff by his courteous nature and a readiness to assist and by his death the Administration has lost a loyal and efficient servant.

Please accept my condolences in the loss you have sustained.

Yours faithfully,

J. S. CONEY.

GENERAL MANAGER,
KENYA AND UGANDA RAILWAY.

KENYA AND UGANDA RAILWAY

7
K.U.R. 752.

Telegraphic Address:
RAILWAYS, NAIROBI.

P. O. Box No. 151.

TELEPHONE NO. 22.

In reply please quote ref.
No. SP/6887/120 Date.

General Manager's Office,
NAIROBI, 27th March 1928.
KENYA COLONY.

Mrs. Parker,
25 Bridgeland Street,
Bideford,
North Devon,
ENGLAND.

Dear Madam,

In continuation of my cable of the 17th instant, I deeply regret to inform you that your son died in Mombasa European Hospital on the 16th instant from Malaria Fever.

A report from the Doctor detailing the case is attached.

The funeral took place at Mombasa Cemetery on the 17th instant, at which a number of the Construction Staff were present.

Mr. Parker had only been at Mombasa Construction for a short time, but he had endeared himself to the Staff by his courteous nature and a readiness to assist and by his death the Administration has lost a loyal and efficient servant.

Please accept my condolences in the loss you have sustained.

Yours faithfully,

J. S. CONEY.
GENERAL MANAGER,
KENYA AND UGANDA RAILWAY.

EAST AFRICA AND UGANDA PROTECTORATES.

DEATH REPORT

Stat. No. 111111
 21st. March, 1928.

Name	Nationality	Age	Sex	Date of Birth	Date of Death	Place of Death
Mr. W. R. P. Parker	British	29	Male	5/3/28	16/3/28	European Hospital, Mombasa.

Had Blackwater fever in June 1927. Since 1924 has had many attacks of Malaria. More or less continuous fever since arrival in Mombasa on the 25th. January 1928. Admitted to Hospital on 5/3/28 and developed Blackwater fever next day.

3. History of last illness (including treatment).

Was admitted on 5/3/28 suffering from symptoms of Malaria. Next day at 10 a.m. he passed some bloodstained urine but refrained from informing myself or the nursing Sister on duty. In consequence he received a dose of Mist. Quinine after Blackwater fever had begun. He was put on Barley Water and Sod. Bicarb. to drink ad lib. Stornberg's Mixture every 2 hours. His complaint of severe pain round the upper abdomen and kidneys which cleared up on the 6th. inst. He was given intravenous injections of Cl of Sod. Bicarb. (3 1/2 grs.) at 10 p.m. 7th., 10 a.m. 8th., and 10 a.m. 9th. He had a rigor after each one and his pulse after the third one was very poor. He was in fact pulseless for nearly 2 hours. He received a hypodermic injection of Digitalin gr. 1/100 and Strychnin 1/60 after each injection of Sod. Bicarb. Camphor in oil gr. III was given four hourly from 7.30 p.m. on 11/3/28. This had the effect of improving his thready running pulse but towards the end the effect was less marked and lasted a shorter time after each injection. He vomited frequently up to the morning of the 6th. yellowish fluid about 2 ozs. at a time after which he vomited only once. I gave him an intravenous injection of normal saline at noon on the 12th. which did not cause a rigor. He was very ill this forenoon and seemed moribund but he rallied considerably at 2 p.m. On this day as his temperature did not show signs of falling, I decided, as his urine had been clear for three days, to give him an intramuscular injection of quinine of 5 grains at 6 p.m. which I repeated at 10 p.m. I gave him a quinine injection of gr. XII at 10 a.m. next day the 13th. and that night the urine was slightly red but had again become normal in colour the next morning the 14th. I therefore repeated the injection but though the first three had had the effect of reducing his temperature to

a lower level to 100 at 2 p.m. on the 15th. this was the last injection of quinine. The temperature rose to 104.6 but was brought down by sponging to 101.

Jaundice was a marked symptom but as was restlessness. He was continually twisting and turning in bed and never slept for long periods. He was tried to get out of bed on the 12th. and that night at 3 a.m. succeeded in getting out of bed and went on the verandah rail. He refused to return to bed and collapsed on the nettee on the verandah. He was subsequently persuaded to return to bed. The following forenoon he was in a critical condition but he rallied at 3 p.m. his pulse improved and he again became rational. In the afternoon of 14th. he became definitely worse and did not rally as he had done previously. He was incontinent of urine after midnight of the 15th. At 3 p.m. he actually seemed slightly improved but during the night he became very noisy and violent and got out of bed and collapsed on the floor. His condition from 3 p.m. became rapidly worse and he died at 4.15 p.m.

Up to the last day he took all fluids given him. He was ordered champagne on the night of the 7th. He took a great deal of milk and chicken soup.

No Post Mortem held.

[Signature]
 SENIOR MEDICAL OFFICER I/C. EUROPEAN HOSPITAL, MOMBASA.

DEATH REPORT.

Name **Walter Humphrey Percival Parker.**
Station **Rombana.**
Date **19th. March, 1928.**

K/5162/28 Kenya

510

Mr. Jewell 29 3 28

Mr. (M) 29 3 28

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

Mr. [unclear]

RECEIVED
MAR 29 1928
10 30

[Signature]

30 March 1928

DRAFT

Mr. Parker

I am to advise you
letter of the 20th of March with
so far as he is aware
of you that [unclear] is not the usual
practice of the [unclear] of Kenya to
provide headstones for the [unclear]

copy [unclear] to [unclear]
at 27/3/28

deceased officials

By the [unclear] [unclear]
and [unclear] [unclear]
with [unclear] [unclear]
[unclear] [unclear]
[unclear] [unclear]
[unclear] [unclear]
[unclear] [unclear]

Mr. [unclear] advised

that any of the [unclear] of [unclear]

commonly used in [unclear] for the

before would be suitable. The
choice is of course a matter
of taste, but the hardest and
most desirable kind, although the
most expensive to dress (polish)

A sample would be the best. My regrettable
fate which will take the class of
work would no doubt advise you
+ quite price

It is understood that the
expense of erecting ^{in Kenya} the monument which
should be fixed in a small ^{concrete}
foundation, would be small. It would
of course be a matter for the discretion
of the Govt of Kenya whether the work
could be carried out by the Public Works
Dept. but there would ~~be no~~ ^{be}
objection to the stone after proper packing
being consigned to the Executive Engineer
Mombasa who would no doubt be willing
to see that the stone is suitably erected on
the spot as far as possible in accordance with your wishes

(Signed) H. J. WISEMAN