Public Works (1897) Department.

G.O., No. 1607 W

DATED 12 June 1897

[Despatch Abstract.]

Wales: Pros: Rev: Dept: Directing that the memorandum of the Sanitary Commissioner on the inadequacy of the — and rations allowed to Relief works according to the Madras Famine Code together with the remarks of the Board of Revenue thereon be forwarded to the Govt of India, Comptr & Offrs of the PWD.

[P.W. 25. 5,000—30-11-96.]

12/6/97

Indexed. 18/6

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Public Works (1897) Department

Current No: 5359

Government {1897} of Madras.

REVENUE.

No. 1046 W dt/14-4-97

Recd. 31-5 } 1897.
Regd. 31-5. }

Enclosures -

Spare copies 16.

G.O., No. 295, 4th May 1897.

Rc No: 1604 W dt 12-6-97

Communicated to

MAY. Offices of the P. W. Dept

in continuation of Rc.

No 1046 W of 14 April 1897.

Cy Cash 4/6/97.

Supdg Engr

Ch. E. for I. C

Asst to Secy

14/6/97

Wages.

Stating that the memorandum of the Sanitary Commissioner, Madras, on the inadequacy of the — and rations allowed to relief-workers according to the Madras Famine Code, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India.

O.L.S. 177
R 7/6

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 18th February 1897, No. 144 :—

Read—G.O., No. 14, Revenue, dated 9th January 1897.

Abstract.—Communicating, for, information, a letter from the Government of India forwarding copy of a Resolution recorded by the Government of North-Western Provinces and Oudh regarding famine-relief operations undertaken in the United Provinces, together with a set of rules framed by that Government for the guidance of officers employed on relief works.

Read—again the following Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 4th February 1897, Mis. No. 845 :—

Read—the following paper :—

Letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Collector of Bellary, dated Fort St. George, 11th January 1897, No. 85-S.

I have the honour to state that, on my inspecting the condition of relief-workers on the Alúr-Guntakal road, I found certain gangs in an unsatisfactory condition of vigour. On making enquiries, I ascertained that certain of these were residents of Hattibelagal. The distances of works from this village vary from three to five miles. Some of the relief-workers get over the difficulty by residing in the village of Nageradonna under very unfavourable hygienic conditions; but the majority have, I believe, to contemplate a march of from eight to ten miles daily in addition to their work.

2. My enquiries showed that the food-grain in this and neighbouring villages was above casbah rate—even allowing for the difference between the respective country and official seers; this has been sufficient to make a diminution in the total nourishment available from a wage which even, under favourable circumstances, permits a mere fraction of a pie for fluctuation of prices of "other items."

3. Under the above circumstances, I would advise your causing the erection of sheds to serve the distant villages as early as possible. Sections 55 and 120 (paragraph 2) of the Famine Code should also, I consider, be put in force with as little delay as possible.

4. The relief-workers declared their willingness to reside in sheds on the works if they be erected for them.

5. In the case of the Hattibelagal village, I would advise you to ascertain whether work nearer the village-site might not be obtained; for example, the Madiga and Mala wells require deepening and improving—also the village well and the fort well.

Endorsement by Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, dated 26th January 1897, No. 3-T.

True copy forwarded for the information of Government, through the Board of Revenue (R.S., L.R., and Agri.).

Resolution—dated 4th February 1897, Mis. No. 845.

Submitted for the information of Government.

2. The Collector of Bellary will be requested to report what action he has taken with reference to the Sanitary Commissioner's letter.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Collector of Bellary.

Read—again Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 5th February 1897, No. 100.

Abstract.—Submitting to Government, with remarks, Sanitary Commissioner's report on the condition of the people near Pattikonda in Kurnool.

Read—also the following letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Secretary to Government, Revenue Department [through the Board of Revenue (R.S., L.R. and Agri.)], dated Mallayala, 27th January 1897, No. T1 :—

I have the honour to forward, for the information of Government, the documents noted in the margin affecting certain matters that my recent inspections of part of the Kurnool and Bellary districts have brought to my notice.

Memorandum, dated 26th January 1897.
Copies of letters No. 85-S, dated 11th January 1897, and No. 179-S, dated 18th January 1897, to the Collectors of Bellary and Kurnool, respectively.

2. I send these through the Board of Revenue so as to prevent the necessity of making second copies of this correspondence for its information and enabling it to make such remarks on matters within its jurisdiction as may be thought necessary.

Enclosure.

Memorandum as to Wages and Rations—Chapter VIII, Famine Code.

1. It is desirable that section 120, chapter VIII of the Famine Code, be more explicit, if the second paragraph, which dictates that certain variations in wage can be permitted if the amount of money to purchase the "other items" be insufficient, is to be of any utility in practice. Whilst it is laid down what the grain equivalent is for class A, that for the B and C can only be obtained by recourse to a calculation—a calculation that various persons may proceed to make from a different basis. For example, it is quite possible to understand that the "other items" would be invariable, and that only the grain should be altered; whilst it may also be held that both grain and "other items" are to be decreased proportionately to the totals quoted in the section for the respective classes. I presume that the latter method is what is really meant. Such a calculation yields the following results :—

—	Total money grain ration.	Distribution.				
		Unhusked grain.	Unhusked pulse.	Salt.	Ghee or oil.	Condiments and vegetables.
	LB.	oz.	oz.	oz.	oz.	oz.
Males—						
A	$2\frac{5}{8}$	24	4	0·5	1	1
B	$2\frac{3}{8}$	21·7	3·6	0·45	0·9	0·9
C	2	18·3	3·05	0·33	0·8	0·8
D	$1\frac{3}{4}$	16	2	0·33	0·33	0·5
Females.—						
A	$2\frac{3}{8}$	20	4	0·5	1	1
B	$2\frac{1}{4}$	18·95	3·8	0·474	0·947	0·947
C	$1\frac{7}{8}$	15·78	3·16	0·395	0·79	0·79
D	$1\frac{5}{8}$	14	2	0·33	0·33	0·5

In my opinion, (*a*) the above diets fail to meet full requirements, and (*b*) the conditions under which the equivalent wage reaches the relief-worker are such as to imperil correct nutrition. I purpose to discuss these conditions *seriatim* :—

2. For comparison with the Famine Code diets given above, I quote the result of observations as to what articles and what amounts are eaten by the labourer in the Deccan per day. This calculation was obtained by causing women well accustomed to cooking to select from a small store—just as they would in prosperous times in their own houses—sufficient for one day's food. This was done in twenty experiments with the following results :—

Standards of diets used by the Deccan labourer.

Amounts required in times of prosperity by the Deccan labourer.

Articles of diet.	Quantity.
	oz.
Unhusked cholum	29 5
Dhal	5·0
Salt	1·2
Tamarind	1·0
Chillies	1·32
Oil	0·825
Vegetables	5·65
	LB.
Firewood	6·65

3. But, lest in selecting enough material for twenty-four hours' food a mistake might occur, observations were made of the amounts of grain and dhal necessary for a single meal only in forty-five experiments. These results went to show that the amounts chosen were in wonderfully close approximation to each other, although no scales were employed by the women—hand and eye being alone used. The following is the result when doubled for the equivalent of one day's supply :—

	oz.		oz.
Unhusked cholum	26·7	=Cleaned cholum at 7 per cent. wastage...	24·83
Dhal	4·758	=Cleaned dhal at 2·3 per cent. wastage ...	4·649

Certain parts of the year may be passed without the dhal, or with very little; certain parts of the year no special vegetables may be taken, but the tendency is always towards the quantities stated. The chillies allowed above seem heavy, but about 1 oz. is doubtless actually used. In the case of the grain, the tendency is towards a greater and not a smaller amount than here shown; so that it may be safely said that for an adult Deccan labourer in prosperous times one seer per day (two pounds) of dry grain is the standard. Indeed, the invariable sequel of the query as to the amount requisite for an adult male per day, is to cause with amusing regularity the index finger to be raised to give emphasis to the uniform statement that "one seer" is necessary. The free use of onions and tamarind at all times apparently keeps at a distance *scorbutus*; oil is not much used, but, when the person can afford it, this is employed. Curds and buttermilk, and occasionally ghee, are trusted to for the supply of fats. Although buttermilk is not rich in fat, it is so in valuable salts.

At least one seer (2 lb.) of grain popularly regarded as requisite per day per adult male.

Theoretical nutrient value of diets.

4 The *theoretical* nutritive value of the relief-worker's diet is as follows :—

Ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz	oz.
A	2·662	20·062	1·449	21·337
B	2·403	18·128	1·307	21·135
C	2·030	15·299	1·143	17·907
D	1·623	12·959	0·615	14·374

The above statement assumes that the whole grain and pulse laid down by the Famine Code is available : whereas no allowance for wastage is made in estimating the grain equivalent wage. The waste that occurs in cleaning ragi or cholum may be taken at from 7 * to 13 per cent. In the Bellary jail, long experience shows it to be 10 per cent. In reality, the methods of cleaning adopted by the cooly are wasteful; but I assume that care in famine times will be exercised; and, therefore, in discussing the value of existing diets, allow only 7 per cent. The *actually available* grain (in ragi) and the nutritive value obtainable with famine wages is therefore as follows :—

The Famine Code ignores results of normal loss by husking and cleaning grain.

Ration for relief-workers allowing 7 per cent. wastage for cleaning ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
A	2·496	18·715	1·348	21·758
B	2·273	16·966	1·282	18·389
C	1·921	14·319	1·122	16·900
D	1·531	12·111	0·597	13·484

Standards affording contrasts with Famine Code diets.

The following affords a standard that may be usefully contrasted with the foregoing :—

Diet of free labourer (Deccan)—cleaned grain.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.	oz.
Cholum	24·831	2·309	17·953	0·497	19·096
Dhal	4·649	1·037	2·831	0·098	3·047
Oil	0·875	..	..	0·875	2·013
Vegetables	7·970	0·143	0·462	0·040	0·554
Total ..	38·325	3·489	21·246	1·510	24·710

5. The difficulty at all times recognizable as to fixing the proportions of constituents in a diet devoid of meat has been the fact that, whilst legumes may be relied upon to represent a fair proportion of albuminoids found in less proportion than requisite in cereals, beyond dealing with a certain amount the stomach refuses to be made a chemical laboratory of, and shows its resentment in the form of indigestion. To keep within this limit, therefore, and yet provide a proper amount of albuminoids without overdoing the proportions of starches found in the staple grains, is a matter of importance. This has been obviously carefully held in mind by the framers of the famine diets; and, were the cooly to be equally appreciative of chemical and physiological questions involved, the combination of efficiency with economy would be less

* I obtained 7 per cent. by exercising the greatest care repeatedly searching the refuse for eatable portions. The Tahsildar, Pattikonda, made an experiment also conducted with much care and got 7·85 per cent.; but this "Nukaloo" was by no means so clean as demanded in jails. Ten per cent. may be regarded as a safe allowance.

questionable. His knowledge, however, is limited to the fact that an amount of grain is requisite that will make his belly-band tight, and, till that is accomplished, he believes himself hungry. That the Deccan cooly is not alone in the matter of bulk of food, I may illustrate by stating that a short time back a party of American soldiers started on what was to be a prolonged march on highly concentrated provisions. In a limited bulk there duly existed the necessary amount of nourishment according to the chemist, and in easily assimilable forms; yet, the men failed to accomplish their work and returned weak, worn out and unfit for duty. Diminution of bulk of food is therefore a question of education, and a population cannot be readily made to fall in with the scientific system of a certain proportion of dhal to grain, &c., laid down for its guidance in the Famine Code. Recent researches by Dr. Pavey into the functions of carbo-hydrates render it probable that this is not altogether to be regretted, and that, in the presence of a certain amount of proteid substances, carbo-hydrates may contribute to the formation of proteids. Indeed, it is not unlikely that the Deccan type of one (and more) seer of grain per diem without dhal for a part of the year is not physiologically wrong, as it would seem in the present state of knowledge. Dr. Pavey's researches cannot, however, yet be applied practically to consideration of these diets, until further experience and data are obtained, and, whilst recognizing that the excess of carbo-hydrates is not an evil, and may mean an aid towards formation of albuminoids, such excess *cannot in the present state of knowledge justify abating the demand for a sufficiency of ready-made albuminoids* represented in these diets by dhal. The excess of carbo-hydrates may further explain the fact that a vegetable oil or animal fat is not a constant part of the diet. I enter into this matter, as it is important to remember that, in using a wage calculated for the reduced diets shown, the Deccan relief-worker is specially liable to the inimical influence of want of sufficient albuminoids in his diet; because believing he cannot buy with his wage enough staple grain at disposal, he will not purchase the expensive dhal that is the essential addition to eke out a correctly proportioned diet.

Given but a small allowance of grain, the relief-worker does not possess the knowledge requisite for a correct adjustment of albuminoids.

6. I have suggested in paragraph 1 that it is likely to produce considerable confusion that the details showing clearly what has been regarded as sufficient for each class of relief-workers are not exhibited. But, whilst this implies inconvenience to those who would feel the responsibility of watching the health condition of relief-workers, a defect that cannot do otherwise than detrimentally influence the results aimed at consists in assuming that so long as such and such a weight of "staple grain" is obtained, no further refinement in definition is requisite. Yet, a little consideration will show that, when working with so fine a margin, or rather, as I show further on, practically no margin at all, for variations in prices of "other items," it is essential that the nature of the grain in use be allowed for. Thus, using B diet as a type, it will be seen that considerable variations occur in the important item of albuminoids according as the grain in use be wheat, cholum, ragi or rice :—

Nutrient value of B diet (allowing 7 per cent. for cleaning).

Grain.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
Wheat	3·749	17·087	1·241	19·942
Cholum	2·837	17·933	1·415	21·188
Ragi	2·403	18·128	1·307	21.135
Rice	2·403	19·235	1·111	21·791

So that to enable the same total of albuminoids to be obtained from ragi as from cholum on the B diet (provided the alteration were made in grain alone) it would be necessary to allow 5·95 ounces more; that is, 5·95 ounces should be added to the 21·7 ounces of ragi to make it equivalent to cholum, no calculation being made for wastage in either case.

Effect of Famine Code ignoring the nature of the staple grain used with relief-worker's diet.

7. The following exhibits the actual results of attempts to purchase the "other items" at various places with the wage allowed. Every precaution was taken to see that the items were obtainable at the same prices as those given to the cooly. The official rate was 15 seers per rupee; and I may here state that, to prevent confusion, this rate is adhered to in all calculations made in this memorandum:—

At Adóni—

A. wage ... A. 1 P. 5

Items of diet according to Famine Code.	Cost (a). A.	P.	Cost (b). A.	P.
24 oz. cholum	0	9	0	9·75
4 „ dhal	0	2·75	0	2·50
0·5 „ salt	0	·33	0	·38
1 „ oil	0	3	0	3
0·5 „ chillies } 0·5 „ tamarind }	0	1·25	0	1·25
Total ...	1	4·33	1	4·88

Note.—(*a*) and (*b*) refer to different shop prices.

B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	8·7
3·6 „ dhal	0	2·25
0·45 „ salt	0	0·34
0·9 „ oil	0	2·7
0·9 „ chillies, tamarind }	0	1·125
Total ...	1	3·11

D wage—Pies 10.

	A.	P.
16 oz. cholum	0	6·4
2 „ dhal	0	1·375
0·33 „ oil	0	0·99
0·33 „ salt	0	0·251
0·5 „ tamarind and chillies	0	0·625
Total ...	0	9·641

What could be actually bought at Adóni for As. 1–3—

29·35 oz. cholum.
1 „ salt.
1 „ chillies.
1 „ tamarind.

At Hathibelagul—B ration—B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	10·85
3·6 „ dhal	0	2·70
0·45 „ salt	0	0·337
0·9 „ oil (not available)	0	2·7
0·45 „ chillies	0	·17
0·45 „ tamarind	0	·085
Total ...	1	5·6

Actually bought at Hathibelagul for As. 1–3 *as the best bargain for the money*—

22·5 oz. cholum.
3 „ dhal.
·5 „ chillies.
1 „ salt.
1 „ tamarind.

At Kosgi (casbah near Chinnathambulam works)—B wage—As. 1–3.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	oil	0	2·25
Salt, chillies, tamarind	... ...	0	2
	Total ...	1	3·65

Bellary—A wage—As. 1–5.

		A.	P.
24 oz.	cholum	0	9
4 „	dhal	0	3
1 „	oil	0	3
1 „	salt ...		
0·5 „	chillies		
0·5 „	tamarind	0	2
	Total ...	1	5

At Pattikonda—wages being As. 1–3 for B class.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	salt	0	·9
0·8 „	vegetables / condiments	0	1·8
0·9 „	oil	0	2·25
	Total ...	1	4·35

There is, therefore, usually a deficit as to purchasing the bare rations below the A wage, whilst in all a margin for fuel, &c., does not exist. On my representing this to the Collector of Bellary and the Executive Engineer, the latter made an independent experiment and purchased the full ration with a fraction of a pie to profit—without, however, any fuel. On comparing prices given, we practically agreed; but I found that the fractional margin had been obtained by reducing to an absurdity the amount of chillies requisite for a single diet, and causing vegetables to be represented by a single brinjal—about the size of a pigeon's egg. This officer has kindly promised to subject the matter to test on all his works; but from frequent enquiries, I am satisfied that *unless the single ounce of vegetables and condiments allowed in the ration be juggled with,* * *so as bring the amounts outside the pale of practical dietetics, the ration cannot be purchased with the allowance for "other items."*

In practice, no "margin" exists in B and C wages.

8. Further, it is a mistake, when calculating the rations, to assume that the whole wage is available daily. The "rest day" gives the cooly but the minimum wage. Thus, at 15 seers per rupee, As. 1–3 is the wage for B class and the minimum is one anna, so that As. 1–2·57 is the daily average wage. Similarly, in the case of the A wage, the minimum of one anna reduces the daily wage of As. 1–5 to a daily average of As. 1–4·3. Therefore, the "ample margin" provided by the framers of the present Famine Code disappears, even on the A wage. Of course, this may be got over by stating that on receipt of the minimum wage the relief-worker does not labour; he receives a wage that will

Still less, is it possible to obtain the diet on the average daily wage?

* Since writing the above, I am in receipt of letter, No. 417, dated 21st January 1897, with which the Collector of Bellary forwards a letter from the Deputy Collector of Adóni, dated 8th January 1897, No. 49, in which it is contended that the rations can be purchased in the wage with a fraction of a pie to profit. But even this was done only with A and D diet; B and C were ignored, yet that this could only have been accomplished by reducing the condiments and vegetables to an *absurdity* is borne out by the following extract from the letter by the Adóni Deputy Collector:—

Total condiments and vegetables. { "Six chillies, tamarind ball bigger in size than a marble. two small brinjals weigh 2½ tolas, value of these articles is 1½ pie each." [!] } 1·50 pies and

sustain life during *rest*. But practice sets this theory at naught. It is clear that in many relief works release for the rest day simply means that a journey of five, or perhaps ten, miles to the nearest village for market supplies has to be undertaken. In any case, as a fact, the total nutrient value of the week's diet of the B class is *limited* by the sum not of As. 1–3 but of As. 1–2·5 and the relief-worker must necessarily adjust his food to this sum.

9. Should the relief-worker not proceed to a neighbouring central town, such as the cusbah station, once weekly for his food, he suffers monetarily; because the village shopman always runs his prices above the cusbah rates. I have found this frequently the case, even allowing for conversion of the 86 tola measure to the Government measure of 80 tolas.

There is no margin to cover the villager as against cusbah prices.

10. A further reason why the relief-worker does not get the nutrient value supposed by the Famine Code diets rests in the fact that, in the midst of scarcity, immature or otherwise inferior grain is bought; quality is here sacrificed to quantity. Thus I found that this year's immature grain in use near Alúr weighs, per seer of 86 tolas, 30 ounces, against 31·5 ounces for old white cholum, and against 34·4 ounces presumed by Government in regulating the 80 tola seer standard; so that the loss by immature grain is 12·8 per cent. Hence, *plus* the loss by wastage in cleaning, which, with the utmost economy, must be 7 per cent., there results a total loss of 19·8 per cent. or, in other words, the ration of available cleaned grain in B diet is reduced from 21·7 oz. to 17·4 oz.

Effect on nutrient value of inferior grain.

NOTE.—In the case of specimens handed to me by the Famine Commissioner, the difference between the mature and immature grain when measured and weighed, respectively, showed 4½ oz. in favour of matured and old grain per seer.

11. Nor do the relief-worker's chances of not receiving even the scanty ration presumed by the Famine Code end here; he has to run the gauntlet of being with a gang that has been subjected to fine or deductions. There can be no doubt that at times these may be conducted with supreme disregard of the fact that the population dealt with is one possessed of no margin, either of funds or physical strength upon which to call. The cause of these fines and deductions may be beyond the control of the greater number of persons subjected to these results. Thus, during my inspection of the Siruguppa road relief works (Bellary district) I found that adult men stood before me holding out their day's wages consisting of 6 and 9 pies. Revenue Board's Proceedings, No. 6834, dated 25th December 1896, show that in the Kurnool district the following fines were enforced:—

Effects of fines and deductions on total nutrient value.

Taluk.	Quantity of work to be done.	Quantity of work actually done.	Deduction in pay to be made.
	Class C.		
	C. FT.	C. FT.	
Koilkuntla	9,729	9,791	Minimum wages were paid.
Do.	852	689	Deductions varying from one-tenth to three-fifths of C class wages were made for most of the gangs on all days. Excess work also paid for on 4th December 1896.
Pattikonda	486	462	A deduction of one-sixth C class wages was made on the 1st day for the only gang formed that day.
	Class B.		
Sirvel	49,801	25,108	A deduction of half the wages.
	Class C.		
Do.	1,343	599	A deduction of three-fifths of the wages.
	Class B.		
Do.	4,139	1,218	Deduction varying from three-fifths hto nine-tenth B class wages.
Nandikotkur	726	653	A deduction of one-fifth B class wages.
Do.	523	388	
Do.	15,907	9,242	Varying from one-fifth to four-fifths of B class wages.

I am at time of writing this near a work (Maddikera) where the majority of the gangs are receiving the minimum wage per day, whilst defective organization as to distribution of tools and the physical condition of the gangs (dealing with excavation) show that the cause is beyond their control. Discretion * here would have seemed essential, and a much diminished task should have sufficed till organization was correct, and a chance had been given for improvement of physique by food that could not certainly be obtained on the minimum wage.

12. A further cause of reduction of the total nutrient value of the ration results when there is neglect of the fact that, if persons are so hard pushed as to resort to test works, there must also be in their houses the old and infirm, or those who are *rightly striving* to keep the remaining cattle fed, that is to say, that the ration meant by the Famine Code to cover the cost of coolies on works accommodated in sheds, and provided with bazaars on the works, is not applicable to the condition of affairs when neither bazaar nor relief circles are formed.

Where "relief circles" are not formed, the worker is at a disadvantage not contemplated in regulating his diet.

13. To complete this method of consideration of wages, it is well to ascertain the actual food lived upon by the relief-workers as a result of the various factors enumerated, showing that certainly no "ample margin" existed. On examining, with their consent, the food of relief-workers on Chinnathambulam works taken haphazard, the following results were obtained:—

What can the relief-worker really procure in the way of food?

For one man and child—plain cholum pudding lb. 3·9, equivalent to 12·81 oz. dry grain.

For two men—nothing but plain cholum pudding 3 lb. 3¼ oz., equivalent to 12·81 oz. dry grain.

For three nursing women—cholum pudding, fragments of kora vegetable, cost 1 pie, green chillies 1 pie, salt 1 pie, total weight 3 lb. 2½ oz., equivalent to 12·625 oz. dry grain.

For two children and one woman—kungunny 2 lb. 2¾ oz. (with kora 3 pies, salt 3 pies), equivalent to 8·69 oz.

For five men—2 lb. 5 oz. cholum with green chillies 1 pie worth and salt 1 pie, equivalent to 9·25 oz. [This seems a very improbable amount; but the five men insisted that was all they could afford to eat, whilst bye-standers confirmed the statement.]

14. Although the condition of scarcity had not lasted more than two months, the state of relief-workers under the above condition on the Chinnathambulam and Adóni-Guntakal works cannot be regarded as reaching the standard set forth by the Famine Commission, namely, "the retention of the able-bodied labourer in a state of strength and health." The following was the result obtained by me on examination of the gangs in the localities stated:—

What is the effect on the physique of the relief-worker of the conditions under which the wages are received?

* Before my departure, a reduction in the task required was made by the Public Works Department Officer. This was none too soon, as the men were much overtaxed by the end of the day. My remarks apply to gravel digging.

Villages.	Number of gangs.	Men.						Women.						Children.					
		Nursing mothers.																	
		Good.		Poor.		Bad.		Good.		Poor.		Bad.		Good.		Poor.		Bad.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Chinnathambulam works, Bellary district.	2 and another.	5	35·8	8	57·1	1	7·1	16	66·7	7	29·2	..	..	..	..	..	..	..	..
	13	42	62·7	14	20·9	11	16·4	29	34·6	38	46·2	..	..	..	90·0	1	10·0	..	..
	17 ..	10	66·7	5	33·3	..	..	11	31·4	16	45·7	..	..	15	88·3	3	16·7	2	8·0
	18 ..	..	..	..	..	..	..	16	42·1	13	34·2	..	..	17	68·0	6	24·0	..	..
	Total ..	57	59·4	27	28·1	12	12·5	72	39·8	74	40·9	35	19·3	41	77·4	10	1	2	3·8
Adóni-Guntakal works, Bellary district.	1 ..	7	53·8	6	46·2	..	..	23	52·3	17	38·6	4	9·1	13	92·9	1	7·1	..	..
	6 ..	22	81·4	5	18·6	..	..	1	20·0	2	40·0	2	40·0	17	94·5	1	5·5	..	..
	7 ..	26	89·7	1	3·4	2	6·9	17	58·6	6	17·3	7	24·1	28	100·0	..	..	..	..
	12 ..	..	..	..	..	..	..	18	35·3	19	37·3	14	27·4	..	..	..	..	..	..
	13 ..	17	70·8	7	29·2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	14 ..	29	74·3	9	23·1	1	2·6	13	50·0	10	38·5	11	11·5	7	87·5	6	42·9	1	7·1
	15 ..	..	..	..	..	..	..	12	41·4	12	41·4	5	17·2	14	..	2	12·5	..	..
	Total ..	101	76·5	28	21·2	3	2·3	84	45·7	65	35·3	35	19·0	74	87·0	10	11·8	1	1·2
Maddikera works, Kurnool district.*	1 ..	..	..	..	..	..	..	17	56·7	10	33·3	3	10·0	6	56·2	7	43·8	..	..
	2 ..	..	..	7	31·8	3	13·6	13	41·9	12	38·7	6	19·4	9	46·5	6	46·5	1	7·7
	3 ..	5	29·4	9	52·9	3	17·7	6	33·3	11	61·1	1	5·6	6	42·8	6	42·8	1	7·7
	4 ..	..	..	..	..	..	..	47	70·1	16	24·0	4	5·9	4	57·1	3	14·3	4	28·6
	5 ..	..	..	..	..	..	..	..	..	..	..	..	..	18	85·7	3	14·3	..	..
	6 ..	4	57·1	3	42·9	..	..	24	58·3	19	42·2	2	4·5	18	41·9	18	41·9	6	13·9
	7 ..	..	..	..	..	..	..	12	75·0	3	18·7	1	6·3	13	61·9	6	28·6	2	9·5
														18	75·0	6	25·0	..	..
	Total ..	21	45·7	19	41·3	6	13·0	119	57·5	71	34·3	17	8·2	87	57·2	52	34·2	13	8·6

* The opening of works here was manifestly too long delayed. The failure of children here, as compared with the result for the Bellary works, is marked.

In estimating the health state of the relief-workers from the above statistics, it must be remembered that the process of malnutrition, as contrasted with starvation is a slow one. The failure of the women, and more especially of the nursing mothers, before the men showed marked effects, must be regarded as but an ordinary sequence of events. In regard to children referred to, it is necessary to remember that they are those above five years of age, and not of that more perilous stage of life between one and five years.

15. In the preceding paragraphs, I have pointed to facts that influence the total nutriment for the wage afforded, especially with the object of demonstrating the fallacy of speaking of an "ample margin" being available. Leaving aside this question, I would now consider the diets from the point of sufficiency. It may be accepted as a fact that, unless the Jail Department has been guilty of gross extravagance up to date, the jail diets are calculated so that they allow nothing but what is requisite for "retaining an able-bodied labourer in health and strength." It would, therefore, be useful to contrast the diets obtainable (average daily) in jail and out of jail by the famine-stricken :—

District Jail diets—Hard labour.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·1	0·691	1·888	0·065	2·038	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including 1·706 oz. condiments and garlic.	7·706	0·139	0·447	0·039	0·089	..
Meat	2·143	0·321	..	0·180	0·414	..
Salt	1·0	..	..	..	..	1·0
Total ..	38·449	2·903	19·903	1·144	22·087	1·0

Simple imprisonment for males (and females on labour) in District Jails.

Articles of food.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	20	1·460	14·640	0·300	15·330	..
Dhal	3·1	0·691	1·888	0 065	2·038	..
Oil	0·5	..	..	0·5	1·150	..
Vegetables, including 1·706 oz. of condiments and garlic	7·706	0·139	0 447	0·039	0·089	..
Meat	1·7	0·255	..	0·143	0·308	..
Salt	1·0	..	..	..	..	1·0
Total ..	34·006	2·545	16·975	1·047	18·915	1·0

Sub-Jails.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·857	0·860	2·349	0·081	2·535	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including condiments	7·5	0·135	0·435	0·038	0·521	..
Salt	1·0	..	..	..	..	1·0
Total ..	36·857	2·747	20·352	0·979	22·602	1·0

16. The utmost that can be proposed in the way of economy in the case of the jail diet is the increase of dhal and abolition of meat * ; but, the endeavours would still be to secure the total proteids and starches. In this case, the ration is reckoned by allowing for wastage of grain, pulse vegetable and meat; not so however the famine rations. So that the rations allowed (ragi being the grain in each case) for a criminal and a famine-stricken population, respectively, may be thus contrasted with acknowledged standards of what is essential :—

* As has indeed been proposed by the Inspector-General of Prisons, Madras.

—	—	Albuminoids.	Starch. equivalent.
		oz.	oz.
A. Hard labour	Jail	2·903	22·087
	Relief works	2·496	21·758
B. Moderate labour	Jail	2·747	22·602
C. Do.	Relief works	2·273	18·389
	Relief works	1·921	16·900
D. Simple existence	Jail	2·545	18·915
	Relief works	1·531	13·484

The necessary nutrient value of rations according to standard authorities—

Lethely's scale (108-*lb. man*).

	Nitrogenous.	Carbonaceous.
	oz.	oz.
Idleness	1·92	14·12
Ordinary labour	3·28	21·05
Active labour	4·18	25·18

Playfair's scale (108-*lb. man*).

—	Albuminoids.	Fat.	Carbohydrates.
	oz.	oz.	oz.
Absolute rest	1·4	0·36	8·64
Gentle exertion	1·8	0·72	8·64

Dr. Meinert's scale (quoted by Church).

—	Albuminoids.	Oils.	Starch.	Starch equivalent.	Ratio.
	oz.	oz.	oz.	oz.	oz.
Bare sustenance	2·184	0·774	7·735	9·514	1:4·36
Moderate work	3·038	1·452	12·889	16·230	1:5·34
Hard work	3·739	2·578	11·510	17·438	1:4·66

These standards represent the amounts requisite after allowing for the difference of weight between the average European and Native. I have taken 108 lb. as a fair estimate of the weight of the Madrassee. This is the weight obtained as the average in the Lunatic Asylum, Madras, in a population of about over 500.† I choose the Asylum population, because it represents average individuals (adult males) from all parts of the Presidency, as I believe the average Tamil and the agricultural labourer of the Deccan differ in weight.

† Average age, 33 years.

Irrespective of the small allowance of albuminoids exhibited in the Famine Code diets by the above contrasts, the absurd provision of 1 oz. for vegetable and condiments in the famine diets against that for jails (paragraph 15) is very striking. In short, the only further possible way of making an economy when contrasted with jail diets has been effected by the framers of the Famine Code *at the expense of*

How it has been arranged to give the relief-worker a cheaper diet than the criminal.

(*b*) The wages should be increased to an extent sufficient to provide a margin that will secure about six ounces of vegetables in diet A, and proportionately in others, and for provision of fuel for town-dwellers.

(*c*) The rations calculated as procurable for each wage should be distinctly set forth in detail in the Code.

(*d*) A relief work distant from the casbah more than three miles should *invariably* have attached to it a bazaar from the moment the work is opened; when feasible, by private arrangement; but, failing this being possible, under official arrangements, so that the articles set forth in the ration allowed should be obtainable on the spot.

(*e*) To encourage the proportionate use of grains and pulses, a short note should be given to each head cooly calling attention to the desirability of so constructing a ration. At the bazaars, the ration should be exhibited by placards in the vernacular; also on the head cooly's muster roll. No interference with the relief-worker's actual purchases should be attempted.

(*f*) Whilst the calculation that condiments and "other items" will correspond to the proportion of grain allowed in the Code is ingenious and fairly correct, it is inapplicable when dealing with so finely estimated diets as those discussed. It does not follow that "other items" will fluctuate with the grain, or that there will be a "margin." It is consequently a round-about way of calculating, for which there can be no good reason. There can be no difficulty in the Tahsildar at the time he issues the statement of the equivalent wage, also quoting in detail the cost of "other items," and this I think should be *invariably* adhered to. It is an arrangement fair to the public funds, and fair to the relief-worker.

(*g*) Not the rates of the casbah but of the villages adjoining the works should be taken as the basis of the Tahsildar's notification.

(*h*) The change from cholum to ragi being distinctly to the detriment of the relief-worker as to total nutrient value of his diet, when cholum is the staple of the district a change to ragi or rice should not be made simply on the ground that the cheaper grain is *procurable* in the larger towns in the district. It should be proved distinctly that such change of conditions has occurred in the area affected as to have led to its free importation in *all the smaller villages*.

(*i*) The moment a test work has proved the necessity for employment the "circle relief" system on behalf at least of villages sending labourers should be started as the logical sequel; for it stands to reason that those who come for employment, out of necessity also leave the aged and infirm at home, whom they have to support from the wage received, although it is calculated for the support of one person only: the two systems must be *inseparable*.

(*j*) Equally, if the wage is to suffice, there should be no hesitation as to multiplying kitchens, so that they shall not be distant from gangs more than one mile, failing which a system of transport of food should be employed for distant kitchens.

(*k*) There should be three classes of labourers—the A, the professional, the B, or able-bodied but not professional, and C, the untasked and weakly. For those on the B wage the existing tasks for B and C should be retained *leaving it to the discretion of the officer in charge of the works what that task shall be.* Proportionate deductions for short work would then be possible down to the existing rates for the wage C. Any deduction below this must be solely as a fine, after due investigation by the officer in charge of the work and a special report should be furnished on the subject.* This is in accordance with section 106 of the Famine Code, and with, I believe, the opinion of most who have had practical experience of famine conditions. The assumption that famine works would become "unduly attractive," or that relief-workers would be persistently idle is, under the special circumstances, very erroneous; except in the immediate neighbourhood of large towns, the typical relief-workers (agricultural labourers) are disciplined with the greatest ease; they regard joining a relief work as a degradation, and will not resort to it till absolutely obliged. If they fail to turn out a required task, it is a matter of ten to one that the supervision is bad, or that the organization of

* It should always be required that this report be accompanied by a declaration that the organization of the gang as to proportion of men, women and children, and its equipment as to provision of tools were correct.

the gang is absurd as to proportion of men and women, or that, as occasionally happens, what with length of journeys from the village to the works, they literally are unable to cope with the duty required, or are so dispirited by repeated fines and private hardships as to be morally unfit to make the effort. I consider, when attempting relief upon the special system relied upon in the Code, that the question of tasking and fining is far too delicate a matter to be dealt with successfully within the limits permitted in G.O., * No. 728, Revenue, dated 18th December 1896. On the opposite, I respectfully suggest that the only safe policy for Government to assume is that the officer in charge of the works is primarily responsible that tasking is judiciously arranged as to each gang, and ensure that this responsibility has due check by inspection by superior Engineer Officers and Medical Officers specially detailed for sanitary duty.

* Communicated with B.P., dated 26th December 1896, No. 460.

(*l*) To effect proposals in the foregoing paragraph, medical inspection of each work should be arranged for systematically. If Medical subordinates at disposal are insufficient to enable one to be on each work, inspection should be arranged for at least every fortnight by an itinerant officer. Each gang should then be inspected, and the officer in charge should be bound to decrease the total task expected, if in the opinion of the Medical Inspector given in writing this is necessary.

(*m*) Male children of 12 years of age should not be classed in future as men; the outturn of these little boys cannot fail to be less than the adult man he represents. In consequence, the gang with several such little boys in it is liable to suffer by deductions. Young children, from 7 to 12 years, might be allowed from one-fourth to half wage; those from 12 to 16 invariably three-fourths wage. I believe that the working of the order as to regarding "all persons of 12 and upwards on relief works as adults (section 120, Famine Code) is a constant cause of short work, and consequent unreasonable reduction to the wage of their adult fellow workers. For example, I have seen gangs supplied with earth by excavating by adults of 12 years of age with women carrying earth for them who could have carried twice the amount excavated. I have seen little boys armed with pick-axes who, weighed against these implements, had little in their favour. Even when these adults (!) have broken a basket of stones, they require aid to lift it on their heads. I am convinced that this is a fundamental error as to economy and imperils the whole system of relief works.

(*n*) *The necessity for the "ample margin" that has not been provided by the Famine Code.*—Fuel has to be bought by the relief-worker when in the neighbourhood of towns. In rural areas the worker gathers his own fuel, but these efforts imply daily greater distances, by one or more members of the family, to be travelled—even if the fuel consist of nothing but old jowari roots; as, perhaps, there are 4,000 people daily who share in the search. On the other hand, in towns, vegetables are readily procured, and the price of grain is usually less than in the village, although the opposite would seem the reasonable result.

It is therefore possible, by having a margin over the bare dry grain ration, to meet the requirements of both urban and rural areas, without making separate scales for each. Remembering fully the necessity of being just to the tax-payer as well as to the relief-worker, and taking care to disturb as little as possible sanctioned conditions of the Famine Code, I regard the following as the least wages that can be recommended, so as to secure the minimum of both grains and vegetable food, and yet hold the hope that both strength and health shall be retained by the relief-worker:—

Table showing proposed revised famine wages and ration (the example being worked at 15 seers per rupee).

—	A.		B.		C.		D.	
	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.
	Males.							
Grain	26·7	10·7	24·1	9·6	20·3	8·1	17·8	7·1
Dhal	4·0	2·75	3·5	2·4	3·0	2·1	2·5	1·7
Salt	1·0	0·75	0·9	0·7	0·7	0·5	0·6	0·45
Oil	1·0	2·3	0·9	2·1	0·7	1·6	0·6	1·4
Tamarind and chillies.	2·0	2·5	1·8	2·3	1·4	1·8	1·2	1·5
Vegetables and fuel.	..	3·0	..	2·9	..	2·9	.. *	0·85
Total cost in pies ..	22		20		17		13	
Total cost in grain ..	oz. 55 or lb. 3-7		oz. 50 or lb. 3-2		oz. 45½ or lb. 2-10½		oz. 32½ or lb. 2-0½	
	Females.							
Grain	22·2	8·9	21·0	8·4	17·5	7·0	15·6	6·2
Dhal	3·3	2·3	3·0	2·1	2·6	1·8	2·2	1·5
Salt	0·8	0·6	0 78	0·58	0·6	0·4	0·5	0·375
Oil	0·8	1·8	0·78	1·76	0·6	1·4	0·5	1·15
Tamarind and chillies.	1·6	2·0	1·57	1·96	1·2	1·5	1·1	1·375
Vegetables and fuel..	..	2·4	..	1·2	..	0·9	.. *	0·4
Total cost in pies ..	18		16		13		11	
Total cost in grain ..	oz. 45 or lb. 2-13		oz. 40 or lb. 2-8		oz. 32½ or lb. 2-0½		oz. 22½ or lb. 1-6½	

* No fuel is allowed.

A. Represents professional labourers.
B. Represents able-bodied adult untrained labourers.
C. Represents untasked labourers, gratuitous relief, minimum wage arrived at by deducting for short work for classes A and B.
D. To be employed for penal purposes only, viz., for contumacious refusal to work, &c.
Children.—Wages will vary according to age, powers of work and requirements from one-fourth to three-fourths of those for adults.

By way of affording a contrast, I quote the figures proposed by the Famine Code Committee of 1882 (*vide* Board's Proceedings, No. 396, dated 27th May 1892) and the existing Famine Code rates.

Table contrasting the rates now proposed and those of the existing Famine Code with those fixed by the Famine Code Committee of 1882—worked in pies.

—	Males.				Females.			
	A.	B.	C.	D.	A.	B.	C.	D.
The Madras Famine Code Committee ration (*vide* paragraph 11 of Board's Proceedings, dated 27th May 1892, No. 396).	27	21	17	..	20	17	13	..
Existing Famine Code rates at 15 seers per rupee.	17	15	13	12	15	14	12	11

This Committee was aided by that thoroughly reliable and experienced sanitary authority, Dr. Cornish. The demands of this Committee were, in my opinion, just and reasonable. If I have offered a diminished ration, it is not because I think demands should be abated, but because I presume the decision of the Government against that Committee's recommendation was guided not by physiological considerations, but unanswerable financial problems, of which it alone can comprehend the full difficulties. I have, therefore, in making these recommendations, held before me the task of asking that *at least the minimum requirements* shall be subserved.

Read—again Memorandum of the Board of Revenue (R.S., L.R. and Agri.), dated 19th December 1896, Mis. No. 6787, calling on the Collectors of Kurnool, Bellary, Anantapur and Cuddapah to report, at a very early date, the actual cost of purchasing the amounts of the "other items" included in a relief worker's ration—both maximum and minimum—at Owk, Adóni, Tadpatri and Jammalamadugu.

Read—also the following letter from C. M. MULLALY, Esq., Collector of Kurnool, to the Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture, dated 5th January 1897, Dis. No. 23-Eng:—

With reference to the Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to give below the actual cost of purchasing the "other items" for the relief work at Owk:—

	Maximum.		Minimum.	
	OZ.	PIES.	OZ.	PIES.
1. Dhall	4	4	2	2
2. Salt	5	½	0·33	¼
3. Oil	1	3	0·33	1
4. Condiments and vegetables	1	1½	0·50	¾
Total ...		9		4

Read—also the following letter from M.R.Ry. S. RAMU IYER Avergal, B.A., Deputy Collector, Adóni Division, to the Collector of Bellary, dated 8th January 1897, Dis. No. 49:—

In returning the Arzi Dis. No. 4453, dated 28th December 1896, of the Tahsildar of Adóni, reporting the price of "other items" included in the wages of relief-workers under section 120 of the Famine Code, I have the honour to report that his calculations are correct, but the prices of dhall and salt as ascertained by him at the date of his enquiry (26th December 1896) differ slightly from what I ascertained by personal enquiries. I found that dhall sold at As. 1–8 to As. 1–10 a seer and salt 4½ pies, as against As. 1–11 and 5| pies, respectively, quoted by the Tahsildar. In the latter part of last month, there was a temporary rise in the price of salt owing to the breach on the Madras Railway.

2. I append a memorandum of my calculations. It will be seen therefrom that, taking the latest quotation of the price of yellow cholum, that is, 16·12 Imperial seers per rupee, the consolidated A class wages (As. 1–4) gives the labourer 2 pies less of other items than he is entitled to under section 120, if ghee is allowed; but that, on the other hand, it allows him nearly half a pie in excess of the cost of other items if oil is substituted for ghee. The consolidated minimum wage (10 pies) gives the labourer an advantage of ⅓ pie or 1 pie according as ghee or oil is allowed.

3. You are aware that the labourer does not eat dhall except on special occasions, and still less ghee. Of course, he makes up for the want of dhall by eating more of grain. I do not think that any labourer, if he can help it, will take less than three-fourth seer of grain. Taking all things together, the consolidated wage seems to me to duly provide for other items.

Endorsement by R. H. CAMPBELL, Esq., Acting Collector of Bellary, dated 11th January 1897, Dis. No. 195.

Copy with the calculation sheet submitted to the Board of Revenue, with reference to B.P., Mis. No. 6787, dated 19th December 1896. The result of my own enquiries at Adóni, is to show that the wage just covers the cost of "other items" allowed for in the Code.

Read—also the following paper :—

Letter from M.R.Ry. M. V. NARAYANASAWMI PILLAI Avergal, B.A., Special Deputy Collector, Jammalamadugu Division, to the Collector of Cuddapah, dated 28th January 1897, Dis. No. 29-F. :—

In reply to your foot-note, dated 22nd December 1896, on Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to submit herewith a statement showing the actual cost of purchasing the amounts of "other items" in the taluks of this division.

2. In section 120 of the Famine Code, the cost required for fuel has not been included in the "other items." As this expenditure is absolutely necessary, I have exhibited its price also in the above statement. The price of the staple grain (ragi) to the on the date to which the prices of the "other items" relate is noted below :—

Taluk.	Date.	Price.	
Proddatur	31st December 1896	19·0	Imperial seers.
Jammalamadugu	30th " "	18·0	"
Pulivendla	27th " "	13·0	"

3. In order to find out whether the grain allowances are unduly above or below the actual cost of the other items, a statement (No. II) is prepared and herewith submitted.

4. While the differences between the prices of the staple grain in the different taluks is large, the cost of purchasing "other items" does not vary proportionately. According to the prices reported by the Tahsildars, the coolies who earn the maximum wages are put to loss even leaving the cost of fuel out of consideration. In Pulivendla, there is a small saving owing evidently to the high price of the staple grain. In the minimum wages, there is a saving generally in Pulivendla and Jammalamadugu, and the loss in Proddatur is trifling. If the cost of fuel is included, the coolies who earn maximum and minimum wages have to be considered as sustaining loss alike by the adoption of the price of grain in lieu of the actual cost of the "other items" making up the ration.

5. I do not know for what reason the cost of fuel has not been provided for in the Famine Code; but fuel is required for cooking. On receipt of the Tahsildars' reports, I myself made experiments to see what the cost of fuel required would be, arranging the cooking most economicably. The result was that the Tahsidars' estimates were not above the mark. Generally, the cooly classes do not purchase firewood, but they collect dried leaves, &c., which answer the purpose. But now that the coolies on the work are expected to turn out the required task, they find little or no time to collect fuel. Some of them during the midday interval collect some fuel; but they have to wander about all the time and the interval cannot be called an interval of rest.

6. I take this opportunity to state that the relief-worker never does, at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a "chatni" (ಚಟ್ನಿ). This costs him a pie or a pie and a half and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables, and they rest satisfied with the "chatni" that they make.

Endorsement by A. C. TATE, Esq., Collector of Cuddapah, dated 1st February 1897, Ref on C. No. 8298-Rev.

Forwarded to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, with reference to Board's memorandam, Mis. No. 6787, dated 19th December 1896. Information regarding the cost of purchasing "other items" has been tabulated also for Proddatur and Pulivendla.

Resolution—No. 144, dated 18th February 1897.

The valuable report forwarded by the Sanitary Commissioner with his letter, dated the 27th January, will be submitted for the consideration and very early orders of Government. The report deals with matters which are of the first importance in any scheme for affording relief to the distressed, and the drawbacks to, and deficiencies of the present system, to which Surgeon-Lieutenant-Colonel King draws attention, are most serious.

2. As an introduction to a discussion of the subject, the Board would draw attention to paragraph 184 of the report of the Indian Famine Commission, 1880, referring to certain main principles which should be kept in mind in times of famine.

The Commissioners stated that—

"One of these is the amount of food required by workers and non-workers. The conclusion we draw from a careful examination of the evidence of authorities in all parts of India is, that, on an average, a ration of about 1½ lb. per diem of the meal or flour of the common coarser grain of the country suffices for an ordinary working adult male. In the rice-eating countries an equal weight of rice may be accepted in lieu of flour, and in any case the ration should include a suitable proportion of pulse. A man doing light work would require about 1½ lb.; and the ration which consists of 1 lb. of flour with a little pulse has been found sufficient to support life in numerous relief-houses, where no work is exacted, all over the country. On these bases the diet scale should be built up, it being understood that a female requires a little less than a male, a child below twelve years of age about half the allowance of an adult male, and a non-working child below six or seven about half as much as a working child on relief-works. However, where a money wage is given, the rate of pay should be such as to leave a slight margin above the actual cost of the flour, so as to allow for the purchase of salt, pepper and other condiments and fire-wood, and to avoid the risk of the wage being insufficient to purchase the full ration of food. Whenever it is necessary to supply people with a kind of food to which they are unaccustomed, the result should be carefully watched, and endeavour should be made to counteract, by some adjustment of the dietary, the unfavourable results which will probably arise from the change."

3. The paragraph above quoted was printed in the appendix to the letter from the Government of India, read in G.O., No. 1006, Revenue, dated 18th August 1883, in which the first Madras Famine Code was discussed. Together with it, the evidence of the most experienced administrators of the famine relief in 1877–78 in Madras and Bombay is given; whilst, in the same Proceedings of the Madras Government, a valuable letter from Surgeon-General Cornish on the subject of famine wages is also printed. A perusal of these papers is necessary to a full comprehension of the subject.

4. Under the first Madras Famine Code, the wages offered to relief-workers were made up of the money value of certain fixed amounts of grain, *plus* certain fixed sums of money. The latter were arbitrarily fixed upon the best information available, at the time the Code was framed, as to the money value of the items other than grain required for the support of the labourers. Dr. Cornish defined these requirements, in a letter read in G.O., No. 1188, Revenue, dated 13th August 1881, as follows :—"Besides the grain allowance, a working adult man in famine times would require at the least 4 ounces of pulse, ½ an ounce of salt, ½ an ounce of pepper or condiment, 1 ounce of ghee or oil, *and* a daily *modicum* of green herbs or vegetable, with corresponding quantities for women and children." No better authority could be quoted. The quantities here mentioned, except that the "*modicum* of green herbs or vegetable" is there reduced to 1 ounce, are practically identical with those laid down as the maximum ration specified in the Provisional Famine Code of the Government of India.

5. No changes were made in the scale of wages prescribed in the Code above mentioned until after a discussion originated by the Government of India, which is to be found in the papers printed in G.Os., No. 839, Revenue, dated 11th August 1892, and No. 685, Revenue, dated 24th September 1894. This discussion arose from a representation by the Supreme Government that the Madras scale of wages was unduly liberal in the condition of prices that now prevails, and is likely to prevail in the future. At the same time they indicated (paragraph 11 of their Resolution No. 6-44, dated 17th March 1892) the general lines of the policy they desired to be followed, as follows :—

"Following the Famine Commissioners' recommendations, labourers on relief-works may be classified according to their capability for work. The classes adopted in the Provisional Code are: A, skilful and able-bodied accustomed to the kind of work required; B, able-bodied accustomed to work; C, able-bodied not accustomed to work; D, others. Classes A and B may receive a full wage, *i.e.*, a wage equivalent to a ration sufficient to keep an able-bodied labourer in health and strength, together with a margin. The margin may be more liberal for class A when it contains a small percentage than when it is allowed to include a large percentage of able-bodied labourers accustomed to work. The wage of class C will not exceed the full wage, and should be determined in general accordance with the principles of sections 133 and 134 of the Provisional Code."

These proposals were referred to this department only for report, and apparently the conclusions of the Government embodied in its Order No. 839, Revenue, dated 11th August 1892, were arrived at on a consideration of the question from an administrative point of view, and without any special consideration of the possible physiological consequences of the changes proposed. The main conclusion then arrived at was that a simple method of calculating the money wage would be a great advantage "provided the wage admits of a small fraction being spent on condiments and vegetables." Such a wage would be found, the Government stated, in "the money equivalent of $2\frac{1}{2}$ lb. of the staple grain *husked*, or of flour in the case of ragi, for a man, 2 lb. for a woman and $1\frac{3}{4}$ or $1\frac{1}{4}$ lb. for a child," and this, it thought, would not be excessive as a standard wage. That is, *the wage was to be the same for all classes*, but, as an encouragement to industry, extra work was to be rewarded by slightly increased pay. *The principle of equal wages for all workers* is no doubt correct. That is, that the sustenance required in all classes is equal or, as Dr. Cornish put it, in paragraph 4 of his letter read in G.O., No. 1188, Revenue, dated 13th August 1881, in reference to the draft Famine Code prepared by the Secretary to the Famine Commission—

"*I cannot agree with the statement in paragraph 13 of the Code that the labourers in classes 3 and 4 would necessarily require less sustenance than those of classes 1 and 2. Their enfeebled condition and inability to do a full day's work might be due to previous privation, the only effective remedy for which would be rest and judicious feeding. The attempt to work any classes, but the able-bodied in famine times is, in my opinion, a mistake, which, if there be any truth in physiological science, is most certain to be attended by great disaster to human life.*"

Surgeon-General Cornish further observed that—

"The present Code is no doubt the outcome of certain experiences gained during the late famine, but it should not be forgotten that, as regards the saving of life, the various labour diets resorted to in Mysore and Madras were not in any way efficacious. I do not wish it to be inferred that I would abolish all labour tests for famine relief, but that, as regards the enfeebled and wasted, whether old or young, much discretion should be exercised in the exaction of work as a condition of relief."

6. The conditions under which the standard wage was to be offered are very clearly stated in paragraph 7 of G.O., No. 839, Revenue, dated 11th August 1892, and were, briefly, that the wage should be paid on the performance of a properly adjusted task, to ensure which fining within certain limits was necessary, but that "*in no case should fining be carried so far as to reduce the wage below a certain limit.*" The limit or minimum, beyond which fining was not to be permitted, was practically the grain equivalent of the wage for days of rest, and the minimum wage of the Government of India, except that allowances were also to be made for loss in husking or grinding. This, however, it was then noted, could be accepted only as "a penal wage," as experience had shown that the so-called subsistence allowance, which was greater, was not sufficient for subsistence. The Government also considered this wage too low for the allowance that is given when work is suspended, and proposed a higher rate for days of rest. The scale then determined on was as follows:—

——	Standard.	Rest day.	Penal ration.
	LB.	LB.	LB.
Men	2·5	2·0	1·75
Women	2·0	1·75	1·50
Children A	1·75	1·50	1·25
„ B	1·25	1·00	1·00

7. The wages herein proposed represented the deliberate conclusions of the Madras Government, which stated that there was "a consensus of opinion amongst the district officials that a ration of that amount (to include the cost of condiments) would only be just sufficient to keep the people in their ordinary state of health," but it is, in the light of Surgeon-Lieutenant-Colonel King's report, doubtful whether sufficient allowance was made for the essential provision of "a daily modicum of green herbs or vegetable."

8. In its Circular Resolution, No. 6—44, dated 17th March 1892, the Government of India issued final orders regarding the revision of the Famine Codes of all provinces, but in that circular it only dealt with the question of the sufficiency or insufficiency of the "subsistence ration," and stated that "the ration was determined in 1883 after consultation with medical experts, and after careful comparison with standards adopted in jails and elsewhere." It also stated that "wages based strictly upon it were during the recent scarcity found sufficient," although, as shown in the Madras G.O. above quoted, that was not the experience in this Presidency, even when the value of the equivalent in flour, instead of in unhusked grain, was allowed. In an appendix to that Resolution a calculation was given to show that in both the maximum (A class) grain wage, and in the minimum (D class) an ample margin was left for fuel, &c., and for fluctuation in prices, and this margin has since been held to be so ample as to obviate the necessity for making any allowance for loss in husking—memorandum read in G.O., No. 244, Revenue, dated 9th June 1896, paragraph 26.

9. The circular above quoted laid down wages in terms of grain equivalents as follows:—

Class.	Men.	Women.
	LB.	LB.
A	2·625	2·375
B	2·375	2·25
C	2·0	1·875
D and minimum	1·75	1·4375

No attempt was, however, made to show, for the B and C class workers, what amount of "other items" was required, nor was it stated how much of the grain equivalent was intended to furnish funds for their purchase. Apparently, in framing this scale, the deliberate recommendations of that high authority, Surgeon-General Cornish, above quoted (paragraphs 4 and 5 *ante*) were not considered.

The scale proposed was, however, adopted for classes A, B and C by the late Mr. Clogstoun without demur, but, both he and the Madras Government protested regarding the insufficiency of the proposed minimum wage. This protest was based on the teachings of experience only, and, as is shown in the paper now under consideration, would have been overwhelming had the proposals been considered in their physiological aspects. To this protest, the Government of India declined to listen.

10. The Sanitary Commissioner now shows that, both on physiological considerations, and by comparison with jail diets, the rations laid down are inadequate, if the workers are to be maintained in health and condition, even if the whole of the grain wage reaches them.

Although it does not affect the conclusions arrived at, it may first be pointed out that the Sanitary Commissioner has made a slight error in the calculations on which the computations in paragraph 1 of his memorandum are based. Instead of the unhusked grain, entered in column 3 of the table there given, flour or cleaned rice should have been entered. As to the distribution of the "other items" for class B and C wages, for reasons above noted, Surgeon-Lieutenant-Colonel King has followed the only method available. In result, the theoretical value of the diets would be rather higher than he works them out, and the figures given in the first, instead of the second, table in paragraph 4 should be used for comparative purposes. The final result, however, is much the same, owing to the fact that there would then be less "margin," and this will be seen when considering the data given in paragraph 7 of the memorandum.

11. In order to show how deficient in proteid matter the Famine Code rations are, the Board has brought together below the figures given at paragraph 16 of Surgeon-Lieutenant-Colonel King's paper, and corrected them with reference to the above remark:—

—	Albuminoids.			Starch equivalent.		
	Meinert's scale.	Jail.	Relief.	Meinert's scale.	Jail.	Relief.
	oz.	oz.	oz.	oz.	oz.	oz.
Hard labour	3·739	2·903	2·662	17·438	22·087	21·337
Moderate labour	3·038	2·747	2·403 or	16·230	22·602	21·13
Rest	2·184	2·545	2·030	9·514	18·915	17·927
			1·623			14·374

The significance of the very marked deficiency in proteids is alluded to in paragraph 5 of the note under consideration, and the Board begs to draw special attention to the fact that, even if the grain wage provided the worker with the means, there would be no security that he would, and almost a certainty that he would not, purchase therewith a properly balanced ration, while the wage will not permit him to purchase such a ration, even if he appreciated the necessity for doing so. Continued disregard of such physiological requirements can have but one result.

12. Besides the fact that, on the B, C and D class wages, the relief-workers cannot, if they will, obtain a properly balanced ration; there is another aspect of the matter of equal importance. The margin does not allow of their purchasing "a daily modicum of green herbs or vegetable," which are essential as antiscorbutics. At paragraph 7 of his memorandum, Surgeon-Lieutenant-Colonel King gives the results of attempts to purchase the "other items" of the rations. In these calculations, one-ninth should be added to the cost of the grain portion of the wage to allow for loss in grinding or making flour. If this be done, the results are as follow :—

Class.	Standard wage.	Cost of the ration at				
		Adóni.	Hatti-belagal.	Kosgi.	Bellary.	Pattikonda.
	As. P.	As. P.	A. P.	As. P.	As. P.	A. P.
A	1 5	1 5·3	..	..	1 6	..
B		1 5·9				
D	1 3	1 4·08	1 6·8	1 4·6	..	1 5·32
	0 10	10·34	..	..	..	..

These figures, so far from suggesting that there is an "ample margin" allowed by the Code rates, point to the reverse. The conclusion is confirmed by reports received by the Board from Collectors showing the cost of purchasing the "other items" in various affected districts. The results of these enquiries are summarised below :—

Cost of purchasing the "other items" of relief wages and the margin left.

Districts.	Pulse.	Salt.	Ghee or Oil.	Condiments and vegetables.	Total.	Maximum wage at prices of January.	Margin for grain.	Quantity of grain purchaseable.
				Maximum—A Class—Males.				
	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Tolas.
Kurnool	4·00	0·50	3·00	1·50	9·00	17·00	8·00	50·00
Bellary	2·41	0·26	2·38	1·50	6·55	18·80	11·45	66·79
Anantapur	3·26	0·30	4·29	2·50	10·35	19·00	8·65	48·66
Cuddapah	3·00	0·33	3·00	1·50	7·83	16·00	8·17	54·81
				Minimum—D Class—Males.				
Kurnool	2·00	0·25	1·00	0·75	4·00	11·00	7·00	43·75
Bellary	1·20	0·18	0·78	0·75	2·91	12·00	9·09	53·03
Anantapur	1·63	0·20	1·43	1·25	4·51	12·00	7·49	42·13
Cuddapah	1·50	0·25	1·00	0·75	3·50	11·00	7·50	50·31

If allowance be made for necessary loss in husking or grinding, instead of having in class A 60 and in class D (minimum) 40 tolas of flour, the amounts of grain purchaseable would yield :—

	Flour.	
	Maximum.	Minimum.
	Tolas.	Tolas.
Kurnool	45·0	39·4
Bellary	60·0	46·7
Anantapur	43·8	37·9
Cuddapah	48·3	45·8

Enquiries are being made as to the amount of condiments and vegetables that can be purchased for the sums mentioned, but, in Bellary, it appears that the amounts purchaseable even with a maximum wage are absurd, and, practically, in no case do the relief-workers get A class wages. In Cuddapah, the Special Deputy Collector reports as follows in the matter :—

"The relief-worker never does at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a 'chatni' (చట్ని). This costs him a pie or a pie and a half, and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have a number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables and they rest satisfied with the 'chatni' that they make."

13. The Board considers that the comments of the Sanitary Commissioner on the Famine Code wages and diets are amply justified, and, this being so, it is its duty, as being entrusted with the administration of all measures for the relief of distress, to urge upon the Government the necessity to rectify the errors, and to remove the drawbacks to the system as soon as possible, in order that the relief offered may meet the requirements of the case as specified in paragraph 112 of the report of the Famine Commission.

14. The remarks made so far are based on an assumption that the relief-worker would, in return for ordinary industry, receive full wages. Most of the persons who resort to relief works would ordinarily be placed in class B, but, as shown by the Sanitary Commissioner, whether from delay in offering them relief, from insufficient wages, or what not, the proportion of workers found to be in good condition is only about half, the rest being in poor or bad condition. The inevitable result, unless tasks are re-adjusted with a liberal hand, must be failure to turn out the tasks demanded in B class; fining for some days till the wage reaches a vanishing point; loss of strength; reduction of class B to class C, and then the same process would, under the inappropriate wage for that class, again go on until the workers reach the weakly gangs, or are sent to the kitchens to be fed gratuitously.
Two main causes work to this end :—

(1) Insufficient and inappropriate rations.
(2) Unrestricted and unsympathetic fining.

On the former point, the views of the Sanitary Commissioner demand the earnest attention of Government; on the latter, the Board would, most respectfully, request that, on reconsideration, the Government will revert to the policy set forth in 1892, which is that so forcibly urged by the Sanitary Commissioner in his memorandum under reference. In particular, the most earnest consideration of Government will be drawn to the fact that the C class diet is unfit for relief-workers placed on tasked work. This appears to have been the view of Government in 1892, and D class diet

is, as Government then remarked, only suitable as a punishment, whilst, the Board would point out, as stated in paragraph 131 of the report of the Indian Famine Commission, that, even in the case of contumacious characters, "care should be taken that the penalties for wilful idleness, in the form of deductions from the wage, should not be so large or so often repeated, as to have the effect of reducing the food of the labourer below what is necessary for subsistence." It was the belief that the recent orders of Government ran counter to this principle which led the Board, in its Proceedings, dated 15th December 1896, No. 436, to point out the dangers involved in the course it understood the Government wished to be followed, and especially prompted the remarks made in paragraph 4 of that Proceedings. When that Resolution was drafted, the Board was not aware that the Famine Code wages contravened physiological principles so greatly, and were so far at variance with the experience gained in jails in this Presidency, and it had only to guide it the empirical deductions of the Madras Government of 1892, in arriving at which the Sanitary Commissioner was not consulted.

15. Besides the risk of loss by fines, the relief-worker has no margin to guard him from "loss which may be inflicted on him by administrative errors, or peculation on the part of subordinates, or other analogous cause." For one day a week he receives the minimum wage only; and as, under the recent orders of Government, village relief is not to be given in any form, he or she often has a number of dependants at home, whose subsistence has to be provided for out of the inadequate wage. In these latter aspects, the system at present laid down for Madras contrasts most unfavourably for the distressed who need and seek relief with that adopted in the North-Western Provinces and Oudh (*vide* G.O., No. 14, Revenue, dated 9th January 1897). There the workers reside on the works and can, therefore, devote their whole energies to the tasks demanded; practically, all are placed in class B; youths and girls above sixteen years are classed as adults, not those above twelve years; as a rule, only the men of the gangs are liable to fines; a wide margin is allowed in fixing the task according to the capacity of the gang; wages are not allowed to be reduced below the penal ration prescribed in article 103 of the North-Western Provinces Code; and, finally, to dependants gratuitous relief on a most liberal scale is given. As to the latter particular, the Board requests that the attention of Government may be given to the following figures, compiled from the *Gazette of India*, showing the numbers relieved on works as dependants, at poor-houses, and otherwise in the three provinces of Madras, Bombay and the North-Western Provinces during three successive weeks. The figures speak for themselves.

—	Numbers.		
North-Western Provinces.			
Relief workers	522,916	664,247	805,595
Dependants	123,052	125,973	165,611
At poor-houses	50,617	57,590	60,665
Otherwise relieved	99,106	176,544	222,137
Total ..	795,691	1,024,354	1,254,008
Bombay.			
Relief workers	178,585	197,546	222,155
Dependants	78,316	83,617	93,767
At poor-houses	7,994	11,062	11,277
Otherwise relieved	..	..	..
Total ..	264,895	292,225	327,199
Madras.			
Relief workers	20,833	24,882	30,744
Dependants	..	..	..
Gratuitously fed in kitchens	1,749	2,070	2,736
Otherwise relieved	6,259	6,974	7,255
Total ..	28,841	33,926	40,735

16. From paragraph 5, &c., *supra* it is clear that the original, and, the Board would respectfully submit, the proper, theory was that all classes require an equal quantity of food. If there is any difference, it should be in favour of, not against, classes B to D. The weaker a cooly is, the more and the better food he requires to bring him into condition. The Board would, therefore, urge that the classification under A, B, C and D should have reference solely to the hereditary occupations and physical condition of the workers, not to the amount of food which they require. In its Proceedings, dated 26th January 1897, Government, after pointing out that the Board had failed to apprehend the system of relief works as laid down in the Famine Code, proceeded to enunciate the safeguards provided by the Code for the Government and for the cooly. The safeguard for the Government was the "rigidity" of tasks and fining. The safeguard for the cooly was the "elasticity" allowed by the change of gang from one class to another. Unfortunately, the "elasticity" which safeguards the cooly is one which gives him less to eat; a ration which has been condemned on the highest scientific authority as insufficient to keep him in health and strength, and which, on the lower scale, has been denounced by the Madras Government itself. The Board has always insisted, as strongly as Government itself, on the necessity for exacting tasks, provided only that these tasks are fair. The relief-cooly is always willing to do a fair task, and, as Surgeon-General Cornish long ago pointed out, and as Surgeon-Lieutenant-Colonel King now observes, there is no danger of the relief works being "unduly attractive", for, in the rural tracts, attendance on them is more or less a degradation. Respectable caste women and girls burst into tears when inspected at Maddikera. The Medical Officer present said that they were hysterical. Possibly, but through sorrow and shame at their fallen condition. It is most difficult to get caste children or caste destitutes into our kitchens, as oppobrious epithets commonly attach to those who frequent them. This is not peculiar to India. "Soupers" and "tickets for soup" are terms of abuse commonly applied to the poor in receipt of relief in Ireland. Poor old women reject with scorn the offer of food in a kitchen, preferring to break stones under the Deccan sun rather than eat an unearned ration. The blind prefer to break stones all day rather than accept the kitchen ration. There are two such cases at Yadiki. For the safeguards enumerated by Government, the Board would most respectfully suggest a rigidity, not in tasks and fining, but in the quantity of food earned by the worker, and an elasticity, not in reducing his class, and consequently his wage, but in adapting the task to his capabilities. Government will be sufficiently safeguarded, so far as expenditure on works goes, by the fact that only extreme pressure will bring the cooly on the works, and by the loyalty and honesty of its own officers.

17. There is another point on which the Board would again, respectfully, request a reconsideration of the orders of Government, viz., the prohibition of gratuitous relief in villages. The Famine Code says: "A rise to the 'scarcity rate', from time to time fixed by Government, in the staple food-grain or grains of the district is a sure indication of the existence of severe scarcity calling for the immediate introduction of relief measures." We have had scarcity rates, more or less, for three months. The early dry crop was nearly all lost, and the later-sown dry crop is also generally a complete failure. The temporary lull, while the petty harvest goes on, alone keeps the poor from crowding to our works, as they will within from three weeks to a month. Many of them are stinting, and have been stinting, themselves. The Code says "in the early stages of distress, unless otherwise directed by Government, relief for all who cannot earn wages on relief works, and are otherwise unable to support themselves shall be restricted to the grant of cooked food at central kitchens established for the purpose." The phrase "unless otherwise directed by Government" does not, the Board would respectfully submit, mean that the Code leaves a discretion as to the time when gratuitous relief shall begin, but as to the form which it shall assume, whether it shall be granted under section 64 or under sections 83 and 84 of the Code. In its Proceedings, dated 16th January 1897, Mis. No. 255, Government stated that there was at present no need to appoint Circle Inspectors. In its Proceedings, dated 30th December 1896, No. 760, Revenue, Government held that the reports submitted to it "did not show that gratuitous relief was likely to be needed in any portion of the

affected tracts for a very considerable time to come", adding that "it is needed only when the season continues bad for a long time in order to save life, but should not be started till then." This view, the Board respectfully submits, is not that laid down for guidance in the Famine Code. If relief is withheld until life is in peril, it will be given too late. The true principle of famine relief is that the people are to be taken in time, and before they have fallen off in condition, and handed over in the same state of health when relief operations close. The Sanitary Commissioner now sounds the same note of alarm. He speaks with professional authority. The Board supports him. It is possible that, at first, the gratuitous relief required in villages may be small, but the nuclei of administration should be formed early, lest, when the crush comes, the authorities should be unequal to the work of organization.

18. With the recommendations of the Sanitary Commissioner, made in paragraphs 19 and 20 of his note, the Board is in almost entire agreement, but in reference to the detailed statement in paragraph 20, it would remark regarding—

(*b*) on the necessity for an ample margin, the Board is at one with the Sanitary Commissioner, but, on the question of the actual amount of vegetable, with which it would include tamarind, required, it offers no opinion. The matter is one for experts.

(*c*) that the particulars should be asked for from the Government of India;

(*d*) and (*j*) instructions in this sense will be issued to all Collectors;

(*e*) this may be done, and the Sanitary Commissioner will be asked to draft the note;

(*f*) the Board considers that the balance of convenience is in favour of a single grain equivalent, so long as an "ample margin" is allowed, but this margin does not now exist.

(*g*) and (*h*) instructions in this sense have been issued;

(*i*) the greatest importance should be attached to this;

(*l*) Collectors will be requested to arrange through District Medical and Sanitary Officers for the systematic inspection of all and, if possible, periodical weighment of some of the gangs, on all works;

(*m*) the change is desirable not to say imperative, and is in accordance with practice in the North-Western Provinces; according to the task tables a boy of 11 counts as one unit and a boy of 12 as four units. In fact, the latter is supposed to do the same work which could be done by 4 boys of 11. This is absurd; and finally

(*a*) and (*k*) are practically what the Madras Government urged in 1892.

19. These Proceedings have been unavoidably delayed. Two paragraphs had been accidentally omitted in fair-copying the Sanitary Commissioner's letter, and a reference had to be made to him at a remote place in Kurnool; and while they were passing through the press, the Famine Commissioner was continually changing camp in the four Deccan Districts. The Sanitary Commissioner, also, required some alterations to be made in his letter after it was in print.

(True Copies and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ Sanitary Commissioner.

Read—also the following letter from T. W. HOLDERNESS, Esq., Deputy Secretary to the Government of India, Department of Revenue and Agriculture (Famine), to the Secretary to the Government of Madras, Revenue Department, dated Calcutta, 20th February 1897, No. 629-F—116-1 :—

In your telegram of the 11th February 1897, summarising the situation and the relief operations for the month, in compliance with the request contained in my letter No. 9-F, dated 25th January, it is said that "the relief wage has been reported inadequate by the Sanitary Commissioner." I am directed to request that the Government

of India may be informed as to the evidence on which the Sanitary Commissioner's report was based, and whether his opinion has the concurrence of other authorities. The Government of India would also be glad to know whether the Sanitary Commissioner refers to the full wage earnable by relief workers on completion of specified tasks, or to the minimum wage, or to wages below the minimum wage actually earned by workers, as the result of fines having been imposed for short work. Section 106 of the Madras Famine Code provides that "as a general rule the effect of fines must not be to reduce the wages below the minimum wage," but the Government of India have no information before them as to how this restriction works in practice. It is however obvious that if the wages actually earned by the majority of workers on particular relief-works are reduced by fines for short work below the minimum wage, the wages may be insufficient, though the minimum wage is sufficient. The Government of India are anxious for full information on this point, as from no other province has a complaint been received as to the insufficiency of the present famine wage.

Order—No. 295, Revenue, dated 4th May 1897.

Miscellaneous.

The memorandum of the Sanitary Commissioner read above, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India with reference to the enquiry made by that Government in its letter, No. 629-F, dated 20th February 1897, and its attention will be drawn prominently to the observations and recommendations made by the Sanitary Commissioner in regard to classification and wages of relief workers. Such of the other recommendations made by this officer as require the orders of Government have already been dealt with in G.O., No. 216, dated 30th March 1897.

2. Ordered that the following letter be addressed to the Government of India.

(True Extract.)

A. Knapp.
for Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement, Land Records and Agriculture).
„ the Local and Municipal Department.
„ the Financial Department.
„ the Public Works Department.
„ the Accountant-General.

Exd. C. M. Thumbuswamy.

150 Copies.

ues and Extract.)

P. 4-D

Government {1897} of Madras.

REVENUE.

Recd.	1897.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 295, 4th May 1897.

1607 Z 12-6-97

Communicated to officers of the C.W.D in continuation of P.C. No. 1046 W of 14 April 1897.

JD CROSS.

S.Ho
ch Rfd

MAY.

Wages.

Stating that the memorandum of the Sanitary Commissioner, Madras, on the inadequacy of the — and rations allowed to relief-workers according to the Madras Famine Code, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 18th February 1897, No. 144 :—

Read—G.O., No. 14, Revenue, dated 9th January 1897.

Abstract.—Communicating, for, information, a letter from the Government of India forwarding copy of a Resolution recorded by the Government of North-Western Provinces and Oudh regarding famine-relief operations undertaken in the United Provinces, together with a set of rules framed by that Government for the guidance of officers employed on relief works.

Read—again the following Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 4th February 1897, Mis. No. 845 :—

Read—the following paper :—

Letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Collector of Bellary, dated Fort St. George, 11th January 1897, No. 85-S.

I have the honour to state that, on my inspecting the condition of relief-workers on the Alúr-Guntakal road, I found certain gangs in an unsatisfactory condition of vigour. On making enquiries, I ascertained that certain of these were residents of Hattibelagal. The distances of works from this village vary from three to five miles. Some of the relief-workers get over the difficulty by residing in the village of Nageradonna under very unfavourable hygienic conditions; but the majority have, I believe, to contemplate a march of from eight to ten miles daily in addition to their work.

2. My enquiries showed that the food-grain in this and neighbouring villages was above casbah rate—even allowing for the difference between the respective country and official seers; this has been sufficient to make a diminution in the total nourishment available from a wage which even, under favourable circumstances, permits a mere fraction of a pie for fluctuation of prices of "other items."

3. Under the above circumstances, I would advise your causing the erection of sheds to serve the distant villages as early as possible. Sections 55 and 120 (paragraph 2) of the Famine Code should also, I consider, be put in force with as little delay as possible.

4. The relief-workers declared their willingness to reside in sheds on the works if they be erected for them.

5. In the case of the Hattibelagal village, I would advise you to ascertain whether work nearer the village-site might not be obtained; for example, the Madiga and Mala wells require deepening and improving—also the village well and the fort well.

Endorsement by Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, dated 26th January 1897, No. 3-T.

True copy forwarded for the information of Government, through the Board of Revenue (R.S., L.R., and Agri.).

Resolution—dated 4th February 1897, Mis. No. 845.

Submitted for the information of Government.

2. The Collector of Bellary will be requested to report what action he has taken with reference to the Sanitary Commissioner's letter.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Collector of Bellary.

Read—again Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 5th February 1897, No. 100.

Abstract.—Submitting to Government, with remarks, Sanitary Commissioner's report on the condition of the people near Pattikonda in Kurnool.

Read—also the following letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Secretary to Government, Revenue Department [through the Board of Revenue (R.S., L.R. and Agri.)], dated Mallayala, 27th January 1897, No. T1 :—

I have the honour to forward, for the information of Government, the documents noted in the margin affecting certain matters that my recent inspections of part of the Kurnool and Bellary districts have brought to my notice.

Memorandum, dated 26th January 1897.
Copies of letters No. 85-S, dated 11th January 1897, and No. 179-S, dated 18th January 1897, to the Collectors of Bellary and Kurnool, respectively.

2. I send these through the Board of Revenue so as to prevent the necessity of making second copies of this correspondence for its information and enabling it to make such remarks on matters within its jurisdiction as may be thought necessary.

Enclosure.

Memorandum as to Wages and Rations—Chapter VIII, Famine Code.

1. It is desirable that section 120, chapter VIII of the Famine Code, be more explicit, if the second paragraph, which dictates that certain variations in wage can be permitted if the amount of money to purchase the "other items" be insufficient, is to be of any utility in practice. Whilst it is laid down what the grain equivalent is for class A, that for the B and C can only be obtained by recourse to a calculation—a calculation that various persons may proceed to make from a different basis. For example, it is quite possible to understand that the "other items" would be invariable, and that only the grain should be altered; whilst it may also be held that both grain and "other items" are to be decreased proportionately to the totals quoted in the section for the respective classes. I presume that the latter method is what is really meant. Such a calculation yields the following results :—

—	Total money grain ration.	Distribution.				
		Unhusked grain.	Unhusked pulse.	Salt.	Ghee or oil.	Condiments and vegetables.
	lb.	oz.	oz.	oz.	oz.	oz.
Males—						
A	2⅝	24	4	0·5	1	1
B	2⅜	21·7	3·6	0·45	0·9	0·9
C	2	18·3	3·05	0·33	0·8	0·8
D	1¾	16	2	0·33	0·33	0·5
Females.—						
A	2⅝	20	4	0·5	1	1
B	2¼	18·95	3·8	0·474	0·947	0·947
C	1⅞	15·78	3·16	0·395	0·79	0·79
D	1⅝	14	2	0·33	0·33	0·5

In my opinion, (*a*) the above diets fail to meet full requirements, and (*b*) the conditions under which the equivalent wage reaches the relief-worker are such as to imperil correct nutrition. I purpose to discuss these conditions *seriatim* :—

Standards of diets used by the Deccan labourer.

2. For comparison with the Famine Code diets given above, I quote the result of observations as to what articles and what amounts are eaten by the labourer in the Deccan per day. This calculation was obtained by causing women well accustomed to cooking to select from a small store—just as they would in prosperous times in their own houses—sufficient for one day's food. This was done in twenty experiments with the following results :—

Amounts required in times of prosperity by the Deccan labourer.

Articles of diet.	Quantity.
	oz.
Unhusked cholum	29 5
Dhal	5·0
Salt	1·2
Tamarind	1·0
Chillies	1·32
Oil	0·825
Vegetables	5·65
	lb.
Firewood	6·65

3. But, lest in selecting enough material for twenty-four hours' food a mistake might occur, observations were made of the amounts of grain and dhal necessary for a single meal only in forty-five experiments. These results went to show that the amounts chosen were in wonderfully close approximation to each other, although no scales were employed by the women—hand and eye being alone used. The following is the result when doubled for the equivalent of one day's supply :—

	oz.		oz.
Unhusked cholum	26·7	=Cleaned cholum at 7 per cent. wastage...	24·83
Dhal	4·758	=Cleaned dhal at 2·3 per cent. wastage ...	4·649

At least one seer (2 lb.) of grain popularly regarded as requisite per day per adult male.

Certain parts of the year may be passed without the dhal, or with very little; certain parts of the year no special vegetables may be taken, but the tendency is always towards the quantities stated. The chillies allowed above seem heavy, but about 1 oz. is doubtless actually used. In the case of the grain, the tendency is towards a greater and not a smaller amount than here shown; so that it may be safely said that for an adult Deccan labourer in prosperous times one seer per day (two pounds) of dry grain is the standard. Indeed, the invariable sequel of the query as to the amount requisite for an adult male per day, is to cause with amusing regularity the index finger to be raised to give emphasis to the uniform statement that "one seer" is necessary. The free use of onions and tamarind at all times apparently keeps at a distance *scorbutus*; oil is not much used, but, when the person can afford it, this is employed. Curds and buttermilk, and occasionally ghee, are trusted to for the supply of fats. Although buttermilk is not rich in fat, it is so in valuable salts.

Theoretical nutrient value of diets.

4. The *theoretical* nutritive value of the relief-worker's diet is as follows :—

Ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
A	2·662	20·062	1·449	21·337
B	2·403	18·128	1·307	21·135
C	2·030	15·299	1·143	17·997
D	1·623	12·959	0·615	14·374

The above statement assumes that the whole grain and pulse laid down by the Famine Code is available: whereas no allowance for wastage is made in estimating the grain equivalent wage. The waste that occurs in cleaning ragi or cholum may be taken at from 7 * to 13 per cent. In the Bellary jail, long experience shows it to be 10 per cent. In reality, the methods of cleaning adopted by the cooly are wasteful; but I assume that care in famine times will be exercised; and, therefore, in discussing the value of existing diets, allow only 7 per cent. The *actually available* grain (in ragi) and the nutritive value obtainable with famine wages is therefore as follows :—

The Famine Code ignores results of normal loss by husking and cleaning grain.

Ration for relief-workers allowing 7 per cent. wastage for cleaning ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
A	2·496	18·715	1·348	21·758
B	2·273	16·966	1·282	18·389
C	1·921	14·319	1·122	16·900
D	1·531	12·111	0·597	13·484

Standards affording contrasts with Famine Code diets.

The following affords a standard that may be usefully contrasted with the foregoing :—

Diet of free labourer (Deccan)—cleaned grain.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.	oz.
Cholum	24·831	2·309	17·953	0·497	19·096
Dhal	4·649	1·037	2·831	0·098	3·047
Oil	0·875	..	..	0·875	2·013
Vegetables	7·970	0·143	0·462	0·040	0·554
Total ..	38·325	3·489	21·246	1·510	24·710

5. The difficulty at all times recognizable as to fixing the proportions of constituents in a diet devoid of meat has been the fact that, whilst legumes may be relied upon to represent a fair proportion of albuminoids found in less proportion than requisite in cereals, beyond dealing with a certain amount the stomach refuses to be made a chemical laboratory of, and shows its resentment in the form of indigestion. To keep within this limit, therefore, and yet provide a proper amount of albuminoids without overdoing the proportions of starches found in the staple grains, is a matter of importance. This has been obviously carefully held in mind by the framers of the famine diets; and, were the cooly to be equally appreciative of chemical and physiological questions involved, the combination of efficiency with economy would be less

* I obtained 7 per cent. by exercising the greatest care repeatedly searching the refuse for eatable portions. The Tahsildar, Pattikonda, made an experiment also conducted with much care and got 7·85 per cent.; but this "Nukaloo" was by no means so clean as demanded in jails. Ten per cent. may be regarded as a safe allowance.

questionable. His knowledge, however, is limited to the fact that an amount of grain is requisite that will make his belly-band tight, and, till that is accomplished, he believes himself hungry. That the Deccan cooly is not alone in the matter of bulk of food, I may illustrate by stating that a short time back a party of American soldiers started on what was to be a prolonged march on highly concentrated provisions. In a limited bulk there duly existed the necessary amount of nourishment according to the chemist, and in easily assimilable forms; yet, the men failed to accomplish their work and returned weak, worn out and unfit for duty. Diminution of bulk of food is therefore a question of education, and a population cannot be readily made to fall in with the scientific system of a certain proportion of dhal to grain, &c., laid down for its guidance in the Famine Code. Recent researches by Dr. Pavey into the functions of carbo-hydrates render it probable that this is not altogether to be regretted, and that, in the presence of a certain amount of proteid substances, carbo-hydrates may contribute to the formation of proteids. Indeed, it is not unlikely that the Deccan type of one (and more) seer of grain per diem without dhal for a part of the year is not physiologically wrong, as it would seem in the present state of knowledge. Dr. Pavey's researches cannot, however, yet be applied practically to consideration of these diets, until further experience and data are obtained, and, whilst recognizing that the excess of carbo-hydrates is not an evil, and may mean an aid towards formation of albuminoids, such excess *cannot in the present state of knowledge justify abating the demand for a sufficiency of ready-made albuminoids* represented in these diets by dhal. The excess of carbo-hydrates may further explain the fact that a vegetable oil or animal fat is not a constant part of the diet. I enter into this matter, as it is important to remember that, in using a wage calculated for the reduced diets shown, the Deccan relief-worker is specially liable to the inimical influence of want of sufficient albuminoids in his diet; because believing he cannot buy with his wage enough staple grain at disposal, he will not purchase the expensive dhal that is the essential addition to eke out a correctly proportioned diet.

Given but a small allowance of grain, the relief-worker does not possess the knowledge requisite for a correct adjustment of albuminoids.

6. I have suggested in paragraph 1 that it is likely to produce considerable confusion that the details showing clearly what has been regarded as sufficient for each class of relief-workers are not exhibited. But, whilst this implies inconvenience to those who would feel the responsibility of watching the health condition of relief-workers, a defect that cannot do otherwise than detrimentally influence the results aimed at consists in assuming that so long as such and such a weight of "staple grain" is obtained, no further refinement in definition is requisite. Yet, a little consideration will show that, when working with so fine a margin, or rather, as I show further on, practically no margin at all, for variations in prices of "other items," it is essential that the nature of the grain in use be allowed for. Thus, using B diet as a type, it will be seen that considerable variations occur in the important item of albuminoids according as the grain in use be wheat, cholum, ragi or rice :—

Nutrient value of B diet (allowing 7 per cent. for cleaning).

Grain.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
Wheat	3·749	17·087	1·241	19·942
Cholum	2·837	17·933	1·415	21·188
Ragi	2·403	18·128	1·307	21.135
Rice	2·403	19·235	1·111	21·791

So that to enable the same total of albuminoids to be obtained from ragi as from cholum on the B diet (provided the alteration were made in grain alone) it would be necessary to allow 5·95 ounces more; that is, 5·95 ounces should be added to the 21·7 ounces of ragi to make it equivalent to cholum, no calculation being made for wastage in either case.

Effect of Famine Code ignoring the nature of the staple grain used with relief-worker's diet.

7. The following exhibits the actual results of attempts to purchase the "other items" at various places with the wage allowed. Every precaution was taken to see that the items were obtainable at the same prices as those given to the cooly. The official rate was 15 seers per rupee; and I may here state that, to prevent confusion, this rate is adhered to in all calculations made in this memorandum:—

At Adóni—

A. wage ... A. 1 P. 5

Items of diet according to Famine Code.	Cost (*a*). A.	Cost (*a*). P.	Cost (*b*). A.	Cost (*b*). P.
24 oz. cholum	0	9	0	9·75
4 „ dhal	0	2·75	0	2·50
0·5 „ salt	0	·33	0	·38
1 „ oil	0	3	0	3
0·5 „ chillies } 0·5 „ tamarind }	0	1·25	0	1·25
Total ...	1	4·33	1	4·88

Note.—(*a*) and (*b*) refer to different shop prices.

B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	8·7
3·6 „ dhal	0	2·25
0·45 „ salt	0	0·34
0·9 „ oil	0	2·7
0·9 „ chillies, tamarind }	0	1·125
Total ...	1	3·11

D wage—Pies 10.

	A.	P.
16 oz. cholum	0	6·4
2 „ dhal	0	1·375
0·33 „ oil	0	0·99
0·33 „ salt	0	0·251
0·5 „ tamarind and chillies	0	0·625
Total ...	0	9·641

What could be actually bought at Adóni for As. 1–3—

29·35 oz. cholum.
1 „ salt.
1 „ chillies.
1 „ tamarind.

At Hathibelagul—B ration—B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	10·85
3·6 „ dhal	0	2·70
0·45 „ salt	0	0·337
0·9 „ oil (not available)	0	2·7
0·45 „ chillies	0	·17
0·45 „ tamarind	0	·085
Total ...	1	5·6

Actually bought at Hathibelagul for As. 1–3 *as the best bargain for the money*—

22·5 oz. cholum.
3 „ dhal.
·5 „ chillies.
1 „ salt.
1 „ tamarind.

At Kosgi (casbah near Chinnathambulam works)—B wage—As. 1–3.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	oil	0	2·25
Salt, chillies, tamarind	... ...	0	2
	Total ...	1	3·65

Bellary—A wage—As. 1–5.

		A.	P.
24 oz.	cholum	0	9
4 „	dhal	0	3
1 „	oil	0	3
1 „	salt ...		
0·5 „	chillies		
0·5 „	tamarind	0	2
	Total ...	1	5

At Pattikonda—wages being As. 1–3 for B class.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	salt	0	·9
0·8 „	vegetables and condiments	0	1·8
0·9 „	oil	0	2·25
	Total ...	1	4·35

There is, therefore, usually a deficit as to purchasing the bare rations below the A wage, whilst in all a margin for fuel, &c., does not exist. On my representing this to the Collector of Bellary and the Executive Engineer, the latter made an independent experiment and purchased the full ration with a fraction of a pie to profit—without, however, any fuel. On comparing prices given, we practically agreed; but I found that the fractional margin had been obtained by reducing to an absurdity the amount of chillies requisite for a single diet, and causing vegetables to be represented by a single brinjal—about the size of a pigeon's egg. This officer has kindly promised to subject the matter to test on all his works; but from frequent enquiries, I am satisfied that *unless the single ounce of vegetables and condiments allowed in the ration be juggled with,* * *so as bring the amounts outside the pale of practical dietetics, the ration cannot be purchased with the allowance for "other items."*

In practice, no "margin" exists in B and C wages.

8. Further, it is a mistake, when calculating the rations, to assume that the whole wage is available daily. The "rest day" gives the cooly but the minimum wage. Thus, at 15 seers per rupee, As. 1–3 is the wage for B class and the minimum is one anna, so that As. 1–2·57 is the daily average wage. Similarly, in the case of the A wage, the minimum of one anna reduces the daily wage of As. 1–5 to a daily average of As. 1–4·3. Therefore, the "ample margin" provided by the framers of the present Famine Code disappears, even on the A wage. Of course, this may be got over by stating that on receipt of the minimum wage the relief-worker does not labour; he receives a wage that will

Still less, is it possible to obtain the diet on the average daily wage?

* Since writing the above, I am in receipt of letter, No. 417, dated 21st January 1897, with which the Collector of Bellary forwards a letter from the Deputy Collector of Adóni, dated 8th January 1897, No. 49, in which it is contended that the rations can be purchased in the wage with a fraction of a pie to profit. But even this was done only with A and D diet; B and C were ignored, yet that this could only have been accomplished by reducing the condiments and vegetables to an *absurdity* is borne out by the following extract from the letter by the Adóni Deputy Collector:—

Total condiments and vegetables. { "Six chillies, tamarind ball bigger in size than a marble. two small brinjals weigh 2½ tolas, value of these articles is 1½ pie each." [!] } 1·50 pies and

sustain life during *rest*. But practice sets this theory at naught. It is clear that in many relief works release for the rest day simply means that a journey of five, or perhaps ten, miles to the nearest village for market supplies has to be undertaken. In any case, as a fact, the total nutrient value of the week's diet of the B class is *limited* by the sum not of As. 1–3 but of As. 1–2·5 and the relief-worker must necessarily adjust his food to this sum.

9. Should the relief-worker not proceed to a neighbouring central town, such as the cusbah station, once weekly for his food, he suffers monetarily; because the village shopman always runs his prices above the cusbah rates. I have found this frequently the case, even allowing for conversion of the 86 tola measure to the Government measure of 80 tolas.

There is no margin to cover the villager as against cusbah prices.

10. A further reason why the relief-worker does not get the nutrient value supposed by the Famine Code diets rests in the fact that, in the midst of scarcity, immature or otherwise inferior grain is bought; quality is here sacrificed to quantity. Thus I found that this year's immature grain in use near Alúr weighs, per seer of 86 tolas, 30 ounces, against 31·5 ounces for old white cholum, and against 34·4 ounces presumed by Government in regulating the 80 tola seer standard; so that the loss by immature grain is 12·8 per cent. Hence, *plus* the loss by wastage in cleaning, which, with the utmost economy, must be 7 per cent., there results a total loss of 19·8 per cent. or, in other words, the ration of available cleaned grain in B diet is reduced from 21·7 oz. to 17·4 oz.

Effect on nutrient value of inferior grain.

Note.—In the case of specimens handed to me by the Famine Commissioner, the difference between the mature and immature grain when measured and weighed, respectively, showed 4½ oz. in favour of matured and old grain per seer.

11. Nor do the relief-worker's chances of not receiving even the scanty ration presumed by the Famine Code end here; he has to run the gauntlet of being with a gang that has been subjected to fine or deductions. There can be no doubt that at times these may be conducted with supreme disregard of the fact that the population dealt with is one possessed of no margin, either of funds or physical strength upon which to call. The cause of these fines and deductions may be beyond the control of the greater number of persons subjected to these results. Thus, during my inspection of the Siruguppa road relief works (Bellary district) I found that adult men stood before me holding out their day's wages consisting of 6 and 9 pies. Revenue Board's Proceedings, No. 6834, dated 25th December 1896, show that in the Kurnool district the following fines were enforced:—

Effects of fines and deductions on total nutrient value.

Taluk.	Quantity of work to be done.	Quantity of work actually done.	Deduction in pay to be made.
	Class C.		
	c. ft.	c. ft.	
Koilkuntla	9,729	9,791	Minimum wages were paid.
Do.	852	689	Deductions varying from one-tenth to three-fifths of C class wages were made for most of the gangs on all days. Excess work also paid for on 4th December 1896.
Pattikonda	486	462	A deduction of one-sixth C class wages was made on the 1st day for the only gang formed that day.
	Class B.		
Sirvel	49,801	25,108	A deduction of half the wages.
	Class C.		
Do.	1,343	599	A deduction of three-fifths of the wages.
	Class B.		
Do.	4,139	1,218	Deduction varying from three-fifths hto nine-tenth B class wages.
Nandikotkur	726	653	A deduction of one-fifth B class wages.
Do.	523	388	
Do.	15,907	9,242	Varying from one-fifth to four-fifths of B class wages.

I am at time of writing this near a work (Maddikera) where the majority of the gangs are receiving the minimum wage per day, whilst defective organization as to distribution of tools and the physical condition of the gangs (dealing with excavation) show that the cause is beyond their control. Discretion * here would have seemed essential, and a much diminished task should have sufficed till organization was correct, and a chance had been given for improvement of physique by food that could not certainly be obtained on the minimum wage.

12. A further cause of reduction of the total nutrient value of the ration results when there is neglect of the fact that, if persons are so hard pushed as to resort to test works, there must also be in their houses the old and infirm, or those who are *rightly striving* to keep the remaining cattle fed, that is to say, that the ration meant by the Famine Code to cover the cost of coolies on works accommodated in sheds, and provided with bazaars on the works, is not applicable to the condition of affairs when neither bazaar nor relief circles are formed.

Where "relief circles" are not formed, the worker is at a disadvantage not contemplated in regulating his diet.

13. To complete this method of consideration of wages, it is well to ascertain the actual food lived upon by the relief-workers as a result of the various factors enumerated, showing that certainly no "ample margin" existed. On examining, with their consent, the food of relief-workers on Chinnathambulam works taken haphazard, the following results were obtained:—

What can the relief-worker really procure in the way of food?

For one man and child—plain cholum pudding lb. 3·9, equivalent to 12·81 oz. dry grain.

For two men—nothing but plain cholum pudding 3 lb. $3\frac{1}{4}$ oz., equivalent to 12·81 oz. dry grain.

For three nursing women—cholum pudding, fragments of kora vegetable, cost 1 pie, green chillies 1 pie, salt 1 pie, total weight 3 lb. $2\frac{1}{2}$ oz., equivalent to 12·625 oz. dry grain.

For two children and one woman—kungunny 2 lb. $2\frac{3}{4}$ oz. (with kora 3 pies, salt 3 pies), equivalent to 8·69 oz.

For five men—2 lb. 5 oz. cholum with green chillies 1 pie worth and salt 1 pie, equivalent to 9·25 oz. [This seems a very improbable amount; but the five men insisted that was all they could afford to eat, whilst bye-standers confirmed the statement.]

14. Although the condition of scarcity had not lasted more than two months, the state of relief-workers under the above condition on the Chinnathambulam and Adóni-Guntakal works cannot be regarded as reaching the standard set forth by the Famine Commission, namely, "the retention of the able-bodied labourer in a state of strength and health." The following was the result obtained by me on examination of the gangs in the localities stated:—

What is the effect on the physique of the relief-worker of the conditions under which the wages are received?

* Before my departure, a reduction in the task required was made by the Public Works Department Officer. This was none too soon, as the men were much overtaxed by the end of the day. My remarks apply to gravel digging.

Villages.	Number of gangs.	Men.						Women.						Children.						Nursing mothers.						Children.			
		Good.		Poor.		Bad.		Good.		Poor.		Bad.		Good.		Poor.		Bad.		Good.		Poor.		Bad.		Good.		Poor.		Bad.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Chinnathambulam works, Bellary district.	2	5	35·8	8	57·1	1	7·1	16	66·7	7	29·2	1	4·1	..	..	..	..	..	..	14	42·4	11	33·4	8	24·2	..	..	..	..
	13 and another.	42	62·7	14	20·9	11	16·4	29	34·6	38	45·2	17	20·2	..	..	..	..	..	..	7	30·5	13	56·5	3	13·0	..	..	..	..
	17	10	66·7	5	33·3	..	..	11	31·4	16	45·7	8	19·1	..	..	..	..	..	..	4	23·8	12	57·1	4	19·1	..	..	..	..
	18	..	..	..	..	..	..	16	42·1	13	34·2	9	10·0	..	..	..	..	..	..	3	30·0	6	60·0	1	10·0	..	..	..	..
	Total ..	57	59·4	27	28·1	12	12·5	72	39·8	74	40·9	35	19·3	29	33·3	42	48·3	16	18·4	41	87·0	10	11·8	1	1·2	..	..	2	3·8
Adóni-Guntakal works, Bellary district.	1	..	..	..	..	..	..	23	52·3	17	38·6	4	9·1	3	27·3	8	72·7	..	..	13	92·9	1	7·1	..	..	..	..	..	..
	6	..	..	..	..	..	..	1	20·0	2	40·0	2	40·0	4	33·3	5	41·7	..	..	17	94·5	1	5·5	..	..	..	..	..	..
	7	..	..	..	..	..	..	17	58·6	5	17·3	7	24·1	7	77·8	2	22·2	..	..	23	100·0	..	..	..	..	..	..	..	..
	12	..	..	..	..	..	..	18	35·3	19	37·3	14	27·4	1	8·3	7	58·4	4	33·3	..	..	6	42·9	1	7·1	..	..	..	..
	13	..	..	..	..	..	..	..	..	..	..	..	..	6	50·0	5	41·7	1	8·3	7	50·0	2	12·5	..	..	..	..	..	..
	14	..	..	..	..	..	..	13	50·0	10	38·5	3	11·5	4	26·7	7	46·6	4	26·7	14	87·5	..	..	..	..	..	..	..	..
	15	..	..	..	..	..	..	12	41·4	12	41·4	5	17·2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	84	45·7	65	35·3	35	19·0	74	39·8	74	40·9	35	19·0	25	35·2	34	47·9	12	16·9	74	87·0	10	11·8	1	1·2	..	..	2	3·8
Maddikera works, Kurnool district.*	1	17	56·2	10	33·3	3	10·0	17	56·2	7	43·8	3	10·0	6	40·0	..	..	2	13·3	9	56·2	7	43·8	..	..	..	..	..	..
	2	6	46·15	6	46·5	6	19·4	2	15·4	6	46·5	1	7·7	..	..	5	33·3	1	6·7	6	46·15	6	46·5	1	7·7	..	..	..	..
	7	6	28·6	6	42·8	1	5·6	5	17·3	4	28·6	4	28·6	7	50·0	..	..	4	26·7	6	28·6	4	28·6	1	7·7	..	..	..	..
	12	18	85·7	3	14·3	1	5·9	19	65·5	10	34·5	4	23·5	..	..	7	41·2	1	5·9	18	85·7	3	14·3	..	..	..	..	..	..
	13	19	44·2	18	41·9	6	13·9	14	48·3	15	51·7	5	17·2	9	52·9	..	..	2	11·8	13	61·9	6	28·6	2	9·5	..	..	..	..
	14	13	61·9	6	28·6	2	9·5	13	44·8	16	55·2	..	..	4	23·5	3	17·6	..	..	12	75·0	6	25·0	..	..	..	..	..	..
	15	18	75·0	6	25·0	..	..	12	41·4	13	44·8	4	13·8	..	..	3	17·6	..	..	12	75·0	..	..	..	..	..	..	..	..
	Total ..	87	57·2	52	34·2	13	8·6	72	47·4	71	46·7	9	5·9	24	35·3	19	27·9	5	7·4	69	90·8	7	9·2	..	..	..	..	..	..
	Total ..	171	50·8	117	34·7	48	14·2	146	43·6	145	43·3	44	13·1	49	35·2	53	38·1	17	12·2	143	89·4	17	10·6	1	·6	..	..	2	1·2
Adóni-Guntakal works, Bellary district.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Maddikera works, Kurnool district.*	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

* The opening of works here was manifestly too long delayed. The failure of children here, as compared with the result for the Bellary works, is marked.

In estimating the health state of the relief-workers from the above statistics, it must be remembered that the process of malnutrition, as contrasted with starvation is a slow one. The failure of the women, and more especially of the nursing mothers, before the men showed marked effects, must be regarded as but an ordinary sequence of events. In regard to children referred to, it is necessary to remember that they are those above five years of age, and not of that more perilous stage of life between one and five years.

15. In the preceding paragraphs, I have pointed to facts that influence the total nutriment for the wage afforded, especially with the object of demonstrating the fallacy of speaking of an "ample margin" being available. Leaving aside this question, I would now consider the diets from the point of sufficiency. It may be accepted as a fact that, unless the Jail Department has been guilty of gross extravagance up to date, the jail diets are calculated so that they allow nothing but what is requisite for "retaining an able-bodied labourer in health and strength." It would, therefore, be useful to contrast the diets obtainable (average daily) in jail and out of jail by the famine-stricken :—

District Jail diets—Hard labour.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·1	0·691	1·888	0·065	2·038	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including 1·706 oz. condiments and garlic.	7·706	0·139	0·447	0·039	0·089	..
Meat	2·143	0·321	..	0·180	0·414	..
Salt	1·0	..	..	..	..	1·0
Total ..	38·449	2·903	19·903	1·144	22·087	1·0

Simple imprisonment for males (and females on labour) in District Jails.

Articles of food.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	20	1·460	14·640	0·300	15·330	..
Dhal	3·1	0·691	1·888	0 065	2·038	..
Oil	0·5	..	..	0·5	1·150	..
Vegetables, including 1·706 oz. of condiments and garlic	7·706	0·139	0 447	0·039	0·089	..
Meat	1·7	0·255	..	0·143	0·308	..
Salt	1·0	..	..	..	..	1·0
Total ..	34·006	2·545	16·975	1·047	18·915	1·0

Sub-Jails.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·857	0·860	2·349	0·081	2·535	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including condiments	7·5	0·135	0·435	0·038	0·521	..
Salt	1·0	..	..	..	..	1·0
Total ..	36·857	2·747	20·352	0·979	22·602	1·0

16. The utmost that can be proposed in the way of economy in the case of the jail diet is the increase of dhal and abolition of meat * ; but, the endeavours would still be to secure the total proteids and starches. In this case, the ration is reckoned by allowing for wastage of grain, pulse vegetable and meat; not so however the famine rations. So that the rations allowed (ragi being the grain in each case) for a criminal and a famine-stricken population, respectively, may be thus contrasted with acknowledged standards of what is essential :—

* As has indeed been proposed by the Inspector-General of Prisons, Madras.

—	—	Albuminoids.	Starch. equivalent.
		oz.	oz.
A. Hard labour	Jail	2·903	22·087
	Relief works	2·496	21·758
B. Moderate labour	Jail	2·747	22·602
	Relief works	2·273	18·389
C. Do.	Relief works	1·921	16·900
D. Simple existence	Jail	2·545	18·915
	Relief works	1·531	13·484

The necessary nutrient value of rations according to standard authorities—

Lethely's scale (108-*lb. man*).

	Nitrogenous.	Carbonaceous.
	oz.	oz.
Idleness	1·92	14·12
Ordinary labour	3·28	21·05
Active labour	4·18	25·18

Playfair's scale (108-*lb. man*).

—	Albuminoids.	Fat.	Carbohydrates.
	oz.	oz.	oz.
Absolute rest	1·4	0·36	8·64
Gentle exertion	1·8	0 72	8·64

Dr. Meinert's scale (quoted by Church).

—	Albuminoids.	Oils.	Starch.	Starch equivalent.	Ratio.
	oz.	oz.	oz.	oz.	oz.
Bare sustenance	2·184	0·774	7·735	9·514	1:4·36
Moderate work	3·038	1·452	12·889	16·230	1:5·34
Hard work	3·739	2·578	11·510	17·438	1:4·66

These standards represent the amounts requisite after allowing for the difference of weight between the average European and Native. I have taken 108 lb. as a fair estimate of the weight of the Madrassee. This is the weight obtained as the average in the Lunatic Asylum, Madras, in a population of about over 500.† I choose the Asylum population, because it represents average individuals (adult males) from all parts of the Presidency, as I believe the average Tamil and the agricultural labourer of the Deccan differ in weight.

† Average age, 33 years.

Irrespective of the small allowance of albuminoids exhibited in the Famine Code diets by the above contrasts, the absurd provision of 1 oz. for vegetable and condiments in the famine diets against that for jails (paragraph 15) is very striking. In short, the only further possible way of making an economy when contrasted with jail diets has been effected by the framers of the Famine Code *at the expense of*

How it has been arranged to give the relief-worker a cheaper diet than the criminal.

the vegetable diet. That he may live to-day, the relief-worker has, therefore, to run certain risks in the future. On these diets, slowly but none the less surely, scorbutic symptoms must show themselves. They must have been devised by officers who never saw the horrors of the so-called "famine ulcers" in the famine of 1877. At that time, men were to be found in hospitals in rows with their legs simply rotting from their bodies, as a result of this scorbutic taint, combined with absence of sufficient nitrogenous diet. A more recent instance of the attempt to live on just such a type of diet—somewhat better indeed—was exhibited in the fate of the followers in the various late Burmese expeditions, large numbers of whom passed through my hands in Mandalay in 1892–93. That large numbers of men broke down in health with symptoms of land scurvy in these expeditions is notorious. Their diet provided (wheat flour ration) 4·141 oz. albuminoids and 18·881 starches; but the antiscorbutic, or vegetable diet, was represented by ½ oz. *amchur*, which it is possible the exigencies of service did not permit them always to get.

The danger of straining too much at economy.

I consider that, in the Famine Code rations, exactly the same class of mistake is being made. Whilst, in the case of the A and B wage, it might be possible for the relief-worker to obtain the minimum amount of vegetable salts by contracting the purchase of the already too small amount of staple grain and "other items," this point is of distinct import when dealing with such finely drawn theoretical diets as afforded by the C and D wage; for it must be remembered that in these not only are the total starches and albuminoids diminished, but that vegetable diet * is brought to the vanishing point.

* D ration—Combined vegetables and condiments, = 0·5 oz.

17. True, workers on diet C have normally but 50 per cent. of a full task; but what officer on relief works will adjust to this diet the task so as to compensate for distance walked from villages to works, the grinding of the day's provision, cooking the same and searching for fuel, not provided by the wage. Take the instance of the gangs from the Hathibelagal village. Certain of these walked about five miles in the morning starting from their homes in the dark at 4 A.M.; they worked at task labour from 7 to 12, and then had two hours' rest; worked from 2 to 5-30 P.M. and walked back five miles arriving at their village at about 9. They required from this time to 11 P.M. for cleaning, grinding, and cooking their food; they got to bed at about 12. This is, I hope, but an exceptional case; but 8 miles per day is not an unusual task. Ten miles per day equals 101·8 foot-tons or (0·47) nearly half a day's work. Unless, therefore, it is possible, in accordance with the refined calculation of the Famine Code as to the diet, to estimate not only the force requisite for the task, but also the total duty performed by the relief-labourer upon such a diet, it follows that the absence of any margin becomes a serious matter. Thus, with ragi grain, and not allowing for wastage, the C diet yields in albuminoids exactly that held necessary by Letheby for "idleness," and but 0·121 above that allowed by Playfair for "gentle exertion," a term that may be said to restrict motion to passing from one room to another, sewing with a needle and the like. Now, it is held that 400 foot-tons per day for the average able-bodied European represents a "hard day's work," and 300 tons is a "fair day's work." Reducing the latter task proportionately for the weight of 108 lb. man that I have assumed above, the task for an average day's work for a Madras native would be represented by 216 tons. But, the task required of the C class is but 50 per cent. of a full day's task; so that 108 foot-tons would represent the work required. If, however, the relief-worker has to march with a child weighing 16 lb. three miles to and from the work—a very common event—the amount of energy spent in marching alone represents 43·84 foot-tons, or 40 per cent. of the appointed task for the day. In short, in my opinion, so long as the standard aimed at is "to keep the able-bodied labourer in health and strength," the C wage is absolutely unsuitable for men *on tasked labour*.

It is not safe to adjust work and wages [diet] without allowing a margin.

The C wage should be abolished for tasked labour.

18. In the case of the D wage, I consider it provides a diet that ought to find no place in a system of relief, otherwise than for penal purposes. I have in paragraph 5 given reasons for believing that the relief-worker will not be guided by the light of scientific researches, and will most certainly not take care to provide a *quantum* of dhal with his one pound of grain. Further, he is saddled with the difficulty of not possessing one pound of prepared flour, but one pound of *unhusked grain*. Granting this, and assuming the unlikely contingency that he will correctly proportion his diet so as to gain the proportion of albuminoids according to the ideal of the Famine Code, the total diet would still represent 0·269 per cent. below what is necessary for "gentle exertion" according to Playfair, and no less than 0·653 per cent. below that held as requisite from the average quoted by Church for "bare sustenance," the calculations being in each case for a man of 108 lb. In discussing this diet more especially, it is seen how great the range may be of total nutrient value in accordance with the description of staple grain used. Thus, those who contend this slender ration is sufficient (paragraph 9, Government of India Resolution with G.O., No. 685, dated 24th September 1894) have much more sound argument on their side, when they rely upon wheat, which I believe is largely used in the north of India as the staple grain, the comparative figures being as follows:—

D wage is absolutely unsuitable otherwise than in wheat-consuming localities.

—	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
Wheat	2·615	12·191	0·567	13·496
Cholum	1·943	12·815	0·695	14·414
Ragi	1·623	12·939	0·615	14·374
Rice	1·623	13·775	0·471	14·859

In this Presidency, the chances of the cooly getting wheat flour are out of the question; what must be contemplated is the use of either ragi or cholum, and, when all dry grains are exhausted, rice. Beyond the richness in oil, practically, in dealing with rice and ragi, the same nutrient value is obtained.

19. *Recommendations based on the foregoing remarks.*—Having then pointed out what I regard as faults existing in the Famine Code diets, it remains for me to suggest what I think is requisite. This must depend upon what are the intentions of Government as to the famine-stricken; if it abide by the standard of maintaining the labourer in strength *and* health, none of the diets will suffice, owing to absence of provision for vegetable salts. But, if the intention be simply to preserve a population, so as to buoy it over an unfavourable period not exceeding, say, three months, diets A and B will suffice for the purpose, remembering that in proportion as the population uses the the type of diet laid down in the Famine Code, and fails to spend a certain part of the scanty wage upon vegetable diet, or is unable to procure it in at least the form of sufficient tamarind, a scorbutic taint must be forthcoming that may bring mischief to a certain proportion; but, in diets C and D the risk becomes so great, that it should not be run even for this brief period. In short, I consider diet C unfit for use with relief-workers *placed on tasked labour*. Subject to the scorbutic risk, it would suffice for (1) untasked labour; (2) as the *minimum* for tasked labour resulting from "reductions," for short work; (3) for gratuitous relief and (4) for poor houses. Diet D should be solely the reward of *contumacious* refusal to work, and not the sustenance of weakly gangs "given enough exercise to maintain health," the nutrient value being such as to render it quite task enough that life should be retained, if it be persisted in day after day.

20. If the diets procurable by wages A, B and D then are retained, the following changes would be necessary:—

(*a*) The amount of grain should be added to, to an extent sufficient to cover loss by wastage, say 10 per cent.

(*b*) The wages should be increased to an extent sufficient to provide a margin that will secure about six ounces of vegetables in diet A, and proportionately in others, and for provision of fuel for town-dwellers.

(*c*) The rations calculated as procurable for each wage should be distinctly set forth in detail in the Code.

(*d*) A relief work distant from the casbah more than three miles should *invariably* have attached to it a bazaar from the moment the work is opened; when feasible, by private arrangement; but, failing this being possible, under official arrangements, so that the articles set forth in the ration allowed should be obtainable on the spot.

(*e*) To encourage the proportionate use of grains and pulses, a short note should be given to each head cooly calling attention to the desirability of so construct- ing a ration. At the bazaars, the ration should be exhibited by placards in the vernacular; also on the head cooly's muster roll. No interference with the relief-worker's actual purchases should be attempted.

(*f*) Whilst the calculation that condiments and "other items" will correspond to the proportion of grain allowed in the Code is ingenious and fairly correct, it is inapplicable when dealing with so finely estimated diets as those discussed. It does not follow that "other items" will fluctuate with the grain, or that there will be a "margin." It is consequently a round-about way of calculating, for which there can be no good reason. There can be no difficulty in the Tahsildar at the time he issues the statement of the equivalent wage, also quoting in detail the cost of "other items," and this I think should be *invariably* adhered to. It is an arrangement fair to the public funds, and fair to the relief-worker.

(*g*) Not the rates of the casbah but of the villages adjoining the works should be taken as the basis of the Tahsildar's notification.

(*h*) The change from cholum to ragi being distinctly to the detriment of the relief-worker as to total nutrient value of his diet, when cholum is the staple of the district a change to ragi or rice should not be made simply on the ground that the cheaper grain is *procurable* in the larger towns in the district. It should be proved distinctly that such change of conditions has occurred in the area affected as to have led to its free importation in *all the smaller villages*.

(*i*) The moment a test work has proved the necessity for employment the "circle relief" system on behalf at least of villages sending labourers should be started as the logical sequel; for it stands to reason that those who come for employment, out of necessity also leave the aged and infirm at home, whom they have to support from the wage received, although it is calculated for the support of one person only: the two systems must be *inseparable*.

(*j*) Equally, if the wage is to suffice, there should be no hesitation as to multi- plying kitchens, so that they shall not be distant from gangs more than one mile, failing which a system of transport of food should be employed for distant kitchens.

(*k*) There should be three classes of labourers—the A, the professional, the B, or able-bodied but not professional, and C, the untasked and weakly. For those on the B wage the existing tasks for B and C should be retained *leaving it to the discretion of the officer in charge of the works what that task shall be*. Proportionate deductions for short work would then be possible down to the existing rates for the wage C. Any deduction below this must be solely as a fine, after due investigation by the officer in charge of the work and a special report should be furnished on the subject.* This is in accordance with section 106 of the Famine Code, and with, I believe, the opinion of most who have had practical experience of famine conditions. The assumption that famine works would become "unduly attractive," or that relief-workers would be persis- tently idle is, under the special circumstances, very erroneous; except in the imme- diate neighbourhood of large towns, the typical relief-workers (agricultural labourers) are disciplined with the greatest ease; they regard joining a relief work as a degrada- tion, and will not resort to it till absolutely obliged. If they fail to turn out a required task, it is a matter of ten to one that the supervision is bad, or that the organization of

* It should always be required that this report be accompanied by a declaration that the organization of the gang as to proportion of men, women and children, and its equipment as to provision of tools were correct.

the gang is absurd as to proportion of men and women, or that, as occasionally happens, what with length of journeys from the village to the works, they literally are unable to cope with the duty required, or are so dispirited by repeated fines and private hard- ships as to be morally unfit to make the effort. I consider, when attempting relief upon the special system relied upon in the Code, that the question of tasking and fining is far too delicate a matter to be dealt with successfully within the limits permitted in G.O.,* No. 728, Revenue, dated 18th December 1896. On the opposite, I respectfully suggest that the only safe policy for Government to assume is that the officer in charge of the works is primarily responsible that tasking is judi- ciously arranged as to each gang, and ensure that this responsibility has due check by inspection by superior Engineer Officers and Medical Officers specially detailed for sanitary duty.

* Communicated with B.P., dated 26th December 1896, No. 460.

(*l*) To effect proposals in the foregoing paragraph, medical inspection of each work should be arranged for systematically. If Medical subordinates at disposal are insufficient to enable one to be on each work, inspection should be arranged for at least every fortnight by an itinerant officer. Each gang should then be inspected, and the officer in charge should be bound to decrease the total task expected, if in the opinion of the Medical Inspector given in writing this is necessary.

(*m*) Male children of 12 years of age should not be classed in future as men; the outturn of these little boys cannot fail to be less than the adult man he represents. In consequence, the gang with several such little boys in it is liable to suffer by deductions. Young children, from 7 to 12 years, might be allowed from one-fourth to half wage; those from 12 to 16 invariably three-fourths wage. I believe that the working of the order as to regarding "all persons of 12 and upwards on relief works as adults (section 120, Famine Code) is a constant cause of short work, and consequent unreasonable reduction to the wage of their adult fellow workers. For example, I have seen gangs supplied with earth by excavating by adults of 12 years of age with women carrying earth for them who could have carried twice the amount excavated. I have seen little boys armed with pick-axes who, weighed against these implements, had little in their favour. Even when these adults (!) have broken a basket of stones, they require aid to lift it on their heads. I am convinced that this is a fundamental error as to economy and imperils the whole system of relief works.

(*n*) *The necessity for the "ample margin" that has not been provided by the Famine Code.*—Fuel has to be bought by the relief-worker when in the neighbourhood of towns. In rural areas the worker gathers his own fuel, but these efforts imply daily greater distances, by one or more members of the family, to be travelled—even if the fuel consist of nothing but old jowari roots; as, perhaps, there are 4,000 people daily who share in the search. On the other hand, in towns, vegetables are readily procured, and the price of grain is usually less than in the village, although the opposite would seem the reasonable result.

It is therefore possible, by having a margin over the bare dry grain ration, to meet the requirements of both urban and rural areas, without making separate scales for each. Remembering fully the necessity of being just to the tax-payer as well as to the relief-worker, and taking care to disturb as little as possible sanctioned condi- tions of the Famine Code, I regard the following as the least wages that can be recommended, so as to secure the minimum of both grains and vegetable food, and yet hold the hope that both strength and health shall be retained by the relief-worker:—

Table showing proposed revised famine wages and ration (the example being worked at 15 seers per rupee).

—	A.		B.		C.		D.	
	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.
				Males.				
Grain	26·7	10·7	24·1	9·6	20·3	8·1	17·8	7·1
Dhal	4·0	2·75	3·5	2·4	3·0	2·1	2·5	1·7
Salt	1·0	0·75	0·9	0·7	0·7	0·5	0·6	0·45
Oil	1·0	2·3	0·9	2·1	0·7	1·6	0·6	1·4
Tamarind and chillies.	2·0	2·5	1·8	2·3	1·4	1·8	1·2	1·5
Vegetables and fuel.	..	3·0	..	2·9	..	2·9	* ..	0·85
Total cost in pies ..	22		20		17		13	
Total cost in grain ..	oz. 55 or lb. 3-7		oz. 50 or lb. 3-2		oz. 45½ or lb. 2-10½		oz. 32½ or lb. 2-0½	
				Females.				
Grain	22·2	8·9	21·0	8·4	17·5	7·0	15·6	6·2
Dhal	3·3	2·3	3·0	2·1	2·6	1·8	2·2	1·5
Salt	0·8	0·6	0 78	0·58	0·6	0·4	0·5	0·375
Oil	0·8	1·8	0·78	1·76	0·6	1·4	0·5	1·15
Tamarind and chillies.	1·6	2·0	1·57	1·96	1·2	1·5	1·1	1·375
Vegetables and fuel..	..	2·4	..	1·2	..	0·9	* ..	0·4
Total cost in pies ..	18		16		13		11	
Total cost in grain ..	oz. 45 or lb. 2-13		oz. 40 or lb. 2-8		oz. 32½ or lb. 2 0½		oz. 22½ or lb. 1-6½	

* No fuel is allowed.

A. Represents professional labourers.
B. Represents able-bodied adult untrained labourers.
C. Represents untasked labourers, gratuitous relief, minimum wage arrived at by deducting for short work for classes A and B.
D. To be employed for penal purposes only, viz., for contumacious refusal to work, &c.
Children.—Wages will vary according to age, powers of work and requirements from one-fourth to three-fourths of those for adults.

By way of affording a contrast, I quote the figures proposed by the Famine Code Committee of 1882 (*vide* Board's Proceedings, No. 396, dated 27th May 1892) and the existing Famine Code rates.

Table contrasting the rates now proposed and those of the existing Famine Code with those fixed by the Famine Code Committee of 1882—worked in pies.

—	Males.				Females.			
	A.	B.	C.	D.	A.	B.	C.	D.
The Madras Famine Code Committee ration (*vide* paragraph 11 of Board's Proceedings, dated 27th May 1892, No. 396).	27	21	17	..	20	17	13	..
Existing Famine Code rates at 15 seers per rupee.	17	15	13	12	15	14	12	11

This Committee was aided by that thoroughly reliable and experienced sanitary authority, Dr. Cornish. The demands of this Committee were, in my opinion, just and reasonable. If I have offered a diminished ration, it is not because I think demands should be abated, but because I presume the decision of the Government against that Committee's recommendation was guided not by physiological considerations, but unanswerable financial problems, of which it alone can comprehend the full difficulties. I have, therefore, in making these recommendations, held before me the task of asking that *at least the minimum requirements* shall be subserved.

Read—again Memorandum of the Board of Revenue (R.S., L.R. and Agri.), dated 19th December 1896, Mis. No. 6787, calling on the Collectors of Kurnool, Bellary, Anantapur and Cuddapah to report, at a very early date, the actual cost of purchasing the amounts of the "other items" included in a relief worker's ration—both maximum and minimum—at Owk, Adóni, Tadpatri and Jammalamadugu.

Read—also the following letter from C. M. MULLALY, Esq., Collector of Kurnool, to the Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture, dated 5th January 1897, Dis. No. 23-Eng :—

With reference to the Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to give below the actual cost of purchasing the "other items" for the relief work at Owk :—

	Maximum.		Minimum.	
	OZ.	PIES.	OZ.	PIES.
1. Dhall	4	4	2	2
2. Salt	5	½	0·33	¼
3. Oil	1	3	0·33	1
4. Condiments and vegetables	1	1½	0·50	¾
Total ...		9		4

Read—also the following letter from M.R.Ry. S. RAMU IYER Avergal, B.A., Deputy Collector, Adóni Division, to the Collector of Bellary, dated 8th January 1897, Dis. No. 49 :—

In returning the Arzi Dis. No. 4453, dated 28th December 1896, of the Tahsildar of Adóni, reporting the price of "other items" included in the wages of relief-workers under section 120 of the Famine Code, I have the honour to report that his calculations are correct, but the prices of dhall and salt as ascertained by him at the date of his enquiry (26th December 1896) differ slightly from what I ascertained by personal enquiries. I found that dhall sold at As. 1–8 to As. 1–10 a seer and salt 4½ pies, as against As. 1–11 and 5| pies, respectively, quoted by the Tahsildar. In the latter part of last month, there was a temporary rise in the price of salt owing to the breach on the Madras Railway.

2. I append a memorandum of my calculations. It will be seen therefrom that, taking the latest quotation of the price of yellow cholum, that is, 16·12 Imperial seers per rupee, the consolidated A class wages (As. 1–4) gives the labourer 2 pies less of other items than he is entitled to under section 120, if ghee is allowed; but that, on the other hand, it allows him nearly half a pie in excess of the cost of other items if oil is substituted for ghee. The consolidated minimum wage (10 pies) gives the labourer an advantage of ⅓ pie or 1 pie according as ghee or oil is allowed.

3. You are aware that the labourer does not eat dhall except on special occasions, and still less ghee. Of course, he makes up for the want of dhall by eating more of grain. I do not think that any labourer, if he can help it, will take less than three-fourth seer of grain. Taking all things together, the consolidated wage seems to me to duly provide for other items.

Endorsement by R. H. CAMPBELL, Esq., Acting Collector of Bellary, dated 11th January 1897, Dis. No. 195.

Copy with the calculation sheet submitted to the Board of Revenue with reference to B.P., Mis. No. 6787, dated 19th December 1896. The result of my own enquiries at Adóni, is to show that the wage just covers the cost of "other items" allowed for in the Code.

Read—also the following paper:—

Letter from M.R.Ry. M. V. NARAYANASAWMI PILLAI Avergal, B.A., Special Deputy Collector, Jammalamadugu Division, to the Collector of Cuddapah, dated 28th January 1897, Dis. No. 29-F.:—

In reply to your foot-note, dated 22nd December 1896, on Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to submit herewith a statement showing the actual cost of purchasing the amounts of "other items" in the taluks of this division.

2. In section 120 of the Famine Code, the cost required for fuel has not been included in the "other items." As this expenditure is absolutely necessary, I have exhibited its price also in the above statement. The price of the staple grain (ragi) to the on the date to which the prices of the "other items" relate is noted below:—

Taluk.	Date.	Price.	
Proddatur	31st December 1896	19·0	Imperial seers.
Jammalamadugu	30th „ „	18·0	„
Pulivendla	27th „ „	13·0	„

3. In order to find out whether the grain allowances are unduly above or below the actual cost of the other items, a statement (No. II) is prepared and herewith submitted.

4. While the differences between the prices of the staple grain in the different taluks is large, the cost of purchasing "other items" does not vary proportionately. According to the prices reported by the Tahsildars, the coolies who earn the maximum wages are put to loss even leaving the cost of fuel out of consideration. In Pulivendla, there is a small saving owing evidently to the high price of the staple grain. In the minimum wages, there is a saving generally in Pulivendla and Jammalamadugu, and the loss in Proddatur is trifling. If the cost of fuel is included, the coolies who earn maximum and minimum wages have to be considered as sustaining loss alike by the adoption of the price of grain in lieu of the actual cost of the "other items" making up the ration.

5. I do not know for what reason the cost of fuel has not been provided for in the Famine Code; but fuel is required for cooking. On receipt of the Tahsildars' reports, I myself made experiments to see what the cost of fuel required would be, arranging the cooking most economicably. The result was that the Tahsidars' estimates were not above the mark. Generally, the cooly classes do not purchase firewood, but they collect dried leaves, &c., which answer the purpose. But now that the coolies on the work are expected to turn out the required task, they find little or no time to collect fuel. Some of them during the midday interval collect some fuel; but they have to wander about all the time and the interval cannot be called an interval of rest.

6. I take this opportunity to state that the relief-worker never does, at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a "chatni" (ಚಟ್ನಿ). This costs him a pie or a pie and a half and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables, and they rest satisfied with the "chatni" that they make.

Endorsement by A. C. TATE, Esq., Collector of Cuddapah, dated 1st February 1897, Ref on C. No. 8298-Rev.

Forwarded to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, with reference to Board's memorandam, Mis. No. 6787, dated 19th December 1896. Information regarding the cost of purchasing "other items" has been tabulated also for Proddatur and Pulivendla.

Resolution—No. 144, dated 18th February 1897.

The valuable report forwarded by the Sanitary Commissioner with his letter, dated the 27th January, will be submitted for the consideration and very early orders of Government. The report deals with matters which are of the first importance in any scheme for affording relief to the distressed, and the drawbacks to, and deficiencies of the present system, to which Surgeon-Lieutenant-Colonel King draws attention, are most serious.

2. As an introduction to a discussion of the subject, the Board would draw attention to paragraph 184 of the report of the Indian Famine Commission, 1880, referring to certain main principles which should be kept in mind in times of famine.

The Commissioners stated that—

"One of these is the amount of food required by workers and non-workers. The conclusion we draw from a careful examination of the evidence of authorities in all parts of India is, that, on an average, a ration of about 1½ lb. per diem of the meal or flour of the common coarser grain of the country suffices for an ordinary working adult male. In the rice-eating countries an equal weight of rice may be accepted in lieu of flour, and in any case the ration should include a suitable proportion of pulse. A man doing light work would require about 1¼ lb.; and the ration which consists of 1 lb. of flour with a little pulse has been found sufficient to support life in numerous relief-houses, where no work is exacted, all over the country. On these bases the diet scale should be built up, it being understood that a female requires a little less than a male, a child below twelve years of age about half the allowance of an adult male, and a non-working child below six or seven about half as much as a working child on relief-works. However, where a money wage is given, the rate of pay should be such as to leave a slight margin above the actual cost of the flour, so as to allow for the purchase of salt, pepper and other condiments and fire-wood, and to avoid the risk of the wage being insufficient to purchase the full ration of food. Whenever it is necessary to supply people with a kind of food to which they are unaccustomed, the result should be carefully watched, and endeavour should be made to counteract, by some adjustment of the dietary, the unfavourable results which will probably arise from the change."

3. The paragraph above quoted was printed in the appendix to the letter from the Government of India, read in G.O., No. 1006, Revenue, dated 18th August 1883, in which the first Madras Famine Code was discussed. Together with it, the evidence of the most experienced administrators of the famine relief in 1877–78 in Madras and Bombay is given; whilst, in the same Proceedings of the Madras Government, a valuable letter from Surgeon-General Cornish on the subject of famine wages is also printed. A perusal of these papers is necessary to a full comprehension of the subject.

4. Under the first Madras Famine Code, the wages offered to relief-workers were made up of the money value of certain fixed amounts of grain, *plus* certain fixed sums of money. The latter were arbitrarily fixed upon the best information available, at the time the Code was framed, as to the money value of the items other than grain required for the support of the labourers. Dr. Cornish defined these requirements, in a letter read in G.O., No. 1188, Revenue, dated 13th August 1881, as follows:—"Besides the grain allowance, a working adult man in famine times would require at the least 4 ounces of pulse, ½ an ounce of salt, ½ an ounce of pepper or condiment, 1 ounce of ghee or oil, *and* a daily *modicum* of green herbs or vegetable, with corresponding quantities for women and children." No better authority could be quoted. The quantities here mentioned, except that the "*modicum* of green herbs or vegetable" is there reduced to 1 ounce, are practically identical with those laid down as the maximum ration specified in the Provisional Famine Code of the Government of India.

5. No changes were made in the scale of wages prescribed in the Code above mentioned until after a discussion originated by the Government of India, which is to be found in the papers printed in G.Os., No. 839, Revenue, dated 11th August 1892, and No. 685, Revenue, dated 24th September 1894. This discussion arose from a representation by the Supreme Government that the Madras scale of wages was unduly liberal in the condition of prices that now prevails, and is likely to prevail in the future. At the same time they indicated (paragraph 11 of their Resolution No. 6-44, dated 17th March 1892) the general lines of the policy they desired to be followed, as follows:—

"Following the Famine Commissioners' recommendations, labourers on relief-works may be classified according to their capability for work. The classes adopted in the Provisional Code are: A, skilful and able-bodied accustomed to the kind of work required; B, able-bodied accustomed to work; C, able-bodied not accustomed to work; D, others. Classes A and B may receive a full wage, *i.e.*, a wage equivalent to a ration sufficient to keep an able-bodied labourer in health and strength, together with a margin. The margin may be more liberal for class A when it contains a small percentage than when it is allowed to include a large percentage of able-bodied labourers accustomed to work. The wage of class C will not exceed the full wage, and should be determined in general accordance with the principles of sections 133 and 134 of the Provisional Code."

These proposals were referred to this department only for report, and apparently the conclusions of the Government embodied in its Order No. 839, Revenue, dated 11th August 1892, were arrived at on a consideration of the question from an administrative point of view, and without any special consideration of the possible physiological consequences of the changes proposed. The main conclusion then arrived at was that a simple method of calculating the money wage would be a great advantage "provided the wage admits of a small fraction being spent on condiments and vegetables." Such a wage would be found, the Government stated, in "the money equivalent of $2\frac{1}{2}$ lb. of the staple grain *husked*, or of flour in the case of ragi, for a man, 2 lb. for a woman and $1\frac{3}{4}$ or $1\frac{1}{4}$ lb. for a child," and this, it thought, would not be excessive as a standard wage. That is, *the wage was to be the same for all classes*, but, as an encouragement to industry, extra work was to be rewarded by slightly increased pay. *The principle of equal wages for all workers* is no doubt correct. That is, that the sustenance required in all classes is equal or, as Dr. Cornish put it, in paragraph 4 of his letter read in G.O., No. 1188, Revenue, dated 13th August 1881, in reference to the draft Famine Code prepared by the Secretary to the Famine Commission—

"*I cannot agree with the statement in paragraph 13 of the Code that the labourers in classes 3 and 4 would necessarily require less sustenance than those of classes 1 and 2. Their enfeebled condition and inability to do a full day's work might be due to previous privation, the only effective remedy for which would be rest and judicious feeding. The attempt to work any classes, but the able-bodied in famine times is, in my opinion, a mistake, which, if there be any truth in physiological science, is most certain to be attended by great disaster to human life.*"

Surgeon-General Cornish further observed that—

"The present Code is no doubt the outcome of certain experiences gained during the late famine, but it should not be forgotten that, as regards the saving of life, the various labour diets resorted to in Mysore and Madras were not in any way efficacious. I do not wish it to be inferred that I would abolish all labour tests for famine relief, but that, as regards the enfeebled and wasted, whether old or young, much discretion should be exercised in the exaction of work as a condition of relief."

6. The conditions under which the standard wage was to be offered are very clearly stated in paragraph 7 of G.O., No. 839, Revenue, dated 11th August 1892, and were, briefly, that the wage should be paid on the performance of a properly adjusted task, to ensure which fining within certain limits was necessary, but that "*in no case should fining be carried so far as to reduce the wage below a certain limit.*" The limit or minimum, beyond which fining was not to be permitted, was practically the grain equivalent of the wage for days of rest, and the minimum wage of the Government of India, except that allowances were also to be made for loss in husking or grinding. This, however, it was then noted, could be accepted only as "a penal wage," as experience had shown that the so-called subsistence allowance, which was greater, was not sufficient for subsistence. The Government also considered this wage too low for the allowance that is given when work is suspended, and proposed a higher rate for days of rest. The scale then determined on was as follows:—

—	Standard.	Rest day.	Penal ration.
	LB.	LB.	LB.
Men	2·5	2·0	1·75
Women	2·0	1·75	1·50
Children A	1·75	1·50	1·25
„ B	1·25	1·00	1·00

7. The wages herein proposed represented the deliberate conclusions of the Madras Government, which stated that there was "a consensus of opinion amongst the district officials that a ration of that amount (to include the cost of condiments) would only be just sufficient to keep the people in their ordinary state of health," but it is, in the light of Surgeon-Lieutenant-Colonel King's report, doubtful whether sufficient allowance was made for the essential provision of "a daily modicum of green herbs or vegetable."

8. In its Circular Resolution, No. 6—44, dated 17th March 1892, the Government of India issued final orders regarding the revision of the Famine Codes of all provinces, but in that circular it only dealt with the question of the sufficiency or insufficiency of the "subsistence ration," and stated that "the ration was determined in 1883 after consultation with medical experts, and after careful comparison with standards adopted in jails and elsewhere." It also stated that "wages based strictly upon it were during the recent scarcity found sufficient," although, as shown in the Madras G.O. above quoted, that was not the experience in this Presidency, even when the value of the equivalent in flour, instead of in unhusked grain, was allowed. In an appendix to that Resolution a calculation was given to show that in both the maximum (A class) grain wage, and in the minimum (D class) an ample margin was left for fuel, &c., and for fluctuation in prices, and this margin has since been held to be so ample as to obviate the necessity for making any allowance for loss in husking—memorandum read in G.O., No. 244, Revenue, dated 9th June 1896, paragraph 26.

9. The circular above quoted laid down wages in terms of grain equivalents as follows:—

Class.	Men.	Women.
	LB.	LB.
A	2·625	2·375
B	2·375	2·25
C	2·0	1·875
D and minimum	1·75	1·4375

No attempt was, however, made to show, for the B and C class workers, what amount of "other items" was required, nor was it stated how much of the grain equivalent was intended to furnish funds for their purchase. Apparently, in framing this scale, the deliberate recommendations of that high authority, Surgeon-General Cornish, above quoted (paragraphs 4 and 5 *ante*) were not considered.

The scale proposed was, however, adopted for classes A, B and C by the late Mr. Clogstoun without demur, but, both he and the Madras Government protested regarding the insufficiency of the proposed minimum wage. This protest was based on the teachings of experience only, and, as is shown in the paper now under consideration, would have been overwhelming had the proposals been considered in their physiological aspects. To this protest, the Government of India declined to listen.

10. The Sanitary Commissioner now shows that, both on physiological considerations, and by comparison with jail diets, the rations laid down are inadequate, if the workers are to be maintained in health and condition, even if the whole of the grain wage reaches them.

Although it does not affect the conclusions arrived at, it may first be pointed out that the Sanitary Commissioner has made a slight error in the calculations on which the computations in paragraph 1 of his memorandum are based. Instead of the unhusked grain, entered in column 3 of the table there given, flour or cleaned rice should have been entered. As to the distribution of the "other items" for class B and C wages, for reasons above noted, Surgeon-Lieutenant-Colonel King has followed the only method available. In result, the theoretical value of the diets would be rather higher than he works them out, and the figures given in the first, instead of the second, table in paragraph 4 should be used for comparative purposes. The final result, however, is much the same, owing to the fact that there would then be less "margin," and this will be seen when considering the data given in paragraph 7 of the memorandum.

11. In order to show how deficient in proteid matter the Famine Code rations are, the Board has brought together below the figures given at paragraph 16 of Surgeon-Lieutenant-Colonel King's paper, and corrected them with reference to the above remark:—

—	Albuminoids.			Starch equivalent.		
	Meinert's scale.	Jail.	Relief.	Meinert's scale.	Jail.	Relief.
	oz.	oz.	oz.	oz.	oz.	oz.
Hard labour	3·739	2·903	2·662	17·438	22·087	21·337
Moderate labour	3·038	2·747	2·403 or 2·030	16·230	22·602	21·13 17·927
Rest	2·184	2·545	1·623	9·514	18·915	14·374

The significance of the very marked deficiency in proteids is alluded to in paragraph 5 of the note under consideration, and the Board begs to draw special attention to the fact that, even if the grain wage provided the worker with the means, there would be no security that he would, and almost a certainty that he would not, purchase therewith a properly balanced ration, while the wage will not permit him to purchase such a ration, even if he appreciated the necessity for doing so. Continued disregard of such physiological requirements can have but one result.

12. Besides the fact that, on the B, C and D class wages, the relief-workers cannot, if they will, obtain a properly balanced ration; there is another aspect of the matter of equal importance. The margin does not allow of their purchasing "a daily modicum of green herbs or vegetable," which are essential as antiscorbutics. At paragraph 7 of his memorandum, Surgeon-Lieutenant-Colonel King gives the results of attempts to purchase the "other items" of the rations. In these calculations, one-ninth should be added to the cost of the grain portion of the wage to allow for loss in grinding or making flour. If this be done, the results are as follow:—

Class.	Standard wage.	Cost of the ration at				
		Adóni.	Hatti-belagal.	Kosgi.	Bellary.	Pattikonda.
	As. P.	As. P.	A. P.	As. P.	As. P.	A. P.
A	1 5	1 5·3				
B		1 5·9	..	..	1 6	..
D	1 3	1 4·08	1 6·8	1 4·6	..	1 5·32
	0 10	10·34	..	..	..	..

These figures, so far from suggesting that there is an "ample margin" allowed by the Code rates, point to the reverse. The conclusion is confirmed by reports received by the Board from Collectors showing the cost of purchasing the "other items" in various affected districts. The results of these enquiries are summarised below:—

Cost of purchasing the "other items" of relief wages and the margin left.

Districts.	Pulse.	Salt.	Ghee or Oil.	Condiments and vegetables.	Total.	Maximum wage at prices of January.	Margin for grain.	Quantity of grain purchaseable.
	Maximum—A Class—Males.							
	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Tolas.
Kurnool	4·00	0·50	3·00	1·50	9·00	17·00	8·00	50·00
Bellary	2·41	0·26	2·38	1·50	6·55	18·00	11·45	66·79
Anantapur	3·26	0·30	4·29	2·50	10·35	19·00	8·65	48·66
Cuddapah	3·00	0·33	3·00	1·50	7·83	16·00	8·17	54·81
	Minimum—D Class—Males.							
Kurnool	2·00	0·25	1·00	0·75	4·00	11·00	7·00	43·75
Bellary	1·20	0·18	0·78	0·75	2·91	12·00	9·09	53·03
Anantapur	1·63	0·20	1·43	1·25	4·51	12·00	7·49	42·13
Cuddapah	1·50	0·25	1·00	0·75	3·50	11·00	7·50	50·31

If allowance be made for necessary loss in husking or grinding, instead of having in class A 60 and in class D (minimum) 40 tolas of flour, the amounts of grain purchaseable would yield:—

	Flour.	
	Maximum.	Minimum.
	Tolas.	Tolas.
Kurnool	45·0	39·4
Bellary	60·0	46·7
Anantapur	43·8	37·9
Cuddapah	48·3	45·8

Enquiries are being made as to the amount of condiments and vegetables that can be purchased for the sums mentioned, but, in Bellary, it appears that the amounts purchaseable even with a maximum wage are absurd, and, practically, in no case do the relief-workers get A class wages. In Cuddapah, the Special Deputy Collector reports as follows in the matter:—

"The relief-worker never does at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a 'chatni' (చట్ని). This costs him a pie or a pie and a half, and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have a number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables and they rest satisfied with the 'chatni' that they make."

13. The Board considers that the comments of the Sanitary Commissioner on the Famine Code wages and diets are amply justified, and, this being so, it is its duty, as being entrusted with the administration of all measures for the relief of distress, to urge upon the Government the necessity to rectify the errors, and to remove the drawbacks to the system as soon as possible, in order that the relief offered may meet the requirements of the case as specified in paragraph 112 of the report of the Famine Commission.

14. The remarks made so far are based on an assumption that the relief-worker would, in return for ordinary industry, receive full wages. Most of the persons who resort to relief works would ordinarily be placed in class B, but, as shown by the Sanitary Commissioner, whether from delay in offering them relief, from insufficient wages, or what not, the proportion of workers found to be in good condition is only about half, the rest being in poor or bad condition. The inevitable result, unless tasks are re-adjusted with a liberal hand, must be failure to turn out the tasks demanded in B class; fining for some days till the wage reaches a vanishing point; loss of strength; reduction of class B to class C, and then the same process would, under the inappropriate wage for that class, again go on until the workers reach the weakly gangs, or are sent to the kitchens to be fed gratuitously.
Two main causes work to this end:—

(1) Insufficient and inappropriate rations.
(2) Unrestricted and unsympathetic fining.

On the former point, the views of the Sanitary Commissioner demand the earnest attention of Government; on the latter, the Board would, most respectfully, request that, on reconsideration, the Government will revert to the policy set forth in 1892, which is that so forcibly urged by the Sanitary Commissioner in his memorandum under reference. In particular, the most earnest consideration of Government will be drawn to the fact that the C class diet is unfit for relief-workers placed on tasked work. This appears to have been the view of Government in 1892, and D class diet

is, as Government then remarked, only suitable as a punishment, whilst, the Board would point out, as stated in paragraph 131 of the report of the Indian Famine Commission, that, even in the case of contumacious characters, "care should be taken that the penalties for wilful idleness, in the form of deductions from the wage, should not be so large or so often repeated, as to have the effect of reducing the food of the labourer below what is necessary for subsistence." It was the belief that the recent orders of Government ran counter to this principle which led the Board, in its Proceedings, dated 15th December 1896, No. 436, to point out the dangers involved in the course it understood the Government wished to be followed, and especially prompted the remarks made in paragraph 4 of that Proceedings. When that Resolution was drafted, the Board was not aware that the Famine Code wages contravened physiological principles so greatly, and were so far at variance with the experience gained in jails in this Presidency, and it had only to guide it the empirical deductions of the Madras Government of 1892, in arriving at which the Sanitary Commissioner was not consulted.

15. Besides the risk of loss by fines, the relief-worker has no margin to guard him from "loss which may be inflicted on him by administrative errors, or peculation on the part of subordinates, or other analogous cause." For one day a week he receives the minimum wage only; and as, under the recent orders of Government, village relief is not to be given in any form, he or she often has a number of dependants at home, whose subsistence has to be provided for out of the inadequate wage. In these latter aspects, the system at present laid down for Madras contrasts most unfavourably for the distressed who need and seek relief with that adopted in the North-Western Provinces and Oudh (*vide* G.O., No. 14, Revenue, dated 9th January 1897). There the workers reside on the works and can, therefore, devote their whole energies to the tasks demanded; practically, all are placed in class B; youths and girls above sixteen years are classed as adults, not those above twelve years; as a rule, only the men of the gangs are liable to fines; a wide margin is allowed in fixing the task according to the capacity of the gang; wages are not allowed to be reduced below the penal ration prescribed in article 103 of the North-Western Provinces Code; and, finally, to dependants gratuitous relief on a most liberal scale is given. As to the latter particular, the Board requests that the attention of Government may be given to the following figures, compiled from the *Gazette of India*, showing the numbers relieved on works as dependants, at poor-houses, and otherwise in the three provinces of Madras, Bombay and the North-Western Provinces during three successive weeks. The figures speak for themselves.

—	Numbers.		
North-Western Provinces.			
Relief workers	522,916	664,247	805,695
Dependants	123,052	125,973	165,611
At poor-houses	50,617	57,590	60,665
Otherwise relieved	99,106	176,544	222,137
Total ..	795,691	1,024,354	1,254,008
Bombay.			
Relief workers	178,585	197,546	222,155
Dependants	78,316	83,617	93,767
At poor-houses	7,994	11,062	11,277
Otherwise relieved	..	..	..
Total ..	264,895	292,225	327,199
Madras.			
Relief workers	20,833	24,882	30,744
Dependants	..	..	..
Gratuitously fed in kitchens	1,749	2,070	2,736
Otherwise relieved	6,259	6,974	7,255
Total ..	28,841	33,926	40,735

16. From paragraph 5, &c., *supra* it is clear that the original, and, the Board would respectfully submit, the proper, theory was that all classes require an equal quantity of food. If there is any difference, it should be in favour of, not against, classes B to D. The weaker a cooly is, the more and the better food he requires to bring him into condition. The Board would, therefore, urge that the classification under A, B, C and D should have reference solely to the hereditary occupations and physical condition of the workers, not to the amount of food which they require. In its Proceedings, dated 26th January 1897, Government, after pointing out that the Board had failed to apprehend the system of relief works as laid down in the Famine Code, proceeded to enunciate the safeguards provided by the Code for the Government and for the cooly. The safeguard for the Government was the "rigidity" of tasks and fining. The safeguard for the cooly was the "elasticity" allowed by the change of gang from one class to another. Unfortunately, the "elasticity" which safeguards the cooly is one which gives him less to eat; a ration which has been condemned on the highest scientific authority as insufficient to keep him in health and strength, and which, on the lower scale, has been denounced by the Madras Government itself. The Board has always insisted, as strongly as Government itself, on the necessity for exacting tasks, provided only that these tasks are fair. The relief-cooly is always willing to do a fair task, and, as Surgeon-General Cornish long ago pointed out, and as Surgeon-Lieutenant-Colonel King now observes, there is no danger of the relief works being "unduly attractive", for, in the rural tracts, attendance on them is more or less a degradation. Respectable caste women and girls burst into tears when inspected at Maddikera. The Medical Officer present said that they were hysterical. Possibly, but through sorrow and shame at their fallen condition. It is most difficult to get caste children or caste destitutes into our kitchens, as oppobrious epithets commonly attach to those who frequent them. This is not peculiar to India. "Soupers" and "tickets for soup" are terms of abuse commonly applied to the poor in receipt of relief in Ireland. Poor old women reject with scorn the offer of food in a kitchen, preferring to break stones under the Deccan sun rather than eat an unearned ration. The blind prefer to break stones all day rather than accept the kitchen ration. There are two such cases at Yadiki. For the safeguards enumerated by Government, the Board would most respectfully suggest a rigidity, not in tasks and fining, but in the quantity of food earned by the worker, and an elasticity, not in reducing his class, and consequently his wage, but in adapting the task to his capabilities. Government will be sufficiently safeguarded, so far as expenditure on works goes, by the fact that only extreme pressure will bring the cooly on the works, and by the loyalty and honesty of its own officers.

17. There is another point on which the Board would again, respectfully, request a reconsideration of the orders of Government, viz., the prohibition of gratuitous relief in villages. The Famine Code says: "A rise to the 'scarcity rate', from time to time fixed by Government, in the staple food-grain or grains of the district is a sure indication of the existence of severe scarcity calling for the immediate introduction of relief measures." We have had scarcity rates, more or less, for three months. The early dry crop was nearly all lost, and the later-sown dry crop is also generally a complete failure. The temporary lull, while the petty harvest goes on, alone keeps the poor from crowding to our works, as they will within from three weeks to a month. Many of them are stinting, and have been stinting, themselves. The Code says "in the early stages of distress, unless otherwise directed by Government, relief for all who cannot earn wages on relief works, and are otherwise unable to support themselves shall be restricted to the grant of cooked food at central kitchens established for the purpose." The phrase "unless otherwise directed by Government" does not, the Board would respectfully submit, mean that the Code leaves a discretion as to the time when gratuitous relief shall begin, but as to the form which it shall assume, whether it shall be granted under section 64 or under sections 83 and 84 of the Code. In its Proceedings, dated 16th January 1897, Mis. No. 255, Government stated that there was at present no need to appoint Circle Inspectors. In its Proceedings, dated 30th December 1896, No. 760, Revenue, Government held that the reports submitted to it "did not show that gratuitous relief was likely to be needed in any portion of the

affected tracts for a very considerable time to come", adding that "it is needed only when the season continues bad for a long time in order to save life, but should not be started till then." This view, the Board respectfully submits, is not that laid down for guidance in the Famine Code. If relief is withheld until life is in peril, it will be given too late. The true principle of famine relief is that the people are to be taken in time, and before they have fallen off in condition, and handed over in the same state of health when relief operations close. The Sanitary Commissioner now sounds the same note of alarm. He speaks with professional authority. The Board supports him. It is possible that, at first, the gratuitous relief required in villages may be small, but the nuclei of administration should be formed early, lest, when the crush comes, the authorities should be unequal to the work of organization.

18. With the recommendations of the Sanitary Commissioner, made in paragraphs 19 and 20 of his note, the Board is in almost entire agreement, but in reference to the detailed statement in paragraph 20, it would remark regarding—

(*b*) on the necessity for an ample margin, the Board is at one with the Sanitary Commissioner, but, on the question of the actual amount of vegetable, with which it would include tamarind, required, it offers no opinion. The matter is one for experts.

(*c*) that the particulars should be asked for from the Government of India;

(*d*) and (*j*) instructions in this sense will be issued to all Collectors;

(*e*) this may be done, and the Sanitary Commissioner will be asked to draft the note;

(*f*) the Board considers that the balance of convenience is in favour of a single grain equivalent, so long as an "ample margin" is allowed, but this margin does not now exist.

(*g*) and (*h*) instructions in this sense have been issued;

(*i*) the greatest importance should be attached to this;

(*l*) Collectors will be requested to arrange through District Medical and Sanitary Officers for the systematic inspection of all and, if possible, periodical weighment of some of the gangs, on all works;

(*m*) the change is desirable not to say imperative, and is in accordance with practice in the North-Western Provinces; according to the task tables a boy of 11 counts as one unit and a boy of 12 as four units. In fact, the latter is supposed to do the same work which could be done by 4 boys of 11. This is absurd; and finally

(*a*) and (*k*) are practically what the Madras Government urged in 1892.

19. These Proceedings have been unavoidably delayed. Two paragraphs had been accidentally omitted in fair-copying the Sanitary Commissioner's letter, and a reference had to be made to him at a remote place in Kurnool; and while they were passing through the press, the Famine Commissioner was continually changing camp in the four Deccan Districts. The Sanitary Commissioner, also, required some alterations to be made in his letter after it was in print.

(True Copies and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Sanitary Commissioner.

Read—also the following letter from T. W. HOLDERNESS, Esq., Deputy Secretary to the Government of India, Department of Revenue and Agriculture (Famine), to the Secretary to the Government of Madras, Revenue Department, dated Calcutta, 20th February 1897, No. 629-F—116-1:—

In your telegram of the 11th February 1897, summarising the situation and the relief operations for the month, in compliance with the request contained in my letter No. 9-F, dated 25th January, it is said that "the relief wage has been reported inadequate by the Sanitary Commissioner." I am directed to request that the Government

of India may be informed as to the evidence on which the Sanitary Commissioner's report was based, and whether his opinion has the concurrence of other authorities. The Government of India would also be glad to know whether the Sanitary Commissioner refers to the full wage earnable by relief workers on completion of specified tasks, or to the minimum wage, or to wages below the minimum wage actually earned by workers, as the result of fines having been imposed for short work. Section 106 of the Madras Famine Code provides that "as a general rule the effect of fines must not be to reduce the wages below the minimum wage," but the Government of India have no information before them as to how this restriction works in practice. It is however obvious that if the wages actually earned by the majority of workers on particular relief-works are reduced by fines for short work below the minimum wage, the wages may be insufficient, though the minimum wage is sufficient. The Government of India are anxious for full information on this point, as from no other province has a complaint been received as to the insufficiency of the present famine wage.

Order—No. 295, Revenue, dated 4th May 1897.

Miscellaneous.

The memorandum of the Sanitary Commissioner read above, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India with reference to the enquiry made by that Government in its letter, No. 629-F, dated 20th February 1897, and its attention will be drawn prominently to the observations and recommendations made by the Sanitary Commissioner in regard to classification and wages of relief workers. Such of the other recommendations made by this officer as require the orders of Government have already been dealt with in G.O., No. 216, dated 30th March 1897.

2. Ordered that the following letter be addressed to the Government of India.

(True Extract.)

(Signed) G. STOKES,
Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement, Land Records and Agriculture).
" the Local and Municipal Department.
" the Financial Department.
" the Public Works Department.
" the Accountant-General.

Exd. C. M. Thumbuswamy.

150 Copies.

P W D

Government {1897} of Madras.

REVENUE.

Recd.	1897.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 295, 4th May 1897.

MAY.

No: 1607 W & 1268 97
Communicated to
officers of the P.W.D in
continuation of G.O. No
1024 W dy 14. April 97.
(Sd) C.W.B.
Secy
Chief Engr

Wages.

Stating that the memorandum of the Sanitary Commissioner, Madras, on the inadequacy of the — and rations allowed to relief-workers according to the Madras Famine Code, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 18th February 1897, No. 144 :—

Read—G.O., No. 14, Revenue, dated 9th January 1897.

Abstract.—Communicating, for, information, a letter from the Government of India forwarding copy of a Resolution recorded by the Government of North-Western Provinces and Oudh regarding famine-relief operations undertaken in the United Provinces, together with a set of rules framed by that Government for the guidance of officers employed on relief works.

Read—again the following Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 4th February 1897, Mis. No. 845 :—

Read—the following paper :—

Letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Collector of Bellary, dated Fort St. George, 11th January 1897, No. 85-S.

I have the honour to state that, on my inspecting the condition of relief-workers on the Alúr-Guntakal road, I found certain gangs in an unsatisfactory condition of vigour. On making enquiries, I ascertained that certain of these were residents of Hattibelagal. The distances of works from this village vary from three to five miles. Some of the relief-workers get over the difficulty by residing in the village of Nageradonna under very unfavourable hygienic conditions; but the majority have, I believe, to contemplate a march of from eight to ten miles daily in addition to their work.

2. My enquiries showed that the food-grain in this and neighbouring villages was above casbah rate—even allowing for the difference between the respective country and official seers; this has been sufficient to make a diminution in the total nourishment available from a wage which even, under favourable circumstances, permits a mere fraction of a pie for fluctuation of prices of "other items."

3. Under the above circumstances, I would advise your causing the erection of sheds to serve the distant villages as early as possible. Sections 55 and 120 (paragraph 2) of the Famine Code should also, I consider, be put in force with as little delay as possible.

4. The relief-workers declared their willingness to reside in sheds on the works if they be erected for them.

5. In the case of the Hattibelagal village, I would advise you to ascertain whether work nearer the village-site might not be obtained; for example, the Madiga and Mala wells require deepening and improving—also the village well and the fort well.

Endorsement by Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, dated 26th January 1897, No. 3-T.

True copy forwarded for the information of Government, through the Board of Revenue (R.S., L.R., and Agri.).

Resolution—dated 4th February 1897, Mis. No. 845.

Submitted for the information of Government.

2. The Collector of Bellary will be requested to report what action he has taken with reference to the Sanitary Commissioner's letter.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ Collector of Bellary.

Read—again Proceedings of the Board of Revenue (R.S., L.R. and Agri.), dated 5th February 1897, No. 100.

Abstract.—Submitting to Government, with remarks, Sanitary Commissioner's report on the condition of the people near Pattikonda in Kurnool.

Read—also the following letter from Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Secretary to Government, Revenue Department [through the Board of Revenue (R.S., L.R. and Agri.)], dated Mallayala, 27th January 1897, No. T1 :—

I have the honour to forward, for the information of Government, the documents noted in the margin affecting certain matters that my recent inspections of part of the Kurnool and Bellary districts have brought to my notice.

Memorandum, dated 26th January 1897.
Copies of letters No. 85-S, dated 11th January 1897, and No. 179-S, dated 18th January 1897, to the Collectors of Bellary and Kurnool, respectively.

2. I send these through the Board of Revenue so as to prevent the necessity of making second copies of this correspondence for its information and enabling it to make such remarks on matters within its jurisdiction as may be thought necessary.

Enclosure.

Memorandum as to Wages and Rations—Chapter VIII, Famine Code.

1. It is desirable that section 120, chapter VIII of the Famine Code, be more explicit, if the second paragraph, which dictates that certain variations in wage can be permitted if the amount of money to purchase the "other items" be insufficient, is to be of any utility in practice. Whilst it is laid down what the grain equivalent is for class A, that for the B and C can only be obtained by recourse to a calculation—a calculation that various persons may proceed to make from a different basis. For example, it is quite possible to understand that the "other items" would be invariable, and that only the grain should be altered; whilst it may also be held that both grain and "other items" are to be decreased proportionately to the totals quoted in the section for the respective classes. I presume that the latter method is what is really meant. Such a calculation yields the following results :—

—	Total money, grain ration.	Distribution.				
		Unhusked grain.	Unhusked pulse.	Salt.	Ghee or oil.	Condiments and vegetables.
	lb.	oz.	oz.	oz.	oz.	oz.
Males—						
A	2⅝	24	4	0·5	1	1
B	2⅜	21·7	3·6	0·45	0·9	0·9
C	2	18·3	3·05	0·33	0·8	0·8
D	1¾	16	2	0·33	0·33	0·5
Females.—						
A	2⅜	20	4	0·5	1	1
B	2¼	18·95	3·8	0·474	0·947	0·947
C	1⅞	15·78	3·16	0·395	0·79	0·79
D	1⅝	14	2	0·33	0·33	0·5

In my opinion, (*a*) the above diets fail to meet full requirements, and (*b*) the conditions under which the equivalent wage reaches the relief-worker are such as to imperil correct nutrition. I purpose to discuss these conditions *seriatim* :—

Standards of diets used by the Deccan labourer.

2. For comparison with the Famine Code diets given above, I quote the result of observations as to what articles and what amounts are eaten by the labourer in the Deccan per day. This calculation was obtained by causing women well accustomed to cooking to select from a small store—just as they would in prosperous times in their own houses—sufficient for one day's food. This was done in twenty experiments with the following results :—

Amounts required in times of prosperity by the Deccan labourer.

Articles of diet.	Quantity.
	oz.
Unhusked cholum	29 5
Dhal	5·0
Salt	1·2
Tamarind	1·0
Chillies	1·32
Oil	0·825
Vegetables	5·65
	lb.
Firewood	6·65

3. But, lest in selecting enough material for twenty-four hours' food a mistake might occur, observations were made of the amounts of grain and dhal necessary for a single meal only in forty-five experiments. These results went to show that the amounts chosen were in wonderfully close approximation to each other, although no scales were employed by the women—hand and eye being alone used. The following is the result when doubled for the equivalent of one day's supply :—

	oz.		oz.
Unhusked cholum	26·7	=Cleaned cholum at 7 per cent. wastage...	24·83
Dhal	4·758	=Cleaned dhal at 2·3 per cent. wastage ...	4·649

Certain parts of the year may be passed without the dhal, or with very little; certain parts of the year no special vegetables may be taken, but the tendency is always towards the quantities stated. The chillies allowed above seem heavy, but about 1 oz. is doubtless actually used. In the case of the grain, the tendency is towards a greater and not a smaller amount than here shown; so that it may be safely said that for an adult Deccan labourer in prosperous times one seer per day (two pounds) of dry grain is the standard.

At least one seer (2 lb.) of grain popularly regarded as requisite per day per adult male.

Indeed, the invariable sequel of the query as to the amount requisite for an adult male per day, is to cause with amusing regularity the index finger to be raised to give emphasis to the uniform statement that "one seer" is necessary. The free use of onions and tamarind at all times apparently keeps at a distance *scorbutus*; oil is not much used, but, when the person can afford it, this is employed. Curds and buttermilk, and occasionally ghee, are trusted to for the supply of fats. Although buttermilk is not rich in fat, it is so in valuable salts.

Theoretical nutrient value of diets.

4. The *theoretical* nutritive value of the relief-worker's diet is as follows :—

Ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz	oz.
A	2·662	20·062	1·449	21·337
B	2·403	18·128	1·307	21·135
C	2·030	15·299	1·143	17·907
D	1·623	12·959	0·615	14·374

The above statement assumes that the whole grain and pulse laid down by the Famine Code is available : whereas no allowance for wastage is made in estimating the grain equivalent wage. The waste that occurs in cleaning ragi or cholum may be taken at from 7 * to 13 per cent. In the Bellary jail, long experience shows it to be 10 per cent. In reality, the methods of cleaning adopted by the cooly are wasteful; but I assume that care in famine times will be exercised; and, therefore, in discussing the value of existing diets, allow only 7 per cent. The *actually available* grain (in ragi) and the nutritive value obtainable with famine wages is therefore as follows :—

The Famine Code ignores results of normal loss by husking and cleaning grain.

Ration for relief-workers allowing 7 per cent. wastage for cleaning ragi.

Class of relief-workers.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
A	2·496	18·715	1·348	21·758
B	2·273	16·966	1·282	18·389
C	1·921	14·319	1·122	16·900
D	1·531	12·111	0·597	13·484

Standards affording contrasts with Famine Code diets.

The following affords a standard that may be usefully contrasted with the foregoing :—

Diet of free labourer (Deccan)—cleaned grain.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.	oz.
Cholum	24·831	2·309	17·953	0·497	19·096
Dhal	4·649	1·037	2·831	0·098	3·047
Oil	0·875	..	..	0·875	2·013
Vegetables	7·970	0·143	0·462	0·040	0·554
Total ..	38·325	3·489	21·246	1·510	24·710

5. The difficulty at all times recognizable as to fixing the proportions of constituents in a diet devoid of meat has been the fact that, whilst legumes may be relied upon to represent a fair proportion of albuminoids found in less proportion than requisite in cereals, beyond dealing with a certain amount the stomach refuses to be made a chemical laboratory of, and shows its resentment in the form of indigestion. To keep within this limit, therefore, and yet provide a proper amount of albuminoids without overdoing the proportions of starches found in the staple grains, is a matter of importance. This has been obviously carefully held in mind by the framers of the famine diets; and, were the cooly to be equally appreciative of chemical and physiological questions involved, the combination of efficiency with economy would be less

* I obtained 7 per cent. by exercising the greatest care repeatedly searching the refuse for eatable portions. The Tahsildar Pattikonda, made an experiment also conducted with much care and got 7·85 per cent.; but this "Nukaloo" was by no means so clean as demanded in jails. Ten per cent. may be regarded as a safe allowance.

questionable. His knowledge, however, is limited to the fact that an amount of grain is requisite that will make his belly-band tight, and, till that is accomplished, he believes himself hungry. That the Deccan cooly is not alone in the matter of bulk of food, I may illustrate by stating that a short time back a party of American soldiers started on what was to be a prolonged march on highly concentrated provisions. In a limited bulk there duly existed the necessary amount of nourishment according to the chemist, and in easily assimilable forms; yet, the men failed to accomplish their work and returned weak, worn out and unfit for duty. Diminution of bulk of food is therefore a question of education, and a population cannot be readily made to fall in with the scientific system of a certain proportion of dhal to grain, &c., laid down for its guidance in the Famine Code. Recent researches by Dr. Pavey into the functions of carbo-hydrates render it probable that this is not altogether to be regretted, and that, in the presence of a certain amount of proteid substances, carbo-hydrates may contribute to the formation of proteids. Indeed, it is not unlikely that the Deccan type of one (and more) seer of grain per diem without dhal for a part of the year is not physiologically wrong, as it would seem in the present state of knowledge. Dr. Pavey's researches cannot, however, yet be applied practically to consideration of these diets, until further experience and data are obtained, and, whilst recognizing that the excess of carbo-hydrates is not an evil, and may mean an aid towards formation of albuminoids, such excess *cannot in the present state of knowledge justify abating the demand for a sufficiency of ready-made albuminoids* represented in these diets by dhal. The excess of carbo-hydrates may further explain the fact that a vegetable oil or animal fat is not a constant part of the diet. I enter into this matter, as it is important to remember that, in using a wage calculated for the reduced diets shown, the Deccan relief-worker is specially liable to the inimical influence of want of sufficient albuminoids in his diet; because believing he cannot buy with his wage enough staple grain at disposal, he will not purchase the expensive dhal that is the essential addition to eke out a correctly proportioned diet.

Given but a small allowance of grain, the relief-worker does not possess the knowledge requisite for a correct adjustment of albuminoids.

6. I have suggested in paragraph 1 that it is likely to produce considerable confusion that the details showing clearly what has been regarded as sufficient for each class of relief-workers are not exhibited. But, whilst this implies inconvenience to those who would feel the responsibility of watching the health condition of relief-workers, a defect that cannot do otherwise than detrimentally influence the results aimed at consists in assuming that so long as such and such a weight of "staple grain" is obtained, no further refinement in definition is requisite. Yet, a little consideration will show that, when working with so fine a margin, or rather, as I show further on, practically no margin at all, for variations in prices of "other items," it is essential that the nature of the grain in use be allowed for. Thus, using B diet as a type, it will be seen that considerable variations occur in the important item of albuminoids according as the grain in use be wheat, cholum, ragi or rice :—

Nutrient value of B diet (allowing 7 per cent. for cleaning).

Grain.	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
Wheat	3·749	17·087	1·241	19·942
Cholum	2·837	17·933	1·415	21·188
Ragi	2·403	18·128	1·307	21.135
Rice	2·403	19·235	1·111	21·791

So that to enable the same total of albuminoids to be obtained from ragi as from cholum on the B diet (provided the alteration were made in grain alone) it would be necessary to allow 5·95 ounces more; that is, 5·95 ounces should be added to the 21·7 ounces of ragi to make it equivalent to cholum, no calculation being made for wastage in either case.

Effect of Famine Code ignoring the nature of the staple grain used with relief-worker's diet.

7. The following exhibits the actual results of attempts to purchase the "other items" at various places with the wage allowed. Every precaution was taken to see that the items were obtainable at the same prices as those given to the cooly. The official rate was 15 seers per rupee; and I may here state that, to prevent confusion, this rate is adhered to in all calculations made in this memorandum :—

At Adóni—

A. wage ... A. 1 P. 5

Items of diet according to Famine Code.	Cost (*a*). A.	Cost (*a*). P.	Cost (*b*). A.	Cost (*b*). P.
24 oz. cholum	0	9	0	9·75
4 „ dhal	0	2·75	0	2·50
0·5 „ salt	0	·33	0	·38
1 „ oil	0	3	0	3
0·5 „ chillies, 0·5 „ tamarind	0	1·25	0	1·25
Total ...	1	4·33	1	4·88

Note.—(*a*) and (*b*) refer to different shop prices.

B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	8·7
3·6 „ dhal	0	2·25
0·45 „ salt	0	0·34
0·9 „ oil	0	2·7
0·9 „ chillies, tamarind	0	1·125
Total ...	1	3·11

D wage—Pies 10.

	A.	P.
16 oz. cholum	0	6·4
2 „ dhal	0	1·375
0·33 „ oil	0	0·99
0·33 „ salt	0	0·251
0·5 „ tamarind and chillies	0	0·625
Total ...	0	9·641

What could be actually bought at Adóni for As. 1–3—

29·35 oz. cholum.
1 „ salt.
1 „ chillies.
1 „ tamarind.

At Hathibelagul—B ration—B wage—As. 1–3.

	A.	P.
21·7 oz. cholum	0	10·85
3·6 „ dhal	0	2·70
0·45 „ salt	0	0·337
0·9 „ oil (not available)	0	2·7
0·45 „ chillies	0	·17
0·45 „ tamarind	0	·085
Total ...	1	5·6

Actually bought at Hathibelagul for As. 1–3 *as the best bargain for the money*—

22·5 oz. cholum.
3 „ dhal.
·5 „ chillies.
1 „ salt.
1 „ tamarind.

At Kosgi (casbah near Chinnathambulam works)—B wage—As. 1–3.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	oil	0	2·25
Salt, chillies, tamarind	... ...	0	2
	Total ...	1	3·65

Bellary—A wage—As. 1–5.

		A.	P.
24 oz.	cholum		
4 „	dhal	0	9
1 „	oil	0	3
1 „	salt ...		
0·5 „	chillies	0	2
0·5 „	tamarind		
	Total ...	1	5

At Pattikonda—wages being As. 1–3 for B class.

		A.	P.
21·7 oz.	cholum	0	8·7
3·6 „	dhal	0	2·7
0·9 „	salt	0	·9
0·8 „	vegetables / condiments	0	1·8
0·9 „	oil	0	2·25
	Total ...	1	4·35

In practice, no "margin" exists in B and C wages.

There is, therefore, usually a deficit as to purchasing the bare rations below the A wage, whilst in all a margin for fuel, &c., does not exist. On my representing this to the Collector of Bellary and the Executive Engineer, the latter made an independent experiment and purchased the full ration with a fraction of a pie to profit—without, however, any fuel. On comparing prices given, we practically agreed; but I found that the fractional margin had been obtained by reducing to an absurdity the amount of chillies requisite for a single diet, and causing vegetables to be represented by a single brinjal—about the size of a pigeon's egg. This officer has kindly promised to subject the matter to test on all his works; but from frequent enquiries, I am satisfied that *unless the single ounce of vegetables and condiments allowed in the ration be juggled with,* * *so as bring the amounts outside the pale of practical dietetics, the ration cannot be purchased with the allowance for "other items."*

Still less, is it possible to obtain the diet on the average daily wage?

8. Further, it is a mistake, when calculating the rations, to assume that the whole wage is available daily. The "rest day" gives the cooly but the minimum wage. Thus, at 15 seers per rupee, As. 1–3 is the wage for B class and the minimum is one anna, so that As. 1–2·57 is the daily average wage. Similarly, in the case of the A wage, the minimum of one anna reduces the daily wage of As. 1–5 to a daily average of As. 1–4·3. Therefore, the "ample margin" provided by the framers of the present Famine Code disappears, even on the A wage. Of course, this may be got over by stating that on receipt of the minimum wage the relief-worker does not labour; he receives a wage that will

* Since writing the above, I am in receipt of letter, No. 417, dated 21st January 1897, with which the Collector of Bellary forwards a letter from the Deputy Collector of Adóni, dated 8th January 1897, No. 49, in which it is contended that the rations can be purchased in the wage with a fraction of a pie to profit. But even this was done only with A and D diet; B and C were ignored, yet that this could only have been accomplished by reducing the condiments and vegetables to an *absurdity* is borne out by the following extract from the letter by the Adóni Deputy Collector:—

Total condiments and vegetables. { "Six chillies, tamarind ball bigger in size than a marble. two small brinjals weigh 2½ tolas, value of these articles is 1½ pie each." [!] } 1·50 pies and

sustain life during *rest*. But practice sets this theory at naught. It is clear that in many relief works release for the rest day simply means that a journey of five, or perhaps ten, miles to the nearest village for market supplies has to be undertaken. In any case, as a fact, the total nutrient value of the week's diet of the B class is *limited* by the sum not of As. 1–3 but of As. 1–2·5 and the relief-worker must necessarily adjust his food to this sum.

There is no margin to cover the villager as against casbah prices.

9. Should the relief-worker not proceed to a neighbouring central town, such as the casbah station, once weekly for his food, he suffers monetarily; because the village shopman always runs his prices above the casbah rates. I have found this frequently the case, even allowing for conversion of the 86 tola measure to the Government measure of 80 tolas.

Effect on nutrient value of inferior grain.

10. A further reason why the relief-worker does not get the nutrient value supposed by the Famine Code diets rests in the fact that, in the midst of scarcity, immature or otherwise inferior grain is bought; quality is here sacrificed to quantity. Thus I found that this year's immature grain in use near Alúr weighs, per seer of 86 tolas, 30 ounces, against 31·5 ounces for old white cholum, and against 34·4 ounces presumed by Government in regulating the 80 tola seer standard; so that the loss by immature grain is 12·8 per cent. Hence, *plus* the loss by wastage in cleaning, which, with the utmost economy, must be 7 per cent., there results a total loss of 19·8 per cent. or, in other words, the ration of available cleaned grain in B diet is reduced from 21·7 oz. to 17·4 oz.

Note.—In the case of specimens handed to me by the Famine Commissioner, the difference between the mature and immature grain when measured and weighed, respectively, showed 4½ oz. in favour of matured and old grain per seer.

Effects of fines and deductions on total nutrient value.

11. Nor do the relief-worker's chances of not receiving even the scanty ration presumed by the Famine Code end here; he has to run the gauntlet of being with a gang that has been subjected to fine or deductions. There can be no doubt that at times these may be conducted with supreme disregard of the fact that the population dealt with is one possessed of no margin, either of funds or physical strength upon which to call. The cause of these fines and deductions may be beyond the control of the greater number of persons subjected to these results. Thus, during my inspection of the Siruguppa road relief works (Bellary district) I found that adult men stood before me holding out their day's wages consisting of 6 and 9 pies. Revenue Board's Proceedings, No. 6834, dated 25th December 1896, show that in the Kurnool district the following fines were enforced:—

Taluk.	Quantity of work to be done.	Quantity of work actually done.	Deduction in pay to be made.
	Class C.		
	C. FT.	C. FT.	
Koilkuntla	9,729	9,791	Minimum wages were paid.
Do.	852	689	Deductions varying from one-tenth to three-fifths of C class wages were made for most of the gangs on all days. Excess work also paid for on 4th December 1896.
Pattikonda	486	462	A deduction of one-sixth C class wages was made on the 1st day for the only gang formed that day.
	Class B.		
Sirvel	49,801	25,108	A deduction of half the wages.
	Class C.		
Do.	1,343	599	A deduction of three-fifths of the wages.
	Class B.		
Do.	4,139	1,218	Deduction varying from three-fifths hto nine-tenth B class wages.
Nandikotkur	726	653	A deduction of one-fifth B class wages.
Do.	523	388	
Do.	15,907	9,242	Varying from one-fifth to four-fifths of B class wages.

I am at time of writing this near a work (Maddikera) where the majority of the gangs are receiving the minimum wage per day, whilst defective organization as to distribution of tools and the physical condition of the gangs (dealing with excavation) show that the cause is beyond their control. Discretion * here would have seemed essential, and a much diminished task should have sufficed till organization was correct, and a chance had been given for improvement of physique by food that could not certainly be obtained on the minimum wage.

12. A further cause of reduction of the total nutrient value of the ration results when there is neglect of the fact that, if persons are so hard pushed as to resort to test works, there must also be in their houses the old and infirm, or those who are *rightly striving* to keep the remaining cattle fed, that is to say, that the ration meant by the Famine Code to cover the cost of coolies on works accommodated in sheds, and provided with bazaars on the works, is not applicable to the condition of affairs when neither bazaar nor relief circles are formed.

Where "relief circles" are not formed, the worker is at a disadvantage not contemplated in regulating his diet.

13. To complete this method of consideration of wages, it is well to ascertain the actual food lived upon by the relief-workers as a result of the various factors enumerated, showing that certainly no "ample margin" existed. On examining, with their consent, the food of relief-workers on Chinnathambulam works taken haphazard, the following results were obtained:—

What can the relief-worker really procure in the way of food?

For one man and child—plain cholum pudding lb. 3·9, equivalent to 12·81 oz. dry grain.

For two men—nothing but plain cholum pudding 3 lb. $3\frac{1}{4}$ oz., equivalent to 12·81 oz. dry grain.

For three nursing women—cholum pudding, fragments of kora vegetable, cost 1 pie, green chillies 1 pie, salt 1 pie, total weight 3 lb. $2\frac{1}{2}$ oz., equivalent to 12·625 oz. dry grain.

For two children and one woman—kungunny 2 lb. $2\frac{3}{4}$ oz. (with kora 3 pies, salt 3 pies), equivalent to 8·69 oz.

For five men—2 lb. 5 oz. cholum with green chillies 1 pie worth and salt 1 pie, equivalent to 9·25 oz. [This seems a very improbable amount; but the five men insisted that was all they could afford to eat, whilst bye-standers confirmed the statement.]

14. Although the condition of scarcity had not lasted more than two months, the state of relief-workers under the above condition on the Chinnathambulam and Adóni-Guntakal works cannot be regarded as reaching the standard set forth by the Famine Commission, namely, "the retention of the able-bodied labourer in a state of strength and health." The following was the result obtained by me on examination of the gangs in the localities stated:—

What is the effect on the physique of the relief-worker of the conditions under which the wages are received?

* Before my departure, a reduction in the task required was made by the Public Works Department Officer. This was none too soon, as the men were much overtaxed by the end of the day. My remarks apply to gravel digging.

Villages.	Number of gangs.	Men.						Women.						Children.					
		Good.		Poor.		Bad.		Good.		Poor.		Bad.		Good.		Poor.		Bad.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Chinnathambulam works, Bellary district.	2	5	35·8	8	57·1	1	7·1	16	66·7	7	29·2	1	4·1	..	..	..	..	..	..
	13 and another.	42	62·7	14	20·9	11	16·4	29	34·6	38	45·2	17	20·2	..	..	..	..	..	..
	17	10	66·7	5	33·3	..	..	11	31·4	16	45·7	8	22·9	..	..	..	..	..	..
	18	..	..	..	..	..	..	16	42·1	13	34·2	9	23·7	..	..	..	..	..	..
	Total ..	57	59·4	27	28·1	12	12·5	72	39·8	74	40·9	35	19·3	2	1·1	10	5·5	4	2·2
Alúr-Guntakal works, Bellary district.	1	7	58·8	6	46·2	..	..	23	52·3	17	38·6	4	9·1	..	..	..	..	..	..
	6	22	81·4	5	18·6	..	..	1	20·0	2	40·0	2	40·0	..	..	..	..	..	..
	7	26	89·7	1	3·4	2	6·9	17	58·6	5	17·3	7	24·1	..	..	..	..	..	..
	12	..	..	..	..	..	..	18	35·3	19	37·3	14	27·4	..	..	..	..	..	..
	13	17	70·8	7	29·2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	14	29	74·3	9	23·1	1	2·6	13	50·0	10	38·5	3	11·5	..	..	..	..	..	..
	15	..	..	..	..	..	..	12	41·4	12	41·4	5	17·2	..	..	..	..	..	..
	Total ..	101	76·5	28	21·2	3	2·3	84	45·7	65	35·3	35	19·0	2	1·1	10	5·4	4	2·2
Maddikera works, Kurnool district.*	1	..	..	..	..	..	..	17	56·7	10	33·3	3	10·0	..	..	..	..	..	..
	2	12	54·6	7	31·8	3	13·6	13	41·9	12	38·7	6	19·4	..	..	..	..	..	..
	3	5	29·4	9	52·9	3	17·7	6	33·3	11	61·1	1	5·6	..	..	..	..	..	..
	4	..	..	..	..	..	..	47	70·1	16	24·0	4	6·0	7	7·7	26	28·6	1	1·1
	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	42·8	..	..
	6	4	57·1	3	42·9	..	..	24	53·3	19	42·2	2	4·5	..	..	18	41·9	6	13·9
	7	..	..	..	..	..	..	12	75·0	3	18·7	1	6·3	..	..	6	28·6	2	9·5
	Total ..	21	46·7	19	41·3	6	13·0	119	57·5	71	34·3	17	8·2	7	7·7	52	31·2	13	8·6

* The opening of works here was manifestly too long delayed. The failure of children here, as compared with the result for the Bellary works, is marked.

In estimating the health state of the relief-workers from the above statistics, it must be remembered that the process of malnutrition, as contrasted with starvation is a slow one. The failure of the women, and more especially of the nursing mothers, before the men showed marked effects, must be regarded as but an ordinary sequence of events. In regard to children referred to, it is necessary to remember that they are those above five years of age, and not of that more perilous stage of life between one and five years.

15. In the preceding paragraphs, I have pointed to facts that influence the total nutriment for the wage afforded, especially with the object of demonstrating the fallacy of speaking of an "ample margin" being available. Leaving aside this question, I would now consider the diets from the point of sufficiency. It may be accepted as a fact that, unless the Jail Department has been guilty of gross extravagance up to date, the jail diets are calculated so that they allow nothing but what is requisite for "retaining an able-bodied labourer in health and strength." It would, therefore, be useful to contrast the diets obtainable (average daily) in jail and out of jail by the famine-stricken :—

District Jail diets—Hard labour.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·1	0·691	1·888	0·065	2·038	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including 1·706 oz. condiments and garlic.	7·706	0·139	0·447	0·039	0·089	..
Meat	2·143	0·321	..	0·180	0·414	..
Salt	1·0	..	..	..	..	1·0
Total ..	38·449	2·903	19·903	1·144	22·087	1·0

Simple imprisonment for males (and females on labour) in District Jails.

Articles of food.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	20	1·460	14·640	0·300	15·330	..
Dhal	3·1	0·691	1·888	0 065	2·038	..
Oil	0·5	..	..	0·5	1·150	..
Vegetables, including 1·706 oz. of condiments and garlic	7·706	0·139	0 447	0·039	0·089	..
Meat	1·7	0·255	..	0·143	0·308	..
Salt	1·0	..	..	..	..	1·0
Total ..	34·006	2·545	16·975	1·047	18·915	1·0

Sub-Jails.

Articles of diet.	Quantity.	Albuminoid.	Starch.	Oil.	Starch equivalent.	Salt.
	oz.	oz.	oz.	oz.	oz.	oz.
Ragi	24	1·752	17·568	0·360	18·396	..
Dhal	3·857	0·860	2·349	0·081	2·535	..
Oil	0·5	..	..	0·5	1·15	..
Vegetables, including condiments	7·5	0·135	0·435	0·038	0·521	..
Salt	1·0	..	..	..	..	1·0
Total ..	36·857	2·747	20·352	0·979	22·602	1·0

16. The utmost that can be proposed in the way of economy in the case of the jail diet is the increase of dhal and abolition of meat * ; but, the endeavours would still be to secure the total proteids and starches. In this case, the ration is reckoned by allowing for wastage of grain, pulse vegetable and meat; not so however the famine rations. So that the rations allowed (ragi being the grain in each case) for a criminal and a famine-stricken population, respectively, may be thus contrasted with acknowledged standards of what is essential :—

* As has indeed been proposed by the Inspector-General of Prisons, Madras.

—	—	Albuminoids.	Starch equivalent.
		oz.	oz.
A. Hard labour	Jail	2·903	22·087
	Relief works	2·496	21·758
B. Moderate labour	Jail	2·747	22·602
C. Do.	Relief works	2·273	18·389
	Relief works	1·921	16·900
D. Simple existence	Jail	2·545	18·915
	Relief works	1·531	13·484

The necessary nutrient value of rations according to standard authorities—

Lethely's scale (108-*lb. man*).

	Nitrogenous.	Carbonaceous.
	oz.	oz.
Idleness	1·92	14·12
Ordinary labour	3·28	21·05
Active labour	4·18	25·18

Playfair's scale (108-*lb. man*).

—	Albuminoids.	Fat.	Carbohydrates.
	oz.	oz.	oz.
Absolute rest	1·4	0·36	8·64
Gentle exertion	1·8	0 72	8·64

Dr. Meinert's scale (quoted by Church).

—	Albuminoids.	Oils.	Starch.	Starch equivalent.	Ratio.
	oz.	oz.	oz.	oz.	oz.
Bare sustenance	2·184	0·774	7·735	9·514	1:4·36
Moderate work	3·038	1·452	12·889	16·230	1:5·34
Hard work	3·739	2·578	11·510	17·438	1:4·66

These standards represent the amounts requisite after allowing for the difference of weight between the average European and Native. I have taken 108 lb. as a fair estimate of the weight of the Madrassee. This is the weight obtained as the average in the Lunatic Asylum, Madras, in a population of about over 500.† I choose the Asylum population, because it represents average individuals (adult males) from all parts of the Presidency, as I believe the average Tamil and the agricultural labourer of the Deccan differ in weight.

† Average age, 33 years.

Irrespective of the small allowance of albuminoids exhibited in the Famine Code diets by the above contrasts, the absurd provision of 1 oz. for vegetable and condiments in the famine diets against that for jails (paragraph 15) is very striking. In short, the only further possible way of making an economy when contrasted with jail diets has been effected by the framers of the Famine Code *at the expense of*

How it has been arranged to give the relief-worker a cheaper diet than the criminal.

the vegetable diet. That he may live to-day, the relief-worker has, therefore, to run certain risks in the future. On these diets, slowly but none the less surely, scorbutic symptoms must show themselves. They must have been devised by officers who never saw the horrors of the so-called "famine ulcers" in the famine of 1877. At that time, men were to be found in hospitals in rows with their legs simply rotting from their bodies, as a result of this scorbutic taint, combined with absence of sufficient nitrogenous diet. A more recent instance of the attempt to live on just such a type of diet—somewhat better indeed—was exhibited in the fate of the followers in the various late Burmese expeditions, large numbers of whom passed through my hands in Mandalay in 1892–93. That large numbers of men broke down in health with symptoms of land scurvy in these expeditions is notorious. Their diet provided (wheat flour ration) 4·141 oz. albuminoids and 18·881 starches; but the antiscorbutic, or vegetable diet, was represented by $\frac{1}{2}$ oz. *amchur*, which it is possible the exigencies of service did not permit them always to get.

The danger of straining too much at economy.

I consider that, in the Famine Code rations, exactly the same class of mistake is being made. Whilst, in the case of the A and B wage, it might be possible for the relief-worker to obtain the minimum amount of vegetable salts by contracting the purchase of the already too small amount of staple grain and "other items," this point is of distinct import when dealing with such finely drawn theoretical diets as afforded by the C and D wage; for it must be remembered that in these not only are the total starches and albuminoids diminished, but that vegetable diet * is brought to the vanishing point.

* D ration—Combined vegetables and condiments, = 0·5 oz.

17. True, workers on diet C have normally but 50 per cent. of a full task; but what officer on relief works will adjust to this diet the task so as to compensate for distance walked from villages to works, the grinding of the day's provision, cooking the same and searching for fuel, not provided by the wage. Take the instance of the gangs from the Hathibelagal village. Certain of these walked about five miles in the morning starting from their homes in the dark at 4 A.M.; they worked at task labour from 7 to 12, and then had two hours' rest; worked from 2 to 5-30 P.M. and walked back five miles arriving at their village at about 9. They required from this time to 11 P.M. for cleaning, grinding, and cooking their food; they got to bed at about 12. This is, I hope, but an exceptional case; but 8 miles per day is not an unusual task. Ten miles per day equals 101·8 foot-tons or (0·47) nearly half a day's work. Unless, therefore, it is possible, in accordance with the refined calculation of the Famine Code as to the diet, to estimate not only the force requisite for the task, but also the total duty performed by the relief-labourer upon such a diet, it follows that the absence of any margin becomes a serious matter. Thus, with ragi grain, and not allowing for wastage, the C diet yields in albuminoids exactly that held necessary by Letheby for "idleness," and but 0·121 above that allowed by Playfair for "gentle exertion," a term that may be said to restrict motion to passing from one room to another, sewing with a needle and the like. Now, it is held that 400 foot-tons per day for the average able-bodied European represents a "hard day's work," and 300 tons is a "fair day's work." Reducing the latter task proportionately for the weight of 108 lb. man that I have assumed above, the task for an average day's work for a Madras native would be represented by 216 tons. But, the task required of the C class is but 50 per cent. of a full day's task; so that 108 foot-tons would represent the work required. If, however, the relief-worker has to march with a child weighing 16 lb. three miles to and from the work—a very common event—the amount of energy spent in marching alone represents 43·84 foot-tons, or 40 per cent. of the appointed task for the day. In short, in my opinion, so long as the standard aimed at is "to keep the able-bodied labourer in health and strength," the C wage is absolutely unsuitable for men *on tasked labour.*

It is not safe to adjust work and wages [diet] without allowing a margin.

The C wage should be abolished for tasked labour.

18. In the case of the D wage, I consider it provides a diet that ought to find no place in a system of relief, otherwise than for penal purposes. I have in paragraph 5 given reasons for believing that the relief-worker will not be guided by the light of scientific researches, and will most certainly not take care to provide a *quantum* of dhal with his one pound of grain. Further, he is saddled with the difficulty of not possessing one pound of prepared flour, but one pound of *unhusked grain.* Granting this, and assuming the unlikely contingency that he will correctly proportion his diet so as to gain the proportion of albuminoids according to the ideal of the Famine Code, the total diet would still represent 0·269 per cent. below what is necessary for "gentle exertion" according to Playfair, and no less than 0·653 per cent. below that held as requisite from the average quoted by Church for "bare sustenance," the calculations being in each case for a man of 108 lb. In discussing this diet more especially, it is seen how great the range may be of total nutrient value in accordance with the description of staple grain used. Thus, those who contend this slender ration is sufficient (paragraph 9, Government of India Resolution with G.O., No. 685, dated 24th September 1894) have much more sound argument on their side, when they rely upon wheat, which I believe is largely used in the north of India as the staple grain, the comparative figures being as follows:—

D wage is absolutely unsuitable otherwise than in wheat-consuming localities.

—	Albuminoids.	Starch.	Oil.	Starch equivalent.
	oz.	oz.	oz.	oz.
Wheat	2·615	12·191	0·567	13·496
Cholum	1·943	12·815	0·695	14·414
Ragi	1·623	12·959	0·615	14·374
Rice	1·623	13·775	0·471	14·869

In this Presidency, the chances of the cooly getting wheat flour are out of the question; what must be contemplated is the use of either ragi or cholum, and, when all dry grains are exhausted, rice. Beyond the richness in oil, practically, in dealing with rice and ragi, the same nutrient value is obtained.

19. *Recommendations based on the foregoing remarks.*—Having then pointed out what I regard as faults existing in the Famine Code diets, it remains for me to suggest what I think is requisite. This must depend upon what are the intentions of Government as to the famine-stricken; if it abide by the standard of maintaining the labourer in strength *and* health, none of the diets will suffice, owing to absence of provision for vegetable salts. But, if the intention be simply to preserve a population, so as to buoy it over an unfavourable period not exceeding, say, three months, diets A and B will suffice for the purpose, remembering that in proportion as the population uses the the type of diet laid down in the Famine Code, and fails to spend a certain part of the scanty wage upon vegetable diet, or is unable to procure it in at least the form of sufficient tamarind, a scorbutic taint must be forthcoming that may bring mischief to a certain proportion; but, in diets C and D the risk becomes so great, that it should not be run even for this brief period. In short, I consider diet C unfit for use with relief-workers *placed on tasked labour.* Subject to the scorbutic risk, it would suffice for (1) untasked labour; (2) as the *minimum* for tasked labour resulting from "reductions," for short work; (3) for gratuitous relief and (4) for poor houses. Diet D should be solely the reward of *contumacious* refusal to work, and not the sustenance of weakly gangs "given enough exercise to maintain health," the nutrient value being such as to render it quite task enough that life should be retained, if it be persisted in day after day.

20. If the diets procurable by wages A, B and D then are retained, the following changes would be necessary:—

(*a*) The amount of grain should be added to, to an extent sufficient to cover loss by wastage, say 10 per cent.

(*b*) The wages should be increased to an extent sufficient to provide a margin that will secure about six ounces of vegetables in diet A, and proportionately in others, and for provision of fuel for town-dwellers.

(*c*) The rations calculated as procurable for each wage should be distinctly set forth in detail in the Code.

(*d*) A relief work distant from the casbah more than three miles should *invariably* have attached to it a bazaar from the moment the work is opened; when feasible, by private arrangement; but, failing this being possible, under official arrangements, so that the articles set forth in the ration allowed should be obtainable on the spot.

(*e*) To encourage the proportionate use of grains and pulses, a short note should be given to each head cooly calling attention to the desirability of so constructing a ration. At the bazaars, the ration should be exhibited by placards in the vernacular; also on the head cooly's muster roll. No interference with the relief-worker's actual purchases should be attempted.

(*f*) Whilst the calculation that condiments and "other items" will correspond to the proportion of grain allowed in the Code is ingenious and fairly correct, it is inapplicable when dealing with so finely estimated diets as those discussed. It does not follow that "other items" will fluctuate with the grain, or that there will be a "margin." It is consequently a round-about way of calculating, for which there can be no good reason. There can be no difficulty in the Tahsildar at the time he issues the statement of the equivalent wage, also quoting in detail the cost of "other items," and this I think should be *invariably* adhered to. It is an arrangement fair to the public funds, and fair to the relief-worker.

(*g*) Not the rates of the casbah but of the villages adjoining the works should be taken as the basis of the Tahsildar's notification.

(*h*) The change from cholum to ragi being distinctly to the detriment of the relief-worker as to total nutrient value of his diet, when cholum is the staple of the district a change to ragi or rice should not be made simply on the ground that the cheaper grain is *procurable* in the larger towns in the district. It should be proved distinctly that such change of conditions has occurred in the area affected as to have led to its free importation in *all the smaller villages*.

(*i*) The moment a test work has proved the necessity for employment the "circle relief" system on behalf at least of villages sending labourers should be started as the logical sequel; for it stands to reason that those who come for employment, out of necessity also leave the aged and infirm at home, whom they have to support from the wage received, although it is calculated for the support of one person only: the two systems must be *inseparable*.

(*j*) Equally, if the wage is to suffice, there should be no hesitation as to multiplying kitchens, so that they shall not be distant from gangs more than one mile, failing which a system of transport of food should be employed for distant kitchens.

(*k*) There should be three classes of labourers—the A, the professional, the B, or able-bodied but not professional, and C, the untasked and weakly. For those on the B wage the existing tasks for B and C should be retained *leaving it to the discretion of the officer in charge of the works what that task shall be*. Proportionate deductions for short work would then be possible down to the existing rates for the wage C. Any deduction below this must be solely as a fine, after due investigation by the officer in charge of the work and a special report should be furnished on the subject.* This is in accordance with section 106 of the Famine Code, and with, I believe, the opinion of most who have had practical experience of famine conditions. The assumption that famine works would become "unduly attractive," or that relief-workers would be persistently idle is, under the special circumstances, very erroneous; except in the immediate neighbourhood of large towns, the typical relief-workers (agricultural labourers) are disciplined with the greatest ease; they regard joining a relief work as a degradation, and will not resort to it till absolutely obliged. If they fail to turn out a required task, it is a matter of ten to one that the supervision is bad, or that the organization of

* It should always be required that this report be accompanied by a declaration that the organization of the gang as to proportion of men, women and children, and its equipment as to provision of tools were correct.

the gang is absurd as to proportion of men and women, or that, as occasionally happens, what with length of journeys from the village to the works, they literally are unable to cope with the duty required, or are so dispirited by repeated fines and private hardships as to be morally unfit to make the effort. I consider, when attempting relief upon the special system relied upon in the Code, that the question of tasking and fining is far too delicate a matter to be dealt with successfully within the limits permitted in G.O., * No. 728, Revenue, dated 18th December 1896. On the opposite, I respectfully suggest that the only safe policy for Government to assume is that the officer in charge of the works is primarily responsible that tasking is judiciously arranged as to each gang, and ensure that this responsibility has due check by inspection by superior Engineer Officers and Medical Officers specially detailed for sanitary duty.

* Communicated with B.P., dated 26th December 1896, No. 460.

(*l*) To effect proposals in the foregoing paragraph, medical inspection of each work should be arranged for systematically. If Medical subordinates at disposal are insufficient to enable one to be on each work, inspection should be arranged for at least every fortnight by an itinerant officer. Each gang should then be inspected, and the officer in charge should be bound to decrease the total task expected, if in the opinion of the Medical Inspector given in writing this is necessary.

(*m*) Male children of 12 years of age should not be classed in future as men; the outturn of these little boys cannot fail to be less than the adult man he represents. In consequence, the gang with several such little boys in it is liable to suffer by deductions. Young children, from 7 to 12 years, might be allowed from one-fourth to half wage; those from 12 to 16 invariably three-fourths wage. I believe that the working of the order as to regarding "all persons of 12 and upwards on relief works as adults (section 120, Famine Code) is a constant cause of short work, and consequent unreasonable reduction to the wage of their adult fellow workers. For example, I have seen gangs supplied with earth by excavating by adults of 12 years of age with women carrying earth for them who could have carried twice the amount excavated. I have seen little boys armed with pick-axes who, weighed against these implements, had little in their favour. Even when these adults (!) have broken a basket of stones, they require aid to lift it on their heads. I am convinced that this is a fundamental error as to economy and imperils the whole system of relief works.

(*n*) *The necessity for the "ample margin" that has not been provided by the Famine Code.*—Fuel has to be bought by the relief-worker when in the neighbourhood of towns. In rural areas the worker gathers his own fuel, but these efforts imply daily greater distances, by one or more members of the family, to be travelled—even if the fuel consist of nothing but old jowari roots; as, perhaps, there are 4,000 people daily who share in the search. On the other hand, in towns, vegetables are readily procured, and the price of grain is usually less than in the village, although the opposite would seem the reasonable result.

It is therefore possible, by having a margin over the bare dry grain ration, to meet the requirements of both urban and rural areas, without making separate scales for each. Remembering fully the necessity of being just to the tax-payer as well as to the relief-worker, and taking care to disturb as little as possible sanctioned conditions of the Famine Code, I regard the following as the least wages that can be recommended, so as to secure the minimum of both grains and vegetable food, and yet hold the hope that both strength and health shall be retained by the relief-worker :—

Table showing proposed revised famine wages and ration (the example being worked at 15 seers per rupee).

—	A.		B.		C.		D.	
	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.	Oz.	Value in pies.
	Males.							
Grain	26·7	10·7	24·1	9·6	20·3	8·1	17·8	7·1
Dhal	4·0	2·75	3·5	2·4	3·0	2·1	2·5	1·7
Salt	1·0	0·75	0·9	0·7	0·7	0·5	0·6	0·45
Oil	1·0	2·3	0·9	2·1	0·7	1·6	0·6	1·4
Tamarind and chillies.	2·0	2·5	1·8	2·3	1·4	1·8	1·2	1·5
Vegetables and fuel.	..	3·0	..	2·9	..	2·9	* ..	0·85
Total cost in pies ..	22		20		17		13	
Total cost in grain ..	oz. 55 or lb. 3-7		oz. 50 or lb. 3-2		oz. 45½ or lb. 2 10½		oz. 32½ or lb. 2-0½	
	Females.							
Grain	22·2	8·9	21·0	8·4	17·5	7·0	15·6	6·2
Dhal	3·3	2·3	3·0	2·1	2·6	1·8	2·2	1·5
Salt	0·8	0·6	0 78	0·58	0·6	0·4	0·5	0·375
Oil	0·8	1·8	0·78	1·76	0·6	1·4	0·5	1·15
Tamarind and chillies.	1·6	2·0	1·57	1·96	1·2	1·5	1·1	1·375
Vegetables and fuel..	..	2·4	..	1·2	..	0·9	* ..	0·4
Total cost in pies ..	18		16		13		11	
Total cost in grain ..	oz. 45 or lb. 2-13		oz. 40 or lb. 2-8		oz. 32½ or lb. 2 0½		oz. 22½ or lb. 1-6½	

* No fuel is allowed.

A. Represents professional labourers.
B. Represents able-bodied adult untrained labourers.
C. Represents untasked labourers, gratuitous relief, minimum wage arrived at by deducting for short work for classes A and B.
D. To be employed for penal purposes only, viz., for contumacious refusal to work, &c.
Children.—Wages will vary according to age, powers of work and requirements from one-fourth to three-fourths of those for adults.

By way of affording a contrast, I quote the figures proposed by the Famine Code Committee of 1882 (*vide* Board's Proceedings, No. 396, dated 27th May 1892) and the existing Famine Code rates.

Table contrasting the rates now proposed and those of the existing Famine Code with those fixed by the Famine Code Committee of 1882—worked in pies.

—	Males.				Females.			
	A.	B.	C.	D.	A.	B.	C.	D.
The Madras Famine Code Committee ration (*vide* paragraph 11 of Board's Proceedings, dated 27th May 1892, No. 396).	27	21	17	..	20	17	13	..
Existing Famine Code rates at 15 seers per rupee.	17	15	13	12	15	14	12	11

This Committee was aided by that thoroughly reliable and experienced sanitary authority, Dr. Cornish. The demands of this Committee were, in my opinion, just and reasonable. If I have offered a diminished ration, it is not because I think demands should be abated, but because I presume the decision of the Government against that Committee's recommendation was guided not by physiological considerations, but unanswerable financial problems, of which it alone can comprehend the full difficulties. I have, therefore, in making these recommendations, held before me the task of asking that *at least the minimum requirements* shall be subserved.

Read—again Memorandum of the Board of Revenue (R.S., L.R. and Agri.), dated 19th December 1896, Mis. No. 6787, calling on the Collectors of Kurnool, Bellary, Anantapur and Cuddapah to report, at a very early date, the actual cost of purchasing the amounts of the "other items" included in a relief worker's ration—both maximum and minimum—at Owk, Adóni, Tadpatri and Jammalamadugu.

Read—also the following letter from C. M. MULLALY, Esq., Collector of Kurnool, to the Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture, dated 5th January 1897, Dis. No. 23-Eng :—

With reference to the Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to give below the actual cost of purchasing the "other items" for the relief work at Owk :—

	Maximum.		Minimum.	
	OZ.	PIES.	OZ.	PIES.
1. Dhall	4	4	2	2
2. Salt	5	½	0·33	¼
3. Oil	1	3	0·33	1
4. Condiments and vegetables	1	1½	0·50	¾
Total ...		9		4

Read—also the following letter from M.R.Ry. S. RAMU IYER Avergal, B.A., Deputy Collector, Adóni Division, to the Collector of Bellary, dated 8th January 1897, Dis. No. 49 :—

In returning the Arzi Dis. No. 4453, dated 28th December 1896, of the Tahsildar of Adóni, reporting the price of "other items" included in the wages of relief-workers under section 120 of the Famine Code, I have the honour to report that his calculations are correct, but the prices of dhall and salt as ascertained by him at the date of his enquiry (26th December 1896) differ slightly from what I ascertained by personal enquiries. I found that dhall sold at As. 1–8 to As. 1–10 a seer and salt 4½ pies, as against As. 1–11 and 5| pies, respectively, quoted by the Tahsildar. In the latter part of last month, there was a temporary rise in the price of salt owing to the breach on the Madras Railway.

2. I append a memorandum of my calculations. It will be seen therefrom that, taking the latest quotation of the price of yellow cholum, that is, 16·12 Imperial seers per rupee, the consolidated A class wages (As. 1–4) gives the labourer 2 pies less of other items than he is entitled to under section 120, if ghee is allowed; but that, on the other hand, it allows him nearly half a pie in excess of the cost of other items if oil is substituted for ghee. The consolidated minimum wage (10 pies) gives the labourer an advantage of ⅓ pie or 1 pie according as ghee or oil is allowed.

3. You are aware that the labourer does not eat dhall except on special occasions, and still less ghee. Of course, he makes up for the want of dhall by eating more of grain. I do not think that any labourer, if he can help it, will take less than three-fourth seer of grain. Taking all things together, the consolidated wage seems to me to duly provide for other items.

Endorsement by R. H. CAMPBELL, Esq., Acting Collector of Bellary, dated 11th January 1897, Dis. No. 195.

Copy with the calculation sheet submitted to the Board of Revenue, with reference to B.P., Mis. No. 6787, dated 19th December 1896. The result of my own enquiries at Adóni, is to show that the wage just covers the cost of "other items" allowed for in the Code.

Read—also the following paper:—

Letter from M.R.Ry. M. V. NARAYANASAWMI PILLAI Avergal, B.A., Special Deputy Collector, Jammalamadugu Division, to the Collector of Cuddapah, dated 28th January 1897, Dis. No. 29-F.:—

In reply to your foot-note, dated 22nd December 1896, on Board's Memorandum, Mis. No. 6787, dated 19th December 1896, I have the honour to submit herewith a statement showing the actual cost of purchasing the amounts of "other items" in the taluks of this division.

2. In section 120 of the Famine Code, the cost required for fuel has not been included in the "other items." As this expenditure is absolutely necessary, I have exhibited its price also in the above statement. The price of the staple grain (ragi) to the on the date to which the prices of the "other items" relate is noted below:—

Taluk.	Date.	Price.	
Proddatur	31st December 1896	19·0	Imperial seers.
Jammalamadugu	30th „ „	18·0	„
Pulivendla	27th „ „	13·0	„

3. In order to find out whether the grain allowances are unduly above or below the actual cost of the other items, a statement (No. II) is prepared and herewith submitted.

4. While the differences between the prices of the staple grain in the different taluks is large, the cost of purchasing "other items" does not vary proportionately. According to the prices reported by the Tahsildars, the coolies who earn the maximum wages are put to loss even leaving the cost of fuel out of consideration. In Pulivendla, there is a small saving owing evidently to the high price of the staple grain. In the minimum wages, there is a saving generally in Pulivendla and Jammalamadugu, and the loss in Proddatur is trifling. If the cost of fuel is included, the coolies who earn maximum and minimum wages have to be considered as sustaining loss alike by the adoption of the price of grain in lieu of the actual cost of the "other items" making up the ration.

5. I do not know for what reason the cost of fuel has not been provided for in the Famine Code; but fuel is required for cooking. On receipt of the Tahsildars' reports, I myself made experiments to see what the cost of fuel required would be, arranging the cooking most economicably. The result was that the Tahsidars' estimates were not above the mark. Generally, the cooly classes do not purchase firewood, but they collect dried leaves, &c., which answer the purpose. But now that the coolies on the work are expected to turn out the required task, they find little or no time to collect fuel. Some of them during the midday interval collect some fuel; but they have to wander about all the time and the interval cannot be called an interval of rest.

6. I take this opportunity to state that the relief-worker never does, at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a "chatni" (చట్ని). This costs him a pie or a pie and a half and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables, and they rest satisfied with the "chatni" that they make.

Endorsement by A. C. TATE, Esq., Collector of Cuddapah, dated 1st February 1897, Ref on C. No. 8298-Rev.

Forwarded to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, with reference to Board's memorandam, Mis. No. 6787, dated 19th December 1896. Information regarding the cost of purchasing "other items" has been tabulated also for Proddatur and Pulivendla.

Resolution—No. 144, dated 18th February 1897.

The valuable report forwarded by the Sanitary Commissioner with his letter, dated the 27th January, will be submitted for the consideration and very early orders of Government. The report deals with matters which are of the first importance in any scheme for affording relief to the distressed, and the drawbacks to, and deficiencies of the present system, to which Surgeon-Lieutenant-Colonel King draws attention, are most serious.

2. As an introduction to a discussion of the subject, the Board would draw attention to paragraph 184 of the report of the Indian Famine Commission, 1880, referring to certain main principles which should be kept in mind in times of famine.

The Commissioners stated that—

"One of these is the amount of food required by workers and non-workers. The conclusion we draw from a careful examination of the evidence of authorities in all parts of India is, that, on an average, a ration of about 1½ lb. per diem of the meal or flour of the common coarser grain of the country suffices for an ordinary working adult male. In the rice-eating countries an equal weight of rice may be accepted in lieu of flour, and in any case the ration should include a suitable proportion of pulse. A man doing light work would require about 1¼ lb.; and the ration which consists of 1 lb. of flour with a little pulse has been found sufficient to support life in numerous relief-houses, where no work is exacted, all over the country. On these bases the diet scale should be built up, it being understood that a female requires a little less than a male, a child below twelve years of age about half the allowance of an adult male, and a non-working child below six or seven about half as much as a working child on relief-works. However, where a money wage is given, the rate of pay should be such as to leave a slight margin above the actual cost of the flour, so as to allow for the purchase of salt, pepper and other condiments and fire-wood, and to avoid the risk of the wage being insufficient to purchase the full ration of food. Whenever it is necessary to supply people with a kind of food to which they are unaccustomed, the result should be carefully watched, and endeavour should be made to counteract, by some adjustment of the dietary, the unfavourable results which will probably arise from the change."

3. The paragraph above quoted was printed in the appendix to the letter from the Government of India, read in G.O., No. 1006, Revenue, dated 18th August 1883, in which the first Madras Famine Code was discussed. Together with it, the evidence of the most experienced administrators of the famine relief in 1877–78 in Madras and Bombay is given; whilst, in the same Proceedings of the Madras Government, a valuable letter from Surgeon-General Cornish on the subject of famine wages is also printed. A perusal of these papers is necessary to a full comprehension of the subject.

4. Under the first Madras Famine Code, the wages offered to relief-workers were made up of the money value of certain fixed amounts of grain, *plus* certain fixed sums of money. The latter were arbitrarily fixed upon the best information available, at the time the Code was framed, as to the money value of the items other than grain required for the support of the labourers. Dr. Cornish defined these requirements, in a letter read in G.O., No. 1188, Revenue, dated 13th August 1881, as follows:—"Besides the grain allowance, a working adult man in famine times would require at the least 4 ounces of pulse, ½ an ounce of salt, ½ an ounce of pepper or condiment, 1 ounce of ghee or oil, *and* a daily *modicum* of green herbs or vegetable, with corresponding quantities for women and children." No better authority could be quoted. The quantities here mentioned, except that the "*modicum* of green herbs or vegetable" is there reduced to 1 ounce, are practically identical with those laid down as the maximum ration specified in the Provisional Famine Code of the Government of India.

5. No changes were made in the scale of wages prescribed in the Code above mentioned until after a discussion originated by the Government of India, which is to be found in the papers printed in G.Os., No. 839, Revenue, dated 11th August 1892, and No. 685, Revenue, dated 24th September 1894. This discussion arose from a representation by the Supreme Government that the Madras scale of wages was unduly liberal in the condition of prices that now prevails, and is likely to prevail in the future. At the same time they indicated (paragraph 11 of their Resolution No. 6-44, dated 17th March 1892) the general lines of the policy they desired to be followed, as follows:—

"Following the Famine Commissioners' recommendations, labourers on relief-works may be classified according to their capability for work. The classes adopted in the Provisional Code are: A, skilful and able-bodied accustomed to the kind of work required; B, able-bodied accustomed to work; C, able-bodied not accustomed to work; D, others. Classes A and B may receive a full wage, *i.e.*, a wage equivalent to a ration sufficient to keep an able bodied labourer in health and strength, together with a margin. The margin may be more liberal for class A when it contains a small percentage than when it is allowed to include a large percentage of able-bodied labourers accustomed to work. The wage of class C will not exceed the full wage, and should be determined in general accordance with the principles of sections 133 and 134 of the Provisional Code."

These proposals were referred to this department only for report, and apparently the conclusions of the Government embodied in its Order No. 839, Revenue, dated 11th August 1892, were arrived at on a consideration of the question from an administrative point of view, and without any special consideration of the possible physiological consequences of the changes proposed. The main conclusion then arrived at was that a simple method of calculating the money wage would be a great advantage "provided the wage admits of a small fraction being spent on condiments and vegetables." Such a wage would be found, the Government stated, in "the money equivalent of $2\frac{1}{2}$ lb. of the staple grain *husked*, or of flour in the case of ragi, for a man, 2 lb. for a woman and $1\frac{3}{4}$ or $1\frac{1}{4}$ lb. for a child," and this, it thought, would not be excessive as a standard wage. That is, *the wage was to be the same for all classes*, but, as an encouragement to industry, extra work was to be rewarded by slightly increased pay. *The principle of equal wages for all workers* is no doubt correct. That is, that the sustenance required in all classes is equal or, as Dr. Cornish put it, in paragraph 4 of his letter read in G.O., No. 1188, Revenue, dated 13th August 1881, in reference to the draft Famine Code prepared by the Secretary to the Famine Commission—

"*I cannot agree with the statement in paragraph 13 of the Code that the labourers in classes 3 and 4 would necessarily require less sustenance than those of classes 1 and 2. Their enfeebled condition and inability to do a full day's work might be due to previous privation, the only effective remedy for which would be rest and judicious feeding. The attempt to work any classes, but the able-bodied in famine times is, in my opinion, a mistake, which, if there be any truth in physiological science, is most certain to be attended by great disaster to human life.*"

Surgeon-General Cornish further observed that—

"The present Code is no doubt the outcome of certain experiences gained during the late famine, but it should not be forgotten that, as regards the saving of life, the various labour diets resorted to in Mysore and Madras were not in any way efficacious. I do not wish it to be inferred that I would abolish all labour tests for famine relief, but that, as regards the enfeebled and wasted, whether old or young, much discretion should be exercised in the exaction of work as a condition of relief."

6. The conditions under which the standard wage was to be offered are very clearly stated in paragraph 7 of G.O., No. 839, Revenue, dated 11th August 1892, and were, briefly, that the wage should be paid on the performance of a properly adjusted task, to ensure which fining within certain limits was necessary, but that "*in no case should fining be carried so far as to reduce the wage below a certain limit.*" The limit or minimum, beyond which fining was not to be permitted, was practically the grain equivalent of the wage for days of rest, and the minimum wage of the Government of India, except that allowances were also to be made for loss in husking or grinding. This, however, it was then noted, could be accepted only as "a penal wage," as experience had shown that the so-called subsistence allowance, which was greater, was not sufficient for subsistence. The Government also considered this wage too low for the allowance that is given when work is suspended, and proposed a higher rate for days of rest. The scale then determined on was as follows:—

	Standard.	Rest day.	Penal ration.
	LB.	LB.	LB.
Men	2·5	2·0	1·75
Women	2·0	1·75	1·50
Children A	1·75	1·50	1·25
" B	1·25	1·00	1·00

7. The wages herein proposed represented the deliberate conclusions of the Madras Government, which stated that there was "a consensus of opinion amongst the district officials that a ration of that amount (to include the cost of condiments) would only be just sufficient to keep the people in their ordinary state of health," but it is, in the light of Surgeon-Lieutenant-Colonel King's report, doubtful whether sufficient allowance was made for the essential provision of "a daily modicum of green herbs or vegetable."

8. In its Circular Resolution, No. 6—44, dated 17th March 1892, the Government of India issued final orders regarding the revision of the Famine Codes of all provinces, but in that circular it only dealt with the question of the sufficiency or insufficiency of the "subsistence ration," and stated that "the ration was determined in 1883 after consultation with medical experts, and after careful comparison with standards adopted in jails and elsewhere." It also stated that "wages based strictly upon it were during the recent scarcity found sufficient," although, as shown in the Madras G.O. above quoted, that was not the experience in this Presidency, even when the value of the equivalent in flour, instead of in unhusked grain, was allowed. In an appendix to that Resolution a calculation was given to show that in both the maximum (A class) grain wage, and in the minimum (D class) an ample margin was left for fuel, &c., and for fluctuation in prices, and this margin has since been held to be so ample as to obviate the necessity for making any allowance for loss in husking—memorandum read in G.O., No. 244, Revenue, dated 9th June 1896, paragraph 26.

9. The circular above quoted laid down wages in terms of grain equivalents as follows:—

Class.	Men.	Women.
	LB.	LB.
A	2·625	2·375
B	2·375	2·25
C	2·0	1·875
D and minimum	1·75	1·4375

No attempt was, however, made to show, for the B and C class workers, what amount of "other items" was required, nor was it stated how much of the grain equivalent was intended to furnish funds for their purchase. Apparently, in framing this scale, the deliberate recommendations of that high authority, Surgeon-General Cornish, above quoted (paragraphs 4 and 5 *ante*) were not considered.

The scale proposed was, however, adopted for classes A, B and C by the late Mr. Clogstoun without demur, but, both he and the Madras Government protested regarding the insufficiency of the proposed minimum wage. This protest was based on the teachings of experience only, and, as is shown in the paper now under consideration, would have been overwhelming had the proposals been considered in their physiological aspects. To this protest, the Government of India declined to listen.

10. The Sanitary Commissioner now shows that, both on physiological considerations, and by comparison with jail diets, the rations laid down are inadequate, if the workers are to be maintained in health and condition, even if the whole of the grain wage reaches them.

Although it does not affect the conclusions arrived at, it may first be pointed out that the Sanitary Commissioner has made a slight error in the calculations on which the computations in paragraph 1 of his memorandum are based. Instead of the unhusked grain, entered in column 3 of the table there given, flour or cleaned rice should have been entered. As to the distribution of the "other items" for class B and C wages, for reasons above noted, Surgeon-Lieutenant-Colonel King has followed the only method available. In result, the theoretical value of the diets would be rather higher than he works them out, and the figures given in the first, instead of the second, table in paragraph 4 should be used for comparative purposes. The final result, however, is much the same, owing to the fact that there would then be less "margin," and this will be seen when considering the data given in paragraph 7 of the memorandum.

11. In order to show how deficient in proteid matter the Famine Code rations are, the Board has brought together below the figures given at paragraph 16 of Surgeon-Lieutenant-Colonel King's paper, and corrected them with reference to the above remark:—

—	Albuminoids.			Starch equivalent.		
	Meinert's scale.	Jail.	Relief.	Meinert's scale.	Jail.	Relief.
	oz.	oz.	oz.	oz.	oz.	oz.
Hard labour	3·739	2·903	2·662	17·438	22·087	21·337
Moderate labour	3·038	2·747	2·403 or 2·030	16·230	22·602	21·13
Rest	2·184	2·545	1·623	9·514	18·915	17·927 / 14·374

The significance of the very marked deficiency in proteids is alluded to in paragraph 5 of the note under consideration, and the Board begs to draw special attention to the fact that, even if the grain wage provided the worker with the means, there would be no security that he would, and almost a certainty that he would not, purchase therewith a properly balanced ration, while the wage will not permit him to purchase such a ration, even if he appreciated the necessity for doing so. Continued disregard of such physiological requirements can have but one result.

12. Besides the fact that, on the B, C and D class wages, the relief-workers cannot, if they will, obtain a properly balanced ration; there is another aspect of the matter of equal importance. The margin does not allow of their purchasing "a daily modicum of green herbs or vegetable," which are essential as antiscorbutics. At paragraph 7 of his memorandum, Surgeon-Lieutenant-Colonel King gives the results of attempts to purchase the "other items" of the rations. In these calculations, one-ninth should be added to the cost of the grain portion of the wage to allow for loss in grinding or making flour. If this be done, the results are as follow :—

Class.	Standard wage.	Cost of the ration at				
		Adóni.	Hatti-belagal.	Kosgi.	Bellary.	Pattikonda.
	As. P.	As. P.	A. P.	As. P.	As. P.	A. P.
A	1 5	1 5·3 / 1 5·9	..	..	1 6	..
B	1 3	1 4·08	1 6·8	1 4·6	..	1 5·32
D	0 10	10·34	..	..	..	..

These figures, so far from suggesting that there is an "ample margin" allowed by the Code rates, point to the reverse. The conclusion is confirmed by reports received by the Board from Collectors showing the cost of purchasing the "other items" in various affected districts. The results of these enquiries are summarised below :—

Cost of purchasing the "other items" of relief wages and the margin left.

Districts.	Pulse.	Salt.	Ghee or Oil.	Condiments and vegetables.	Total.	Maximum wage at prices of January.	Margin for grain.	Quantity of grain purchaseable.
	Maximum—A Class—Males.							
	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Tolas.
Kurnool	4·00	0·50	3·00	1·50	9·00	17·00	8·00	50·00
Bellary	2·41	0·26	2·38	1·50	6·55	18·00	11·45	66·79
Anantapur	3·26	0·30	4·29	2·50	10·35	19·00	8·65	48·66
Cuddapah	3·00	0·33	3·00	1·50	7·83	16·00	8·17	54·81
	Minimum—D Class—Males.							
Kurnool	2·00	0·25	1·00	0·75	4·00	11·00	7·00	43·75
Bellary	1·20	0·18	0·78	0·75	2·91	12·00	9·09	53·03
Anantapur	1·63	0·20	1·43	1·25	4·51	12·00	7·49	42·13
Cuddapah	1·50	0·25	1·00	0·75	3·50	11·00	7·50	50·31

If allowance be made for necessary loss in husking or grinding, instead of having in class A 60 and in class D (minimum) 40 tolas of flour, the amounts of grain purchaseable would yield :—

	Flour.	
	Maximum.	Minimum.
	Tolas.	Tolas.
Kurnool	45·0	39·4
Bellary	60·0	46·7
Anantapur	43·8	37·9
Cuddapah	48·3	45·8

Enquiries are being made as to the amount of condiments and vegetables that can be purchased for the sums mentioned, but, in Bellary, it appears that the amounts purchaseable even with a maximum wage are absurd, and, practically, in no case do the relief-workers get A class wages. In Cuddapah, the Special Deputy Collector reports as follows in the matter :—

"The relief-worker never does at present, as a rule, purchase either the pulse or the ghee or the vegetables provided for. All that he gets is, a little salt, tamarind and chillies and he makes this into a 'chatni' (చట్ని). This costs him a pie or a pie and a half, and for the remainder of the wage he gets, he purchases ragi and cholum. The adult cooly on the relief works eats at one meal more than can be cooked out of 45 tolas of ragi, the C class wage for a whole day. Besides, some coolies who have a number of young children do not bring all the children to the works. Some are left at home owing to the distance of the works from their homes. These have to be fed out of the wage paid at the works. For these reasons, the relief-workers cannot afford to purchase pulse or ghee or vegetables and they rest satisfied with the 'chatni' that they make."

13. The Board considers that the comments of the Sanitary Commissioner on the Famine Code wages and diets are amply justified, and, this being so, it is its duty, as being entrusted with the administration of all measures for the relief of distress, to urge upon the Government the necessity to rectify the errors, and to remove the drawbacks to the system as soon as possible, in order that the relief offered may meet the requirements of the case as specified in paragraph 112 of the report of the Famine Commission.

14. The remarks made so far are based on an assumption that the relief-worker would, in return for ordinary industry, receive full wages. Most of the persons who resort to relief works would ordinarily be placed in class B, but, as shown by the Sanitary Commissioner, whether from delay in offering them relief, from insufficient wages, or what not, the proportion of workers found to be in good condition is only about half, the rest being in poor or bad condition. The inevitable result, unless tasks are re-adjusted with a liberal hand, must be failure to turn out the tasks demanded in B class; fining for some days till the wage reaches a vanishing point; loss of strength; reduction of class B to class C, and then the same process would, under the inappropriate wage for that class, again go on until the workers reach the weakly gangs, or are sent to the kitchens to be fed gratuitously.
Two main causes work to this end :—

(1) Insufficient and inappropriate rations.
(2) Unrestricted and unsympathetic fining.

On the former point, the views of the Sanitary Commissioner demand the earnest attention of Government; on the latter, the Board would, most respectfully, request that, on reconsideration, the Government will revert to the policy set forth in 1892, which is that so forcibly urged by the Sanitary Commissioner in his memorandum under reference. In particular, the most earnest consideration of Government will be drawn to the fact that the C class diet is unfit for relief-workers placed on tasked work. This appears to have been the view of Government in 1892, and D class diet

is, as Government then remarked, only suitable as a punishment, whilst, the Board would point out, as stated in paragraph 131 of the report of the Indian Famine Commission, that, even in the case of contumacious characters, "care should be taken that the penalties for wilful idleness, in the form of deductions from the wage, should not be so large or so often repeated, as to have the effect of reducing the food of the labourer below what is necessary for subsistence." It was the belief that the recent orders of Government ran counter to this principle which led the Board, in its Proceedings, dated 15th December 1896, No. 436, to point out the dangers involved in the course it understood the Government wished to be followed, and especially prompted the remarks made in paragraph 4 of that Proceedings. When that Resolution was drafted, the Board was not aware that the Famine Code wages contravened physiological principles so greatly, and were so far at variance with the experience gained in jails in this Presidency, and it had only to guide it the empirical deductions of the Madras Government of 1892, in arriving at which the Sanitary Commissioner was not consulted.

15. Besides the risk of loss by fines, the relief-worker has no margin to guard him from "loss which may be inflicted on him by administrative errors, or peculation on the part of subordinates, or other analogous cause." For one day a week he receives the minimum wage only; and as, under the recent orders of Government, village relief is not to be given in any form, he or she often has a number of dependants at home, whose subsistence has to be provided for out of the inadequate wage. In these latter aspects, the system at present laid down for Madras contrasts most unfavourably for the distressed who need and seek relief with that adopted in the North-Western Provinces and Oudh (*vide* G.O., No. 14, Revenue, dated 9th January 1897). There the workers reside on the works and can, therefore, devote their whole energies to the tasks demanded; practically, all are placed in class B; youths and girls above sixteen years are classed as adults, not those above twelve years; as a rule, only the men of the gangs are liable to fines; a wide margin is allowed in fixing the task according to the capacity of the gang; wages are not allowed to be reduced below the penal ration prescribed in article 103 of the North-Western Provinces Code; and, finally, to dependants gratuitous relief on a most liberal scale is given. As to the latter particular, the Board requests that the attention of Government may be given to the following figures, compiled from the *Gazette of India*, showing the numbers relieved on works as dependants, at poor-houses, and otherwise in the three provinces of Madras, Bombay and the North-Western Provinces during three successive weeks. The figures speak for themselves.

	Numbers.		
North-Western Provinces.			
Relief workers	522,916	664,247	805,695
Dependants	123,052	125,973	165,611
At poor-houses	50,617	57,590	60,665
Otherwise relieved	99,106	176,544	222,137
Total ..	795,691	1,024,354	1,254,008
Bombay.			
Relief workers	178,585	197,546	222,155
Dependants	78,316	83,617	93,767
At poor-houses	7,994	11,062	11,277
Otherwise relieved	..	..	..
Total ..	264,895	292,225	327,199
Madras.			
Relief workers	20,833	24,882	30,744
Dependants	..	..	..
Gratuitously fed in kitchens	1,749	2,070	2,736
Otherwise relieved	6,259	6,974	7,255
Total ..	28,841	33,926	40,735

16. From paragraph 5, &c., *supra* it is clear that the original, and, the Board would respectfully submit, the proper, theory was that all classes require an equal quantity of food. If there is any difference, it should be in favour of, not against, classes B to D. The weaker a cooly is, the more and the better food he requires to bring him into condition. The Board would, therefore, urge that the classification under A, B, C and D should have reference solely to the hereditary occupations and physical condition of the workers, not to the amount of food which they require. In its Proceedings, dated 26th January 1897, Government, after pointing out that the Board had failed to apprehend the system of relief works as laid down in the Famine Code, proceeded to enunciate the safeguards provided by the Code for the Government and for the cooly. The safeguard for the Government was the "rigidity" of tasks and fining. The safeguard for the cooly was the "elasticity" allowed by the change of gang from one class to another. Unfortunately, the "elasticity" which safeguards the cooly is one which gives him less to eat; a ration which has been condemned on the highest scientific authority as insufficient to keep him in health and strength, and which, on the lower scale, has been denounced by the Madras Government itself. The Board has always insisted, as strongly as Government itself, on the necessity for exacting tasks, provided only that these tasks are fair. The relief-cooly is always willing to do a fair task, and, as Surgeon-General Cornish long ago pointed out, and as Surgeon-Lieutenant-Colonel King now observes, there is no danger of the relief works being "unduly attractive", for, in the rural tracts, attendance on them is more or less a degradation. Respectable caste women and girls burst into tears when inspected at Maddikera. The Medical Officer present said that they were hysterical. Possibly, but through sorrow and shame at their fallen condition. It is most difficult to get caste children or caste destitutes into our kitchens, as oppobrious epithets commonly attach to those who frequent them. This is not peculiar to India. "Soupers" and "tickets for soup" are terms of abuse commonly applied to the poor in receipt of relief in Ireland. Poor old women reject with scorn the offer of food in a kitchen, preferring to break stones under the Deccan sun rather than eat an unearned ration. The blind prefer to break stones all day rather than accept the kitchen ration. There are two such cases at Yadiki. For the safeguards enumerated by Government, the Board would most respectfully suggest a rigidity, not in tasks and fining, but in the quantity of food earned by the worker, and an elasticity, not in reducing his class, and consequently his wage, but in adapting the task to his capabilities. Government will be sufficiently safeguarded, so far as expenditure on works goes, by the fact that only extreme pressure will bring the cooly on the works, and by the loyalty and honesty of its own officers.

17. There is another point on which the Board would again, respectfully, request a reconsideration of the orders of Government, viz., the prohibition of gratuitous relief in villages. The Famine Code says: "A rise to the 'scarcity rate', from time to time fixed by Government, in the staple food-grain or grains of the district is a sure indication of the existence of severe scarcity calling for the immediate introduction of relief measures." We have had scarcity rates, more or less, for three months. The early dry crop was nearly all lost, and the later-sown dry crop is also generally a complete failure. The temporary lull, while the petty harvest goes on, alone keeps the poor from crowding to our works, as they will within from three weeks to a month. Many of them are stinting, and have been stinting, themselves. The Code says "in the early stages of distress, unless otherwise directed by Government, relief for all who cannot earn wages on relief works, and are otherwise unable to support themselves shall be restricted to the grant of cooked food at central kitchens established for the purpose." The phrase "unless otherwise directed by Government" does not, the Board would respectfully submit, mean that the Code leaves a discretion as to the time when gratuitous relief shall begin, but as to the form which it shall assume, whether it shall be granted under section 64 or under sections 83 and 84 of the Code. In its Proceedings, dated 16th January 1897, Mis. No. 255, Government stated that there was at present no need to appoint Circle Inspectors. In its Proceedings, dated 30th December 1896, No. 760, Revenue, Government held that the reports submitted to it "did not show that gratuitous relief was likely to be needed in any portion of the

affected tracts for a very considerable time to come", adding that "it is needed only when the season continues bad for a long time in order to save life, but should not be started till then." This view, the Board respectfully submits, is not that laid down for guidance in the Famine Code. If relief is withheld until life is in peril, it will be given too late. The true principle of famine relief is that the people are to be taken in time, and before they have fallen off in condition, and handed over in the same state of health when relief operations close. The Sanitary Commissioner now sounds the same note of alarm. He speaks with professional authority. The Board supports him. It is possible that, at first, the gratuitous relief required in villages may be small, but the nuclei of administration should be formed early, lest, when the crush comes, the authorities should be unequal to the work of organization.

18. With the recommendations of the Sanitary Commissioner, made in paragraphs 19 and 20 of his note, the Board is in almost entire agreement, but in reference to the detailed statement in paragraph 20, it would remark regarding—

(*b*) on the necessity for an ample margin, the Board is at one with the Sanitary Commissioner, but, on the question of the actual amount of vegetable, with which it would include tamarind, required, it offers no opinion. The matter is one for experts.

(*c*) that the particulars should be asked for from the Government of India;

(*d*) and (*j*) instructions in this sense will be issued to all Collectors;

(*e*) this may be done, and the Sanitary Commissioner will be asked to draft the note;

(*f*) the Board considers that the balance of convenience is in favour of a single grain equivalent, so long as an "ample margin" is allowed, but this margin does not now exist.

(*g*) and (*h*) instructions in this sense have been issued;

(*i*) the greatest importance should be attached to this;

(*l*) Collectors will be requested to arrange through District Medical and Sanitary Officers for the systematic inspection of all and, if possible, periodical weighment of some of the gangs, on all works;

(*m*) the change is desirable not to say imperative, and is in accordance with practice in the North-Western Provinces; according to the task tables a boy of 11 counts as one unit and a boy of 12 as four units. In fact, the latter is supposed to do the same work which could be done by 4 boys of 11. This is absurd; and finally

(*a*) and (*k*) are practically what the Madras Government urged in 1892.

19. These Proceedings have been unavoidably delayed. Two paragraphs had been accidentally omitted in fair-copying the Sanitary Commissioner's letter, and a reference had to be made to him at a remote place in Kurnool; and while they were passing through the press, the Famine Commissioner was continually changing camp in the four Deccan Districts. The Sanitary Commissioner, also, required some alterations to be made in his letter after it was in print.

(True Copies and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Sanitary Commissioner.

Read—also the following letter from T. W. HOLDERNESS, Esq., Deputy Secretary to the Government of India, Department of Revenue and Agriculture (Famine), to the Secretary to the Government of Madras, Revenue Department, dated Calcutta, 20th February 1897, No. 629-F—116-1:—

In your telegram of the 11th February 1897, summarising the situation and the relief operations for the month, in compliance with the request contained in my letter No. 9-F, dated 25th January, it is said that "the relief wage has been reported inadequate by the Sanitary Commissioner." I am directed to request that the Government

of India may be informed as to the evidence on which the Sanitary Commissioner's report was based, and whether his opinion has the concurrence of other authorities. The Government of India would also be glad to know whether the Sanitary Commissioner refers to the full wage earnable by relief workers on completion of specified tasks, or to the minimum wage, or to wages below the minimum wage actually earned by workers, as the result of fines having been imposed for short work. Section 106 of the Madras Famine Code provides that "as a general rule the effect of fines must not be to reduce the wages below the minimum wage," but the Government of India have no information before them as to how this restriction works in practice. It is however obvious that if the wages actually earned by the majority of workers on particular relief-works are reduced by fines for short work below the minimum wage, the wages may be insufficient, though the minimum wage is sufficient. The Government of India are anxious for full information on this point, as from no other province has a complaint been received as to the insufficiency of the present famine wage.

Order—No. 295, Revenue, dated 4th May 1897.

Miscellaneous.

The memorandum of the Sanitary Commissioner read above, together with the remarks of the Board of Revenue thereon, will be furnished to the Government of India with reference to the enquiry made by that Government in its letter, No. 629-F, dated 20th February 1897, and its attention will be drawn prominently to the observations and recommendations made by the Sanitary Commissioner in regard to classification and wages of relief workers. Such of the other recommendations made by this officer as require the orders of Government have already been dealt with in G.O., No. 216, dated 30th March 1897.

2. Ordered that the following letter be addressed to the Government of India.

(True Extract.)

(Signed) G. STOKES,
Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement, Land Records and Agriculture).
" the Local and Municipal Department.
" the Financial Department.
" the Public Works Department.
" the Accountant-General.

Exd. C. M. Thumbuswamy.

150 Copies.