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The Role of Accounting Practices in Enhancing Profit Monitoring Among Banana Farmers: Insights from Burhanpur District. M.P.

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Abstract: *This study investigates the impact of accounting practices on profit assessment among banana farmers in Burhanpur district, Madhya Pradesh. With a sample of 237 farmers, the research explores the prevalence, methods, and effectiveness of farm record-keeping, aiming to understand how different approaches influence farmers' ability to monitor income and expenses. The findings reveal that while a majority of farmers (approximately 75%) maintain some form of records, the methods are largely unorganized, with 73.93% relying on informal small diaries. Only a small proportion use structured manual (15.81%) or computerized (10.26%) accounting systems. A chi-square test was applied to assess the relationship between record-keeping methods and the ability to assess profit or loss. The results show a statistically significant association, indicating that the type of record-keeping significantly influences a farmer's financial awareness and decision-making capabilities. Farmers using computerized or structured manual systems were more likely to accurately assess their farm's profitability. The study highlights the urgent need for policy interventions to promote better accounting habits, provide training, and support digital tools to enhance financial literacy and income tracking. These improvements can directly contribute to better cost-benefit analysis, informed decision-making, and overall profitability for banana growers in the region.*

Keywords: banana farming, profitability, record keeping

I. INTRODUCTION

Banana cultivation is a key component of the agricultural economy in Burhanpur district, Madhya Pradesh. Recognized for its high investment requirements as well as high returns, banana farming demands careful cost management and financial planning. However, many farmers in the region continue to operate without systematic accounting practices, limiting their ability to monitor input costs, evaluate profitability, or make informed decisions. The absence of structured record-keeping often results in untracked expenses, inefficient resource use, and poor understanding of actual farm performance.

Under the Government of India's **One District One Product (ODOP)** initiative, banana has been identified as the flagship crop for Burhanpur. This has led to increased institutional focus, infrastructural development, and market linkages. Despite these positive developments, internal financial management at the farm level—particularly with respect to cost tracking and profit assessment—remains inconsistent. Many farmers still rely on memory-based or unorganized methods to record transactions, which can hinder long-term planning and access to formal financial services.

Effective record-keeping, whether manual or digital, plays a vital role in enhancing a farmer's ability to monitor farm performance, calculate returns, and adopt data-driven management practices. Moreover, sound accounting habits improve transparency, help farmers access government schemes and credit facilities, and contribute to overall agricultural sustainability.

This study aims to examine the accounting practices followed by banana farmers in Burhanpur district and analyze their impact on profit assessment and cost management. Based on a primary survey of **237 banana cultivators,** the research

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evaluates the types of record-keeping methods used—manual, digital, or none—and their influence on the farmers' ability to assess profitability.

The findings are expected to offer actionable insights into the role of farm-level financial discipline in improving profitability. The study also seeks to inform policymakers, agricultural extension services, and farmer organizations about the need to promote financial literacy and user-friendly accounting tools tailored to small and medium-scale banana farmers.

Objectives of the Study

The present study has been undertaken with the following specific objectives:

- To examine the current accounting practices followed by banana farmers in Burhanpur district.
- To classify the types of record-keeping methods adopted by farmers (manual, digital, or none).
- To assess the relationship between record-keeping habits and farmers' ability to calculate costs and profits accurately.
- To analyze how accounting practices influence overall financial decision-making and resource allocation in banana farming.
- To identify the challenges faced by farmers in maintaining systematic cost records.
- To suggest appropriate policy measures and practical interventions for promoting accounting literacy and tools among banana farmers.

Hypothesis of the Study

In the context of modern agriculture, especially in high-investment crops such as banana, financial literacy and systematic record-keeping play a crucial role in enabling farmers to assess the profitability of their operations. With the rising cost of cultivation and market uncertainties, maintaining organized records has become essential for effective farm management. However, among small and medium-scale banana farmers in Burhanpur district, the practice of structured accounting varies significantly — ranging from detailed manual records to digital tools, or in many cases, no record-keeping at all.

Given this diversity in accounting behavior, the present study seeks to examine whether the type of record-keeping system adopted by banana farmers has any significant impact on their ability to assess profit or loss. To empirically test this relationship, the following hypothesis has been formulated:

Null Hypothesis (H_0):

The type of record-keeping (manual, digital, or none) does not influence the farmer's ability to assess profit or loss.

Alternative Hypothesis (H_1):

The type of record-keeping significantly influences the farmer's ability to assess profit or loss.

This hypothesis will be tested using appropriate statistical tools on data collected from a sample of 237 banana farmers in Burhanpur district. The outcome of the analysis will help determine whether improved accounting practices are associated with greater financial awareness and better decision-making in banana cultivation.

II. RESEARCH METHODOLOGY

Research Design.

This study adopts a descriptive and analytical research design to examine the role of accounting practices in profit monitoring among banana farmers. The research seeks to understand the types of cost record-keeping methods adopted by farmers and their influence on the ability to assess profitability in banana farming. Both qualitative and quantitative approaches were used to collect and interpret data.

Study Area.

The research was conducted in Burhanpur district, located in the southwestern region of Madhya Pradesh, which is a major banana-producing region and has been identified under the One District One Product (ODOP) initiative for

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banana promotion. The district is known for intensive banana cultivation and comprises both traditional and modern farming practices.

Sampling Method and Sample Size

A stratified random sampling technique was employed to ensure representation across various categories of farmers—small, medium, and large—and across different villages in Burhanpur district. From the population of banana growers, a total of 237 farmers were selected for the study.

Data Collection Tools

Primary data was collected through a structured questionnaire, which included both closed-ended and open-ended questions. The questionnaire was designed to capture:

- Socio-economic profile of farmers
- Type of record-keeping practices (manual, digital, or none)
- Ability to assess profit or loss
- Challenges faced in record maintenance
- Awareness of government schemes and ODOP initiatives

In addition, interviews and field observations were conducted to validate and enrich the responses. Secondary data was collected from published reports, ODOP documents, district agriculture department records, and relevant literature.

Variables Used in the Study.

Independent Variable: Type of record-keeping. (manual, digital, none)
Dependent Variable: Ability to assess profit or loss.
Control Variables: Farm size, education level, access to training, awareness of schemes.

Hypothesis Testing.

To test the formulated hypothesis, the following hypothesis was framed:
H_0 (Null Hypothesis):
The type of record-keeping (manual, digital, or none) does not influence the farmer's ability to assess profit or loss.
H_1 (Alternative Hypothesis):
The type of record-keeping significantly influences the farmer's ability to assess profit or loss.
Data was analyzed using statistical techniques such as Chi-square tests and cross-tabulations to assess the relationship between record-keeping methods and profitability awareness.

Data Analysis: Chi-Square Test of Independence

Objective:

To check whether the type of record-keeping (computerized, manual, small diary, or none) affects a farmer's ability to assess profit or loss from banana farming.

Hypotheses:

- **Null Hypothesis (H_0):** Type of record-keeping does not affect the ability to assess profit or loss.
- **Alternative Hypothesis (H_1):** Type of record-keeping affects the ability to assess profit or loss.

Observed Data Table

Record Type	Can Assess Profit/Loss	Cannot Assess	Total
Computerized	19	0	19
Manual Accounting	25	3	28

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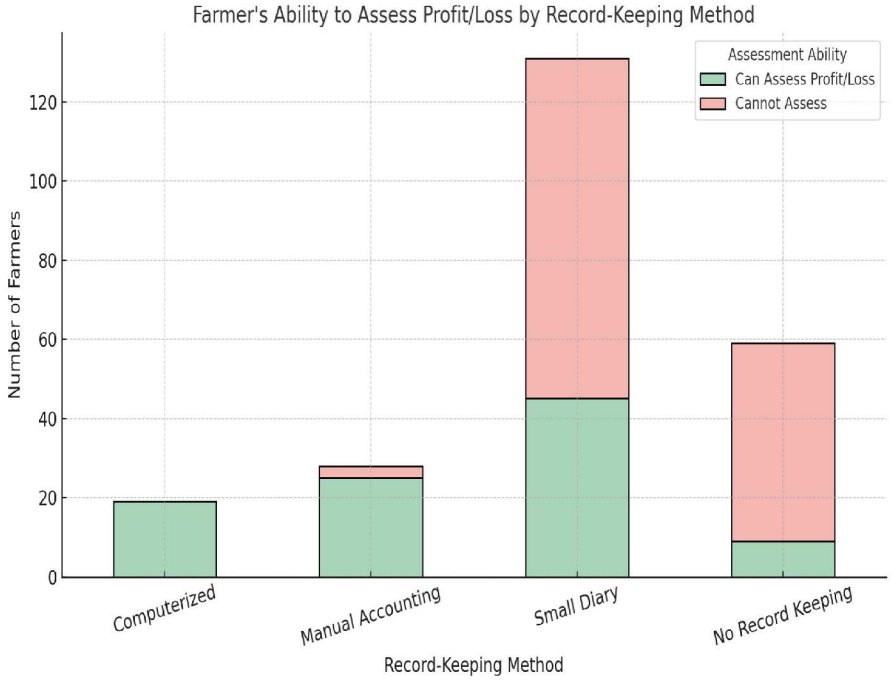
Record Type	Can Assess Profit/Loss	Cannot Assess	Total
Small Diary (Unorganized)	45	86	131
No Record Keeping	9	50	59
Total	**96**	**139**	**237**

Graphical representation of data



Expected Values (Calculated using formula: (Row Total × Column Total) ÷ Grand Total)

Record Type	Can Assess (Expected)	Cannot Assess (Expected)
Computerized	7.86	11.14
Manual Accounting	11.58	16.42
Small Diary	54.17	76.83
No Record Keeping	24.40	34.60

Formula Used:
Chi-Square (χ^2) = $\Sigma\ (O - E)^2 \div E$
Where O = Observed value, E = Expected value

Chi-Square Result:
χ^2 value = 72.69
Degrees of freedom (df) = 3
p-value = 1.13×10^{-15}

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II. CONCLUSION

Since the p-value is much smaller than 0.05, we reject the null hypothesis.
This means that the type of record-keeping does influence a farmer's ability to assess profit or loss. Farmers who use computerized or structured manual records are better able to understand the financial outcomes of their farming compared to those who don't keep proper records.

Key Findings

High Awareness of Record-Keeping, But Poor Methods Used

Out of 237 banana farmers, 234 (98.7%) maintain some form of cost and revenue records.
However, 73.93% of these farmers use unorganized methods such as writing in small diaries. Only 10.26% use computerized accounting, and 15.81% use structured manual accounting.

Strong Link Between Record-Keeping and Profit Assessment

Chi-square analysis shows a significant relationship between the type of record-keeping and a farmer's ability to assess profit or loss.
Farmers who use computerized or organized manual records are much more likely to understand their profit/loss than those who use unorganized methods or keep no records.

Low Financial Literacy Among Majority of Farmers

Despite maintaining records, many farmers cannot analyze or interpret their financial data effectively due to a lack of training or proper tools.

Age and Experience Help, But Aren't Enough

Most banana farmers are between 30–50 years old, and many have over 10 years of experience, yet financial literacy remains low among a large portion, especially those relying on traditional methods.

Need for Capacity Building and Digital Tools

There is a clear need for training programs in basic accounting, mobile record-keeping apps, and government-supported digital solutions.

Policy Support Is Essential

Farmers need access to professional accounting services, subsidized digital tools, and support from agricultural extension officers to make financial planning part of their routine farm management.

Record-Keeping is Linked to Better Decision-Making

Farmers who maintain structured financial records can better plan their investments, adopt improved farming practices, and manage risks effectively—leading to improved profitability.

III. DISCUSSION

The findings of this study underscore the critical role that effective accounting practices play in enabling banana farmers in Burhanpur district to assess profitability and make informed financial decisions. While a large majority of farmers (98.7%) reported maintaining some form of cost and revenue records, the predominance of unstructured methods—such as using small diaries—limits the utility of such data. This indicates that although awareness of record-keeping exists, its application lacks standardization and efficiency.
The results of the chi-square test reveal a statistically significant relationship between the type of record-keeping and a farmer's ability to assess profit or loss. Farmers who employ computerized or structured manual accounting methods demonstrate a far better understanding of their farm economics compared to those who use unorganized methods or no

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record-keeping at all. This finding aligns with existing literature that emphasizes the importance of financial literacy and systematic documentation in improving farm management and profitability.

Interestingly, the study also shows that age and farming experience alone do not guarantee financial awareness or proper record-keeping habits. Even farmers with over a decade of experience lacked the tools or training necessary to manage their finances effectively. This suggests that experience must be supplemented by targeted training in financial management practices.

Furthermore, the gap in digital adoption—where only 10.26% of farmers use computerized records—points to technological and educational barriers. Access to affordable digital tools, mobile apps, and professional accounting services remains limited. This highlights an opportunity for government agencies, NGOs, and private agritech firms to intervene with tailored solutions such as localized financial training programs, subsidized digital record-keeping apps, and extension services focused on financial literacy.

The One District One Product (ODOP) initiative in Burhanpur has indeed brought visibility and policy attention to banana cultivation. However, the full benefits of ODOP—such as improved income, crop insurance, and market linkages—can be better realized if farmers are financially literate and can track the profitability of their farming operations accurately.

In conclusion, record-keeping is not just a financial tool but a gateway to improved farm management. Empowering farmers with the skills and tools to maintain accurate records can help unlock better access to credit, insurance, subsidies, and markets, ultimately enhancing their economic well-being.

Suggestions and Policy Recommendations

Suggestions:-

For Farmers

Farmers should adopt systematic record-keeping practices (manual or digital) to clearly assess input costs and profit margins.

Training in basic financial literacy should be promoted to help them analyze cost-benefit outcomes accurately.

Use of simple accounting formats or mobile apps should be encouraged for ease and consistency.

For Extension Services and Agriculture Departments

Provide on-field demonstrations and hands-on training on farm accounting techniques.

Develop easy-to-use record-keeping templates in local languages to promote adoption.

Promote peer learning models, where progressive farmers help others in adopting better practices.

For Traders and Market Linkages

Encourage transparent transactions with receipts to support income tracking by farmers.

Establish local collection centers or cooperatives under ODOP to reduce middlemen costs.

Policy Recommendations :-

Incorporate farm accounting training in all government agricultural extension programs and schemes (e.g., PM-Kisan, ODOP, FPO initiatives).

Provide subsidized access to digital record-keeping tools or apps for small and marginal farmers.

Under ODOP (One District One Product), expand support to include:

Financial documentation assistance

Promotion of banana by-products (e.g., fiber, leaf plates) to generate additional income

Infrastructure support like cold storage and insurance coverage

Link farmers with microfinance, banks, and digital advisory platforms to enhance their capacity to make data-driven decisions.

IV. CONCLUSION

The research undertaken on banana farming in Burhanpur district sheds critical light on the importance of accounting practices in enhancing the financial awareness and profit monitoring capacity of farmers. Through the study of 237

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banana growers, it became evident that the way farmers record and manage their input costs, yields, and income directly influences their understanding of profitability and their ability to make informed farming decisions.

A major finding of the study was the strong correlation between the type of record-keeping practice and a farmer's ability to assess profit or loss. Farmers using computerized or structured manual accounting methods showed a significantly higher level of clarity about their financial performance, compared to those using unorganized methods like basic diaries or those who kept no records at all. This was statistically validated through the application of the Chi-square test, which confirmed that record-keeping methods significantly affect the ability to monitor profit or loss.

Despite the fact that nearly 75% of farmers maintain some form of records, the majority still rely on informal and unorganized methods. These practices, while better than none, do not allow for accurate cost-benefit analysis or effective financial planning. On the other hand, only a small percentage of farmers employ professional or digital accounting methods, indicating a gap in financial literacy, accessibility to digital tools, and awareness of the long-term benefits of systematic accounting.

The study also reveals that better accounting practices not only help track income and expenditure but also encourage disciplined farm management, enable better decision-making about input use, and allow farmers to identify loss-making activities early. With market conditions becoming more volatile and farming increasingly input-intensive, the ability to accurately monitor profitability has become essential.

Therefore, it is imperative that policymakers, agricultural extension agencies, and rural development bodies focus on improving farmers' accounting habits. Providing training in basic financial management, encouraging the adoption of structured manual or digital record-keeping formats, and integrating these tools into existing agricultural support programs can significantly uplift the financial resilience of small and marginal farmers.

In conclusion, the role of accounting practices in farming goes far beyond bookkeeping—it is a strategic tool for empowerment, sustainability, and economic growth. Enhancing these practices among banana farmers in Burhanpur can lead to better planning, reduced financial risk, and increased profitability, ultimately contributing to improved livelihoods and rural development.

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