***Original Research Article***

**A study on socioeconomic profile of dairy farmers in Datia and Gwalior district of Madhya Pradesh**

**ABSTRACT**

**Aim:** The present study was conducted to recognize the socioeconomic profile of dairy farmers of Datia and Gwalior district of Madhya Pradesh.

**Study Design:** An observational study was conducted through a questionnaire developed specifically for the study. The response of every farmer was recorded by personal visits at farmer’s doorstep.

**Place and Duration of study**: The study was conducted involving 210 dairy producers, arbitrarily selected from twenty-one villages of Datia and Gwalior districts of Madhya Pradesh during January 2022 to December 2022.

**Methodology:** Farmers from all the seven blocks (three blocks of Datia and four blocks of Gwalior district) were selected from both the district. Questionnaire was assessed for the socioeconomic, personnel and communicative profiles of dairy producers of the both the district. Total 10 Independent Variables were measured through appropriate scales and schedules. By the schedule interview of the each farmer, the data were collected.

**Results:** The overall dairy producers (42.4 %) were belonged to middle-aged group, had their education between middle to higher secondary (54.76 %) and belonged to OBC-category (87.14 %). The majority of dairy farmers have more than four fellows in their family (78.60 %), were members of one organisation (49.05 %) and possessing one to two hectares of land (51.90 %). Most of the farmers occupied “Agriculture + Dairy” as their main occupation (77.6 %) and having small animal holding size (44.29 %). The majority of the farmers had average extension contact (68.57 %) and had medium (60.48 %) level exposure to Mass media.

**Conclusion:** Farmers are practicing the mixed farming in both the district. The majority of dairy farmers are having small animal holding which seems to be less remunerative and farmers need to increase the animal holding as economy of scale prevails in animal-based enterprises. Now it is noteworthy to mention that time has come for farmers to convert mixed farming into Integrated Farming System for resource recycling, ecological balance and sustainable farming. Moreover,

***Key Words:*** *Socioeconomic profile, Q*uestionnaire*, Mass Media, Extension contact*

1. **INTRODUCTION**

India is an agricultural nation, with the livestock industry playing an important role. It has the most overall livestock in the world, ranking second in cattle population (193.46 million) and first in buffalo population (109.85 million).The country’s dairy sector has achieved an impressive compounded Annual Growth Rate (CAGR) of 4.97% during 2018-19 and 2023-24 leading to historic production of 239.30 million tonnes in 2023-24 ( Annual Report DAHD,2023-24).The livestock population in India is 535.78 million as of the most recent livestock census in 2019, representing a growth of 4.6 percent from the previous livestock census in 2012. Total Bovine population (Cattle, Buffalo, Mithun and Yak) was 302.79 Million in 2019 which shows an increase of 1.0% over the previous census (Annual Report DAHD, 2023-24). The total number of cattle in the country was 192.49 million in 2019 showing an increase of 0.8 % over previous Census. Gwalior and Datia ranked 15th and 23rd in milk production among different district of Madhya Pradesh with production of 488.11 and 353.50.38 thousand tonnes of milk annually, respectively in the year 2021-22 (Department of Animal Husbandry, Annual Report 2022-23 Government of M.P.). However, Morena is the leading milk producing district in the state with production of 914.49 thousand tonnes of milk annually in the year 2021-22 (Department of Animal Husbandry, Annual Report 2022-23 Government of M.P.). The reproductive, feeding, management, disease control, and marketing activities are the most essential practices in contemporary to dairy production. The adoption of the improved dairy husbandry practices depends on the socioeconomic attributes of the dairy farmers besides the other factors. The socioeconomic is a combined assessment of social factors and economic well being of an individual in relation to society. The socioeconomic attributes are essential because they influence the dairy animal productivity, access to scientific knowledge and profitability. The understanding of socioeconomic attributes of dairy farmers are helpful not only for scientists but equally helpful for administrators, policy makers, planners, and financiers a chance to solve these issues. Keeping in mind the above mentioned facts the present study on assessing the socioeconomic profile of dairy farmers in Datia and Gwalior districts of Madhya Pradesh was conducted.

1. **METHODOLOGY**

The present study was conducted in the Datia and Gwalior districts of Madhya Pradesh. Datia belongs to bundelkhand region of M.P. while Gwalior belongs to gird region of MP. There are three blocks namely Datia, Bhander and Seondha in Datia district and four blocks namely Gwalior, Ghatigaon, Dabra and Bhitarwar in Gwalior district. All the seven blocks was selected from both the district for the present study. Three village from each block was selected randomly and ten dairy farmers was selected randomly from each selected village. A list of the dairy producers, having dairying as their primary/secondary occupation, was compiled in group meeting with farmers in each village and then ten dairy producers was picked up from each designated village randomly. Thus, a random sample of 210 dairy producers was selected.

The schedule interview, personally, has been supposed to stand the most significant method via which the investigator may collect most genuine information. The questionnaire was formed by keeping in mind the goals of the research and it was unchanging for all the respondents. In developing the questioners, specialists of district animal husbandry office, Veterinary and Extension scientist from IGFRI, Jhansi and NDVASU Jabalpur were contacted. Questionnaire was made to assess the Socioeconomic Personnel and Communicative profiles of dairy producers. By the schedule interview, personally of the all the dairy farmers the data were assimilated.

Questionnaire was used to assess the socioeconomic profiles of dairy producers of the Datia and Gwalior districts of Madhya Pradesh. Total 10 Independent Variables were measured through appropriate scales and schedules.

1. **RESULTS AND DISCUSSION**

**3.1 Age of the farmers:**

The information regarding the age group of the respondents is important in getting an insight about the potential human resources. It is evident from Table 1 that majority of the respondents (42.4%) were from the age group of 35-50 years followed by the 37.10 per cent of the respondents, who belonged to young age group (**<=**35 yrs) and near about one fifth of the respondents (20.5. %) were belonged to the age category of old age group (> 50 yrs. ) similar finding reported by Quddus (2012), Sharma *et al*., (2012), Mudzengi *et al*., (2014), Sabapara (2014), Kumar and Singh (2015), Atreya *et al*., (2018), Mahesh et al., (2020) Rajput *et al*., (2023) and Kamble *et al* l (2024).

**3.2 Educational qualification:**

Educational status of the dairy farmers is an important aspect while assessing their knowledge level and adaptability of good dairy farming practices. Educational qualification revealed that most (54.76 %) of the dairy farmers had completed their middle school, high school and higher secondary education. This was followed by 33.33 percent of farmers who had completed their primary education, 9.52 percent of farmers who had completed their graduate education, 0.95 percent of illiterate farmers and 1.43 percent of farmers who had completed their postgraduate education. Similar outcomes was reported by Gour (2002), Vekariya *et al*., (2016), Singh et al., (2021) Rajput *et al*., (2023) and Kamble *et al* (2024). Prashad et al., (2017) reported that the majority (57.50%) of the respondents had a high school and intermediate level of education followed by graduation and above (20.83%).

**3.3 Caste:**

Study on the Caste of the respondents revealed that the majority (87.14 %) of the dairy farmers belonged to OBC, followed by 10 percent from the General, 2.38 percent from SC and 0.48 percent from the ST community. Similar results were reported by Sabapara (2014), Vekariya *et al.,* (2016) Mithun *et al.,* (2022) and Rajput *et al*., (2023). However present findings do not agree with Meena (2010), who found that the most of trainees came in the dominant caste.

**Table.1 Distribution of respondents according to their Socioeconomic Personnel and Communicative profiles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.no** | **Attribute** | **Category** | **Frequency** | **Percentage** |
| 1 | Age | Young-aged (**<=**35 yrs.) | 78 | 37.1 |
| Middle-aged (>35 to **<=** 50 yrs.) | 89 | 42.4 |
| Old-aged (> 50 yrs.) | 43 | 20.5 |
| 2 | Education | Illiterate | 2 | 0.95 |
| Primary | 70 | 33.33 |
| Middle High school and Higher Secondary | 115 | 54.76 |
| Graduation | 20 | 9.52 |
| Post-Graduation | 3 | 1.43 |
| 3 | Caste | General | 21 | 10.00 |
| OBC | 183 | 87.14 |
| SC | 5 | 2.38 |
| ST | 1 | 0.48 |
| 4 | Size of Family | Small sized (**<=** 4 fellows) | 45 | 21.40 |
| Big size (> 4 fellows) | 165 | 78.60 |
| 5 | Organizational participation | No participation | 28 | 13.33 |
| Participation in one organization | 103 | 49.05 |
| Participation in more than one organization | 56 | 26.67 |
| Holding a position in the organization | 23 | 10.95 |
| 6 | Size of Land holding | Landless | 0 | 0 |
| Marginal-sized (**<=** 1.00 ha.) | 15 | 7.14 |
| Small-sized (>1.00 to **<=** 2.00 ha.) | 109 | 51.90 |
| Medium-sized (>2.00 to **<=** 4.00 ha.) | 35 | 16.67 |
| Large-sized (> 4.0 ha.) | 51 | 24.29 |
| 7 | Vocational diversification | Only Dairy | 23 | 11.0 |
| Dairy +Agriculture | 163 | 77.6 |
| Dairy + Service | 8 | 3.8 |
| Dairy + Labour | 0 | 0 |
| Dairy +Agriculture + Service | 16 | 7.6 |
| 8 | Size of Animal holding | Small (Up to 5 Dairy animals) | 93 | 44.29 |
| Medium (6 to 10 Dairy animals) | 70 | 33.33 |
| Large (More than 10 Dairy animals) | 47 | 22.38 |
| 9 | Extension contact | Low (Up to 10.26) | 27 | 12.86 |
| Medium (10.27 to 15.84) | 144 | 68.57 |
| High (Above 15.85) | 39 | 18.57 |
| 10 | Exposure to Mass media | Low (Below 9.01) | 43 | 20.48 |
| Medium (9.01 to 13.67) | 127 | 60.48 |
| High (Above 13.67) | 40 | 19.05 |

**3.4 Size of Family**

The Size of farmer families of the study revealed that the vast majority of respondents (78.60 %) come from families with more than four fellows, followed by 21.40 percent of respondents who come from families with up to four fellows.The outcomes of the current research were consistent with those found by Mande and Thombre (2009), Upadhyay and Desai (2011), Khode (2018)and Kamble *et al*., (2024). Contrast to the current results, Satyanarayan and Jagadeeswary (2010) and Gopi *et al*., (2017) revealed that the mostly of the respondents had families of a modest size, followed by families of a large size.

**3.5 Organizational participation:**

Pursual of data from Table: 1reveal that most of the dairy producers (49.05 %) had members of one organisation, followed by 26.67 percent who had member in more than one organisation, 13.33 percent members who had no involvement in any organisationand10.95 percent members who had holding a position in an organisation. Upadhyay and Desai (2011) and Singh *et al., (*2021) also reported the similar findings.

**3.6 Land-Holding Size:**

The Study on Land-Holding Sized of the dairy farmers revealed that most (51.90%) of the dairy producers have between one and two hectares of land followed by 24.29 percent of farmers who had more than four hectares of land, 16.67 percent of farmers who had between two and four hectares of land and 7.14 percent of farmers who had up to one hectare of land. The present results are in agreement with the results shown by Chaudhary *et al.,* (2018) and Mithun *et al.,* (2022) and Kamble *et al*., (2024).

**3.7 Vocational diversification:**

The vocational diversification of the farmers revealed that the most (77.6 %) of the dairy producers occupied “agriculture + Dairy” as their main occupation whereas the 11 percent depend only on “Dairy” and 7.6 percent depend on “agriculture + dairy + service”. Only 3.8 percent dairy producers were found engaged in “dairy + service”. The current results were in accordance with the results of Sharma *et al*. (2012), Thombre *et al*., (2012), Devi *et al., (*2015), Vekariya *et al.,* (2016), Prasad *et al.,* (2017) and Mahesh *et al.,* (2020). In contrast to these findings Patel *et al*. (2005) shown that mostly 74.00 percent of the respondents depend on the livestock for their livelihood.

**3.8 Animal holding size:**

It was depicted from table: 1that most (44.29 %) of the dairy producers had small animal holding size followed by medium (33.33 %) and large animal holding size (22.38 %).The current results were in accordance with the results of Mande and Thombre (2009), Thombre *et al*., (2012), Ashoo *et al.,* (2021) and Pulla *et al.,* (2021). Present results are not in agreement with findings of Kamble *et al* (2024) who have reported that 87.50 per cent dairy farmers are having large animal holding.

**3.9 Extension Contact:**

The Extension Contact of the farmers revealed that nearly two third half (68.57 %) of the dairy farmers had average extension contact, trailed by 18.57 percent had high and 12.86 percent had low extension contact. The current results were in accordance with the results of Upadhyay (2010) Sabapara *et al.,* (2014), Pulla *et al.,* (2021) and Kamble *et al*., (2024).

**3.10 Mass Media Exposure:**

The present study found that most (60.48 %) of the dairy farmers had medium level exposure to Mass media, trailed by 20.48 percent who had low and 19.05 percent of dairy farmers who had high degree of exposure to Mass media. The results of the current study were accordance with the results shown by Vekariya *et al.,* (2016), Gopi *et al.,* (2017), Chaudhary *et al.,* (2018), Pulla *et al.,* (2021), Singh *et al.,* (2021) and Rajput *et al*., (2023).

**4. CONCLUSION:**

It can be concluded from the present study that Majority of the dairy producers were had one to two ha. of land, occupied “agriculture + Dairy” as their main occupation, had small animal holding size, had average extension contact and had medium level exposure to Mass media. Looking to present challenges of climate changes and low income from agriculture the time has come for farmers to convert mixed farming into Integrated Farming System for resource recycling, ecological balance and sustainable farming. Moreover, farmers are having small animal holding which can be increased as economy of scale prevails in animal-based enterprises.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Authors hereby declare that no generative AI technologies such as large language model and text to image generators have been used during the writing of this manuscript.

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