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Socio-economic status of tribal farmers of Jhansi district of Utter Pradesh India: A case study

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Abstract
The present study describes the socio-economic status of tribal farmers of Jhansi district of Uttar Pradesh, India. In this, three villages namely Patha-Karka, Ghurat and Magarwara come under bangra block of district Jhansi were selected. The information was collected on the basis of personal interview to each of the farmer through a questionnaire. A total sample of 200 farmers was selected randomly from three studied villages during 2019-2020. The study revealed that they are very poor farmers with low literacy (approximately 10-12%), limited irrigation sources and limited knowledge about agricultural methods. Farmers were growing blackgram, groundnut and sesame in *Kharif* season; wheat, chickpea, field pea and mustard in *Rabi* season. They also have limited knowledge regarding pest and disease identification and their management. The socioeconomic status can be improved with introducing new scientific technologies or facilities of modern agricultural practices.

Keywords: Bundelkhand region, crop, Jhansi and tribal farmers

Introduction
Jhansi is a historic city in the Indian state of Uttar Pradesh, which located in the region of Bundelkhand on the banks of the Pahuj River, in the extreme south of Uttar Pradesh. Jhansi is the administrative headquarters of Jhansi district and Jhansi division, also called the Gateway to Bundelkhand. Jhansi is situated between the rivers Pahuj and Betwa at an average elevation of 285 meters (935 feet). It is about 415 kilometers (258 mi) from New Delhi and 99 kilometers (62 mi) south of Gwalior. Jhansi locate on the plateau of central India, an area dominated by rocky relief and minerals underneath the soil. The city has a natural slope in the north as it is on the south western border of the vast Tarai plains of Uttar Pradesh and the elevation rises on the south. The land is suitable for species of citrus fruit and crops include wheat, pulses, peas, and oilseeds. The region relies heavily on Monsoon the rains for irrigation purposes. The agro ecosystem of the three selected TSP villages (Patha-Karka, Ghurat and Magarwara) come under Jhansi district of Bundelkhand region is very fragile and degraded (Singh *et al.*, 2012) [1] Physio graphically, Bundelkhand is among the most disadvantaged regions of India owing to undulating and rugged topography, highly eroded and dissected land, poor soil fertility, small land holdings, and lack of irrigation facilities, scarce underground water resources and heavy biotic pressure on natural resources. The rain fed agro ecosystem of Bundelkhand is characterized by dry and hot summer, warm and moist rainy season and cool winter with occasional rain showers. The mean summer (April-June) temperature is 34 ^{0}C which may rise to a maximum of 46 to 49 ^{o}C during May and June while mean winter temperature (December-February) is 16 ^{0}C which may drop to 3-5 ^{0}C in December and January. West monsoon The annual rainfall of the Jhansi region varies from 800 to 900 mm, about 90% of which is received during South period in the month of July and August. Most of the cultivated area is mono-cropped due to lack of irrigation facilities. The soil types are locally known as Kabar, Rakar and Parwa which are the variants of the red and black soils.

Materials and Methods
The study was conducted with a sample of 200 farmers of three different villages of Bangra block of Jhansi district of Utter Pradesh. A multistage purposive cum random sampling design was followed for selection of the respondents. The investigation was carried out with various problems faced by the tribal farmers in Patha-Karka, Ghurat and Magarwara villages of the district.

The data were collected by personal interview method using both structural schedule and semi-structured interview during 2019-20 by supplying the questionnaire. After completion of survey, a total of 190 filled in questionnaire were received and were analyzed to find out the socio economic condition of the tribal farmers of the Bangra blocks.

Result and Discussion

In the present study, it was observed that the tribal farmers are socio-economically poor as compared to the non-tribal of the studied villages. Agriculture is the main source of livelihood for the overwhelming majority of the tribal population. So as to reduce the problems of tribal people, it is important for the policy makers/administrative officials to identify and quantify the socio-economic factors which are inhibiting their slow growth and development (Sikha Deka, R.K. Nath, Mukesh Sehgal, A.C. Barbora, R.K. Kakati and Ahuja, D.B. *et al*. 2017) [2]. The tribal owing to their life style and community habits and habitats have not been able to keep pace with the modern society. Tribals are not as advanced as the people of rest of Jhansi, Utter Pradesh (Xaxa, 2001). The base line information gathered as part of study is included in Table 1.

Table 1: The information regarding selected villages

S. No.	Particulars	Village -Patha-Karka	Village –Magarwara	Village –Ghurat
1.	Total Population	Approximately 170	Approximately 600	Approximately 450
2.	Literacy Rate (%)	10% (new generation only)	12% (new generation only)	10% (new generation only)
3.	Cropping Pattern	Kharif (Groundnut-Black gram-Sesame) Rabi (Wheat-Chickpea-Field pea-Mustard)	Kharif (Groundnut-Black gram-Sesame) Rabi (Wheat-Chickpea)	Kharif (Groundnut-Black gram-Sesame) Rabi (Wheat-Chickpea)
4.	Main Kharif crop:	Groundnut-Blackgram-Sesame	Groundnut-Blackgram-Sesame	Groundnut-Blackgram-Sesame
5.	Main Rabi crop	Wheat-Chickpea-Field pea-Mustard	Wheat-Chickpea-Field pea-Mustard	Wheat-Chickpea-Field pea-Mustard
6.	Main Insects	White grub (Groundnut), Sucking pest (aphid and whiteflies in Kharif pulses), Pod borer in Chickpea and Mustard aphid	White grub (Groundnut), Sucking pest (aphid and whiteflies in Kharif pulses), Pod borer in Chickpea and Mustard aphid	White grub (Groundnut), Sucking pest (aphid and whiteflies in Kharif pulses), Pod borer in Chickpea and Mustard aphid
7.	Main Diseases	Mosaic disease of Black gram, Tikka disease of Groundnut, Wilt disease of Chickpea, Dry root rot of Chickpea and loose smut of wheat	Mosaic disease of Black gram, Tikka disease of Groundnut, Wilt disease of Chickpea, Dry root rot of Chickpea and loose smut of wheat	Mosaic disease of Black gram, Tikka disease of Groundnut, Wilt disease of Chickpea, Dry root rot of Chickpea and loose smut of wheat
8.	Total irrigated Area (%)	20%	24%	26%
9.	Source of irrigation	Dug wells	Dug wells	Dug wells
10.	Name of the main vegetable crop	Cucurbits	Tomato, Brinjal, Chili and Cucurbits	Tomato, Brinjal, Chili and Cucurbits
11.	Area of main vegetable crop	5%	12%	8%
12.	Fertilizer in Pulses/wheat (kg/ ha): (N:P:K)	Only Rabi season; 40 Kg DAP, 30 Urea (Pulses) Wheat (80 Kg DAP and 80 Urea) No Fertilizer application in *Kharif*	Only Rabi season; 40 Kg DAP, 30 Urea (Pulses) Wheat (80 Kg DAP and 80 Urea) Limited fertilizer application in *Kharif* season	Only Rabi season; 40 Kg DAP, 30 Urea (Pulses) Wheat (80 Kg DAP and 80 Urea) No Fertilizer application in Kharif
13.	No. of pesticide sprays	1 spray in chickpea for Pod borer, 2 Spray in cucurbits	1 spray in chickpea for Pod borer, 2-4 spray in vegetables	1 spray in chickpea for Pod borer, 2-4 spray in vegetables
14.	Level of Awareness about IPM	Very Limited	Very Limited	Very Limited

From the above investigation it was observed that the average populations of villages Partha-Karka, Magarwara and Ghurat are 170, 600 and 450 respectively. The majority of the farm families were nuclear in all the three villages. As per the education status of the villagers the illiterate percentage was observed 10, 12 and 10%, respectively in villages Patha-Karka, Magarwara and Ghurat (only new generation). The major occupation of the tribal farmers was agriculture and livestock rearing. Majority of farmers or almost all farmers come under categories marginal farmers secured less than one hectare land. The cropping pattern of the studied area includes both *Rabi* and *Kharif* crops in which more than 50% of the total area is covered by Wheat in Rabi season and remaining area covered by Chickpea-Field pea-Mustard. In *Kharif* season Groundnut and Black gram dominant crops grown more than 70% area and remain area covered by Sesame crop. The farmers do not have much knowledge regarding vegetable production, only 5-12% farmers growing vegetables crop in all three studied villages. During the survey it was also observed that white grub in groundnut, aphid and whiteflies (sucking pest) in Kharif pulses, pod borer in chickpea and Mustard aphid play a major role in farmers crops yield reduction. Similarly, mosaic disease of *Kharif* pulses, Tikka disease of groundnut, wilt disease and dry root rot of chickpea and loose smut of wheat present in less to severe form and reduced the crop yield. Due to lack of knowledge, fertilizer application in *Kharif* season very limited or not however, farmers used fertilizers in Rabi crop with adequate dose. More than 95%, 97% and 100% households are electrified in village Patha-Karka, Magarwara and Ghurat respectively. The limited sources of irrigation available in these villages are 20, 24 and 26 percent with dug wells only. Likewise, the livestock population in these villages includes cow, goat, pig and poultry birds which were accounted more in village Ghurat and Magarwara. The major source of agricultural information in the studied area was extension staff, mass media and relatives. The co- operative societies were major source of credit supply in these villages. Use of plant protection measures to save the crops from pests and diseases was observed lower in all three villages.

Suggestions

- Policy suggestions based on the findings from field study of these area tribal farmers are as hereunder: Good free educational facilities should be provided for the tribal people.
- Creating awareness to check the exploitation of Tribals.
- Good, reliable communication facilities should be provided to improve the agricultural production. Extension agencies /experts must regularly visit the villages and interact with farmers.
- Regular Farmer Field Schools.
- Identification pictorial guide for pests and natural enemies must be prepared and distributed to tribal farmers.
- Resource mobilization
- Multiple cropping and intercropping should be actively encouraged. The government must make major moves to create permanent assets with tribal farmers and provide infrastructural support for meeting input, credit and marketing needs.
- Inventory of quality critical inputs must be prepared and made available to them.
- Regular Training should be provided to the tribals in different income generating activities.
- The role of middle man should be minimized for more income to the farmers.
- Suitable steps should be taken by the Government/administrative agencies so as to educate the tribal farmers about the importance of crop loan and crop insurance facility to enhance their resources.

Conclusion

If all the suggestions mentioned above are implemented in the studied tribal villages, the development of those backward tribal villages can be seen in near future. By introducing facilities of modern agricultural technology, their socioeconomic status can be improved. Thus this weaker part of the society can be turned into the huge mass of human resource. However, further studies are required to know more about them.

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