

# The Organic Shift: Evaluating Farmer Perceptions and Practices in Shimla, Himachal Pradesh

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## **Abstract:**

In the agriculturally diverse terrains of Shimla, Himachal Pradesh, this study delves into the understanding and application of organic farming methodologies among local farmers. Utilising a strategic sampling approach, we engaged with 90 stakeholders across three subdivisions in Shimla District. These participants, representing a mix of farming backgrounds from various villages, provided a holistic view of the region's agricultural practices. Primary insights were gathered through a meticulously curated interview framework. The findings of this study reveal that a significant proportion of respondents possess a moderate level of perception (57.77%) and adoption (64.44%) when it comes to organic farming principles. Interestingly, the derived correlation coefficients between various determinants and core study variables (understanding and integration) hint at intricate relationships, alluding to external factors not explicitly addressed in our research. This underscores potential challenges that might be impeding the full-fledged adoption of organic practices. The research unravels the multifaceted nature of farming in Shimla and emphasises the need for specialised interventions to bridge the knowledge-implementation gap in organic farming. Such endeavours have the potential to elevate both the sustainability and productivity aspects of agriculture in this pivotal region.

**Keywords:** Organic Farming, Awareness, Adoption, Perception

## **Introduction**

Organic farming is a holistic agricultural approach that emphasizes the cultivation of crops without the use of synthetic pesticides, herbicides, and genetically modified organisms, focusing instead on practices that restore, maintain, and enhance ecological harmony. Central to this method is the belief in a system-oriented approach, where the farm is viewed as an interconnected organism (Lampkin, 1990). Organic farming practices often involve crop rotation, green manure, compost, biological pest control, and mechanical cultivation to enhance soil health, maximise biological activity, and maintain long-term soil fertility. By fostering a symbiotic relationship between the soil, plants, and animals, organic farming aims to achieve sustainable and harmonious agricultural production (Reganold et al., 1987). The goal is not just to replace synthetic inputs with natural ones, but to harness the natural processes that occur within a farming system, ensuring long-term sustainability, biodiversity, and ecological balance (Altieri, 1995). The inception of organic agriculture as a contemporary concept traces its roots to the early 20th century, predominantly in Europe and subsequently in the United States. This evolution was a response to escalating concerns about soil erosion, diminishing crop varieties, and subpar food quality, coinciding

with the rapid mechanisation of agriculture. This mechanisation revolutionised farming, making it more affordable and significantly boosting crop yields. Sir Albert Howard, a British botanist, is often heralded as the pioneer of modern organic agriculture. In 1905, he meticulously documented traditional farming practices in Pusa, Bihar, India, and deemed them superior to prevailing agricultural science. His observations culminated in the seminal work "The Agricultural Testament" and later, in 1947, "The Soil and Health, A Study of Organic Agriculture"—the first book to explicitly address organic agriculture/farming (Howard, 2006). Concurrently, in 1924, Rudolf Steiner, an Austrian philosopher, introduced biodynamic farming in Germany. This holistic approach underscored the symbiotic relationship between animals, plants, and soil, rooted in Steiner's anthroposophical philosophy rather than empirical science (Steiner, 1929). To further his agricultural vision, Steiner instituted the Agricultural Experimental Circle of Anthroposophical Farmers and Gardeners of the General Anthroposophical Society (Paull, J. (2011)). The term "organic farming" was conceptualised by British agronomist Lord Northbourne in his 1940 publication "Look to the Land", where he advocated for a holistic and ecologically harmonious farming approach (Northbourne, 1940). Meanwhile, in Japan, microbiologist Masanobu Fukuoka pioneered a "No-Till" organic farming model around 1940, which is contemporarily recognized as natural or Fukuoka Farming (Fukuoka, 2009).

Organic agriculture, while a contemporary buzzword, has deep-seated roots in India's agrarian history. The ancient Indian civilization, dating back thousands of years, was underpinned by organic farming practices. Traditional Indian agriculture was inherently organic, leveraging plant and animal derivatives as fertilisers and pesticides. This age-old approach to farming can be traced back to 10,000 years ago when early cultivators relied solely on natural resources. Ancient Indian scriptures, including the Rigveda, Ramayana, Mahabharata, and Kautilya's Arthashastra, make notable mentions of organic inputs, underscoring the significance of these practices in historical agrarian communities (Sofia et al., 2006). Indeed, organic farming was the linchpin of the Indian economy, with cow dung being a pivotal organic fertiliser. However, post-independence, the Green Revolution around 1965 ushered in a wave of conventional farming, driven by the allure of increased yields. This shift, while initially promising, soon revealed detrimental impacts on land health and human well-being. Consequently, discerning farmers and consumers, cognizant of the adverse effects of conventional farming, began gravitating back to organic farming, recognizing its sustainable and health-centric ethos (Singh & Grover, 2011).

Following the economic reforms of 1991 in India, the global landscape for organic farming underwent significant transformations. In 1991, the European Union established a foundational legal framework for organic agriculture, which underwent subsequent revisions in 1999, 2007, and 2008 (Michelsen, 2008). By 1997, the United States Department of Agriculture (USDA) introduced its inaugural National Organic Program (NOP), marking a pivotal moment in organic agriculture's regulatory evolution (Heckman, 2006). Two years later, in 1999, the Codex Alimentarius, a commission steered by the UN's World Health Organization and the Food and Agriculture Organization, endorsed international guidelines for the cultivation, processing, marketing, and labelling of organic foods, setting a global benchmark (Jacobsen, 2002). The dawn of the new millennium saw Japan establishing the JAS Standards for organic plants and organic processed foods of plant origin in 2000. This was closely followed by the United States formally adopting the National Organic Program (NOP) in 2002, offering a comprehensive blueprint for organic agriculture's growth (Youngberg & DeMuth, 2013). In a move to further bolster organic farming, the European Commission, in 2004, embraced the first Action Plan for Organic Food and Farming (Padel, 2005). Organic farming, deeply embedded in India's agrarian traditions, has witnessed a resurgence in

recent decades, driven by increasing awareness of sustainable practices and health considerations (Behera et al., 2012). India's diverse agro-climatic zones offer a conducive environment for various organic crops, with states like Himachal Pradesh emerging as frontrunners in this domain. Himachal Pradesh, with its unique topography and climate, has embraced organic farming, capitalising on its traditional farming practices and the state's inclination towards horticultural crops, which are particularly suited for organic cultivation (Mehta et al., 2018). The state's initiatives, coupled with farmers' enthusiasm, have positioned Himachal Pradesh as a model for organic farming, contributing significantly to India's organic produce market (Thakur et al., 2010).

Utilising a strategic sampling approach, this study engages with 90 stakeholders across three subdivisions in Shimla, Himachal Pradesh. Participants from diverse farming backgrounds provide insights into the region's agricultural practices. Data is collected through a meticulously curated interview framework, with findings suggesting varied levels of understanding and integration of organic farming principles.

**Material and methods**

The research was conducted in deliberately chosen three subdivisions of the Shimla district. A group of 90 individuals participated, providing insights into the study's main focus: understanding the levels of perception and implementation of organic farming practices among them. To gather this data, a carefully designed interview schedule was used. Furthermore, an in-depth questionnaire was formulated to explore the socio-economic backgrounds of the participants, encompassing factors such as annual earnings, age, education, and duration of farming experience. The goal was to discern how these individual attributes might sway one's views and actual adoption of organic farming techniques. In terms of data analysis, various statistical tools, including calculations of frequency, percentage, mean, standard deviation (SD) and correlation coefficients, were utilised to ensure a thorough interpretation of the findings.

**Results and Discussion**

The subsequent sections present a comprehensive analysis of the collected data, shedding light on the perception and adoption of organic farming practices among Shimla's farmers. Through a series of tables, we explore the intricate relationships between various socio-economic factors and their influence on organic farming decisions. This discussion aims to provide a deeper understanding of the current agricultural landscape in Shimla and the challenges and opportunities it presents.

S. No.	Level	Perception		Adoption	
		Frequency	Percentage	Frequency	Percentage
1.	Low	27	30	25	27.77
2.	Medium	52	57.77	58	64.44
3.	High	11	12.22	7	7.78

**Table 1. Perception level and Adoption level of farmers**

Table 1. offers an in-depth insight into the varying degrees of farmers' perception and their subsequent adoption of organic farming methodologies. The data, meticulously categorized into Low, Medium, and High levels, paints a vivid picture of the current landscape of organic farming awareness and its practical implementation. At the lower spectrum, we observe that about 30% of farmers, although having some rudimentary knowledge about organic farming, might not be fully cognizant of its comprehensive benefits or techniques. This is further substantiated by the fact that the adoption rate at this level is marginally lower, suggesting that a foundational understanding doesn't always translate to practical application. On the other hand, the medium level encapsulates the majority, with 57.77% of farmers. These individuals, while having a more refined grasp of organic farming, might still be on the fence about its complete range of benefits or might lack the resources to implement it fully. This hypothesis gains traction when we note that the adoption rate, intriguingly, surpasses the perception rate, hinting at a proactive approach by many to integrate organic practices, even if their comprehension isn't exhaustive. The high-level segment, though smaller in number, represents the cream of the crop. These farmers, constituting 12.22%, are well-versed with the nuances of organic farming. However, a slightly lower adoption rate in this bracket underscores potential external challenges they might face. In essence, the table underscores a pivotal observation: while awareness about organic farming is on the rise, there remains a tangible gap between understanding and its real-world application, necessitating targeted interventions to bridge this divide.

**Table 2. Relationship between personal, socio economic characteristics of farmers and their perception and adoption of organic farming.**

S.No.	Characteristics	Frequency	Percentage	Correlation Coefficient 'r'	
				Perception	Adoption
1.	<b>Annual income</b>				
	More than 2.5 Lakh	33	36.67	0.52	0.50
	1.5 Lakh - 2.5 Lakh	47	52.22	0.47	0.45
	Less than 1.5 lakh	10	11.11	-0.15	-0.13

<b>2.</b>	<b>Age</b>				
	Upto 30 years	27	30	0.55	0.53
	between 30-50 years	59	65.56	0.48	0.46
	Above 50 years	4	4.44	-0.10	-0.08

<b>3.</b>	<b>Education</b>				
	Illiterate	15	16.66	-0.25	-0.22
	12th pass	48	53.33	0.50	0.48
	Graduate and above	27	30	0.58	0.56

4.	Farming experience				
	Below 10 years	11	12.22	0.20	0.18
	Between 10-20 years	35	38.89	0.45	0.43
	Above 20 years	44	48.89	0.60	0.58

Table 2. offers a detailed exploration into the correlation between various personal and socio-economic attributes of farmers and their perception and adoption of organic farming practices. The data, segmented based on annual income, age, education, and farming experience, provides a multifaceted view of the factors influencing organic farming decisions. For instance, the annual income data suggests a clear trend: farmers with higher incomes tend to have a more favourable perception and adoption rate of organic farming. This could be attributed to their better access to resources and information. Conversely, those in the lower income bracket exhibit a negative correlation, indicating potential barriers such as limited awareness or financial constraints. The age factor presents another intriguing perspective. Younger farmers, those up to 30 years, display a strong positive correlation, possibly due to their exposure to modern farming techniques and a greater willingness to innovate. However, as age increases, there's a slight dip in the correlation, with the elderly group being less receptive, hinting at a preference for traditional methods. The role of education is undeniable, with a clear positive correlation observed as the education level rises. Illiterate farmers, unfortunately, lag behind, emphasising the pivotal role of education in promoting organic practices. Lastly, farming experience showcases a nuanced view. While newer entrants to farming are open to organic methods, it's the veterans, those with over 20 years of experience, who exhibit the strongest inclination towards organic farming, possibly recognizing its long-term benefits.

The findings of the study resonate with previous research in the domain of organic farming, yet they also present unique insights specific to the Shimla region. The perception and adoption levels, as depicted in Table 1, align with the observations made by (Gour, 2016). , who noted a rising awareness of organic farming practices across India. However, the gap between perception and actual adoption, as highlighted in our study, is more pronounced in Shimla compared to the national average. This discrepancy underscores the region-specific challenges that farmers in Shimla face, which might not be prevalent in other parts of the country. The correlation between socio-economic attributes and organic farming decisions, as presented in Table 2, offers parallels to the findings of Azam (2015). They observed that farmers with higher incomes and educational backgrounds tend to be more receptive to organic farming practices. Our study further refines this observation by highlighting the nuanced role of age and farming

experience. While Azam (2015) suggested a general positive correlation between age and organic farming adoption, our study nuances this by showing that younger farmers in Shimla are more inclined towards organic practices, but this inclination tends to taper off as age increases. This divergence could be attributed to the unique socio-cultural dynamics of Shimla, where younger generations might have more exposure to modern farming techniques and global sustainability trends.

Furthermore, the strong positive correlation between farming experience and organic farming adoption, especially among veterans, echoes the findings of Ramesh and Rao (2005). They argued that seasoned farmers, with their vast experiential knowledge, are better positioned to recognize the long-term benefits of organic farming. However, present study adds another layer to this by suggesting that while these veterans are well-aware, external challenges might still impede their full-fledged adoption of organic practices. Thus, while the findings of the study align with the broader trends observed in previous research, they also shed light on the unique challenges and opportunities in Shimla. As the organic farming movement gains momentum, it is crucial to consider these region-specific insights to tailor interventions effectively.

## Conclusion

This research, centered in Shimla's diverse agricultural terrains, has unveiled significant insights into the perception and adoption of organic farming practices among local farmers. While a majority of respondents demonstrated a moderate understanding and integration of organic farming principles, there exists a discernible gap between knowledge and its practical application. The study's findings, when juxtaposed with prior research, emphasise the unique socio-economic and cultural dynamics of Shimla that influence these trends. Notably, factors such as income, age, education, and farming experience play pivotal roles in shaping farmers' organic farming decisions. As the global push towards sustainable agriculture intensifies, understanding and addressing these region-specific nuances becomes paramount. This research underscores the need for tailored interventions in Shimla to bridge the existing knowledge-implementation chasm, ultimately fostering a more sustainable and productive agricultural landscape.

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