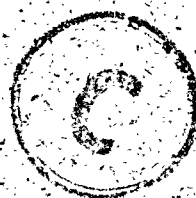


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REPORT (S)
ON THE
OPERATIONS OF THE DEPARTMENT OF
LAND RECORDS AND AGRICULTURE
FOR
1901-1902



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RECORDS AND AGRICULTURE,

MADRAS PRESIDENCY,

FOR THE OFFICIAL YEAR

1901-1902.

For the year 1901-1902
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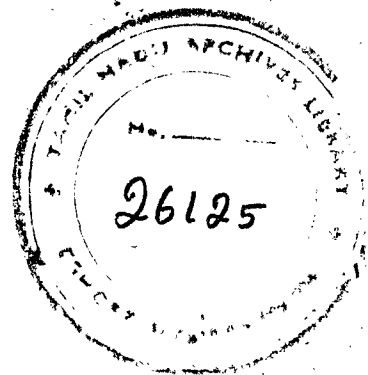
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REPORT
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OPERATIONS OF THE DEPARTMENT OF LAND RECORDS
AND AGRICULTURE
FOR
1901-1902.

I.—PREFATORY.

The post of Director of the Department was filled by the Hon'ble Mr. H. Bradley from 1st April 1901 till the first week of May, after which date the Hon'ble Mr. J. N. Atkinson took over charge. Mr. C. Benson, M.R.A.C., the Deputy Director, was on duty from 3rd April till the end of the year. The office of the Superintendent, Civil Veterinary Department, was held by Veterinary-Lieutenant J. D. E. Holmes, M.A., A.V.D., till the 14th September 1901, when he was transferred to the Bacteriological Laboratory at Muktesar. His successor, Veterinary-Major W. D. Gunn, did not join till the 12th March 1902, and in the interval the Deputy Director was in charge of the office of the Superintendent. The Government Botanist, Mr. C. A. Barber, was on duty throughout the year.

2. The state of the season during July, August and September 1901, and again in February 1902, took the Director on tour into the Anantapur, Bellary, Cuddapah, North Arcot and Chingleput districts. In the latter part of December, he inspected the experimental farm in Tinnevely and made enquiries regarding the Periyár irrigation in Madura. From the 14th January to 9th February he was on tour with the Irrigation Commission, whilst the Deputy Director also accompanied that body throughout their tour in this Presidency, except to Ootacamund. The work of the Deputy Director was almost entirely agricultural and that officer during the year paid frequent visits to the Bellary and Koilpatti farms and on three occasions visited the experimental agave plantation at Hindupur. In August, at the request of the Court of Wards, he inspected the home-farm of the Sivagiri estate in Tinnevely and reported on its management. Towards the close of November, he proceeded to Bezwada and Nellore to meet Mr. Fuller, Secretary to the Government of India, Revenue and Agricultural Department, in connection with questions relating to the maintenance of land records and survey marks. He visited Gó dávari in December for inspection of sugarcane crops and again in February to arrange with the Government Botanist for starting the experimental sugar-station at Samalkót. During March he accompanied the newly-appointed Inspector-General of Agriculture when he toured in this Presidency, visiting the Kurnool, Bellary, Cuddapah, Coimbatore and Gó dávari districts.



II.—LAND RECORDS ESTABLISHMENT.

3. No regular survey schools were held during the year. The question of how training of karnams in surveying should in future be provided for is under consideration. No district surveyors were employed during the year in the three districts where the Survey Department was working nor in the Madras district. In Malabar, a district surveyor was appointed in November, as by that time the survey work in that district had been almost completed and the survey establishments disbanded. He completed the training in survey of the Menons of all the taluks of Malabar excepting umbranad and Chirakkal. In the other districts, the district surveyors were fully engaged in training karnams and candidates for the post of Revenue Inspectors; in examining the karnams' field-measurement books and inspecting their work in connection with the measurement of subdivisions and examination of boundary marks; and in attending to the work of demarcation and subdivision affected with intricate boundary disputes and other cases specially referred to them by Collectors, such as could not be attended to by the Revenue Inspectors. The following abstract shows details of the work done in such districts for which information is available:—

District.	Number of karnams whose work was inspected.	Number of villages inspected.	Number of fields, the plotting of which was tested.	Number of sub-divisions tested in field and plotting.	Number of missing stones inspected.
1	2	3	4	5	6
Vizagapatam	129	195	2,378	416	6,617
Gódvári	..	..	..	..	1,125
Kistna	59	93	346	3	4,320
.. .. .	50	31	2,499	370	1,782
.. .. .	..	..	2,837	..	..
.. .. .	..	..	6,054	281	30
.. .. .	191	265	4,161	292	11,509
.. .. .	8	10	1,176	48	461
.. .. .	94	96	832	3,005	264
.. .. .	78	78	1,524	773	7,770
.. .. .	53	57	460	165	398
.. .. .	..	..	40,279	1,216	23
.. .. .	..	..	1,290	..	332

4. The results of the periodical inspections of village and taluk accounts by district officers have been reported in the Annual Jamabandi report.

5. *The use made of the Land Records staff in connection with Famine Relief.*—A test work opened in Cuddapah during the latter half of the previous year was carried on till the end of June 1901, when it was closed, as the number of coolies attending did not justify its further continuance. Portions of North Arcot district having been affected by the failure of the north-east monsoon of 1900, a test-work was opened there early in April, but it attracted very few labourers and was closed in June. As the south-west monsoon of 1901 was late or deficient in the Anantapur, Cuddapah, North Arcot and Chingleput districts and the opening of test works in Cuddapah and North Arcot districts was found necessary, whilst kitchens for feeding destitute children and old and infirm persons were also opened in all the four districts. The result of the north-east monsoon put an end, however, to all fear of distress. The main duty of the Land Records staff in collecting information and reporting on the state of the season was systematically carried on, whilst the inspection of the tracts affected received closer attention than usual, with a view to questions of the remission or postponement of land revenue being properly considered. The necessary inquiries into applications for the grant of State loans both for land improvements and for purchase of fodder also fell as usual on this establishment.

III.—UTILIZATION OF LAND RECORDS.

6. The manner in which these have been maintained has already been reported in the Annual Jamabandi report of the Board of Revenue.

IV.—SCIENTIFIC AND NATIONAL ENQUIRY UNDER IMPERIAL DIRECTION.

7. *Geology.*—The survey of Vizagapatam referred to in the previous year's report was continued from December 1901 by the Geological Survey.

8. *Chemistry.*—The report of Dr. Leather, Agricultural Chemist to the Government of India, regarding the work done by him during the short period of his stay at Saidapet shows that he did not perform any analytical work there.

9. *Entomology.*—Specimens of locusts, which passed through Gódvári and Kistna in June 1901, were forwarded to the Imperial Entomologist, who found that those from the Gódvári district belonged to two species: *Acridium peregrinum*, Olivier and *Oedalus Senegaleusis*, Krauss, Family *Acrididae*, while those from the Kistna district were the ordinary migratory locust, *Acridium peregrinum*.

V.—SCIENTIFIC AND LOCAL ENQUIRY UNDER PROVINCIAL DIRECTION.

10. As stated in the previous year's report, the starting of two experimental farms was sanctioned about the end of that year, one at Bellary and the other at Koilpatti in the Tinnevely district. The sites were selected and the land required was acquired during the early months of the year, that at Bellary being obtained first. Work began there in June 1901, and fair progress was made, during the year now under report, towards the completion of the necessary buildings and in other matters connected with the laying out of the farm. Trial crops were grown on the experimental plots, but their outturn showed such considerable variations that it is considered advisable to await another year's results before attempting comparative experiments. Meanwhile from the crops grown, specimens of definite varieties of sorghum and cotton have been obtained. At Koilpatti, the land was not obtained till a little later and the progress made was slower, but so far as field work was concerned, has equally advanced. The main plots for future experimental work were laid out and were all sown withumbu (*Pennisetum typhoides*). The results were even more irregular than at Bellary. This farm consists of two blocks, one of red soil, in which there are several wells, and the other of black soil; a good deal of the latter was in foul condition when taken over, and is in process of cleaning. On some of this black soil, besides theumbu mentioned above, cotton was sown, from which seed of recognisable varieties was selected. Another portion was sown with white cholam from Bellary, but the crop failed. On the red soil block, a considerable portion was sown with horsegram and the rest with a variety of crops. The most interesting results were obtained with the peculiar "Irungu" cholam of the south, of which a number of varieties have been separated for future investigation and with groundnuts—a new crop in the locality.

11. *Groundnuts.*—Complete reports on the further experiments with certain varieties of the East African, the seed of which was obtained in 1899, alluded to in paragraph 18 of the last year's report were not received till after the close of the year and will be dealt with separately.

12. *Aloe plantation*.—With a view to obtain some definite information as to the rate and cost of production of the various agaves, the value of which as fibre plants has recently come strongly to public notice, a small area of land was taken up near Hindupur in the Anantapur district and 27,000 plants put out in various methods there. The Agave Sisalana plants were obtained partly from the Madras and Bangalore gardens and partly from Poona: the Agave Vivipara from Dharwar. Of the plants set out, about 4,800 have died, and the remainder were doing fairly at the end of the year. The only expense at present incurred is for a watchman, but it is desirable that the area should be considerably increased if plants can be obtained.

13. *Sugar-cane*.—The recommendation made to Government to appoint a committee of experts to investigate the sugar-cane disease prevailing in the Gódvári district as to the cause and method of propagation of which there were differences of opinion, was disposed of by Government towards the end of the year by ordering a further scientific investigation of the precise nature and mode of propagation of the disease by the Government Botanist, and to enable him to carry on the investigation, the starting of an experimental station was sanctioned and towards the end of the year, the lease of a block of land was obtained for the purpose at Samalkot, which was planted up under the personal supervision of that officer, a plan of action having been settled by him in communication with the Deputy Director.

14. *Botany*.—The Government Botanist was engaged primarily to carry on the systematic Botanical survey of the Presidency as part of such survey of the whole of India. Experience has, however, demonstrated that the work of economic research is much more important and urgent and will afford constant occupation to a special officer. It has therefore been decided to make the appointment, originally sanctioned as a temporary one for five years, permanent. The Government Botanist will now become one of the staff of the Agricultural Department as expert adviser in Economic Botany.

A report on the work done by Mr. Barber in the year is appended. In connection with the Botanical survey of India, he visited a portion of the hill tracts of the Tinnevely district in May to July 1901, and at the request of the Forest department he visited the Anamalai hills in October–November. Collections of grasses were made at different parts and special attention was devoted to forest trees. The total number of plants collected in the year was larger than in any previous year. Over 4,000 sheets of specimens were poisoned and mounted. Under Economic botany, besides the work done in respect of sugarcane, the Government Botanist continued his investigation of the damage caused to the date palm by beetles and also devoted attention to the mode of tapping and general life of the palms in the Gódvári district on which an interesting report was submitted after the close of the year. He also paid some attention to a pepper-vine disease in the Wynaad, to the investigation of which the planters have desired the deputation of an expert.

15. The work of collecting specimens of articles for the Imperial Institute was proceeded with. Revised lists of products previously indented for and not supplied and of new products, was received from the Reporter on Economic Products during the year and the necessary instructions were issued to the Collectors and other officers for the collection of the articles required. Specimens of twelve articles were forwarded during the year.

16. A separate detailed report regarding the working of the Agricultural College Farm and Botanical Gardens, Saidapet, has been submitted in the Educational department by the Principal of the College of Agriculture, under whose control the farm is. The farm was conducted purely for educational purposes, and with its working, the Agricultural Department has no connection.

17. *Meteorology*.—As usual the rainfall registered at the rain gauge stations was tabulated and the results published by the Meteorological Reporter to the Government of Madras. The total number of stations in the Presidency at the end of the year was 427 (inclusive of 61 in the Native States) or 4 more than at the end of the previous year; of these

18. *Veterinary Science*.—The report of the Superintendent has been separately published. Owing to the fact that no Superintendent was on duty for about six months, very little progress was made during the year, but the Upper Subordinate staff was reorganised, and the remaining Stock Inspectors who were not considered fit for the post of Veterinary Assistants were pensioned. At the instance of the Government of India, in order to provide a staff of Lower Veterinary subordinates, the Government decided that arrangements should be made for providing Veterinary instruction in the vernaculars at the College of Agriculture, Saidapet, and when the new Superintendent joined in March, he was called upon to prepare a scheme, in communication with the Principal of that College.

Two pony stallions were destroyed during the year, leaving twelve at work—eight in Coimbatore and four in Salem. The average number of coverings per pony was 35.4 against 29 in the previous year. Of the 407 mares covered in the previous year, 221 were found to be empty and the results in 83 cases were not ascertained. The remaining 103 includes mares which aborted.

There were four donkey stallions at work—one at Kollegal and two in Salem, while the fourth was lent to the Devanahalli Mule-breeding Farm in Mysore. The last has since been returned by it. The average number of mares covered was 24 against 23 in the previous year.

Fifty-six entire ponies were castrated in Coimbatore and 78 in Salem against 47 and 127 in the previous year.

The revised arrangements for pony-breeding operations referred to in the previous year's report were not introduced in the year under review as the new Superintendent did not join till towards the close of the year.

No pony shows were held during the year.

19. The Cattle Diseases Act (Act II of 1866) was put in force in 21 places, all in the Tinnevely district in connection with large cattle fairs: and wherever required, a Stock Inspector or a Senior Veterinary Assistant was deputed to assist the local authorities in carrying out the provisions of the Act. The Glanders and Farcy Act, which was introduced into the Madura district in the previous year, continued in force up to November, when it was withdrawn, owing to absence of a professional Superintendent. During the whole period that the Act was in force 45 animals were destroyed.

20. *Statistics*.—The following returns were published in connection with local enquiries under provincial direction:—

(1) Report on the operations of the establishments for stamping weights and measures submitted to Government, Revenue Department, in July.

(2) Comparative statements of irrigation and rainfall forwarded to the Chief Engineer for Irrigation in October.

(3) Statement of quantity and value of crops irrigated under major productive works and minor works for which capital and revenue accounts are kept.

(4) Season reports in three sections (rainfall, cultivation and prices of food-grains and salt)—monthly.

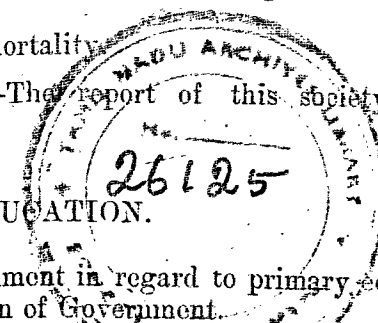
(5) Quarterly and annual reports of cattle mortality.

21. *The Madras Agri-Horticultural Society*.—The report of this society for 1901–1902 has not yet been received.

VI.—AGRICULTURAL EDUCATION.

22. The recommendations submitted to Government in regard to primary education in agriculture continued under the consideration of Government.

As stated in the previous year's report, the question of giving some instruction in agriculture to minors under the Court of Wards was under consideration. An instructor on Agriculture and Botany to the minors at Newington has been sanctioned and arrangements have also been made for the practical instruction of the wards in morning classes at the College of Agriculture, Saidapet.



23. *Higher Education.*—The College of Agriculture is administered by the Educational department, but the report is forwarded to the Director of this department for perusal. The number of students in the College fell from 42 to 38. No changes were made during the year in the College course, but as stated last year, the question of improving it has been investigated and reported upon by a Special Committee and the orders of Government are awaited on the proposals. Dr. Leather, the Agricultural Chemist to the Government of India, did duty at the College for less than a month (4th to 31st March) against the sanctioned period of six weeks. He delivered 18 lectures to class III and devoted 11 hours to Laboratory Demonstrations (3 hours with class III and 8 hours with class II). The insufficiency of the short period of lectures now given and the necessity for providing a Chemist for the Agricultural department has been accepted by Government who have addressed the Government of India on the appointment of a Special officer for teaching and investigation in the Presidency. As the post of the Superintendent, Civil Veterinary Department, was vacant from September to March, the usual course of lectures on Veterinary matters was not delivered in the College of Agriculture.

The Veterinary Hospital suffered during the first half of the year on account of the competition of the S.P.C. A's infirmary but regained its position subsequently. The total number of cases treated has steadily increased from 804 in 1899-1900 to 856 in 1900-1901 and 867 in 1901-1902.

Owing to a favourable season the students enjoyed more opportunities of engaging in practical work on the farm than they did during the previous year.

VII.—THE PUBLICATION OF AGRICULTURAL INFORMATION.

24. During the year under report, the following bulletins were published by the department:—

- (1) No. 45 "A Tea-leaf worm Disease in South India" by C. A. Barber, Esq., Government Botanist.
- (2) No. 46 "The Sugarcanes of Madras" by C. Benson, Esq., M.R.A.C., Deputy Director of Land Records and Agriculture.

25. The subject chosen for the Industrial Monograph for the year under report is "Wood carving" and Mr. Thurston, Superintendent, Government Central Museum, has undertaken to prepare it. It was however not due before the end of the year.

26. The number of papers received from and communicated to other Provincial departments was as follows:—

Subject.	Received.										Sent.			
	Reports.		Books.		Pamphlets.		Journals.		Other papers.		Total.		Reports.	Pamphlet.
	Indian.	Foreign.	Indian.	Foreign.	Indian.	Foreign.	Indian.	Foreign.	Indian.	Foreign.	Indian.	Foreign.		
Agriculture ..	12	26	1	4	23	204	45	168	17	6	98	408	..	3
Statistics .. { Crop ..	..	..	3	..	..	..	..	..	..	..	3	..	..	17
.. { Trade ..	..	..	1	..	..	..	..	4	..	..	3	4	..	..
Forest ..	12	..	..	..	2	..	12	..	1	..	27	..	..	..
Arts and Industries ..	..	..	..	..	7	..	43	..	..	..	50	..	..	..
Botany ..	2	..	1	2	..	..	..	3	..	..	3	5	..	..
Entomology ..	1	..	..	1	..	..	..	..	..	..	1	1	..	..
Geology and Minerals ..	7	..	..	..	1	..	..	..	..	..	8	..	..	..
Meteorology ..	15	..	1	..	..	..	..	..	..	..	16	..	..	..
Live stock ..	..	..	..	..	..	..	50	..	..	..	50	..	..	..
Veterinary science ..	11	..	..	..	..	..	..	..	..	..	11	..	..	..
Total ..	60	26	7	7	33	204	152	175	18	6	270	418	2	17

APPENDIX.

Annual Report of the Government Botanist, Madras.

I have the honour to forward the following annual report on the work done by my department. The period included is from 1st April 1901 to 31st March 1902.

2. The following were my movements during the year:—

The month of April was spent at Head Office. A careful study of the plague of cockchafer was made at Ootacamund and a long report prepared on the Gódávri sugar-canes.

On 8th May I left head office on a three months' tour in Tinnevely. Collections of grasses were made at different parts of the district and special attention throughout the tour was devoted to forest trees in the mixed and evergreen forests. A short visit was paid to the sub-alpine region around Kalivayalpil and a large number of interesting plants were obtained in an ascent of Agastiar Malai (6,000 feet).

I reached Ootacamund after a short visit to Madras and remained there from 1st August to 2nd October. As some of the specimens were found to be mouldy, the whole collection was thoroughly overhauled. A certain amount of herbarium work was done during the monsoon, special attention being devoted to forest trees.

At the request of the Forest Department, the next tour, 2nd October to 17th November, was spent in the Anamalai forests. Here the evergreen forests were again carefully collected over. The weather was exceptionally bad and most of the trees had neither flowers nor fruits upon them. A trip to the Grass Hills (7,000-8,000 feet) produced some interesting mountain plants.

From 17th November to 23rd January I remained at Head Office. A preliminary study was made of the Anamalai forest trees and a good deal of attention was devoted to experiments with white grubs and to preparations for the Gódávri sugar-cane station.

The remainder of the year was spent in the Gódávri district. A considerable time was devoted to the sugar-cane station, but the canals were toured over and a special study was made of the date palms of the neighbourhood.

3. It will be seen that there were two main collecting tours, both primarily in the evergreen forests, although other tracts were also traversed.

The high forest was studied at Kannikatti in the Tinnevely Hills and at Paralai in the Anamalais.

Deciduous or mixed forest at Mundanthorai, Kannikatti, Courtallam and below Poonachi.

The sub-alpine flora was collected at Poonachi (5,000 feet), Kalivayalpil (4,000 feet), Agastiar Malai (6,000 feet), and the Grass Hills above Paralai (7,000-8,000 feet).

Considerable attention was paid throughout the year to grasses, and special collections were made at Palamcottah, Ambásamudram, Mundanthorai, Courtallam, Aulankolam, Pollachi, Poonachi, Ootacamund, Dwarapudi and Mandapeta, in order to determine their relative distribution.

It is too early to speak of the value of the collections made. Several undoubtedly new species have been found, and many valuable additions have been made to our collections of forest trees and grasses.

4. Progress in the herbarium has been considerably greater during the year. The work was hampered by a somewhat serious accident which kept the plant collector in hospital for some months, but the addition of a second assistant to the staff has made itself very distinctly felt. A larger number of plants were collected than in any previous year. This will be seen from the accompanying figures of plants collected during the last three years.

From January 1899 to March 1900 (tours in Madras, Tinnevely, South Arcot and Ganjam) collection Nos. 1-1,500.

From 1st April 1900 to 31st March 1901 (tours in Vizagapatam and South Canara) collection Nos. 1,501-2,700.

From 1st April 1901 to 31st March 1902 (tours in Tinnevely and the Anamalais) collection Nos. 2,701-4,300.

Over 4,000 sheets of specimens have been poisoned and mounted. The heavy arrears in the herbarium are being taken in hand and the constant attention of one assistant is devoted to the collections.

5. Several additions have been made to the herbarium from outside sources. A fine set of Assam ferns has been obtained by purchase, a set of grasses has been received from the Director of the Botanic Department, Sydney, New South Wales, and a certain number of cbonies and

grewias from Ceylon. Sets of specimens were sent to the United States of America Agrostologist and the Botanic Departments in New South Wales, Ceylon and Calcutta. A few specimens were sent to the Madras Museum for the Index collection and a number of spirit and dried plants obtained for Dr. Bourne for class work in the Presidency College.

6. A good deal more work of an economic character has been done during the year than in any previous one. Nevertheless many matters have had to be left untouched and scant attention has been given to others.

The subject which has received most attention has been sugar-cane cultivation. A parcel of canes from Udampalpet was found to be infested with moth-borer, *Chilo simplex*. Traces of fungi were also found, but only in the hyphal condition, and therefore not determinable. The moth-borer, which causes the appearance known as "dead-heart" in the young canes, is known wherever the sugar-cane is grown. It usually is most abundant when the plants have had unseasonable weather in the early stages of growth. A short correspondence was carried on concerning the recent introduction into Vizianagram of a number of kinds of Mauritius canes. Special attention was again devoted to the canes in the Gódavari district. A long report was prepared at the beginning of the year on the introduction of Hospet canes, and the months of January to March were devoted to the founding of an experimental sugar-cane station at Samalkot.

7. During the long halts at Samalkot a careful study was made of the mode of tapping and general life of the date palms of the district. It was noted that the mode of cutting the trees for toddy was very different from that practised in Vizagapatam, also that the number of deaths from overtapping was very much larger. It was not difficult also to find the palm weevil, *Rhynchophorus ferrugineus*, in the trees.

As it was not found possible to arrive at certain conclusions from casual visits to a number of different plantations, a definite area was submitted to an exhaustive analysis. Half a mile of date trees were counted and all the dead ones carefully examined. Two facts were at once evident. Firstly, all the trees had died shortly after tapping, for they always showed the slanting-cut at the top, and secondly, the great majority of them had no trace of borer or other such injury, so that the conclusion was forced upon one that the chief cause of death was overtapping. A report on the subject was forwarded to the Board of Revenue.

8. The "white grub" of the Nilgiris received a good deal of attention during the year. These, it will be remembered, were held to be responsible for the failure of sowings of Seoni wheat which it was sought to introduce, and the Government Botanist was directed to make a study of them.

The "white grub" is the larval form of the cockchafer beetle. As it was discovered that the chief flights of the latter occurred during the April-May rains, collections were made with a view to identifying the species which were causing the damage. Specimens sent to Cambridge for determination proved them to be new or rare species, and a series of experiments were instituted in order to learn something of their life-history.

As is well known, the study of the life-history of cockchafers is one of great difficulty and takes years to accomplish. Pits were dug at various periods to find out the condition of the pests and the different species were sown in order to find out which grubs belonged to the different beetles. These observations are not yet completed. A number of facts have, however, been brought to light which indicate the way in which the pest can be combated.

9. A disease in the Wynaad pepper plantations received a certain amount of attention. After a careful examination of the specimens received it was decided that study at a distance was useless. Several pests were found, and it is always a matter of difficulty to determine which of these has attacked plants weakened from some other cause and which has made an onslaught on originally healthy plants.

10. In conclusion of this review of the economic work during the year, I will mention some of the many other subjects of minor importance which have engaged our attention.

The following were dealt with:—Rust in wheat from the Palnis; minute insects (Aptera) among Cinchona seedlings, determined to be harmless because of the character of their mouthparts; smutted Sorghum, remedies suggested and a scheme of experiments with recent methods drawn up for the Suidapet farm; turnip fleas (*Begrada picta*) in the Ootacamund gardens; plant bugs (*Nezara viridula* var.) in the gardens and notably in the Cinchona plantations; difference in colour of coffee beans; a destructive outbreak of green scale (*Aspidiotus Camelliae*) in the Kanan Devan Tea plantations; a coffee-root fungus in Coorg; a disease of the prickly-pear, unfortunately received in bad condition; *Striga euphrasioides*, etc., as pests in badly cultivated lands; sand-binding plants as protection on the East Coast; salt bushes as fodder plants; the requirements of the Durian tree as regards climate and elevation; fibre machines suitable for "Aloe fibre"; and questions on *Hydnocarpus*, mosquitoes, *Balsamodendron Berryi* as a hedge plant, various species of Cassia as "senna," *Tephrosia* or "wild indigo" for green dressing, and many other references of minor importance.

11. A number of photographs have been taken of subjects of economic interest and a set of negatives has been sent to Dr. Watt for copying.

A considerable number of forest trees and shrubs have been named for forest officers.

A labelled collection of barks of Anamalai trees was made. These are to be handed over to the Conservator of Forests, Southern Circle, for his Museum at Coimbatore.

As already stated, a large collection of grasses has been made during the year. A set of 46 species was obtained in the neighbourhood of Ootacamund for the Supply and Transport Officer, Southern Circle, Wellington, and a preliminary list of South Indian grasses was prepared at the request of the Forest Department.

Considerable additions have been made to the collection of pests and diseases during the year, but efforts in this direction have been discouraged because the staff is fully occupied with other matters.

A commencement has been made towards the formation of a herbarium of plants grown as crops. This will form an important part of our future work. Such plants as sugar-cane cannot be preserved in this way, but a series of photographs to scale and analytical drawings have been made. For this kind of work, however, an artist will be needed and descriptions of varieties will be incomplete without a simple chemical analysis.

Resolution—Mis. No. 5155, dated 1st September 1902.

The Board begs to submit herewith its report on the administration of the Department of Land Records and Agriculture during 1901–1902, and to state that the orders issued in G.O., No. 709, dated 8th August 1902, were received too late to allow of the points referred to in paragraphs 2 to 6 being included in the report of the Settlement Department.

(True Extract.)

(Signed) C. BENSON,
for Secretary.

To the Secretary to Government, Revenue Department,
with report on the operations of the Department
of Land Records and Agriculture for 1901–1902.

Order—No. 942, Revenue, dated 20th October 1902.

Miscellaneous.

The report has been prepared in the form hitherto adopted. For the future, the subject of land records and their utilization will be dealt with together with that of revenue settlement and the present report will deal with agricultural work in all its aspects with separate sections on the work of the Civil Veterinary department and of the Government Botanist.

2. *Land Records*.—The work done by the district survey establishments seems extraordinarily uneven in the several districts and generally unsatisfactory. The general lines of a scheme for providing adequate supervision over the preparation and maintenance of the survey and other village records have, however, been settled: and the formulation of detailed proposals for the sanction of the Secretary of State has been entrusted to Mr. R. C. C. Carr, I.C.S., who has been placed on special duty for the purpose.

3. *Agriculture*.—The activities of the department were chiefly engaged on the two experimental farms at Bellary and Koilpatti and on the experimental sugar station at Samalkota. Some progress was made in getting these farms into working order.

The departmental experiment in planting out *agave* plants appears so far to have been fairly successful. The reports on the further trials with *ground-nut* seed are awaited: but it is feared that these trials, being made under the supervision of busy revenue officials, are hardly likely to afford results of any certainty or value.

4. *Veterinary Science*.—The annual report of the Civil Veterinary Department has been elsewhere noticed. The Government will, however, take this opportunity of reminding the Board and the Superintendent that the proposals called for on the subjects of opening veterinary classes and of establishing veterinary dispensaries are long overdue.

5. *Agricultural Education*.—A revised curriculum has been prescribed for the Agricultural College at Saidapet: and steps have been taken to procure for the department the services of a whole-time agricultural chemist whose duties will comprise lecturing at the college as well as conducting investigations in the field.

(True Extract.)

(Signed) M. HAMMICK,
Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement).
„ the Educational Department.
„ the Superintendent, Madras Survey.
„ the Inspector-General of Agriculture (three copies).

Forwarded to the Board of Revenue (Revenue Settlement).

(By Order.)

(Signed) C. RATNAVELU MUDALIYAR,
Registrar.

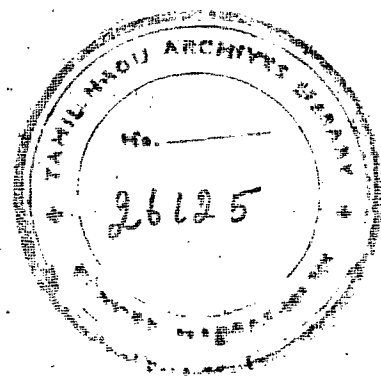
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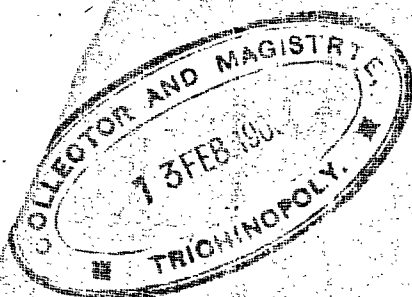
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(Signed) N. E. MARJORIBANKS,
Under Secretary to Government.

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