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MADRAS RECORD OFFICE**GOVERNMENT OF MADRAS***Revenue* DEPARTMENT

G.O. No.

~~B.P. No.~~

906

Press

~~Mis.~~

Dated

6.7.1876 196.

Not to be folded or roughly handled

906
1

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

No. 52. Read the following Proceedings of the Board of Revenue, dated 10th June 1876, No. 1,530:—

Read the following letter from W. LOGAN, Esq., Collector of Malabar, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Calicut, 17th May 1876, No. 125.

With reference to the Board's Proceedings, dated 29th April 1875, No. 1,075, calling for information on certain points connected with the Coffee leaf-disease,

Mr. F. W. Ditmas.	Mr. C. Puddicombe.	I have the honor to forward copies of
Col. W. J. Wooldridge.	Mr. T. R. Richmond.	replies received on the subject from the
Mr. H. Dawson.	Mr. W. J. Rayne.	marginally-named planters of North

Wynaad, and to inform you that the South Wynaad Planters' Association has been requested to expedite the submission of their reports.

2. The Secretary of the North Wynaad Planters' Association informs me that a very interesting and complete collection of specimens of leaf-disease as exhibited by young plants and the leaves and stems of old trees was prepared, but has been unfortunately ruined by exposure during transport and that no specimens will be now procurable in that quarter.

3. The tendency of the reports now submitted is to establish a connection between the unusual rain-fall of the seasons 1871 to 1874, and the development of the leaf-disease. The disease seems to have been known in the district so long ago as 1860.

ENCLOSURE No. 1.

From F. W. DITMAS, Esq., Honorary Secretary, Planters' Association of North Wynaad, to W. LOGAN, Esq., Collector of Malabar, dated Manantoddy, 29th September 1875.

In reply to your letter covering extract from the Proceedings of the Madras Government, Revenue Department, No. 574 of 10th April 1875, I have herewith to hand you my replies to the questions propounded by S. Thwaites with reference to leaf-disease in Coffee.

Answer No. 1.—Every cultivated Coffee tree in this district of North Wynaad (North West District) has been affected as described in the question.

Answer No. 2.—For the first three years in which the disease appeared, this dust of a pale orange color was invariably seen on the underside of the leaves affected, but for the last two years (1874 and 1875) I have noticed that from 50 to 75 per cent. of the leaves affected have none of the red dust on them. They have, however, the blotches in common with the other leaves and fall off after a time in exactly the same manner.

Answer No. 3.—On highly-manured and well-cultivated portions of estates, the trees do seem to recover altogether from the disease; but certainly not on poor soil, or where the cultivation is anything but high. For the first three years (1871, 1872 and 1873) I found on my estates that the disease commenced in June, July and August for the several years; and was of a very virulent type, completely stripping the trees of the whole of their leaves within a week or ten days' time. The trees then kept on forming new leaf all through the months of September, October, November, December and January, which was swept off by the disease almost as soon as it was formed.

Directly the crop was off the trees, they seemed to shake off the disease and they progressed rapidly in forming wood and leaf during February, March, April and May, only, however, to lose it again during the months of June, July and August.

In 1874, a very virulent attack of the disease came on in October, just as the crop commenced to ripen, but it was not general and was confined to less than a half of the area I have in culti-

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

vation. Since that date, the disease has been continuously present amongst the Coffee trees, except during the months of June, July and August (1875) when it was only observable in the nurseries of young plants, but it has been of an exceedingly mild type. It appears in a field at one end of the estate at the beginning of a month and is gone before the end, leaving no traces beyond the dead leaves on the ground. In all fields that were manured during 1874-75 (i.e., July 1874 to June 1875) no disease was noticeable except on the chicks, which are a kind of Coffee tree that always are affected by every disease before the others.

Answer No. 4.—I first noticed the disease in 1871. It commenced at the top of the ghauts and spread from there inland. The first year it only travelled about six miles inland, the second year about the same distance, and in the third year it was general all over the district. I am more particularly referring here to the virulent type.

Answer No. 5.—I consider that those parts of the district in which the rain-fall is the heaviest get the most severe attacks of the disease. The rain-fall varies here from 300 inches per annum on the ghaut or forest side (where the disease commenced) to 50 inches on the bamboo or inland side. Poverty of soil, exposure to wind or weather, and in fact anything which tends to keep the tree in low condition seems to be favorable to the development of the disease. A statement of rain-fall is appended to this letter.

Answer No. 6.—I consider that in 1871, the first year of the attack, the leaf-disease reduced my crop to one-third of what it would have been, had the disease not attacked my trees. Since that time the trees have not been able to make wood enough to bear as much as that, and in the years 1872 and 1873 a very large proportion of the Coffee was either blind (without seed) or malformed.

Answer No. 7.—No conclusive ones that I know of.

Answer No. 8.—I cannot say. Many jungle shrubs and trees seem to be affected by a very similar disease, but it does not seem to do them any injury as it does to the Coffee tree.

Answer No. 9.—I find organic manures, such as cattle manure, Castor seed, Poonac, Coffee pulp, and jungle surface soil, are the only reliable manures; they mitigate the severity of the disease and enable the trees to bear a moderate crop, but they by no means cure the disease.

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

Statement of Rain-fall on the Bon Espoir Estate, North Wynaad.

	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	Remarks.
January	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	
February			0.01	2.35	.....	.....	.....	.....	
March			0.30	.....	.....	.....	.....	.....	
April		1.75	.....	6.99	.....	5.80	0.02	.....	
May		2.37	1.50	4.67	1.77	3.42	.....	1.20	* Not registered.
June		5.20	3.74	11.72	6.03	3.20	2.45	.....	
July		46.61	36.23	56.61	38.62	38.43	70.05	34.10	
August		47.78	49.33	67.82	55.66	85.55	67.32	40.40	
September		27.10	25.30	39.21	52.14	38.40	30.33	27.32	
October		23.24	18.83	26.58	21.30	18.55	24.01	11.72	
November		6.45	14.24	9.65	8.18	6.06	8.11	3.97	
December		2.45	3.10	1.78	11.86	0.42	0.85	0.67	
.....		4.42	.....	0.25	0.02	0.75	0.19	1.44	
Total...	8.90	175.91	146.62	235.81	182.85	210.85	220.36	125.74	

Average from 1869 to 1875 is 185.71 inches.

(Signed) F. W. DITMAS.

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

From Colonel J. W. WOOLDRIDGE, to F. W. DITMAS, Esq., Honorary Secretary, Planters' Association, North Wynaad, dated Dumerce Estate, 28th August 1875.

REPLYING to your letter No. 507, giving cover to extract from the Proceedings of the Madras Government, Revenue Department, 10th April 1875, No. 572, I have the honor to state with reference to the questions contained therein that—

(1.)—The Coffee trees have been affected as mentioned.

(2.)—The spots which appear on the leaf are not covered with the orange-color dust that appears afterwards, and that more frequently the dust appears before.

(3.)—The trees certainly appear to recover their leaves with exception of those primaries and secondaries which die off, and these are numerous.

(4.)—The disease first appeared in 1872, and was confined to one or two separate trees on different parts of the estate.

(5 and 6.)—In 1874, the disease did most injury; the monsoon of that year was very late, but the rain when it did come was excessive and the crop was greatly diminished, there being a vast proportion of empty berries and light Coffee.

(8.)—I have observed a very similar appearance this year on the Peach tree and the Charcoal tree, the botanical name of which I don't know; this by naked eye not by microscope.

(9.)—I observe that one acre very heavily manured with cattle-shed manure last October has very little of the disease this year so far, and the trees look very healthy and strong with abundance of fresh wood. The disease generally appeared this season on the night of the 9th instant, although I have observed it partially in different places some time before; in fact, it never altogether disappears. I also remark that it does not attack young Coffee of two or three years old, although it does the plants in the nursery. But these plants put out on the estate appear to shake it off, and do as well as those put out without it. The old trees are the greatest sufferers. Yet one of those old trees cut down to within eight inches of the ground, and the stumps singed, throw new suckers which are without the disease for two or three years.

It is also worthy of remark that on a small field of irrigated Coffee of about six acres, in which are both old and new trees, not a particle of the disease has appeared, although those trees immediately contiguous. But beyond the action of the water, have been severely punished.

The disease this year has appeared in force much earlier than any season before, and may be in consequence of an exceptionally light monsoon; it has generally commenced its ravages on this estate in the latter end of November.

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

Answers to S. THWAITE'S Questions regarding Leaf-disease.

No. 1.—Yes.

No. 2.—Yes.

No. 3.—I should answer both portions of this question in the negative.

No. 4.—The disease struck my attention first in 1872. I noticed it over a large area.

No. 5.—I should say that the disease prevails less where there is a mild rain-fall and a warm exposure, and that the disease is in excess in the month of September.

No. 6.—Yes.

No. 7.—Not to my knowledge.

No. 8.—Not to my knowledge.

No. 9.—As to manuring, I feel very diffident about speaking and lettering I have not tried; but I have observed that a field of Coffee affected by the disease has recovered more rapidly (to

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

the extent the trees appear to recover from this disease) after a good digging up of the soil than another field of Coffee also affected by the disease and not so treated.

BRAHMAGURY ESTATE,
25th August 1875.

(Signed) H. DAWSON,
(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

ANSWERS TO QUESTIONS.

*Extract from the Proceedings of the Madras Government, Revenue Department, No. 574,
10th April 1875.*

Answer to No. 1.—The cultivated Coffee trees in Kelioot have been observed to be affected by a disease which causes their leaves to become at certain times, and somewhat rapidly, worked with yellow spots or blotches, leaving the branches nearly bare, the berries not maturing on proper quantities from blossom, and in very bad cases, only a few unripe berries remaining upon the branches of the tree.

Answer to No. 2.—Yes; exactly described in the question.

Answer to No. 3.—Yes do. do.

Answer to No. 4.—The disease was first discovered in January 1872 in the north-east and eastern locality of Kelioot Estate situated near Manantoddy, and during the year spread through many acres to the western—worse in some places than in others.

Answer to No. 5.—In the wet season, whether under conditions of heavy monsoon rains as in 1872-73 and 1874, or the present year to the end of August 1875 which monsoon has been especially light and fine, the falling off, of the leaves have been the same, probably not quite so bad as in the two former years, but in the rains apparently taking the form of black leaves, or rot, with a mouldy appearance; the new formed wood and ends of primaries turning black and perishing, and the large berries more or less falling off on the slightest touch, and this in or out of the shade of large trees under which they may be growing, probably worse in the open out of shade, although partial as to localities under both conditions.

Answer to No. 6.—Yes, so seriously diminishing the crop, and also the quality of the berries, that I imagine planters are afraid to say in many cases the full extent of the mischief done.

Answer to No. 7.—None, as to any safe results that I can testify to.

Answer to No. 8.—Yes, all descriptions of Fig or Sand-paper totally lose their leaves, and are covered with yellow spots, also some grasses; also the rest is not so diffused as the Coffee leaf, the tree also and Jack partially, but the Charcoal trees lose their leaves many times in the year and the yellow spots, as the Fig at the present time; the trees are nearly leafless, and as the dry weather approaches the Fig will be quite so, but the Charcoal renews its leaf vigorously.

Answer to No. 9.—No sulphur or mineral substances have been applied, only superphosphate, steamed bones and cattle manure.

Remarks.—Kelioot Estate is near Manantoddy and is 13, 14 and 15 years old. The trees have all had borer years ago, in 1865, 1866 and 1867, where shade grew up in time to protect them and they got manure; the suckers two or three on the old stems near the roots have grown up into fine strong trees, and where not cultivated in the same way or large quantities of cattle manure applied, the trees have died out.

I find cattle manure and steam bones good; superphosphates only good for fruits; no good apparently for wood or leaf, but rather distresses the tree; even the former manures, although

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

applied the last three years, do not stop the ravages of the leaf-disease, but of course aid and sustain the tree greatly. The trees (old) have died out worse than by the borer.

MANANTODDY,
September 6th, 1875.

(Signed) C. PUDDICOMBE,
Proprietor.

(True Copy.) (Signed) J. W. DITMAS,
Honorary Secretary.

Answers to Questions by Dr. S. Thwaites.

1.—Yes, all the trees where I have observed leaf-disease have their leaves worked with yellow spots and blotches, these leaves afterwards fall off and leave the branches of trees bare.

2.—Yes.

3.—In very many instances, but I have also seen them recover entirely.

4.—The disease was first observed in the Ramsey and Sue Sunker Estates in 1872, and in Huntley in 1873, but I recollect similar disease at Dindamull as far back as 1860; on all these estates it was at first only on a small area.

5. Since 1872, the monsoons have been exceptionally wet. This monsoon the rainfall is much less, and I think the leaf-disease also.

6.—The leaf-disease has very seriously diminished the crop on the estates abovementioned but the quality has not been affected; the Coffee of 1874-75 was exceptionally heavy.

7.—Can't say, and don't know.

8.—Cattle manure seems to bring the trees round after a bad attack, but they get it again in many cases.

(Signed) T. R. RICHMOND.

(True Copy.) (Signed) J. W. DITMAS,
Honorary Secretary.

Answers to Dr. S. Thwaite's Questions re "Leaf-disease."

1.—Yes.

2.—Not always on their first appearance.

3.—Yes, or nearly so.

4.—About four years ago—generally.

5.—Generally appears first, during the monsoon, in low-lying damp places, such as a nursery in a swamp, but attacks all parts later; worse some years than others.

6.—Yes.

7.—Yes.

8.—Yes.

9.—Yes.

MANANTODDY,
9th August 1875.

(Signed) W. T. RAYNE.

(True Copy.) (Signed) J. W. DITMAS,
Honorary Secretary.

(True Copies.) (Signed) W. LOGAN,
Collector.

SUBMITTED to Government with reference to G.O., dated 10th April 1875, No. 574, and in continuation of Board's Proceedings, dated 15th October 1875, No. 2,875.

(True Copies and Extract.) (Signed) C. A. GALTON,
Acting Secretary.

*Proceedings of the Madras Government, Revenue Department,
6th July 1876.*

No. 53.

ORDER THEREON, 6th July 1876, No. 906.

Miscellaneous.

ORDERED to be forwarded to the
Secretary of State in continuation of
despatches, 30th November 1875, No. 31,
and 9th March 1876, No. 4.

(True Extract.)

D. F. CARMICHAEL,
Secretary to Government.

To the Board of Revenue.

Exd. W. H. French.

No. 1,530.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 10th June 1876.

the following letter from W. LOGAN, Esq., Collector of Malabar, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Calicut, 17th May 1876, No. 125:—

WITH reference to the Board's Proceedings, dated 29th April 1875, No. 1,075, for information on certain points connected with the Coffee leaf-disease,

W. Dittmas. Mr. C. Puddicombe.
V. J. Wooldridge. Mr. T. B. Richmond.
I. Dawson. Mr. W. J. Rayne.

I have the honor to forward copies of
replies received on the subject from the
marginally named planters of North
Wynaad, and to inform you that the

a Wynaad Planters' Association has been requested to expedite the submission
of their reports.

2. The Secretary of the North Wynaad Planters' Association informs me
a very interesting and complete collection of specimens of leaf-disease as
collected by young plants and the leaves and stems of old trees was prepared, but
has been unfortunately ruined by exposure during transport and that no specimens
can be now procurable in that quarter.

3. The tendency of the reports now submitted is to establish a connection
between the unusual rain-fall of the seasons 1871 to 1874, and the development of
leaf-disease. The disease seems to have been known in the district so long
as 1860.

ENCLOSURE No. 1.

F. W. DITMAS, Esq., Honorary Secretary, Planters' Association, of North Wynaad,
to W. LOGAN, Esq., Collector of Malabar, dated Manantoddy, 29th September 1875.

In reply to your letter covering extract from the Proceedings of the Madras Government,
Revenue Department, No. 574 of 10th April 1875, I have herewith to hand you my replies to the
questions propounded by S. Thwaites with reference to leaf-disease in Coffee.

Answer No. 1.—Every cultivated Coffee tree in this district of North Wynaad (North West
district) has been affected as described in the question.

Answer No. 2.—For the first three years in which the disease appeared, this dust of a pale
green color was invariably seen on the underside of the leaves affected, but for the last two years
(1874 and 1875) I have noticed that from 50 to 75 per cent. of the leaves affected have none of
this dust on them. They have, however, the blotches in common with the other leaves and fall
at a time in exactly the same manner.

Answer No. 3.—On highly manured and well cultivated portions of estates, the trees do seem
to recover altogether from the disease; but certainly not on poor soil, or where the cultivation is
shallow and high. For the first three years (1871, 1872 and 1873) I found on my estates that
the disease commenced in June, July and August for the several years; and was of a very viru-
lent type, completely stripping the trees of the whole of their leaves within a week or ten days.

The trees then kept on forming new leaf all through the months of September, October,
November, December and January, which was swept off by the disease almost as soon as it was
formed.

Directly the crop was off the trees, they seemed to shake off the disease and they progressed
rapidly in forming wood and leaf during February, March, April and May, only, however, to lose
again during the months of June, July and August.

In 1874, a very virulent attack of the disease came on in October, just as the crop commenced to ripen, but it was not general and was confined to less than a half of the area I have in cultivation. Since that date, the disease has been continuously present amongst the Coffee trees, except during the months of June, July and August (1875) when it was only observable in the nurseries of young plants, but it has been of an exceedingly mild type. It appears in a field at one end of the estate at the beginning of a month and is gone before the end, leaving no traces beyond the dead leaves on the ground. In all fields that were manured during 1874-75 (i.e., July 1874 to June 1875) no disease was noticeable except on the chicks, which are a kind of Coffee tree that always are affected by every disease before the others.

Answer No. 4.—I first noticed the disease in 1871. It commenced at the top of the ghauts and spread from there inland. The first year it only travelled about six miles inland, the second year about the same distance, and in the third year it was general all over the district. I am more particularly referring here to the virulent type.

Answer No. 5.—I consider that those parts of the district in which the rain-fall is the heaviest get the most severe attacks of the disease. The rain-fall varies here from 300 inches per annum on the ghaut or forest side (where the disease commenced) to 50 inches on the bamboo or inland side. Poverty of soil, exposure to wind or weather, and in fact anything which tends to keep the tree in low condition seems to be favorable to the development of the disease. A statement of rain-fall is appended to this letter.

Answer No. 6.—I consider that in 1871, the first year of the attack, the leaf-disease reduced my crop to one-third of what it would have been, had the disease not attacked my trees. Since that time the trees have not been able to make wood enough to bear as much as that, and in the years 1872 and 1873 a very large proportion of the Coffee was either blind (without seed) or malformed.

Answer No. 7.—No conclusive ones that I know of.

Answer No. 8.—I cannot say. Many jungle shrubs and trees seem to be affected by a very similar disease, but it does not seem to do them any injury as it does to the Coffee tree.

Answer No. 9.—I find organic manures, such as cattle manure, Castor seed, Poonac, Coffee pulp, and jungle surface soil, are the only reliable manures; they mitigate the severity of the disease and enable the trees to bear a moderate crop, but they by no means cure the disease.

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

Statement of Rain-fall on the Bon Espoir Estate, North Wynaad.

	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	Remarks.
	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	INCH.	
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Total...	8.90	175.91	146.62	235.81	183.85	210.85	220.30	125.74	

Average from 1869 to 1875 is 185.71 inches.

(Signed) F. W. DITMAS.
(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

Coffee-leaf Disease.—Ordering to forward to the Secretary of State Proceedings of the Board of Revenue submitting papers from the North Wynaad Planters regarding—

JULY.
Nos. 52-53.

G.O., 6th July 1876, No. 906.

Desd July, 6th.

Recd.

THE BOARD OF REVENUE.

To

REVENUE.

Govt. of 1876, Mysore.

From Colonel J. W. WOOLDRIDGE, to F. W. DITMAS, Esq., Honorary Secretary, Planters' Association, North Wynaad, dated Dumerce Estate, 28th August 1875.

REPLYING to your letter No. 507, giving cover to extract from the Proceedings of the Madras Government, Revenue Department, 10th April 1875, No. 572, I have the honor to state with reference to the questions contained therein that—

- (1.)—The Coffee trees have been affected as mentioned.
- (2.)—The spots which appear on the leaf are not covered with the orange-color dust that appears afterwards, and that more frequently the dust appears before.
- (3.)—The trees certainly appear to recover their leaves with exception of those primaries and secondaries which die off, and these are numerous.
- (4.)—The disease first appeared in 1872, and was confined to one or two separate trees on different parts of the estate.
- (5 and 6.)—In 1874, the disease did most injury; the monsoon of that year was very late, but the rain when it did come was excessive and the crop was greatly diminished, there being a vast proportion of empty berries and light Coffee.
- (8.)—I have observed a very similar appearance this year on the Peach tree and the Charcoal tree, the botanical name of which I don't know; this by naked eye not by microscope.
- (9.)—I observe that one acre very heavily manured with cattle-shed manure last October has very little of the disease this year so far, and the trees look very healthy and strong with abundance of fresh wood. The disease generally appeared this season on the night of the 9th instant, although I have observed it partially in different places some time before; in fact, it never altogether disappears. I also remark that it does not attack young Coffee of two or three years old, although it does the plants in the nursery. But these plants put out on the estate appear to shake it off, and do as well as those put out without it. The old trees are the greatest sufferers. Yet one of those old trees cut down to within eight inches of the ground, and the stumps singed, throw new suckers which are without the disease for two or three years.

It is also worthy of remark that on a small field of irrigated Coffee of about six acres, in which are both old and new trees, not a particle of the disease has appeared, although those trees immediately contiguous. But beyond the action of the water, have been severely punished.

The disease this year has appeared *in force* much earlier than any season before, and may be in consequence of an exceptionally light monsoon; it has generally commenced its ravages on this estate in the latter end of November.

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

Answers to S. THWAITE'S Questions regarding Leaf-disease.

- No. 1.—Yes.
- No. 2.—Yes.
- No. 3.—I should answer both portions of this question in the negative.
- No. 4.—The disease struck my attention first in 1872. I noticed it over a large area.
- No. 5.—I should say that the disease prevails less where there is a mild rain-fall and a warm exposure, and that the disease is in excess in the month of September.
- No. 6.—Yes.
- No. 7.—Not to my knowledge.
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- No. 9.—As to manuring, I feel very diffident about speaking and lettering I have not tried; but I have observed that a field of Coffee affected by the disease has recovered more rapidly (to the extent the trees appear to recover from this disease) after a good digging up of the soil than another field of Coffee also affected by the disease and not so treated.

BRAHMAGURY ESTATE,
25th August 1875.

(Signed) H. DAWSON,

(True Copy.)

(Signed) F. W. DITMAS,
Honorary Secretary.

ANSWERS TO QUESTIONS.

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10th April 1875.

Answer to No. 1.—The cultivated Coffee trees in Kelioot have been observed to be affected by a disease which causes their leaves to become at certain times, and somewhat rapidly, worked with yellow spots or blotches, leaving the branches nearly bare, the berries not maturing on proper quantities from blossom, and in very bad cases, only a few unripe berries remaining upon the branches of the tree.

Answer to No. 2.—Yes; exactly described in the question.

Answer to No. 3.—Yes do. do.

Answer to No. 4.—The disease was first discovered in January 1872 in the north-east and eastern locality of Kelioot Estate situated near Manantoddy, and during the year spread through many acres to the western—worse in some places than in others.

Answer to No. 5.—In the wet season, whether under conditions of heavy monsoon rains as in 1872-73 and 1874, or the present year to the end of August 1875 which monsoon has been especially light and fine, the falling off, of the leaves have been the same, probably not quite so bad as in the two former years, but in the rains apparently taking the form of black leaves, or rot, with a mouldy appearance; the new formed wood and ends of primaries turning black and perishing, and the large berries more or less falling off on the slightest touch, and this in or out of the shade of large trees under which they may be growing, probably worse in the open out of shade, although partial as to localities under both conditions.

Answer to No. 6.—Yes, so seriously diminishing the crop, and also the quality of the berries, that I imagine planters are afraid to say in many cases the full extent of the mischief done.

Answer to No. 7.—None, as to any safe results that I can testify to.

Answer to No. 8.—Yes, all descriptions of Fig or Sand-paper totally lose their leaves, and are covered with yellow spots, also some grasses; also the rest is not so diffused as the Coffee leaf, the tree also and Jack partially, but the Charcoal trees lose their leaves many times in the year and the yellow spots, as the Fig at the present time; the trees are nearly leafless, and as the dry weather approaches the Fig will be quite so, but the Charcoal renews its leaf rigorously.

Answer to No. 9.—No sulphur or mineral substances have been applied, only superphosphate, steamed bones and cattle manure.

Remarks.—Kelioot Estate is near Manantoddy and is 13, 14 and 15 years old. The trees have all had borer years ago, in 1865-66 and 1867, where shade grew up in time to protect them and they got manure; the suckers two or three on the old stems near the roots have grown up into fine strong trees, and where not cultivated in the same way or large quantities of cattle manure applied, the trees have died out.

I find cattle manure and steam bones good superphosphates only good for fruits; no good apparently for wood or leaf, but rather distresses the tree; even the former manures, although applied the last three years, do not stop the ravages of the leaf-disease, but of course aid and sustain the tree greatly. The trees (old) have died out worse than by the borer.

MANANTODDY,
September 6th, 1875.

(Signed) C. PUDDICOMBE,
Proprietor.
(True Copy.)

(Signed) J. W. DITMAS,
Honorary Secretary.

Answers to Questions by Dr. S. Thwaites.

1.—Yes, all the trees where I have observed leaf-disease have their leaves worked with yellow spots and blotches, these leaves afterwards fall off and leave the branches of trees bare.

2.—Yes.

3.—In very many instances, but I have also seen them recover entirely.

4.—The disease was first observed in the Ramsey and Sue Sunker Estates in 1872, and in Huntley in 1873, but I recollect similar disease at Dindamull as far back as 1860; on all these estates it was at first only on a small area.

5. Since 1872, the monsoons have been exceptionally wet. This monsoon the rainfall is much less, and I think the leaf-disease also.

6.—The leaf-disease has very seriously diminished the crop on the estates above-mentioned, but the quality has not been affected; the Coffee of 1874-75 was exceptionally heavy.

7.—Can't say, and don't know.

9.—Cattle manure seems to bring the trees round after a bad attack, but they get it again in many cases.

(Signed) T. R. RICHMOND.
(True Copy.)

(Signed) J. W. DITMAS,
Honorary Secretary.

ANSWERS TO DR. S. THWAITES.
Questions re "Leaf Disease."

1.—Yes.

2.—Not always on their first appearance.

3.—Yes, or nearly so.

4.—About four years ago—generally.

5.—Generally appears first, during the monsoon, in low-lying damp places, such as a nursery in a swamp, but attacks all parts later; worse some years than others.

6.—Yes.

7.—Yes.

8.—Yes.

9.—Yes.

MANANTODDY,
9th August 1875.

(Signed) W. T. ROYNE,

(True Copy)

(Signed) J. W. DITMAS,
Honorary Secretary.

(True Copies)

(Signed) W. LOGAN,
Collector.

SUBMITTED to Government with reference to G.O., dated 10th April 1875, No. 574, and in continuation of Board's Proceedings, dated 15th October 1875, No. 2,875.

(A true Copy and Extract.)

W. H. French
Acting Secretary.

To the Secretary to Government, Revenue Department.
Copy to the Collector of Malabar.

Exd. W. H. French.

8080-11-21-6-37-35
10-4-31-140-41

No 906

MM

Order to be forwarded to the
Secy of State, in continuation of Despatches
30 Mar. 1875 No 31 and 9 March 1876 No 11

14 To the Board of Revenue on 19 July

6 July 1876

No 2655
210499

Revenue 1876, 24 June 76

Board of Revenue,
MADRAS.

PROCEEDINGS, 10th JUNE 1876, No. 1,530.

Despatch 23 June 1876

Encl.

Received. 11 July 76

JUNE.
No. 1,530.

Coffee-leaf Disease. — Submitting to Govern-
ment letter from Collector of Malabar for forwarding
replies of North Wynad Planters regarding —

No. 906. 6 July 1876

With Accn