

**Gendered Inequities in Agriculture: A Spatio-Economic Study of Women's
Challenges in Sonipat District**

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Abstract

This study investigates the persistent gender-based disparities in the agricultural sector of Sonipat district, Haryana, with a specific focus on unequal pay, limited access to education and training, and economic marginalization of women. Despite women's extensive contributions to both crop cultivation and allied sectors such as dairy farming, they remain underpaid and excluded from income control and decision-making processes. A 2024 primary survey reveals that women earn 30–40% less than men for performing similar or more labor-intensive agricultural tasks. Furthermore, women account for over 80% of dairy-related labor yet lack access to the financial benefits. Spatial analysis across eight blocks shows significant disparities, with Mundlana, Kathura, and Gohana exhibiting the highest inequality in wages and restricted access to education and skill development. Cultural constraints and the digital divide further exacerbate the invisibility and disempowerment of women in rural agricultural contexts. The findings highlight the need for targeted reforms, including wage parity, educational investment, credit access, and institutional recognition of women's roles in agriculture. This study underscores the critical need for inclusive agricultural policy and gender-responsive governance to ensure sustainable rural development and women's empowerment.

Keywords: Women in Agriculture; Gender Inequality; Unequal Pay; Sonipat District; Rural Development; Dairy Farming; Economic Marginalization; Skill Training; Digital Divide; Haryana Agriculture; Patriarchy and Labor Rights; Agricultural Empowerment.

Introduction

Agriculture remains the backbone of India's rural economy, employing a significant proportion of the country's labor force. Within this sector, women constitute a vital yet undervalued component, contributing extensively to farming, livestock rearing, and allied activities. Despite their indispensable role, women in agriculture continue to face systemic inequalities that manifest in multiple dimensions—unequal pay, lack of ownership over land and assets, limited access to education and training, and exclusion from financial decision-making. These disparities are particularly stark in the context of rural Haryana, where patriarchal norms and socio-economic structures reinforce women's marginalization. Sonipat district, located in the northern part of Haryana, exemplifies the gendered inequities pervasive in agrarian settings. With a predominantly rural population and a high reliance on irrigated agriculture, the district offers a representative case to examine the structural and cultural barriers faced by women.

Recent studies and primary surveys conducted in 2023 and 2024 across the district reveal troubling patterns—women are paid significantly less than men for the same agricultural tasks, often receive no financial returns from their labor in dairy farming, and face restricted access to education, digital tools, and training resources. These challenges are not merely economic; they reflect deeper issues of gender bias, lack of institutional support, and policy neglect. This study seeks to analyze these gender-based challenges in a spatial and statistical framework, focusing on eight blocks of Sonipat: Ganaur, Sonipat, Rai, Kharkhoda, Gohana, Kathura, Murthal, and Mundlana. By mapping patterns of unequal pay and limited access to resources, the research aims to highlight the urgent need for gender-sensitive reforms in rural agricultural policy.

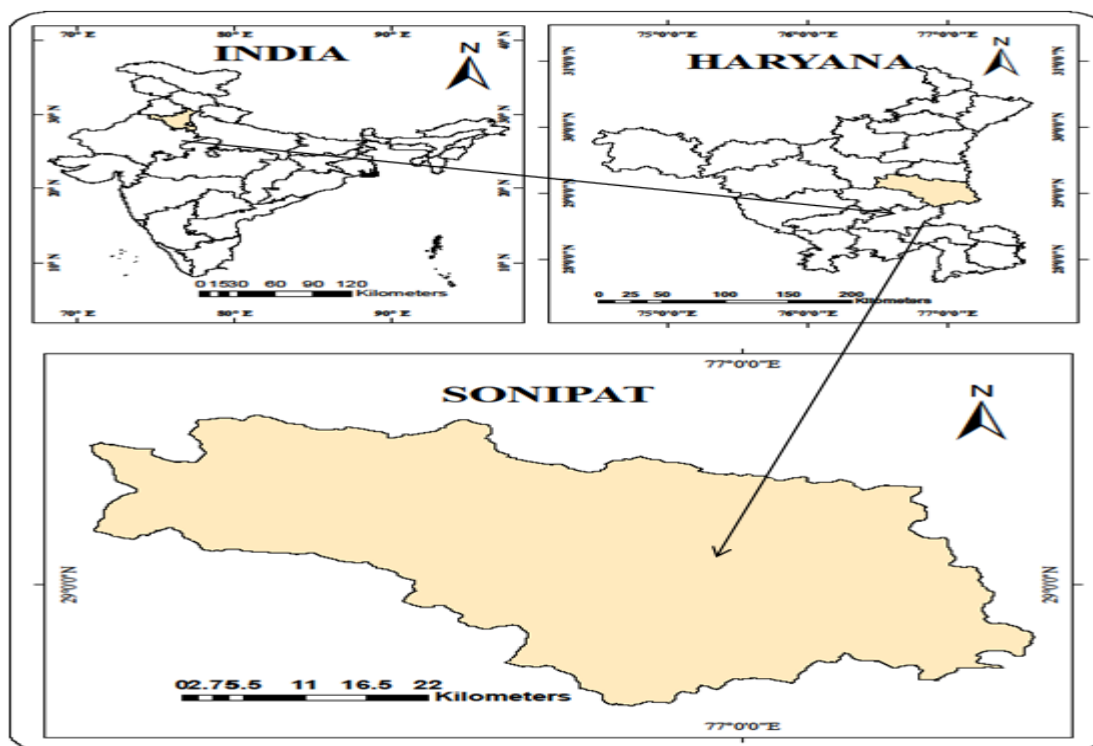
Objectives

- i. To study the problem faced by women in agriculture.

Study Area

Sonipat district is one of the densely populated districts of the state. It lies between latitudinal and longitudinal extent of 28°57'19" N to 29°01'29" N latitude and 76°58'27" E to 77°05'19" E longitude. Total area of Sonipat is 2,122 km² including 2,039.99 km² rural area and 82.01 km² urban area. As per 2011 stats, Sonipat has a population of 14, 50,001 peoples, out of which urban population is 4, 53,364 while rural population is 9, 96,637. The district has a population density of 683 inhabitants per square kilometre. There are about 2, 77,726 houses in the district, including 90,174 urban houses and 1, 87,552 rural houses. When it comes to villages, there are about 319 villages in Sonipat district

Map 1: Location of the Study area



Source: Prepared by the research scholar with the help of QGIS

District Sonipat comprises four sub-divisions, namely Ganaur, Sonapat, Kharkhoda and Gohana and eight blocks (Ganaur, Sonipat, Rai, Kharkhoda, Gohana, Kathura, Murthal and Mundlana) has been carved out of Rohtak and made a full-fledged district on 22 December 1972. Sonapat is the largest tehsil followed by Gohana. It has one Municipal Corporation Sonipat and three municipal committees Ganaur, Gohana and Kharkhoda. The River Yamuna, which borders the district in the East, is the main river in the district. The district is drained by drain no.8, which was constructed to take out excess monsoon runoff from uplands to River Yamuna. The areas east of upland plains are more prone to flooding because of its low-lying nature. Irrigation in the district is done by surface and ground water as well. Around 42 percent of the area is irrigated by tube wells and rest of the area is irrigated by canals. About 96 percent area has been irrigated with respect to net sown area in the district. The district has a high irrigation intensity of 159 percent. About 91 percent area of the district is gross area irrigated with respect to total cropped area. The climate of the district is characterized by the dryness of the air with an intensely hot summer and a cold winter. The cold season starts by late November and extends to about the middle of March. It is followed by hot season, which continues to about the end of June when the southwest monsoon arrives over the district.

Unequal pay and economic marginalization of women in Sonipat

The problem of unequal pay and economic marginalization of women in Sonipat becomes even more evident when examining block-level and sector-specific data. A 2023 survey conducted in the Gohana block revealed a striking disparity in agricultural wages: women engaged in the labor-intensive task of paddy transplantation were paid only ₹150 per day, while men performing plowing—a task of comparable physical demand—earned ₹250 per day. This wage gap not only reflects gender-based discrimination but also the undervaluation of traditionally female agricultural roles, despite their critical importance in crop cultivation. The inequality extends beyond crop farming into allied sectors like dairy farming. According to a 2022 study by the National Dairy Research Institute (NDRI), women contribute approximately 80% of the total labor in dairy activities, including milking, feeding, cleaning and animal care. However, men retain complete control over the income generated from these efforts. This reinforces a cycle where women perform the majority of the work but are systematically excluded from financial decision-making and ownership. Such gendered economic structures reduce women's visibility as contributors to the rural economy and diminish their bargaining power, autonomy and long-term financial security. These patterns are deeply rooted in patriarchal norms that assign productive value to male labor while treating women's work as an extension of domestic responsibility. To break this cycle, there is a need for institutional reforms that ensure wage parity, joint ownership of agricultural assets, access to credit for women and direct income transfers into women's accounts. Only then can true economic empowerment of rural women be achieved.

Table 1: *Unequal Pay for Equal Work*

Issue	Fact/Data	Example
Wage gap in farming	Women earn 30-40% less than men for same work.	In Gohana, women earn ₹150/day for transplanting paddy vs. men's ₹250/day for plowing.
MGNREGA wage disparity	Women: ₹214/day	Men: ₹250/day.
Unpaid dairy labor	Women do 80% of dairy work, but men control income.	In Kharkhoda, women milk buffaloes but sales proceeds go to male family members.

Source: Haryana Panchayat Department Report, 2023

Unequal pay for equal work remains one of the most glaring manifestations of gender discrimination in agriculture, with women consistently earning less than men despite doing similar or even more labor-intensive tasks. In Sonipat, this wage gap is stark—women earn 30–40% less than men for the same agricultural work. A clear example comes from Gohana, where women are paid only ₹150 per day for transplanting paddy, while men earn ₹250 per day for plowing, even though both jobs require physical endurance and skill. This disparity not only reflects gender bias but also undermines women's economic agency and contribution to farming. The wage gap is institutionalized even in government employment schemes like MGNREGA, where women receive ₹214 per day compared to ₹250 for men, further entrenching financial inequality in state-supported programs meant to offer equal opportunity. The situation is worse in sectors like dairy farming, where women contribute extensively but remain invisible in terms of income control. Women perform over 80% of dairy-related work, including feeding, cleaning and milking, yet men retain control over the earnings. In Kharkhoda, for instance, women handle the daily chores of milking buffaloes and maintaining livestock, but the sales proceeds from milk are collected and managed by male family members, leaving women with the labor but none of the financial benefits. This system of unpaid or underpaid labor reinforces women's dependence and devalues their essential contributions to the rural economy. Addressing these inequities requires not just wage reforms but also structural changes that recognize and remunerate women's work fairly, promote shared income rights and ensure women's representation in labor negotiations and cooperatives.

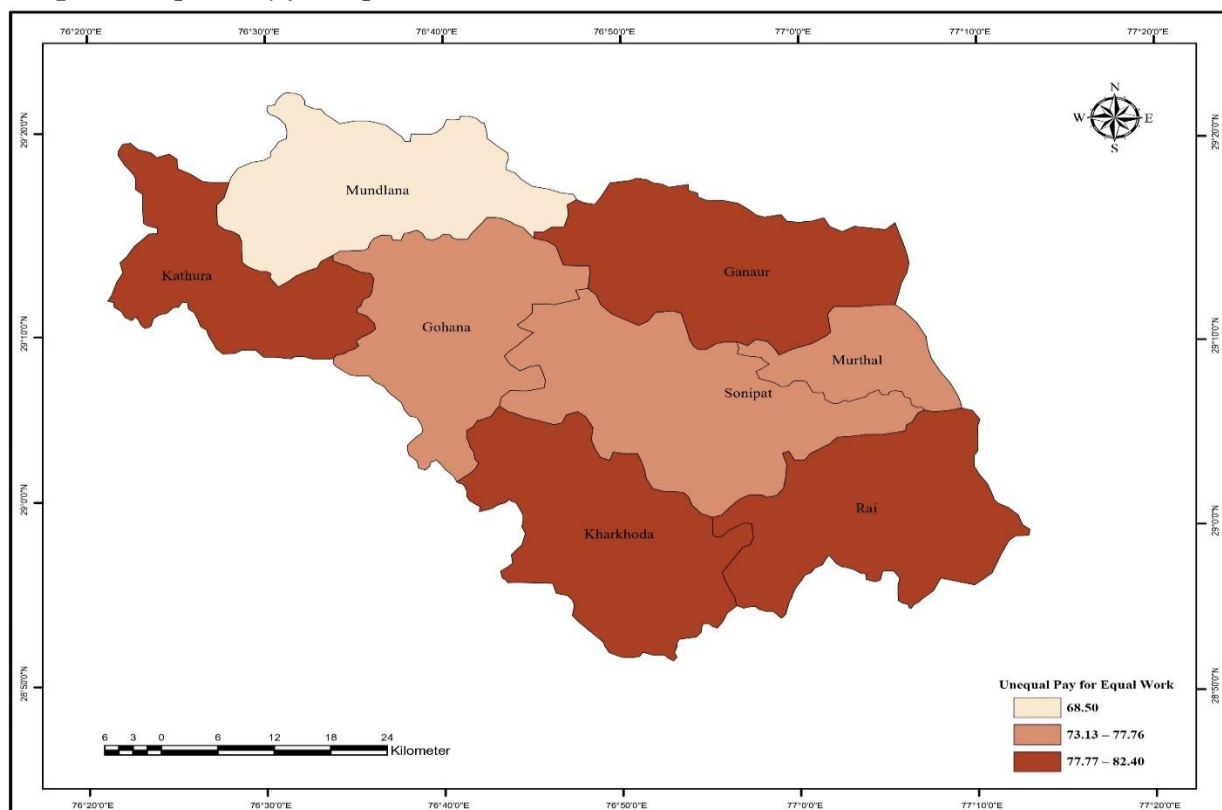
Table 2: *Unequal Pay for Equal Work in the Year 2024*

Sr. No.	Blocks in Sonipat	Unequal Pay for Equal Work
1	Mundlana	82.40
2	Kathura	79.60
3	Gohana	76.30
4	Ganaur	73.80
5	Rai	68.50
6	Sonipat	78.20

7	Kharkhoda	70.40
8	Murthal	74.10

Source: Primary survey, 2024

Map 2: Unequal Pay for Equal Work in the Year 2024



Source: Prepared by the research scholar with the help of QGIS

In the year 2024, the issue of unequal pay for equal work among the blocks of Sonipat district continues to reflect significant disparities, highlighting ongoing gender and labor inequalities. According to the data, Mundlana block reported the highest level of unequal pay at 82.40%, indicating a severe gap in wage distribution for individuals performing the same work. It was followed closely by Kathura (79.60%), Sonipat (78.20%), and Gohana (76.30%), suggesting that a large proportion of the workforce in these areas, particularly women and marginalized workers, are not compensated fairly in comparison to their counterparts. Other blocks such as Murthal (74.10%), Ganaur (73.80%), and Kharkhoda (70.40%) also show considerable inequality, though slightly lower than the top-ranking blocks. Rai block, while still affected, displayed the least unequal pay among the listed areas at 68.50%, yet this figure too remains concerning. These statistics point to a critical need for stronger enforcement of labor laws, gender equity initiatives, and workplace accountability in Sonipat, as unequal pay not only undermines the principles of social justice but also impedes overall economic growth and the empowerment of disadvantaged groups.

The digital divide further isolates rural women from the growing wave of agri-tech solutions and e-governance tools. While platforms like Kisan Call Centres aim to provide timely advisories, only 12% of women avail these services. The primary barrier is not just

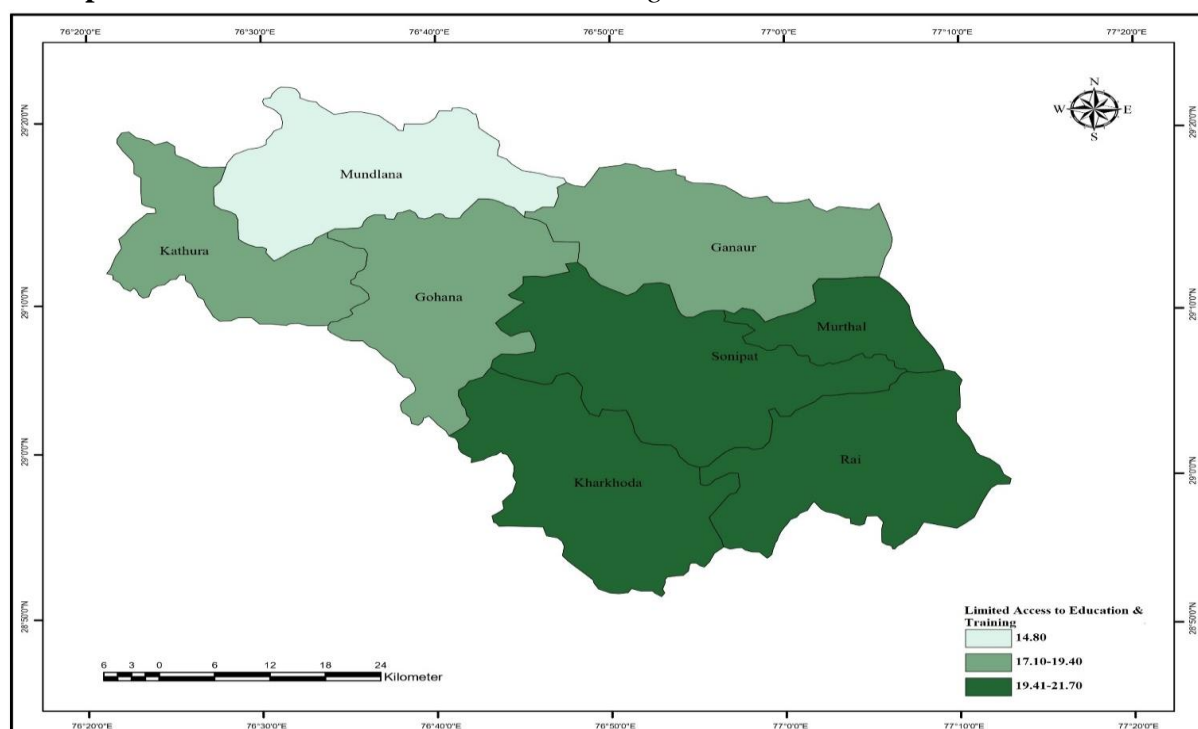
digital illiteracy but also restrictive social norms, such as purdah, which discourage or prevent women from using mobile phones or speaking with male advisors. As a result, women miss out on vital weather updates, market prices and farming techniques that could improve their yield and income. This triple disadvantage—low literacy, exclusion from training and limited digital access—not only stifles their potential but also perpetuates their invisibility in agricultural development. Bridging these gaps is crucial for enabling women to become informed, confident and capable contributors to India’s agricultural future.

Table 3: *Limited Access to Education & Training in the Year 2024*

Sr. No.	Blocks in Sonipat	Limited Access to Education & Training
1	Mundlana	14.80
2	Kathura	16.10
3	Gohana	17.60
4	Ganaur	19.30
5	Rai	21.70
6	Sonipat	15.20
7	Kharkhoda	18.80
8	Murthal	16.90

Source: Primary survey, 2024

Map 3: *Limited Access to Education & Training in the Year 2024*



Source: Prepared by the research scholar with the help of QGI

In the year 2024, limited access to education and training remains a pressing challenge across various blocks of Sonipat district, reflecting regional disparities in educational opportunities and skill development. Among the blocks, Rai exhibits the highest level of restricted access at 21.70%, indicating a significant portion of the population facing barriers to educational and vocational resources. Ganaur (19.30%), Kharkhoda (18.80%), and Gohana (17.60%) also report considerable limitations, which may be attributed to factors such as inadequate infrastructure, socio-economic constraints, and gender-based restrictions. Meanwhile, Murthal (16.90%), Kathura (16.10%), and Sonipat (15.20%) show moderate levels of limitation, though the need for improvement remains evident. Mundlana, with the lowest figure at 14.80%, still reflects notable challenges in ensuring universal and equitable access to education and training. These findings emphasize the urgency of targeted government interventions, including investment in rural education infrastructure, expansion of vocational training centers, and focused programs for women and marginalized communities, to bridge the existing gaps and promote inclusive human development in Sonipat district.

Conclusion

The present study clearly illustrates that despite their critical contributions to the agricultural economy, women in Sonipat district remain systematically marginalized across multiple dimensions. From unequal pay for equal work to restricted access to education, training, and financial resources, rural women face entrenched structural and social barriers that hinder their empowerment and visibility in the agrarian sector. The block-wise data from 2024 reinforces this reality—women receive 30–40% lower wages than men for performing similar or even more labor-intensive agricultural tasks, and their unpaid contributions in dairy farming remain economically unrecognized. Furthermore, the limited access to training and digital agri-services due to social norms and digital illiteracy further alienates them from modern farming advancements. These patterns not only perpetuate gender-based economic injustice but also undermine the overall productivity and sustainability of the rural economy. The invisibility of women's labor in official records and income channels reflects a deep-rooted patriarchy that must be addressed through targeted institutional, legal, and policy reforms. Efforts such as ensuring wage parity, joint ownership of agricultural assets, expansion of rural training centers for women, access to agri-credit, and digital literacy programs are essential steps toward bridging these gaps. In conclusion, the empowerment of women in agriculture is not merely a gender issue—it is a developmental imperative. True rural progress in districts like Sonipat can only be achieved when women are acknowledged, rewarded, and equipped as equal partners in the agrarian economy. Addressing these inequities holistically will pave the way for inclusive and sustainable agricultural growth in Haryana and beyond.

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