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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No. ~~B.P. No.~~ 1786
Press ~~Mis.~~

Dated 9-12-1875 ~~196~~ .

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department, 9th December 1875.

Read the following :—

No. 133. Proceedings of the Board of Revenue, dated 7th October 1875, No. 2,802 :—

Read again G. O., 18th May 1875, No. 752, and Board's Proceedings, 14th June 1875, No. 1,606.

Read the following letters :—

From J. R. COCKERELL, Esq., Commissioner of the Nilgiris, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Ootacamund, 1st July 1875, No. 65.

AT paragraph 3 in Board's Proceedings, dated 14th June 1875, No. 1,606, on the subject of beer brewed on the Nilgiri Hills, it is stated that, according to the trade statistics, "no concentrated wort has been imported into the Presidency since 1866-67." The Proceedings give from the trade statistics the quantity of hops imported since 1872-73, and remark: "Thus it is apparent that the whole quantity of hops imported would not have sufficed for three-fourths of the beer of Messrs. Honeywell and Frend's brewing which paid excise." I had stated in a letter in the Proceedings that Messrs. Honeywell and Frend each used 4 lbs. of hops to every hogshead of beer, and that in brewing the better kind of beer, Mr. Honeywell employed "concentrated wort."

2. Neither Mr. Honeywell nor Mr. Frend keep accounts in book-form. I have examined vouchers produced by both for 1874-75, and have directed that the vouchers should be preserved in case the Board may wish to scrutinize them.

3. A packet of hops averages 200 lbs. In 1874-75, Mr. Honeywell purchased one packet from Messrs. Oakes & Co., and 140 lbs. of hops from the Nilgiri Bakery. For these he has vouchers. He asserts he purchased, about November last, three cases of hops, each holding 3 cwt., from a native who brought them from Bombay. Mr. Frend corroborates the statement declaring the hops were offered to him. I believe Mr. Honeywell, because there is no reason to suppose he has altered his mode of brewing and he has always used hops. I have visited his brewery constantly, and always unexpectedly, and have on every occasion seen hops in use and sometimes concentrated wort.

Mr. Honeywell, in 1874-75, brewed 55,700 gallons of beer and used 1,844 lbs. of hops. Therefore he employed about 1¾ lbs. of hops per hogshead. He buys his casks from the Commissariat at Wellington. Each cask on export from England has 1 lb. of hops thrown into it for the beer to feed upon during the passage to

India. These hops are not exhausted by the use to which they are thus put, and Mr. Honeywell casks his beer upon them. It should be stated that the use of hops is to make beer keep. Beer exported from England must accordingly be hopped higher than beer required only for use immediately. The beer of Messrs. Honeywell and Frend is brewed for immediate drinking, and draught beer in England manufactured for immediate consumption rarely has more than 2 lbs. of hops to the hogshead.

4. The vouchers produced by Mr. Frend show that in 1874-75 Mr. Frend used five packets of hops which he purchased from Messrs. Oakes & Co. He brewed 37,000 gallons of beer. He, therefore, employed about 1⅓ lbs. of hops to a hogshead of beer.

5. Thus the Board will perceive I was wrong in asserting that 4 lbs. of hops was used per hogshead. The error was an inadvertence produced by my misconceiving Mr. Honeywell. I should have said that Mr. Honeywell employs 4 lbs. of hops per hogshead for his bottled beer. The Board will also perceive that the trade statistics do not exhaust the matter, and that Messrs. Honeywell and Frend used three times the quantity of hops in 1874-75 exhibited by the statistics as imported.

6. With regard to "concentrated wort" vouchers put in by Mr. Honeywell show Mr. Honeywell wrote to Messrs. Oakes inquiring the freight, &c., per ton of wort, and show further that Messrs. Oakes received wort in May 1874 for Mr. Honeywell. It is alleged by Mr. Honeywell that the quantity received was one ton. I have no reason to doubt the correctness of the statement, as I saw some of the wort at the brewery and it was in considerable quantity. It is thus apparent that wort was imported in 1874-75, and that the import is omitted from the "Trade Statistics."

7. Dr. Nicholson states in his memorandum on beer in the Proceedings of the Board that the customs duty on imported beer is 1 Anna per gallon, and he recommends that the excise duty on Indian brewed beer of lower quality should be 3 or 4 Annas per gallon. I am still unable to see the reason for a distinction if Indian brewed beer is made of malt, hops and sugar, as the hops pay an import duty. If it is desired, Messrs. Honeywell and Frend could be compelled to use 4 lbs. of hops per hogshead. The reason they use less is, they say, not on account of the expense so much as that their native customers prefer sweet to bitter beer, and 4 lbs. of hops per hogshead introduces too much bitter. It is always easy to ascertain whether Messrs. Honeywell and Frend consume the hops; the Board may see fit to prescribe by making them produce receipts for their purchases of hops from time to time, and this should in future be done; but I see no reason for interfering with Messrs. Honeywell and Frend's trade by requiring from them a highly hopped beer.

8. Dr. Nicholson states in paragraph [illegible] of his memorandum: "In England alcohol in beer pays much less duty than the same quantity of alcohol in the spirit, which could be separated from the beer by distillation. This difference is made on the ground of beer being a wholesome and a national beverage, and care is taken that the beer is made from malt and not from non-exciseable materials,

such as steeped grain, molasses or glucose." Upon this passage it seems necessary to remark—

(1.) That a beer brewed with 1⅓ lbs. of hops to the hogshead is not less wholesome, though less bitter than a beer brewed with 4 lbs. to the hogshead.

(2.) That the taste for the former beer is growing amongst natives, and no reason appears why the taste should not be gratified on the same principles that are held to apply in England.

9. In the latter part of the passage, coupled with the remark in paragraph 5 that beer at Bangalore is made from "sprouted grain," there seems to be some confusion. I am not aware that it is possible to brew beer from "steeped grain" or "sprouted grain." Beer can only be brewed from malt. Malt is steeped grain laid out on a malting floor to heat. The heating causes it to sprout. When germination has proceeded to the extent required, the grain is put into a kiln and dried, and the dried germinated grain is malt. Before being used in brewing, malt is crushed.

10. In my former letter, I informed the Board that sugar in its various forms of patent saccharine, glucose, &c., is used in England in brewing beer. This material is, contrary to what is apparently implied by Dr. Nicholson, exciseable so soon as it enters a brewery to be incorporated with the other materials required to brew beer.

From A. WEDDERBURN, Esq., Collector of Coimbatore, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated 3rd July 1875, No. 200.

WITH reference to the Proceedings of the Board of Revenue, dated 14th June 1875, No. 1,606, I have the honor to inform the Board that the chemical analysis of a quart of Honeywell's draught beer sold in Coimbatore Town, which was sent to the Chemical Examiner in December 1871, showed that it contained 10·5 per cent. of pure (anhydrous) alcohol, equal to 79° below proof. This was sold at 2 Annas. Country arrack 60° below proof, and perhaps even less, was 8 Annas a quart. The consumption of beer was, therefore, unduly encouraged.

2. Mr. Honeywell, to whom I communicated this result as also the suspension of his shop, was of opinion that the original liquor was not of that strength, and that it would not pay him to brew of such alcoholic strength; at the same time it is difficult to suppose that the retailer, unless with a very large margin of profit, could add alcohol.

3. None of the Nilgiri brewers can afford to sell malt and hop beer at 2 Annas a quart; but, provided that the liquor is not above a certain alcoholic strength, there seems no reason why it should not, to a certain limited extent, be allowed.

4. Mr. Frend has applied to me for license to sell in four places. If his beer is gauged and passed, I see no objection to his having two licenses, equally with Mr. Honeywell, and, with the Board's permission, would give him one for Coimbatore and another for Erode. Thus there will only be four shops in the district, and each at a separate place.

I informed Mr. Frend that the matter awaited the Board's order as to any license at all being granted.

From J. HUNTER-BLAIR, Esq., Collector of Sea Customs, to H. E. STOKES, Esq., Acting Secretary to the Borad of Revenue, dated Madras, 30th June 1875, No. 869.

WITH reference to your demi-official letter, dated 19th June 1875, I have the honor to send you copy of a letter from Messrs. Oakes & Co., dated 22nd June 1875, from which you will observe that the total quantity of concentrated wort imported by them since 1870 was only 50 cwts.: 10 cwts. in November 1870, and 40 cwts. in March 1874.

2. Extracts from the Bills of Entry put in by them to clear the article are herewith forwarded. In the Trade Return No. [illegible], of foreign merchandize imported duty free, forwarded from this office for the month of January 1871, the 10 cwts. of wort imported in November 1870 are shown separately. The quantity imported in 1874 was left out of the accounts by a mistake.

3. Since the beginning of 1867 concentrated wort is passed free of duty as hops are.

4. Messrs. Oakes & Co. state that they sold all the wort imported by them to Mr. Honeywell, and none to Messrs. Abraham of either Bangalore or Bellary.

ENCLOSURE No. 1.

From Messrs. OAKES & CO., to J. HUNTER-BLAIR, Esq., Collector of Sea Customs, dated Madras, 22nd June 1875.

IN reply to your letter, No. 828, of yesterday, we have the honor to inform you that we have imported 50 cwts. of concentrated wort received by ships as shown in the margin, the whole of which was sold to Mr. Honeywell, Coonoor, and not to Mr. Abraham.

S. S. "[illegible]," [illegible] November 1870, 10 cwt.
S. S. "[illegible]," [illegible] March 1874, 40 cwt.

2. We are not certain as to how the material was entered in our Import Application, but you will be able, we have no doubt, to ascertain with present information.

(True Copy.)

(Signed) J. HUNTER-BLAIR,
Collector of Sea Customs.

ENCLOSURES Nos. 2 and 3.—Extracts from Bills of Entry.

From Major T. G. CLARKE, Officiating Secretary to the Chief Commissioner of Mysore, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Bangalore, 19th July 1875, No. [illegible] 704.

IN reply to your letter No. 1,891, dated [illegible] June 1875, I am directed, by the Officiating Chief Commissioner, to state that, from information supplied by the Commissioner, Nundidroog Division, the quantity of beer manufactured at the three breweries of Messrs. Abraham & Co., Mr. Honeywell and Mr. Roberts, amounted, during the official year 1874-75, to [illegible] hogsheads.

2. The Traffic Manager of the Madras Railway Company furnishes the following statistics of beer exported by rail into the adjoining districts of the Madras Presidency:—

During 1874.

	HHDS.	MOS.	S.
To Madras...	4	31	0
To Moorapoor	1	7	35
To Salem	6	47	6
During 1875—for six months nearly.			
To Salem	3	23	21
To Bellary...	2	16	0

3. We have no information as to the quantity sent out of Bangalore by road.

4. With regard to your inquiry, whether any restrictions are placed upon the export of the beer by rail or otherwise, I am to state that the license contains no conditions to that effect. The beer is removed from the brewery under a pass, after the payment of the prescribed duty of 2 Annas per gallon.

From Surgeon W. MACRAE, M.B., M.C., M.A., Acting Chemical Examiner, to C. A. GALTON, Esq., Acting Sub-Secretary to the Board of Revenue, dated Madras, 17th July 1875, No. 271.

IN reply to your Official Memorandum, No. 1,138, dated 15th instant, I have the honor to inform you that I have not yet finished the analyses of the different samples of beer referred to.

2. The accompanying table contains the results obtained so far. In the first column the composition of the contents of a bottle of Bass, bottled by Daukes and obtained from Messrs. McDowell & Co., Madras, is entered for comparison.

3. I have entered two columns for alcohol, as the percentage is different according as it is reckoned by weight or by volume. I presume that percentage by volume is that referred to by Government in its Proceedings. Assuming that it will be seen that most of the samples examined exceeded 8 p.c.

4. Some of the samples are two acid. The acidity should not exceed about 240 grains per gallon reckoned as dry acetic acid.

5. In some there is practically no hop present, and most seemed to be keeping badly.

6. There is a want of *body* in most of them as compared with European beer, what is known as *body* depending on the quantity of malt and hop extracts present. The extract gravity column shows this.

7. I want to analyse some of these again in order to judge better as to their keeping qualities.

[illegible] Beer, [illegible] Madras.	[illegible] Mr. McDowell & Co.	1st July 1875	1005·5	1016·5	5·89	7·5	117	Creamy surface; clear; strong but pleasant bitter of hop; no unpleasant after taste.
Frend's Draught Beer, Nilgiris.	Commissioner of Nilgiris with letter to the Board.	29th May 1875	994	1006	7·8	9·25	183	Sparkling but not creamy; turbid; tastes like mild table-beer to which a dash of cider had been added; not particularly disagreeable; very little bitter. Yeast cells seen under Microscope.
Honeywell's Draught Beer, Nilgiris.	No. 45, dated 17th April 1875.	29th May 1875	999·7	1011	7·32	8·8	157	Effervescent like soda water; slightly turbid; very sweet taste; very little bitter of any kind not unpleasant. Some yeast cells.
Nelson's Beer, Bellary	Collector of Bellary, bought in Bellary, labelled 12th June.	23rd June 1875	1003·9	1012	4·53	5·4	824	Bottles only one-third full. Corks bad; tastes like mixture of decoction of Bark and Chiretta; abominable.
B. and M. Abraham's Beer, Bellary.	Collector of Bellary, bought in Bellary, labelled 14th June.	23rd June 1875	997·5	1005·5	6·32	7·75	140	Bottles only one-third full; corks bad; turbid; slightly frothy; disagreeable; not much bitter; no taste of hop. Abundant yeast cells.
Roberts and Co.'s Beer, Bangalore.	Collector of Trichinopoly, sent from Trichinopoly.	24th June 1875	999·6	1009·8	5·58	7·15	250	Slightly turbid; very little bitter (not hop) sub-acid sweetish taste. Under Microscope yeast cells visible.
Honeywell's Beer, purchased by [illegible] Pillai of Trichinopoly.	Do. do.	24th June 1875	997·8	1007	6·75	8·55	336	Quite flat; somewhat turbid; sub-acid disagreeable taste; a good many yeast cells and some bacteria (sign of keeping badly.)
Frend's Draught Beer, from Nilgiris.	Commissioner of Nilgiris, with letter No. 189, dated 24th June.	29th June 1875	998	1009·5	6·62	8·46	840	Slightly thick; sub-acid; very little bitter; not very unpleasant; slightly turbid; some yeast cells and Bacteria.
Honeywell's Draught Beer, from Nilgiris.	Do. do.	29th June 1875	998·3	1007	6·98	11·1	167	Nearly quite clear; sub-acid sweetish taste; very little bitter; some effervescence but [illegible]
Honeywell's East India Pale Ale, Nilgiris.	Commissioner of Nilgiris.	2nd July 1875	999	1012·5	7·85	9·75	140	Quite flat; contains some hop but not pleasant; nearly clear; a few oval cells and Mycelia fragments.
Honeywell's Stout XXX Porter, Nilgiris.	Do. do.	5th July 1875	1017·3	1035	6·29	7·9	266	Flows like oil; no froth; feels like an oily liquid in mouth; somewhat bitter; not very disagreeable.

MADRAS,
17th July 1875.

(Signed) W. MACRAE,
Acting Chemical Examiner to Government.

Proceedings of the Madras Government, Revenue Department,
9th December 1875.

From Surgeon W. MACRAE, M.B., M.C., M.A., Acting Chemical Examiner, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Madras, 7th August 1875, No. 301.

I HAVE the honor to enclose a tabular statement of all the analyses of country-brewed beer made by me during the last two months, with a similar analysis of an average sample of Bass's beer, bottled by Daukes, for comparison.

2. The brackets to the left of the table, couple bottles from the same samples, but examined at different periods.

3. Malt liquors consist of water containing alcohol, and the following matters in solution:—Sugar, extractive matters other than sugar of variable composition derived from the grain and bitter used, organic acids developed in course of fermentation, and a small quantity of inorganic salts from the grain and water.

4. The chief substances besides *alcohol* are the extractive matters (including sugar), and hence the use of the term "Extract Gravity" to indicate the specific gravity of the liquor after all the alcohol has been driven off and replaced by an equal volume of distilled water. Every four parts above a thousand in the extract gravity indicates one per cent. of extractive matters, so that, for example, the sample of Bass's beer contained a little more than 4½ per cent. of extractive matters.

5. Experience shows that injurious changes in beer are kept in check by the use of much hop, by the presence of much alcohol, or by having a comparatively small quantity of extractive matters in solution. In good beers imported from England, there is much hop and a moderate amount of alcohol and extractive matters, while in the country-brewed beers generally there is little or no hop, a large percentage of alcohol and a small amount of extractive.

6. In all beers a *slow* fermentation goes on in the bottle increasing the percentage of alcohol, and lowering the specific and extractive gravities, and slightly increasing the proportion of free acid. If the beer has not been clarified properly before bottling so that there is turbidity from the presence of numerous yeast cells, these will not merely hurry on the change above mentioned, but by remaining in the liquid they tend to promote those injurious changes in the liquid which result in the formation of vinegar.

7. There are therefore two changes to which beer is liable, particularly in a hot climate. These are the conversion of the saccharine matters into alcohol, and the conversion of the latter into acetic acid. The former of these changes is not necessarily a bad one, but the latter certainly is, and it is the one in consequence of which so much of the beer imported for troops in this country is condemned.

8. The physical properties of good beer are a creamy top, transparency, a pleasant bitter taste, the bitterness not being persistent, and slight acidity.

9. The country-brewed beers are generally defective in these qualities: for example, they are all more or less turbid from the presence of yeast cells, amorphous matters, and in many cases of rod-shaped bodies resembling those seen in organic mixtures in which putrefactive changes are taking place.

10. I made six analyses of Honeywell's common beer. The specific gravity varied from 994·1 to 999, the extract gravity from 1007 to 1011, the alcohol from 8·5 to 11·1 per cent. by volume, and the acidity from 157 to 266. They were in bottle for periods of one week up to three months. Some effervesced (without any creaminess) and some were flat: all were turbid: they had generally a sweetish acid taste, not unpleasant, and they contained little bitter of any kind with little or no flavor of hop. Fermentation was actively going on in the freshest sample examined, and such a liquor is generally considered unwholesome (causing dyspepsia), but in other respects they did not appear to be hurtful. There was very little *body* in them as may be seen by the low extract gravity.

11. Similar remarks apply to Frend's beer, except that it contained more bitter, a good deal of it hop.

12. Norton's beer had a most abominable bitter taste, most nearly resembling that of a mixture of Cheretta and Bark. The first sample sent from Bellary was contained in badly corked bottles not more than one-third full, and that may be the reason why it had such a small quantity of alcohol and a large amount of acid. Both the samples, however, were too sour.

13. The two samples of Abraham's beer differed much in composition, the second having a much lower specific gravity and much more alcohol than the first. This was probably because it was kept longer and rapid changes were taking place. Both were flat and disagreeable to taste, and they did not seem to contain much hop.

14. The two samples of Roberts' beer also differed in composition, and from the same cause they contained very little bitter of any kind, probably no hop, and they were rather sour.

15. Honeywell's porter flowed like oil and felt thick and oily in the mouth. It probably contained a good deal of hop. Only two bottles were supplied, and although the second examined was only kept three weeks longer than the first, there was evidence of a strong tendency to undergo the acid change. This was the case also with his two samples of pale ale. The acid was increasing far too rapidly.

16. The bottle of Honeywell's cooper was not unpleasant: it had a sweetish bitter taste, a creamy top, and it was tolerably clear.

ENCLOSURE No. 1.

Tabular Statement of the Analyses of Country-brewed Beer.

Liquor.	Brewer.	By whom sent.	Where brewed.	When received.	When examined.	Specific Gravity, Water being 1000.	Extract Gravity, Water being 1000.	Alcohol per cent. by Volume.	Acidity in Grains anhydrous acetic Acid per Gallon.
Beer ...	Bass, bottled by Dunlop	Messrs. McDowell & Co. ...	England ...	......	1st July 1875 ...	1008·6	1018·6	7·5	117
Draught Beer	Honeywell ...	Commissioner of Nilgiris ...	Nilgiris ...	1st May 1875 ...	23th May 1875 ...	999·7	1011	8·8	157
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	16th July 1875 ...	997·8	1010	8·7	196
Do. ...	Do. ...	Do. ...	Do. ...	26th June 1875 ...	28th June 1875 ...	993·3	1007	11·1	167
Do. ...	Do. ...	Collector of Trichinopoly ...	Do. ...	30th April 1875 ...	25th June 1875 ...	995·2	1007	8·55	245
Do. ...	Do. ...	Collector of Coimbatore from Licensed shop	Do. ...	24th April 1875 ...	21st July 1875 ...	995·7	1007	9·35	266
Do. ...	Do. ...	Collector of Coimbatore from Private dealer	Do. ...	Do. ...	22nd July 1875 ...	994·1	1006·8	10·2	242
Do. ...	Frend ...	Commissioner of Nilgiris ...	Do. ...	1st May 1875 ...	28th May 1875 ...	994	1016	9·25	183
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	27th July 1875 ...	994·6	1006·5	8·6	221
Do. ...	Do. ...	Do. ...	Do. ...	26th June 1875 ...	29th June 1875 ...	996	1006·5	8·45	220
Beer ...	Norton ...	Collector of Bellary ...	Bellary ...	18th June 1875 ...	22nd June 1875 ...	1008·2	1012	5·4	374
Do. ...	Do. ...	Collector of Cuddapah ...	Do. ...	10th April 1875 ...	19th July 1875 ...	999·3	1009·3	8·4	330
Do. ...	Abraham ...	Collector of Bellary ...	Do. ...	18th June 1875 ...	23rd June 1875 ...	997·5	1008·3	7·75	140
Do. ...	Do. ...	Collector of Trichinopoly ...	Bangalore ...	30th June 1875 ...	30th July 1875 ...	992·7	1006·7	10·75	231
Do. ...	Roberts ...	Do. ...	Do. ...	[illegible]	24th June 1875 ...	999·6	1009·6	7·15	250
Do. ...	Do. ...	Collector of Salem ...	Do. ...	20th May 1875 ...	28th July 1875 ...	995·1	1008	9·5	289
Porter ...	Honeywell ...	Commissioner of Nilgiris ...	Nilgiris ...	26th June 1875 ...	5th July 1875 ...	1017·3	1036	7·9	266
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	26th July 1875 ...	1017·5	1037·5	7·65	256
Pale Ale ...	Do. ...	Do. ...	Do. ...	Do. ...	3rd July 1875 ...	990	1012·3	9·75	140
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	20th July 1875 ...	998·8	1012·5	9·4	264
Cooper ...	Do. ...	Do. ...	Do. ...	Do. ...	15th July 1875 ...	1010	1020·7	7·85	260

(Signed) W. MACRAE,
Acting Chemical Examiner to Government.

MADRAS,
7th August 1875.

m J. R. COCKERELL, Esq., Commissioner of Nilgiris, to H. E. STOKES,
Esq., Acting Secretary to the Board of Revenue, dated Ootacamund,
19th August 1875, No. 87.

I HAVE the honor to submit a petition from Mr. Honeywell on the subject of Excise duty imposed on beer brewed on the Hills, and to request early orders h reference to my letter, dated 1st ultimo, No. 65.

2. I recently had the opportunity of speaking to a gentleman engaged in ffee planting who has had considerable experience in brewing in England. It pears that a variety of beers is in general consumption. There is good beer ewed with malt, hops, and sugar, and small beer is made by reboiling the contuency employed. There is treacle beer made with sugar and hops only. rm beer made with sugar and barm and hops. Finally there is "Tom and ry" beer, which is apparently a bad form of treacle beer. In all beers hops st be used or substitutes, such as in England either gentian or a material adver-ed as "the substitute for hops." A very excellent beer could be brewed of lt sugar and chiretta casked on 1 lb. of hops in each cask.

3. I have on several occasions asked the opinion of the President of the nicipal Commission in Bangalore on the subject of beer brewed there. The ty on Bangalore brewed beer is 2 Annas per gallon. This rate is the subject complaint. The beer thrown into the bazaar is sold for 25 Rupees per hogshead; d Doctor Orr calculates it costs 12 Rupees to manufacture. Add the duty of upees 6-12-0 and the profit to the brewer is Rupees 6-4-0. It appears probable at the higher the duty the greater temptation to adulterate, and this is affirmed by ssrs. Abraham, the largest brewers in Bangalore. Manufacture is more expensive the Hills than in Bangalore.

4. Messrs. Frend and Honeywell both have malt kilns, and I am satisfied e beer they use is hop. Obviously they cannot use so much hop as is found in mmissariat beer, but the latter beer costs Government at Wellington 45 Rupees r hogshead.

5. Doctor Orr is quite satisfied that the beer brewed in Bangalore is wholeome and he has taken pains to investigate the matter. I see no reason to suppose lgiri beer is worse than Bangalore beer. The intoxicating qualities attributed India brewed beers is due to the preponderance of sugar.

6. I venture, with regard to the enhanced duty recently imposed on Nilgiri beer, to remark that no new circumstances have transpired since the 1 Anna uty was fixed in February 1872 to show that the beer now brewed is worse than as then manufactured. I am given to understand that beer brewed in Bombay ays no Excise duty. The brewers take out a license to brew at a cost of upees 25.

ENCLOSURE No. 1.—Petition.

From the same Officer, dated Ootacamund, 11th September 1875, No. 89.

IN continuation of my letter, No. 87, of 19th alt., submitting Mr. Honeywell's petition on the subject of Excise duty imposed on beer brewed on the Hills, I have the honor to forward herewith a similar petition from Mr. Frend.

2. My views were expressed in the letter above quoted.

ENCLOSURE No. 1.—Petition.

From J. H. MASTER, Esq., Collector of Bellary, to H. E. STOKES, Esq., Acting
Secretary to the Board of Revenue, dated 24th September 1875, No. 370.

WITH reference to the Proceedings of the Board, dated 17th ultimo, No. 2,315, I have the honor to forward herewith two statements showing the quantities of materials used by Messrs. Norton and Co. and Messrs. Abraham and Co. in the manufacture of their beer.

2. This information had to be collected item by item from the accounts of the brewers; hence the delay in the submission of this report.

3. Wheat, and in some cases paddy, has been used as a substitute for barley; concentrated wort does not seem to enter into the manufacture, nor is it possible to say from the accounts how much malt has been obtained from the grain at each malting, nor is there any record of the quantity of malt used at each brewing.

4. There is a little diversity in the method of keeping accounts as obtaining at the breweries. Messrs. Norton and Co. have all their entries regarding hops in packets, not in pounds; a packet they say is equal to an cwt.; but I have no means of ascertaining if this be correct.

5. Messrs. Norton and Co. have now ceased to be brewers.

ENCLOSURE No. 1.

Statement showing the quantity of Materials used in brewing Beer in the Brewery of Messrs. Norton and Co., Bellary, for the Fasli years of 1282 to 1284.

—	Hops.		Sugar.	Jaggery.	Wheat.	Paddy.	Remarks.
	PACKETS	LBS.	MAUNDS.	MAUNDS.	SEERS.	SEERS.	
From July 1872 to 30th June 1873 ...	6	0	... *	... *	... *	... *	* The quantity of materials for 1872-73 cannot be ascertained, as the accounts are said to have been mislaid.
From July 1873 to 30th June 1874 ...	8	6	4½	1,676 [illegible]	... †	... †	† Do. do. do.
From July 1874 to June 1875 ...	...	‡	5¾	967 [illegible]	2,399¼	100	‡ Do. do. do.
Total...	8	...	10¼	2,645 [illegible]	2,399¼	100	

(Signed) J. H. MASTER,
Collector.

BELLARY,
24th September 1875.

ENCLOSURE No. 2.

Statement showing the quantity of Materials used in brewing Beer in the Brewery of Messrs. Abraham and Co., Bellary.

—	Hops.	Wheat.	Sugar.	Remarks.
	POUNDS.	SEERS.	MAUNDS.	
From July 1872 to 30th June 1873	590	2,950	765	
From July 1873 to 30th June 1874	697	2,460	889	
From July 1874 to 30th June 1875	448	1,260	540	
Total...	1,735	6,670	2,194	

(Signed) J. H. MASTER,
Collector.

BELLARY,
24th September 1875.

IN the Government Order above read, Government directed that the grant of beer licenses should be restricted to beer made of malt, hops, and sugar only, and of an alcoholic strength not exceeding 8 per cent.; called for report as to the arrangements to be made for testing the beer; and ordered the Board to give Mr. Cockerell's letter of the 17th April 1875, No. 35, relating to the brewing of Messrs. Honeywell and Frend on the Nilgiris, full consideration, and to state whether they would recommend any reduction in the Excise duty of 4 Annas a gallon ordered to be levied.

2. The Board partly replied in their Proceedings of the 14th June, but stated that after making further inquiries they would report again. The papers above recorded contain the results of these inquiries, and they will be submitted for the information of Government.

3. The Board had adduced certain figures to show that the statements made by Mr. Honeywell as to the use by him of hops and concentrated wort were incorrect. In his letter of the 1st July the Commissioner of Nilgiris, with reference to this subject, states that Messrs. Honeywell and Frend do not keep book accounts;* that Mr. Honeywell produced vouchers for the purchase of 340 lbs. of hops and Mr. Frend for five packets, or 1,000 lbs; that Mr. Honeywell has proved purchase of 3 cwts. more; that he used 1,344 lbs; that the rate of 4 lbs. per hogshead applies only to the bottled ale (quantity brewed not stated); that the quantity of hops per hogshead is 1¼ or 1½ lbs. in Nilgiri beer; and that the casks in which the beer is put contain a residue of hops by which it benefits. As to concentrated wort, he got one ton in May 1874 from Messrs Oakes and Co., and the Commissioner has no doubt that he uses this material and that the trade statistics are wrong.

4. Mr. Abraham, the brewer of Bangalore, having come to the Board's office, gave from a note-book the following particulars regarding his brewing to the Board's Acting Secretary:—

	Cost. RS.
To brew 20 hogsheads of beer— 20 Maunds of sugar. 360 Bangalore measures (= ⅔rds Madras measure) of wheat malted. 60 Pounds of hops. 200 Pounds of concentrated wort.	222
Wood and labour... ...	20
Total...	242

or Rupees 12-1-7 per hogshead which he sells to the shopkeeper for Rupees 25. The Excise duty is 2 Annas a gallon or Rupees 6-12-0 per hogshead; and he pays Rupees 50 per annum for his brewing license, besides local cess at 1 Anna per Rupee on his payments to Government. He brews from 150 to 200 hogsheads a month. His payments are therefore, taking 175 hogsheads per month, Rupees 19-4-9 per hogshead, leaving Rupees 3-11-3 for rent and profit. The shopkeepers sell at Rupees 30 per hogshead. They pay Rupees 15 a month as shop

* Their licenses are, therefore, liable to forfeiture. The license provides that correct accounts of the materials used shall be kept.

license fee, besides local cess thereon. Mr. Abraham also asserted that he had purchased concentrated wort from Messrs. Oakes and Co. Mr. Abraham of Bellary is said to adopt the same recipe as his brother in Bangalore.

5. The Collector of Bellary has caused the accounts of the Bellary brewers to be examined in order to ascertain the materials used. Messrs. Norton and Co. have not kept proper accounts, and the figures relative to their brewing cannot be used except for 1874-75. They have now ceased to brew. Messrs. Abraham and Co. have used hops, wheat, and sugar; Messrs. Norton and Co. hops, wheat and paddy, and jaggery and sugar. Neither used concentrated wort. Unfortunately the Collector has not stated the quantity of beer brewed from these materials; but 82,324 gallons having been excised in 1874-75 the Board obtain the undermentioned results, which are contrasted with those given by Messrs. Abraham and Co. of Bangalore, and Mr. Frend of the Nilgiris in his petition :—

—	BELLARY.		BANGALORE.		NILGIRIS.	
	Pounds per Gallon.	Proportion.	Pounds per Gallon.	Proportion.	Pounds per Gallon.	Proportion.
Hops	*·005 (a)	·01	·05	·04	·06	·01
Grain and Malt ...	·089	·16	*·67	·49	†4·00	·71
Sugar ...	·460	·83	·46	·34	1·62	·28
Concentrated Wort ...	...	...	·19	·13	...	...
Total...	·554	1·00	1·37	1·00	5·68	1·00

* The seer wet measure equal 2 lbs. nearly.

† The bushel equals 54 lbs.

(a) No hops were used by Messrs. Norton and Co. in 1874-75.

The figures are doubtful, but they show how largely sugar, pure and simple, enters into the manufacture. The Board observe that the proportion of sugar used by Messrs. Abraham and Co. has increased. The following shows the distribution of the solid materials used by them for three years past :—

—	1872-73.	1873-74.	1874-75.
Sugar	·75	·80	·82
Grain	·23	·18	·15
Hops	·02	·02	·03
Total...	1·00	1·00	1·00

The Bellary beer, at any rate, is nothing but fermented syrup. The sugar used by Messrs. Norton and Co. was, all but a half per cent., jaggery. Their beer is nothing but a spirit wash.

6. The Collector of Sea Customs states on Messrs. Oakes and Co.'s authority that since 1870 they have imported two consignments of concentrated wort, one of 10 cwt. in 1870, (which was entered in the Trade Returns as "Solid wort or hops," and probably tabulated under the latter head,) and 40 cwt. in March 1874 (omitted by mistake from the returns.) The whole was sold to Mr. Honeywell and none to Mr. Abraham. Thus Mr. Honeywell's statement as to his purchase is borne out; and it may be true that for his bottled ale and porter the wort is used. The quantity of beer brewed in Bangalore in 1874-75 would require 203 cwt. of concentrated wort, and that brewed in Bellary 136 cwt. These large quantities can scarcely have been omitted in the Trade Returns. There is no evidence that Mr. Frend has used any concentrated wort and none is entered in the statement of materials given in his petition.

7. On the whole the Board think that it is clear that the liquor called country beer is not beer at all, *i. e.*, it is not made from barley malt, and the quantity of hops used, if any, is infinitesimal. It was only 0·0028 lbs. per gallon, or 0·15 lbs. per hogshead on the figures for 1874-75; and complete information as to the quantity brewed in previous years is not available. The beer is in fact almost all made from country grains of different kinds; and though it may not necessarily be unwholesome yet the liquor cannot be called beer, and the description of it given by Surgeon Nicholson that it is a mere spirit wash seems not far from the truth. It is necessary that Government should declare whether they mean by beer manufactured from malt, beer manufactured from barley malt or preparations of it, or beer made from any sprouted grain. From G. O., 2nd February 1875, No. 170, it would seem that they mean barley malt only.

1874-75.		
Hops imported	Lbs.	840
Beer brewed—		
Nilgiris	Gals.	92,700
Bellary	,,	82,324
Bangalore...	,,	122,688
Total...		297,712

8. The Board now turn to the Chemical Examiner's report. The statement furnished with his second letter gives the whole results and embraces twenty-one analyses of fifteen specimens of country beer and of one of English beer for comparison. Doctor Macrae does not state the nature of the "extractive" matters found in country beer, and does not seem to have traced any adulteration with noxious drugs of any kind. Whether he looked for them or not, the Board do not know. But he says enough to show that the liquor has all the characteristics, physical and chemical, of bad beer. It has "little or no hop, a large percentage of alcohol, and a small amount of extractive matter." It is turbid and contains numerous yeast cells, which accelerate acetous fermentation. In no specimen is the amount of acetic acid less than 20 per cent. in excess of that in Bass' bottled beer, and in some specimens it is more than three times as great. The increase in the quantity is strikingly shown in some of the analyses of the same specimens at different times. Fermentation was active in the freshest samples examined, and in many cases microscopic bodies, such as are produced in putrefaction of organic matter, were found. Even Honeywell's pale ale, which is supposed to be very superior to his draught ale, was found to be undergoing, far too rapidly, the acid change.

9. In ten out of fifteen specimens the percentage of alcohol was above 8 per cent. In one the percentage was over 11, in one over 10, in four over 9, and in four between 8 and 9 per cent. In the subsequent fermentation the alcohol

seems to decrease and the acidity to increase. In one case, however, the opposite is the case. Mr. Honeywell asserts apparently that the retailers add alcohol, but the Board concur with the Collector of Coimbatore in doubting this. The Board observe, with reference to Doctor Macrae's remark in his first letter, that of course the prescribed percentage is intended to be by volume.

10. On the whole Doctor Macrae's report seems to show that the liquor is not worthy of encouragement as a wholesome or genuine beverage. Even if harmless when sold fresh on the cool climates of the Hills or the Wynaad or even Bangalore, the Board believe that it cannot be brewed or sold in a wholesome state in the plains in this Presidency.

11. The Board have no means of verifying Mr. Cockerell's statements as to the English duties on beer, nor do they understand to what standard of specific gravity he refers in his statements about beer brewed for export, or his remark that the use of the sugar is to reduce the specific gravity. He probably means to increase the alcoholic strength and prevent the subsequent fermentation. However, the Board consider the comparison with English beer as to taxation to be entirely irrelevant, except in connection with the prices at which English and country beer can be sold in this country. Ordinary country beer sells for from 8 to 12 Annas a gallon; English beer of any kind could not be sold in the mofussil much under 2 Rupees. The additional 3 Annas duty will only raise the price of the country beer to 11 or 15 Annas; and of Mr. Honeywell's best beer from Rs. 1-12-0 to 1-15-0 per gallon by retail. There is thus, as regards all kinds, a considerable margin between the price of country and of the English beer with which it is supposed to compete. Mr. Frend in his petition forwarded with the Commissioner's letter of the 11th September gives figures as to the cost of manufacture, which show that to yield the present profit the price would have to be raised 25 per cent. to cover the enhanced duty. But the Board observe that the stated cost of manufacture is double that of Messrs. Abraham's beer; and they cannot accept the figures as correct. They are admittedly not so even for the better sort as regards one of the items, hops; and the differences in cost and quality of the better and common kinds of country beer are very great.

12. The Bangalore Excise is 2 Annas a gallon, the shop license fee, (Rupees 180 per annum according to Mr. Abraham) is twelve times as high as in the Madras Presidency and the brewing license fee (Rupees 50) double. The difference between the brewers price and the retail price in Bangalore is 7 Rupees a hogshead; and if half of this be taken as the retailer's profit, the shop license fee would come to just 1 Anna a gallon, making the duty 3 Annas. This is not found to be repressive, though of course it is complained of by the brewers, as stated by Mr. Cockerell. The Board see no reason to believe that 4 Annas will unduly weight genuine beer in the competition with that of English manufacture; while for the ordinary stuff, which is not genuine beer, and which competes with arrack and toddy, the rate is favorable and not proportioned to the alcoholic strength. The Board therefore do not recommend any reduction of the rate fixed on by Government.

13. From the Chief Commissioner's letter, it would seem that but little Mysore beer finds its way into Madras. It has already paid the Mysore Excise but nevertheless an applicant for a license proposed to sell it at Trichinopoly at 2 Annas a bottle, or 12 Annas a gallon, retail. If its sale in the Madras Presidency is allowed it must pay the Madras Excise, whether it pays that at Bangalore or not; all beer shopkeepers must be required to keep accounts with vouchers showing whence and in what quantities the beer they sell has been obtained; and they must make themselves liable for the Excise duty on Bangalore beer in case they sell any such. This will not be altogether an efficient precaution, but the Mysore brewers would probably get beer for Madras exempted from Mysore duty, and it might be possible to settle with the Chief Commissioner for the levy on account of the Madras Government, Madras Excise on all beer so exempted; duplicates of the passes granted being sent to the place of destination. Of course beer not protected by a permit would, if in any quantity, be liable to seizure under Section 17, Act III. of 1864; whether the word "Beer" in that section is *or* is not qualified by the words "English or Foreign."

14. As to the testing of the beer the Board foresee very great difficulties. Even the Chemical Examiner does not give the nature of the "Extractive matter" and the Board are unable to say whether chemistry can tell whether beer is made from barley malt or from any other sprouted grain. If barley malt be insisted on, as seems to be the intention of Government, it is clear to the Board that the sale of the liquor now called country beer must be prohibited altogether. If any sprouted grain is allowed to be used, it seems sufficient to require that the beer shall give a certain proportion, say 5 per cent. or specific gravity 1,020 of extractive matter. The taste apparently must be the only test for hop. It is for Government to decide whether they will require any particular amount of hop to be used or any restriction as to the quantity of raw sugar. Even then, in the absence of constant inspection, they will be at the mercy of the brewers. As to acidity, the Board do not know what should be done. If the sale of the beer is allowed to be extended and if shops in the numbers authorized in Board's Proceedings, 24th March 1875, No. 122, and 2nd April 1875, No. 70, are licensed, such test as is possible must be carried out by the Zillah Surgeons; and the Chemical Examiner should be instructed to draw up short instructions; to lay down the proportion of acidity within which beer should be allowed to be sold; to indicate tests for datura, opium, bhang, or other common drugs with which the beer is likely to be adulterated; and to supply the necessary apparatus.

15. The system under which the Excise duty has hitherto been collected is explained in the Board's Proceedings noted in the margin. Now that the duty has been raised, and that it has been resolved to look closely into the ingredients used, the Board think that a well salaried officer of Government, if not a police guard, should be attached to each brewery, and paid for by the licensee. The conditions of the license as to the keeping of proper accounts, which seems to have fallen into abeyance, must be strictly enforced in future.

1st April 1873, No. 494.
1st October 1873, No. 1,931.

16. The Board request the orders of Government whether they still wish ities to be given for the extended sale of country beer.

(True Copies and Extract.)

(Signed) H. E. STOKES,
Acting Secretary.

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134. Proceedings of the Board of Revenue, dated 27th October 1875, Miscellaneous No. 3,699.

Read the following letter from Major T. G. CLARKE, Officiating Secretary to the Chief Commissioner of Mysore, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Bangalore, 21st October 1875, No. 5,952/21.

In acknowledging the receipt of a copy of the Board's Proceedings, dated 7th ber 1875, No. 2,802, regarding the materials used in the manufacture of country , and the rate of excise duty thereon, I am desired by the Officiating Chief missioner to request the favor of being furnished with a copy of any orders that be passed by the Madras Government on those Proceedings.

Submitted to Government in continuation of Board's Proceedings, dated 7th ber 1875, No. 2,802.

(True Copy and Extract.)

(Signed) H. E. STOKES,
Acting Secretary.

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135. Order thereon, 9th December 1875, No. 1,786.

Separate Revenue, No. 13.
Abst.

These papers prove beyond all question that the so-called country beer, as now manufactured and sold both on the Hills and plains, must often in its ers be extremely injurious, and does not merit encouragement.

2. The Government resolve therefore to maintain the rate of excise at 4 Annas gallon, to limit the manufacture to beer brewed from malt, hops and sugar, and to n the existing restriction as to alcoholic strength.

3. It is evident that the brewers are not manufacturing what it was intended to ss under the name of Beer, and they should be warned that their proceedings be strictly watched and their licenses summarily cancelled if they give ground suspicion that they are violating the conditions imposed.

4. In future no brewery will be allowed elsewhere than on the Hills, and the rd will consider what arrangements will best secure the manufacture of a sound wholesome beverage.

5. The Board will cause the decision of Government to be communicated to the manufacturers.

(True Extract.)

(Signed) D. F. CARMICHAEL,
Secretary to Government.

To the Board of Revenue.
" the Petition Department.

Exd. W. H. French.

REVENUE

No. 2,802.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 7th October 1875.

Read again G. O., 18th May 1875, No. 752, and Board's Proceedings, 14th June 1875, No. 1,606.

Read the following letters :—

From J. R. COCKERELL, Esq., Commissioner of the Nilgiris, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Ootacamund, 1st July 1875, No. 65.

AT paragraph 3 in Board's Proceedings, dated 14th June 1875, No. 1,606, on the subject of beer brewed on the Nilgiri Hills, it is stated that, according to the trade statistics, "no concentrated wort has been imported into the Presidency since 1866-67." The Proceedings give from the trade statistics the quantity of hops imported since 1872-73, and remark : "Thus it is apparent that the whole quantity of hops imported would not have sufficed for three-fourths of the beer of Messrs. Honeywell and Frend's brewing which paid excise." I had stated in a letter in the Proceedings that Messrs. Honeywell and Frend each used 4 lbs. of hops to every hogshead of beer, and that in brewing the better kind of beer, Mr. Honeywell employed "concentrated wort."

2. Neither Mr. Honeywell nor Mr. Frend keep accounts in book-form. I have examined vouchers produced by both for 1874-75, and have directed that the vouchers should be preserved in case the Board may wish to scrutinize them.

3. A packet of hops averages 200 lbs. In 1874-75, Mr. Honeywell purchased one packet from Messrs. Oakes & Co., and 140 lbs. of hops from the Nilgiri Bakery. For these he has vouchers. He asserts he purchased, about November last, three cases of hops, each holding 3 cwt., from a native who brought them from Bombay. Mr. Frend corroborates the statement declaring the hops were offered to him. I believe Mr. Honeywell, because there is no reason to suppose he has altered his mode of brewing and he has always used hops. I have visited his brewery constantly, and always unexpectedly, and have on every occasion seen hops in use and sometimes concentrated wort.

4. Mr. Honeywell, in 1874-75, brewed 55,700 gallons of beer and used 1,344 lbs. of hops. Therefore he employed about 1⅓ lbs. of hops per hogshead. He buys his casks from the Commissariat at Wellington. Each cask on export from England has 1 lb. of hops thrown into it for the beer to feed upon during the passage to India. These hops are not exhausted by the use to which they are thus put, and Mr. Honeywell casks his beer upon them. It should be stated that the use of hops is to make beer keep. Beer exported from England must accordingly be hopped higher than beer required only for use immediately. The beer of Messrs. Honey-

well and Frend is brewed for immediate drinking, and draught beer in England manufactured for immediate consumption rarely has more than 2 lbs. of hops to the hogshead.

4. The vouchers produced by Mr. Frend show that in 1874-75 Mr. Frend used five packets of hops which he purchased from Messrs. Oakes & Co. He brewed 37,000 gallons of beer. He, therefore, employed about 1½ lbs. of hops to a hogshead of beer.

5. Thus the Board will perceive I was wrong in asserting that 4 lbs. of hops was used per hogshead. The error was an inadvertence produced by my misconceiving Mr. Honeywell. I should have said that Mr. Honeywell employs 4 lbs. of hops per hogshead for his bottled beer. The Board will also perceive that the trade statistics do not exhaust the matter, and that Messrs. Honeywell and Frend used three times the quantity of hops in 1874-75, exhibited by the statistics as imported.

6. With regard to "concentrated wort" vouchers put in by Mr. Honeywell show Mr. Honeywell wrote to Messrs. Oakes inquiring the freight, &c., per ton of wort, and show further that Messrs. Oakes received wort in May 1874 for Mr. Honeywell. It is alleged by Mr. Honeywell that the quantity received was one ton. I have no reason to doubt the correctness of the statement, as I saw some of the wort at the brewery and it was in considerable quantity. It is thus apparent that wort was imported in 1874-75, and that the import is omitted from the "Trade Statistics."

7. Dr. Nicholson states in his memorandum on beer in the Proceedings of the Board that the customs duty on imported beer is 1 Anna per gallon, and he recommends that the excise duty on Indian brewed beer of lower quality should be 3 or 4 Annas per gallon. I am still unable to see the reason for a distinction if Indian brewed beer is made of malt, hops and sugar, as the hops pay an import duty. If it is desired, Messrs. Honeywell and Frend could be compelled to use 4 lbs. of hops per hogshead. The reason they use less is, they say, not on account of the expense so much as that their native customers prefer sweet to bitter beer, and 4 lbs. of hops per hogshead introduces too much bitter. It is always easy to ascertain whether Messrs. Honeywell and Frend consume the hops; the Board may see fit to prescribe by making them produce receipts for their purchases of hops from time to time, and this should in future be done; but I see no reason for interfering with Messrs. Honeywell and Frend's trade by requiring from them a highly hopped beer.

8. Dr. Nicholson states in paragraph 1 of his memorandum: "In England alcohol in beer pays much less duty than the same quantity of alcohol in the spirit, which could be separated from the beer by distillation. This difference is made on the ground of beer being a wholesome and a national beverage, and care is taken that the beer is made from malt and not from non-exciseable materials, such as steeped grain, molasses or glucose." Upon this passage it seems necessary to remark—

(1.) That a beer brewed with 1½ lbs. of hops to the hogshead is not less wholesome, though less bitter than a beer brewed with 4 lbs. to the hogshead.

(2.) That the taste for the former beer is growing amongst natives, and no reason appears why the taste should not be gratified on the same principles that are held to apply in England.

9. In the latter part of the passage, coupled with the remark in paragraph 5 that beer at Bangalore is made from "sprouted grain," there seems to be some confusion. I am not aware that it is possible to brew beer from "steeped grain" or "sprouted grain." Beer can only be brewed from malt. Malt is steeped grain laid out on a malting floor to heat. The heating causes it to sprout. When germination has proceeded to the extent required, the grain is put into a kiln and dried, and the dried germinated grain is malt. Before being used in brewing, malt is crushed.

10. In my former letter, I informed the Board that sugar in its various forms of patent saccharine, glucose, &c., is used in England in brewing beer. This material is, contrary to what is apparently implied by Dr. Nicholson, exciseable so soon as it enters a brewery to be incorporated with the other materials required to brew beer.

From A. WEDDERBURN, Esq., Collector of Coimbatore, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated 3rd July 1875, No. 200.

WITH reference to the Proceedings of the Board of Revenue, dated 14th June 1875, No. 1,606, I have the honor to inform the Board that the chemical analysis of a quart of Honeywell's draught beer sold in Coimbatore Town, which was sent to the Chemical Examiner in December 1871, showed that it contained 10·5 per cent. of pure (anhydrous) alcohol, equal to 79° below proof. This was sold at 2 Annas. Country arrack 60° below proof, and perhaps even less, was 8 Annas a quart. The consumption of beer was, therefore, unduly encouraged.

2. Mr. Honeywell, to whom I communicated this result as also the suspension of his shop, was of opinion that the original liquor was not of that strength, and that it would not pay him to brew of such alcoholic strength; at the same time it is difficult to suppose that the retailer, unless with a very large margin of profit, could add alcohol.

3. None of the Nilgiri brewers can afford to sell malt and hop beer at 2 Annas a quart; but, provided that the liquor is not above a certain alcoholic strength, there seems no reason why it should not, to a certain limited extent, be allowed.

4. Mr. Frend has applied to me for license to sell in four places. If his beer is gauged and passed, I see no objection to his having two licenses, equally with Mr. Honeywell, and, with the Board's permission, would give him one for Coimbatore and another for Erode. Thus there will only be four shops in the district, and each at a separate place.

I informed Mr. Frend that the matter awaited the Board's order as to any license at all being granted.

From J. HUNTER-BLAIR, Esq., Collector of Sea Customs, to H. E. STOKES, Esq., Acting Secretary to the Borad of Revenue, dated Madras, 30th June 1875, No. 369.

With reference to your demi-official letter, dated 19th June 1875, I have the honor to send you copy of a letter from Messrs. Oakes & Co., dated 22nd June 1875, from which you will observe that the total quantity of concentrated wort imported by them since 1870 was only 50 cwts.: 10 cwts. in November 1870, and 40 cwts. in March 1874.

2. Extracts from the Bills of Entry put in by them to clear the article are herewith forwarded. In the Trade Return No. I., of foreign merchandize imported duty free, forwarded from this office for the month of January 1871, the 10 cwts. of wort imported in November 1870 are shown separately. The quantity imported in 1874 was left out of the accounts by a mistake.

3. Since the beginning of 1867 concentrated wort is passed free of duty as hops are.

4. Messrs. Oakes & Co. state that they sold all the wort imported by them to Mr. Honeywell, and none to Messrs. Abraham of either Bangalore or Bellary.

Enclosure No. 1.

From Messrs. OAKES & CO., to J. HUNTER-BLAIR, Esq., Collector of Sea Customs, dated Madras, 22nd June 1875.

B. S. "Dalsina," 7th November 1870, 10 cwt.
S. S. "Othello," 12th March 1874, 40 cwt.

In reply to your letter, No. 823, of yesterday, we have the honor to inform you that we have imported 50 cwts. of concentrated wort received by ships as shown in the margin, the whole of which was sold to Mr. Honeywell, Coonoor, and not to Mr. Abraham.

2. We are not certain as to how the material was entered in our Import Application, but you will be able, we have no doubt, to ascertain with present information.

(True Copy.)

(Signed) J. HUNTER-BLAIR,
Collector of Sea Customs.

Enclosures Nos. 2 and 3.—Extracts from Bills of Entry.

From Major T. G. CLARKE, Officiating Secretary to the Chief Commissioner of Mysore, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Bangalore, 19th July 1875, No. 3,314-704.

In reply to your letter No. 1,501, dated 11th June 1875, I am directed, by the Officiating Chief Commissioner, to state that, from information supplied by the Commissioner, Nundydroog Division, the quantity of beer manufactured at the three breweries of Messrs. Abraham & Co., Mr. Honeywell, and Mr. Roberts, amounted, during the official year 1874-75, to 2,272 hogsheads.

2. The Traffic Manager of the Madras Railway Company furnishes the following statistics of beer exported by rail into the adjoining districts of the Madras Presidency:—

	HHDS.	MDS.	S.
During 1874.			
To Madras	4	31	0
To Moorapoor	1	7	35
To Salem	6	47	6
During 1875—for six months nearly.			
To Salem	3	23	21
To Bellary	2	16	0

3. We have no information as to the quantity sent out of Bangalore by road.

4. With regard to your inquiry, whether any restrictions are placed upon the export of the beer by rail or otherwise, I am to state that the license contains no conditions to that effect. The beer is removed from the brewery under a pass, after the payment of the prescribed duty of 2 Annas per gallon.

From Surgeon W. MACRAE, M.B., M.C., M.A., Acting Chemical Examiner, to C. A. GALTON, Esq., Acting Sub-Secretary to the Board of Revenue, dated Madras, 17th July 1875, No. 271.

In reply to your Official Memorandum, No. 1,138, dated 15th instant, I have the honor to inform you that I have not yet finished the analyses of the different samples of beer referred to.

2. The accompanying table contains the results obtained so far. In the first column the composition of the contents of a bottle of Bass, bottled by Daukes and obtained from Messrs. McDowell & Co., Madras, is entered for comparison.

3. I have entered two columns for alcohol, as the percentage is different according as it is reckoned by weight or by volume. I presume that percentage by volume is that referred to by Government in its Proceedings. Assuming that it will be seen that most of the samples examined exceeded 8 p.c.

4. Some of the samples are two acid. The acidity should not exceed about 240 grains per gallon reckoned as dry acetic acid.

5. In some there is practically no hop present, and most seemed to be keeping badly.

6. There is a want of *body* in most of them as compared with European beer, what is known as *body* depending on the quantity of malt and hop extracts present. The extract gravity column shows this.

7. I want to analyse some of these again in order to judge better as to their keeping qualities.

Enclosure No. 1.

Results of Analyses of different Samples of Beer.

Description of liquor.	By whom sent.	Date when examined.	Specific Gravity.	Extract Gravity.	Alcohol per cent. by Weight.	Alcohol per cent. by Volume.	Acidity in Grains, of acetic acid per Gallon.	Remarks.
Bass's Beer bottled by Daukes.	Purchased from Messrs. McDowell & Co.	1st July 1875	1002·5	1018·6	5·89	7·5	117	Creamy surface; clear; strong but pleasant bitter of hop; no unpleasant after taste.
Frend's Draught Beer, Nilgiris.	Commissioner of Nilgiris with letter to the Board.	28th May 1875	994	1009	7·3	9·25	182	Sparkling but not creamy; turbid; tastes like mild table-beer to which a dash of cider had been added; not particularly disagreeable; very little bitter. Yeast cells seen under Microscope.
Honeywell's Draught Beer, Nilgiris.	No. 15, dated 17th April 1875.	29th May 1875	999	1011	7·02	8·8	157	Effervescing like soda water; slightly turbid; very sweet taste; very little bitter of any kind not unpleasant. Some yeast cells.
Norton's Beer, Bellary	Collector of Bellary, bought in Bellary, labelled 12th June.	22nd June 1875	1008	1012	4·33	5·4	274	Bottles only one-third full. Corks bad; tastes like mixture of decoction of Bark and Chiretta; abominable.
D. and W. Abraham's Beer, Bellary.	Collector of Bellary, bought in Bellary, labelled 14th June.	22nd June 1875	997	1008	6·22	7·75	140	Bottles only one-third full; corks bad; turbid; slightly frothy; disagreeable; not much bitter; no taste of hop. Abundant yeast cells.
Roberts and Co.'s Beer, Bangalore.	Collector of Trichinopoly sent from Trichinopoly.	24th June 1875	996	1009·5	5·25	7·15	250	Slightly turbid; very little bitter (not hop); sub-acid sweetish taste. Under Microscope yeast cells visible.
Honeywell's Beer produced by Government Office of Trichinopoly.	Do. do.	25th June 1875	995	1007	6·75	8·45	245	Quite flat; somewhat turbid; sub-acid disagreeable taste; a good many yeast cells and some Bacteria (sign of keeping badly.)
Frend's Draught Beer from Nilgiris.	Commissioner of Nilgiris, with letter No. 166, dated 24th June.	29th June 1875	996	1006·6	6·62	8·25	220	Slightly brisk; sub-acid; very little bitter; not very unpleasant; slightly turbid; some yeast cells and Bacteria.
Honeywell's Draught Beer from Nilgiris.	Do. do.	30th June 1875	995	1007	8·98	11·1	167	Nearly quite clear; sub-acid sweetish taste; very little bitter; some effervescence but not creamy.
Honeywell's East India Pale Ale, Nilgiris.	Commissioner of Nilgiris.	2nd July 1875	999	1012·5	7·85	9·75	140	Quite flat; contains some hop but not pleasant; nearly clear; a few oval cells and Mycelia fragments.
Honeywell's Stout XXX Porter, Nilgiris.	Do. do.	5th July 1875	1017·5	1036	6·29	7·9	260	Flows like oil; no froth; feels like an oily liquid in mouth; somewhat bitter; not very disagreeable.

Madras,
17th July 1875.

(Signed) W. MACRAE,
Acting Chemical Examiner to Government.

From Surgeon W. MACRAE, M.B., M.C., MA., Acting Chemical Examiner, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Madras, 7th August 1875, No. 301.

I HAVE the honor to enclose a tabular statement of all the analyses of country-brewed beer made by me during the last two months, with a similar analysis of an average sample of Bass's beer, bottled by Daukes, for comparison.

2. The brackets to the left of the table, couple bottles from the same samples, but examined at different periods.

3. Malt liquors consist of water containing alcohol, and the following matters in solution:—Sugar, extractive matters other than sugar of variable composition derived from the grain and bitter used, organic acids developed in course of fermentation, and a small quantity of inorganic salts from the grain and water.

4. The chief substances besides alcohol are the extractive matters (including sugar), and hence the use of the term "Extract Gravity" to indicate the specific gravity of the liquor after all the alcohol has been driven off and replaced by an equal volume of distilled water. Every four parts above a thousand in the extract gravity indicates one per cent. of extractive matters, so that, for example, the sample of Bass's beer contained a little more than 4¼ per cent. of extractive matters.

5. Experience shows that injurious changes in beer are kept in check by the use of much hop, by the presence of much alcohol, or by having a comparatively small quantity of extractive matters in solution. In good beers imported from England, there is much hop and a moderate amount of alcohol and extractive matters, while in the country-brewed beers generally there is little or no hop, a large percentage of alcohol and a small amount of [illegible]

6. In all beers a *slow* fermentation goes on in the bottle increasing the percentage of alcohol, and lowering the specific and extractive gravities, and slightly increasing the proportion of free acid. If the beer has not been clarified properly before bottling so that there is turbidity from the presence of numerous yeast cells, these will not merely hurry on the change above mentioned, but by remaining in the liquid they tend to promote those injurious changes in the liquid which result in the formation of vinegar.

7. There are therefore two changes to which beer is liable, particularly in a hot climate. These are the conversion of the saccharine matters into alcohol, and the conversion of the latter into acetic acid. The former of these changes is not necessarily a bad one, but the latter certainly is, and it is the one in consequence of which so much of the beer imported for troops in this country is condemned.

8. The physical properties of good beer are a creamy top, transparency, a pleasant bitter taste, the bitterness not being persistent, and slight acidity.

9. The country-brewed beers are generally defective in these qualities; for example, they are all more or less turbid from the presence of yeast cells, amorphous matters, and in many cases of rod-shaped bodies resembling those seen in organic mixtures in which putrefactive changes are taking place.

10. I made six analyses of Honeywell's common beer. The specific gravity varied from 994·1 to 999, the extract gravity from 1007 to 1011, the alcohol from 8·5 to 11·1 per cent. by volume, and the acidity from 157 to 266. They were in bottle for periods of one week up to three months. Some effervesced (without any creaminess) and some were flat: all were turbid: they had generally a sweetish acid taste, not unpleasant, and they contained little bitter of any kind with little or no flavor of hop. Fermentation was actively going on in the freshest sample examined, and such a liquor is generally considered unwholesome (causing dyspepsia), but in other respects they did not appear to be hurtful. There was very little *body* in them as may be seen by the low extract gravity.

11. Similar remarks apply to Frend's beer, except that it contained more bitter, a good deal of it hop.

12. Norton's beer had a most abominable bitter taste, most nearly resembling that of a mixture of Cheretta and Bark. The first sample sent from Bellary was contained in badly-corked bottles not more than one-third full, and that may be the reason why it had such a small quantity of alcohol and a large amount of acid. Both the samples, however, were too sour.

13. The two samples of Abraham's beer differed much in composition, the second having a much lower specific gravity and much more alcohol than the first. This was probably because it was kept longer and rapid changes were taking place. Both were flat and disagreeable to taste, and they did not seem to contain much hop.

14. The two samples of Roberts' beer also differed in composition, and from the same cause they contained very little bitter of any kind, probably no hop, and they were rather sour.

15. Honeywell's porter flowed like oil and felt thick and oily in the mouth. It probably contained a good deal of hop. Only two bottles were supplied, and although the second examined was only kept three weeks longer than the first, there was evidence of a strong tendency to undergo the acid change. This was the case also with his two samples of pale ale. The acid was increasing far too rapidly.

16. The bottle of Honeywell's cooper was not unpleasant: it had a sweetish bitter taste, a creamy top, and it was tolerably clear.

ENCLOSURE No. 1.

Tabular Statement of the Analyses of Country-brewed Beer.

Liquor.	Brewer.	By whom sent.	Where brewed.	When received.	When examined.	Specific Gravity, Water being 1000.	Extract Gravity, Water being 1000.	Alcohol per cent. by Volume.	Acidity in Grains anhydrous acetic Acid per Gallon.
Beer ...	Bass, bottled by Barker.	Messrs. McDowell & Co. ...	England ...	....	1st July 1875 ...	1008·6	1018·6	7·5	117
Draught Beer.	Honeywell ...	Commissioner of Nilgiris ...	Nilgiris ...	1st May 1875 ...	28th May 1875...	999·7	1011	8·8	157
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	16th July 1875...	997·8	1010	8·7	196
Do. ...	Do. ...	Do. ...	Do. ...	24th June 1875 ...	30th June 1875...	992·3	1007	11·1	167
Do. ...	Do. ...	Collector of Trichinopoly...	Do. ...	24th April 1875 ...	26th June 1875...	993·2	1007	8·55	245
Do. ...	Do. ...	Collector of Coimbatore from licensed shop.	Do. ...	24th April 1875 ...	21st July 1875 ...	995·7	1007	9·35	266
Do. ...	Do. ...	Collector of Coimbatore from Private dealer.	Do. ...	Do. ...	22nd July 1875...	994·1	1006·8	10·2	242
Do. ...	Frend ...	Commissioner of Nilgiris ...	Do. ...	1st May 1875 ...	28th May 1875 ...	994	1010	9·35	168
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	27th July 1875 ...	994·6	1006·5	8·6	221
Do. ...	Do. ...	Do. ...	Do. ...	24th June 1875...	28th June 1875...	996	1006·6	8·45	266
Beer ...	Norton ...	Collector of Bellary ...	Bellary ...	12th June 1875...	22nd June 1875...	1008·2	1012	5·4	374
Do. ...	Do. ...	Collector of Cuddapah ...	Do. ...	15th April 1875...	19th July 1875...	998·8	1009·3	6·4	330
Do. ...	Abraham ...	Collector of Bellary ...	Do. ...	12th June 1875...	23rd June 1875...	997·5	1008·5	7·75	149
Do. ...	Do. ...	Collector of Trichinopoly...	Bangalore ...	24th June 1875...	21st July 1875...	992·7	1006·7	10·75	231
Do. ...	Roberts ...	Do. ...	Do. ...	(?) ...	24th June 1875...	999·6	1009·6	7·15	259
Do. ...	Do. ...	Collector of Salem ...	Do. ...	24th May 1875 ...	26th July 1875...	995·1	1008	9·5	289
Porter ...	Honeywell ...	Commissioner of Nilgiris...	Nilgiris...	24th June 1875...	8th July 1875...	1017·5	1026	7·9	266
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	26th July 1875 ...	1017·5	1027·6	7·65	255
Pale Ale ...	Do. ...	Do. ...	Do. ...	Do. ...	3rd July 1875 ...	999	1012·8	9·75	149
Do. ...	Do. ...	Do. ...	Do. ...	Do. ...	29th July 1875 ...	999·8	1012·6	9·4	264
Cooper ...	Do. ...	Do. ...	Do. ...	Do. ...	15th July 1875 ...	1010	1020·7	7·85	259

MADRAS,
7th August 1875.

(Signed) W. MACRAE,
Acting Chemical Examiner to Government.

From J. R. COCKERELL, Esq., Commissioner of Nilgiris, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Ootacamund, 19th August 1875, No. 87.

I HAVE the honor to submit a petition from Mr. Honeywell on the subject of the Excise duty imposed on beer brewed on the Hills, and to request early orders with reference to my letter, dated 1st ultimo, No. 65.

2. I recently had the opportunity of speaking to a gentleman engaged in coffee planting who has had considerable experience in brewing in England. It appears that a variety of beers is in general consumption. There is good beer brewed with malt, hops, and sugar, and small beer is made by reboiling the constituency employed. There is treacle beer made with sugar and hops only. Barm beer made with sugar and barm and hops. Finally there is "Tom and Jerry" beer, which is apparently a bad form of treacle beer. In all beers hops must be used or substitutes, such as in England, either gentian or a material advertized as "the substitute for hops." A very excellent beer could be brewed of malt sugar and chiretta casked on 1 lb. of hops in each cask.

3. I have on several occasions asked the opinion of the President of the Municipal Commission in Bangalore on the subject of beer brewed there. The duty on Bangalore brewed beer is 2 Annas per gallon. This rate is the subject of complaint. The beer thrown into the bazaar is sold for 25 Rupees per hogshead, and Doctor Orr calculates it costs 12 Rupees to manufacture. Add the duty of Rupees 6-12-0 and the profit to the brewer is Rupees 6-4-0. It appears probable that the higher the duty the greater temptation to adulterate, and this is affirmed by Messrs. Abraham, the biggest brewers in Bangalore. Manufacture is more expensive on the Hills than in Bangalore.

4. Messrs. Frend and Honeywell both have malt kilns, and I am satisfied the bitter they use is hop. Obviously they cannot use so much hop as is found in Commissariat beer, but the latter beer costs Government at Wellington 45 Rupees per hogshead.

5. Doctor Orr is quite satisfied that the beer brewed in Bangalore is wholesome and he has taken pains to investigate the matter. I see no reason to suppose Nilgiri beer is worse than Bangalore beer. The intoxicating qualities attributed to India brewed beers is due to the preponderance of sugar.

6. I venture, with regard to the enhanced duty recently imposed on Nilgiri beer, to remark that no new circumstances have transpired since the 1 Anna duty was fixed in February 1872 to show that the beer now brewed is worse than was then manufactured. I am given to understand that beer brewed in Bombay pays no Excise duty. The brewers take out a license to brew at a cost of Rupees 25.

ENCLOSURE No. 1.—Petition.

From the same Officer, dated Ootacamund, 11th September 1875, No. 99.

IN continuation of my letter, No. 87, of 19th ult., submitting Mr. Honeywell's petition on the subject of Excise duty imposed on beer brewed on the Hills, I have the honor to forward herewith a similar petition from Mr. Frend.

2. My views were expressed in the letter above quoted.

ENCLOSURE No. 1.—Petition.

From J. H. MASTER, Esq., Collector of Bellary, to H. E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated 24th September 1875, No. 370.

WITH reference to the Proceedings of the Board, dated 17th ultimo, No. 2,315, I have the honor to forward herewith two statements showing the quantities of materials used by Messrs. Norton and Co. and Messrs. Abraham and Co. in the manufacture of their beer.

2. This information had to be collected item by item from the accounts of the brewers; hence the delay in the submission of this report.

3. Wheat, and in some cases paddy, has been used as a substitute for barley; concentrated wort does not seem to enter into the manufacture, nor is it possible to say from the accounts how much malt has been obtained from the grain at each malting, nor is there any record of the quantity of malt used at each brewing.

4. There is a little diversity in the method of keeping accounts as obtaining at the breweries. Messrs. Norton and Co. have all their entries regarding hops in packets, not in pounds; a packet they say is equal to an cwt.; but I have no means of ascertaining if this be correct.

5. Messrs. Norton and Co. have now ceased to be brewers.

ENCLOSURE No. 1.

Statement showing the quantity of Materials used in brewing Beer in the Brewery of Messrs. Norton and Co., Bellary, for the Fasli years of 1282 to 1284.

—	Hops.		Sugar.	Jaggery.	Wheat.	Paddy.	Remarks.
	PACKETS.	LBS.	MAUNDS.	MAUNDS.	SEERS.	SEERS.	
From July 1872 to 30th June 1873 ...	6	0		*	*	... *	* The quantity of materials for 1872-73 cannot be ascertained, as the accounts are said to have been mislaid.
From July 1873 to 30th June 1874 ...	3	0	4½	1,676[illegible]	... †	... †	† Do. do. do.
From July 1874 to June 1875 ...	...	¼	5¾	937[illegible]	2,399½	100	‡ Do. do. do.
Total...	9	...	10¼	2,613[illegible]	2,399½	100	

BELLARY,
24th September 1875.

(Signed) J. H. MASTER,
Collector.

ENCLOSURE No. 2.

Statement showing the quantity of Materials used in brewing Beer in the Brewery of Messrs. Abraham and Co., Bellary.

—	Hops.	Wheat.	Sugar.	Remarks.
	POUNDS.	SEERS.	MAUNDS.	
From July 1872 to 30th June 1873	590	2,950	765	
From July 1873 to 30th June 1874	697	2,460	889	
From July 1874 to 30th June 1875	448	1,260	540	
Total...	1,735	6,670	2,194	

BELLARY,
24th September 1875.

(Signed) J. H. MASTER,
Collector.

IN the Government Order above read, Government directed that the grant of beer licenses should be restricted to beer made of malt, hops, and sugar only, and of an alcoholic strength not exceeding 8 per cent.; called for report as to the arrangements to be made for testing the beer; and ordered the Board to give Mr. Cockerell's letter of the 17th April 1875, No. 35, relating to the brewing of Messrs. Honeywell and Frend on the Nilgiris, full consideration, and to state whether they would recommend any reduction in the Excise duty of 4 Annas a gallon ordered to be levied.

2. The Board partly replied in their Proceedings of the 14th June, but stated that after making further inquiries they would report again. The papers above recorded contain the results of these inquiries, and they will be submitted for the information of Government.

3. The Board had adduced certain figures to show that the statements made by Mr. Honeywell as to the use by him of hops and concentrated wort were incorrect. In his letter of the 1st July the Commissioner of Nilgiris, with reference to this subject, states that Messrs. Honeywell and Frend do not keep book accounts;* that Mr. Honeywell produced vouchers for the purchase of 340 lbs. of hops and Mr. Frend for five packets, or 1,000 lbs; that Mr. Honeywell has proved purchase of 3 cwts. more; that he used 1,344 lbs; that the rate of 4 lbs. per hogshead applies only to the bottled ale (quantity brewed not stated); that the quantity of hops per hogshead is 1½ or 1¼ lbs. in Nilgiri beer; and that the casks in which the beer is put contain a residue of hops by which it benefits. As to concentrated wort, he got one ton in May 1874 from Messrs Oakes and Co., and the Commissioner has no doubt that he uses this material and that the trade statistics are wrong.

4. Mr. Abraham, the brewer of Bangalore, having come to the Board's office, gave from a note-book the following particulars regarding his brewing to the Board's Acting Secretary:—

	Cost.
	RS.
To brew 20 hogsheads of beer— 20 Maunds of sugar. 800 Bangalore measures (= [illegible] Madras measure) of wheat malted. 60 Pounds of hops. 200 Pounds of concentrated wort.	222
Wood and labour...	20
Total...	242

or Rupees 12-1-7 per hogshead which he sells to the shopkeeper for Rupees 23. The Excise duty is 2 Annas a gallon or Rupees 6-12-0 per hogshead; and he pays Rupees 60 per annum for his brewing license, besides local cess at 1 Anna per Rupee on his payments to Government. He brews from 150 to 200 hogsheads a month. His payments are therefore, taking 175 hogsheads per month, Rupees 19-4-9 per hogshead, leaving Rupees 3-11-3 for rent and profit. The shopkeepers sell at Rupees 30 per hogshead. They pay Rupees 15 a month as shop licensa fee, besides local cess thereon. Mr. Abraham also asserted that he had purchased concentrated wort from Messrs. Oakes and Co. Mr. Abraham of Bellary is said to adopt the same recipe as his brother in Bangalore.

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* Their licenses are, therefore, liable to forfeiture. The license provides that correct accounts of the materials used shall be kept.

5. The Collector of Bellary has caused the accounts of the Bellary brewers to be examined in order to ascertain the materials used. Messrs. Norton and Co. have not kept proper accounts, and the figures relative to their brewing cannot be used except for 1874-75. They have now ceased to brew. Messrs. Abraham and Co. have used hops, wheat, and sugar; Messrs. Norton and Co. hops, wheat and paddy, and jaggery and sugar. Neither used concentrated wort. Unfortunately the Collector has not stated the quantity of beer brewed from these materials; but 82,324 gallons having been excised in 1874-75 the Board obtain the undermentioned results, which are contrasted with those given by Messrs. Abraham and Co. of Bangalore, and Mr. Frend of the Nilgiris in his petition :—

—	BELLARY.		BANGALORE.		NILGIRIS.	
	Pounds per Gallon.	Proportion.	Pounds per Gallon.	Proportion.	Pounds per Gallon.	Proportion.
Hops	*·005 (a)	·01	·05	·04	·06	·01
Grain and Malt...	·089	·16	*·67	·49	†4·00	·71
Sugar	·460	·83	·46	·34	1·62	·28
Concentrated Wort ...	...	...	·19	·13	...	...
Total...	·554	1·00	1·37	1·00	5·68	1·00

* The seer and measure equal 2 lbs. nearly.

† The bushel equals 54 lbs.

(a) No hops were used by Messrs. Norton and Co. in 1874-75.

The figures are doubtful, but they show how largely sugar, pure and simple, enters into the manufacture. The Board observe that the proportion of sugar used by Messrs. Abraham and Co. has increased. The following shows the distribution of the solid materials used by them for three years past.—

—	1872-73.	1873-74.	1874-75.
Sugar	·75	·80	·82
Grain...	·23	·18	·15
Hops	·02	·02	·03
Total...	1·00	1·00	1·00

The Bellary beer, at any rate, is nothing but fermented syrup. The sugar used by Messrs. Norton and Co. was, all but a half per cent., jaggery. Their beer is nothing but a spirit wash.

6. The Collector of Sea Customs states on Messrs. Oakes and Co.'s authority that since 1870 they have imported two consignments of concentrated wort, one of 10 cwt. in 1870, (which was entered in the Trade Returns as "Solid wort or hops," and probably tabulated under the latter head,) and 40 cwt. in March 1874 (omitted by mistake from the returns.) The whole was sold to Mr. Honeywell and none to Mr. Abraham. Thus Mr. Honeywell's statement as to his purchase is borne out; and it may be true that for his bottled ale and porter the wort is used. The quantity of beer brewed in Bangalore in 1874-75 would require 203 cwt. of concentrated wort, and that brewed in Bellary 136 cwt. These large quantities can scarcely have been omitted in the Trade Returns. There is no evidence that Mr. Frend has used any concentrated wort and none is entered in the statement of materials given in his petition.

7. On the whole the Board think that it is clear that the liquor called country beer is not beer at all, *i. e.*, it is not made from barley malt, and the quantity of hops used, if any, is infinitesimal. It was only 0·0028 lbs. per gallon, or 0·15 lbs. per hogshead on the figures for 1874-75; and complete information as to the quantity brewed in previous years is not available. The beer is in fact almost all made from country grains of different kinds; and though it may not necessarily be unwholesome yet the liquor cannot be called beer, and the description of it given by Surgeon Nicholson that it is a mere spirit wash seems not far from the truth. It is necessary that Government should declare whether they mean by beer manufactured from malt, beer manufactured from barley malt or preparations of it, or beer made from any sprouted grain. From G. O., 2nd February 1875, No. 170, it would seem that they mean barley malt only.

1874-75.		
Hops imported	Lbs.	840
Beer brewed—		
Nilgiris	Gals.	92,700
Bellary	,,	82,324
Bangalore...	,,	122,688
Total...		297,712

8. The Board now turn to the Chemical Examiner's report. The statement furnished with his second letter gives the whole results and embraces twenty-one analyses of fifteen specimens of country beer and of one of English beer for comparison. Doctor Macrae does not state the nature of the "extractive" matters found in country beer, and does not seem to have traced any adulteration with noxious drugs of any kind. Whether he looked for them or not, the Board do not know. But he says enough to show that the liquor has all the characteristics, physical and chemical, of bad beer. It has "little or no hop, a large percentage of alcohol, and a small amount of extractive matter." It is turbid and contains numerous yeast cells, which accelerate acetous fermentation. In no specimen is the amount of acetic acid less than 20 per cent. in excess of that in Bass' bottled beer, and in some specimens it is more than three times as great. The increase in the quantity is strikingly shown in some of the analyses of the same specimens at different times. Fermentation was active in the freshest samples examined, and in many cases microscopic bodies, such as are produced in putrefaction of organic matter, were found. Even Honeywell's pale ale, which is supposed to be very superior to his draught ale, was found to be undergoing, far too rapidly, the acid change.

9. In ten out of fifteen specimens the percentage of alcohol was above 8 per cent. In one the percentage was over 11, in one over 10, in four over 9, and in four between 8 and 9 per cent. In the subsequent fermentation the alcohol

seems to decrease and the acidity to increase. In one case, however, the opposite is the case. Mr. Honeywell asserts apparently that the retailers add alcohol, but the Board concur with the Collector of Coimbatore in doubting this. The Board observe, with reference to Doctor Macrae's remark in his first letter, that of course the prescribed percentage is intended to be by volume.

10. On the whole Doctor Macrae's report seems to show that the liquor is not worthy of encouragement as a wholesome or genuine beverage. Even if harmless when sold fresh on the cool climates of the Hills or the Wynaad or even Bangalore, the Board believe that it cannot be brewed or sold in a wholesome state in the plains in this Presidency.

11. The Board have no means of verifying Mr. Cockerell's statements as to the English duties on beer, nor do they understand to what standard of specific gravity he refers in his statements about beer brewed for export, or his remark that the use of the sugar is to reduce the specific gravity. He probably means to increase the alcoholic strength and prevent the subsequent fermentation. However, the Board consider the comparison with English beer as to taxation to be entirely irrelevant, except in connection with the prices at which English and country beer can be sold in this country. Ordinary country beer sells for from 8 to 12 Annas a gallon; English beer of any kind could not be sold in the mofussil much under 2 Rupees. The additional 3 Annas duty will only raise the price of the country beer to 11 or 15 Annas; and of Mr. Honeywell's best beer from Rs. 1-12-0 to 1-15-0 per gallon by retail. There is thus, as regards all kinds, a considerable margin between the price of country and of the English beer with which it is supposed to compete. Mr. Frend in his petition forwarded with the Commissioner's letter of the 11th September give figures as to the cost of manufacture, which show that to yield the present profit the price would have to be raised 25 per cent. to cover the enhanced duty. But the Board observe that the stated cost of manufacture is double that of Messrs. Abraham's beer; and they cannot accept the figures as correct. They are admittedly not so even for the better sort as regards one of the items, hops; and the differences in cost and quality of the better and common kinds of country beer are very great.

12. The Bangalore Excise is 2 Annas a gallon, the shop license fee, (Rupees 180 per annum according to Mr. Abraham) is twelve times as high as in the Madras Presidency and the brewing license fee (Rupees 50) double. The difference between the brewers price and the retail price in Bangalore is 7 Rupees a hogshead; and if half of this be taken as the retailer's profit, the shop license fee would come to just 1 Anna a gallon, making the duty 3 Annas. This is not found to be oppressive, though of course it is complained of by the brewers, as stated by Mr. Cockerell. The Board see no reason to believe that 4 Annas will unduly weight genuine beer in the competition with that of English manufacture; while for the ordinary stuff, which is not genuine beer, and which competes with arrack and toddy, the rate is favorable and not proportioned to the alcoholic strength. The Board therefore do not recommend any reduction of the rate fixed on by Government.

13. From the Chief Commissioner's letter, it would seem that but little Mysore beer finds its way into Madras. It has already paid the Mysore Excise, but nevertheless an applicant for a license proposed to sell it at Trichinopoly at 2 Annas a bottle, or 12 Annas a gallon, retail. If its sale in the Madras Presidency is allowed it must pay the Madras Excise, whether it pays that at Bangalore or not; all beer shopkeepers must be required to keep accounts with vouchers showing whence and in what quantities the beer they sell has been obtained; and they must make themselves liable for the Excise duty on Bangalore beer in case they sell any such. This will not be altogether an efficient precaution, but the Mysore brewers would probably get beer for Madras exempted from Mysore duty, and it might be possible to settle with the Chief Commissioner for the levy on account of the Madras Government, Madras Excise on all beer so exempted; duplicates of the passes granted being sent to the place of destination. Of course beer not protected by a permit would, if in any quantity, be liable to seizure under Section 17, Act III. of 1864; whether the word "Beer" in that section is or is not qualified by the words "English or Foreign."

14. As to the testing of the beer the Board foresee very great difficulties. Even the Chemical Examiner does not give the nature of the "Extractive matter" and the Board are unable to say whether chemistry can tell whether beer is made from barley malt or from any other sprouted grain. If barley malt be insisted on, as seems to be the intention of Government, it is clear to the Board that the sale of the liquor now called country beer must be prohibited altogether. If any sprouted grain is allowed to be used, it seems sufficient to require that the beer shall give a certain proportion, say 5 per cent. or specific gravity 1,020 of extractive matter. The taste apparently must be the only test for hop. It is for Government to decide whether they will require any particular amount of hop to be used or any restriction as to the quantity of raw sugar. Even then, in the absence of constant inspection, they will be at the mercy of the brewers. As to acidity, the Board do not know what should be done. If the sale of the beer is allowed to be extended and if shops in the numbers authorized in Board's Proceedings, 24th March 1875, No. 122, and 2nd April 1875, No. 70, are licensed, such test as is possible must be carried out by the Zillah Surgeons; and the Chemical Examiner should be instructed to draw up short instructions; to lay down the proportion of acidity within which beer should be allowed to be sold; to indicate tests for datura, opium, bhang, or other common drugs with which the beer is likely to be adulterated; and to supply the necessary apparatus.

15. The system under which the Excise duty has hitherto been collected is explained in the Board's Proceedings noted in the margin. Now that the duty has been raised, and that it has been resolved to look closely into the ingredients used, the Board think that a we salaried officer of Government, if not a police guard, should be attached to each brewery, and paid for by the licensee. The conditions of the license as to the keeping of proper accounts, which seems to have fallen into abeyance, must be strictly enforced in future.

1st April 1873, No. 494.
1st October 1873, No. 1,981.

18

16. The Board request the orders of Government whether they still wish facilities to be given for the extended sale of country beer.

(True Copies and Extract.)

Acting Secretary.

To the Acting Secretary to Government, Revenue Department,
with two Petitions and two extracts from Bills of Entry, to be returned,
and copy of Board's Proceedings, dated 1st April 1873, No. 494.

Copy to the Collector of Bellary.
„ to the Collector of Sea Customs, Madras.
„ to the Collector of Coimbatore.
„ to the Commissioner of Nilgiris.
„ to the Secretary to Chief Commissioner of Mysore.
„ to the Chemical Examiner to Government.

Rd. W. H. French.
Exd. J. Tulloch.

f. 133

Gt 2 Feby/75 No 29 - 31
— 18 May/75 - 161 - 63
— 24 June/75 - 243 - 202

No 4036

Revenue 1875. Dept

Board of Revenue,
MADRAS.

Proceedings, 7th October 1875, No. 2,802.

Desp 11 Oct/75

Received 18 Octr/75

OCTOBER.
No. 2,802.

Country Beer.—Submitting to Government certain papers on subject of materials used in the manufacture of — and the rate of Excise duty thereon, and requesting orders as to whether they still wish facilities to be given for the extended sale of the liquor.

90

No. 494.

Proceedings of the Board of Revenue, dated 1st April 1873.

Read the following letter from J. R. COCKERELL, Esq., Commissioner of the Nilgiris, to the Secretary to the Board of Revenue, dated Ootacamund, 22nd February 1873, No. 18:—

With reference to Proceedings of the Board of Revenue, No. 1,094, dated 24th June 1872, upon a letter from the Acting Collector of Bellary requesting to be informed what establishment he is to propose for a beer factory in the Bellary District, to which the Board reply that "the duties should be collected on the casks, which must be gauged beforehand," copy of which was sent to me, I have the honour to report the system that has been adopted by me in connection with the factory of Mr. Honeywell on the old Coonoor Road since Mr. Honeywell was allowed by Government Order to brew up to a strength of eight per cent. alcohol.

2. I have delayed reporting to the Board hitherto on the matter in order that time might be allowed to see how the procedure works.

3. The system is as follows:—Mr. Honeywell receives from this office a cheque book in duplicate form. On despatching a consignment of beer he enters the quantity in both parts of the cheque, keeps the first part until the end of the month, when he despatches it to this office for calculation of duty, and gives the second part to the person in charge of the beer to cover the liquor in transit. When the new system was commenced I tried triplicate cheques, Mr. Honeywell sending the third cheque to the Police; but this he found too onerous as there is no Post Office nearer the brewery than Ootacamund, and he had to forward the third part of the cheque by a man on horseback. Furthermore, Mr. Honeywell keeps separate accounts with each consignee of his beer in this district, and I have examined these books and found them to tally with the cheques. When Mr. Honeywell sends beer out of the district it is covered by special passes issued for each consignment on each occasion. These cheques are in triplicate—one remains in this office, one covers the beer in transit, and a third this office sends to the Police here.

4. Mr. Honeywell has naturally many enemies in the district, both native and European. I have made many inquiries and have no reason whatever to suspect that Mr. Honeywell sends more casks of beer away than his cheques show. I have repeatedly warned him that a discovery of foul play would entail the loss of his license, and Mr. Honeywell is so well aware of the value of his present privileges that I do not think it would be worth his while to defraud, even if he had fraudulent intentions, which I do not suspect. As to the quantity of beer in each cask Mr. Honeywell pays upon the cask, and it is his interest, therefore, to fill each up to the bung. There can be no fraud in the casks as they are all bought at the Wellington Depôt and are merely washed out at Mr. Honeywell's factory before being filled with his beer.

Mr. Honeywell's sales have been as follow :—

—	Quantity.	Excise.		
		RS.	A.	P.
August 1872	5,465	340	15	0
September 1872 ...	7,938	496	2	0
October ,, ...	4,953	309	9	0
November ,, ...	7,219	451	3	0
December ,, ...	5,251	328	3	0
January 1873	7,089	443	1	0
Total...	37,905	2,369	1	0
Monthly average...	......	394	13	0

5. The defect in the present system it appears to me is that there is no guarantee of the strength of the beer. But if a person was employed at the factory competent to analyze, which is the only mode of ascertaining the strength of beer, he would necessarily be a highly-paid functionary both to ensure honesty and to perform a duty which requires special education and skill.

If the casks are all of a known and uniform size they need not be gauged. The Commissioner will examine a number of them at hap-hazard and report if this is the case. If the casks are not of a uniform size the actual capacity of each should be permanently marked upon it once for all.

2. The cheque system which the Commissioner describes fails in one respect. There is nothing to show that the original sent to the ... sent to the Commissioner mention the same quantities. The Commissioner should require Mr. Honeywell to arrange that the consignee's original is despatched to the Commissioner directly the beer is de__ed, and should require the Police to examine consignments occasionally and see if they correspond with the pass.

3. The Commissioner should request Mr. Broughton to examine the beer sold in the bazaar occasionally, say twice a year, to see that it does not contain more than eight per cent. of alcohol.

(A true Copy and Extract.)

(Signed) J. GROSE,
Secretary.

To the Commissioner of the Nilgiris.
Copy to the Collector of Bellary.

Exd. A. S. Rodgers.

1873.
Board of Revenue,
MADRAS.

Proceedings, 1st April 1873, No. 404.

Rev 4035/75 2 Encl.
Rev 4096/75

Received

APRIL.
No. 404.

Beer Factory—of Mr. Honeywell on Nilgiris. — Orders passed on letter from Commissioner reporting system adopted in connection with issue of beer from — Commissioner requested to report whether all the casks used by Mr. Honeywell are of a uniform size.

MISCELLANEOUS No. 3699

PROCEEDINGS OF THE ~~COURT~~ Board OF ~~WARDS~~ Revenue

Dated 27th October 1875

Read the following

No. 5952

From The Offg Secretary to the Chief Commissioner of Mysore

To The Acting Secretary to the Board of Revenue, Madras

Sir,

In acknowledging the receipt of a copy of the Board's Proceedings dated 4th October 1875, No 2802, regarding the materials used in the manufacture of Country Beer, and the rate of Excise duty thereon, I am desired by the Officiating Chief Commissioner to request the favour of being furnished with a copy of any orders that may be passed by the Madras Government on those Proceedings.

I have &c

Mysore Chief Commissioner's Office, Bangalore
[illegible] October 1875

Submitted to Government in continuation of Boards Proceedings dated 7th October 1845, No 2802

(True Copy & Extract)

N. Eaton
Ag. Secretary

To
The Secretary to Government
Revenue Department

Revenue 1875 29th
Board
PROCEEDINGS OF THE ~~COURT~~
OF ~~WARDS~~ Revenue

No. 4228

Dated 27
Do 27
Recd. 28 } October 1875.

S.O. No. 1786 - 9 December 1875

Submitting copy of letter from Secretary to Chief Commissioner of Mysore requesting to be furnished with a copy of any orders passed by the Madras Govt on Board's Pro. No. 2882 dated 7 Octr 75.

[illegible]

REVENUE DEPARTMENT.

No. 4036

From Bd. Board of Revenue
Dated 27 Octr. 1875

FOR ORDERS.

I entertain no doubt that the country beer sold on the hills & plains is in its effects extremely injurious & that the manufacture should as much as possible be discouraged even on the hills the introduction [illegible] & [illegible] have generally

My ~~belief~~ opinion is that the manufacture should be discouraged and restricted [illegible] prevented by refusal of licenses [illegible] the plains. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible] the trade, I think [illegible] have [illegible] [illegible] report [illegible]

[illegible]

[illegible]

produces serious illness – I have had repeated instances of this among my own servants & have heard the same from my neighbours. WM

I should [illegible] be there – WM

Agree JM

[illegible]

& of public health &c [illegible] & extend facilities JM

Agree

Agree.

[illegible] WM

We should have to grant a large sum in compensation to the Hill Breweries – but perhaps more stringent supervision would efficiently discourage manufacture

maintained & of the percentage of alcohol [illegible]

[illegible] of the community

[illegible]

FOR ORDERS.

[illegible] from [illegible] Karty
[illegible] Esq. [illegible]
the [illegible] being [illegible]
[illegible]
[illegible]
[illegible] P.O.
The conditions of the license
[illegible]
[illegible]
[illegible] by [illegible]
The manufacture [illegible]
[illegible]
[illegible]
[illegible] the [illegible]
of the [illegible]
[illegible]
the [illegible] of the [illegible]
[illegible]
[illegible]
[illegible]

Yes [illegible]

I would maintain the duty & restore [illegible] as to alcohol and not consider [illegible] or malt without specifying [illegible] — [illegible]

Yes

I would [illegible] [illegible] has been [illegible] [illegible] [illegible] manufacture [illegible] [illegible] [illegible] Mysore [illegible]

Revenue Dept.

No. 1786

Proceedings of the Madras Government
Under date the 9 Nov. 187

Read the following Pro. of the Board of Revenue

Submitting certain papers on subject of materials used in the manufacture of Country Beer rate of excise duty thereon, &c.	Dt. 7 Oct. 1875. No. 2802
Submitting letter from Secretary to Chief Comr. of Mysore requesting to be furnished with copy of any orders passed by Govt. on the above Pro. of the Board of Rev.	" 27 Oct. 1875, Mis. No. 4649

These papers prove beyond all question that the so called country beer, as now manufactured and sold both on the Hills and plains, must in its effect be extremely injurious, and that its consumption should as much as possible be discouraged.

does not mean
intemperance

2. ~~His Excellency~~ in Council resolves therefore to maintain the rate of excise at 4 annas per gallon to limit the manufacture to beer brewed from malt (barley malt will not be insisted on)

hops

hops and sugar, and to retain the existing restriction as to alcoholic strength.

3. It is evident that the brewers are not manufacturing what it was intended to license under the name of beer, and they should be warned that their proceedings will be strictly watched and their licenses summarily cancelled if they give ground for

for

for suspicion that
hey are violating the
onditions imposed.

In future no
rewery will be allowed
lsewhere than on the
[illegible] and the Board
ll consider what
rrangements will
t secure the manu
facture of a sound
d wholesome beverage
[illegible] the Board [illegible]
[illegible] the [illegible]
[illegible] to the
[illegible] to
[illegible]

14 To the Board of [illegible] 11 [illegible]
1 [illegible] 5

County Bar.

4/2 [illegible]

[illegible]

[illegible]
[illegible] 28 Pages