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Cattle and irrigation under British rule

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Abstract
Irrigation was considered the modern technique of irrigation throughout the colonial period. It resulted in significant changes not only in the agricultural processes of the impacted region, such as crop pattern and density, but also in social, economic, cultural, political, and ecological processes. The value of live stock is extremely important in traditional agrarian societies. The question arises how does modern technology, such as canals, affect conventional agricultural practises? Also, how have canals influenced the region's living stocks? This Paper focuses on these issues.

Keywords: british rule, modern technique, agricultural practises

Introduction

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 producing- 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 sod 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 provinces 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 by the Bhoginipur, Etawah and Fatehpur branches of lower Ganges canal. The canal was opened for irrigation in 1878, and further extension was going on. Fatehpur branch was opened for irrigation in 1898 and in 1901-02 it irrigated 34451 acres (total) [2].

The district of Cawnpore was formed by the treaty dated the 10th November 1801, in which the certain provinces were ceded by the Nawab Vizier to the east India Company and these were subsequently formed into seven Zillahs, one of which was denominated 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 an area of 2358 square miles the rivers flow inside the district, the Pandu, the Isan, the rind, the non, similarly flows with the Ganges and Jumna, forming the northern and southern boundaries, all flow from west to east. Irrigation is carried on from wells, rivers, ponds and Ganges canal. Figures for the total irrigated area, of the 1878 settlement report, are given below-

Table 1

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

As far as the question of live stocks in the canal affected districts, it has been broadly argued that the canals reduced the number of cattle in the affected area. Whitcomb argued that with the expansion of cultivation in the khadir, the Gujjar benefitted from Rabi cultivation, though the khureef-crops were still precarious. But with the conversion of Gujjar into agriculturists, the supply of cattle to the cultivators had to rely on their own, often deteriorating, stock. Meanwhile, Gujjars in areas outside the range of the canal developments remained obstinately unmoved by the 'spirit of industry' [5].

Ian stone argued in the favour of canal Irrigation. He proved, with 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 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 proved that cultivators have more bullocks, though less

cattle, per holding in the canal irrigation 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 are 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 1870, the figures of this enumeration are given below- [9]

Table 2

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 1899, the figures for that year are given below-

Table 3

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 that of 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-

Table 4

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 at last settlement to 104000 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 cultivation, about 40.6% were wet and balance dry, slightly over half of the wet area, or 178722 acres received its irrigation from wells, 3/8th or 131454 from canals and 1/8th 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 or roughly 2-1/2 times as large an area as last settlement. Wells show a slight drop from 178722 to 162555 and tanks and rivers decline from 41351 to 35724 [12].

Here, we can say that as the canal irrigation expending in the district, the live stock was also increasing but only those which are useful for Colonial Government. It was due to the increasing production, especially cash crops, and also due to the technological changes in the traditional agrarian practices

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