SELECTIONS

FROM THE

RECORDS OF THE

GOVERNMENT OF THE PUNJAB

AND ITS DEPENDENCIES.

New Serics.

No. V.

Tea Cultivation in the Kangra District.

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From Major Edward H. Paske, Additional Commissioner Jullundur Division, to Lieut.-Col. H. Coxe, Offg. Commissioner and Superintendent Jullundur Division, dated 8th July 1869.

I have the honor to submit, for transmission to the Financial Commissioner, a report upon the introduction and progress of tea cultivation in the Kangra district, embracing a review of operations to the close of 1868. This report I had it in contemplation to prepare when Deputy Commissioner of Kangra, but I was relieved of charge of the district before I had received the information applied for from Managers of Plantations.

On reference to Major Nassau Lees' work on the cultivation of tea in India, I find that in 1830, not 40 years ago, it Introduction of tea cultiwas a matter of speculation as to whether the tea vation in Assam. plant would grow and flourish in India. covery of the indigenous tea plant in Assam, appears to have been made Lord William Bentinck, who was then Governor General about that time. of India, alive to the advantages that would accrue to the country from the introduction of the tea plant, and impressed with the conviction that the climate and soil of portions of India were suitable to it, set on foot enquiries on the subject, and made arrangements for carrying out the object he had in A Committee called the "Tea Committee" was appointed to submit to Government a plan for the accomplishment of the object and for the superintendence of its execution. From the enquiries made it was ascertained that the plant was indigenous to, and distributed extensively over, a large portion of Upper Assam, that there was a similarity in configuration between the valley of Assam and some of the best tea Provinces of China, and that there was a similarity between the climates of the two countries. Experimental plantations were formed for the cultivation both of tea plants brought from China and also of the indigenous tea plants of the country. Success led to the extension of operations and the introduction of private enterprise. was tea cultivation introduced into Assam, from whence it was extended to Cachar and Darjeeling. The entire extent of grants of land for tea cultivation amounted in 1862 to 1,61,219 acres, the area actually under cultivation to 28,061 acres.

Provinces.

The marked success that attended operations in Assam led to the

Introduction of tea cultivation in the North Western

introduction of tea cultivation in North Western India. It was the general belief that the slopes of the Himalayas, at altitudes varying from 2,000 to 6,000 feet above the level of the sea, were better

adapted than any other part of India for the successful cultivation of tea. Of seedlings raised from China seed received in 1835 a supply of 20,000 young plants and also some fresh seed were sent to the North West, and formed the first stock of the Himalaya tea gardens. Sites were selected and experimental gardens formed in different localities in Kumaon, Gurhwal and in the Dehra Doon. Progress appears to have been slow in these plantations for 5 or 6 years. Of the seedlings sent from Calcutta only 2,000 had reached their destination alive, and none of the seed first supplied germinated. but renewed operations proved beyond all doubt that the tea plant thrived vigorously in Kumaon. In 1842 nine Chinamen were located on the plantations in Kumaon, and the first crop of tea was obtained in 1843. Chinamen were unanimous in opinion that the tea plant of the Kumaon plantations was the genuine cultivated Chinese plant, and superior to the indigenous tea of Assam. Specimens of the Kumaon teas were pronounced by London brokers to be fine flavored and strong, and better for the most part than the Chinese tea imported for mercantile purposes. This favorable report upon the Kumaon teas led to the further extension of operations, and in 1843 Doctor William Jameson was placed in charge of the Government tea plantations in the hill districts of the North West Provinces. officer took a deep interest in the tea experiments; he made a careful survey of the district of Kumaon, selected fresh sites for nurseries, and pushed on the extension of tea cultivation with much vigour. In 1845 there were 8 small plantations in Gurhwal and Kumaon, containing 118 acres of cultivation. and in the next year these plantations were increased by 200 acres; year by year cultivation was extended, private plantations were established, and it was fully proved not only that good tea could be manufactured in Kumaon. but that a local market for it was in existence there.

Emboldened by the results achieved in Kumaon, Doctor Jameson sought to extend the sphere of his operations. With Introduction of tea cultithe sanction of Government, in 1850, he introduced vation in the Punjab, and establishment of nurseries the tea plant into the Kangra valley. Two sites were selected for nurseries, one at Nagrota, a village

in the Kangra Valley.



about 8 miles east of Kangra, at an elevation of 2,900 feet, and the other at Bowarna, 20 miles east of Kangra, at an elevation of 3,300 feet above the level of the sea. Fresh seed was imported and seedlings brought from Kumaon, but the young plants having travelled during the season of the hot wind many died, and the experiment was commenced under trying circumstances; still it was a success, and in the two nurseries the tea plants flourished beyond the most sanguine expectations.

- 5. In 1852, the Marquis of Dalhousie, than Governor General of India, visited the Kangra Valley, and was so pleased with the success that had attended the two small experimental nurseries at Nagrota and Bhowarna that he sanctioned the establishment of another plantation on an extensive scale. Holta, a spot 5 miles above the Bhowarna nursery, and at an elevation of about 4,200 feet above the sea, was the locality selected, and there the Government appropriated an extensive tract of waste land comprising over one thousand acres, untouched by the people on account of some local superstition, which appeared to afford considerable facilities for tea cultivation, both in regard to climate, soil and facilities for irrigation.
- 6. The site once selected and land secured, operations were commenced without delay. Mr. W. Rogers, an active Manager, who had been trained on one of the Kumaon estates, was placed in charge of the new plantation. About 20 acres of land were at once planted out with tea, 300 acres were planted in 1853, and nearly as many in 1854. Thus by the end of 1854, Holta was a promising plantation, with about 600 acres of land under tea cultivation; the position was found all that could be desired, soil and climate very suitable for tea, and there were ample means for irrigation.
- 7. The progress of the plantation may be judged from the fact that the out-turn of tea for the season of 1860, amounted to 29,312 lbs., the teas sold by public auction brought an average of Rupee 1* per lb; those sold by private sale realized an average of Rupee 1-11† per lb. From 1861 to 1865, the out-turn of tea was each year somewhat less than in 1860. This decrease arose from two causes; first, improvement in the quality of tea, the proportion of fine to coarse teas was increased year by year; secondly, increase in the out-turn of seed and seedlings. It was the object of Govern-

² shillings.

^{† 3} shillings 4 pence-halfpenny.

ment to encourage private parties to enter upon tea cultivation in the Kangra Valley, and in this view seed and seedlings were distributed gratuitously to all applicants, the leaves not being plucked from plants set apart for seed. I find that in 1861 about 860* maunds of seed and 31,000 seedlings were distributed to Europeans and Natives; the leaves produced from the plants cultivated by Natives were all purchased at the Government Factors at prices which afforded considerable profit to the zemindars who had entered upon tea cultivation.

- 8. About this time, that is, in 1859 and 1860, the success of the Holta plantation led to the introduction of European enterprise in tea cultivation in the Kangra Valley.

 prise and capital. Several offers were made for the purchase of the Government plantation at Holta, but all were for the time refused, and wisely so. The sale of the plantation would have given one Company a monopoly, and have prevented other settlers from obtaining seed. The Government retained the plantation, distributing seed and seedlings year by year, until numerous plantations had been established and the planters no longer required the distribution of seed. Eventually in 1865, the Government plantation passed by sale into private hands, the purchaser being Major Strutt, who received this valuable estate and a considerable quantity of tea which was in store for a sum of one and a half lac of rupees.†
- But the operations of private individuals desirous of commencing tea cultivation in the Kangra Valley were retarded by Difficulties experienced by the difficulties that beset the settlers in securing the settlers in obtaining land for tea cultivation. The Government rights in waste land in this land. district had not been reserved by the Settlement Officer, but these wastes had been marked out, mapped and registered as the property of village com-It is not necessary now to discuss the question of the title thus secured to the zemindars under the Settlement record, the subject has been worn out in discussion, and the Government has resolved not to revive in its own favor claims which its agents had failed to prosecute at the proper time. Having secured possession of the waste lands within their respective boundaries, village communities displayed considerable tenacity and strenuously opposed the efforts of Europeans to secure the transfer of any portion of

^{# 1,720} lbs.

these wastes by purchase. So decided was the opposition that it was feared intending settlers would be compelled to abandon the enterprise altogether. Representations were made to Government, and it became a prominent question for consideration whether the Government could not in any way interfere to assist Europeans in their efforts to secure land for tea cultivation in the Kangra Valley.

At this juncture it was determined to depute a Government officer to facilitate the transfer of waste lands to settlers, by negociating between the zemindars and intending purchasers. I was selected for this duty, and commenced operations in January 1860. I first proceed-

Appointment of a Government officer to facilitate the transfer of waste land to European settlers.

ed to Holta, where I obtained a great deal of information on the subject of tea cultivation from Mr. W. Rogers, the Superintendent of the plantation. Having satisfied myself as to the requirements of soil, climate, &c., for tea planting, I made a personal survey of all the waste lands that appeared suited for tea cultivation. Three or four European gentlemen, intending purchasers, accompanied me in this tour, and I was able to negociate in their favor the transfer of plots of land which formed the nucleus of what have since become very valuable plantations. But it was then decided that I should negociate direct with the zemindars, and purchase waste lands in the name of Government, the land thus secured to be sold by auction to settlers. This course was considered desirable as it gave the purchasers a parliamentary title, free from the troublesome conditions and limitations that might have encumbered a private bargain. I was able to secure for Government waste lands to the extent of 2,596 acres, which were sold by public auction on the 1st July 1860. The extent of land thus secured may appear small, but I was employed on this special duty for a period of less than six months; moreover, although the area thus obtained formed but a very small proportion of the very extensive wastes known to exist in the district, the lands I had secured were situated in different localities, and were all well suited for tea cultivation, so that each settler who obtained even a small plot secured a footing in a locality suitable for tea cultivation, and the land thus purchased formed the nucleus of a plantation the size of which the owner was able to increase by his own future exertions in his intercourse with the village proprietors. Under the exigencies of the public service my operations were brought to a somewhat abrupt conclusion on the 1st July 1860. But it was my good fortune years after to return to the district, and to see the results that had been attained in the extension of tea cultivation in many parts of the valley.

- Purchase of waste land by the Deputy Commissioner of waste land by the Deputy Commissioner in 1862.

 Rangra, entered into negociations with village communities for the purchase of waste lands to be sold to settlers, and was able to effect the transfer of about 2,540 acres of land, which was all re-sold.
- In February 1867, nearly seven years after the close of my former operations, I returned to Kangra to fill the appoint-Occupation of waste lands ment of Deputy Commissioner of the district, which by settlers. appointment I have held till the close of April last. During this tenure of office I have frequently visited every tea plantation in the district, and have had constant communication with the planters. On almost every plot of waste land that I purchased in 1860 there now stands a planter's house and factory surrounded by cultivation. When formerly negociating for the transfer of land I had to toil through dense forests, or push my way through the long grass and stubble that covered the extensive wastes; but now, neat paths with hedge rows of fruit trees and wild roses lead through extensive tracts of rich tea cultivation, and these tracts, from barren wastes, have been turned into rich gardens. The planter for whom I had secured a plot of perhaps 50 acres, by his own exertions, by conciliating the people, and giving employment to those in the neighbourhood willing to labour, has since largely increased the area of his plantation by the purchase of fresh land.
- Description of the principal tead plantations in the Kangra valley. For the purposes plantations in the Kangra valley. For the purposes of this enumeration I may mention that all the plantations are situated on the lower slopes, or on the plateaus below, at elevations varying from 2,500 to 5,000 feet above the sea, of the great Dhoula Dhar, or snowy range of Chumba, which forms the outer of the several high mountain ranges of the Punjab from Kangra to Karakorum. The water-shed of this range running from above Noorpoor on the west to Baijnath on the east forms the northern boundary of the Kangra district. I follow the course of this range from west to east in describing the several plantations that lie on the slopes and plateaus below:—



- I. Proceeding along the main road from Noorpoor to Dhurmsala, at a distance of 25 miles from the former and 12 miles from the latter station, is the tea plantation of Shahpoor, the property of General Burnett, a retired officer of the old Bengal Artillery. This plantation contains an area of about 300 acres of rich land well suited for tea, about 100 acres of which have been brought under cultivation. Overlooking the plantation and within its limits stand the ruins of the old Shahpoor fort, the scene of many a clan fight between the Rajpoot chiefs of Kangra. The site of the fort will shortly be occupied, and its stones used for the construction of the planter's house and factory. The plantation is at present in charge of a native, and the teas manufactured have been of the coarser kind for the native market; but a European Manager will shortly be appointed, and then finer teas will be manufactured for the home market. The capabilities of this plantation are very great.
- II. About 8 miles from Shahpoor, on the road to Dhurmsala, is a small plantation of 50 acres, occupying a plateau in the midst of the rich lands of Giroh, the entire area under tea cultivation. The plantation is the property of Meean Tek Singh, a Rajpoot of high family in the Kangra district; he has built a factory on the estate, and manufactures teas which are sold in the local market at Umritsur.
- III. At Dhurmsala, on the slopes of the Fir Forest, below the upper station, and near the Goorkha cantonment, is atea plantation the property of Major White, containing an area of 420 acres, of which 98 acres are under tea cultivation. A factory exists on this estate, and of the teas manufactured the black teas are sold in the local market, and the green teas bought up by Umritsur merchants for exportation to Cashmere, Yarkund and Cabool.
- IV. Distant from Dhurmsala 3 miles, on the road to Palumpoor, is the Kuniara tea estate, the property of a small association comprised of members of the Civil and Military services. This estate is divided into two plantations, one on the upper slopes and the other on the lower plateau within the boundaries of Kuniara; the total area of both plantations is 350 acres, with 150 acres under tea cultivation; a factory has been built on this estate, and the teas manufactured are mostly sold in the local market.
- V. Distant 7 miles from Kuniara, on the road to Palumpoor, is the well cultivated estate of Gopalpoor, forming one of the two estates held by the Kangra Valley Tea Company. This plantation comprises an area of 468

acres, with 210 acres under tea cultivation, and the excellent condition of the tea plants, as seen from the main road skirting the plantation tells of good soil and careful cultivation. There is a large factory on this estate, and of the teas manufactured the black teas are sold in England and the green teas in the local market at Umritsur.

- VI. Onwards from Gopalpoor, at a distance of about 7 miles, but off the road, along the slopes of the Bundyara hill, is the Mount Somerset plantation, one of two estates held by a private association. This plantation covers an area of 500 acres, with 145 acres under tea cultivation; it has a factory in good working order, and of the teas manufactured the black teas are sold in England and to messes and families in India, and the green teas are purchased by the Umritsur merchants.
- VII. Proceeding 2 or 3 miles further we reach the station of Palumpoor, established by Mr. T. D. Forsyth, C. B., and at which a large annual fair is held. Palumpoor is the very centre of some of the most flourishing tea plantations in the valley, and hundreds of acres of tea plants may be seen from any part of the station. The first plantation in the neighbourhood of Palumpoor is the valuable estate called the Bundla tea plantation, one of the first established in the valley. This estate covers an area of 542 acres, with about 140 acres under tea cultivation; the condition of the plants on this estate tells of high cultivation and careful management; there is a large factory in good working order, and the teas manufactured are almost all sent for sale in the London market. This plantation was formed by two young Military officers, who sold their commissions and became settlers in the Kangra valley; it is now owned by an association comprising 5 or 6 gentlemen, the original proprietors still being partners, and one of them the resident manager.
- VIII. Opposite the Bundla Tea Company's plantation, and on the other side of the Palumpoor ridge, is the second estate belonging to the Kangra Valley Tea Company (the first being that at Gopalpoor). This plantation covers an area of 276 acres, with 156 acres under tea cultivation, and is under the careful management of Mr. R. Ballard, one of the first among the planters who entered upon tea cultivation in the valley. There is an excellent factory in good working order, and of the teas produced a considerable portion of the best black teas are shipped for the London market, the

remainder disposed of by local sales; green teas, for which there is an increasing demand, are purchased by the Noorpoor and Umritsur traders.

- 1X. Adjoining the Bundla estate of the Kaugra Tea Valley Company is the Holta plantation, formerly the property of Government, and established in 1852 as detailed above in para. 6. In 1865 the plantation was sold to its present proprietor, Major Strutt, who resides on his estate, and is effecting considerable improvements. The entire area of the plantation is 700 acres, of which 400 acres are now under tea cultivation. There is a large factory on the estate, and the out-turn of manufactured tea is large. Of black teas, the greater portion of those of the best qualities find their way to the London market, the rest are sold in the local markets. Green teas are sold to the Umritsur and Noorpoor merchants, and are in increasing demand.
- X. Adjoining and immediately below the Holta plantation is the estate belonging to the Nassau Tea Company, which with the branch estate in the adjacent village of Raepoor, covers an area of 2,877 acres of land, with 470 acres under cultivation. This is the largest and certainly one of the best managed plantations in the valley. The founder of this plantation was Major Nassau Lees, in whose operations were displayed a spirit of enterprise that has marked his action in all the speculations in which he embarked in this district. I may here mention that to his enterprise alone is due the introduction of the Cinchona plant now flourishing in this district. The factory on this plantation is the largest and best arranged I have seen in the district. Of the best qualities of black teas manufactured in this plantation, considerable quantities are sold in the local markets, and the rest either sold in Calcutta or from thence shipped for the London market. The green teas, for which there is an increasing demand, are readily purchased by the Noorpooor and Umritsur merchants.
- XI. Deserving of mention, as showing the enterprising spirit of a native chief of repute in the district, is the small plantation, covering an area of 25 acres, the property of Raja Sir Jodhbeer Chund, of Nadown, Knight of the Star of India, and which is adjacent to the Nassau plantation. The Raja has built a small factory, and his teas as manufactured are readily purchased by natives.
- XII. Beyond and two or three miles in rear of the Raja of Nadown's plantation, on the upper slopes of Kund Baree, stands one of two plantations, the property of Mr. W. Rogers, formerly Superintendent on the Holta

plantation; the second plantation is in Tindole, a village lower down in the valley and distant 8 miles from Kund Baree. The two estates cover an area of 140 acres, with 130 acres under tea cultivation. Mr. Rogers has his own factory, and manufactures good teas, which appear to sell well in the local market. Mr. Rogers was a soldier, who served in Havelock's regiment in Cabool, he left the Army, was made Superintendent of one of the Government plantations in Kumaon, from whence in 1852 he was transferred to assist in establishing the Holta plantation, and of this plantation he held charge for 13 years until it was sold in 1865. Mr. Rogers was then granted a pension, and now in his old age lives in his own pleasant and well situated estate.

- XIII. Beyond and below Mr. Rogers' estate, on the road from Palumpoor to Baijnath, is the Soongul plantation, the second of the two estates held by the proprietors of the Mount Somerset plantation. The Soongul plantation covers an area of 91 acres, with 80 acres planted out with tea; it is managed by Mr. Sparks, one of the partners in the association; a factory has been built on this estate, and the teas manufactured are sold with the produce of the Mount Somerset estate as detailed above, No. VI.
- XIV. About 6 miles beyond Sunsal, but 3 or 4 miles off the road, on the upper slopes of Lanode, stands a large plantation the property of Dr. Crawford, of the Indian Medical service. This estate covers an area of nearly 700 acres, but up to the present time less than 100 have been brought under tea cultivation. Dr. Crawford has built a factory which is in good working order, has placed a European Manager in charge, and is doing much for the improvement of his valuable preperty. Of the teas manufactured on this estate the best black teas are sold, some portion to messes and families in India, and the remainder in the London market.
- XV. Below Lanode, within the boundaries of Baijnath, at the end of the Kangra valley and on the confines of the district, stands the Baijnath tea plantation, the property of three officers of the Royal Army, one of whom, Captain Fitzgerald, has sold his commission and is resident manager of the estate. The entire estate comprises an area of 950 acres, of which 180 acres are under tea cultivation. I know no plantation on which the tea plant shows more strikingly the advantage of high cultivation than is apparent in the estate of Baijnath; it is certainly one of the best cared for estates in the valley, and the teas manufactured on this plantation are of excellent quality.

The black teas on this plantation appear to be readily sold in the local market, and some portions are shipped for the home market; green teas are readily purchased by natize merchants.

- XVI. Moonshee Jaishee Ram, Extra Assistant Commissioner, an old servant of Government in the Punjab, possesses several small plantations in different localities in the valley, the aggregate area of these being 221 acres, with 118 acres under tea cultivation. The Extra Assistant Commissioner has built a factory on his largest estate, and the teas manufactured find ready sale in the local market.
- XVII. I should here notice the plantation formed by Wazeer Goshaon of Mundee, at Bîr, a village above Baijnath, and in which locality he holds a jageer. This estate covers an area of 128 acres, with 108 acres under tea cultivation. The Wazeer, who is well known as the wealthiest native and most enterprising trader in these hills, has built a factory on his estate, and the teas he manufactures are sold chiefly in the local native markets. Some portions of the teas are sent to Ladakh and Yarkund.
- XVIII. At a distance of 8 miles from Baijnath, outside the Kangra district, and within the limits of his own territory, His Highness Bijey Sein, the Raja of Mundee, has established a large tea plantation at Sûkha Bagh, on the road through Mundee to Kooloo. This plantation covers an area of 300 acres, with 120 acres under tea cultivation. An English gentleman, Mr. J. Clarke, has been placed in charge of the plantation. A factory has been constructed, and the teas manufactured on this estate are well spoken of and find a good sale. I have frequently visited this estate, though not within the limits of the district, and consider its condition does much credit to Mr. Clarke's management. The produce is sold both in the London and in the local markets.
- XIX. Passing through the Independent State of Mundee for a distance of 50 or 60 miles, we enter the Koolloo valley, an outlying portion of the Kangra district, and to this distant tract of country tea cultivation has been extended by European enterprise. An association, styled the Koolloo Valley Tea Company, possess several tea gardens in different parts of the Koolloo valley. I have not however received any return showing the extent of these gardens and the area under cultivation. The principal partner in these plantations is Mr. G. Knox, a Deputy Commissioner in the Punjab, and the resident manager Mr. J. Minniken. Teas are manufactured by the

Company on their own estates, and the produce is readily sold in the local market.

I have now briefly noticed the principal tea plantations in the 14. Kangra valley, including one in the Mundee territory and one in the Koolloo valley, 19 in all. Aggregate area of plantation; gross produce; average produce per acre. While giving a brief description of each plantation. I have purposely avoided details, or the entering upon any comparison in regard to the merits of particular plantations, which would have been a rather invidious task, and might also have been displeasing to some of those who so kindly gave me the particulars I applied for. The statement furnished from each estate will be appended to this report, and will show further details that may be required. The aggregate area of the 19 estates enumerated above comprises 8,708 acres, the area actually under tea cultivation 2,635 acres, the gross aggregate produce in the season of 1868 amounted to 2,41,332 lbs of tea. The produce per acre and the price realised per ib by sale differs much in different plantations, but striking an average on the whole I find that the produce per acre is 91.6 lbs of tea, and the average price realised by sale Rs. 1-1-3 per lb.* These figures must however be taken as presenting an approximate average only, as the returns received from some of the plantations present such great differences in regard to the extent of produce per acre that I cannot think all are fully reliable.

- 15. In addition to the plantations described above, there are numerous small plantations, some 45 in number, covering areas from 2 to 50 acres, the properties of agricultural notables and of influential heads of villages in different parts of the valley. The aggregate area of these plantations amounts to 351 acres, and the area actually under cultivation to 148 acres. On some of these estates the proprietors manufacture coarse teas for the native market; on others, the smaller ones, the owners do not attempt to manufacture tea, but sell the leaves to planters who have factories in work.
- 16. The figures given in para 14 above may at first sight draw forth the remark that the area actually under tea cultivation is very small in this valley, but this appears to me a healthy sign, and I see in it one

^{* 2} shillings 2 pence.

of the elements of success. It is the too rapid formation of extensive unmanageable estates that has led in some measure to the disastrous results of tea cultivation in parts of Assam, where quantity rather than quality appears to have been the aim; planters in their eagerness to extend cultivation, and to declare that a certain area had been planted out, overlooked the essentials of quality and degree of productiveness of the plants, leaving it to those to whom they would sell their estates to realize the truth that neglected tea bushes yield no profit. In Kangra, on the other handplanters have wisely proceeded slowly, planting out carefully, cultivating highly, and covering only a manageable area. Moreover, I may observe that extensive as are the waste lands in the Kangra district, the available tracts fit for tea cultivation have always been very limited in extent; what is called the Kangra valley is a narrow tract of country. The portion of it fit for tea cultivation is comprised within altitudes from 2,500 to 5,000 feet above the sea; this still further narrows the available area; and lastly, it must be borne in mind that this limited area was occupied before the planters came, and occupied by classes of native argiculturists attached to their ancestral holdings, wedded to their time-honored system of agriculture, disliking change. and jealous to a degree of the approach of strangers within their boundaries. When these considerations are dwelt upon it seems matter for surprise that so much has been achieved.

17. It is unnecessary for me to lengthen this report by a discussion of questions regarding the soil and climate best suited for tea—the best mode of cultivation—system of manufacture—cost of production—returns,

&c. These are all points for consideration at starting, when tea cultivation is an experiment. In the Kangra valley we have long passed the experimental stage, and have secured results which afford ample proof of success. Moreover, I do not profess to have studied the subject of tea cultivation so deeply as to be able to give any decided opinion of my own upon the questions alluded to. But upon those several points I would offer the following brief remarks.

18. While a rich loamy soil has been declared best suited for tea,
experience has proved that, granted the essential
Soil best adapted for tea. conditions of climate, the various soils in different parts of the valley found suitable for the cereals which ordinarily

come within the system of rotation of crops of native communities are also suited for tea. Even when the soil is poor very much can be done by proper cultivation to improve and enrich it, the great point is to have a deep soil free from stones and rock, which prevent the tap roots from penetrating to a sufficient depth.

- 19. Climate appears to me a question requiring more consideraclimate. tion, for much can be done to improve and render
 the soil adaptable, while the condition of climate cannot be changed.
 A tolerably moist climate, such as is found in this valley at elevations from
 2,500 to 5,000 feet above the level of the sea, and in localities sufficiently
 remote from the plains to be free from the influence of the hot winds in
 summer, appears to be required. Tea will thrive in heat when there is
 some degree of moisture in the climate, but heat combined with excessive
 dryness in the atmosphere has an injurious effect.
- 20. On most of the plantations in this valley a system of what is termed high cultivation is adopted. The ground System of cultivation. is well prepared by deep digging and manuring, the seed carefully sown, and only healthy seedlings planted out; twice in the year the soil is turned up with the hoe, grass and weeds removed, and manure given; top pruning of the plants is attended to, buds and blossoms are picked off, and no seeds are allowed to ripen. Under a good system of high cultivation an acre of tea bushes might be made to produce 250 lbs of tea. Irrigation is not usually necessary, the rain-fall being generally heavy throughout the year, and, as a rule, at such intervals as to prevent the absorption of all moisture in the atmosphere. But it is advantageous to have the means of irrigation, for sometimes, though exceptionally, the months of May and June are particularly hot and dry, the plants are then apt to suffer, and the fresh flushes become partially destroyed, more particularly in exposed situations.
- 21. The flushes or new shoots on plants come on four or five times

 Manufacture.

 between the months of April and October, and
 the pickings take place when these new shoots
 are 3 or 4 inches long. The system of withering the leaf, rolling, firing,
 roasting, drying and storing is much the same on all plantations, and scarcely
 needs description here; indeed, I may admit that I have not studied the

system of manufacture sufficiently to give a very reliable description of the process.

- 22. Nor do I feel myself in a position to offer any decided remarks upon the subject of cost of production, and Cost of production. returns by sale of manufactured teas. The cost of production varies on different plantations according to their condition and the care and skill displayed in their management. I should suppose, however, that on a plantation where tea is manufactured at the average of 190 or 200 Ibs per acre, the cost of production and manufacture may be set down at about, or a trifle under, 8 annas * per lb.
- In regard to returns, I believe that all the plantations in the valley now pay well their working expenses, but a few Returns. only have as yet realized profits and return a dividend. With the exception of Holta, not a single plantation in the valley has been in existence more than 8 years, and it is said that a Himalayan tea garden cannot be considered in full bearing under 8 years. In this valley there is certainly the great advantage of cheap labour; but as a set-off there is the heavy cost of transport to the distant sea board when teas are exported for the home market. I am disposed to think also that in instances planters began operations without due economy and sunk capital prematurely. European assistants may have been engaged before their services could be required, and factories built before there was any tea to manufacture. Establishments too perhaps were entertained on too large a scale. The additional capital thus sunk prematurely may have retarded the realization of profits. But I feel satisfied that in regard to tea cultivation in the Kangra valley, the tide has now turned, and that with ordinary care and management every planter will find his undertaking a success. Enormous profits must not be expected, but steady returns yielding from 5 to 10 or even 12 per cent interest on the capital employed may I think be fairly hoped for.
 - 24. The disastrous results that have attended the working of so many tea plantations in Assam, and in some instances in the hill districts in the North-Western Provinces, have not been without their effect in bringing about

Plantations in the Kangra valley owned by individual proprietors or by small associations. a depreciation of the prospects of tea cultivation

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in all parts of India. But happily the conditions that led to disaster in Assam and elsewhere do not prevail in Kangra. As I observed in a former part of this report, the comparatively small size of the plantations in this valley is a healthy sign, and the fact that all our plantations are either the property of one or two individual planters, resident on their estates, or else owned by a few forming a small association, does to my mind bear an element of success.

25. If myself engaged in tea cultivation I should never attempt to form a plantation above 200 acres in extent; and Limited area under tea cultivation desirable.

Of this area I would not bring more than two-thirds at the most under tea, leaving fully one-

I would try and secure all the land within a ring fence, and have my house and factory in the very centre of the plantation. In an enterprize like tea cultivation, where all operations are performed by manual labour, and where the laborers employed are as a rule slow and naturally idle, more than may be supposed depends upon the compactness of the estate, and the consequent facilities for supervision and economy of labour; also while selecting rather undulating ground, I should avoid considerable slopes. The tea plants should be well covered with soil round their roots, and when the cultivation is in slopes the soil is either washed away by the heavy rains or else there must be resort to terrace cultivation, which is costly.

In passing I may remark here that the increasing value of timber and the comparative scarcity of firewood, even in Growth of timber for tea this richly wooded country, renders the growth of boxes and wood fuel. timber on their estates a matter of considerable importance and deserving the immediate attention of planters. experiments made for some years past, and which I have continued on a large scale, have proved that the Kelu or Himalaya Deodar, which gives such a valuable timber, grows well on the lower slopes of the Dhoula Phar, and on the plateaus below, where most of the plantations are situated. I should advise every planter to set aside a small area, say 15 or 20 acres, for the growth of timber, constantly renewing by fresh planting as the timber is cut down. If this matter does not receive timely attention, the cost of timber for tea boxes, and of wood fuel for the factories, will hereafter form a heavy item of expenditure.

- 27. Another matter to which I may briefly allude is the provision of a suitable paper for packing tea. I believe it is Vegetable parchment for admitted that all kinds of tea quickly deteriorate by tea packing. being packed in ordinary paper. It is said that vegetable parchment is of great value in packeting tea; that tea thus enveloped retains its aroma for an indefinite time, and the vegetable parchment does not communicate any odour or flavour to the tea. This matter may appear to affect the retail sellers who make up teas into small parcels, rather than the planters who sell wholesale, with their teas packed in cases lined with lead; but when the quality of the tea is injuriously affected by careless packing in bad paper the reputation of the planter suffers. It seems to me that planters might with advantage give their attention to the subject of the preparation of a good vegetable parchment or paper for packing tea.
- 28. Of much importance in regard to the success of tea cultivation is

 Markets for the sale of the provision of markets for the sale of produce.

 Kaugra valley teas.

 It may be said that there are four markets available for the sale of Kangra Valley teas:—
 - I. The Home or London market.
 - II. The Local European Market.
 - III. The Local Native Market.
 - IV. The Central Asian Market.
- 29. Almost all the planters manufacture and ship teas for the London market, but as yet I believe that this has been found to be the least profitable market. The manipulation of teas highly flavoured and suitable for the home market is costly, careful packing in lead and wood and labelling adds to the expense, and then transport to the sea board, shipping dues, freight, assurance, dock dues and brokerage, form items that swell the charges greatly, and eat up profits. Assuming the cost of manufacture as stated above to amount to 8 annas * per lb, the transit charges from the plantation to the London market are not less than 4 annas 6 pie † per lb, making the total cost to the planter not less than 12 annas 6 pie, or 1 shilling 6 pence 3 farthings per lb. Then there are other risks, and the uncertainty in regard to prices realized by auction

^{*} One shilling.

^{† 6} pence 3 farthings.

sale. On some plantations it is said that actual loss is incurred by sending teas to the London market. An impression also prevails that there is a combination on the part of tea brokers in London to depreciate the value and keep down the prices of Indian teas. In order to test the truth of this report I have it in contemplation to take with me to England in the ensuing winter some samples of the finest teas manufactured on the best plantations in the valley, and to distribute these samples among some of the first of the London tea merchants. It is possible that in distributing these samples, the official position I have held in this district, the experience I have gained in my observation of tea cultivation, and the assurance that I have no personal concern in any undertaking in the district, may induce some of the London traders to avail themselves of the information I can afford, and to turn their attention to the purchase of Kangra teas more largely and at higher prices.

- 30. Kangra teas are year by year selling more largely and coming into greater demand in the Local European market.

 These teas are almost universally used in messes and private families in the Punjab and Upper India, and I believe are purchased by the Commissariat Department for the use of troops. But while good teas readily secure remunerative prices in this mark et, the demand, considering the comparatively small proportion of Europeans in this country, can never absorb the supply available from the numerous plantations. For three or four years past I have always consumed a class of Kangra tea which I purchase from the plantation at the retail price of Rs. 1-8-0 * per lb. I find this tea more to my taste, and as far as my opinion goes of better quality than China tea that when last in England I purchased at 4 shillings and 9d. or 5 shillings per lb. from one of the best houses in London.
- This market absorbs the coarser qualities of black teas, the tea dust, and the green teas, which are manufactured at comparatively smaller cost and which are packed in cloths; these teas are frequently purchased by the native merchants direct from the factories. Now that these cheap teas are procurable, the custom of tea drinking is steadily increasing and spreading among all classes of natives, and year by year this local demand will become of steadily increasing importance. Any one curious to ascertain whether natives are given to tea

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drinking, need only leave his tea box open and he will find how soon his servants will help him to consume its contents. But as yet the greater portion of the teas purchased in the local native market are for exportation to the Central Asian market, regarding which mention will be made presently. Amritsur is and ever will be a great mart for the supply of teas for the native markets throughout Upper India. At Amritsur the Ladakh and Yarkund traders have commenced and will continue to purchase teas for the ir own countries, and for the Eastern Provinces of Central Asia; there also the Cabool traders will always purchase teas for Cabool, Herat, Khiva, Bokhara, Samurkand, and other centres of trade in Central Asia: and from Amritsur too there has set in the exportation of tea via Kurrachee for ports in the Persian Gulf.

- 32. The last, but to my mind the most important, market for the sale of Kangra teas is the Central Asian market. Trade Central Asian market. returns that I furnished when Deputy Commissioner of Goojrat in 1862 will show what very large quantities of China green teas, brought up from Bombay, were exported through Cashmere to Ladakh, Yarkund, Khotan, and Kashgar. A perusal of Vambery's Travels in Central Asia will show how common is the use of green teas among all classes with whom that traveller communicated in his journey from the shores of the Caspian sea, through the Turkoman deserts, to Khiva, Samurkand, Bokharaand Herat. The use of tea as a beverage, especially of green teas, will increase in the cities and countries of Central Asia that I have named, with increased facilities of supply. Our Kangra valley planters would probably be able to command the whole of the Central Asian market, and it will be found the most profitable of all the markets.
- Palumpoor.

 Palumpoor.

 Market for the sale of teas for export via Koolloo,
 Lahoul and Ladakh to the Eastern Provinces of
 Central Asia. Though hopeful, I see difficulties that make me not entirely
 sanguine. Our mountain passes in Upper Koolloo and Lahoul are more
 difficult, and are closed by snow earlier in the season, than are the passes
 through Cashmere and by the Chimurtee route. It sometimes happens
 owing to the early closing of the passes that Yarkund and Ladakh traders
 who have started to come down via Lahoul and Koolloo through Kangra
 have had to retrace their steps and proceed by the Cashmere or Chimurtee
 route; thus the coming of these traders is uncertain, when they do come their

desire is to barter goods in exchange for tea rather than pay in cash, but this system of barter would not suit our planters, who require cash. Lastly, if these traders can be induced to purchase teas for cash payment, they require the teas to be stored by the planters for some months until their return to their homes in the following spring. These are difficulties and uncertainties which in the interests of our planters it is only fair to mention and look in the face.

- 34. Amritsur is, and in my opinion always will be, the great mart to which our Kangra planters must forward their teas to feed the Central Asian market. From Amritsur is the easiest route via Jumoo and Cashmere to Ladakh and the Eastern Provinces of Central Asia. From Amritsur via Cabool the tide of trade flows to the great Central Asian marts of Herat, Khiva, Bokhara and Samurkund. From Amritsur there is a greatly increasing trade via Kurachee to the ports in the Persian Gulf. And lastly, I think it is not taking too sanguine a view, to anticipate the day when Kangra teas forwarded by rail to Kurrachee and from thence shipped to Suez may be conveyed through the Suez canal and shipped to Russian ports in the Black sea at a smaller cost than teas can now be conveyed overland from China to Russia.
- 35. If myself engaged in tea cultivation I should manufacture teas for all the markets. I should supply quantities of tea for the London market, varying according to the results of previous sales; but I would continue to supply even without profits, in order that the qualities of the teas might become more known to the public in England, and hence the value of the plantations in the Kangra valley become the better appreciated. The same considerations would lead me to supply teas for the local European markets. The planter should not think only of his annual profits, but look to increasing the marketable value of his estate, in view to eventualities, should he desire to dispose of a portion or the whole, and this he can best do by always selling a certain quantity of good teas in the London and local European markets. But the local native and the Central Asian markets are those upon which I should depend for the most sure and easy profits, and for which therefore I should manufacture most largely.
- 36. Intimately connected with the success of tea cultivation are the Labour and communica. questions of the supply of labour and facilities of communication. Upon these subjects I should therefore offer brief remarks.



- Happily the supply of labour is abundant in the Kangra valley, and will always remain so. Recent census operations Labour. have shown that the population of Kangra proper is remarkably dense for a mountaincus country, and the people are by no means migratory; on the contrary they are wedded to their homes, and as a rule would work for small wages near their homes rather than be induced to take employment elsewhere. Labour too is remarka bly cheap at present. Rs. 4 per mensem * representing the pay of an able-bodied labourer, on a plantation. The services of women and children are also largely available during the picking season for picking and carrying the leaf to the factories. But here as elsewhere the price of labour must rise with the development of trade, the advancing prosperity of the country, and the consequent gradual rise in the range of prices of grain and of all articles of food and clothing. I think it highly probable that within 2 or 3 years planters will have to raise the rates of wages from Rs. 4 to 5 † per man and when this takes place it. will become a question whether machinery may not be introduced into factories with advantage. One planter has shown me a machine for rolling the tea leaf, which he informed me was worked with greater economy than by employing manual labour for the purpose. I have no fear on the score of deficiency of labour; indeed the abundance of labour will always prove an element of success in this valley, and will give our planters a great advantage over those in some other provinces.
- 38. The new Kangra valley cart road now in course of construction, commencing at Noorpoor on the west, and running for a distance of 60 or 70 miles, through Kotela, Shahpoor, Kangra, Nagrotah, Palumpoor to Baijnath, the eastern extremity of the district, will, when completed, afford all the facilities that could be desired for communication with the plains; and this difficult and costly road, with its many cuttings, its heavy embankments and noble bridges, will be a lasting monument of the interest taken by the Government in the operations of the planters, and of its earnest desire to contribute all in its power to ensure their success. This road will too be a monument of the engineering skill of Captain T. Browne, of the Royal Engineers, who aligned the road throughout, partially completed a considerable portion of it, and who on this

^{* 8} shillings. † 8 to 10 shillings.

line built two of the largest brick arch bridges in the world, having each a span of 140 feet.

- 39. While fully alive to the immense advantages that will result from this road on its completion, I think it matter for regret that the work was not divided into two sections, one from Kangra to Baijnath, and one from Kangra to Noorpoor, the second section not to have been commenced until the completion of the first; had this plan of operation been adopted, the portion of the road urgently required to connect Palumpoor and Baijnath with the cart road from Hoshiarpoor to Kangra would ere this have been opened and fit for traffic, at an outlay less than has been incurred in the partial construction of the entire line, the opening of any portion of which must now be delayed. Moreover, the second section from Kangra to Noorpoor is not a matter of urgency in the interests of the planters, as with one exception all the plantations lie to the east of Kangra. The great utility of the Kangra and Noorpoor section will not be apparent until we can secure the construction of the tramway or light railway between Pathankote and Amritsur proposed by Mr. T. D. Forsyth, c. B., have completedt he missing link in the line of Railway communication between Mooltan and Kotree, and Kurrachee becomes in effect, as it is now in name only, the port of the Punjab. When these works are undertaken and completed then the section of the cart road between Kangra and Noorpoor will become a most important and valuable link in the chain of communication through the Kangra district.
- 40. In closing this report it behoves me that I should bear testimony to the good feeling always evinced by the Kangra planters in their intercourse with the authorities, and the good will and consideration they have always displayed in their dealings with the people. Much of their success may be attributed to their conciliatory bearing towards the shy and jealous native communities among whom they have located themselves, and whose prejudices they have done so much to overcome. Disputes between planters and native villagers seldom if ever occur; and during my long tenure of Office as Magistrate and Civil Judge of the district, I have seldom or ever received any complaints, and have not had occasion to adjudicate in a single difference between planter or villager; village communities while furnishing labor for the plantations are enriched by the wages of their labor; they and the planters see how useful one class is to the other; and thus while

rendering each other mutual services they have learnt the unity of their interests. For myself I have always received a kind and hospitable welcome on each of the plantations I have visited, and every planter has readily furnished any information I have applied for. In many instances they have rendered considerable services. One planter undertook the construction of a dawk bungalow in Koolloo without any renumeration for his trouble; others have built bridges and repaired roads in order to assist the authorities. The planters too are men who can give useful information to the District Officer; among their number are those who do not confine themselves to the limits of their plantations, but who travel among the wildest tracts of this mountainous district, and are always ready to furnish information regarding the state of the country and of trade in the wild and inhospitable tracts of Lahoul and Spiti—tracts not often visited by the authorities.

STATEMENT REGARDING THE HOLTA TEA PLANTATION DURING THE SEASON 1868.

Markets in which sold.	Umritsur, Jullundur and London.
Average price per b realized for each description of tea.	One rupee per 16 all round=2 shilliugs.
Descriptions of tea manufac- tured.	Black teas 28,000 fbs. green teas 11,000 fbs.
Average produce per acre, in lbs.	About 97 lbs per acre; but only 200 acres in full bearing.
Gross produce Average pro- in the during duce per 1868. acre, in ths.	Nearly 39,000 lbs.
Area under tea culti- vation, in acres.	About 400 acres.
Area of the plantation, in acres.	About 700 acres.
Locality.	Palumpore.
Name of company or proprietor.	Major C. H. Strutt, Proprietor.
Name of plantation.	Holta.

REMARES.—This estate, under the late management, only produced about 20 to 25,000 ibs of tea from an average under cultivation of some half the estate, which was overgrown with grass jungle, and than pruned and cut away all the burnt wood on the bushes and turned up the soil. The result was so satisfactory, that the estate increased its yield 14,000 fbs in 1868. I have taken out of cultivation 50 acres, and cut down their way to Bukhara viá Cabul. There is not much local demand for black teas, the bulk of which we send to the London markets, where 150 acres. The bushes had exhausted themselves and produced nought but seed and a very inferior description of leaf. I therefore burnt down acre. The demand for green teas is on the increase, and the Unritsur merchants are the chief purchasers of these teas, which eventually find hey realize a fair price; and from the results of the last two years auction sales in London, the Kangra teas appear to take precedence of all other about 150 acres of the larger and older bushes, manured those that were burnt last year, and from the general appearan o of the bushes and mproved condition of the whole estate, I anticipate the produce of 1869 will amount to between 50 and 60,000 lbs. or 130 to 150 lbs per ndian teas.

I have built a propagating house for Cinchona cultivation, and have upwards of 5,000 healthy young plants, which I propose to plant out the beginning of the rains, being encouraged to do so by the success which has marked the operations of the Cinchona Company at Bowarnah and Rycpore.

C. II. STRUTT, Major, late Royal Artillery.

STATEMENT REGARDING THE BUNDLA TEA PLANTATION DURING THE SEASON 1868.

	•
Markets in which sold.	Indian local markets and London.
Average price per lb realized for each des- cription of tea.	All the necessary details are not yet to hand.
Descriptions of tea manufactured.	All kinds of black and green.
Average produce per acre in Ibs.	133 † 1 <i>pa</i> •
Gross produce Average pro- in the during duce per 1868. acre in fbs.	.edf £78,8I
Area under tea culti- vation, in acres.	l⊈O ≀lCrea,
Area of the plantation, in acres.	Acres, roods, poles, 542 S & S42
Locality.	Bundla, Kangra Valley.
Name of company or proprietor.	Colonel E. P. Anthur, Commissioner Phalumpore; F. Souter, Esq., Commissioner of Police Bombay; G. Duff Esq., Slate Quarries Dhurmsala; T. Sellon Esquire, London; Revd. T. Astley Cock, Pentonville; Capt. G. A. Harrison, Bundla.
Name of plantation.	The Bundla Tea Plantation.

REMARES.—Natives from Central Asia have not yet bought any tea in the Kangra Valley, and it appears doubtful if they eventually will do so. One of the great drawbacks to tea being a commercial success is the difficulty of procuring manure. This will always limit the area under cultivation. Also, during the past year and a half, an unexampled depression has taken place in the London markets, quite unaccountable; this is the more serious, as there are no symptoms of a reaction, and it should be borne in mind that London will ever be the chief mart for our produce.

G. A. HARRISON,

Manager.

STATEMENT REGARDING THE GOPALPUR TEA PLANTATION DURING THE SEASON OF 1868.

Markets in which sold.	Black tea in the English market and green in local (Umritsur) mart.
Average price per the realized for each description of tea.	.egnillide 2=0-0-1 .eA
Descriptions of tea manufactured.	Black and green.
Average produce per acre, in Ibs.	133 fbs nesrly.
Gross produce Average pro- in the during duce per 1868. acre, in ths.	28,000 lbs.
Area under tea culti- vation, in acres.	Given in foregoing column.
Area of the plantation in acres.	Forest, cultivated lands paying tax and swamps, 258 2 2 Under tea cultivation, 210 0 30 Total, 468 3 1
Locality.	Gopalpur, Lalla, Chichiyar and Gea villages, in the valley between the Dhoula Dhar and Futtear Hill.
Name of company or proprietor.	Kangra Valley Tea Company.
Name of plantation.	Gopalpur Estate.

BEMARES.-High cultivation, large quantities of manure, top pruning, ground turned up twice in the year by hoe.

J. NAPIER LENNOX, Manager Gopalpur Estate,

Kangra Valley Tea Company, "Limited."

STATEMENT REGARDING THE KUNYARA TEA PLANTATION DURING THE SEASON OF 1868.

REKVEKS.	The Kunyara plantation do not sell their teas as a rule till at least 12 months after their manufacture. Our teas are mostly sold by retail in India.
Markets in which sold.	
Average price per ib realized for each de- scription of tea.	Not yet sold.
Descriptions of tea manufactured.	Green.
Average produce per acre in ths.	44 Bs.
Gross produce Average pro- in hs during duce per 1868. acre in hs.	6,735 lbs.
Area under tea cultiva- tion, in acres.	150
Area of the plantation in acres.	
Locality.	Kunyara
Name of company or proprietor.	Kunyara Coy. Kunyara.
Name of plantation.	Киряга.

STATEMENT REGARDING THE BAREE AND TINDOLE TEA PLANTATION DURING THE SEASON OF 1868.

Remarks.	Green teas are most in demand, which are quickly bought up on the Plantation by the Umritsur traders. Black tea brings the best	price, but sells in small quantities to consumers only.
Markets in which sold.	ore. sie. lee. ur.	
Average Descrip- produce tions of tea h. realized for each in lbs. tured. description of tea.	Green 12 annas* Black 1-4-0†	21 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
Descrip- tions of tea manufac- tured.	Green, fbs. 2,634-3. Black, fbs. 1,578-12.	4,212
Average produce t per acre, in ibs.	32	
Gross produce in fbs during 1868.	130 4,212-15	
Area under tea cultiva- tion in acres.	130	
Area of the plantation in acres.	140	
Locality.	Baree and Tindole.	
Name of Company or Proprietor.	W.O. Rogers, Baree and Proprietor. Tindole.	
Name of Plantation.	$egin{array}{c} \mathrm{Baree} \\ \mathrm{and} \\ \mathrm{Tindole,} \end{array} \}$	

W. O. ROGERS,

Tea Planter.

THE KANGRA DISTRICT.

STATEMENT REGARDING THE NASSAU TEA PLANTATIONS DURING THE SEASON OF 1869.

	THE KANGRA DISTRICT.
Markets in which sold.	All green teas sold to Noorpoor and Umritsur merchants as soon as made. About 3000 black sold annually in local market to Europeans, remainder sold in Calcutta, but never sent to England if remunerative prices can be got in Calcutta. Cannot say what 1868 black teas sent to Calcutta may fetch. Some of the year before—Pekoe Souchong—sold in England at 3s-8d per lb., which obtained special mention in the Tea Reports, vide Home News.
Average price per B. rea- lized for each description of tea.	Rs. 1-2° per 1b. cash on the spot for green tea, and for black tea Rs. 1-8† per 1b. on the spot for what is sold in the local market. * 2s-2s.
Descrip- tions of tea manufac- tured.	Black and Green, see Column No. 6.
Average produce per acre in Ibs.	Say for 197, or 200 per sere, from full bearing plants, including good and bad land.
Gross produce in Bs. during 1868.	24,561fbs. Black tea. 20,252 " Green tea. 44.813fbs. Total.
Area of the plantation plantation vation in acres.	Four hundred and seventy (470) acres, of which acres 210 in full bearing, remainder small plants.
Arca of the plantation in acres.	Two thousand eight hundred and seventy-seven (2,877) acres, including forest.
Locality.	Kangra Valley, near Palumpore.
Name of Company or Pro- prietor.	Vassau Tea Company.
Name of plantation.	Vassau Plantation, Raipore Plantation.

ANDREW TURNBULL, Manager,

Nивваи Теа Сотрану.

NASSAU, PALUMPORE, Teh 6th April 1869.

STATEMENT REGARDING THE BYJNATH TEA PLANTATION DURING THE SEASON OF 1868.

Remares.	Local market. All the Green chased by a control bushes on the plantachased by a tion are still very young and not in full yield. Green tea Merchant, only in demand by the nacoarse and tives. Alarger quantity often would have been made in 1-2 per up to the usual period, but they stopped on the 24th August, and there was no more rain for 5 months. I believe Umritsur merchants purchase the Green tea for the Central Asian market and Cabul.
Markets in which sold.	About Rs. Local market. 1-2 per All the Green pound all readily pur- chased by a. Native Merchant, coarse and fine at Rs. 1-2 per pound.
Average price per 1b. realized for each description of tea.	About Rs. 1-2 per pound all round.
Descrip- tions of tea manufac- tured.	12,000 fbs. of Black and 10,000 fbs. of Green.
Average produce per acre in fbs.	122 Bs.
Gross produce in ibs during 1868.	22,000 ths.
Area under tea cultiva-tion in acres.	950 acres. 180 acres.
Area of the plantation in acres.	950 acres.
Locality.	Byjnath, Kangra Valley.
Name of Company or Proprietor.	Byjnath. Firm, Major W. Croker, 27th Regi- ment. Surgeon A. H. Fraser, 88th Regi- ment. Captain O. Fitzgerald.
Name of Plantation.	Byjnath Tea Plantation.

F 1868.	Remabes.	
SEASON OF	Markets in which sold.	Green Tea, English market. Black Tea, English market.
THE	Average price per B realized for each description of tea.	Rupee one per pound=2 shillings.
PLANTATION DURING	Descriptions of tea manufac- tured.	Black Tea three thousand pounds. Green Tea four thousand pounds.
PLANTATI	Average produce per acre in ibs.	Eighty-seven and a half pounds.
ODE TEA	Area of the Area under Gross produce Average propautation tion, in 1868. acres acres.	Seven thousand pounds.
THE LANODE	Area under tea cultiva- tion, in acres.	Eighty acres or thereabouts.
REGARDING 1	Area of the plantation in acres.	Seven hundred acres or thereabouts.
	. Locality.	Lanode.
STATEMENT	Name of company o proprietor.	Surgeon Major J. D. Crawford, 2nd Bengal Cavalry, Deolee.
ST	Name of plantation.	Lanode Tea plantation.

DAVID N. TURNBULL,
Manager.

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URING THE	Remarks.	
AND LOONGUL TEA PLANTATIONS DURING OF 1868.	Markets in which sold.	Black tea to England. A small quantity about 3,000 lbs in local markets, messes, private families, &c. Green tea bought on plantation by Umritsur merclants.
EA PLANT	Descrip-Average price tions of per Ib realized tea malufactured.	Black tea being now on the way to England cannot tell what it may realize. Green tea averaged about Ra. 1-1-9 per lb.
GUL 1	Descriptions of tea manufactured.	Mostly black tea. About 3,000 lbs of green tea.
D LOON 1868.	Average produce per acre, in lbs.	Mount Somerset, 66 lbs 14 oz. per acre. Loongul 97 lbs 6 oz. per acre.
SOMERSET ANI SEASON OF	Gross produce hooduce in lbs during per acre, in lbs.	Mount Somerset 9,700 lbs. Loongul 7,7190 lbs. Tioungul 7,490 lbs.
UNT SOMI	Area under tea culti- vation, in acres.	Mount Somerset, 145 acres giving tea. Loongul, 80 acres giving tea.
THE MOUNT	Area of the plantation in acres.	Mount Somerset, about 500 acres of land, 145 under foots of land, 145 under of lands of lands feat of lands feat.
arding	Locality.	Monnt Somerset, above Palumpore, about 5,600 feet. Loongul between Palumpore and Byjnath, about 3,600 feet.
STATEMENT REGA	Name of company or proprietor.	H. J. Barnard, Esquire; G. F. Barnard, Esquire; L. M. Sparke, Esquire; Captain Batt; H. Dumbleton, Esquire.
STATEM	Name of plantation.	Mount Sopierset and Loongul Tea Estates.

TEA CULTIVATION IN

STATEMENT REGARDING THE DHURMSALA TEA PLANTATION DURING THE SEASOM 1868.

Markets in which sold.	Local and English, Lahore, Mooltan, Itawulpindee, Jul- undhur, &c., &c.
Avorage price per the realized for each description of tea.	Average price all round, Rs. 1-2-6.
Descriptions of tea manufactured.	Pekoe; P. Sonchong; Sou- chong; and about 3 per cent. of Bohea, Hyson, Hyson Skin, &c., &c.,
Average produce per acre in fbs.	i
Gross produce in Bs during 1868.	4,500
Area under tea culti- vation, in acres.	86
Area of the plantation, in acres.	420
Locality.	Dhurmsala.
Name of Name of com- pany or plantation. proprietor.	Major M. J. White.
Name of plantation.	Dhurmsala Major M Plantation. White,

and purchase their teas from the growers direct the advantage to both would be great, but this seems hopeless as they are kept from coming by all sorts of devices. A want of even ordinary combination amongst the growers lays them open to attack from all sides, until the result will be abandonment of tea cultivation altogether. The coolies combine to gain greater privileges—which means less labour for higher pay—and the Native purchasers combine to force down prices, whilst the planter sits still. There can be but one result of such supineness. This year too the Government has not made its usual demand for hill teas through the Commissariat, whereby a door has been closed to the exit of a large amount of and without prospect of amendment. The green tea trade is gradually getting into the hands of one Umritsur firm, the consequence of which will be a permanent reduction in price paid to the growers. If the Mogol and Povindah traders could be induced personally to visit the valley REMARKS.—The system of cultivation is the same as is pursued throughout the valley. Green teas are purchased by the Natives for exportation to Cabul, Cashmere and Yarkund, whilst they all but neglect Blacks. Prices during the whole of last year have been unusually low eas, and the ingress of that which is much required amongst the Planters, a considerable amount of ready money

DHURMSALA.

The 29th June 1869.

M. J. WHIT

STATEMENT REGARDING THE BUNDLA TEA PLANTATION, KANGRA VALLEY TEA COMPANY "LIMITED," DURING THE SEASON OF 1868.

Name of plantation.	Name of company.	Locality.	Area of the plantation, in acres.	Area under (tea cultivation, in acres.	Gross produce Average pro- in its during duce per 1868. acre, in its.	Average produce per acre, in fbs.	Descriptions of tea manufactured.	Descriptions Average price of tea for each description of tured.	Markets in which sold.
Bundla Plantation.	Kangra Valley Tea Company "Limited."	Locality of Palampur.	276 acres.	156 acres.	30,099 lbs.	193 lbs.	Black and Green tea.	Black tea sold from 1 shilling 8 pence to 1 shilling and 10 pence per 1b; Green tea	Black tea sold from 1 shilling 8 pence to 1 London and shilling and India general. 1b; Green tea b; Green tea sold from 14
								ana (18-94) to Rs. 1-8-0 (3s.) and averaged 2 shill- ings the Ball round.	

sowing of seed, and deep cultivation in preparing the ground, and planting only good healthy seedlings and rejecting all bad ones. If these matters were carefully attended too, tea in moderate favorable seasons would yield 250 lbs per acre. In an old plantation the cold weather REMARES.—Success in tea cultivation depends on the selection and preparation of the land, good soil, at a suitable elevation, next careful cultivation commences in November, first deep hoeing, then manuring, pruning and plucking blossom. In April the manufacturing season commences, and all hands are employed plucking leaf and manufacturing till November; and during the intervals when there is no leaf to pluck all

hands are turned to light hoeing and weeding round the plants, to keep down the jungle and open up the soil to receive moisture and heat.

Formerly there was a good market for Black tea in India, but of late years the Indian market has been overstocked with tea, and an increasing demand for Green tea in India and the fair prices for the best Black tea which we get in London, we hope with great economy in the working of our estates to make tea pay us an eight per cent dividend, but then we have been growing it for upwards of nine years, without any Any Green tea we have as yet made has been pretty well sold to native merchan's in Unritsur and Loodianah, and the demand for Green tea increased last year very much. If the demand for Green tea increases, we will be glad to do a larger trade in green tea. My tea packed in wood and lead for the market costs me one shilling (eight anas) the pound, and with the greater part of our Black tea is sold in the London market.

RICHARD BALLARD,

Manager.

Bundla, 10th June 1869.

From T. H. Thornton Esquire, Secretary to Government Punjab, to J. A. E.

Miller Esquire, Secretary to Financial Commissioner Punjab,

No. 934 dated 3rd August 1869.

I am directed to acknowledge your letter No. 601 dated 26th ultimo, forwarding a report by Major E. H. Paske on Tea Cultivation in the Kangra Valley; and to request that the acknowledgments of Government may be conveyed to Major Paske for the zeal he has evinced and the labor he must have bestowed on preparing it. The report will be published as a No. of "Selections from the Records of the Government of the Punjab."

