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Original Article

ROLE OF GREEN MANAGEMENT PRACTICES IN ACHIEVING LONG-TERM CORPORATE SUSTAINABILITY: A STUDY OF DAIRY AND FOOD PROCESSING INDUSTRIES IN SOLAPUR DISTRICT

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Abstract:

In recent years, growing environmental concerns and regulatory requirements have encouraged industries to adopt green management practices to achieve long-term corporate sustainability. This study examines the role of environmentally friendly management strategies in promoting sustainable growth in the dairy and food processing industries of Solapur District. Using a mixed-method approach, primary data was collected from 90 respondents through structured questionnaires and interviews, and secondary data was gathered from company reports and government publications. The research identifies key initiatives such as waste reduction, water and energy conservation, pollution control, and the use of eco-friendly raw materials, and evaluates their impact on operational efficiency, cost reduction, and compliance with environmental laws. The findings indicate that industries implementing green management practices experience improved efficiency, reduced costs, enhanced corporate reputation, and strengthened long-term sustainability. However, challenges such as high initial investment, lack of technical knowledge, and employee resistance remain. The study emphasizes training, financial incentives, and strategic planning to support sustainable industrial development.

Keywords: Green Management Practices, Corporate Sustainability, Dairy Industry, Food Processing, Resource Efficiency.

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Introduction:

Green Management Practices refer to strategies and actions adopted by organizations to reduce their environmental impact while improving efficiency. These include energy and water conservation, waste reduction, pollution control, eco-friendly technologies, and sustainable sourcing. Such practices help businesses operate responsibly, protecting natural resources and promoting environmental stewardship.

Long-Term Corporate Sustainability focuses on ensuring that a company can grow and remain profitable while minimizing harm to the environment and contributing positively to society. It emphasizes balancing economic performance with ecological and social responsibility to maintain business success over time.

The dairy and food processing industries in Solapur District are significant to the local economy but consume large amounts of water, energy, and raw materials, generating considerable waste. Adopting green management practices in these industries is crucial for achieving long-term corporate sustainability, reducing environmental impact, and supporting responsible industrial growth.

Statement of Problems:

The dairy and food processing industries in Solapur District are vital to the economy but consume large amounts of water, energy, and raw materials, generating significant waste and environmental issues. This study examines how green management can enhance resource efficiency, reduce environmental impact, and support long-term corporate sustainability in the region.

Objectives of the Study

1. To study the concept of green management practices adopted by dairy and food processing industries in Solapur District.
2. To examine the level of adoption of green management practices in selected dairy and food processing units.
3. To analyse the role of green management practices in achieving long-term corporate sustainability.
4. To identify the benefits and challenges faced by dairy and food processing industries while implementing green management practices.

Importance of the Study:

The study of green management practices in dairy and food processing industries in Solapur District is important for several reasons. First, it helps industries understand how adopting environmentally friendly practices can reduce the excessive use of water, energy, and raw materials, and manage waste more effectively. Second, it highlights the role of green practices in achieving long-term corporate sustainability, ensuring that businesses can grow without harming the environment or society.

Third, the study provides insights into the benefits and challenges of implementing green management practices, which can guide industry managers in making informed decisions. Finally, the findings of this research can help policymakers and stakeholders promote sustainable industrial practices, contributing to environmental protection and responsible economic development in the region.

Scope of the Study:

This research focuses on dairy and food processing industries in Solapur District, examining how green management practices are applied in real-

world operations. The study covers areas such as water and energy conservation, waste management, eco-friendly production techniques, and their impact on long-term corporate sustainability. It also considers both organizational and environmental perspectives, providing insights into operational improvements and environmental benefits.

The scope is limited to industries located in Solapur District, but the findings may provide guidance for similar industries in other regions that aim to implement sustainable practices and reduce environmental impact. The study does not cover other sectors or regions outside Solapur.

Limitation of Study:

1. The study focuses only on dairy and food processing industries in Solapur District.
2. Data is collected from 90 respondents, representing a sample of the workforce.
3. The research is limited to green management practices and sustainability aspects.
4. The study covers a specific period, reflecting practices at that time.

Choice of Topic:

The topic was chosen due to the increasing importance of sustainability in industries and the significant environmental impact of dairy and food processing units. It aims to explore how green management practices can help industries grow responsibly while protecting the environment. The study also seeks to highlight the benefits, challenges, and practical implementation of these practices in local industries. Additionally, it provides insights that can guide managers and policymakers in promoting sustainable industrial development in Solapur District.

Review of Literature:

Parmar, R., & Desai, K. (2023): The study examines green management practices in small food processing industries in India, focusing on energy conservation, waste reduction, and sustainable packaging, and highlights benefits and challenges in implementation.

Maradi, S., & Patel, D. (2024): This research explores eco-friendly practices in dairy industries, including water and energy efficiency, waste management, and employee awareness, emphasizing their role in long-term sustainability.

Chaudhary, B. (2023): The paper studies challenges in adopting green practices in regional food processing units, such as cost, managerial support, and employee engagement, and examines their impact on sustainability.

Romero, R., Tan, L., & Cortez, M. (2024): The research analyses green practices in urban dairy and food processing industries, including renewable energy, water recycling, and eco-friendly packaging, and suggests strategies for improving environmental performance.

Research Methodology:

The study uses a descriptive and analytical design to examine the role of green management in achieving long-term corporate sustainability in Solapur's dairy and food processing industries. Data was collected from 90 respondents through questionnaires and interviews, and supplemented with journals, company reports, and government publications. Statistical tools like percentages and tables were used for analysis.

Sample Design:

The study uses a non-probability convenience sampling method. A total of 90 respondents were selected from dairy and food processing industries in Solapur District. The

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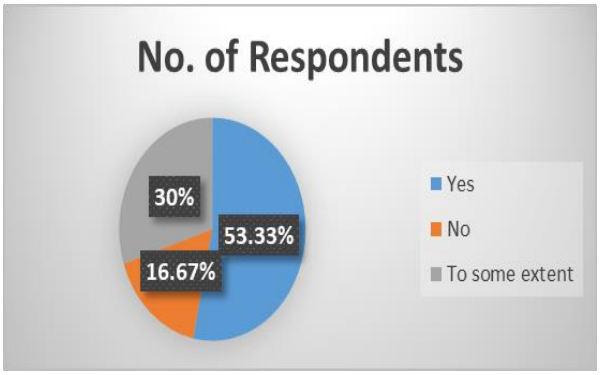
respondents include managers, supervisors, and employees involved in operational and environmental management activities. The sample size is considered sufficient to understand the level of adoption of green management practices and their impact on long-term corporate sustainability.

Data analysis And Interpretation:

Table 1: Awareness of Green Management Practices

Response	No. of Respondents	Percentage (%)
Yes	48	53.33
No	15	16.67
To some extent	27	30
Total	90	100

(Source- Primary Data)



The data indicates that more than half of the respondents (53.33%) have clear awareness of green management practices, while 30% possess limited or partial awareness. Only 16.67% reported having no awareness. Overall, the results suggest a fairly good level of awareness in the dairy and food processing industries of Solapur District, though there is still a need to improve understanding among all employees to support long-term corporate sustainability.

Table 2: Training and Encouragement of Employees

Response	Respondents	Percentage (%)
Strongly agree	22	24.44
Agree	34	37.78
Neutral	18	20
Disagree	10	11.11
Strongly disagree	6	6.67
Total	90	100

(Source- Primary Data)

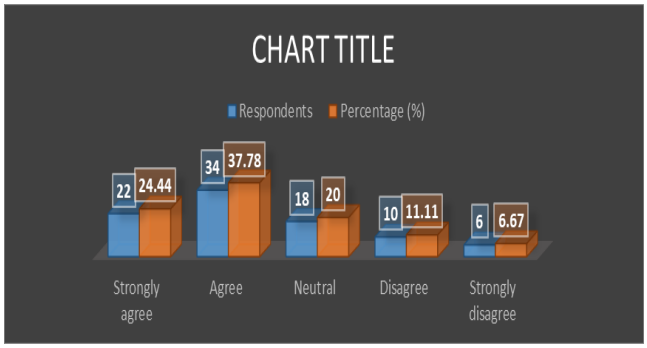


Table 2 shows that most respondents (62.22%) agree that their organizations provide training and encouragement for green management practices. About 20% are neutral, indicating uncertainty or limited training, while 17.78% disagree, suggesting insufficient support for some employees. Overall, training exists but requires improvement to enhance long-term corporate sustainability.

Table 3: Green Management Practices Adopted (Multiple Responses Allowed)

Practices	Respondents	Percentage (%)
Water conservation	65	72.22
Energy-efficient technologies	58	64.44
Waste reduction & recycling	70	77.78
Eco-friendly raw materials	42	46.67
Pollution control measures	60	66.67

(Source- Primary Data)

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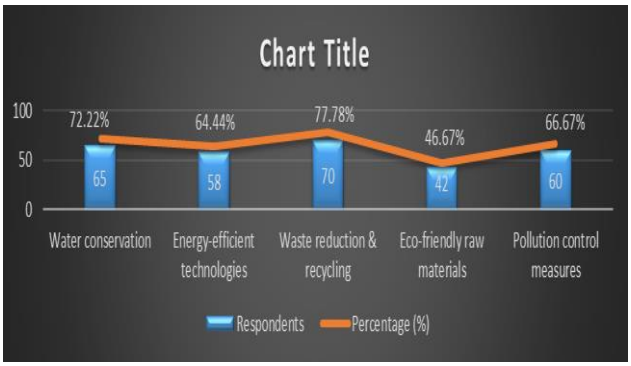
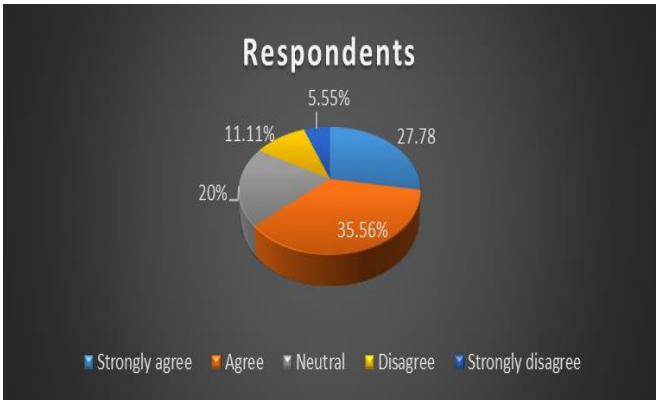


Table 3 shows that green management practices are widely adopted in Solapur's dairy and food processing industries. Waste reduction and recycling leads (77.78%), followed by water conservation (72.22%) and pollution control (66.67%). Energy-efficient technologies are used by 64.44%, while eco-friendly raw materials are less adopted (46.67%). Overall, adoption is positive, with room to improve sustainable sourcing for long-term corporate sustainability.

Table 4: Cost Reduction and Efficiency Improvement

Response	Respondents	Percentage (%)
Strongly agree	25	27.78
Agree	32	35.56
Neutral	18	20
Disagree	10	11.11
Strongly disagree	5	5.55
Total	90	100

(Source- Primary Data)



Most respondents (63.34%) agree or strongly agree that green management practices help reduce costs and improve efficiency. 20% are neutral, while only 16.66% disagree or strongly disagree. This indicates that green practices are generally seen as beneficial for operational efficiency in the industries studied.

Table 5: Contribution to Long-Term Sustainability

Response	Respondents	Percentage (%)
Strongly agree	28	31.11
Agree	36	40
Neutral	15	16.67
Disagree	7	7.78
Strongly disagree	4	4.44
Total	90	100

(Source- Primary Data)

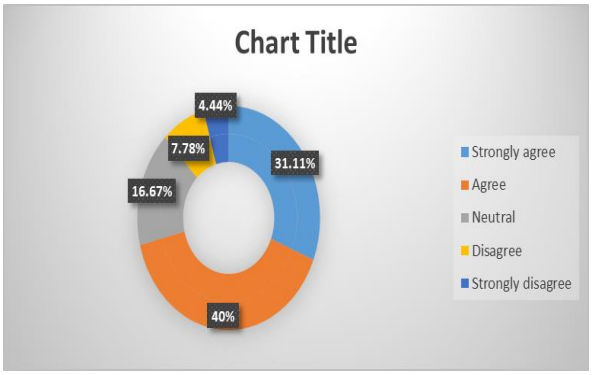


Table 5 shows respondents' views on the role of green management practices in achieving long-term corporate sustainability. 31.11% of respondents strongly agree, and 40% agree, indicating that a large proportion recognize the positive impact of these practices. 16.67% remain neutral, while 7.78% disagree and 4.44% strongly disagree, showing that only a small minority are skeptical about their contribution. Overall, the data highlights that green management practices are

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largely seen as supporting long-term sustainability in the industries studied.

Table 6: Compliance with Environmental Laws

Response	Respondents	Percentage (%)
Yes, to a great extent	38	42.22
Yes, to some extent	34	37.78
Very little	12	13.33
Not at all	6	6.67
Total	90	100

(Source- Primary Data)

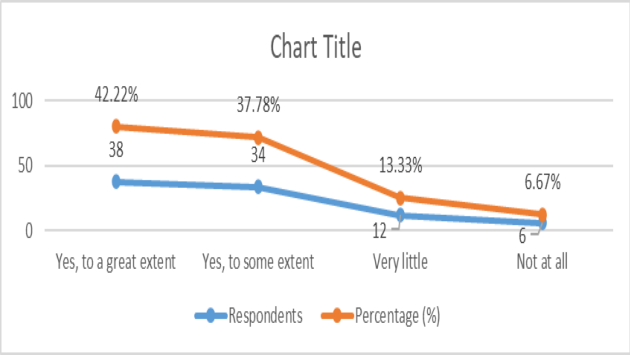

Table 6 shows that most respondents comply with environmental laws, with 42.22% following them to a great extent and 37.78% to some extent. However, 13.33% comply very little and 6.67% not at all, indicating that while efforts are generally strong, overall compliance can still be improved.

Table 7: Challenges in Implementing Green Management (Multiple Responses Allowed)

Challenges	Respondents	Percentage (%)
High initial investment cost	62	68.89
Lack of technical knowledge	48	53.33
Resistance from employees	36	40
Lack of government support	44	48.89
Operational difficulties	39	43.33

(Source- Primary Data)

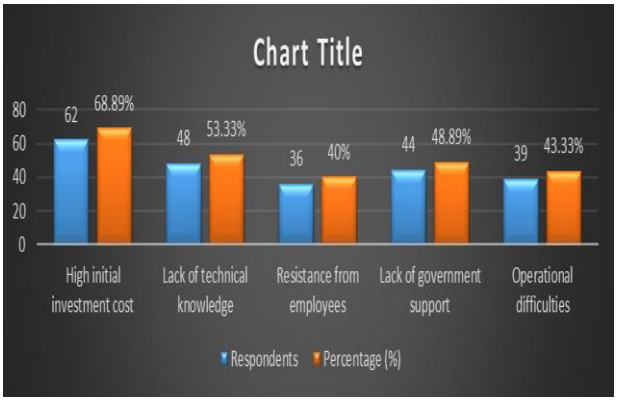

Table 7 shows that the biggest challenge in adopting green management is the high initial investment cost (68.89%). Other major challenges include lack of technical knowledge (53.33%), lack of government support (48.89%), operational difficulties (43.33%), and resistance from employees (40%). These challenges suggest the need for financial assistance, skill development, and stronger support to promote green practices.

Table 8: Future Plans to Strengthen Green Practices

Response	Respondents	Percentage (%)
Strongly agree	30	33.33
Agree	35	38.89
Neutral	15	16.67
Disagree	7	7.78
Strongly disagree	3	3.33
Total	90	100

(Source- Primary Data)

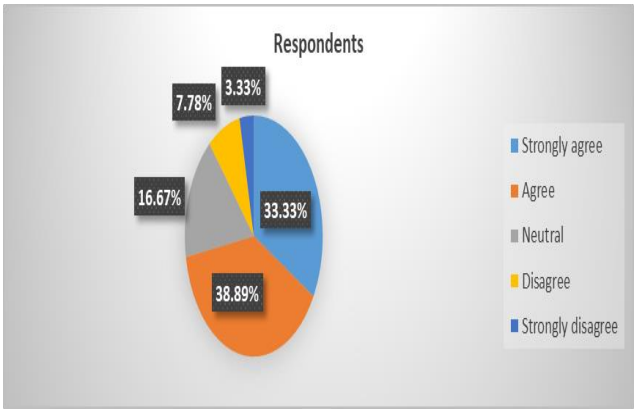

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Table 8 shows respondents' views on enhancing green practices in the future. 33.33% of respondents strongly agree, showing a very strong commitment to improving green initiatives. 38.89% agree, indicating a positive intention, though not as strong as strong agreement. 16.67% are neutral, reflecting uncertainty or indecision. 7.78% disagree, showing some unwillingness, while 3.33% strongly disagree, indicating clear refusal or difficulty in adopting future green measures. Overall, most respondents support strengthening green management practices.

Findings:

1. Most employees in dairy and food processing industries in Solapur District are aware of green management practices, although some still have limited knowledge.
2. Organizations provide training and encouragement for implementing green practices, but the level of support varies across companies.
3. Waste reduction, water conservation, and pollution control are the most commonly adopted green practices, while the use of eco-friendly raw materials is relatively low.
4. Green management practices help industries reduce operational costs and improve efficiency, showing both environmental and economic benefits.
5. The majority of respondents believe that adopting green practices contributes to long-term corporate sustainability and strengthens the organization's competitive advantage.
6. Most companies comply with environmental laws to some extent, but a small number still need to improve adherence.
7. High initial investment, lack of technical knowledge, employee resistance, and insufficient government support are major challenges in implementing green practices.
8. Industries in Solapur show a positive attitude toward enhancing green initiatives in the future, indicating commitment to sustainable growth.

Suggestions:

1. Provide regular training for employees: Training programs can increase awareness, knowledge, and proper implementation of green management practices.
2. Offer financial support or incentives: Subsidies, tax benefits, or grants can help industries overcome the high initial investment required for sustainable technologies.
3. Promote the use of eco-friendly raw materials: Using sustainable materials reduces environmental impact and improves overall green performance.
4. Government and technical support: Guidance and technical assistance from authorities can help industries adopt best practices effectively.
5. Enhance employee engagement programs: Motivating employees and involving them in sustainability initiatives reduces resistance and ensures better participation.
6. Regular monitoring and compliance checks: Continuous evaluation ensures industries follow environmental laws and maintain sustainability standards.
7. Develop long-term green strategies: Planning future initiatives strengthens corporate sustainability and supports continuous environmental improvement.

Conclusion:

The study reveals that green management practices play a crucial role in promoting long-term corporate sustainability in dairy and food processing industries of Solapur District. Adoption of practices like waste reduction, water conservation, and energy-efficient technologies not only improves operational efficiency and reduces costs but also enhances compliance with environmental laws and strengthens corporate reputation. Despite challenges such as high investment costs, lack of technical knowledge, and employee resistance, most industries show a positive attitude toward strengthening green initiatives in the future. Overall, proactive implementation of green practices supports sustainable growth, environmental protection, and long-term competitiveness.

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