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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

REVENUE DEPARTMENT

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GOVERNMENT OF MADRAS.
FINANCIAL DEPARTMENT.

1st March 1877, No. 757.

Famine Relief.

Read the following papers:—

No. 1. From Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Madras, 13th February 1877, No. 115.

In a Minute dated 19th January by the Hon. Sir Richard Temple and published in the *Gazette of India* (Supplement, page 106) of 3rd February, I find the following statement in regard to the quantity of food necessary to sustain the health of persons employed on Famine Relief Works in the Bellary District:—

"The present rate of wages is fixed at 2 Annas per diem for an adult and proportionately lower for women and children. This rate is fixed upon the supposition that it will purchase 1½ lbs. of grain per diem—a quantity which is deemed essential for a man while at work. There might indeed be a question whether life cannot be sustained with 1 lb. of grain per diem, and whether Government is bound to do more than sustain life. This is a matter of opinion: and I myself think that 1 lb. per diem might be sufficient to sustain life, and that the experiment ought to be tried. Possibly the gangs might not perceptibly fall off in condition. After a week or fortnight of experience it would be seen whether they so fall off, or not: if they were to seriously fall off, then the point could be considered."

2. I have the honor, as the adviser of Government on public health questions in this part of India, to record my respectful protest against "opinions" which, although emanating from so eminent a public official as Sir R. Temple, are in direct contradiction to the accumulated testimony of scientific observers in every country in which this question of the quantity and variety of food essential to keep a laboring man in health and strength has been the subject of investigation.

3. While Sir Richard Temple expresses an individual opinion only, unsupported by evidence, scientific or otherwise, as to the sufficiency of 16 oz. of cereal grain to maintain a laboring adult in health, it must be remembered that there is a large accumulation of facts in reference to this very question, and that these facts do not afford any support to such a theory.

4. One of the highest living authorities on all questions connected with dietaries is Sir B. Christison, of Edinburgh. He is of opinion that the adult human body requires 35 oz. of dry food per diem, arranged so, that carboniferous and nitrogenous principles may be in the proportion of three of the former to one part of the latter. (In Indian dietaries these proportions are but barely attained, and the tendency is always to a smaller proportion of nitrogenous food.)

5. In the year 1863 a careful inquiry was made by order of the Secretary of State for India regarding the nature and quantity of food of the various classes of the people in India, and of the prison dietaries. This inquiry was instituted at the

instigation of the British Association for the advancement of science, and the reports of District Medical Officers and others on this point were submitted by myself to the Madras Government in the year 1864. It is a curious fact that amongst all the reporters there was this combined testimony, that the minimum grain allowance of a man in health and in work was *not less than 24 oz.*, while the amount which a native of good appetite was capable of disposing of, estimated by natives themselves, was from 24 to 48 oz., per diem. For Bellary and Cuddapah the average daily allowance of dry cereal for a laborer was reported to be 33 and 48 oz., respectively.

6. The physiological needs of the adult human body, according to all scientific investigators, necessitate the expenditure of from 140 to 180 grains of nitrogen in twenty-four hours, *while the body is in a state of rest*. In ordinary labor about 300 grains of nitrogen will be excreted, and under great physical exertion, such as that of walking for many hours consecutively, from 500 to 600 grains.

Now, if this amount of nitrogen is not provided in food, it is obvious that the body must prey on its own tissues, so long as any remain to be preyed upon, and this is, in fact, what happens when the food taken into the body is insufficient in quantity or quality to compensate for the constant waste that is going on in every organ and tissue.

7. The quantity of nitrogen in 16 oz. of rice may be from 68 to 80 grains; in raggy or cholam, somewhat more, about 100 grains, and less than wheat (116 grains). To a certain extent, the low amount of nitrogen in cereal grain is supplemented in the dietaries of all classes by the use of flesh-meat, milk, cheese, &c., and in the vegetable feeders of India by the use of pulses, which are highly nitrogenous in their composition. The pulses, however, cannot supply the deficiency entirely, because in practice we find that their indigestibility prevents the people from using more than from 1 to 2 oz. per diem.

8. All our experience in Indian jails goes to show that there are things essential to health other than the bare allowance of 1½ lbs. per diem of cereal grains. These are (1), pulses; (2), meat or fish; (3), oil and condiments; (4), fruit or vegetable; and (5), salt. With a regulated minimum of these articles (taking care to comply with the primary physiological law of supplying enough of each class of food to compensate for the normal waste of the body under ordinary labor and exercise) we are enabled to keep the prisoners in fair health, and, if this minimum of food from any cause is withheld or lessened for any time, the jail inmates begin to drop off from the very same causes that tell so severely on the famine-stricken people in our relief-camps.

9. I may here remark that the quantity of food essential to maintain life is a question very much of the work expected to be got out of the eater. If we want to get a maximum of steam-power out of an engine we must feed the furnace liberally with coals, and in like manner a man would soon cease to have any power in his muscles if the food-supplies were inadequate. A feeble vitality might be maintained for a certain length of time on a diet, the staple of which is a pound of rice per diem, but labor on public works on such a dietary is quite out of the question. As soon as the nitrogenous matters of the food cease to supply the normal waste of the muscular and other tissues, the body itself begins to die. If this slow death of the body goes on for too long a time the Indian laborer finds himself precisely in the condition of the Edinburgh physiologist (Dr. Stark, who tested in his own person the

effects of a reduced dietary); he is the victim of a form of starvation from which no amount of subsequent liberality in feeding can save life.

10. Practically the important point is this: any dietary which contains less than 200 grains of nitrogen for natives of India will not permit of severe labor or task-work. The jail diets in this Presidency are calculated to provide from 200 to 300 grains of nitrogen, and in certain instances these diets have had to be supplemented by extra meat and vegetables to prevent the men from falling into a low condition unfitting them for their daily task. Some confusion on this point seems to exist, and I think it very necessary to record that a *diet sufficient to keep life in a man when at rest* may be *wholly inadequate* to his needs when employed on tasks necessitating severe physical exertion.

11. It comes therefore to this, whether in the present dearth of supplies a man engaged on task labor and paid at the rate of 1 lb. of grain per diem and half Anna in cash, can with the latter coin purchase a sufficient amount of nitrogenous nutriment (to say nothing of salt, oil, condiments, vegetables, and fire-wood) to make his daily ration equivalent to 200 grains and upwards of nitrogen. The reply is, simply, that neither in the shape of meat, fish, dholl, milk, or butter-milk can he procure a sufficiency to eke out the defects of his grain ration.

12. The ordinary food-grain of the Bellary District is cholam. In 1874 the price varied from 26 Imperial seers the Rupee to 34 seers, and the average for the year was about 30 seers. The present price is stated to be 8.25 seers per Rupee. The rise in price then from 1874 is equivalent to a rise of the 4 lb. loaf of bread in England from 6d. or 6½d. to 2s., and, while the staple food has thus enhanced in value, it must be remembered that pulses, oil, vegetables, milk, butter, and every other product depending on agricultural prosperity have increased correspondingly in value. While the value of all food-supplies has risen, the wages rate has fallen, because the drought has thrown the great bulk of the agricultural laborers out of employ, and many thousands are ready to work for a bare subsistence allowance. I foresee the gravest dangers to the health of the people in calculating that subsistence allowance of grain at 16 oz., and especially when that grain is deficient in nitrogenous constituents, as rice is known to be. If only a pound of grain can be given it will be better to give cholam or raggy than rice, these grains having a higher proportion of nitrogenous matter and being moreover the food to which the poor are accustomed. I apprehend, however, that in the present scarcity rice must be largely used to feed the people, and of this grain there can be no hesitation in saying that 16 oz. is insufficient for the maintenance of a laboring man.

13. In my letter, No. 105, dated 7th February, I have pointed out that the effects of insufficient nutriment may not be immediately apparent, and, in regard to this question of a pound of grain being enough or not enough, we should never know the results until the mischief resulting from a deficient supply of nitrogenous food have gone so far that a retracing of our steps would be powerless to save life. I cannot too often repeat that it is the slow and gradual form of starvation by defective nutrition in the daily food, that is the most difficult to deal with by after-remedies. It is easier in these cases to break down the vital powers than to build up or restore.

14. If the 1 lb. of rice be inadequate for the daily ration of a laboring man, it is sufficiently obvious that if he attempts to divide this amount of food with

young children, or do without food for one day in the week (on Sundays) that the break-down in strength will come only the faster.

No. 2.

No. 3.

ORDER THEREON, 1st March 1877, No. 757.

The Governor in Council resolves to forward copy of Dr. Cornish's letter to the Government of India and the Secretary of State with intimation that the Government are anxiously watching the effect of the scale of wages now in force and have directed that weekly, or, if necessary, more frequent report of the results be submitted to Government.

2. They have also arranged that Dr. Cornish shall personally inspect some of the working gangs in the North Arcot and Ceded Districts and report the results of his observations.

3. The Governor in Council further resolves that a copy of Dr. Cornish's letter be forwarded to the Board of Revenue and every Collector and District Officer in charge of relief operations in order to warn them of the importance of the anxious duty confided to them of watching the effect of the tentative reduction of subsistence allowance, and to direct that all Zillah Surgeons at stations in the vicinity of which relief works are in progress shall, as soon as the new scale of wages has been in force for one week, report to Government after careful inspection of the laborers whether they can, or cannot, detect any indication of loss of power or flesh in the coolies, and shall maintain constant supervision and forward periodical reports on the subject.

(True Extract.)

Chief Secretary

To the Sanitary Commissioner.

- „ Collector of
- „ Revenue (Famine) Department.
- „ Board of Revenue.
- „ Public Works Department.
- „ Surgeon-General, Indian Medical Department.

Exd. A. S. Rodgers.

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No. 115

Office of Sanitary Commissioner
Madras 13th February 1877

From

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The Sanitary Commissioner
for Madras

To

The Chief Secretary to Government

Sir

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"The present rate of wages is fixed at two annas per diem for an adult and proportionately lower for women and children. This rate is fixed upon the supposition that it will purchase $\frac{1}{2}$ lb. of grain per diem a quantity which is deemed essential for a man while at work. There might indeed be a question whether life cannot be sustained with one pound of grain per diem, and whether government is bound to do more than sustain life. This is a matter of opinion; and I myself think that one lb. per diem might be sufficient to sustain

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5 Dec/77

Govt. of 1877 Madras.

FINANCIAL.

To THE SANITARY COMMISSIONER,

Dated Madras 13th

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MARCH.
Nos. 1-3.

James R. Kelly. - Orders passed on letter from the Sanitary Commissioner on submitting proposals on Sir Richard Temple's Minute on Famine Relief Works in the Bellary District.

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While Sir Richard Temple expresses an individual opinion only, unsupported by evidence, scientific or otherwise, as to the sufficiency of 16 ounces of cereal grain to maintain a laboring adult in health, it must be remembered that there is a large accumulation of facts in reference to this very question and that these facts do not afford any support to such a theory.

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8 All our experience in Indian Sails goes to show that there are things essential to health other than the bare allowance of $1\frac{1}{2}$ lbs. per diem of cereal grain. These are (1) pulses (2) meat or fish (3) oil & condiments (4)

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(4) fruit or vegetables and (5) salt. With a regulated minimum of these articles (taking care to comply with the primary physiological law of supplying enough of each class of food to compensate for the normal waste of the body under ordinary labor and exercise) we are enabled to keep the prisoners in fair health, and if this minimum of food from any cause is withheld or lessened for any time, the Sails inmates begin to drop off from the very same causes that tell so severely on the famine-stricken people in our relief camps.

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itself begins to die. If this slow death of the body goes on for too long a time, the Indian laborer finds himself precisely in the condition of the Edinburgh physiologist Dr. Stark (who tested on his own person the effects of a reduced dietary); - he is the victim of a form of starvation from which no amount of subsequent liberality in feeding can save life.

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I have the honor to be
Sir

/True Copy/

your most obedient Servant
/Signed/ W. R. Forriest F.R.C.S.
Sanitary Commissioner
for Madras.

