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## AWARENESS OF GREEN MARKETING THROUGH DIGITAL MARKETING TECHNOLOGIES AMONG GRAPE GROWERS IN KARNATAKA

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### ABSTRACT

This study aims to examine the level of knowledge about green marketing strategies among grape growers in Karnataka and to evaluate the usage of digital marketing platforms by these framers. Grape producers' awareness of green marketing methods and their usage of digital marketing platforms are both examined in relation to demographic characteristics in the study. The present study is exploratory in nature; the researcher aims to explore the awareness of the grape farmers on green marketing through digital marketing channels. The sample for the study is draw from Karnataka state. Using the Cochran formula of unknown population, 100 Farmers were chosen from four divisions of Karnataka using convenience sampling technique. Bangalore division (20 Farmers), Mysore (20 Farmers) division, Kalaburgi (30 Farmers), and Belgavi division (30 Farmers). A semi structured questionnaire was prepared using the regional language Kannada and data was collected on the existing use of Digital marketing Platforms and awareness of green marketing among the farmer. Three questions were asked to measure the use of digital marketing platforms and three questions were connected with awareness of green marketing practices. A 5-point likert scale of agreement was used to record the responses on the grape growers. The data is analysed using the ANOVA and Independent t test results conducted through the SPSS software. The results of the study indicate that the mean scores below 3.00 indicate disagreement range of responses which shows that less than 35% farmers in the study use digital marketing channels. There was least awareness of green marketing practices among Grape growers in Karnataka. Due to lacking of proper education and support, farmers cannot effectively use

environmentally friendly processes within the agricultural processes. To this end, more awareness creation and sensitisation efforts should be rolled out to educate grape growers in Karnataka on the rationale for green marketing as well as its possible benefits.

**KEYWORDS:** Awareness, Green marketing, digital marketing technologies, Grape growers.

## **INTRODUCTION**

Green marketing is the process of selling products that are environmental friendly or have a sustainable nature. Consumers who get in touch with farming agencies that implement green marketing have more focus on recycled material such as packing materials, energy used while packaging and production, and the company's non-tolerance for greenhouse gasses (**Mishra & Sharma, 2014**). In implementing the green marketing strategies, farmers can target consumer that are conscious on the issues of environmental degradation and sustainability (**Dangelico & Vocalelli, 2017**). This can assist them in having a differentiation strategy in the market and enlist a rising group of green consumers (**Peattie, 2016**). Furthermore, green marketing can also assist farmers in cutting on wastage, increasing productivity and efficiency and assisting in achieving the general goal of moving towards establishing sustainable agriculture systems (**Kilbourne, 1998**).

Marketing based upon environmentalism through the utilization of available technologies is way forward to reach out the farmers directly to the consumer base as more and more customer shifting towards online portals (**Durmaz & Yaşar, 2016**). There is an avenue through social media, websites, and online markets where farmers can portray their activities in sustainable agriculture, as well inform the customers on the benefits of their products to the environment (**Vilkaite-Vaitone & Skackauskiene, 2019**). With the help of digital tools, farmers can expand the circle of household consumers who are ready to buy their products with a responsible logo, as well as solve the problem of evaluating the effectiveness of green marketing – which helps create a positive shift in the food industry (**Liao et al., 2020**).

Some of the benefits of marketing green products through online media are; visibility, customers' interaction enhanced brand and product differentiation. Also, when farmers promoting their products on the internet, they would attract customers who are willing to spend more for green products (**Mishra & Sharma, 2010**). Doing this not only have a direct positive impact on the farmers' profits but is also part of the move towards more sustainable agriculture. Thus, digital green marketing is not only helpful for individual farmers but also promotes the industry (**Arora, 2020**).

In using green marketing using digital platforms to farmers there are some disadvantages that include the cost of putting sustainable practice in place and marketing them is expensive, an aspect that might

lock out new farmers (Tiwari, 2014). It is always difficult to showcase the right content to the right audience since the impact of using strategies such as digital green marketing is intertwined with the consumers' interest in sustainability. But while there are these, the advantages outweigh the demerits of digital green marketing for farmers are more than the drawbacks because it will assist farmers to make their products unique in the market and enhance sustainability in the market (Mishra & Sharma, 2010).

Farmers under the Indian paradigm are not sophisticated and have limited control over the awareness and the knowledge of the green marketing using the digital technologies. This is so because take-up of technology, and literacy levels in the rural areas are still wanting. But with the advance mobile phones and internet connection there is a strong signal for farmers to embrace digital green marketing information (Mishra & Sharma, 2010). Therefore, through increasing knowledge of farmers on the advantages of practicing sustainable agriculture and with the pertinent instruments, the concept of digital green marketing can make a positive and dramatic impact on the practices of farmers and, in general, on making agriculture in India a more sustainable practice (Arora, 2020).

The green marketing of agricultural produce is linked with Sustainable goal number twelve which is concerned with responsible consumption and production. Through the digitisation of green marketing farmers can reverse the worrying trend of negative impacts on the environment and feed the growing population with quality produce that socially conscious consumer is looking for. Using the recommendations given in the paper, this change in the practice and the methods applied in farming turns beneficial not only to environment but potentially can result in higher revenues for farmers of India.

With this background the current study entitled "Awareness of Green marketing through digital marketing technologies among Grape growers in Karnataka" is conducted. The introductory section of the paper delineates the green marketing practices using the digital technologies. The second section offers a comprehensive literature review on the awareness of farmers on green marketing. The research procedures utilized in this study are outlined in the third section, detailing the analytical tools and sample selection criteria. The fourth section of the paper concentrates on the results and discussion of the research study. The concluding section of this study encompasses the conclusion and the potential directions for further research.

## **REVIEW OF LITERATURE**

This study utilized a systematic literature review methodology to assess the origins and consequences of Green marketing. The initial stage of the evaluation process entailed accessing databases to locate publications from 2015 to 2024 related to awareness of green marketing, the advantages and

disadvantages of green marketing. After reviewing multiple papers, 20 were considered relevant and subsequently included in the study.

### **Digital Marketing in agriculture business**

1. **Waluyo (2024).** As one of the world's most important economic sectors, agribusiness must adapt quickly to the changing demands of consumers and the marketplace by capitalizing on the opportunities presented by the explosion of digital technology. The purpose of this study is to examine how agribusiness product marketing might be enhanced through the use of digital technologies. The use of social media, agriculture-specific e-commerce platforms, and mobile applications has increased the visibility of agricultural products and increased farmers' access to markets.
2. **KN et al., (2024)** The promotion of agricultural goods through the use of information technology, and more specifically digital marketing, is the focus of this study. The study aims to solve the obstacles experienced by millennial farmers in Wonotulus Village, Purworejo Regency, Indonesia, as a result of lengthy distribution chains and their reliance on middlemen. It proposes internet marketing tactics as a solution to these issues. The paper highlights the effects of digital marketing on farmers' bargaining positions, market access, and revenue growth through extensive references and case studies in diverse villages. The significance of training and mentorship for participants from SMEs is highlighted in the conclusion, which also highlights the efficacy of digital marketing.
3. **Fitriana et al., (2024, January)** Innovations in information technology, particularly the internet, have had an impact on every sector of Indonesia's economy, from commerce in agricultural goods to company operations. Prior studies on digital marketing have been focused on non-agricultural goods sold in industrialized nations and have taken the perspective of firms and sellers. Research on digital marketing in underdeveloped nations, particularly for agricultural goods, should still incorporate a consumer-side viewpoint, however. To address this knowledge vacuum, this study has been conducted. Increasing the usage of websites, social media, and viral marketing to promote agricultural products is suggested by this study as a means of reaching highly educated consumers who are digital natives.
4. **Zghurska et al, (2023)** The scientific study aims to identify and rationalize ideal ways and tools of digital marketing in the agricultural business within the framework of the dynamic acceleration of modern society's globalization and digitization processes. The research aims to clarify the function of digital marketing tools in agricultural development. These tools encompass a variety of digital communication channels that aim to inform the target audience about commercial opportunities, while also giving businesses the chance to better focus their communication channels, analyze market conditions, and gather consumer feedback.

5. **Ravi & Rajasekaran, (2023)** The purpose of this work is to investigate the factors that encourage the usage of digital marketing technologies in academic pursuits. Attitude, trust, adaptability, value, and quality are elements that impact digital marketing, as per the author's prior research. Digital marketing outperforms traditional marketing, and consumers are more receptive to it, as shown by the author's review of current studies.
6. **Şalvarlı (2023)**, By 2050, the world's population is projected to reach approximately 9.7 billion. To ensure an adequate supply of staple foods, this case focused on intensive good agricultural practices that sought to boost productivity in agricultural production operations. When it comes to future economic, social, and environmental sustainability, agricultural firms that adhere to a sustainable agriculture policy will have a leg up thanks to their efficient and effective use of resources. The rise of digitization will be a major factor in the agricultural and marketing industries, as will the importance of improved yield techniques and sound agricultural practices brought about by advancements in agricultural technology. Sustainable digital agriculture and marketing stand to benefit greatly from initiatives aimed at resolving issues plaguing the agricultural sector.
7. **Gabriel & Gandorfer, (2023)** Numerous research has focused on the application of digital technologies in crop production and livestock farming, mirroring the increasing digitization in the agricultural industry. On the other hand, research on digitization tendencies in the context of subsistence farming has been scarce. In a small-scale agricultural region in southern Germany,
8. **Srivastava (2022)** The Indian economy relies heavily on agriculture. The agricultural supply chain is the lifeblood of our nation, supporting the livelihoods of the vast majority of its residents. This study sheds light on the function of labor in the modern digital age with regard to the online promotion of agricultural goods. Search engine optimization, affiliate marketing, e-mail marketing, and social media marketing are all examples of e-marketing platforms that digital marketers use to monitor and analyze customers' intricate and ever-changing purchasing habits. To ensure the e-marketing framework for agricultural products is sound, structural equation modeling is employed. The model that has been established has the potential to improve the capacity of workers in this digital age to create a successful online marketing plan for agricultural goods.
9. **Ali & Xia, (2022)** Many see the rise of AI and big data as a promising new way to solve the world's most pressing social and industrial issues. The COVID-19 pandemic has sparked expectations of quick expansion in the digital agricultural market (DAM) in the years to come. A new digital asset management (DAM) company can take advantage of the industry's predicted expansion from \$5.6 billion in 2020 to \$6.2 billion in 2021 and \$11 billion in 2025, respectively. Finding and assessing the DAM industry's present and future activities on social welfare and the environment is necessary for this to serve as a reference for local and foreign

corporations looking to spend more in the industry going forward.

10. **Dudukalov et al., (2022)** In order to address food shortages, this study proposes and proves through regression analysis the hypothesis that expanded reproduction in agriculture is currently accomplished through conveyor-based agro-industrial production, which goes against the idea of agricultural sustainability.
11. **Prasad & Rao, (2019)** Business-to-business (B2B) e-commerce, a well-known phenomenon on a worldwide scale, is also booming in the Indian agriculture industry. One promising strategy for improving India's agricultural marketing's disjointed and inefficient supply chain is the government's electronic National Agricultural Marketing (eNAM) program. More sales opportunities, easier access to markets, lower costs associated with intermediaries, and better supply chain practices—all thanks to this business-to-business e-commerce network. High adoption of eNAM is necessary to get its benefits. This section uses a pilot study to examine the following adoption framework constructs: "Performance Expectancy," "Effort Expectancy," "Social Influence," "Facilitating Conditions," "Behavioural Intention," "Trust," and "Cost" as they pertain to the Indian agricultural industry. Analyzing data acquired from an opinion poll in the Meerut wholesale market in Uttar Pradesh (UP), we examine the link between adoption factors and intention to adopt. In the long run, the success of the National Agricultural Marketing B2B platform depends on the increasing number of users, and this study should shed light on the online habits of adopters.
12. **Kamani et al., (2016)** There is tremendous untapped potential for social media to facilitate smallholder farmers' access to and exchange of information. Users have access to robust tools for content and contact sharing, organization, and discovery through online social networks. The need to examine the features and usage of online social networks on a large scale is fueled by the rapid growth and practicality of these sites. In order to enhance existing systems and create new applications for online social networks, it is crucial to comprehend this study. Numerous massive technologies, each with its own unique offering, have recently been dominating the market.
13. **Lamba, P. (2017)** Efficient markets ensure that all participants are on an equal footing and that prices are discovered efficiently. This study takes a comprehensive look at recent trends in agricultural marketing in India, with a focus on how to overcome obstacles to e-NAM deployment in order to halve farmers' incomes and, by extension, reduce poverty in line with SDG targets. Using the three I's (Infrastructure, Institutions, and Information), the study identifies a number of obstacles to e-NAM implementation and calls for public-private interventions to shore up the supply chain's back end, changes to state APMC Acts to make room for e-tendering operations, and extensive education of farmers on the advantages of e-NAM.

14. **Raju et al., (2016)** With the exception of certain federal programs, agricultural marketing is largely the purview of the individual states. The establishment of physical markets, storage facilities (both on and off farm), transportation, packing, grading, standardization, and price support programs under the Minimum Support Price (MSP) have been the primary goals of successive Five-Year Plans beginning in 1951. The promotion and maintenance of agricultural production and productivity, which in turn leads to food security and inclusive national growth, is greatly influenced by agricultural marketing.

### **Green marketing in Agriculture business**

1. **Shankar (2011).** Most businesses are now focusing less on making conventional products and more on making environmentally friendly ones in order to stay competitive. Products as diverse as cars, batteries, fridges, microwaves, air conditioners, paints, computers, energy-efficient lighting, real estate, insecticides, and buildings have all embraced the idea of green marketing. Because farming is so important to India's economy, the fertilisers utilised have a direct impact on crop yields. Companies should make fertilisers that are safe for the environment and won't harm crops when utilised by farmers. The purpose of this article is to raise awareness about the environmental friendliness of green fertilisers and to identify the elements impacting green marketing by learning how knowledgeable farmers are about these products. As an integral part of India's agricultural system, sustainable green marketing is something that this study can shed light on and raise awareness of among farmers.
2. **Durmaz & Yaşar (2016)** Businesses today understand that they cannot continue to operate without taking environmental issues into consideration. Businesses have to take environmental considerations of all activities in their corporate strategy and long-term plans. Those environmental initiatives and green marketing are beginning to be taken into consideration by so many businesses. In this study, green marketing is investigated.
3. **Li et al., (2020)** A key practical issue that needed to be addressed to promote sustainable growth of the agricultural economy was to understand why and how farmers were prepared to engage in agricultural green production (AGP) in the setting of increasingly tight resource and environmental restrictions. Perceived dangers had a considerably negative effect on AGP willingness, in contrast to perceived value that had a strongly favourable effect. In addition, while perceived value had a stronger direct impact on farmers' AGP willingness than perceived benefits or dangers, perceived benefits were the deciding factor that played a crucial role in AGP willingness. This was due to the fact that, on the route from perceived benefits to green production willingness, perceived value actively mediated at a rate of 23.1%.

## **RESEARCH GAP**

There is very limited research studies tied to assess the level of awareness and adopted green marketing practices by the farmers in India. These comprise an empirical gap of sorts into which studies on the effects of digital green marketing to farmers in India can be situated. The results of this study can then be used to create more educational tools to continue to spread the word about sustainable farming to the Indian farmers. In conclusion, it will be critical to close this empirical gap in order to fully leverage digital green marketing efforts in the agricultural sector in India.

## **RESEARCH OBJECTIVES**

- To assess the use of digital marketing Platforms by grape framers in Karnataka
- To analyse the awareness of green marketing practices among grape framers in Karnataka
- To evaluate the influence of demographic variables on the use of digital marketing platforms and awareness of green marketing practices by grape growers.

## **RESEARCH METHODS**

The present study is exploratory in nature, the researcher aims to explore the awareness of the grape farmers on Green marketing through digital marketing channels. The sample for the study is drawn from Karnataka state. Karnataka ranks as the second-largest grape producer in India, following Maharashtra. During the 2020-21 year, Karnataka contributed 25% to India's overall grape crop. Karnataka possesses 10,000 hectares dedicated to grape cultivation. The primary grape cultivars cultivated in Karnataka include Bengaluru Blue, Anab-e-Shahi, seedless variety, and various other types. The typical grape production in Karnataka is 10 tonnes per acre, however the VSD grape variety can produce up to 20 tonnes per acre. The acreage, production, and productivity of grapes in Karnataka have all increased markedly over time. The biggest growth rate is observed in the Belagavi and Kalaburagi divisions. Using the Cochran formula of unknown population, 100 Farmers were chosen from four divisions of Karnataka using convenience sampling technique. Bangalore division (20 Farmers), Mysore (20 Farmers) division, Kalaburgi (30 Farmers), and Belgavi division (30 Farmers). A semi structured questionnaire was prepared using the regional language Kannada and data was collected on the existing use of Digital marketing Platforms and awareness of green marketing among the farmer. Three questions were asked to measure the use of digital marketing platforms and three questions were connected with awareness of green marketing practices. A 5-point likert scale of agreement was used to record the responses on the grape growers. The data is analysed using the ANOVA and Independent t test results conducted through the SPSS software.

## **RESULTS AND DISCUSSION**

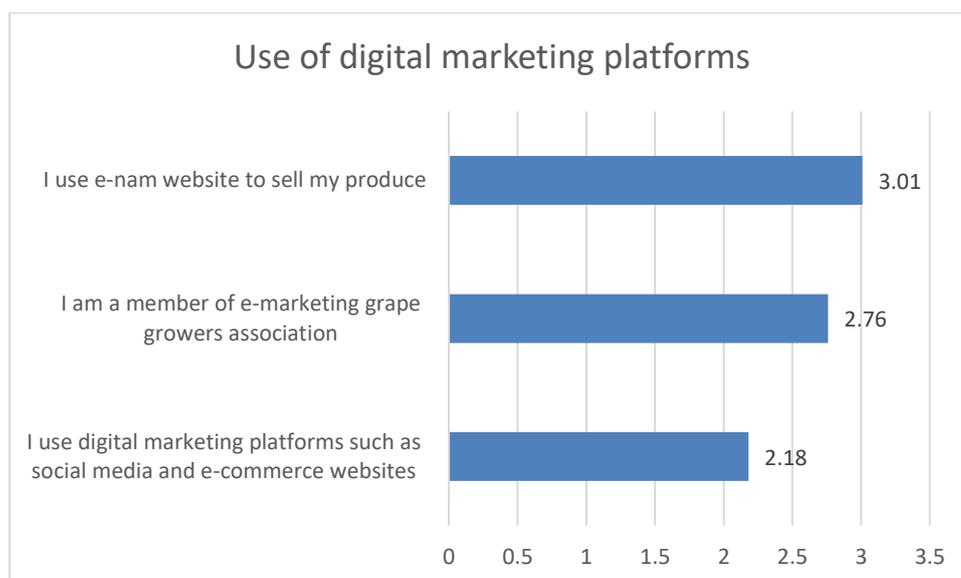
### **Demographic profile of the respondents**

Of the farmers surveyed, 86% were men and 14% were women. Of the total number of farmers, 12.8% are between the ages of 18 and 25, while 38.4% are between the ages of 25 and 35. The age group of

35–45 comprises 27% of farmers. Among farmers, 15.1% are between the ages of 45 and 55, while 6.7% are 55 and up. Of the farmers surveyed, 27.6% have finished elementary school, 54.1% have finished secondary school, 14.0% have earned a PUC or diploma, and 4.4% have earned a bachelor's degree. In contrast to the 32% who have eight or more family members, 36.3% have four or less. Joint families with many members are common in rural areas. Of those surveyed, 23% reported an annual income of less than 50,000. An annual income of over 100,000 was earned by 13.1%, while 64% earned between 50,000 and 1,00,000. In terms of farmland, 33.4% of farmers are considered marginal, with less than 1 acre of arable land; 49.4% are small, with 1–5 acres; and 17.2% are medium, with 5 acres or more.

### Use of digital marketing Platforms by grape framers in Karnataka

Figure 1 - Use of digital marketing Platforms by grape framers in Karnataka



The mean scores below 3.00 indicate disagreement range of responses which shows that less than 35% farmers in the study use digital marketing channels. However, most grape producers resort to e-nam services for marketing of their produce. Social media and e-commerce websites are least used digital marketing strategies by farmers.

### Awareness of Green marketing practices among grape framers in Karnataka

**Figure 2 - Awareness of Green marketing practices among grape framers in Karnataka**



The mean scores for awareness of Green marketing practices also had mean scores below 3.00, Thus there was least awareness of green marketing practices among Grape growers in Karnataka. This could be as a result of little awareness being created and enhanced on sustainable farming methods in the area. Also, the grape growers may not be aware of the available and potential of green marketing and may not have access to the tools and information. Due to lacking of proper education and support, farmers cannot effectively use environmentally friendly processes within the agricultural processes. To this end, more awareness creation and sensitisation efforts should be rolled out to educate grape growers in Karnataka on the rationale for green marketing as well as its possible benefits.

**Testing of Hypothesis**

**H1 – There is an influence of demographic variables on the use of digital marketing platforms by grape growers**

**Table 1 – ANOVA and Independent t test results - influence of demographic variables on the use of digital marketing platforms by grape growers**

	ANOVA- F Statistics				Independent t test
	Age	Qualification	Marital Status	Monthly Income	Gender
<b>I use digital marketing platforms such as social media and e-commerce websites</b>	2.412*	2.632*	1.275	1.612*	1.398
<b>I am a member of e-marketing grape growers association</b>	3.818*	3.538*	0.997	1.613*	1.038
<b>I use e-nam website to sell my produce</b>	8.180*	7.226*	2.358	2.913*	1.591
<b>* Indicate statistically significant at p&lt;0.05</b>					

The results of ANOVA test reveal that age is a significant indicator which influences the use of digital marketing tools. Farmer who are between 25-30 years of age are the highest users of digital marketing tools as compared to the older age group. Qualification is also a significant influencer of digital marketing tools used by grape grower. Farmers who have completed their PUC and above have higher inclination towards using digital marketing channels. Monthly Income from Farming also impacts the use of digital technologies, farmers with greater income have the budget to use digital marketing platforms. However, gender and marital status are statistically insignificant for use of digital marketing technologies.

**H2 – There is an influence of demographic variables on the awareness of green marketing practices by grape growers**

**Table 2 – ANOVA and Independent t test results - influence of demographic variables on the awareness of green marketing practices by grape growers**

	ANOVA- F Statistics				Independent t test
	Age	Qualification	Marital Status	Monthly Income	Gender
<b>I am aware of green marketing (Eco friendly marketing)</b>	3.334*	3.687*	0.565	0.659	6.196*
<b>I am aware the green marketing will help my business</b>	4.922*	1.835*	0.151	3.034	4.547*
<b>I am aware that green marketing is the sustainable marketing strategy</b>	9.827*	1.217*	0.276	2.413	4.029*
<b>* indicate statistically significant at p&lt;0.05</b>					

The results of ANOVA test reveal that age is a significant indicator which influences the awareness of Green marketing strategies. Farmer who are between 18-30 years of age have higher awareness of green marketing. Qualification is also a significant influencer of awareness of green marketing strategies of grape grower. Farmers who have completed their PUC and above have higher awareness of green marketing. The independent t test results show that male farmers have greater awareness of green marketing practices. However, Monthly Income and marital status are statistically insignificant for use of digital marketing technologies.

## CONCLUSION

The report has revealed that it would be wise for grape growers in Karnataka to employ the use of the internet to market grapes. With the help of the social networks and Internet sites for market selling the grape producers can expand the circle of consumers and boost up the sales. This will also assist them to directly engage consumers and thus break the circle of depending on conventional marketing techniques. The opportunity to shift towards digital marketing means that the grape growers in Karnataka can manage to compete effectively in the market and thus attain higher profitability.

This paper recommends the government to assist grape growers in Karnataka in prevailing over these challenges by offering training, tools, and support to enable the producers to exploit digital marketing effectively. Since the government can provide grape growers with knowledge through enablement of

support programs and workshops, growers can be equipped with the right knowledge in the marketing of the produce through the internet. Further, the government can also facilitate partnership with the agencies so as to engage grape growers into e-commerce platform market places for easy selling of their crops. In sum, future government assistance in this field will produce much-positive impacts on grape growers in Karnataka and enable them to carry out their business more effectively in a digital world.

Some of the advantages of green marketing should be described by the government and other related institutions in a bid to encourage grape producers adopt eco-friendly production techniques. Suggesting the measures to focus on environmental-friendly process of grape farming and appealing the usefulness of environmental-friendly marketing, in order to gain a greater circle of customers, the government will be able to assist grape producers. This in particular may cause more sales and enhanced profitability for growers of the grapes in Karnataka. Therefore, the government can contribute to prosperous future for grape-growing industry in the region.

Since the present study is confined to a specific area of agriculture, future scholars may examine the effects of the government's support on sustainability in other agricultural segments. Besides, they can extend more information about the consumer behavior and inclination toward the environmental friendly products available in the market. Thus, greater research should be made by policymakers as well as the stakeholders in the industry by identifying ways and means for fostering sustainable growth and development in the sector. This may set a precedent and not only assist grape growers in Karnataka but the whole agricultural industry in the area.

## REFERENCES

1. Ali, A., & Xia, C. (2022). Current and prospective impacts of digital marketing on the small agricultural stakeholders in the developing countries. In *Application of machine learning in agriculture* (pp. 91-112). Academic Press.
2. Arora, M. (2020). Green Marketing In India: A Study Of Benefits And Opportunities. *Green Banking and Environment*, 161.
3. Dangelico, R. M., & Vocalelli, D. (2017). "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner production*, 165, 1263-1279.
4. Dudukalov, E. V., Patsyuk, E. V., Pecherskaya, O. A., & Petrenko, Y. S. (2022). Expanded Reproduction as the Basis for Agricultural Sustainability: Marketing, Digital Economy, and Smart Technologies. In *Sustainable Agriculture: Circular to Reconstructive, Volume 1* (pp. 255-263). Singapore: Springer Singapore.
5. Durmaz, Y., & Yaşar, H. V. (2016). Green marketing and benefits to business. *Business and Management studies*, 2(2), 64-71.

6. Durmaz, Y., & Yaşar, H. V. (2016). Green marketing and benefits to business. *Business and Management studies*, 2(2), 64-71.
7. Fitriana, W., Azriani, Z., & Hariance, R. (2024, January). Utilization of Digital Marketing in Food Agricultural Business. In *International Conference on Entrepreneurship, Leadership and Business Innovation (ICELBI 2022)* (pp. 688-698). Atlantis Press.
8. Gabriel, A., & Gandorfer, M. (2023). Adoption of digital technologies in agriculture—an inventory in a european small-scale farming region. *Precision Agriculture*, 24(1), 68-91.
9. Kamani, K. C., Ghodasara, Y. R., Soni, N. V., & Parsaniya, A. (2016). Empowering Indian agriculture with WhatsApp—a positive step towards digital India. *International Journal of Agriculture Sciences*, ISSN, 0975-3710.
10. Kilbourne, W. E. (1998). Green marketing: A theoretical perspective. *Journal of Marketing Management*, 14(6), 641-655.
11. KN, L. K., & Nasution, M. I. P. (2024). USE OF DIGITAL MARKETING INFORMATION TECHNOLOGY IN MARKETING AGRICULTURAL PRODUCTS. *Jurnal Ekonomi Bisnis dan Manajemen*, 2(1), 47-57.
12. Lamba, P. (2017). A new era in agricultural marketing in India. *IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM)*, 5(7), 19-24.
13. Li, M., Wang, J., Zhao, P., Chen, K., & Wu, L. (2020). Factors affecting the willingness of agricultural green production from the perspective of farmers' perceptions. *Science of the Total Environment*, 738, 140289.
14. Liao, Y. K., Wu, W. Y., & Pham, T. T. (2020). Examining the moderating effects of green marketing and green psychological benefits on customers' green attitude, value and purchase intention. *Sustainability*, 12(18), 7461.
15. Mishra, P., & Sharma, P. (2010). Green marketing in India: Emerging opportunities and challenges. *Journal of Engineering, Science and Management Education*, 3(1), 9-14.
16. Mishra, P., & Sharma, P. (2014). Green marketing: Challenges and opportunities for business. *BVIMR Management Edge*, 7(1).
17. Peattie, K. (2016). Green marketing. In *The marketing book* (pp. 573-597). Routledge.
18. Prasad, A. P., & Rao, V. C. (2019). Excellence in agri-marketing through national agricultural market (NAM) for sustainability of Indian farming sector. *Archives of Business Research*, 7(11), 91-103.
19. Raju, K. V., Naik, G., Ramseshan, R., Pandey, T., & Joshi, P. (2016). Transforming Agricultural Marketing in India: Linking Farmers to a National Gateway and E-Markets Current Scenario and a Way Forward, *Research Report IDC-5*.
20. Ravi, S., & Rajasekaran, S. R. C. (2023). A perspective of digital marketing in rural areas: A literature review. *International Journal of Professional Business Review*, 8(4), e01388-e01388.

21. Şalvarlı, M. S. (2023). Evaluation of Sustainable Digital Agriculture Marketing Using The AHP Method. *Evaluation*, 89.
22. Shankar, M. G. (2011). A study on the awareness level of the farmers towards green marketing. *International Journal of Management Prudence*, 3(1), 158.
23. Srivastava, G. (2022). Antecedents of e-marketing of agriculture products in this digital era: An empirical study. *International Journal of Technology and Human Interaction (IJTHI)*, 18(7), 1-17.
24. Tiwari, J. (2014). Green marketing in India: An overview. *IOSR Journal of Business and Management*, 1(6), 33-40.
25. Vilkaite-Vaitone, N., & Skackauskiene, I. (2019). Green marketing orientation: evolution, conceptualization and potential benefits. *Open Economics*, 2(1), 53-62.
26. Waluyo, T. (2024). Utilization of digital technology in marketing agribusiness products. *Jurnal Multidisiplin Sahombu*, 4(01), 34-41.
27. Zghurska, O., Fedorchenko, A., Larina, Y., Yerankin, O., Dyma, O., & Avramchuk, L. (2023). DETERMINATIVE ROLE OF USING DIGITAL MARKETING TOOLS FOR THE AGRICULTURE DEVELOPMENT. *Journal of Hygienic Engineering & Design*, 44.