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(2) Date of repair 26. 9. 27
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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue

DEPARTMENT

G.O. No. 3081 Press.
B.P. No. _____ Mis.

Revenue Dept.

Dated 4-10-1877 197.

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.
REVENUE DEPARTMENT.

4th October 1877, No. 3,081.

Read the following paper:—

No. 63. Proceedings of the Board of Revenue, dated 26th September 1877.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent, Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Madras, 8th September 1877, No. 783.

I HAVE the honor to submit the following remarks, with reference to the suggestions made by Mr. F. G. Shaw, Officiating Inspecting Veterinary Surgeon, in his letter printed with G.O., No. 2,479, of the 10th of August last.

2. There can be no doubt but that Buckwheat is suited for culture as an auxiliary bread-corn crop, under certain conditions, in some portions of this Presidency; but I am of opinion that Mr. Shaw has in his letter greatly over-valued the crop and under-estimated the demands it makes on the soil.

3. Buckwheat has long been known to agriculturists. The crop is cultivated over a wide range of country, but chiefly where the climate is temperate. There are several species; the most important are *Polygonum fagopyrum* (common Buckwheat), *Polygonum Tataricum* (Tartarian Buckwheat), *Polygonum emarginatum*, and *P. Cymosum* (Perennial Buckwheat). The first of these is the most important and the most generally cultivated. The Tartarian Buckwheat and the *P. emarginatum* are hardy varieties, but are less productive while their flour is bitter. The Perennial Buckwheat produces, it is said, a large quantity of leaves and branches, but it seeds badly.

4. In Northern India Buckwheat is grown to some extent. In the Punjab it does not appear to be highly valued, judging from the following extract from "The Hand-book of the Economic Products of the Punjab":—"The cultivation is confined to the hills, and forms an autumn crop; the seeds yield a hard, bitter, and unpalatable bread, which is said to be heating; it is only eaten in the plains during the "Bart" or fast-days, being one of the "phalahas" food lawful for fast-days. There seems to be little or no difference in the taste, &c., of the two varieties, but the appearance is dissimilar, one having sharp edges to the seed, the other being rounded off." The varieties here referred to are *P. fagopyrum* and *P. emarginatum*. Both varieties are grown on the Himalayas at elevations of from 6,000 to 10,000 feet.

5. Buckwheat (*P. fagopyrum*) is grown but to a very limited extent in Great Britain, and chiefly only to provide food for poultry or game. On the Continent, especially in Germany, it is extensively grown. Mr. Schiffmayer, my Assistant, who has had some experience in cultivating the crop in Germany, informs me that its usual yield is about twenty-four bushels per acre, and that the crop occupies the ground from ten to twelve weeks. He adds that in Germany it is deemed necessary to secure loose, friable, well-tilled soils for Buckwheat. In America, where the crop is largely grown, it is considered important to secure fertile soils for Buckwheat. Regarding the crop "Allen's Farm Book," a standard American Agricultural work, at page 178, states as follows:—"It grows freely on light soils, but yields a remunerating crop only on those which are fertile * * * Sandy loams are its favorite soils, especially such as have lain long in pasture, and those should be well ploughed and harrowed."

6. On the Sydapet Experimental Farms Buckwheat (*P. fagopyrum*) has been tried on two occasions. On the first occasion, about six years ago, a plot of sandy land was sown with Australian seed; it grew to a height of 6 or 7 inches when it flowered, but failed to produce seed. This crop was not irrigated. On the second occasion last year also with seed imported from Australia better results were

secured from the crop having been occasionally irrigated. The enclosed statement affords full information regarding this experiment. It will be observed that the crop was sown on the 9th of November on land in good manural condition, that the crop was watered seven times, and that harvesting did not begin until the 21st of January, or ten weeks after sowing; the yield being 167 lbs. of grain and 1,138 lbs. of straw per acre. In the same field, with the Buckwheat, there were plots sown with Maize and Sorghum which were dealt with in exactly the same way as that under Buckwheat. Both of these crops gave a much higher return, the Maize yielding 12,000 lbs. of straw per acre. A large area of land sown with Yellow Cholum, without the aid of irrigation, gave as much grain and twice as much straw per acre as the Buckwheat. The crops were sown at about the same time, but the Cholum occupied the land a little longer than the Buckwheat.

7. The grain of the Buckwheat is undoubtedly a valuable bread-corn. But in estimating its yield of human food it must be remembered that 20 per cent. of the weight of the grain is husk, quite indigestible and therefore useless. The decorticated grain is very similar in composition to wheat. The following is an average analysis by Professor Church, M.A. :—

Decorticated Seed of the P. fagopyrum.

	Per Cent.
Water	13.4
Albuminoids	15.2
Starch	63.6
Fat	3.4
Cellulose	2.1
Mineral matters	2.3
	100.0

It thus contains nearly double the quantity of albuminoids and fat, and about 10 per cent. less starch than rice. The grain is very readily converted into flour.

8. There is but a small area of the arable soil of this Presidency, that is, under present management, capable of producing fair crops of Maize, yet the Buckwheat demands of the soil quite as much plant-food as does the Maize. The following shows the consumption of the more important elements of plant-food by each crop :—

	Per Cent. in the Ash of Buckwheat (<i>P. fagopyrum</i>).	Per Cent. in the Ash of Maize.
Potash	23.1	27.0
Soda	6.2	1.5
Magnesia	13.4	14.6
Lime	3.3	2.7
Phosphoric Pentoxide	48.0	44.4

9. As I have before stated the Buckwheat (*P. fagopyrum*) would form a useful auxiliary corn-crop in some portions of the Presidency where the climate is favorable. The *P. fagopyrum* occupies the ground a little longer than the *P. Tataricum* which latter is, I believe, the species that Mr. Shaw must have experimented with, though I have met with no other instance of the crop maturing in such a short time as that mentioned by him. But the *P. Tataricum* yields a flour which is bitter and otherwise inferior.

10. We have, I think, several indigenous grain and pulse crops quite equal for ordinary cultivation to the Buckwheat, if only the ryots could be induced to manure and cultivate better.

11. If it is considered desirable to introduce the crop into some parts of the Presidency, the seed could, I think, be obtained in Nepal which appears to be the

original home of the Buckwheat. I would not recommend the introduction of any species excepting the *P. fagopyrum*.

SUBMITTED to Government.
(A true Copy and Extract.)

(Signed) D. MACLEAN,
Additional Sub-Secretary.

ENCLOSURE No. 1.

Experiment made with Buckwheat in No. 11 field of the Sydapet Farm.

1. General nature of soil.—Light sandy loam.
2. Area of land sown.—1,302 square yards.
3. Cultivation of soil before sowing.—Ploughed, harrowed, and ridged.
4. Kind and quantity of Manure used.—Field received a dressing of horse manure. Plot 27 lbs. saltpetre.
5. Per cent. of vital grain in seed.—Determined, but record not to be found.
6. Method of sowing seed.—By hand on the ridge.
7. Pounds of seeds sown.—7 (seven).
8. Date of sowing.—November 9th, 1876.
9. Date of appearance of plants above ground.—November 13th, 1876.
10. Cultivation during growth of crop.—Hand-hoed.
11. Date of plants flowering.—About seven weeks after sowing.
12. If irrigated, how many times.—Seven times.
13. Number of inches of rain-fall and number of wet days recorded at nearest station during growth of crop.
14. Date when crop harvested.—January 21st, 1877.
15. Weight of fodder 24 hours after cutting and not wetted by rain.*
16. Weight of grain when fit for market.—45 lbs.
17. Weight of straw when dry.—306 lbs.

* This space will, of course, be left blank when the crop is allowed to produce grain.

SAIDAPET,
5th September 1877.

(Signed) C. BENSON,
Superintendent, Saidapet Farm.

No. 64. ORDER THEREON, 4th October 1877, No. 3,081.

Miscellaneous.

COMMUNICATED to Mr. Shaw with the thanks of Government for drawing attention to the subject.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To F. G. Shaw, Esq., Inspecting Veterinary Surgeon, Ootacamund,
the Board of Revenue.

Exd. F. R. Bantleman.

Revenue Dept.

No 4501

Proceedings of the Board of Revenue

Dated 26th September 1897

Read the following

No 783

From

Mr R. Robertson Esq. In R. A. C.

Supt. Government Farms

To

C. A. Galtson Esq.

Ag Secretary, Board of Revenue

Madras

Sir

I have the honor to submit the following remarks, with reference to the suggestions made by Mr F. G. Shaw Esq. Inspecting Veterinary Surgeon, in his letter printed with G. O. No 2479 of the 10th of August last

2. There can be no doubt, but that Buckwheat

GOVERNMENT (1877) MADRAS

REVENUE

R. G. SHAW, Esq.

Inspecting Veterinary Surgeon,

Madras.

Dated October 4th.

Received

For

G. O. No. 414, Dated 1-11-97, No. 8, 1081.

OCTOBER

Nov. 6-97

Forwarded, Communicating to Mr. Inspecting Veterinary Surgeon, Shaw, Proceedings of the Board of Revenue submitting remarks of the Inspecting Veterinary Surgeon, in his letter printed with G. O. No 2479 of the 10th of August last, and conveying the thanks of the Government to Mr. Shaw for drawing attention to the subject.

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(Tartarian Buckwheat) *Polygonum*
Emarginatum ³⁰⁹⁷ & *P. Cymosum*
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2081
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Govt. Farms office } I have re-
8th Sept 1857 } (sd) W. R. Robertson

Submitted

Submitted to Government.

(True copy + extract)

Chas. Mathews

Asst. Subsecretary

To

The Secretary to Government RO

with copy of enclosure

Experiment made with the Buckwheat in No 11 field of the
Hydopet Farm

1	General nature of soil	Light sandy loam				
2	Area of land sown	1302 Square yards				
3	Cultivation of soil before sowing	Ploughed harrowed & ridged				
4	Kind & quantity of manure used	field received a dressing of horse manure Plot - - - - - 27 lbs Saltetre				
5	Percent. of water in soil in seed	determined but record not to be found				
6	Method of sowing seed	By hand on the ridges				
7	Number of ridges	7 (Seven)				
8	Date of sowing	November 9 th 1876				
9	Date of appearance of plants above ground	Nov 13 th 1876				
10	Cultivation during growth of crop	hand-held				
11	Date of plants flowering	about 7 weeks after sowing				
12	Irrigated, how many times	Seven times.				
13	Number of inches of rainfall & number of wet days recorded at nearest station during growth of crop	<table><tr><td>Inches</td><td>Wet days</td></tr><tr><td>3.88</td><td>9</td></tr></table>	Inches	Wet days	3.88	9
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14	Date when crop harvested	January 21 st 1877.				
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Hydopet Farm }
Office }
5th Sept. 1877 } (Sd) C. Blundson
Supt. Hydopet Farm (J. M. C. J.)
(Sd) W. R. Robertson
Supt. Govt. Farm

Ed. M.

Chas. M. M. M.
add. Sub Secretary

Decemr 1877 82/10/77
No 4188

E1

Proceeding of the
Board of Revenue

26th Sept 1877
28th Sept 1877
29th Sept 1877

31

26-10-77 2.50.87

Sowing marks
of the field
farms in garden
including M. M. M.
Sutton's house
farms & M. M. M.
about Buckwheat
for orkard
etc

22 Oct 77 18/9/77

REVENUE DEPARTMENT.

No. 4188

From Pres. Board of Revenue

Dated 26 September 1877.

FOR ORDERS.

Comd. S. L. Shaw
in L. K. K. K. K. K.
Drawing attention
to this subject.

MS

Dec 4/1887

Enclosure in 1885
Prop. to the Secretary
to Govt. L. 18 26 5
Sept 1877 1877 no 4501

84-10-7 n: 3087

L. 18

FOR ORDERS.

Inspr. Veterinary Surgeon Shaw's
suggestions & remarks about
Buck-Wheat.

200. 4/11/77 R. J. M. B.

Proceedings of the Madras Government
Under date the 4th Oct. 1877.

Read Proceedings of
the Board of Revenue dated 26
Sept. 77 N^o 4581 submitting remarks
of the Superintendent Gov^t. Farms
regarding Inspecting Veterinary
Surgeon Shaw's suggestions &
remarks about Buck-Wheat.

Communicated to
Mr. Shaw with the thanks
of Gov^t for drawing
attention to the subject.

C. J. M.

To F. J. Shaw Esq. Inspr. Vet. Surgeon 215-10-77
144 H. of Revenue
R. J. M. B.

G. C.

Regarding culture
of Buck-wheat during a
drought & famine season
suggested by Mr. Thos.
Veterinary Surgeon -

Des