

C.S.

*Scientific
misc*
INDUSTRIES.

MISC.

MIN/PEA/1#22

193 5.

No.

197/35.

Mr. A.G.Bennett.

SUBJECT.

1935.

29th June.

FERTILISATION OF PEAT.

Previous Paper.

194/33, 289/32

MINUTES.

① Letter from Mr. A.G.Bennett. 29/6/35.

*Yh. Submitted. This is most
interesting and Mr. Bennett might
pursue the matter. It would be a
great boon in this colony if
peat could be converted into a
fertiliser.*

*WCH
CS.
16.7.35*

*I have read the ^{conferences} minutes
and pamphlet literature. It deals with
one of the ^{for gardens} numerous fertilizers and
don't see anything in it for us but I
hope...*

Subsequent Paper.

M^r Bennett

To see and withdraw
your enclosures. Perhaps you
would like to put forward
further observations. If we
could treat our peas so as
to produce a fertiliser it
would be a boon to the colony.

MCH
Ct.
19.7.35

Hon: Col: Secy:

I am awaiting further correspondence
and in the meantime the pamphlets are
being left in this paper. The letters withdrawn.
As far as the correspondence goes at present
it seems unlikely that large scale
fertilisation could be cheaply carried out.

A. G. Benth of. Not.
19.7.35

See p.a.
MCH

Hon. Col. Secy;

I beg to attach for the information of H.E. the Governor further correspondence on the subject of bacterised peat. as I feared, Messrs Bottomley & Emerson Ltd. do not seem inclined to part with the living bacteria. It might be possible to obtain the bacteria through one of the Government Departments.

I have received a sample of an insecticide & beg to submit the correspondence as the material "Malzek" seems to offer possibilities in the freeing of animals from parasites.

A. Bennett
as Nat
25/9/35

V. Submitted.

MCH
CS.
25.9.35

Seen with interest

~~ttttt~~ 25/9/35

Ag. Naturalist

To see and withdraw your
correspondence.

The P. W. D. or the H. C. G.
might be interested in the
insecticide. I enclose 2 envs. of
the bacterised pear resin mail
to give it a trial.

mch
cs.
26.9.35

Hon. Col. Secy:

Thank you, seen. As I have
answered this correspondence privately
I think that it would better that
the letters remain in this paper for
any future reference

Agd
ag: H. C. G.
7.10.35.

✓
P. A.
mch →

To A. A. for info - also J. L.

H. C. G. 24/3/35

Agri. Adviser.

To see.

mch
cs.

25.3.35

Hon. Col. Secy

Seen & noted thank you - No doubt
Mr Davies who is due here from Aberystwyth in the spring
will have some information on this subject and I will
take it up with him accordingly. Sent - 9/4/37

Bacterised Peat.

Hon:Col:Secretary.



I beg to submit for the information of H E the Governor correspondence that I have had on the subject of bacterised peat. In early 1914 it was announced in the press that Professor Bottomley of the London University had discovered a bacteria to fertilise peat. I wrote to the Professor on the subject, but received no reply. I recently saw that Mr, Clarence Elliott had the material for sale and wrote him; the object being to obtain the living bacteria and apply it to local peat.

It is evident from the letter of Messrs Bottomley & Emerson that they do not care to part with, what may be, a patent process. The living bacteria might not carry to this distance by freight or by Post, but it could be brought here by hand even if thermos flasks were used and the process of propagation carried on during the journey.

Enclosures.

Two letters, a number of pamphlets, I would ask that these are returned to me, please.

A. G. Bennett

Ag: Gov: Nat:
29.6.35.

MP 197/35.



CLARENCE ELLIOTT LTD.
ALPINE AND HERBACEOUS PLANTS
SIX HILLS NURSERY, STEVENAGE
HERTS

TELEPHONE 109

A.G. Bennett Esq.,
Stanley,
Falkland Islands.

CE:HN. 1432.

25th May 1935.

Dear Mr. Bennett,

Many thanks for your letter, and I am most interested in what you tell me about your interest in Bacterised Peat. A system of inoculating peat with nitrogen-fixing bacteria was involved a good many years ago by Professor Bottomley of the London University, but he put it on the market too soon when it was really only in the laboratory stage and would not stand up to practical field trial. The result was that it was a commercial flop, and the system got rather a bad name. At a later date a Mr. Bottomly, - no relation of Professor Bottomley, - took it up and worked at it and put it on a perfectly sound commercial basis. ^{a practical scientific} I know this Mr. Bottomley. He is a good Yorkshireman and was educated (before my time) at the same School as myself. His Bacterised Peat is now doing very well, both practically and commercially. I tried it out here and found it excellent, though of course it only supplies nitrogen. I have very little doubt that a quantity of the Peat could be sent out to you in such a way that the bacteria would arrive alive. How far the firm

A.G. Bennett Esq. cont.

would be prepared to instruct you on further propagation I cannot say, but I think the best thing I can do is to forward your letter to Mr. Bottomley and leave it to him to deal with the matter as he thinks best. I think there is little doubt they would, at any rate, send you out a sample of this Bacterised Peat, and it would be interesting if you could give it a scientific trial with proper controls on soil not treated with it. *4 sent similar soil with.*

By the bye I flowered Calceolaria Fothergilli a few weeks ago. I raised a nice batch of seedlings, but they were very difficult to keep. They seemed to damp off very easily, but one flowered well, - a charming thing with narrower smaller flowers than C. Darwini, a lovely colour. It also has a longer stalk than Darwini.

To revert to plant foods in the Falkland Islands; I remember that on my first visit about 1909 or 1910 I was amazed to find that the Government were employing a special tank steamer to take all ^{the} light soil out to sea and dump it. I wonder what is done now, and whether modern water-borne sanitation has been installed. Of course where the old fashioned earth closet is used, the ideal system is to systematically open trenches across the garden, not more than 18 inches deep, and fill in regularly every day. ~~The~~ *Bacteria* deal with the matter swiftly and efficiently, and very greatly to the

A.G. Bennett Esq. cont.

to grow on such soil.

benefit of the plants, I employed this system for about ten years in the garden of my present cottage, but no doubt you know all about this. In the meantime I sincerely hope Mr. Bottomley will be of help to you.

With all good wishes,

Yours very sincerely,

Carina Hudt

P.S. The Potato results are extremely interesting. C.E.

MP.
197/35

J.C. BOTTOMLEY & EMERSON LIMITED.

ESTABLISHED 1851.
FERTILISER MANUFACTURERS.

TELEGRAMS:
BOTTOMLEY, EMERSON, BRIGHOUSE.

TELEPHONES:
574 (2 LINES) BRIGHOUSE
1569 HUDDERSFIELD.

A.B.C. CODE 5TH EDITION
BENTLEY'S CODE

DIRECTORS:
JOHN FLOYD BOTTOMLEY.
LOUIS EMERSON.



REGISTERED TRADE MARKS
"WALLDECO" "BITUVAR"
"LITTLE JOHN"
"BACPEAT"
"GIPPOON STERILE GLAZE"

Brighouse
YORKS.

27th May 1935.

AND AT LONGROYD BRIDGE, HUDDERSFIELD.

JFB/ER.

A.G. Bennett Esq.,
Stanley.
FALKLAND ISLANDS.

Dea Sir,

Mr. Clarence Elliott has very kindly forwarded to us your letter of April 11th last, which is very interesting, and we are not at all surprised that you did not get a reply from Professor Bottomley as he was a most unbusinesslike man. He might have made a fortune out of Bacterised Peat if he had looked after it but he seemed to neglect every opportunity, however we are glad to say that as Mr. Elliott has told you we have tackled the proposition and have made Bacterised Peat a success.

We enclose you a lot of literature with regard to Bacterised Peat which we feel sure will be of great interest to you and we are making enquiries as to what the cost of freight would be to Falkland Island and will write you again later.

It would be quite impossible for you to manufacture Bacterised Peat in the Falkland Islands as the bacteria would not survive until they arrived there, and we think that you would have ~~the~~ to import the necessary food for them which would add very materially to the cost of manufacture, it would also mean installing a good size boiler etc., etc.

At the same time we believe from what you say in your letter that Bacterised Peat might be of great service to you, because your soil being clay will require a lot of humus and also aeration, and Bacterised Peat will do that, and although you can get the aeration with your local acid peat, that does not produce humus, and is not good as a rule for vegetation.

Bacterised Peat is very concentrated, and one of

the largest County Horticultural Schools in this Country carried out some most exhaustive experiments and proved to their own satisfaction entirely that 1 ton of Bacterised Peat had as much virtue in it as 20 tons Stable Manure and therefore the spreading of that reduces very considerably the cost of spreading.

In addition you will notice from our enclosures, Bacterised Peat produces a certain amount of nitrogen and no harm is done by top dressing with more Sulphate of Ammonia or Nitrate of Soda.

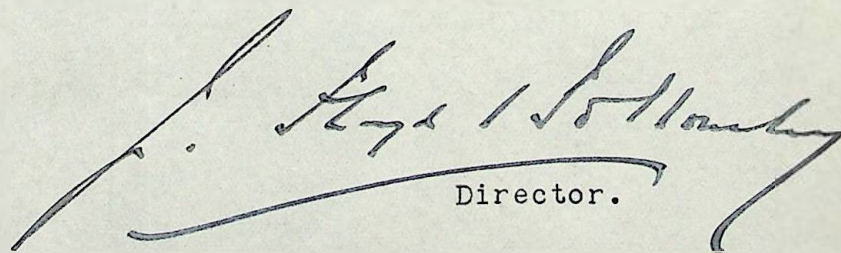
The one thing one ought to warn you about is that you ought not to lime your soil, or to put it another way, you ought not to apply Bacterised Peat until three months at least after liming your soil.

We have had an enormous lot of success in different parts of the Country, and in different parts of the world with Bacterised Peat, and we hope that if you try it it will be very beneficial to you.

We will write you again directly we have full information with regard to freightage, and we hope to hear favourably from you before very long.

Yours truly,

for J.C.Bottomley & Emerson Ltd.

A large, stylized handwritten signature in dark ink, appearing to read 'J.C. Bottomley'. The signature is written in a cursive, flowing style with long, sweeping strokes. Below the signature, the word 'Director.' is printed in a simple, sans-serif font.

Director.

J.C. BOTTOMLEY & EMERSON LIMITED.

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LOUIS EMERSON.



REGISTERED TRADE MARKS
"WALLDECO" "BITUVAR"
"LITTLE JOHN"
"BACPEAT"
"GIPPON STERILE GLAZE"

5th June 1935.

Brighouse

YORKS.

AND AT LONGROYD BRIDGE, HUDDERSFIELD.

JFB/NF

A.G. Bennett Esq.,
Stanley.
FALKLAND ISLANDS.

Dear Sir,

Further to our letter of May 27th we have now got a reasonable freight from the Shipping Company for Bacterised Peat and we now quote -

c.i.f. Stanley in casks

6 ton lots	@ £10.10.-	per ton
4 " "	@ £10.15.-	" "
2 " "	@ £11. 2.6	" "
1 " "	@ £11. 5.-	" "

All nett cash. cash against documents.

To encourage business we have treated our works price as the same for all these lots and the differences in prices are entirely due to cost of carriage. We hope, therefore to receive your order in due course, and we will advise you that the next ship leaves Liverpool on July 11th. We do not know what facilities you have for cabling nor how long it will take for you to receive this letter, but if you do receive it in time and can cable we suggest you do cable so that we can catch the ship sailing July 11th.

Esteeming your favours in due course.

Yours truly,

for J.C. Bottomley & Emerson Ltd.

J. C. Bottomley
Director.

TEL. 36434.

EST. 1883.

TELEGRAMS:
"MALSEK"

THE SCIENTIFIC



INSECTICIDE

REGD.

DIRECTORS:

E. APPLETON (BRIT.)
T. APPLETON (BRIT.)
S. THOMPSON (BRIT.)

THOS. CLOUGH, LTD.,

3, MYTON PLACE,

HULL.

Aug. 17th., 75.

The Government Naturalist,
PORT STANLEY,
Falkland Islands.

Dear Sir:

We have taken the liberty of sending you a sample of our liquid insecticide, "MALSEK" which has been specially evolved for dealing with the more obnoxious insect pests. Leaflets concerning it are enclosed herewith and we shall be glad if you will be good enough to test this preparation for its effect when sprayed directly on insects, their eggs and larvae. Also its effect on insects when it has been diffused in any given atmosphere.

In our experience no other preparation comes up to the efficiency of "MALSEK" as the formula is exceptionally well balanced so as to enable a number of methods of attack to proceed simultaneously - stomach poisoning, suffocation, nerve, paralysing, tissue destroying. In addition "MALSEK" is intensely disliked by insects and they seek to avoid places where it is used and when it is sprayed into crevices, spaces behind beams, etc., any insects present are instantly ejected so that they may be dealt with by direct spraying.

It is officially recommended by a number of important research associations, including The Wool Industries Research Association, The British Research Association for the confectionery, preserve, etc., trades and the British Food Manufacturers Research Association all of which are satisfied with the above claims for it. In consequence it is widely used in many industries for dealing with particular insect pests.

It is also used by many important public health authorities for dealing with the bed-bug and other vermin and is supplied for this purpose to many units of the British Army

(2)

overseas. The enclosed copy of a letter recently received may interest you in this connection. We also supply "MALSEK" in large quantities to the Royal Air Force for use both at home and overseas as a "general fly and mosquito spray".

We are very anxious to extend the sale of "MALSEK" within the Empire and shall be very grateful if you will kindly bring it to the notice of any department likely to be interested. For your information, it is normally packed in 5 gallon drums, but we are always glad to accomodate clients by packing in sizes suitable to their requirements. For quantities prices are very favourable.

Thanking you in anticipation, we are,

Yours faithfully,

FOR AND ON BEHALF OF
THOMAS CLOUGH LTD.

E. Apple

Director

(COPY)

No. 4. B.A. 1342/33.

9th April. 1934.

Sir,

I have the honour to annex a copy of a letter received from Messrs. Thos. Clough, Ltd., of Hull, concerning a brand of insecticide named "MALSEK" for favour of transmission to other Departments who may be interested, as requested in para. 6 therein.

2. The Entomologist of this Department has tested this preparation and finds it effective when used as a spray, in destroying COCKROACHES AND SILVER FISH.

I have the honour to be,

Sir,

Your obedient servant,

Sd. H.D. Meads.

For Director of Agriculture,
S.S.&.F.M.S.

The Under Secretary to Government,

Federated Malay States,

KUALA LUMPUR.

(COPY)

SUBJECT : INSECTICIDE - ISSUE OF

Headquarters,
Royal Artillery,

No. 2171.

In common with the occupants of all barracks in Gibraltar we suffer at Europa, particularly in summer, from bed bugs in large quantities.

We have been in communication with Messrs. Thomas Clough, Ltd., of 3, Myton Place, Hull, who sent us some samples of their liquid insecticide "MALSEK".

This has been tried with great success, in the barracks of 4th (Gibraltar 1779-83) Heavy Battery R.A., the Officer Commanding reports that this substance kills vermin immediately.

I forward herewith the firms pamphlet on the subject and would be grateful if the question of an official issue of this insecticide could be taken up as urgent.

Europa
Gibraltar.
27-4-35.

Lieut-Colonel, R.A.,
Commanding 3rd. Heavy Brigade, R.A.,

GOLD COAST COLONY.

(COPY)

Ref. No. 177/1113/1

Department of Agriculture,
Division of Mycology,
P.O. Box No. 27,
Aburi, Gold Coast.

28th May 1975.

Messrs. Thomas Clough, Ltd.,
2, Ayton Place,
SUVA.

Dear Sir:

MALSIK.K.2.

With reference to your letter of the 15th April I have tried out your MALSIK.K.2 for the control of the Cocoa Moth, Ipthea sp., and have found that it destroys the egg and larval stages as well as the adult moth. It is also effective when used as a control for cockroaches and other household pests.

Owing to the habits of the cocoa moth being different in this country than they are in a temperate climate (full grown larva do not leave stacks in any appreciable number to climb walls and pupate in the rafters, but pupate in the smacking on the outside of stacks) it is necessary to apply an insecticide directly on to bags if the larval stage is to be effectively treated. As you are no doubt aware, cocoa beans are very easily tainted if allowed to come in contact with aromatic substances. In my opinion, therefore, some kind of assurance is necessary that MALSIK.K.2 does not contaminate cocoa beans for manufacture into chocolate. Possibly this could be obtained through the British Association of Research for the Cocoa etc., Trades.

At present thorough cleaning out of cocoa stores between seasons is recommended to prevent the carry over of moth from season to season. An insecticide such as your MALSIK.K.2 should be of value if used at this time provided it can be put on the market sufficiently cheaply.

I intend making an order for a small quantity of MALSIK.K.2 through the Crown Agents for the Colonies for use in our laboratory against cockroaches etc., and meanwhile have no hesitation in recommending it for this purpose.

Yours faithfully,

(Signed) G.S. Gottarell.

ENTOMOLOGIST.

THE
CLOTHES MOTH
AND ITS
EXTERMINATION
IN
MILLS, STORES, WAREHOUSES, ETC.



THOMAS CLOUGH LTD.
3 MYTON PLACE HULL.

THE CLOTHES MOTH.

A brief scientific survey of its Life-cycle.

The Clothes Moth (*Tineola bisselliella*) is the most common of the three species of moth encountered in the textile industries. The others are the Fur Moth (*Tinea pellionella*) and the Tapestry Moth (*Tricophaga tapetiella*).

All are similar in development, passing from the egg stage through the larval and pupal stages to the adult moth.

The moth itself rarely lives more than a month. It does no damage as it cannot eat, but during its short lifetime the female commonly lays as many as one hundred and fifty eggs. These eggs are normally laid on the surface of material or in convenient cracks and crevices, and hatch out in from six to ten days.

The larva or grub emerges from the egg in the form of a tiny white worm. It immediately begins to eat.

This is the directly destructive stage of all three species. The larva feeds on wool, fur, feathers, hair, bristles or any available material of a similar nature.

Under favourable conditions propagation can be so rapid that in the course of a year the larvae of the several generations of one moth are capable of destroying as much as one hundredweight of material.

When it reaches maturity the larva spins a cocoon and develops into the pupa or chrysalis. From this the full-grown moth emerges after a period of not less than ten days.

While it is the larva alone which causes damage, and its destruction removes the immediate cause of loss, it is necessary to destroy all stages of insect development in order to ensure complete eradication.

THE DESTRUCTION OF THE CLOTHES MOTH.

The most convenient practical method of effective eradication under normal industrial conditions is by direct contact, employing an agent which is effective at each of the four stages of the insect's development.

MALSEK K3 is a Contact Insecticide which has been specially evolved for this purpose. It destroys moths at every stage of their life-cycle—the Moth, the Egg, the Larva and the Pupa. In the case of the Moth and the Larva this destruction is immediate. The Egg is either sterilised at once or, if the Larva emerges, it dies before it can do any damage.

SPRAYED INTO CRACKS AND CREVICES WHERE MOTHS BREED, IT CLEARS A WAREHOUSE OR STORE OF MOTH INFESTATION.

TEXTILE MATERIALS IN WAREHOUSES, STORES, ETC., SPRAYED UPON PERIODICALLY ARE RENDERED FREE FROM MOTH ATTACK.

Wool in the raw state and in the early stages of manufacture is completely sterilised if sprayed with **MALSEK K3**, and if subsequently stored under reasonably air-tight conditions, remains immune from attack for an indefinite period.

Dyed and finished fabrics may be treated equally successfully, as **MALSEK K3** does not stain or harm the fibres.

MALSEK K3 is the absolutely efficient Contact Spray.

It has been thoroughly tested by an authoritative British Research Organisation, to whom enquirers may be referred.

MALSEK K3 IS AN ENTIRELY BRITISH INVENTION AND IS WHOLLY MANUFACTURED IN THIS COUNTRY.

The Proprietors welcome all enquiries, which should be addressed to :—

THOMAS CLOUGH, LTD.,
3 Myton Place,
HULL, England.

WHAT THE CLOTHES MOTH COSTS IN INDUSTRY.

A world-famous Continental scientist estimates that moths destroy more than twenty-two million pounds weight of wool per annum.

American research specialists put the annual loss in damaged fabrics in the U.S.A. at about one-sixth of the total value of that country's production.

A British expert estimates the loss in Great Britain through moths at more than one million pounds sterling every year.



CLARENCE ELLIOTT LTD.

TELEPHONE 109

ALPINE AND HERBACEOUS PLANTS
SIX HILLS NURSERY, STEVENAGE

HERTS

A.G. Bennett Esq.,
Stanley,
Falkland Islands.

CE:HN.1237.

15th August 1933.

Dear Mr. Bennett,

Very many thanks for your interesting letter and the two lots of seed, Mountain Berry and Malvina Berry which I am delighted to have.

I am sorry old Bottomley has not sent you out living "bugs" with instructions for cultivation, but I suppose he looks on this as a trade secret and fears that such information might possibly leak back to this country. However, perhaps the Government will be able to do something about it. When I was in the Falklands many years ago, - about 1908/9, I was astonished to find such a very wasteful form of sanitation, - earth closets, and a steamer for dumping the manure out at sea. There is a book, "Rural Hygiene" which deals with this subject very fully. What might be done instead of sea dumping, and what I think should be done, would be to have a Government garden. A piece of land under cultivation, and the night soil buried in shallow trenches *in it*

A.G. Bennett Esq. cont.

systematically and regularly. By this method, instead of going to considerable expense to dump wastefully in the sea, the Government could very soon have a most fertile tract of land for the cultivation of vegetables etc. I have practised this system of shallow burial, not more than a foot or 18 inches, in my own garden for many years. *with grand results*

Thanks for the hint about the conditions under which Calceolaria Darwini grows in nature. I will try experimenting on these lines, though of course with our drier conditions, it might want some modification.

Thanks for the address of the exchange list for which I will write. I had no idea that the Falklands were the Fiji!

Yours *sincerely*

Clara Hall