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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

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Read the following papers:—

No. 175. Proceedings of the Board of Revenue, dated 10th July 1874, No. 1,761.

Read again G. O., dated 4th April 1873, No. 388, Revenue Department, recorded in Board's Proceedings, dated 18th April 1873, Miscellaneous No. 2,343:—

Read also Endorsement of Government, dated 18th October 1873, transferring to Board, letter from Collector of Vizagapatam, reporting on the cultivation of tobacco.

Read also the following replies of Collectors to Board's Proceedings, dated 18th April 1873, Miscellaneous No. 2,343:—

From the Collector	of Ganjam,	dated	24th September	1873,	No.	2,276.
,, ,,	,,	,,	19th January	1874,	,,	158.
,, ,,	,,	,,	20th ,,	,,	,,	172.
,, ,,	Godavery District,	,,	10th October	1873,	,,	340.
,, ,,	Kistna District,	,,	5th September	,,	,,	1,350.
,, Acting Collector of	Nellore,	,,	17th October	,,	,,	2,323.
,, Collector	Bellary,	,,	5th November	,,	,,	394.
,, Acting Collector of	Cuddapah,	,,	9th October	,,	,,	188.
,, ,,	Kurnool,	,,	19th September	,,	,,	287.
,, Collector	Madras District,	,,	7th July	,,	,,	158.
,, Acting Collector of	Chingleput,	,,	11th October	,,	,,	442.
,, Collector	North Arcot,	,,	4th ,,	,,	,,	325.
,, ,,	South Arcot,	,,	13th August	,,	,,	291.
,, ,,	Tanjore,	,,	4th October	,,	,,	343.
,, Acting Collector of	Trichinopoly,	,,	19th September	,,	,,	209.
,, ,,	,,	,,	13th December	,,	,,	287.
,, ,,	Madura,	,,	15th November	,,	,,	349.
,, Collector	Tinnevelly,	,,	19th June	,,	,,	328.
,, ,,	Coimbatore,	,,	3rd October	,,	,,	219.
,, Commissioner	Nilgiris,	,,	18th August	,,	,,	72.
,, Acting Collector of	Salem,	,,	29th August	,,	,,	246.
,, Collector	South Canara,	,,	5th September	,,	,,	1,480.
,, Acting Collector of	Malabar,	,,	2nd May	,,	,,	112.

THE Proceedings of Government, dated 4th April 1873, No. 388, forwarding a letter from the Officiating Secretary to the Government of India, Department of Revenue, Agriculture, and Commerce, on the subject of tobacco cultivation in this Presidency were forwarded to the Collectors of districts for report, and their replies are submitted herewith.

2. The first of the nine queries contained in the above letter was intended doubtless to apply to the Presidency generally, but having been included with the other questions for report, Collectors have endeavoured to reply to it in detail.

3. It will be seen from the answers submitted that tobacco is grown more or less throughout the Madras Presidency, with the exception of Malabar and the Hill Ranges; but the chief localities of production are the alluvial lands of the Godavery District where is grown the far famed "Lunka" tobacco (so named from the lunkas or river islands on which it is cultivated) and parts of the Salem,

Coimbatore, and Madura Districts from which the Trichinopoly Cheroot Manufacturers draw their supplies of raw material.

4. Climate.—Tobacco flourishes in any ordinary tropical climate not unduly moist, depending less so much upon temperature as upon speciality of soil for success, and it will be observed that in the reports submitted, opinions differ as to what particular degree of temperature and quantity of humidity suits it best. The Collector of South Arcot for instance pronounces in favour of a dry, the Collector of the Godavery of a moist climate. In the Salem District, where the different temperatures of the plains and of the Mysore table land are in close proximity, that grown in the hotter climate on better soil* is superior to that produced in the more temperate region. The practical experience of Mr. Campbell, a tobacco merchant of Dindigul, in the Madura District, shows that exotic tobacco at any rate can be best permanently grown on a hill range. As a proof that the plant can flourish in an extremely arid atmosphere, it may be observed that it is grown in the hottest parts and during the hottest season of the year in the Ceded Districts: while on the other hand it may not be out of place to remark that fiscal rather than climatic considerations prevent its extensive cultivation in England, as the plant can endure any cold short of actual frost, and is grown on a large scale in the comparatively cool climate of Holland.

* *i.e.* impregnated with iron.

5. The information called for in the 2nd, 3rd, 4th, 5th and 8th questions is given in a Statement appended to these Proceedings. As to the query "raw or manufactured," it is presumed that by raw is meant cured tobacco, and by manufactured the article made up into a form ready for smoking or snuffing; except in a very few places as the Godavery, Trichinopoly, Dindigul and Madras, the tobacco is exported "raw." Many of the statistics, however, as observed by the Collectors themselves, must be more or less unreliable, being necessarily founded on insufficient data. It would be difficult to obtain correct detailed information concerning any ordinary produce of the country in the hands of natives; and in the case of tobacco which is usually grown on a small scale as a special garden product, and frequently on odd patches of ground, and backyards of houses, etc., it is peculiarly difficult to obtain any trustworthy reports of the cost and extent of cultivation, outturn of produce, etc. The statistics of exportation are most probably unreliable in the instance of land transit, as there are no possible grounds for calculation beyond guess work, and the statistics of exports by sea, while correct as far as the port of export is concerned, no doubt may embrace the land imports from other districts, and thus do not exhibit the actual produce of the district.

6. Method of Cultivation.—It will be observed from the reports that tobacco is grown on almost every description of soil, from black loam to sand, from irrigated land to high arid sites. But alluvial lands are preferred, then high ground, deserted village sites, and backyards of houses, the latter on account of the salts impregnating the soil, and, also in the case of house backyards, probably for convenience of position as regards manuring, and watching and curing the produce. It will be observed that, of the more esteemed tobaccos used for European consumption, the best of the Godavery produce is grown on the alluvial lands which receive the rich deposit of silt in the river floods and are

out of the influence of the sea-freshes, and that the Dindigul tobacco is produced on a carefully cultivated red loam to which is stated "an alluvial character has been artificially imparted." Some of the highest priced tobacco is grown on rich, dry land under irrigation, but while suited for chewing it is deficient in texture of leaf, and pungency in flavour for smoking.

7. Irrigation.—In some parts irrigation is not, in others it is practised but only a small quantity of water is supplied to the plant, and as a rule not by gravity, but by mechanical appliances, and preferably from wells of brackish water containing probably potassic salts. Excessive damp is prejudicial, and the seed-beds and soil generally are superficially drained or stand high. The crop while young is gently watered by hand, and it will be observed that the Collector of Godavery and Captain Campbell report that heavy rains detract from the quality of the tobacco, while the Collector of Nellore notices that the unirrigated produce commands the highest price in his district; and generally the tobacco grown on ordinary irrigable land is inferior.

8. Manure.—The manures generally used are the droppings of sheep and goats penned on the land previously to cultivation, cattle-dung and urine, ashes and sweepings. In Nellore, salt-earth is used. The manures are very plentifully applied to all soils except alluvial lands.

9. Sowing.—The seed is invariably sown in seed-beds.

10. Seasons of Cultivation.—The seasons of cultivation vary according to local climatic considerations. As a rule, sowing commences after the local rains from July to October, though tobacco is sometimes grown as a second crop commencing in January. The site of cultivation is thoroughly ploughed and manured, (subject to the exception noted above) the seed germinates in some eight days after sowing, and the seedlings are transplanted in the course of some six weeks, on attaining a height of five or six inches, into holes a foot to a yard apart, sometimes in ridges, sometimes on the flat surface of the field. In some localities the seed-beds and young plants are protected from the extreme heat of the sun by means of mats, etc., and all leaves except ten or twelve are nipped off to strengthen those left, the flowers are also promptly nipped off with the exception of those purposely left for seed. The leaves begin to ripen in the course of some two months from transplantation, and as soon as one or two turn colour, the whole crop is collected. This is effected generally by cutting the stem with a knife, though in Ganjam and the alluvial lands of Vizagapatam the leaves are nipped off separately, and in part of Tanjore some leaves are first plucked in January and the stem and remaining leaves cut down in May or June. As a rule no second crop is gathered, and where the after sprouts are collected at all they are of very inferior quality.

11. Method of Curing.—The subject of gradually drying and fermenting is effected by modes slightly differing in detail. In Nellore, for instance, the cut leaves are hung in the sun two days, put in heaps, turned every two days, and ranged in layers for twenty days, during which time they are frequently turned. They are then tied in bundles, dipped in water, sweetened with Date jagiri, and are then ready for sale. In other parts, as in the Salem District

...is are left a day or two in the field, then exposed to the sun and dew ...r a week, tied in strings and buried in the ground for a alternate ... week, after which the leaves are stripped from the stems, made into bundles, placed ... and put under heavy weights, with their ends exposed for six weeks, during which they are opened and turned every other day. In ... localities the leaves, after drying in the fields for a day or two, are hung over poles or ropes preferably in the shade, in regular drying sheds or in the cultivator's houses, and subsequently stacked in heaps which are opened out and pressed together again at stated intervals until the requisite curing is effected. Occasionally the leaves are sprinkled with jagiri water or an infusion of the cassia auriculata while drying, and the Head-Assistant Collector of Coimbatore reports that the leaves after being strung are hung upon the milk hedge (euphorbia tirucalli) to acquire a flavour thence.

12. With reference to the request contained in the first part of the second paragraph of the letter under reply, Extract of a letter from Captain Campbell of Dindigul, dated 6th August 1873, to the Collector of Madura, is forwarded herewith. With reference to the concluding part of the paragraph it is sufficient to refer to the Proceedings of Government, Revenue Department, of September 24th, 1873, No. 1,035, from which it appears that the results of experiments with exotic tobacco-seed furnished to the Board with G. O., No. 215 of 1st February 1872, ... been already forwarded to the Government of India. The remaining existing information on the subject has been embodied by Mr. O'Connor of the Department of Revenue, Agriculture and Commerce, in the report recently communicated to the Board.

Statement of Cultivation of Tobacco in each District of the Madras Presidency.

Districts.	Years.	Extent of Acres under Tobacco cultivation during each of the last five years.	Average out-turn per Acre.	Cost of cultivation per Acre.	Quality and Price per Maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
								Rs.	
Ganjam..	1867-68 ...	420	900 lbs.	Rs. 5-14-0	First quality is sold at Rs. 150 per 900 lbs. Second quality used for cigar or snuff is sold at 80 Rs. per 900 lbs.	Not given ..	Exported raw..	20,000	* This refers only to the Gumsur and Surada Taluqs; no information being available for the Mallahs and Bodagada Zemindary. *
	1868-69 ...	519							
	1869-70 ...	537							
	1870-71 ...	537							
	1871-72 ...	513							
Vizagapatam.	.....	No reliable information for past five years; annual cultivation may be assumed to cover 7,000 Acres.	375 to 750 lbs.	15 to 25 Rs.	First quality grown on lunka land, Rs. 3 per maund of 25 lbs. Second quality Rs. 2-8-0 per maund. Third, Rs. 1-8-0 per maund.	From Vizagapatam 126 cwts. and Bimlipatam 1,200 lbs.	Mostly raw. Manufactured.	1,550 164 1,714	
Godavery.	1868-69 ...	7,825	625 or 750 lbs. in "Lunka" land. 250 or 300 lbs. in black Cotton soil.	23 to 50 Rs.	The best quality is grown in the "Lunka" lands above the anicut which receives most of its ... from the river floods and the rent out of each of the ... taches; the next ... to this ... grown on ... kas as rich ... by the	Last years 1872-73, 28,196 Bengal maund of 80 lbs. = 2,255,680 lbs.	Partly raw, partly manufactured. No statistics to discriminate between the two sorts.	4,01,154	
	1869-70 ...	8,676							
	1870-71 ...	8,653							
	1871-72 ...	5,970							
	1872-73 ...	8,936							

Statement of cultivation of Tobacco in the Districts of the Madras Presidency.—(Continued.)

Districts	Year.	Extent of Tobacco under cultivation during each of the last five years.	Average outturn per Acre.	Cost of cultivation per Acre.	Quantity and Price per Maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
Nellore	1863-69	2,946	½ of puttis to 1 puttis = 2,000 lbs.	16 to 80 Rs.	First sort, 2½ to 80 Rs. per puttu. Second sort, 10 to 50 Rs. Third sort, 1 to 21 Rs.	For chewing "Punka leaf" and "Ice Punka leaf" 50 and 60 Rs per candy of 560 lbs. are taken: the inferior tobacco grown in small-yards and used only for snuff, fetches 10 Rs per candy.	1866-67, 956,120 lbs.	1,25,[illegible]	
	1869-70	3,975					1867-68, 880,638 lbs.		
	1870-71	4,013							
Bellary	1868-69	800	40 maunds = 1,000 lbs.	50 Rs.	4 Rs. per 28 lbs. downwards.		1868-69, 608,863 lbs.	64,73	
	1869-70	3,000							
	1870-71	2,316					1869-70, 814,332 lbs.	66,903	
	1871-72	2,170							
	1872-73	3,211					1870-71, 2,15,270 lbs.	25,100	
Tinnevelly	1868-69	1,267	750 lbs.	50 to 75 Rs.	Inferior 1 to 3-12-0 per 25 lbs.		1868-69, 3,260 puttis = 1,625,000 lbs.		
	1869-70	1,950							
	1870-71	1,796							
	1871-72	1,273							
	1872-73	1,273							
Trichinopoly	1868-69	2,278							
	1869-70	1,858							
	1870-71	1,872							
	1871-72	2,020							
	1872-73	2,278							
Coimbatore	1868-69	1,853	1,000 lbs.	50 Rs. on alluvial and kicheri on sandy soil	Quality moderately good, Rs. 3-0 per 25 lbs.		50,000 lbs.		
	1869-70	1,849							
	1870-71	1,872							
	1871-72	2,020							
	1872-73	2,278							
Madura	1868-69	1,479							
	1869-70	1,573							
	1870-71	1,958							
	1871-72	1,961							
South Arcot	1868-69	1,852	270 to 1,253 lbs.	35 to 50 Rs. including curing	3 Annas a thook to 1 Rupee.	None			4 thook = nearly 4 lbs.
	1869-70	1,791							
North Arcot	1867-68	14,313	14 Candy = 750 lbs.	40 Rs. exclusive of land Revenue.	First quality grown on village sites, 60 to 70 Rs. per candy.	Three kinds— 1st sort for cheroots, 2nd for chewing, and for chewing. Prices at Cannot be ascertained, but comparatively trifling.	1866-67, 926,120 lbs.	1,25,[illegible]	
	1868-69	13,433					1867-68, 880,638 lbs.	79,[illegible]	
	1869-70	24,124							
	1870-71	14,185					1868-69, 608,863 lbs.	64,73	
Salem	1866-67	14,313	14 Candy = 750 lbs.	40 Rs. exclusive of land Revenue.	First quality grown on village sites, 60 to 70 Rs. per candy.	For chewing "Punka leaf" and "Ice Punka leaf" 50 and 60 Rs per candy of 560 lbs. are taken: the inferior tobacco grown in small-yards and used only for snuff, fetches 10 Rs per candy.	1866-67, 926,120 lbs.	1,25,[illegible]	
	1867-68	13,433					1867-68, 880,638 lbs.	79,[illegible]	
	1868-69	24,124							
	1869-70	14,185					1868-69, 608,863 lbs.	64,73	
	1870-71	[illegible]							
Kurnool	1868-69	4,113	10 to 30 maunds in dry, 5,996 to 60 in wet land.	10 to 25 Rs. in dry, 20 to 40 Rs. in wet.	Dry land tobacco is superior and sells from Rs. 3 to Rs. 1-12-0 per maund, wet land produce at from Rs. 1-12-0 to 1 Rupee.	Tobacco is always exported after it is cured and tied up into bundles. There are no statistics to show the quantity and value of what is exported, but it is believed that about ¼ths of the produce is exported.			
	1869-70	4,361							
	1870-71	5,996							
	1871-72	2,786							
	1872-73	7,628							
Cuddapah	1870	1,339	437½ to 1,250 lbs.	45 to 60 Rs.	Best tobacco grown on red loam undervalued at 3 to 4 Rs. per 25 lbs. Inferior tobacco, Rs. 2-4-0 per 25 lbs.		29,510 lbs. = 13,750 lbs.	Expected cured but not manufactured.	Cannot be ascertained.
	1871	1,826							
	1872	2,342							
	1873	2,606							
Guntoor	1868-69	29,000	1,000 lbs.	50 to 75 Rs.	3-12-0 per 25 lbs.	No raw tobacco exported, but large import trade from Dindigul and Caroor estimated at	10,003		
	1869-70	29,000							
	1870-71	29,000							
	1871-72	29,000							
	1872-73	29,000							

10th August 1874.

Statement of Cultivation of Tobacco in each District of the Madras Presidency.—(Continued.)

Districts.	Year.	Extent of Acres under Tobacco cultivation during each of the last five years.	Average outturn per Acre.	Cost of cultivation per acre.	Quality and Price per maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
Madura..	1868-69 1869-70 1870-71 1871-72 1872-73 ...	*2,193 4,719 [illegible] 7,404 6,604	7½ cwt.	30 Rs...	Quality fetching highest prices is acrid, stiff and thick raised on rich soil and useful only for snuff, sells at about Rs. 3-8-0 for 25 lbs. A finer leaf grown on light loamy soil used for cheroots sells at about Rs. 2-4-0 per 25 lbs. A third kind useful only for chewing grown on inferior soil, sells at about Rs. 1-9-0.	300,000 lbs. for manufacture into cheroots. No statistics of export of manufactured tobacco. From Perambalore and Udayarpalliem, however, 200 candies or 10,000 are stated to have been exported to Tanjore and South Arcot. About 150,000 maunds of 25 lbs.	Chiefly raw...	3,60,000	* This information is incomplete, returns for some talukas of the district being wanting for some years.

Tinnevelly.	1868 ... ... 1869 ... ... 1870 ... ... 1871 ... ... 1872	1,88[illegible] 1,990 1,940 1,890 2,050	1,000 lbs. ...	50 to 60 Rs.	Captain Campbell, Cigar Manufacturer, gives generally 45 Rs. per pothi of 350 lbs. Quality ordinary, Rs. 1-8-0 per 25 lbs.	None apparently exported from the district, being imported from Jaffna.	....	....	
Coimbatore	1868 ... ... 1869 ... ... 1870 ... ... 1871 ... ... 1872	12,874 [illegible] 19,580 22,825 30,640	345 to 1,440 lbs.	19 to 33 Rs.	The best used for chewing on western coast, second quality used for cheroots, third grown dry for snuff and smoking. The price per maund of 960 lbs. weight varies 12 Annas to 2 Rs.	17,339 candies of 480 lbs. = 8,322,720 lbs.	Partly raw and partly manufactured.	6,00,000	Information not available for part of the [illegible].
[illegible]	1868-69 ... 1869-70 ... 1870-71 1871-72 1872-73	5,011 4,996 5,493 7,644 8,565	15 maunds of 25 lbs.	45 Rs...	[illegible] 1-12-0 per maund.	47,382 maunds of 25 lbs. = 1,184,550 lbs.	....	....	
Madras	18[illegible]-69 ... [illegible]-70 ... 187[illegible] 187[illegible]-72 18[illegible]2-73	....	....	....	....	Cwt. 754 1,048 198 594 56[illegible]	....	19,987 21,823 14,11[illegible] 2[illegible],037 [illegible]9,161	The exports from the Madras [illegible] are entered here.
From Messrs. Roberts and Co., to the Collector of Godavery.	....	....	2¼ candies per acre with heads, which is equivalent to 710 lbs. fine tobacco leaf.	[illegible]0 to 125	Messrs. Roberts and Co. state that "the chief markets for export for raw [illegible] are Rangoon and Mauritius, and for cheroots Bombay, Calcutta, Ceylon, Australia, [illegible] England; the cheroots [illegible]				

are very much appreciated in [illegible] and the Continent [illegible] their fine flavour; secondly, no adulteration and their cheapness; in fact the only difficulty to overcome to make them a household word [illegible] ness and evenness of colour, but to give [illegible] slightest appearance [illegible] of growing and cutting is an utter impossibility."

N.B.—Returns from the Districts of Madras, Chingleput, [illegible] Nilgiris not inserted, as cultivation is only carried on in them to a trifling extent.

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Extract of letter from Captain E. A. CAMPBELL, [illegible] to the Collector of Madura, dated 6th August [illegible] Dindigul.

In answer to your letter requesting information [illegible] 1873. cultivation of tobacco in Southern India, I have the honour to inform you that I have visited the chief tobacco gardens of any renown in South India. I have been through the only districts of Tanjore, Trichinopoly, Madura and Coimbatore, and I have also [illegible] tobacco, having that the gardens of the Dindigul Taluq, in Madura District, are the best in the south.

I have lived since 1867 in Dindigul, and in the crop season of each I spend some time in the taluq, visiting the gardens and bespeaking crops for use in our Cheroot factory at Dindigul.

I have also, during the last six years, regularly cultivated a few acres annually of Exotic, Hyond[illegible] co, on the adjoining hills, and on the plains; I trust, therefore, that my evidence in favour of the superiority of tobacco raised in your Collectorate may be taken as the result of practical experience.

I now proceed to answer the questions which your letter [illegible]ly, puts before me categorically.

1st.—The districts already enumerated above, viz. Coimbatore, Madura and Tanjore, undoubtedly are the chief localities with a reputation, properly earned, for the cultivation of good tobacco.

Strange to say, that the district of Trichinopoly which has such a renown for tobacco, really grows no leaf worth rolling into cigars; the famous cheroots called "Trichinopoly" are made from tobacco raised in the Madura, Coimbatore and Tanjore Districts. The genuine Trichinopoly Tobacco is the rankest trash, as a rule, I have met with.

Again, though three districts, or rather provinces, grow good cigar leaf, still, in all three [illegible] on which really good leaf is grown is very much circumscribed, [illegible] one taluq in this large district grows a good leaf, that is the most northerly one, only one taluq in Coimbatore the eastern one, only one in Tanjore, the southern taluq.

Again, other portions of these taluqs grow tobacco which is worth anything, and often only a portion of one garden will grow good leaf. A newly taken in piece of land is no use here for tobacco, no more is a useless piece of garden land *on the plains*.

I should state that in the *plains* of Southern India all tobacco cultivation is under irrigation [illegible], the soil itself will not, without the addition of the well water, grow a good leaf.

It follows [illegible] I surmise that the well water has some constituent in it which is essential to the growth of tobacco, and which the soil has not, and takes some years for land newly brought under the influence of well-irrigation, to bear good [illegible] which of course does not grow, till saturation with the missing constituent has taken place.

By "good leaf" I mean, as I am a manufacturer of cigars, a leaf which shall in

1st place, burn freely.
2nd " give a white ash.
3rd " be free from large nerves.
4th " be of a golden brown color.

Probably my neighbors, the bazaarmen, would say just the reverse, as they deal in chewing leaf, which should be large ribbed, coarse veined, and need not burn as they go in for quantity and weight; to [illegible]e quality, and light texture.

Thousands of tons of chewing tobacco are grown all over Southern India, and to the uninitiated such leaf is far the finer of the two in appearance, and loud have been the praises I have heard given to leaf that [illegible] would not burn.

Persons, not [illegible] have but little idea of the annoyances and dangers to which the Cigar Manufacturer in India is exposed. No classification of tobacco takes place here, as in America, where the merchant can buy what he wants and knows what he pays for. Splendid looking leaf is brought to the doors of the Cigar Manufacturers for sale; he smokes a sample leaf, is delighted, the leaf is large, nut brown, almost small ribbed, and burns a beautiful ash; the

price is moderate, he jumps at the bait, secures the consignment, and pays cash down, no credit is given to [illegible] of produce, and his heart bounds at the prospect of the enhanced [illegible] in store for him [illegible] of cigars.

The leaf arrives, [illegible] rolled; the following day, he inspects perhaps some 10,000 cigars *looking* [illegible] made by women from his new leaf, he is carefully by habit, and regularly [illegible] small percentage of the cigars made [illegible] lucky he does so, and to his horror he finds that a considerable number will [illegible] ; he has been cheated, and to preserve the reputation of his manufactures, he destroys the whole of the 10,000 cigars he looked so fondly on in the morning, and sends out to [illegible] the parties who have mixed a burning leaf with a non-burning leaf; literally nothing short of a [illegible] make any impression on some of the tobacco leaves which grows alongside of some of the best and most admired cigar leaves [illegible].

In America the Government classifies tobacco; but here, merchants have [illegible] against the imposition of the middlemen who go between the grower and manufacturer.

Probably these middlemen [illegible] is very fickle in its likes and dislikes, portions of one field grow good leaf, while other portions grow bad.

This accounts, sometimes, for the abuse one often hears bestowed on the native Cigar Merchants of Trichinopoly; they are accused of sending uneven samples of cheroots, not living at a distance, as they do, from the gardens [illegible] must rely on middlemen.

For the first few years that I commenced my enterprize here, I suffered in the same way, and had I been naturally given to despair, I should have given it up long ago. Those interested in the concern with me fled, and thought they were knowingly leaving a sinking ship, and sunk long ago would have been the barque had I not commenced the plan of dealing direct with the growers, purchasing from the gardeners themselves, and only such portions of their gardens as repeated personal inspection told me was fit for my purpose.

There is yet another danger to which the unfortunate purchaser of tobacco in India is exposed, that is, the deterioration of leaf which has been fed on by the tobacco fly; the leaf looks good when cut, and all goes well until the curing is finished, and then it is brought into use, then it is found out that the minute punctures of this tiny insect have destroyed all the elasticity of the leaf, which is of no use for cigar wrappers.

Immense quantities of leaf are lost by this blight, which I regret to say, seems to increase sing year by year; much beautiful tobacco is thus spoilt, as the best leaf seems to suffer most.

Nothing again but repeated personal inspection will prevent the purchaser being taken in by the gardener, who will do his best to keep him from inspecting that portion of his crop which has been attacked by this blight.

In short, nothing but unceasing, unwearying attention to minute detail in the culture of the leaf, in its curing, its mellowing, and its rolling, will ensure success in cigar manufacturing in India. Each plant must be inspected during its growth, and after it is cut, *each* leaf must be inspected before being given to the rollers, and *each* cigar must be inspected after its manufacture.

Such is not the case elsewhere; in other countries Government Inspectors classify tobacco leaf in the same way that Government Inspectors in India tend to, and classify Cotton and Jute for the purchaser.

Years of devotion to this business has shown me that at present there is no short cut to making money out of the manufacture of cigars in India for European consumption.

But, on the other hand, they show that attention bestowed to minute detail, as stated above, will make "Indian Tobacco" a name which shall be known, ere long, throughout the world; already importers of cigars, in Europe, who laughed at my experiments, some years ago, have not only consented to try the cigars I make now, but have [illegible] the first proposals to me [illegible] are really in earnest in their demand for large supplies of them.

But where is the tobacco to come from [illegible] not sufficient classified leaf, and nothing can now induce me to purchase leaf unless I have watched its growth from the seedling, know the percentage of the seed, and have supervised its cultivation and curing.

Extract ... Native gardens, here, generally average 2 to 2½ acres in extent; these gardens are seldom continuous, but are generally some miles apart, so to meet the demand for improved tobacco and cigars; it should require 100 such gardens at once, and probably in a few years time, double that number; no one man can pay proper attention to the extension of the culture of many gardens, and at the same time attend to the minute details which the supervision of a rolling factory, many miles away, entails, as is the case in every country but India does the manufacturer grow the tobacco he rolls.

I have answered your question about the chief localities in which tobacco is grown in the ... talu... th of India.

... course of course aware that good tobacco is grown in the delta of the Godavery, on the ... or Islands, formed by the alluvial deposit of that river.

I know ... ing of the culture there, if it is not by well-irrigation, probably the leaf is of more even sample, than the leaf procurable in the south, the flavor and texture of which is dependent on ... constituents of the water in each particular ...

My experience of the culture of tobacco here on the hills where I do not irrigate and have fine alluvial soil is that acres and acres can be grown contiguously in one district, all the leaf being of the same quality. If the conditions are the same on the delta of the Godavery, the Cigar manufacturer who settles there has great advantage over us, as he can get leaf of the same sample to any amount.

... should have thought of this before I embarked everything in your district, where it is seldom that two consecutive acres give the ... sample of leaf.

... can best be answered by your own Office records; thousands of acres of tobacco are grown in the south of India, but I do not know of 100 acres which really give a perfect cigar leaf.

Question 3.—If the wells have sufficient water, a rare occurrence here, and there is no blight, it generally takes 1½ acre to give 1 ton of marketable leaf.

Question 4.—Your records can perhaps answer this generally; the gardeners get three crops from the same garden in the year, viz., two grain crops, and one of tobacco, and this they do year after year.

Question 5.—I never give less than Rupees 25 for cigar tobacco, and generally have ... prices per pothy; sometimes going up to 60 or 70, but rarely; a pothy of newly cured tobacco, weighs ... 350 lbs, in six months after curing it weighs little over 250 lbs., 100 lbs less in this climate.

Question 6.—Your own Office, I know, can give you the ... of tobacco culture obtaining gro... among natives in this District.

The land preferred by natives is old garden land, perfectly flat, irrigated as shown above. ... made many experiments, but I find that alluvial soil, until reduced in strength, cannot be ... thing could prove this better than the fact that in this taluq so renowned for tobacco, no decent leaf for cigars is procurable within ten miles of the hills which skirt its entire southern boundary. Quantities of tobacco is grown within this radius, but the web is too rough for cigar leaf, as you leave the hills and get far away from the influence of wash from them, the web of leaf gets finer.

... doubt, but that the land near the foot of the hills was the latest brought under cultivation, still the argument I have advanced is borne out, and that is that alluvial soil must be weakened before the tobacco grown on it will bear irrigation.

I have grown quantities of cigar tobacco on these same hills, where I got the soil in its pure alluvial state, undiluted so to speak, but I did not irrigate, and I found that the soil was too strong to allow of a thin webbed leaf being grown in the monsoon. Plants got too rigorous. I now never plant tobacco out on the hills from the nursery until the monsoon is well ... there is just rain enough to bring the plants to maturity.

Your ... stion is, what manure is used? generally cattle and sheep are picketed out on ... land, ... their refuse thus utilized; but near the villages, house sweepings and ashes are ... ed, and put on the fields.

No. 17... Read the ... letter from J. BROUGHTON, Esq., Government ... inologist, to the Hon. R. ... DALYELL, Acting Secretary to Government, Revenue Department, dated ... camund, 23rd August 1873.

I HAVE received Proceedings of the Board of Revenue, No. 5,003 of August 9th 1873, requesting that I would examine certain samples of tobacco from the Godavery District sent therewith, and report on the same to Government.

2. The tobaccos were two specimens grown from Manilla seed. One was grown on the Aurungabada Island in the Godavery, and the other at the village of Kovur, in the Yernagudem Taluq. The tobaccos were examined by the methods I have hitherto employed, whose results give the closest numerical estimates of certain qualities, which unless the tobaccos possess, they will be of bad flavor for European smokers. If they possess these qualities, the tobacco cannot be naturally inferior, though of course may be made so by bad curing. I subjoin a Statement of the results obtained.

Tobacco specimen from.	Per cent. of ash.	Per cent. of carbonate of potash.	Per cent. of nicotine.
Kovur Manilla tobacco	26·36	7·43	1·56
Aurungabada	26·20	5·86	2·15

Like the country tobaccos from the same district I have received and analysed, and reported on in Board's Proceedings, No. 3,704 of August 28th 1872 and No. 5,360, of December 10th, 1872. These Manilla tobaccos are free from the general South Indian defect of containing scarcely any potash salts, an absence which entirely spoils the flavor of the tobacco. The best Manilla cheroots usually contain 7 per cent. of potassic carbonate in their ash, but the amounts contained in these tobaccos are sufficient for good quality. The amount of nicotine usually present in good Manilla cheroots is 2-3 per cent., hence the Kovur tobacco is milder in quality than the other specimen.

3. On smoking, these tobaccos are of excellent flavor though rather new. That from Kovur is the best, as its amount of potassic carbonate would almost indicate. It has a decided Manilla flavor, though cured in the ordinary country fashion which renders it almost unfit for cheroots. Had it been cured in the Manilla fashion by submitting it to a somewhat less amount of fermentation than is usual in the Godavery District, and care had been taken to preserve the shape of the leaves it could have been made into good Manilla cheroots. At present it is fit for export.

4. As the Godavery District already produces excellent Indian tobacco, which finds ready sale, I would almost conclude that the introduction of foreign kinds would be ... less service than in other districts. ... no part of this Presidency could I recommend ... district apparently more suitable for the cultivation of fine cigar tobaccos than ... ead, when a ... system of curing could be adopted with less change of ...

native resistance. I have already mentioned this my conviction to the Board of Revenue, Proceedings No. 2,778, of 7th July 1871, paragraph 15.

No. 176. ORDER THEREON, 19th August 1874, No. 1,047.

Miscellaneous.

G. O., 20th May 1873, No. 503.
Government Quinologist, letter dated 23rd August 1873.

ORDERED that the foregoing Proceedings with its accompanying printed papers be forwarded to the Government of India, in reply to their letter of the 28th March 1874, No. 3-417, together with copies of the papers noted in the margin.

(True Extract.)

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

To the Board of Revenue.

Exd. G. A. Turton.

Govt. of India, 3rd Dept.
1874
REVENUE.

Dated August 1874.
Read

G. O. 10th August 1874, No. 1,047.

AUGUST
Nos. 175-176.

No. 1,761.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 10th July 1874.

Read again G. O., dated 4th April 1873, No. 388, Revenue Department, recorded in Board's Proceedings, dated 18th April 1873, Miscellaneous No. 2,343 :—

Read also Endorsement of Government, dated 18th October 1873, transferring to Board, letter from Collector of Vizagapatam, reporting on the cultivation of tobacco.

Read also the following replies of Collectors to Board's Proceedings, dated 18th April 1873, Miscellaneous No. 2,343 :—

From the Collector	of Ganjam,	dated	24th September	1873,	No. 2,276.
,, ,,	,,	,,	19th January	1874,	,, 158.
,, ,,	,,	,,	20th ,,	,,	,, 172.
,, ,,	Godavery District,	,,	10th October	1873,	,, 340.
,, ,,	Kistna District,	,,	5th September	,,	,, 1,350.
,, Acting Collector of	Nellore,	,,	17th October	,,	,, 2,323.
,, Collector	Bellary,	,,	5th November	,,	,, 394.
,, Acting Collector of	Cuddapah,	,,	9th October	,,	,, 188.
,, ,,	Kurnool,	,,	19th September	,,	,, 287.
,, Collector	Madras District,	,,	7th July	,,	,, 158.
,, Acting Collector of	Chingleput,	,,	11th October	,,	,, 472.
,, Collector	North Arcot,	,,	4th ,,	,,	,, 625.
,, ,,	South Arcot,	,,	13th August	,,	,, 291.
,, ,,	Tanjore,	,,	4th October	,,	,, 343.
,, Acting Collector of	Trichinopoly,	,,	19th September	,,	,, 209.
,, ,,	,,	,,	13th December	,,	,, 287.
,, ,,	Madura,	,,	13th November	,,	,, 349.
,, Collector	Tinnevelly,	,,	19th June	,,	,, 328.
,, ,,	Coimbatore,	,,	3rd October	,,	,, 218.
,, Commissioner	Nilgiris,	,,	12th August	,,	,, 72.
,, Acting Collector of	Salem,	,,	29th August	,,	,, 246.
,, Collector	South Canara,	,,	5th September	,,	,, 1,486.
,, Acting Collector of	Malabar,	,,	2nd May	,,	,, 112.

THE Proceedings of Government, dated 4th April 1873, No. 388, forwarding a letter from the Officiating Secretary to the Government of India, Department of Revenue Agriculture, and Commerce, on the subject of tobacco cultivation in this Presidency were forwarded to the Collectors of districts concerned and their replies are submitted herewith.

2. The first of the nine queries contained in the above letter was intended doubtless to apply to the Presidency generally, but having been included with the other questions for report, Collectors have endeavoured to reply to it in detail.

3. It will be seen from the answers submitted that tobacco is grown more or less throughout the Madras Presidency, with the exception of the Nilgiris and the Hill Ranges; but the chief localities of production are the alluvial lands of the Godavery District where is grown the far famed "Lunka" tobacco (so named from the lunkas or river islands on which it is cultivated) and parts of the Salem, Coimbatore, and Madura Districts from which the Trichinopoly Cheroot Manufacturers draw their supplies of raw material.

4. CLIMATE.—Tobacco flourishes in any climate upon soils moderately moist, depending not so much upon temperature with the quality of soil for success, and it will be observed that in the reports submitted, opinions differ as to what particular degree of temperature and quantity of humidity suits it best.

The Collector of South Arcot for instance pronounces in favour of a dry, the Collector of the Godavery of a moist climate. In the Salem District, where the different temperatures of the plains and of the Mysore table-land are in close proximity, that grown in the hotter climate on better soil* is superior to that produced in the more temperate region. The practical experience of Mr. Campbell, a tobacco merchant of Dindigul, in the Madura District, shows that exotic tobacco at any rate can be best permanently grown on a hill range. As a proof that the plant can flourish in an extremely arid atmosphere, it may be observed that it is grown in the hottest parts and during the hottest season of the year in the Ceded Districts: while on the other hand it may not be out of place to remark that fiscal rather than climatic considerations prevent its extensive cultivation in England, as the plant can endure any cold short of actual frost and is grown on a large scale in the comparatively cool climate of Holland.

* i.e. impregnated with iron.

5. The information called for in the 2nd, 3rd, 4th, 5th and 8th questions is given in a Statement appended to these Proceedings. As to the query "raw or manufactured," it is presumed that by raw is meant cured tobacco, and by manufactured the article made up into a form ready for smoking or snuffing; except in a very few places as the Godavery, Trichinopoly, Dindigul and Madras, the tobacco is exported "raw." Many of the statistics, however, as observed by the Collectors themselves, must be more or less unreliable, being necessarily founded on insufficient data. It would be difficult to obtain correct detailed information concerning any ordinary produce of the country in the hands of natives; and in the case of tobacco which is usually grown on a small scale as a special garden product, and frequently on odd patches of ground, and backyards of houses, etc., it is peculiarly difficult to obtain any trustworthy reports of the cost and extent of cultivation, outturn of produce, etc. The statistics of exportation are most probably reliable in the instance of land transit, as there are no possible grounds for calculation beyond guess work, and the statistics of exports by sea, while correct as far as the port of export is concerned, no doubt may embrace the land imports from other districts, and thus do not exhibit the actual produce of the district.

6. Method of Cultivation.—It will be observed from the reports that tobacco is grown on almost every description of soil, from black loam to sand, from irrigated land to high arid sites. But alluvial lands are preferred, then high ground, deserted village sites, and backyards of houses, the latter on account of the salts impregnating the soil, and also in the case of house backyards, probably for convenience of position as regards manuring, and watching and curing the produce. It will be observed that, of the more esteemed tobaccos used for European consumption, the best of the Godavery produce is grown on the alluvial lands which receive the richest deposits of silt in the river floods and are sea-freshes, and that the Dindigul tobacco is produced on land carefully irrigated from tanks to which is ascribed "an alluvial character artificially imparted." Some of the highest priced tobacco is grown on rich dry land under irrigation, but which suited for chewing is too coarse in texture of leaf, and pungent in flavour for smoking.

7. Irrigation.—In some parts irrigation is not, in others it is practised, but only a small quantity of water is supplied to the plant, and as a rule not by gravity, but by mechanical appliances, and preferably from wells of brackish water containing probably potassic salts. Excessive damp is prejudicial and the beds and soil generally are superficially drained or stand high. The crop while young is gently watered by hand, and it will be observed that the Collector of Ganjam and Captain Campbell report that heavy rains detract from the quality of the tobacco, while the Collector of Nellore notices that the unirrigated produce commands the highest price in his district; and generally the tobacco grown on ordinary irrigable lands is inferior.

8. Manure.—The manures generally used are the droppings of sheep and goats penned on the land previously to cultivation, cattle-dung and marine, ashes and sweepings. In Nellore salt-earth is used. The manures are very plentifully applied to all soils except alluvial lands.

9. Sowing.—The seed is invariably sown in seed-beds.

10. Seasons of Cultivation.—The seasons of cultivation vary according to local climatic considerations. As a rule, sowing commences after the local rains from July to October, though in some districts it is grown as a second crop and commencing in January. The site of cultivation is carefully selected, well manured, (subject to the exception noted above) the seed germinates in some eight days after sowing, and the seedlings are transplanted in the course of some six weeks, on attaining a height of five or six inches, into holes a foot to a yard apart, sometimes in ridges, sometimes on the flat surface of the field. In some localities the seed-beds and young plants are protected from the extremes of the sun by means of mats, etc., and all leaves except ten or twelve are nipped off with the thumb and finger, those left, the flowers are also promptly nipped off with the exception of those purposely left for seed. The leaves begin to ripen in two to three course of some two months from transplantation, and as soon as they do so they are gathered by cutting the stem with a knife, though in Ganjam and in part of Vizagapatam the whole crop is cut down at once. This is done generally, and in part of Vizagapatam the lowest leaves are first plucked in January and the stems cut down in May or June. The leaves are nipped off separately as they ripen and remaining leaves gathered, and where the whole plants are collected. At the end of the crop the quality of the leaves is very inferior. The object of gradually drying and fermenting is effected by methods slightly differing in detail. In Nellore for instance, the cure is effected by methods slightly differing in ways, but in heaps, turned every two days, leaves are hung in the sun for two days during which time they are frequently and ranged in layers for twenty days, occasionally dipped in water, sweetened with turned. They are then tied in bundles, in other parts, as in the Salem District. Date jagiri, and are then ready for sale. In other districts the leaves are exposed to the sun and dew the plants are left a day or two in the field. In tropical climates the ground for a alternately for a week, then wrapped in mats upon specially made bundles. week, after which the leaves are stripped from the stems, made into bundles, placed in straw, or put under heavy weights, with their ends exposed and turned every other week, the piles in which they are laid being opened and turned every other day. In other localities the leaves are drying in the sun for a day or two, are

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hung [illegible] room [illegible]ably in the shade, in regular [illegible] sheds or in
[illegible] cultivators [illegible] and subsequently stacked in heaps which [illegible] opened out
[illegible] Occasionally the leaves [illegible] kari water or an infusion
of the cassia [illegible]culata while drying. The following day, Head-Assistant Collector of
Coimbatore reports that the [illegible] leaves after being strung are hung up on
the milk hedge (euphorbia tirucalli) to acquire a flavour thence.

12. With reference to the request contained in the first part of the second paragraph of the letter under reply, Extract of a letter from Captain Campbell of Dindigul, dated 6th August 1873, to the Collector of Madura, is forwarded herewith. With reference to the concluding part of the paragraph it is sufficient to refer to the Proceedings of Government, Revenue Department of September 24th, 1873, No. 1,03[illegible] from which it appears that the results of experiments with exotic tobacco [illegible] furnished to the Board with G. O., No. 215 of 5th February 1872, have been already forwarded to the Government of India. The remaining exist[illegible] information on the subject has been embodied by Mr. O'Connor, of the [illegible] Department of Revenue, Agriculture and Commerce in the report recently com[illegible] to the Board.

(Vide Extract.)

Acting Sub-Secretary.

To [illegible]

The Acting Secretary to Government, Revenue Department,

[illegible] with one Statement, Extract of communication from Captain E. A. Campbell and original replies of Collectors.

Copy to the Collectors, with Statement and Extract of Communication

" to the Superintendent of Government Farms, with d[illegible]

" to the Hon[illegible]-Horticultural Society, with do

" to the Hon[illegible] Press, for

Extd. G. A. Turto[illegible]

[illegible]stricts, and thu[illegible]

CULTIVATIO[illegible]

alm[illegible]

Received 26-7-73 & replied 22-8-73

Received 27-8-73

Received 1874 September

BOARD OF REVENUE, MADRAS.

Read Proceedings Dtd July 1874, No. 1,761.

JULY. No. 1761.

Extract of letter from Captain E. A. CAMPBELL, Dindigul to the Collector of Madura, dated 6th August 1873.

In answer to your letter requesting information about the cultivation of tobacco in Southern India, I have the honour to inform you that I have personally visited all the tobacco districts of any renown in South India, [illegible] miles apart, [illegible] tobacco districts of Tanjore, Trichinopoly, Madura and Coimbatore, [illegible] gardens at each station in stating that the gardens in Dindigul Taluq, in Madura District, are the best in the south.

I have lived since 1867 in Dindigul, and in the crop season of each year I spend some time in the taluq, visiting the gardens and bespeaking crops for use in our Cheroot factory at Dindigul.

I have also, during the last six years, regularly cultivated a few acres annually of Exotic, Hybrid, and indigenous tobacco, on the adjoining hills, and on the plains; I trust, therefore, my verdict in favour of the superiority of tobacco raised in your Collectorate may be taken as the result of practical experience.

I now proceed to answer the questions which your letter, under reply, lays before me categorically.

1*st*.—The districts already enumerated above, viz., Coimbatore, Madura and Tanjore, undoubtedly are the chief localities with a reputation properly earned, for the cultivation of good tobacco.

Strange to say, that the district of Trichinopoly, which has such a renown for tobacco, grows none worth rolling into cigars. The cheroots called "Trichinopoly" are made from tobacco raised in the Madura, Coimbatore and [illegible] districts. Tobacco is the rankest trash, as a rule, I have met with.

Again, though three districts, or rather provinces, grow good cigar leaf, still, in each the area on which really good leaf is grown is very much circumscribed, viz., only one taluq in this large district grows a good leaf, that is the most northerly one, only one taluq in Coimbatore, the eastern one, only one in Tanjore, the southern taluq.

[illegible] of one garden will grow good leaf. A newly taken in piece of land is no use [illegible] *on the plains*.

I should state that on the *plains* of South India all tobacco is grown under irrigation by wells, the soil itself will not without the addition of [illegible]

It follows, therefore, I surmise that [illegible] constituent in the soil which is essential to the growth of tobacco, and [illegible] some reason for the new land brought under the influence of well-irrigation, to be [illegible] which of course does not grow till saturation with the missing constituent has taken place [illegible]

[illegible] as a manufacturer of cigars, [illegible]

1st place, burn free.
2nd " give a white ash.
3rd " be free from large nerves.
4th " be of a golden brown color.

Probably my neighbors, the Pezaarmen, would say just the reverse, as they deal in chewing tobacco, which should be large [illegible], coarse veined, and need not burn; they go in for quantity and weight; I desire quality, and light texture.

Thousands of tons of chewing tobacco are [illegible] annually in India, and to the uninitiated such leaf is rank, the finer of the two, [illegible] have been the praises I have heard given [illegible] would not [illegible]

Persons, [illegible] can have but little idea of the annoyances and [illegible] Cigar manufacture [illegible] exposed. [illegible] fermentation of tobacco takes place [illegible] America where [illegible] what he wants and knows that he pays for [illegible]

lo[illegible]f is br[illegible] to the doors o[illegible]facturers for sal[illegible] a sample leaf is deligh[illegible]er p[illegible] large nu[illegible]grably in the s[illegible] ribbed, and throws a beautiful ash; the price is mo[illegible] at the bait[illegible]quently sta[illegible]signment, and pays cash down, no credit is given to purchasers of produce, and h[illegible] in[illegible] a[illegible] prospect of [illegible]anced renown in store for his brands of cigars.

The leaf is served [illegible] the rollers; the following day, he inspects perhaps some 10,000 of *fine looking cigars* made by his men from [illegible] new [illegible], he is careful by habit, and regularly lights a small percentage of the cigars made daily; lucky he does so, as to his horror he finds that a considerable number will not burn at all; he has been cheated, and to preserve the reputation of his manufactures, he destroys the whole of the 10,000 cigars he looked so fondly on in the morning, and sends out to catch the parties who have mixed a burning leaf with a non-burning leaf; literally nothing short of a crucible will make any impression on some of the tobacco leaf which grows alongside of some of the best, and most admired cigar leaf in India.

In America the Government classifies tobacco; but here, merchants have no safeguard against the [illegible]on of the middlemen who go between the grower and manufacturer.

[illegible] these middlemen are, sometimes, deceived themselves; as tobacco is very fickle [illegible] and dislikes, portion[illegible] of a field grow good leaf while other portions grow bad.

This accounts, sometimes, for the abuse one often hears bestowed on the Native Cigar merchants of Trichinopoly; they are abused for sending uneven samples of cheroots, but living at a distance, as they do, from the gardens, they must rely on middlemen.

For the first few years that I commenced my enterprize here, I suffered in the same way, and had I been naturally given to despair, I should have given it up long ago. Those interested in the concern with me fled, and thought they were knowingly leaving a sinking ship, and sunk long ago would have been the bark had I not commenced the plan of dealing direct with the growers, purchasing from the gardeners themselves, and only such portions of their gardens as repeated personal inspection told me was fit for my purpose.

There is yet another danger to which the unfortunate purchaser of tobacco in Indi[illegible] is the deterioration [illegible] which happen[illegible] fe[illegible] by the tobacco fly; the leaf looks good when cut, and all goes well until the curing is finished, and the leaf is brought into use, then it is found out that the minute punctures of this tiny insect have destroyed all the elasticity of the leaf, which is of no use for cigar wrappers.

Immense quantities of leaf are lost by this blight which progresses so [illegible], seems to be increasing year by year; much [illegible] tobacco is thus spoilt, as the best leaf seems to suffer most.

Nothing again[illegible] districts, careful inspection will prevent the purchaser being taken in by the gardener, who [illegible] keep him from inspecting that portion of his crop which has been attacked by [illegible].

In short, nothing [illegible] unceasing, unwearying attention to minute detail [illegible] the culture of the leaf, in its curing, its mellowing, and its rolling, will ensure success on cigar manufacturing in India. Each plant must be inspected during its growth, and after it is cut, *each* leaf must be inspected before being given to the roller, and *each* cigar must be inspected after its manufacture.

Such is not the case elsewhere; in other countries Government Inspectors classify tobacco leaf in the same way that Government Inspectors in India tend to, and classify Cotton and Jute for the purchaser.

Years of devotion to this business has shown me that at present there is no short cut to making money out of the manufacture of cigars in India for Europeans.

But, on the other hand, they show that attention bestowed to minute detail, as stated above, will make "Indian Tobacco" a name which shall be known, ere long, throughout the world; already importers of cigars, in Europe, who laughed at my first attempts, some years ago, have not only consented to try the cigars I make now, but have recently made the *first* proposals to me, and are really in earnest in their demand for large supplies of them.

[illegible] to come fro[illegible]ELL, Dindig[illegible] classi[illegible] leaf, and will now induce me to purchase leaf unles[illegible] August 1873. [illegible] know the parentage of the leaf and have supervised [illegible]mation about curing.

Nati[illegible] gardens, [illegible] generally a large [illegible] have pe[illegible]s in extent; these gardens are scattered, contiguous, but are generally [illegible] miles apart, [illegible] the demand for improved tobacco and cigars; I should require 100 such gardens, at once, and probably in a few years time, nearly double that number; no one man can pay proper attention to the supervision of the culture of so many gardens, and at the same time attend to the minute detail which the supervision of the [illegible] factory, many miles away, entails, and in no other country but India does the Cigar manufacturer grow the tobacco he rolls.

I have answered your question about the chief localities in which tobacco is grown in the south of India.

You are of course aware that good tobacco is grown in the delta of the Godavery, on the "Lunkas," or Islands, formed by the alluvial deposit of that river.

I know nothing of the culture there, if it is not by well-irrigation, [illegible] the leaf is of more even sample, than the leaf procurable in the south, the flavor and texture [illegible] dependent on the constituents of the water in each [illegible].

My experience of the culture of tobacco here [illegible] hill where I do not irrigate and have fine alluvial soil is that acres [illegible]res can be gro[illegible]ously in one district, all the leaf being of the same quality. [illegible] are the same on the delta of the Godavery, Cigar manufacturer who settles there [illegible] over us, as he can get leaf of the same sample to any amount.

I should have thought of this before I embarked everything in your district, where it is seldom that two consecutive acres give the same sample of leaf.

Question 2.—Can best be answered from your own Office records; thousands of acres of toba[illegible] are grown in the south of India, but I do not know of 100 acres which really give a cigar leaf.

Question 3.—[illegible] blight, it generally takes 1½ acre[illegible] give 1 ton of [illegible]rketable leaf.

Question 4.—Your records c[illegible] perhaps answer this generally; the gardeners get three crops from the same garden in two years, viz., two grain crops, and one of tobacco, and this they do year after year.

Question 5.—I never give less than R[illegible]pees 25 per [illegible] tobacco, and gene[illegible]y have [illegible] give 45 Rupees per pothy; sometimes going up to 60 [illegible]; a pothy of newly [illegible] tobacco ought to weigh 350 lb[illegible] in six months after [illegible] cut do[illegible] little over 250 lbs[illegible] in this climate.

Question 6.—Your own Offic[illegible] I know, can give you the mode of tobacco [illegible] obtaining among natives in this district.

The land [illegible]d by natives is of garden land perfectly flat, irrigated [illegible] shown above. I have made many experiments, but I find that alluvial soil, until reduced in strength, cannot be advantageously irrigated. Rank coarse leaf is the result; natives here all agree with me, and nothing could prove this [illegible] than the fact that in this taluq so renowned for tobacco, no decent leaf for cigars is procurable within ten miles of the hills which skirt its entire southern boundary. Quantities of tobacco is grown within this [illegible]ius, but the web is too rough for cigar leaf, as you leave the hills and get far away from the influence of wa[illegible] on them, the web of the leaf gets finer.

No[illegible] but that the [illegible] foot of the hi[illegible] the latest brought under cultivation, still the argume[illegible] have advanced is borne out, and that is that alluvial soil must be weaned before the tobacco grown on it will bear irrigation.

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Statement of Cultivation of Tobacco in each District of the Madras Presidency.

Districts.	Year.	Extent of Acres under Tobacco cultivation during each of the last five years.	Average out-turn per Acre.	Cost of cultivation per Acre.	Quality and Price per Maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
								Rs.	
Ganjam..	1867-68 ...	*450	900 lbs.	Rs. 52-4-0	1st quality is sold at Rs. 1 per 900 lbs.	Not given ...	Exported raw..	20,000	The figures refers only to the Gumsur and Sudda Talugs; no information being available for the Maliahs and Bodagada Zemindary.
	1868-69 ...	519			2nd quality used for cheroot or snuff is sold at 80 per 900 lbs.				
	1869-70 ...	537							
	1870-71 ...	537							
	1871-72 ...	513							
Vizagapatam.	.....	No reliable information for past five years; annual cultivation may be assumed to cover 7,000 Acres	375 to 750 lbs.	15 to 25 Rs.	First quality grown on Lanka land, Rs. 3 per maund of 25 lbs. Second quality, Rs. 2-8-0 per maund. Third, Rs. 1-8-0 per maund.	From Vizagapatam 126 cwts. and Bimlipatam 1,200 lbs.	Mostly raw. Manufactured.	1,550 164	
								1,714	
Godavery.	1868-69 ...	7,825	625 or 750 lbs. in "Lunka"	23 to 50 Rs.	The best quality is grown on the "Lunka" lands above the anicut which receive the silt in the river floods and are out of reach of the sea-freshes; the next quality is that grown on the lower Lunkas less rich in silt and affected by the water.	Last years 1872-73, 28,196 Bengal maund of 80 lbs. = 2,255,680 lbs.	Partly raw, partly manufactured. No statistics to discriminate between the two sorts.	4,01,154	
	1869-70 ...	[illegible]							
	1870-71 ...	[illegible]							
	1871-72 ...	5,479	250 or 300 lbs. in Black Cotton soil.						
	1872-73 ...	2,926							

Statement of Cultivation of Tobacco in each District of the Madras Presidency.—(Continued.)

District.	Year.	Extent of Acres under Tobacco cultivation during each of the last five years.	Average out-turn per Acre.	Cost of cultivation per Acre.	Quality and Price per Maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
Cuddapah	1869 ...	1,339	437½ to 1,250 lbs.	45 to 60 Rs.	...ost tobacco grown on ...oam under wells valued ...3 to 4 Rs. per 25 lbs. ...erior tobacco, Rs. 2-4-0 ... 25 lbs.	Mannda 29,510 of 25 lbs. = 737,750 lbs.	Expected cured but not manufactured.	Cannot be ascertained.	
	1870 ...	1,826							
	1871 ...	2,352							
	1872 ...	2,202							
	1873 ...	2,006							
Kurnool	1868-69 ...	4,113	10 to 30 maunds in dry, 20 to 60 in wet land.	10 to 25 Rs. in dry, 20 to 40 Rs.	...y land tobacco is superior tobacco grown in ...and sells at from Rs. 3 to Rs. 1-12-0 per maund, ...land produce at from Rs. 1-12-0 to 1 Rupee.	Tobacco is always exported after it is ...ted up into bundles. There are no statistics to show the quantity and value of what is exported, but is believed that about ¼th of the produce is exported.	.....	.....	
	1869-70 ...	4,361							
	1870-71 ...	5,996							
	1871-72 ...	2,786							
	1872-73 ...	7,628							
North Arcot.	.....	About 500 to 700 Acres.	400 to 1,500 lbs. per Acre.	29 to Rs.	Three kinds— 1st sort for snuff, 2nd for cheroots, 3rd for chewing; prices at ...o 1 Rupee.	Cannot be ascertained. Quite comparatively trifling.	.....	.....	
South Arcot.	1869 ...	1,791	276¼ to 1,933 lbs.	35 to Rs.	...mas a thook	None.	.....	.....	A thook = ...lbs.
	1870 ...	1,852			Rs. inclu...				
	1871 ...	1,961			...ing cur...				
	1872 ...	1,968							
	1873 ...	1,479							
Tanjore.	1868-69 ...	1,858	1,000 lbs.	80 R...	Quality moderately Good,	50,000 lbs....	.....	5,000	
	1869-70 ...	1,8...			...s. 2-8-0 per 25 lbs.				
	1870-71 ...	2,278							
	1871-72 ...	2,...							
	1872-73 ...	2,...							
Trichinopoly.	1869-70 ...	961	750 lbs.	50 to ...	Quality inferior.	No raw tobacco exported.	.....	10,000	
	1870-71 ...	1,...			1 to Rs. 3-12-0 per 25 lbs.				
	1871-72 ...	1,79...							
	1872-73 ...	1,57...							

Kistna	1866-67 ...	14,313	1¼ Candy = 750 lbs.	40 Rs. e...	...t quality grown on village and "low lunka leaf" ...Rs. are taken; the ...rior tobacco grown in ...-yards and useful only ...nuff, fetches 40 Rs. per ...y-	1866-67, 956,120 lbs.	.....	1,25,988	
	1867-68 ...	13,453		clusive o...					
	1868-69 ...	24,124		sites, 36 to 60 Rs. per					
	1869-70 ...	14,185		land Re...	...nd.	1867-68, 880,658 lbs.	.....	79,832	
	1870-71 ...	12,751		venue.	...luvial land, 30 to 40 Rs.	1868-69, 668,863 lbs.	.....	64,731	
Nellore	1868-69 ...	2,946	¼o of puttis to 4 puttis = lbs. 2,000.	16 to 80 Rs.	...st sort, 20 to 80 Rs. per ...cond sort, 20 to 40 Rs. ...rd sort, 15 to 24 Rs.	1869-70, 814,382 lbs.	.....	66,903	
	1869-70 ...	3,975				1870-71, 2,15,270 lbs.	.....	25,100	
	1870-71 ...	4,013				3,250 puttis = lbs. 1,625,000.	.....	.....	
	1871-72 ...	3,176							
	1872-73 ...	3,207							
Bellary	1868-69 ...	800	40 maunds = 1,000 lbs.	50 Rs.	Rs. per 25 lbs. down- ...lbs.	.....	None.	.....	
	1869-70 ...	3,005							
	1870-71 ...	2,319							
	1871-72 ...	2,170							
	1872-73 ...	3,211							

Statement of Cultivation of Tobacco in each District of the Madras Presidency.—(Continued.)

Districts.	Year.	Extent of Acres under Tobacco cultivation during each of the last five years.	Average out-turn per Acre.	Cost of cultivation per Acre.	Quality and Price per Maund.	Quantity and kind of Tobacco exported.	Raw or Manufactured.	Value of Exports.	Remarks.
								Rs.	
Madura..	1868-69 ...	*2,193	7½ cwt. ..	30 Rs....	uality fetching highest es is acrid, soft and thick ed on rich soil and useful for snuff, sells at about 3-8-0 for 25 lbs. A r leaf grown on lighter by soil useful for che- rs sells at about Rs. 2-4-0 p25 lbs. third kind useful only fchewing grown on in- for soil, sells at about Rl-9-0.	300,000 lbs. for manufacture into cheroots. No statistics of export of manufactured tobacco. From Perambalore and Udyarpalliem, however, 200 candies or 10,000 are stated to have been exported to Tanjore and South Arcot. About 150,000 maunds of 25 lbs.	Chiefly raw ...	60,000	* This information is incomplete, returns for some talugs of the district not being available for some years.
	1869-70 ...	4,719							
	1870-71 ...	4,821							
	1871-72 ...	7,404							
	1872-73 ...	6,604							
Tinnevelly.	1868	1,880	1,000 lbs. ...	50 to 60	Quality ordinary, Rs. 1-8-0 per 25 lbs.	None apparently exported from the district, being imported from Jaffna	.....	.....	
	1869	1,990							
	1870	1,940							
	1871	1,890							
	1872	2,050							
Coimbatore.	1868	12,874	345 to 1,440 lbs.	19 to 38	The best used for chewing on western coast, second quality used for cheroots, third grown on dry for snuff and smoking. The price per maund of 960 lbs. weight varies 12 Annas to 2 Rs.	17,339 candies of 480 lbs. = 8,322,720 lbs.	Partly raw and partly manufactured.	6,00,000	Information not available for parts of the district.
	1869	11,954							
	1870	19,580							
	1871	22,825							
	1872	30,640							
Salem ...	1868-69 ...	5,011	15 maunds of 25 lbs.	45 Rs	5 Annas to 1-12-0 per maund.	47,382 maunds of 25 lbs. = 1,184,550 lbs.	.....	.....	
	1869-70 ...	4,996							
	1870-71 ...	5,493							
	1871-72 ...	7,644							
	1872-73 ...	8,565							
Madras..	1868-69 ...	.....	.....	.....	.....		Cwt.		
	1869-70 ...	.....	.....	.....	.....		754	.....	12,887
	1870-71 ...	.....	.....	.....	.....		1,048	.....	21,823
	1871-72 ...	.....	.....	.....	.....		198	.....	4,114
	1872-73 ...	.....	.....	.....	.....		594½	.....	8,037
							561¾	.....	10,161
From Messrs. Roberts and Co., to the Collector of Goa ver,.	.....	.....	2[illegible] candies per acre with headr[illegible] or which is equivalent to 710 lbs fine tobacco lea[illegible]	120 Rs.	Messrs. Roberts and Co. state that "the chief markets for export for raw leaf are Rangoon and Mauritius, and for cheroots, Bombay, Calcutta, Ceylon, Australia, and England; the cheroots are very much app[illegible] in England and the Continent chiefly, for their fine flavour; second[illegible]y, so adulter[illegible] and thirdly, cheapness; make [illegible]m a hous[illegible] fact the only difficulty to overcome to sightly appearance [illegible]ord is smoothness and evenness of colour, but to give them a bility."	.....	.....	.....	The exports from the Madras Sea-Customs are entered here.

N.B.—Returns from the Districts of Madras throughout, [illegible] South Canara, and Nilgiris not inserted, as cultivation is only carried on in them to a trifling extent.

Rec. 25 Aug 1873
Rev. 21 Aug 1873
Ans. 31 Aug 1873

Otacamund
23rd August 1873

From. W. J. Broughton
Government Quinologist

To The Honble R. A. Dalyell
Acting Secretary to Government
Revenue Department
Otacamund

Sir,

I have received proceedings of the Board of Revenue No. 5003 of August 9th 1873 requesting that I would examine certain samples of from the Godavery district and report on the same to the Board

The tobaccos were two specimens grown from Manila seed. One was grown on the Aurungabada Island on the Godavery and the other at the village of Kovur in the Yernagudem Taluq. The tobaccos were examined by the method I have hitherto employed, whose results give the clearest numerical estimates of certain qualities, which unless the tobaccos possess they will be of bad flavour for European smokers. If they possess these qualities

the tobacco cannot be naturally inferior, though of course may be made so by bad curing. I subjoin a statement of the results obtained

Tobacco specimen from	Per cent of Ash	Per cent of carbonate of potash	Per cent of Nicotine
Kovvur Manila tobacco	26.36	7.49	1.56
Aurungabad " "	26.20	5.86	2.15

Like the country tobaccos from the same district I have received and analysed and reported on in Board's Proceedings ~~[illegible]~~ of August 28th 1871, and No. 2360 of December 10th 1872, these Manila tobaccos are free from the general South Indian defect of containing scarcely any potash salts, an absence which entirely spoils the flavour of the tobacco. The best Manila cheroots usually contain 9 % of potassic carbonate in their ash, but the amounts contained in these tobaccos are sufficient for good quality. The amount of nicotine usually present in good Manila cheroots is about 2–3 %, hence the Kovvur tobacco is milder in quality than the other specimens.

In smoking these tobaccos are of excellent flavour though rather weak. That from Kovvur is the best, as its amount of potassic carbonate would almost indicate. It has a decided Manila flavour, though cured in the ordinary country fashion, which renders it almost unfit for cheroots. Had it been cured in the Manila fashion by submitting it to a somewhat less amount of fermentation than is usual in the Godavery district, and care had been taken to preserve the shape of the leaves, it could have been made into good Manila cheroots. As it presents it is fit for export.

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As the Godavery district already produces excellent Indian tobacco which finds a ready sale, I would almost conclude that the introduction of foreign kinds would be of less service than in other districts. In no part of this presidency could I recommend any district apparently more suitable for the cultivation of fine foreign tobaccos than Wynaad, when a careful system of curing

could

could be adopted with less chance of passive native resistence. I have already mentioned this my conviction to the Board of Revenue proceedings N°. 2778. of 7th. July 1871 para. 15.

I have the honour to be
Sir.
Your most Obes. Servt.

John Beveridge
Govt. Zoologist

Revenue Department

No. 1047.

Proceedings of the Madras Government.

Under date the 19th August 1874.

Read the following Proceedings of the Bd. of Rev.

Subj. with remarks reports from Collectors on Tobacco cultivation in Madras Presidency with reference to call from Govt. of India on subject—

H.R. & W. 4th July 1874 No. 1703.

Letter from the Govt. Secretary

(Here enter 23d Augt 1873.)

Ordered that the foregoing Proceedings with its accompanying printed papers be forwarded to the Government of India in reply to their letter of the 28th March 1874 No. 3-117 together with

Read Rev. 1873 No. 2515

From The Govt. Secretary

To The Secretary to Govt. Revenue Department

Dated 23d Augt. 1873

Rec'd 25th Augt. 1873

Enclosures. None

Tobacco. Return on the cultivation of tobacco in the Madras Presidency for the year 1872-73 forwarded with Govt. letter dated 23d August 1873 No. 2515

1055 A.

with copies of the
papers noted in the
margin.

Gd 20th May 1873
No 503
Govt Queensland
letter dated 23rd Augt 73

Acknd

To B of Rev with 24 Encs
7/8-9-74

1/5-4/76

R/21/8/74 }
D/21/8/74 }

C 10/8/74 R 19th