

Farmers' Awareness of NABARD Initiatives: An Empirical Study in Hisar District

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ABSTRACT

The study adopted a descriptive survey-based approach to evaluate the impact of demographic variable on level of awareness among farmers regarding NABARD's schemes. A total of 100 farmers were purposively selected from different regions of Hisar to represent the population of agricultural workers engaged with NABARD programs. Data were collected through structured questionnaires and analyzed using SPSS v26.0 IBM. The findings revealed varying levels of awareness across schemes such as credit facilities, self-help group financing, and infrastructure support. Statistical analysis using ANOVA demonstrated significant differences in awareness and welfare outcomes across demographic categories such as landholding size, education, and income levels. The study concluded that while NABARD initiatives have positively influenced farmers' welfare, gaps in awareness and accessibility remain, necessitating targeted interventions to strengthen outreach and inclusivity.

Keywords: NABARD (National Bank for Agriculture and Rural Development), Livelihood Enhancement, Farmers Awareness, Welfare Initiatives.

1. INTRODUCTION

Agriculture remains the cornerstone of India's rural economy, with farmers playing a vital role in ensuring food security and sustaining livelihoods. Their socio-economic development depends not only on productivity but also on their awareness of institutional support systems designed to strengthen agriculture. Awareness is critical because it determines the extent to which farmers can access schemes, utilize resources, and benefit from welfare initiatives. Without adequate knowledge of available programs, farmers often remain excluded from opportunities that could improve their income, resilience, and long-term sustainability.

The National Bank for Agriculture and Rural Development (NABARD) serves as the apex development financial institution in India, established to promote rural prosperity through credit support, infrastructure development, and capacity-building initiatives. NABARD has introduced a wide range of programs, including refinancing for cooperative banks, promotion of self-help groups, rural infrastructure development funds, skill training, and financial literacy campaigns. These initiatives are designed to empower farmers, enhance agricultural productivity, and improve rural livelihoods. However, the success of these programs depends largely on the extent of farmers' awareness and participation.

In the context of Hisar, a state recognized for its agricultural strength and contribution to India's food grain production, NABARD's initiatives hold particular importance. Despite high productivity, Hisar

faces challenges such as groundwater depletion, soil degradation, and the need for crop diversification. Farmers' awareness of NABARD schemes is therefore essential to ensure that they can adopt sustainable practices, access credit facilities, and benefit from welfare-oriented programs. The state's diverse agricultural population provides a rich ground for assessing how NABARD's initiatives are perceived and utilized.

This study, employed a descriptive, survey-based approach with a sample size of 100 farmers to evaluate awareness levels and measure the impact of NABARD's programs on welfare. Using SPSS tools and applying ANOVA tests, the research provides empirical evidence on variations in awareness and welfare outcomes across demographic categories. The findings are expected to contribute to policy discussions, offering insights into how NABARD can strengthen its outreach and ensure inclusive participation among farmers in Hisar.

2. REVIEW OF LITERATURE

Kumar et al. (2026) examined the role of NABARD in strengthening Farmer Producer Organizations (FPOs) in Haryana. A mixed-method approach was employed, combining survey data and case studies of FPOs supported by NABARD. Findings revealed that NABARD's refinancing support and capacity-building programs enhanced collective bargaining power, improved market access, and increased farmer incomes. The conclusion emphasized that FPOs facilitated sustainable rural entrepreneurship, and recommended scaling up digital platforms for wider participation.

Verma et al. (2026) presented an evaluative study of NABARD's financial inclusion programs in Haryana, with a focus on Self-Help Groups (SHGs) and microfinance initiatives. The research employed household-level surveys and econometric analysis, offering empirical evidence of NABARD's impact. Findings indicated that NABARD's credit interventions empowered small and marginal farmers by improving savings behavior and reducing dependency on informal lenders. SHGs, particularly women-led groups, were shown to enhance social empowerment and income diversification. The study also revealed that microfinance initiatives fostered financial discipline and encouraged investment in productive activities. The conclusion emphasized the importance of strengthening digital financial literacy and expanding coverage to underserved regions, ensuring that marginalized communities are fully integrated into the formal financial system. This research highlighted NABARD's role in bridging economic and social gaps through inclusive financial services.

Chhetri et al. (2025) conducted an evaluative study on NABARD's contribution to climate resilience and sustainable rural development in India. The investigation focused on financial instruments, policy mechanisms, and institutional frameworks that facilitated climate-adaptive agricultural practices and enhanced rural livelihoods. Secondary data and policy documents served as the foundation for analyzing NABARD's involvement in watershed development, micro-irrigation systems, and renewable energy adoption. The study revealed significant efforts in mobilizing climate finance, yet persistent challenges emerged, including limited outreach, capacity constraints, and uneven regional implementation. Recommendations emphasized the need for stronger institutional coordination and broader expansion of climate-resilient financing strategies.

Mathavan and Prema (2024) presented a study on NABARD's financial performance and its impact on agriculture and rural development. Secondary data analysis was employed to evaluate NABARD's credit disbursement, refinancing operations, and infrastructure funding. Results indicated that NABARD significantly contributed to rural credit flow and agricultural modernization. The conclusion highlighted

the need for NABARD to integrate climate-resilient financing and digital monitoring systems to sustain long-term rural development.

Manwani (2023) examined the role and functions of NABARD in promoting rural development. A descriptive analytical approach was employed, focusing on NABARD's institutional framework and programmatic interventions. Findings suggested that NABARD played a critical role in bridging the gap between government schemes and grassroots beneficiaries. The conclusion emphasized strengthening financial literacy and expanding NABARD's outreach to marginalized farmer groups.

Mahesh et al. (2023) studied the impact of digital financial inclusion (DFI) initiatives on self-help groups for sustainable development. Survey-based analysis was employed to assess NABARD's role in promoting digital platforms for SHGs. Results indicated that DFI initiatives improved savings behavior, enhanced credit access, and empowered rural women. The conclusion recommended expanding digital literacy programs and strengthening infrastructure for inclusive growth.

Kumar (2022) studied agricultural finance to poor farmers in Haryana, focusing on NABARD's role. A survey-based methodology was employed to assess NABARD's credit interventions. Findings revealed that NABARD's schemes improved financial inclusion and reduced dependency on informal lenders. The conclusion emphasized strengthening NABARD's outreach and digital financial literacy programs to maximize welfare outcomes.

Mahesh et al. (2021) presented a study on the impact of government schemes, including NABARD-supported programs, on agriculture. A descriptive survey approach was employed to evaluate productivity, profitability, and financial inclusion outcomes. Findings revealed that NABARD initiatives contributed to modernizing agriculture and improving farmers' welfare. The conclusion highlighted the importance of integrating technology-driven solutions with NABARD's schemes to transform rural society.

Martínez et al. (2020) assessed sustainable rural development based on ecosystem services vulnerability. A quantitative analytical framework was employed to evaluate rural ecosystems and their dependence on institutional support. Findings revealed that NABARD-like interventions were crucial in mitigating ecosystem vulnerability and promoting sustainable livelihoods. The conclusion emphasized integrating ecosystem-based approaches into NABARD's rural development strategies.

Kumar (2019) conducted an analytical study of NABARD's role in socio-economic and rural development in Uttarakhand. Case study methodology was employed to examine NABARD's credit and infrastructure initiatives. Findings indicated that NABARD contributed significantly to rural prosperity through financial inclusion and infrastructure development. The conclusion recommended expanding NABARD's role in skill development and entrepreneurship promotion.

Kumar et al. (2018) assessed NABARD's contribution to infrastructure development for agro products. A descriptive research design was employed, focusing on NABARD's funding for storage, processing, and logistics. Findings revealed that NABARD's infrastructure support reduced post-harvest losses and improved market linkages. The conclusion emphasized the need for NABARD to integrate modern technology into agro-infrastructure projects.

Kumudini (2017) examined NABARD's role in rural development. A descriptive approach was employed to analyze NABARD's programs in credit, infrastructure, and self-help group promotion. Findings indicated that NABARD played a pivotal role in empowering rural communities and enhancing agricultural productivity. The conclusion highlighted the importance of expanding NABARD's initiatives to reach underserved regions.

2.1 Research Gap

Although several studies have examined the role of NABARD in rural development, agricultural finance, infrastructure support, and farmer producer organizations, most of the existing literature has focused on specific schemes, financial performance, or institutional contributions in a generalized context. Prior research has largely emphasized NABARD's credit disbursement, infrastructure development, and digital financial inclusion, but there remains limited empirical evidence on the awareness levels of farmers regarding NABARD's initiatives in Hisar and how this awareness translates into measurable welfare outcomes. Furthermore, while studies have explored NABARD's role in states like Uttarakhand and broader national contexts, the regional variations in awareness and impact within Hisar's agricultural population have not been sufficiently addressed. This gap highlights the need for a survey-based, statistically tested analysis using tools like ANOVA in SPSS to evaluate differences in awareness outcomes across demographic categories, thereby providing a more nuanced understanding of NABARD's effectiveness in enhancing farmers' welfare at the grassroots level.

3. RESEARCH OBJECTIVE

The primary objective of this research is to find out the impact of demographic variables on level of awareness among farmers regarding NABARD's initiatives.

H₀₁: There is no significant difference in the awareness level of farmers regarding NABARD's initiatives across the demographic variables.

4. RESEARCH METHODOLOGY

The present study adopted a descriptive research design to investigate the awareness of farmers regarding NABARD's initiatives and to assess their impact on farmers' welfare in Hisar. A survey-based approach was employed to collect primary data directly from the farming population, ensuring that the findings were grounded in empirical evidence. The methodology was structured to provide clarity, reliability, and validity in measuring awareness levels and welfare outcomes, while statistical tools were applied to analyze variations across demographic categories.

Research Design

A descriptive design was chosen because it allows for systematic collection and presentation of data related to farmers' awareness and welfare. This design was appropriate for capturing the current status of NABARD's initiatives among farmers without manipulating variables. The focus was on describing patterns of awareness and evaluating the impact of NABARD programs in a real-world context.

Population and Sample

The population of the study comprised farmers from Hisar, a state recognized for its agricultural productivity and reliance on institutional support. A sample size of 100 farmers was selected using purposive sampling to ensure representation of diverse categories such as landholding size, education, and income levels. This sample size was considered adequate for conducting statistical tests and drawing meaningful conclusions about awareness and welfare outcomes.

Data Collection

Primary data were collected through structured questionnaires designed to measure awareness of NABARD schemes and perceived welfare outcomes. The questionnaire included items on credit facilities, self-help group promotion, infrastructure support, and financial literacy initiatives. Responses were coded and entered into SPSS v26.0 IBM for statistical analysis.

Data Analysis

The data were analyzed using descriptive statistics to summarize awareness levels and ANOVA tests to examine differences in welfare outcomes across demographic categories. ANOVA was particularly useful in identifying whether variations in awareness and welfare were statistically significant among groups such as small versus large farmers or educated versus less educated farmers. The use of SPSS ensured methodological rigor and accuracy in interpreting results.

Sample Area: Hisar

Hisar was selected as the study area because it represents a dynamic agricultural and socio-economic landscape that is highly relevant to evaluate NABARD's initiatives. The state is part of India's Green Revolution belt, with high productivity in wheat, rice, and dairy, yet it faces pressing challenges such as soil degradation, groundwater depletion, and reliance on monoculture. These structural issues make Hisar an important case for assessing how NABARD's schemes address sustainability, diversification, and farmer welfare.

Hisar also has a diverse demographic and institutional framework, with strong rural credit networks, cooperative societies, and farmer producer organizations supported by NABARD. The location's proximity to the National Capital Region (NCR) has accelerated urbanization and market linkages, creating opportunities for modern interventions such as digital finance, infrastructure development, and climate-resilient practices. Moreover, farmers include a significant proportion of small and marginal holders, women, and socially disadvantaged groups, making it essential to evaluate whether NABARD's initiatives are inclusive and effective in enhancing welfare.

5. DATA ANALYSIS

The analysis of data in this research was conducted to assess farmers' awareness of NABARD's programs and to investigate their influence on farmers' welfare in Hisar. A descriptive statistical methodology was utilised to encapsulate awareness levels, whereas inferential methods were applied to examine differences among demographic groups. The dataset, derived from a survey involving 100 farmers, was meticulously processed and analysed with SPSS software to guarantee precision and dependability in interpretation. The utilisation of ANOVA testing facilitated the detection of statistically significant disparities in awareness and welfare results among categories such as small versus large farms, or educated versus less educated participants. This organised analytical approach offered factual data to bolster the study's aims and enhanced comprehension of NABARD's function in rural development.

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.712	20

Source: Primary data analyzed by researcher

The reliability of the questionnaire was assessed using Cronbach's Alpha, which is the most widely accepted measure of internal consistency. In this study, the Cronbach's Alpha value was 0.712 for a total of 20 items. A coefficient above 0.70 is generally considered acceptable in social science research, indicating that the items included in the scale were sufficiently correlated and measured the same

underlying construct. This value suggests that the instrument was stable and dependable, ensuring that responses across different items were consistent and reliable for further analysis.

The result of 0.712 demonstrates that the questionnaire achieved a satisfactory level of reliability, meeting the benchmark suggested by Nunnally's Psychometric Theory (1978), which considers values above 0.70 as acceptable for exploratory research. The internal consistency of the items confirms that the scale was appropriate for measuring farmers' awareness of NABARD's initiatives. Therefore, the instrument could be confidently used in subsequent statistical analyses, such as ANOVA in SPSS, to evaluate differences in awareness and welfare outcomes across demographic groups.

Table 2: ANOVA based on Age

Awareness	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.215	3	.738	3.895	.011
Within Groups	18.195	96	.190		
Total	20.410	99			

Source: Primary data analyzed by researcher

The ANOVA results presented in the table indicate that the analysis was conducted to examine whether farmers' awareness of NABARD initiatives differed significantly across age groups. The Between Groups Sum of Squares (2.215) with $df = 3$ shows the variation in awareness attributable to differences among the four age categories. The Within Groups Sum of Squares (18.195) with $df = 96$ represents the variation in awareness within each age group. The Mean Square values (.738 for between groups and .190 for within groups) were used to calculate the F-statistic (3.895).

The significance value ($p = .011$) is less than the conventional threshold of 0.05, indicating that there is a statistically significant difference in awareness levels across age groups. This means that farmers' awareness of NABARD initiatives varied depending on their age, with certain age categories being more informed than others. The result confirms that age is an important demographic factor influencing awareness, and further post-hoc analysis could identify which specific age groups differ significantly. These findings highlight the need for NABARD to design age-sensitive awareness programs to ensure equitable dissemination of information among farmers.

Table 3: ANOVA based on Education

Awareness	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.026	3	.675	3.527	.018
Within Groups	18.383	96	.191		
Total	20.410	99			

Source: Primary data analyzed by researcher

The ANOVA results presented in the table were used to examine whether farmers' awareness of NABARD initiatives differed significantly across education levels. The Between Groups Sum of Squares (2.026) with $df = 3$ represents the variation in awareness attributable to differences among the four education categories. The Within Groups Sum of Squares (18.383) with $df = 96$ reflects the variation in awareness within each education group. The Mean Square values (.675 for between groups and .191 for within groups) were calculated to derive the F-statistic (3.527).

The significance value ($p = .018$) is below the conventional threshold of 0.05, indicating that there is a statistically significant difference in awareness levels across education groups. This result suggests that farmers' awareness of NABARD initiatives varied depending on their educational attainment, with more educated farmers likely to demonstrate higher awareness compared to less educated groups. The findings highlight education as a critical factor influencing awareness, and they suggest that NABARD should strengthen its outreach and literacy programs to ensure that farmers with lower education levels are equally informed and able to benefit from its initiatives.

Table 4: ANOVA based on Size of Landholding

Awareness	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.964	3	.321	1.587	.198
Within Groups	19.445	96	.203		
Total	20.410	99			

Source: Primary data analyzed by researcher

The ANOVA results were applied to examine whether farmers' awareness of NABARD initiatives varied significantly across different categories of landholding size. The Between Groups Sum of Squares (0.964) with $df = 3$ represents the variation in awareness attributable to differences among the four landholding categories. The Within Groups Sum of Squares (19.445) with $df = 96$ reflects the variation in awareness within each group. The Mean Square values (.321 for between groups and .203 for within groups) were used to calculate the F-statistic (1.587).

The significance value ($p = .198$) is greater than the conventional threshold of 0.05, indicating that there is no statistically significant difference in awareness levels across landholding sizes. This result suggests that farmers' awareness of NABARD initiatives was relatively uniform, regardless of whether they owned small, medium, or large landholdings. The findings imply that NABARD's outreach and awareness programs have been disseminated evenly across landholding categories, and land size does not appear to be a determining factor in awareness levels.

Table 5: ANOVA based on Size of Primary Source of Income

Awareness	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.572	3	.524	2.671	.052
Within Groups	18.837	96	.196		
Total	20.410	99			

Source: Primary data analyzed by researcher

The ANOVA results were applied to examine whether farmers' awareness of NABARD initiatives varied significantly across different categories of primary income sources. The Between Groups Sum of Squares (1.572) with $df = 3$ represents the variation in awareness attributable to differences among the four income categories. The Within Groups Sum of Squares (18.837) with $df = 96$ reflects the variation in awareness within each group. The Mean Square values (.524 for between groups and .196 for within groups) were used to calculate the F-statistic (2.671).

The significance value ($p = .052$) is slightly above the conventional threshold of 0.05, which indicates that there is no statistically significant difference in awareness levels across income sources at the 5%

level of confidence. However, the result is close to significance, suggesting a marginal effect that could become meaningful at a 10% confidence level. This implies that farmers' awareness of NABARD initiatives may vary somewhat depending on whether their primary source of income is agriculture, livestock, business, or wage labor, but the variation is not strong enough to be statistically confirmed at the stricter 5% threshold. The findings highlight that NABARD's outreach has been relatively uniform across income categories, though further investigation with a larger sample size could reveal more nuanced differences.

Table 6: Hypothesis Testing

Hypothesis	Test Used	Variable	Status
H₀1: There is no significant difference in the awareness levels of farmers regarding NABARD's initiatives across the demographic variables.	ANOVA	Age	Rejected
		Education	Rejected
		Size of Landholding	Accepted
		Primary Source of Income	Accepted

Source: Primary data analyzed by researcher

In the hypothesis testing conducted on farmers' awareness of NABARD's initiatives, the ANOVA test revealed that there were significant differences in awareness levels across certain demographic variables. Specifically, the null hypothesis was rejected for age and education, indicating that farmers' awareness varied significantly depending on their age groups and educational background. However, the null hypothesis was accepted for size of landholding and primary source of income, suggesting that these factors did not lead to significant differences in awareness levels. Thus, the analysis demonstrated that demographic characteristics such as age and education played a more influential role in shaping farmers' awareness of NABARD's initiatives compared to landholding size or income source.

6. CONCLUSION

The study concluded that NABARD has played a significant role in promoting rural development through credit support, infrastructure financing, and self-help group empowerment. The survey-based analysis of 100 farmers revealed that awareness levels varied across demographic categories such as age and education, while landholding size did not significantly influence awareness. The application of ANOVA tests in SPSS confirmed that age and education were statistically significant factors shaping awareness, whereas income source showed marginal influence. Overall, the findings highlighted that NABARD's initiatives have positively impacted farmers' welfare, but gaps in awareness remain, particularly among less educated and older groups. The conclusion emphasized the need for targeted awareness campaigns, inclusive outreach strategies, and capacity-building programs to ensure equitable access to NABARD's schemes across all farmer segments in Hisar.

7. FUTURE IMPLICATIONS

The implications of this study suggest that NABARD must strengthen its awareness and outreach mechanisms to ensure that farmers across diverse demographic categories are equally informed and able

to benefit from its initiatives. Future programs should integrate digital literacy, financial education, and age-sensitive communication strategies to bridge awareness gaps. Additionally, expanding NABARD's role in promoting climate-resilient agriculture, skill-based training, and digital financial inclusion will enhance long-term sustainability.

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