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# A Study of Navigating the Landscape of Organic Farming: Analysing Challenges and Exploring Opportunities for Sustainability in Buldhana Region

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**ABSTRACT:** Organic farming has emerged as an important priority in India to promote environmental sustainability and food safety. With only 1.5% of total agricultural land under organic cultivation, there is immense scope for growth. Organic farming avoids use of synthetic fertilizers and pesticides, and focuses on traditional practices that nurture the soil through crop rotations, organic manures, green manures and biological pest control. This review article provides an overview of the current status, benefits, challenges and future prospects of organic farming in India. Organic produce fetches higher prices and improves farm incomes. Organic practices build soil health, conserve biodiversity, reduce pollution and mitigate climate change impacts. Challenges include transition costs, certification burdens, lack of awareness, supply chain gaps and insufficient institutional support. Government schemes to mainstream organic farming through farmer incentives, market development and extension services have shown positive impacts. Further policy support, public-private partnerships, farmer collectives and participatory guarantee systems can help tap the full potential of organic farming towards building sustainable food production systems in India.

## I. INTRODUCTION

The organic movement may have gained a place in the spotlight of the mainstream media now, but it has not been like that for long. Since the 1950s, organic farmers operating at a grass roots level have devised, tested and shared production methods. They have codified a set of ideals into a pioneering best practice agricultural management system that addresses multiple community values. Niche markets have gradually been created, commonly based on trust and goodwill (formal certification did not begin until the 1960s and 1970s), and often using novel direct marketing strategies such as box schemes and community supported agriculture. After many years of consumers having to hunt around for their organic produce from several suppliers, perhaps directly from the farmer, the task is now a lot easier with specialist food shops and organic shelf space in supermarkets, in the industrialised world at least. Global links have been forged in all continents as organic agriculture has been seen to be an effective rural development option.

A global perspective Despite the generally positive outlook, the organic movement faces several hurdles as it expands internationally. A recent review of organic farming listed several challenges facing organic agriculture (Halberg et al. 2005a) including:

- ecological justice;
- animal welfare;
- fair trade;
- supply chain development;
- productivity limitations; and
- regional adaptation and global harmonisation for standards

Agriculture is one of the oldest and most fundamental primary occupation of all human beings since stone age. It is a foundation of all social Cultural and Economical condition of mankind. The oldest civilization of the world depends upon Agriculture. Since the agriculture is one of the fundamental economic activities (Pawar M.S. 2008) of a man and is closely related with various geographical factors.



## II. WHAT IS ORGANIC FARMING

Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment.

As per the definition of the United States Department of Agriculture (USDA) study team on organic farming “organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection”.

### The key characteristics of organic farming include

- Protecting the long term fertility of soils by maintaining organic matter levels, encouraging soil biological activity, and careful mechanical intervention
- Providing crop nutrients indirectly using relatively insoluble nutrient sources which are made available to the plant by the action of soil micro-organisms
- Nitrogen self-sufficiency through the use of legumes and biological nitrogen fixation, as well as effective recycling of organic materials including crop residues and livestock manures
- Weed, disease and pest control relying primarily on crop rotations, natural predators, diversity, organic manuring, resistant varieties and limited (preferably minimal) thermal, biological and chemical intervention
- The extensive management of livestock, paying full regard to their evolutionary adaptations, behavioural needs and animal welfare issues with respect to nutrition, housing, health, breeding and rearing
- Careful attention to the impact of the farming system on the wider environment and the conservation of wildlife and natural habitats

## III. LITERATURE REVIEW

**Ramesh P. Singh Mohan and Rao Subha (2005)**, Organic farming: It relevance to the Indian context. Present paper considering the potential environmental benefits of organic production and its compatibility with integrated agricultural approaches to rural development, organic agriculture may be considered as a developed vehicle for developing countries like India in Practical.

**Prabhakar Shetty R.K. (2007)**, Social perspectives of organic farming. Present paper discuss as organic farming has the potential to provide positive externalities in social aspects like job opportunities and rural development.

**Jadhav A.S. Gaikwad C.B. Shaikh A.A. and Tumbare A.D. (2001)**, Organic farming in the pest, its relevant in the present and the future agriculture it studies that there is a growing concern about the health and the environmental hazards of chemical-based intensive agriculture.

**Kikani B.K. (2007)**, Limitations of microbial technology for organic farming. He studies that the rural economy is facing a challenge of over dependence on synthetic input an the increase the price of these inputs further, the Indian Agriculture face the market competition due to the globalization of trade.

**Gahukar R.T. (2006)**, Potential and use of bio-fertilizers in India. Present paper stated that, Bio-fertilizers are natural and organic products. They help to provides and keep in the soil all the materials and micro-organism required for the plant growth.

**Murthy K. Srinivasa and Nigam G.L. (2001)**, Organic farming and pest management. They stated that, organic farming systems, water management, balanced use of fertilizers, use of bio-pesticides and botanicals form part of integrated pest management strategies to control that losses owing to pests and diseases (10 to 30 percent) hole to successful farming.

**Telashikar S.C. and Mehta V.B. (2007)**, They attempted to find out the quality of organic inputs and their standards for organic farming.

**Mayande V.M. (2007)**, He studied on crop recycles. A major sources for organic farming crop residues are utilized for different purposes since the inception of agriculture.

**Kaur Jaswinder and Kalra R.K. (2006)**.Organic farming in Punjab- A case study this paper is an attempt to know



the type of farmers engaged in organic farming background and functioning of the concerned private firms and identify the problems faced by the farmers along with the reasons for practicing organic farming.

**Gaur A.C. (2001)**, Organic manure a basic input in organic farming. The paper explains the important of organic manure in organic farming. Many of growing successfully crops like coconut, spices, banana, grapes etc. with the liberaluse of organic manures.

**Pal S.S., Singh Ravindra, Biswas Chinmay and Jat M.C. (July-2005)**, Prospects and problems of growing crops in upper genetic plains region. This study focused that green revolution technology has undoubtedly increased production and labor efficiency. But it showed remarkable side effects on field and farm-level diversity as well as on environment.

**Rao S.S. and Shaktawat (Dec.2000)**, He explain in his studies that the fertilizer need of a crop in cropping system mainly depends on the characteristics of preceding crop and kind and quantities of fertilizers applied.

**ALI Shaviquea, Khan Iram and Ali Ayeshas (Jan.2001)**, Friendly earthworms. This work highlight the important soil organisms apart from enriching the soil, they are now increasingly being recognized as indicators of soil health too.

**DaglaHarchand R andShekhawat N.S. (2006)**, Origin of Agriculture. The present paper addresses the history of agriculture and the origin of agriculture was the other great change for humanity after the mastery of fire.

**Kokate K.D. Kharde P.B. and Ahire M.C. (2007)**, Social aspects and challenges of organic farming. This work highlights on social aspects and benefits arising from organic farming as and also studies the challenges of organic farming.

**Suri V.K. (2007)**, Scope of commercialization of indigenouse technology for organic farming he studies in his paper that west material organic farmer presently using a variety of other local products to meet nutritional requirement of crops and protect them against pest with a good measure of success.

#### IV. RESEARCH METHODOLOGY

##### Objective

- Understanding Organic Farming
- Analysing Challenges in organic farming
- Explore Sustainability Opportunities of organic farming in buldhana region
- study of long term sustainability Strategies in Organic Farming

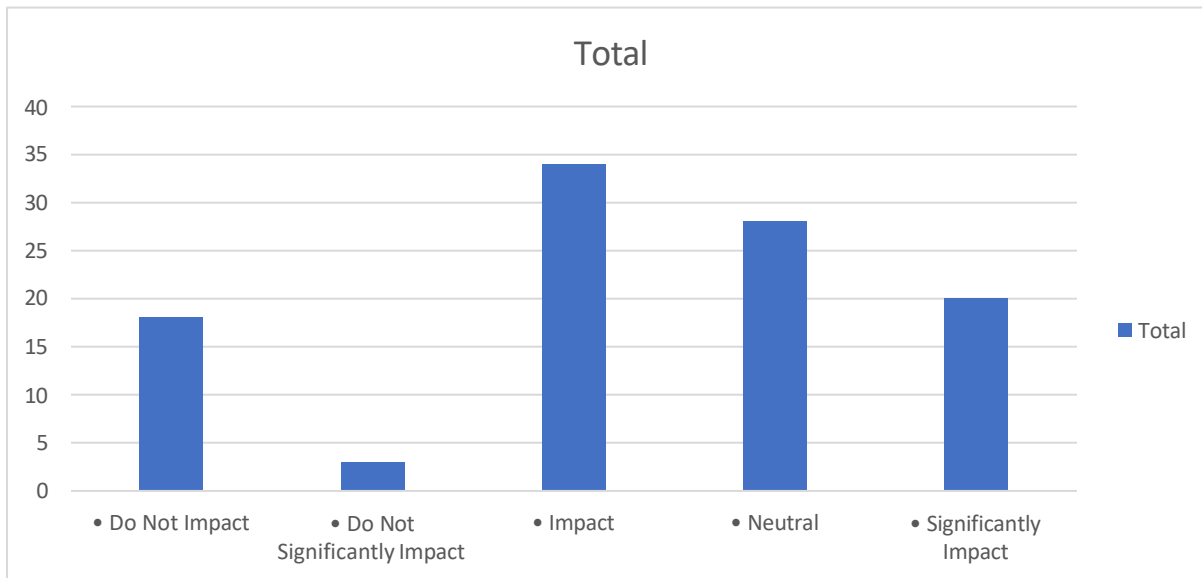
##### Analysis and Interpretation

**Table no.1.1**

<b>Organic farming practices are feasible for the agricultural landscape of Buldhana Region.</b>	
<b>Count in %</b>	
<b>Do not impact</b>	<b>17%</b>
<b>Do not significantly impact</b>	<b>3%</b>
<b>Impact</b>	<b>33%</b>
<b>Neutral</b>	<b>27%</b>
<b>Significantly impact</b>	<b>20%</b>
<b>Total</b>	<b>100</b>



Chart no.1.1



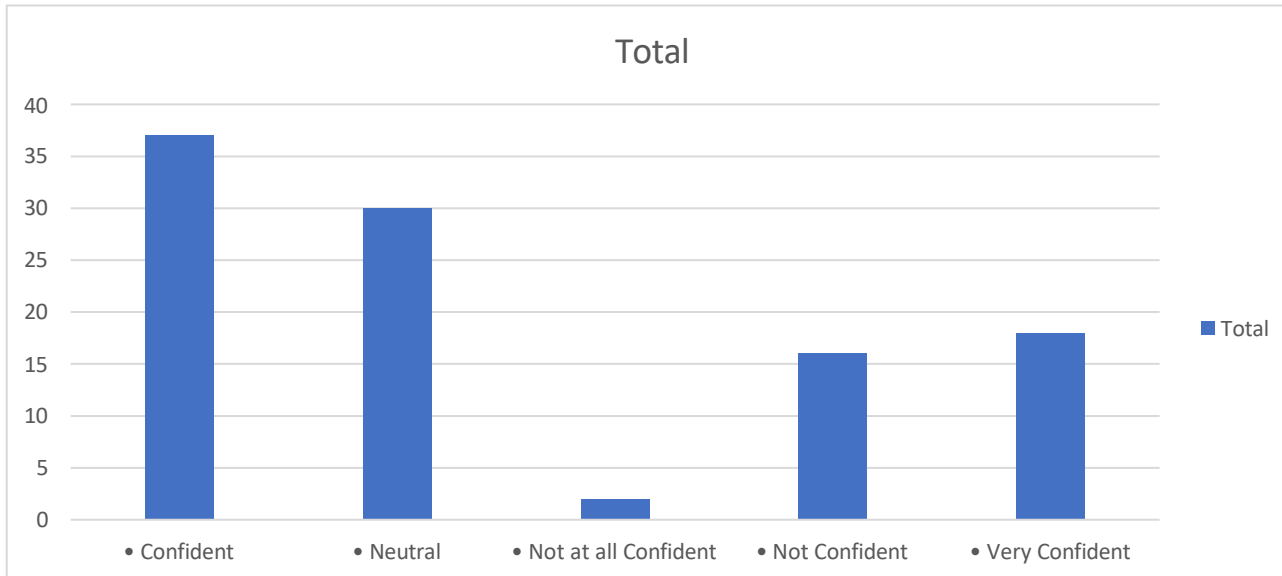
organic farming practices are generally perceived to have an impact in the Buldhana Region. Specifically, 53% of respondents either find them impactful or significantly impactful. However, there is a considerable portion, 27%, who remain neutral, suggesting a degree of uncertainty or ambivalence toward organic farming practices.

Table no. 1.2

The challenges faced in implementing organic farming methods in Buldhana Region are significant.	
Count in %	
Confident	34%
Neutral	30%
Not at all confident	2%
Not confident	16%
Very confident	18%
Total	100%



Chart no. 1.2



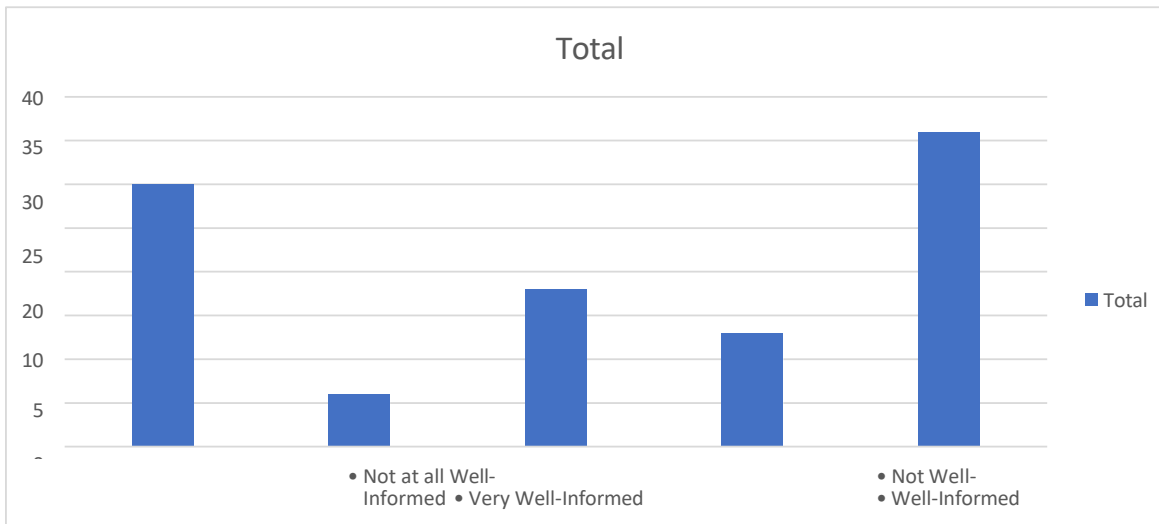
while there is a notable level of confidence (52%) in implementing organic farming methods in the Buldhana Region, significant challenges persist, indicating a need for further support and resources to facilitate successful adoption.

Table no. 1.3

There is adequate awareness among farmers about the benefits of organic farming in the Buldhana Region.	
Count in %	
Neutral	30%
Not at all well inform	6%
Not well inform	17%
Very well inform	13%
Well inform	36%
<b>Total</b>	<b>100%</b>



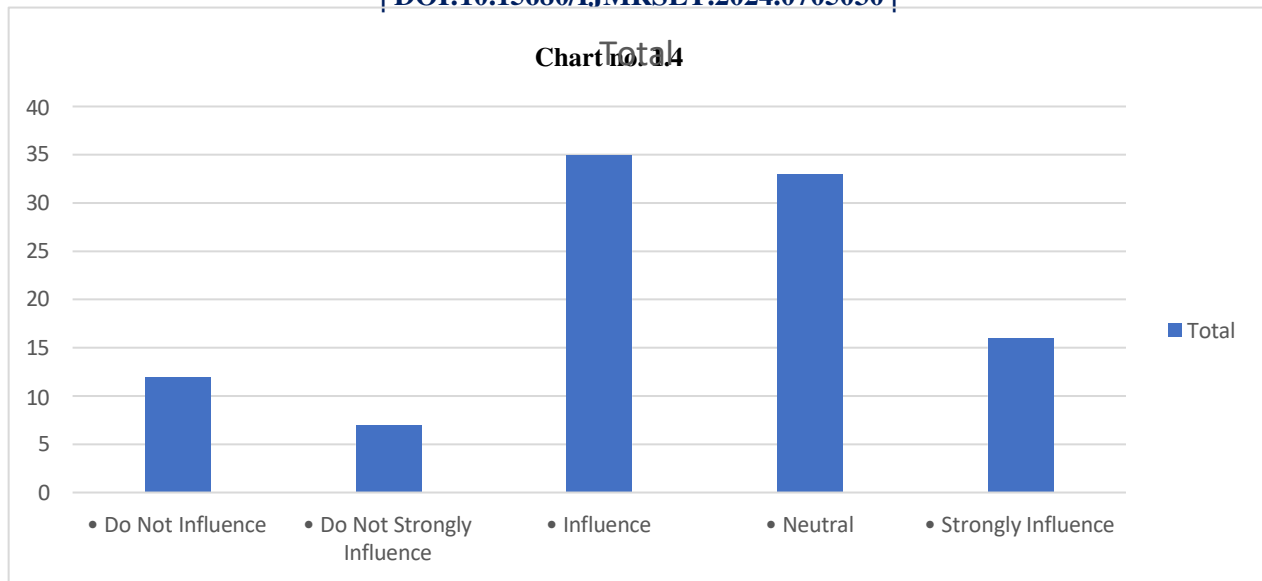
Chart no. 1.3



The majority of farmers in the Buldhana Region are well-informed about the benefits of organic farming, with 49% being either 'Well informed' or 'Very well informed'. However, there is still room for improvement, as 23% of farmers are either 'Neutral' or 'Not well informed'. Efforts should be made to further educate and raise awareness among these segments of farmers to promote wider adoption of organic farming practices in the region."

Table no. 1.4

Access to resources like organic fertilizers and pesticides is a major hurdle for organic farming in this region	
Count in %	
Do not influence	11%
Do not strongly influence	6%
Influence	34%
Neutral	33%
Strongly influence	16%
<b>Total</b>	<b>100%</b>



Access to resources like organic fertilizers and pesticides is perceived as a significant hurdle for organic farming in this region. A combined 50% of respondents either strongly or simply influence this perception, while only 17% indicate that it does not significantly influence their view. Additionally, a significant portion (33%) remains neutral, suggesting a potential awareness or concern about this issue.

## V. CONCLUSION

In conclusion, adoption of organic farming in India remains far below potential despite growing demand and substantial benefits for sustainability. A favourable policy for environment, marketing support, and farmer-centric extension can facilitate wider adoption of organic practices. This will contribute to solving the economic, environmental and nutritional challenges facing Indian agriculture today. Sustained innovation, enterprise and collectivism involving diverse stakeholders can enable organic farming to usher in a sustainable agricultural future for India

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