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The canal irrigation, and live-stock in the Cawnpore district (1890-1910)

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Abstract
Canal Development has been one of the greatest developments of British Ruler. Impact and the purpose of canal development have been an issue of serious controversy among the Historian. One group of historians believed that canals were being used by Colonial ruler to fulfil their colonial interest, on the other hand historian believed that canal development has positive impact on Indian agrarian society. So, this paper aims at the positive impact of canal development on livestock at micro level in Kanpur District of Uttar Pradesh.

Keywords: British ruler, canal irrigation, live-stock

Introduction

During the Colonial period canals were considered as the modern mode of Irrigation. It brought the major changes not only in the agricultural processes of the irrigated regions, like crop pattern, crop density, crop production etc. but also brought many changes with economy and cultural, in addition ecological and environmental issues. The traditional agrarian society, the significance of livestock is very high but the question is how the new technology, like canals, brings changes in the traditional agricultural practices? And In what ways canals affected the live stocks of the region?

The significance and availability of the cattle stock in the United Province is described by the W H Moreland-

"Practically, all the heavy work of the country, ploughing, raising water from wells, threshing grain and carrying produce- is done by cattle; Buffaloes take some share, especially in ploughing wet rice land and in carting, but most important of all is the bullock. In the greater part of the provinces the cultivators do not rear their bullocks, for use on their lands; it is of course the ambition of the most men to keep a cow for the sake of the milk, and the bull-calves born in the village are usually kept till fit for work and then put to the plough, most of the cattle are used, brought from outside. Their two great breading grounds in the provinces, Bundelkhand on the south and the sub mountain districts on the north. In both of these tracts the population is scanty and there is a great deal of uncultivated land, the rough grazing on which is sufficient to rear large number of young animals. When these are ready for work they are brought in droves into the more populous districts and sold either at fair or from village to village. Speaking roughly, the sub mountain tract supply most of the cattle imported into Oudh and Rohilkhund, while Bundelkhand find its chief market in the lower doab and parts of Benaras. The extreme East of the province is supplied from the Bengal, while on the West the rich District of the Upper doab get their large and powerful cattle mainly from the Punjab, and parts of the middle doab depend largely on the produce of Central India or Rajputana [1]

The district of Cawnpore provided the irrigation mainly from the Bhoginipur, Etawah and Fatehpur branches of lower Ganges Canal. The Canal was opened for irrigation in AD 1878, while further extension of the canal network was going on. Fatehpur branch was opened for irrigation in AD 1898 and in 1901-02 it irrigated the total area 34451 acres [2].

The district of Cawnpore was formed by the treaty with Oudh Nawab on 10th November 1801, in which the certain portions were ceded by the Nawab VIZIER to the east India Company and these were subsequently formed into seven Zillahs, one of which was denominated as Cawnpore (page 20) [3] The district forms the Western portion of lower Ganges-Jumna doab. It lies between 25*56' and 26*57' north latitude and 79*34' and 80*38' east longitude, and marches with the Fatehpur District on the East and with Etawah and Farrukhabad on the West. It has a total area of 2358 square miles. The rivers flow inside the district are the Pandu, the Isan, the Rind, the Non, similarly the major rivers like Ganges and Jumna also pierced the district, forming the northern and southern boundaries, these rivers flow from West to East. Irrigation was carried on from wells, rivers, ponds and Ganges Canal. Figures for the total irrigated area by each sector, of the AD 1878 settlement Report, are given below-

Wells	20.6%
Canals	15.3%
Others	4.6%
Total irrigated area	40.5%[4]

As far as the question of live-stock in the canal affected districts, it has been broadly argued that the Canals reduced

[1] Moreland W. H. Agriculture of the United The Provinces, an Introduction for the use of Land Holders and Officials, Allahabad, Printed at the Pioneer press 1904(page 124-125).
[2] Irrigation Administration Report of the United Provinces for the year ending 31st March 1903, Printed at the United Provinces Government Press, Allahabad-1903.
[3] Upper India Chamber of Commerce Cawnpore-1888-1938, L.B.S. National Academy of Administration Mussooie.
[4] Settlement Report of the Cawnpore District 1878.

the number of cattle in the affected area. Elizabeth Whitcomb argues that with the expansion of cultivation in the khadir (khadar), the Gujjar community benefitted from Rabi cultivation, though the khureef-crops were still precarious. But with the conversion of Gujjar tribe into agriculturists, the supply of cattle to the cultivators had to rely on their own, often deteriorating, stock. Meanwhile, Gujjar in areas outside the range of the canal developments remained obstinately unmoved by the 'spirit of industry' [5].

While Ian stone argued in the favour of Canal Irrigation. He provides many examples that the number of Cattle had not reduced due to the expansion of canal Irrigation, instead of this, the number of cattle were in the favour of canal irrigated villages. One Bull, Bullock or Bull-Buffalo per 3.3 acres of Canal areas as against 3.8 acres for the well tract [6]. William Crooke noted in AD 1881 that the canal 'enabled the cultivators to dispense with a large number of their plough cattle' and that in addition, excessive use of Canal irrigation had tended to lower the class of cattle used in agricultural work [7].

In the cost benefit analysis of the Sarda Canal system, it is argued that cultivators have more bullocks, though fewer cattle, per holding in the Canal irrigated area than in the non-canal irrigated area. This is due to their larger needs of draught Cattle power on of (a) their larger average size of holding, and (b) their larger transport requirements to carry the cash crops to the assembling markets. Their larger holding, however, enable them to reduce under-utilization of bullock power so that they have a lesser number of bullocks per acre (0.39) than in the control area (0.49). By valuation, there are Cattle worth Rs. 406.85 per holding and 88.48 per acre in the Canal irrigated area. The respective figures for the non-canal irrigated were Rs 335.50 and Rs 115.32 [8].

If we examine the question of live-stock, whether it was increasing due to the expansion of Canal irrigation or not, we find some relevant fact in the Cawnpore district of United Provinces. The first regular Enumeration of cattle in the district was made at the Settlement of AD 1870, the figures of this enumeration are given below [9]

Drought bullocks	96217
Cows and young stock	171275
Buffaloes	28396
Total plough animal	189899

The average number of cattle per plough was about 2.1, leaving a very small margin, while an average plough duty was 8.25 acres, the figure ranging from 7.25 in Akbarpur and Bilhaur to as much as 10 acres in Ghatampur.

A fairly accurate stock Census was taken in AD 1899, the figures for that year are given below-

Bulls and bullocks	200698
Of male buffaloes	42273
Of cows	142913
Of Cow buffaloes	91485

This showed an increase of over 100,000 horned cattle and of more than that amount in the case of buffaloes. The number of available cattle per plough had risen to 2.28, though this was still below the general average of the provinces, and the plough duty had dropped to 7.44 acres, much the same as in fatehpur but well above the figure for Etawah and Farrukhabad [10].

The next Census was in the year AD 1904, when a further general increase was found to have taken place, especially in the case of cows and young stocks, this being but a natural result of a period of unbroken prosperity and a marked recovery from the agricultural depression of the preceding decade. There were than the figures are as below-

Bulls and bullocks	219,255
Cows	154,423
Buffaloes	45,977
Cows-buffaloes	92,241
Young-stock	245,660

The average number of animal per plough, however, had remained unchanged, the increase being very slight; and it is needless to point out that the proportion is in some measures, since allowance should be made for drought and pack-animal, as also for those unfit for work an account of age or infirmity, probably there is little, if surplus; and this seems clear from the relatively high plough duty, at present averaging 7.35 acres, although due regard should be paid to the large proportion of light and easily worked soil. The number of milk-cattle was well above the average, indicating the importance of 'ghee' industry, the city of Cawnpore providing an almost inexhaustible demand for this commodity [11].

The increasing number of live-stock in the district is supported by the Settlement Report of 1907 in which, the Settlement Officer says that double cropped area has been risen from 54000 acres at last settlement to 104000 acres approximately the double. Surely it may have been due to the expansion of Canal Irrigation. The report further says that at last Settlement out of 864457 acres of cultivated land, about 40.6% were wet and balance dry, slightly over half of the wet area, or 178722 acres received its irrigation from wells, $3/8^{th}$ or 131454 from Canals and $1/8^{th}$ or 41351 from Tanks and Rivers. At present; out of 833630 acres of cultivation, 516209 or over 61.5% are wet and less than 39% dry. The increase in wet falls entirely under the head canals which irrigate 317950 acres or roughly 2-1/2 times as large an area as last settlement. Wells show a slight drop from 178722 acres to 162555 acres and tanks and rivers decline from 41351 acres to 35724 acres [12].

Here, we can say that as the canal irrigation was expanding in

[5] Whitcomb Elizabeth, Agrarian Conditions in Northern India, vol 1, The United Provinces Under British Rule, 1860-1900, New Delhi: Thomson Press (India) Limited, University of California Press 1971.(page 84)

[6] Stone Ian, Canal Irrigation in British India, Perspective on Technological Change in a Peasant Economy, Cambridge University Press Cambridge, 1984.

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[9] Cawnpore: A Gazetteer, Vol. xix of the District Gazetteer of the United Provinces of Agra and Oudh. by H.R. Nevile Allahabad ; Printed by f. luker, Superintendent, Government Press, United Provinces 1909.

[10] Ibid.

[11] Ibid.

[12] Final Report off the Seventh Settlement of the Cawnpore District of the United Province(1903-04), by H. K. grecy esq. Settlement Officer, Allahabad, Printed at United Provinces Government Press 1907.

the district, the livestock was also increasing positively. It was due to the increasing production, especially cash crops, and also due to the technological changes in the traditional agrarian practices. It is true that the Railway was providing a major transport facility to the district, but for the local transport, the agrarian society was fully depended on the traditional modes of transport like horse cart, bullock cart etc. and also in ploughing the field and providing the manure to the agricultural land, the significant of livestock was very high. Village communities were also depended on the live-stock for their nutrient like milk, ghee, cream etc.

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