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Colonialism And Healthcare In Duars Tea Plantation :1869-1947

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Abstract: The paper seeks to investigate the essence of the malaria and black water fever surveys, the nature of various diseases which attacked the garden labourers, the reason for shortage of qualified doctors in the duars plantation and the poor housing and health conditions of the workers during the colonial period**.** The paper also studies disease control as a mode of colonial power, governance and intervention in areas of productivity and attempts to protect their social and political exclusivity. It also tries to analyse the process through which the tea estates negotiate medical practice and preventive health in the plantation zone.

Keywords: Plantation, medical practitioners, epidemic, malaria, labour, planters

This article intends to deal with the complexities of colonial tea economy that developed into a significant stature in the Bengal's district of Jalpaiguri during the British era. The area was also popularly known as Duars. There is evidently, an acute shortage of printed materials as far as condition of existence of duars plantation workers were concerned, especially during the initial decades. The duars remained neglected by both the colonial authority as well as nationalist press. Apart from a couple of enquiry committee reports, one in 1911 and the other in 1936, there were no chronological reports on the condition of immigrant workers. Bhowmik observed that there was no dearth of historical materials from the second decade of twentieth century. He found out that the living and working condition of the tea garden workers was more or less static for a long period of time.[1] There was a high degree of morbidity among the coolies because of unhealthy living conditions within the tea estates. The enactment of Dooars Labour Act of 1912 was prompted by the high incidence of sickness which resulted in absenteeism and heavy death tolls among tea plantation workers due to various diseases, especially malaria and black water fever. As more and more Europeans fell prey to these perils, a growing need was felt to take some appropriate measures.[2] Dooar's Planters Association's report showed inconsistent fluctuations of the death rate among the planation workers in the 1910s. The Associations' report for 1920 reflected the dismal death rate figure in the tea gardens which was 46. 86 per mile for the year 1919 and 28.07 per mile for the year 1918. Those figures were attributed to the devastating Cholera and small pox epidemics which ripped through the Duars tea enclaves in 1919 causing havoc.[3]

The problematic of poor health infrastructure and lack of specialist health care workers was reflected in almost all the survey reports on the Duars tea plantation. One major issue was the unavailability of European doctors who were unwilling to come to a place which was labelled as 'White man's grave' by the planters themselves. Captain S. R. Christopher and Bentley's report in 1908 further exposed the issue. [4] But no reports, however critical it might have been on the planters was successful in convincing the planters to work towards this end and mitigate the problem. As was evident, instead of putting more efforts and try to convince the qualified doctors to come to their rescue, most of the planters just shrugged off their responsibility by putting the onus on the unavailability of trained doctors. In the absence of European doctors, it was the native doctors who were entrusted with the lives of the poor planation workers. It was often these native doctors, many of whom were newbies in their profession, who received the utmost criticism for the substandard medical service provided in the planation area. They were often considered insincere and unqualified and were often blamed for the alarming death rates within the tea plantation. But in order to understand the poor state of healthcare facilities in the duars plantation, the nuances of medical education in the mid nineteenth century colonial India needs to be contextualized without which we will be unable to understand the nitty gritty of the situation.

Up to the end of the Eighteenth century, the colonial authority felt no need for the dissemination of medical education or training to the natives. But with the expansion of British imperialism, a growing need of healthcare was realized specially in the army and other areas of commercial interest such as plantation. The East India Company officials were least interested in sending European Doctors to cater to the needs of either of the above. In the year 1822, a memorandum was sent by the medical board of the company requesting the authority to find a medical institution where natives could be trained for various low ranking medical jobs of the company. This memorandum of 1822 got the endorsement of the Military establishment and subsequently the 'School for Native Doctors' was founded.[5]

So, one of the very purposes of the institution was to train a number of inferior quality physicians of western medicine to be absorbed in various low ranks in the army and other areas as per requirement. It also revealed the superiority of the western medicine as well as of the western world. But that integrated teaching of western medicine along with the Indian traditional system did not last long and the need of a fully westernised medical education was soon felt. With the establishment of Calcutta medical college in 1835, the impractical and poor quality of medical education in Bengal gave way to a more scientific and more westernised way of teaching and training. The Calcutta medical college started with fifty students and the first batch of successful students passed out in October, 1838.[6] But this steady outflow of trained medical professionals from Calcutta Medical College into the society at large was not suffice as want of qualified doctors was felt all over Bengal. Needless to say, these properly educated physicians from the medical college were not available for the service of the masses. William Brooke O'Shaughnessy was one of the reputed physicians of the time and he was associated with Calcutta Medical College. He formed a body name 'A Society for Medical Institution' in 1836 with the sole objective of providing training in Vernaculars to a large number of students to meet the demands in the army.[7] Thus, a large number of low profiles undertrained native doctors was created and they were made liable to work for at least ten years in the regiments as apothecaries or dressers. Another scheme of vernacular classes was introduced in the year 1851 with fifty students and the course duration was of three years. Pundit Madhusudan Gupta was made the superintendent of this section. [8]

As was evident, the sole purpose of introducing these vernacular divisions in the Calcutta Medical College was to create a bunch of native graduates who would treat the indigenous population only. They were given basic orientation training only and were expected to somehow tackle the frequent epidemics in rural areas without any costly assistance from the government. Some of them became vernacular licentiates or hospital apprentices and got themselves absorbed in the low-profile subordinate medical service to serve in the Sadar Health Centres, charitable dispensaries or in the jail hospitals. Many of them were forced to join very undignified career to such an extent that their exact nature of jobs was unknown.[9] Anil Kumar wrote that the government's objective of providing country doctors failed miserably as nearly all civilians who secured a CMS or MB or a certificate preferred government employment or private practice in the big cities. Countryside practitioners were mostly the dropouts of Medical College and School. Dr. Mahendra Lal Sarkar, a respectable name in the medical circle also warned the government against

generating such greater number of quacks endangering the lives of the lay and ignorant people of rural areas. [10]

However, once the floodgate got open to admit the natives in the vernacular section of the medical college, the demand of the course started to grow among the natives. So much was the demand that by 1865, the Bengali section outnumbered the English section. Unfortunately, these native doctors failed to make themselves useful to the poor people. They were ignorant of the indigenous system of treatment. These vernacular native doctors could prescribe only few expensive western medicines, which, most people could not afford to buy. The poor people were thus compelled to visit the village quacks who utilized the advantage at the cost of the patients. Many of these native doctors took jobs in the tea gardens of the Duars and earned a bad reputation for themselves. Most of their standard was that of an assistant compounder only.[11] So, it can be argued without much dispute that the deplorable state of healthcare services in the duars plantations could be attributed to the 'disgracefully bad supply line' of healthcare professionals from medical institutions. Ignorance of medical knowledge was rampant among these doctors. Subhrojyoti Roy also found the same in his work. '***Most of the doctors, locally known as the 'doctor babus', were unqualified for their task, a shortcoming which they often tried to conceal "*** wrote Roy.[12]

Christopher and Bentley also briefed us about the presence of these so-called doctor babus in most tea gardens of duars. In the hierarchy of medical establishment of duars tea plantation, these doctor babus were placed between a European medical officer and an ordinary coolie helper. But in the absence of real facilities for serious medicinal work among the plantation workers, that hierarchical order or ranking appeared to be abstract. Neither these European medical officers were held accountable for the actions of their subordinate doctor babus, nor they were expected to be liable for the overall healthcare service within the plantation. As far as the native doctor babus were concerned, most of them held qualification of dubious nature. Christopher and Bentley opined that these doctor babus added no or little value in the treatment of the sick in most of the cases. They were casual, unprofessional and ignorant in their approach to treat the patients. They were not indispensable to their management and often, they were made to act as part time clerk in addition to their scheduled medical duties. Christopher and Benley's report also reflected the helplessness of some of these doctor babus as they were less in number to look after the affairs of large coolie population.[13] Duars committee was assigned the task of investigating the qualification of the doctor babus in the tea gardens in the duars. As per findings of the duars committee, for roughly 1500 plantation workers, there was one doctor babu and the work load was too heavy, especially in large plantations.[14]

Their social and financial insecurities also contributed to their marginal status within the plantation establishment. They were, typically, a class of upper division clerk, belonged mostly to the 'bengali bhadrolok class', engaged in clerical or medical jobs in the tea plantations of Jalpaiguri duars.[15] Many of them were English educated and often burdened with the responsibility of a large joint family. It was this responsibility, that often compelled them to overlook the unattractive prospect of employment in the duars and embrace the calling of nasty climate and insecure life in remote tea plantations. Upon arriving there, they found themselves isolated many a times, as other members of the plantation community, notably the Sahibs, Sardars and the coolies belonged to a different social and cultural world.

Many contemporary accounts written in vernacular mentioned about the under-trained medical staffs who used to work in duars plantation. Prior to the passing of Jalpaiguri Labour Act (1912), there was no law to compel the plantation management to recruit duly qualified medical men within tea plantation. Even the JLA failed to legislate for the compulsory recruitment of qualified doctors in the district's plantations. There were only few provisions for medical and sanitary improvements within the act. Under the Act, civil surgeons were appointed as inspectors who were supposed to recommend remedies and suggestions for the betterment of healthcare facilities in the tea district of Jalpaiguri. Their inspections further exposed the presence of unqualified medical professionals in most tea gardens in Jalpaiguri. In 1915, there were only 3 duly qualified men mong all the doctor babus working in the duars.[16] In 1918, among the 126 tea gardens in the district, there were only 9 doctors with government recognised

qualification.[17] The number of qualified native doctors dropped to seven in the year 1921. Two tea gardens, namely Rahimabad and Damanpur were reported to function without any doctors at all.[18] In 1924, the figure remained same at seven, out of one hundred and thirty-six tea gardens in the district. In 1928, the number of qualified native doctors was seventeen and in 1931, out of a total of one hundred and fifty-two tea gardens, the total number of resident doctors babus with government recognised qualification was reported to be thirty-three. [19]

It was also acknowledged that the absence of government approved qualification did not debar some of these native doctors from diagnosing and treating diseases since some of them had gained basic practical knowledge under the guidance of European medical officers. But majority of them, according to civil surgeon, R.B. Khambata, were merely compounders. Another civil surgeon in 1918 expressed his lack of trust about the abilities of these native doctor babus ***"In fact, I met during my inspection two so called doctor babus one at Reabari and the other at Gurjaman who are not really safe to be entrusted with medicines." [20]*** In almost all the annual reports of the Jalpaiguri Labour Act, the officiating civil surgeons recommended for the employment of qualified doctors. Their recommendation, was however met with strong rebuttal from Dooars Planters Association, which continued to maintain its position that most of the doctor babus, though lacked qualification, were competent enough and that efforts were made to replace them gradually. The Association, continued to reiterate the fact that since these doctor babus were quite familiar with the local working conditions, their services should be retained. Again, the common argument on their behalf was that since these doctor babus were supervised by qualified European doctors, their service would rather benefit the coolie population.[21]

Even the Duars Enquiry Committee of 1911 pointed out that the dearth of qualified healthcare workers was one of the chief causes of ill health of duars plantation workers. No doubt, the desperation of the Duars planter's lobby to employ students of medical colleges without a proper degree or diploma as the 'coolie doctors' had raised some uncomfortable questions regarding the standard of medical education in the country. But more than that it demonstrated the influence of the planter's lobby over the government. No wonder, when the government tried to bring a legislation to cancel the licences of those intending to become coolie doctors, it utterly failed in implementing the legislation.[22] Situation did not change much as late as the beginning of second world war as official DPA correspondence could be found regarding the wide presence of unqualified doctors in the duars tea gardens.[23] While writing social history of colonial India, Biswamoy Pati and Mark Harrison put it

'Preliminary indications are that demand for hospital and dispensary care increased massively from the middle of the nineteenth century, although with notable differences among classes, castes, genders and religions. Indeed, the most interesting studies are likely to be those which take account of the peculiarities of place and which examine hospitals as institutions intertwined with the history of communities they serve. Apart from the large general hospitals, many smaller hospitals and dispensaries were established for particular communities, ranging from institutions for textile and plantation workers to hospitals catering exclusively for particular castes or religious groupings'[24]

By the mid nineteenth century, there was a gradual increase in the area under tea as well as the demand for workers needed in the various tea gardens of duars. From the very inception, the owner planters enjoyed autonomy and freedom in regard to the healthcare and medical infrastructure within their plantation. They were indeed protective about their autonomous space and did not allow any outside interference in the management of their plantation. Government on its part, did not wish to intervene either, unless strictly necessary. Law and order within the plantation were maintained by the planters themselves. Disputes were settled internally; police interference was rare. As Grunning noted in his district Gazetteer of Jalpaiguri in 1911 ***'with free labour, it is unnecessary for the government to reserve the right of inspection or in interference in the matter of wages, tasks or the general management of the estate'.[25]***

Access to these tea gardens were difficult and time consuming as many of them were located in isolated terrain, interrupted by forests and divided by seasonal waterbodies. After the annexation of western duars into British territory, a new district 'Jalpaiguri' came into existence in the year 1869. Grunning wrote in the district Gazetteer

'Few districts in India have developed as rapidly as the Western Duars. The northern tract along the base of the hills, between the Tista and the Torsha rivers, is now covered by prosperous tea-gardens, separated only by rivers or occasional areas of reserved forest; east of the Torsa the chain of tea gardens continues right up to the Sankos river, but is broken up by larger stretches of forest. South of the tea gardens as far east as the Torsha river,...'[26]

By the mid nineteenth century, with the expansion of the tea industry and with the consequent arrival of a large immigrant workforce in the duars, the emerging public health and sanitation concerns in the tea plantation became too important an issue for the government to sleep over anymore.

Table 1:[27]

Year	No of tea gardens	Total area under Tea(in acres)	Approx production (lbs)	Number of labourers
1874	1	-	-	N/A
1876	13	818	29520	N/A
1881	55	6230	1027116	N/A
1892	182	38583	18278628	N/A
1901	235	76403	31087537	68619
1907	180	81338	45196814	N/A
1911	191	90859	48820637	75315
1921	131	112688	43287187	88564
1931	151	132074	66447715	112591

However, the problem of ingress and outgress of the labour population to and from the tea plantation continued to persist. Jalpaiguri Labour Act insisted on the containment of epidemics, preferably within the tea gardens and that was often reflected in the observation of the civil surgeons during their inspection visits.[28] The Dooars Planter's Association continued to appeal to the government for some scheme to improve the sanitation and water supply of the bustee and government bazaars in the neighbourhood of the tea estates. It lamented the fact that time and again, it was these bustees and bazaars, outside the purview of plantation management that brought diseases such as cholera and alike into the plantation. Apart from cholera, bowel diseases such as dysentery was quite prevalent in duars and often it was attributed to the worker's habit of going outside and eat spoilt and decomposed food items, available outside. In 1913, the manager of a tea garden in duars asked for special power for the European doctors engaged within the plantation so that they could enforce ban on sale of any unhygienic food items in the local hats around the tea estates under their supervision.

'The difficulty is that some of our coolies go to the neighbouring Government bazaars during the week and buy unwholesome food such as dried fish, fruit, unripe, and over ripe, and inferior sweetmeats We therefore write to ask whether the Association would take the matter up with Government. The remedy we suggest is that the Medical Officers of the various Tea Companies of Doctor's Association should be empowered by Government to inspect shops at any time, and the report to the Deputy Commissioner of the District on the condition or quality of the food offered for sale. In the event of bad food being found the Medical Officer should have authority to prevent the sale, pending orders from the Deputy Commissioner or the Civil Surgeon. We think in this way a great deal of sickness would be prevented'[29]

An argument was made that independent power may be given to the concerned medical officer to ban any food items confiscated by him on the suspicion of contamination. No such power, was however given. But since such contaminated food items were mainly sold in the bazaars and bastis, outside the boundaries of tea estates, the Duars Planter's Association found it convenient to transfer the related responsibility for sanitary provisions directly to the government. In his letter to the deputy commissioner of Jalpaiguri, the secretary of Duars Planter's Association made a request to appoint inspectors to examine the food items sold in those bazaars.[30] Consequently, within a couple of years, Bengal government appointed a sanitary inspector in Jalpaiguri, on the recommendation of the of the commissioner of Rajshahi to inspect the quality of foods sold in duars bazaars. [31]

A trend was thus set in the official discourse both from the government and the planter's perspective that epidemics (barring malaria), when they broke out, were invariably due to external factors, beyond the jurisdiction of plantation management. This narrative was often confirmed and corroborated by the officiating civil surgeons. This trend was further reinforced during the influenza epidemic of 1918-19. Many tea gardens wrote to the civil surgeons that the disease came from the bustees or brought by outsiders. These claims were not independently verified though and taken at face value.[32] The argument that the bazaars and local hats were responsible for many diseases was further accelerated during cholera epidemic of 1919. This trend could be located since the very inception of Jalpaiguri Labour Act. In the very first report under the Act, the civil surgeon Major D Munro, acknowledged the difficulty of distinguishing between the working population and the actual population in the coolie lines.[33] There was no definition of what constituted the working population; hence their exact number was impossible to verify. Since the responsibility for the sanitation and medical facilities in the hats and bastis outside the plantation area was beyond the purview of estate management, it was either the Jalpaiguri district board or the provincial administration who were held accountable. The duars planter's Association never intended to stretch it's own resources so far as sanitary improvements in the outside areas were concerned.

The Meenglass tea estate anti-malaria scheme in the duars comprised of permanent works such as sub draining some of the jhoras or hill streams, and training and strengthening others. All the other jhoras were spread with kerosene. The total population of the garden came down up to 1924 and then began to rise. [34]In order to understand the cyclic character of the malarial intensity, the spleen index of patients was carefully monitored and observed in the Meenglass tea estate scheme. In the year 1927, the death rate as well as the birth rate were found to drop from previous year. The spleen index and the malaria sickness rate remained almost the same compared to previous few years. In fact, the spleen index in the scheme remained almost the same since 1923.[35] It must be noted that the entire preparation of the Meenglass tea estate anti malaria scheme was prepared on the basic principle of under draining which has been successfully adopted in the Malay states.[36] Another malaria survey in duars was undertaken in the civil station of Kumargram thana during 1930.[37] Quinine tablets were distributed free through the rural public health staff, supernumerary doctors and medical officers of the district board and aided dispensaries and by the staff of the Chaklajat estates of Coochbehar. During 1940, the tea gardens and surrounding areas at Gairkata and Barron Tea Estate in the Jalpaiguri duars were surveyed with a view to formulate anti-malarial schemes for the said areas.[38] In the same year, Field Malaria Research Laboratories were started at various regions of Bengal to find out the local vectors and to investigate the various etiological factors responsible for the spread of malaria. Mr. H. N. Worth was a malaria engineer in the Bengal public health department and he was very pro-active ever since he joined his duty on March,1940. He was engaged upon the examination of anti-malaria proposals and schemes submitted to the public health department by various district boards and municipalities. The investigation into anti-malaria proposals has necessitated extensive travel throughout the malarious districts of Bengal and numerous consultations with officers of the irrigation, public works and other departments. A detailed study of the methods adopted in the tea growing areas of the duars in the control of A.minimus had also been made by the department during his tenure.[39]

R. G. Griffin, deputy sanitary commissioner and special officer in charge of the hookworm project in the duars pointed out in his report to the government about several deficiencies in the condition of existence in the tea estates.[40] Griffin felt that water supply was badly controlled in most tea gardens and there was an over reliance on kutcha wells for drinking purposes, causing cholera in epidemic form. Griffin noted that the workers were ignorant in all sanitary matters. Their houses were densely populated and food that they consumed were costly. The workers were given accommodation in a place within the tea estate, known as 'cooli lines'. During initial years, the workers had to construct their houses as per their choice without much assistance from the garden authority. They used to get some help from their recruiting sardars. Most of the houses were of bamboo with thatched roof and sides. Some of them had iron structures with corrugated iron roofs and thatched walls.[41] There was no shortage of hut building materials as bamboos, jute, straw – all were in plentiful in the vicinity and the coolies could build their own huts. The average size of the houses were 18 feet by 12 feet approximately. Their housing lacked minimum standard of living. Inadequate living conditions such as the absence of sanitation, poor drainage, poor air quality and overcrowding- all that led to negative health outcomes, including chronic diseases and infections. The duars Enquiry Committee of 1911 as well as the Royal commission on Labour of 1931 on their investigation exposed the poor housing condition of the duars plantation workers.[42] As far as these coolie lines were concerned, it was generally recommended to divide them up at various points across the tea garden. That was done with the objective of serving a dual purpose. Apart from minimising the possibility of serious escalation in matters of defiance against the garden authority and avoid law and order break down within the garden, this segregation of coolie lines would also assist the authority to limit the scope of any epidemic which may break out at any given situation. It was a common practice to build these cooli lines near the tea garden boundary and these were further divided into arrays based on caste and community divisions.[43]

Tuberculosis was another disease very common among the tea garden workers. The annual reports of the inspector (civil surgeon of Jalpaiguri) showed an appalling number of deaths from tuberculosis in tea gardens. It was as high as 16.6 per mile in 1940 against a provincial average of .25 per mile.[44] In the Bengal public health report, it was urged to the government to establish an industrial section of the public health department armed with legal powers to improve the health and living conditions of the industrial workers. [45] The existing Act, Jalpaiguri labour Act of 1912 could not satisfy either of the stakeholders. The government, on the one hand, did not consider that a satisfactory solution as it gave them no power to compel the tea gardens to look after the health of the coolies. On the other hand, the planters themselves realised the necessity of scientifically organised combined effort to fight various diseases on their gardens. A discussion followed and at a conference held in Darjeeling in 1920, a decision was taken to legislate for the sanitation of the tea gardens in the duars on the similar line of Asansol Mines Board of Health. Consequently, the Duars Tea Gardens Sanitation Bill was prepared to be effective and implemented in the future.[46]

Nandini Bhattacharya has shown in her study that the situation in Duars was different from other industrial establishments because district officials enjoyed special power in the Jalpaiguri district and the regulations of Bengal government were not applicable there unless by special ordinance. The period of dyarchy witness the formation of several local boards in Bengal at the local level. No village (union) boards were formed in the district. The deputy commissioner and the Jalpaiguri district board urged to the provincial government for the establishment of three local boards in Jalpaiguri including one for the duars. The then district officer in charge was of the opinion that Jalpaiguri being a 'backward' district, it was not feasible to legislate local self-government at the village level. Evidently, the provincial government did not wish to experiment with such local governance too and it refrained from issuing any such legislation.[47]

According to Griffin, the situation in the Indian tea estates were more deplorable as far as health of the coolies were concerned. In fact, that was a common trend in the medical and administrative discourse on colonial duars. In many of the reports of the Jalpaiguri Labour Act, the officiating civil surgeons noted that unlike their European Counterpart, the Indian owned tea gardens made no attempt to provide piped drinking water to its workforce and to appoint qualified doctor babus. The tea gardens owned by the

natives were always situated as the breeding ground of diseases, in addition to outside bazaars and bastis, only leaving the European owned tea gardens as 'sanitary enclave' in their own right.

Moreover, the information and statistics that were published in the annual reports of the working of the Jalpaiguri Labour Act were often seen as errorless by the district officials- the civil surgeon and the deputy commissioner. By situating the issue of the bazaars and the bastis as the source of the disease, the managers and medical officers were able to successfully externalise the problem and demanded government intervention. It indicated the degree of faith that the local administration had on the managerial assertions of tea gardens as far as disease management within the tea plantation was concerned. The emphasis from the district administration point of view was on the control of epidemic diseases as and when they occurred rather than investment for long term return. As officiating civil surgeon remarked in 1920-

'The great majority of the doctor babus in charge of the district are still unregistered men of inferior qualification, but matters are much improved by the increase of proper supervision and this should lead to a better control of epidemic disease…..' [48]

Though the sick workers were left at the mercy of the untrained doctor force, on an individual level, however, it was one of the recognised duties of each manager on a tea estate to take a personal interest in the health and wellbeing of his workers. In a system of free labour, there were many ways to draw forth the loyalty of the workers. In the context of Jalpaiguri duars, the planters could more successfully identify themselves with the worker's interest by acting against the government to support some of its worker's activities (such as the brewing of pachwai also known as haria).[49] This discretion on the part of the estate managers was occasioned by the object of demonstrating the paternal benevolence within the plantation. Christopher and Bentley, in their understanding of the estate management also pointed out that the protection of the coolie under the sardari system was based on paternalistic terms. [50]

Another important aspect was definitely the monetary aspect. There was little doubt that since the very inception of the tea district in the duars, there was an emphasis on keeping costs especially the costs of recruiting and the expenditure on labour cheap. Subhrojyoti Roy argued that the culture of minimising labour expenditure in the duars continued throughout the colonial period and factors such as absence of any penal laws, proximity to the recruiting districts and availability of large tracts of virgin land for settlement by the tea garden coolies helped a great deal in sustaining that culture.[51] While quoting Dr. Bentley and Captain Christopher's penetrating survey on the duars workers (1911), Roy showed that the planters choose to recruit more workers to make up for the annual depletion of workforce due to diseases rather than to provide more expensive medical facilities to check the epidemics such as malaria, cholera and small pox. Fear of expenditure often overruled the administrative obligation of the planters whenever they considered the prevention of contagious diseases within their plantation.[52] It goes without saying that large scale expenditure on housing, water supplies and sanitation – essential to prevent many such contagious diseases was a distant dream for most of the tea gardens in duars throughout the colonial period.

Amiya Kumar Bagchi has argued how earnings from tea export played a crucial role in Britain's international trade and capital flow relations and in the maintenance of the British imperial system [53]. Manas Dasgupta showed in his book how the introduction of new technologies brought profit for duars planters as a whole. The capitalist temperament of the planters played a vital role in formulating the nitty gritty of plantation economy and it was designed in such a way that profits were maintained above a certain level at any given circumstances. Costly tea machinery such as rolling machine, shifters, tea drying machine, prime movers etc were imported from Britain and other foreign markets and these were testimonial to the modernization process of tea estates. Factories were built with the help of foreign experts too. '***a major portion of profit was used for importing machinery and spares from abroad thereby***

enriching Britain further. In other words, there was a considerable flight of capital and profit from India to Britain' Dasgupta wrote.[54] He further argued that the tea gardens had earned a substantial amount of profit up to the period of 1930 but it was never reflected in the improved conditions of the labourers. So, the new technology and modernization that was introduced had more to do with increased profit and minimising wage cost and less about the improvement of the condition of wage labourers.

A distinctive and noteworthy feature of the Duars Tea plantation system was definitely the rise of a small but growing body of Bengali entrepreneurship. Most of these people were generally lawyers, legal practitioners, contractors, merchants and service holders and the major source of capital invested by these people in the duars tea industry were the savings made out of their income from legal practices and other professional activities, services and trade and commerce. The Jalpaiguri Tea company, a joint stock company was formed by those early Bengali entrepreneurs based in Jalpaiguri in 1879.[55] Their venture began with the lease of the Mogalkata Tea Estate, consisting land of 741 acres in the year 1881. This was followed up by the establishment of more Indian owned tea gardens. Though most of these early Bengali planters were risk takers and adventurous by nature, there was no denying the fact that a whole set of administrative, political and financial arrangement within India were at play to deprive these people from a level playing field. The ease of doing business never favoured these Bengali entrepreneurs and they always used to face challenges including racial discrimination. In 1918, the native planters formed their own association, the Indian Tea Planter's Association to look after their own interest. The European planters, on the other hand were represented by the influential Duars Planter's Association founded in 1878 which used to bully it's Indian counterpart on various grounds. As Ranajit Dasgupta argued, the chief commercial association of the planter, the Duars Planter's Association (DPA) remained a predominantly European affair primarily looking after the interests of the European planters well before and after 1915. But at times, when the question of medical policies and sanitation within the estate arose, these two employer's bodies joined hands to stand beside each other.[56]

There was no provision of institutional loans for these early Bengali planters, many of whom were compelled to depend on the Marwari businessman and money lenders for monetary needs. Ranajit Dasgupta mentioned moments of crisis for these Bengali planter's family when money had to be obtained by pawning family ornaments also. [57]Faced with such monetary hardships and uneven competition with their European counterparts, looking after the sanitation and healthcare of their workforce was indeed too much to ask for from these Bengali tea planters of the duars in those initial years.

These native planters, like their European counterparts, recruited doctors without proper qualification. There was hardly any provision for the supervision of these doctors. After the enactment of Jalpaiguri Labour Act of 1912, moved by the continuous reporting of presence of unqualified doctors, some native planters replicated the supervisory positions set up in the European owned tea estates and appointed qualified native doctors as medical officers to supervise the doctor babus.[58] But the improvement was slow and stunted in nature as in 1926, many years after the passing of JLA, twelve Indian tea gardens were reported to function without any qualified medical practitioners.

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