INTRODUCTION

CHAPTER 1

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Agricultural industries cannot progress without an intensive labour force. The physical performance of the agricultural labourer plays an important role at both the household and the national level, because in developing countries most agricultural activities/industries are highly labour intensive (Flores, 1984). The labourers have a positive role to play in the national economy. National development is dependent on the productivity of the labour force from the various sectors employing them. The poor health and nutritional status of the labourer would, therefore, be translated into poor individual and national productivity.

Nutritional status has a direct bearing on the work output of the labourers Further, the productivity of the labourers depends on the working conditions in which they work. Better living conditions, educational and medical facilities, good food, along with some other amenities have a great role to play in improving productivity.

The spectrum of nutritional status of this labour population goes all the way from marginal undernutrition to severe undernutrition. Marginal malnutrition comprises of all subclinical forms of malnutrition, namely, conditions that are thought to be related to nutritional deficiencies but are not

identifiable as a nutritional disease. By the time it can be identified it is always in the severe form.

North East India, comprising seven states/union territories, has an area of 255.037 sq.km. which is nearly 8% of the total geographical area of India. Assam is one of the seven states, covering an area of 78,523 sq.kms. Its population of 195 lakhs constitutes about 3.5% of the total population of the country (1971 census as there was no census for 1981). According to 1971 census 91.2% of the total population of Assam lives in rural areas and 65% of the population of the state depends on agriculture as their primary source of livelihood.

The plantation industries* in India include the tea and rubber industries of which the former plays a vital role in the economic life of the country. India produces 29.8% of the total tea in the world and occupies the top position, particularly in the case of tea production and its export. Further, tea industry provides employment to over one million of the country's labour force, it thus being the largest labour force in a single industry in India. Taking into account non working residents in the tea estates, casual workers, contractors, labourers, administrative staff members, workers engaged in transportation, housing, broking, blending, distribution etc. over ten million people in India are directly or indirectly benefitted from this industry. Further, tea industry supports many auxillary industries band services. Plywood, fertilizer, chemical and engineering industries find an organized market for their

products in the tea industry . Among all the tea producing states, Assam secures first position in India, contributing to the extent of 52% of the total production of tea in the country. Sixty two percent of this tea is exported. Tea sales contribute to 99.9% of revenue from agriculture in this state (Baruah, 1986).

At present, there are 844 tea plantations in the State of Assam. These are of three types based on their ownership:

(a) British Tea Plantation: Owned by various British companies but now run by a joint Indian and British management on a partnership basis.

(b) Assam Tea Corporation Plantation: Run by the Corporation in collaboration with Government of Assam.

(c) Native Tea Plantation: Owned and run by the native people and companies (Assam Tea Planters Association).

In the official records (1983) it is stated that there are no differences in the wages and other facilities provided to the workers in the three types of plantations.

The striking feature of this organised sector of industry is that it offers the largest avenue of employment for women. Out of 4.58 lakh labourers in various tea gardens in Assam, 2.04 lakh (44.6%) were male; 1.90 lakh (41.4%) were female; and the rest 0.64 lakh (14%) were adolescents and children (Borah, 1981).

Studies on the nutritional status of adult populations are very limited especially in the Indian context. Moreover, studies on the nutritional status of the adult labour community are even more scarce. Gardner et al (1977) studied the interrelationship of physical work capacity and selected physiological parameters related to work performance in females (26-62 years of age) in the tea estates of Sri Lanka. They reported a wide variation in the haemoglobin levels which ranged from 6.1 to 15.9 g/dl.

Another study on Sri Lankan tea plantation workers by Edgerton et al. (1979) reported that poor nutritional status (assessed by haemoglobin concentrations between 6.0 to 9.0 g/dl) of the tea plantation workers was directly related to poor plucking performance. An improvement in the nutritional status improved their work performance. Anaemia and productivity were studied among the Indonesian workers by Basta and Churchill (1973). The haemoglobin levels of these workers were between 11.0 to 11.9 g/dl.

The nutritional status of the organised agricultural women workers of a tea plantation in South India was studied by Rahamathullah (1983). The results indicated that women aged 25 to 44 yrs were anaemic with an average haemoglobin level of 6.1 g/dl. The mean body weight was 48.1 kg. Further, hookworm infection was found to directly affect their nutritional status.

However, in the case of the State of Assam, information on health and nutrition is very scanty. Further, with the available

information, it is not possible to draw any conclusions about the nutritional status of the population in Assam, particularly that of some of the important groups of population viz. the plantation workers engaged in the tea plantations.

There is not much data available on the nutritional or health profile of workers in tea plantations. Given the open air working environment and the large number of women, adolescents and child workers in tea gardens, the energy needs and output of various jobs and their nutritional requirements needs urgent study (Paul, 1984).

No indepth study with regard to the nutritional status of the tea garden workers of this region has been carried out. This area of investigation is important and relevant because nutritional status is a major determinant of the earning capacity of the workers.

The present study was, therefore, planned with the following objectives :

i. To compare the nutritional status of male and female tea plantation workers among the three types of plantations.

ii. To study the effect of peak and lean tea plucking seasons on dietary intake and the nutritional status of the workers.

iii. To identify those socio-economic, environmental and other factors that are most detrimental to the nutritional status of these workers.

iv. To evaluate the well being of these workers using a derived Quality of Life Index.

v. To recommend corrective measures to the tea plantation management on the basis of the findings of the study.

Scientific and Practical utility of the study

No indepth study has been conducted on the nutritional status of tea plantation male and female workers using a large sample. Also, no comparison has been made so far between the nutritional status of the tea plantation workers employed by different plantation types.

An attempt is being made in this study to fulfill this lacuna. This study is very pertinent and relevant for the following reasons :

(a) Assam is the region where tea plantation labourers represent the largest labour force.

(b) It will be of practical importance for the State Department of Labour to know whether the type of tea plantation and the facilities offered to workers have any influence on their health and nutritional status.

(c) Such factual information can help to shape relevant plans and policies and also implement them so that the largest labour force in one type of agro-industry can be improved.

(d) A spin-off benefit of this study would be to provide an updated health, nutrition and dietary/nutrient intake profile of men and women of Assam based on a large data set.