Analysis of the 2020 Farm Reform Bills: Gaps in MSP and Their Impact on Farmers' Welfare in India

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| KEYWORDS |  | ABSTRACT |
| Agriculture  Minimum Support Price  Cost of Cultivation  Comprehensive Cost  Swaminathan committee  Farm Bills 2020  Farmer’s Protest  Kharif and Rabi crops |  | In the present study efforts have been made to Find the gap between MSP Given by government to farmers and MSP recommended by Swaminathan committee in the report of national commission on farmers. The NCF had submitted a total of five reports between 2004 -2006 with new formula for MSP. The secondary data on value of comprehensive cost that is cost of cultivation C2 and Current MSP of crops of both season that is kharif and rabi were collected for the period 2013-14 to 2023-24 from CACP reports and agricultural ministry reports . The collected data of cost of cultivation was converted to MSP by C2 + 50% formula and were to find gap between MSP given and MSP recommended. The study reveals that gap between MSPs is more in kharif crops as compared to rabi crops. The gap is likely to be more in cereals and pulses crops as Government policies supported main staple crop like paddy and wheat also cost of cultivation is less in these crops supporting the results of those data analysis. The MSP calculation and gap analysis were analyzed using excel tool. The gaps in percentage will help readers to understand the gap in farmers income. This paper will try to get the idea of policy required for enhancement of farmers income and also farmers to evolve their cultivation pattern based on historic MSP gaps. This study compares the MSPs announced by the government with those recommended by the Swaminathan Committee, analysing their economic impact on farmers' livelihoods and suggesting policy changes. |

# INTRODUCTION

The historical experience of almost all economies shows that the share of the agriculture and allied sectors in total employment as well as in their national income falls with progress in economic development ***(Graddy-Lovelace et al., 2020)****.* India frequently considered as an agrarian economic system, stands at a crucial situation in its agricultural journey. With over 70% of its population living in rural regions and depending directly or indirectly on agriculture for their livelihoods, the sector stays the spine of the country's financial system. Even after the implementation of the New Economic Policy (NEP) of 1991 and consequent economic reforms, the importance of agriculture and allied sectors in terms of employment generation and a source of livelihood in rural India has been enormous. However, the contribution of this sector to the Gross Domestic Product (GDP) is on the decline vis-à-vis the manufacturing and services sector. **(Kumar, 2018)** Beneath the rustic appeal lies a load of challenges that threaten the sustenance and prosperity of thousands and thousands of small-scale farmers. The demanding situations challenging small farmers in India are multifaceted and deeply rooted. Fragmented land holdings, inadequate right of entry to credit score and markets, unpredictable weather patterns increased by way of climate change, and the lack of modern generation and infrastructure in the rural landscape (Alam et al., 2023). Coupled with these challenges is the persistent challenge of poverty, which is large in rural India, riding endless farmers right into a cycle of debt and suicide.

Doubling farmers’ income or raising it to a significant degree, thus, might require some re-orientation or change in the policy stance. One fundamental ingredient of the policy comprises the identification and targeting of poor or low-income farmers**(Roy, 2017)***.* In 2019, there was agreement within the highest levels in government that a new post-Green Revolution vision for the next decade was needed. The Honourable Vice-President, in his inaugural address at the National Dialogue and in the Foreword to this book, reiterates the direction for the needed change**(Ramesh Chand, 2021)**The innovation of the latest agricultural farm bills in 2020 sought to cope with a number of those challenges by bringing a new era of agricultural reform and liberalization. The three bills which got clearance in Rajya Sabha, the upper house of the Indian parliament is, i) the Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020 and ii) the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill and The third bill as The Essential Commodities (Amendment) Bill 2020. The first bill granted permission to sell agricultural output beyond Agricultural Produce Market Committee (APMC) bound markets.The second bill facilitates contract farming facilities. There is scope for farmer to strike a deal with prospective buyers about type of crop or vegetable and corresponding prices. The third bill provides an opportunity for farmers to proceed beyond periphery of APMC markets and explore intra-state and inter-state trading options. State authorities are forbidden to impose any market fee, cess beyond the ambit of APMC. There is high wastage of food grain due to excess production of cereals and underproducing of protein-based pulses. Reform of export policy devoid of present stop-start would open up new avenues for agricultural revenue*.***(Subhendu Bhattacharya, 2021)**

However, the implementation of these bills created a great controversy and induced mass protests across the country, in particular in agrarian states like Punjab and Haryana. Farmers. Frightened of the ability repercussions, raised concerns over the deregulation of agricultural markets, the weakening of the present Agricultural Produce Market Committee (APMC) mandis, and the perceived hazard of corporate dominance in the agricultural sector. The end result of those concerns culminated in a historic display of disagreement as farmers took to the streets in protest, demanding the repeal of the controversial farm bills and the protection in their rights and livelihood. The farmer unions started protesting on the outskirts of Delhi since 26 November 2020 with a clear demand from the union government to repeal the three farm Acts and pass the new enactment of legal guarantee for minimum support price (MSP) for public and private agencies/companies engaged in the purchase of agricultural produce**(Gill, 2021**)*.* Nearly 60,000 farmers started protesting. The farmer protests of 2020-2021, marked by their scale, resilience, and team spirit, underscored the deep-rooted grievances and systemic flaws within India's agricultural policies **(Bansal, 2021)**. Amidst those challenges and protests, the idea of agripreneurship and e-commerce have emerged as a beacon of desire and opportunity for small farmers searching for alternative way for income generation. Agripreneurship, which includes the integration of entrepreneurial concepts into the rural sector, could offer a transformative technique closer to sustainable monetary improvement and empowerment of small-scale farmers. Agripreneurship creates value for primary agriculture and enhances farm income. Agripreneurship widens the job opportunities for the people in the rural areas. Enhanced agripreneurship activity could result in the improvement of rural infrastructure which may in turn encourage the growth and development of non-agricultural business activities of the rural economy **(Veni, 2018)**. By fostering innovation, selling price addition, and leveraging era, agripreneurship holds the ability to revoltionalize India's rural financial system, increase farmer incomes, and mitigate challenges prevalent in the rural area. Agribusiness firms, face the challenge of changing their business model and practices to account for the rapid growth of e-commerce. E-commerce allows firms to tap new and old suppliers through innovative channels and provides firms with the ability to lure new customers and procure old customers in new ways. The ability of the Internet to reduce transaction costs through improvements in transaction, information, and negotiation functions of the supply- chain is associated with higher probabilities of e-commerce adoption amongst agribusiness firms. **(Sharma, 2018)**

With scrapping of laws main demand of farmers was of legalisation of MSP and to give MSP according to Swaminathan comittee recommendation. Minimum Support Price (MSP) is average price of selected agricultural products recommended by the Commission for Agricultural Costs and Prices (CACP) and is fixed by the government of India. The prices are determined based on cost of production, expenses and other charges given by the farmers for production of agricultural product **(Anamika, 2022)**.As of now Government gives MSP with a formula of (A2+FL) + 50% But according to Swaminathan committee c2 that is comprehensive cost + 50% should be the formula. . In the NCF report, It was recommended that the MSP should be the total cost of production plus 50 per cent. Unfortunately, however, a recent panel set up by the Government of India has recommended a margin of only about 10 per cent more than the cost of production **(Swaminathan, 2016).** In this paper, we will try to delve into difficult dyanamics of indian agriculture, inspecting the challenges confronted to small farmers analyzing the impact of recent farm bills and recent farmers protest exploring the gap between msps. This research seeks to shedd light on different possibilities to change the future destiny of Indian farmers.

# OBJECTIVES

To Find Gap Between Cacp MSP And Swaminathan Committee Recommended MSP

# RELATED WORKS

The conclusion drawn by Charlene Murphy and Dorian Q. Fuller in their paper titled "The Agriculture of Early India" elucidates the profound and lasting impact of agricultural origins in South Asia. The transition to sedentism, alongside an increase in population size and reliance on domesticated food items, marked a significant shift in the region's socio-economic landscape. Local domestication events, particularly focusing on millets and pulses in specific regions such as south Deccan, Saurashtra Peninsula, and the upper alluvial reaches of the eastern Indus tributaries, underscore the indigenous contributions to early agricultural practices. This comprehensive review underscores the dynamic nature of early agricultural practices in South Asia and emphasizes the intricate interplay between indigenous innovations, external influences, and cultural dynamics in shaping the region's agricultural landscape. (Fuller, 2017)

The evolving landscape of Indian agriculture, as explored by Ashok Gulati and Kavery Ganguly in their paper "The Changing Landscape of Indian Agriculture" underscores the pivotal role of technology, institutions, and markets in driving revolutionary changes within the sector. The authors highlight the historical contributions of the public and cooperative sectors. Particularly during the Green Revolution and Operation Flood, in enhancing agricultural productivity and facilitating market access. However, they note a shifting paradigm towards a "for-profit" objective driven by the private sector, evident in transformative initiatives like the adoption of Bacillus thuringiensis technology in the cotton sector and corporate involvement in food processing and retailing. This transition from a "not-for-profit" to a "for-profit" ethos carries significant implications for the competitiveness, inclusiveness, sustainability, and scalability of Indian agriculture. (Gulati, 2010)

In "Economic Development and Agriculture in India" by Adam Cagliarini and Anthony Rush, the authors delve into the significant developments within the Indian agricultural sector, highlighting both its pivotal role in the economy and the challenges it faces for future growth. Despite a declining share in the overall economy over the past five decades, India's agricultural sector remains vital. However, the article also addresses several challenges impeding the sector's progress, including land distribution policies, access to credit, water management, and food distribution. (Cagliarini, 2011)

In "Liberalisation of Agriculture in India: Some Major Issues" by C.H. Hanumantha Rao, the author meticulously examines the implications of liberalization within the Indian agricultural sector. Hanumantha Rao elucidates three pivotal areas of interest: liberalization of agricultural trade, input subsidies, and institutional frameworks such as farm size and tenure. The article underscores the imperative of extending market reforms to agriculture, highlighting the potential for higher investment and growth induced by favourable terms of trade. He cautions against a one-size-fits-all approach to liberalization, stressing the need to consider the specific socio-economic context and devise tailored reform packages. (Hanumantha Rao, 1995)

In "Small Farmers in India: Challenges and Opportunities" by S. Mahendra Dev examines the multifaceted roles and challenges faced by smallholding agriculture in India. It delves into differential policies and institutional support for smallholders. along with the challenges and prospects of smallholding agriculture, including information needs. Additionally, the paper offers valuable insights and lessons from India's experience with smallholding agriculture, which could apply to other countries grappling with similar issues. Through its comprehensive analysis, the paper contributes to a deeper understanding of the dynamics surrounding smallholder agriculture in India and beyond. (Mahendra Dev, 2014)

In "Status, Challenges, and Strategies for Farm Mechanization in India" by C. R. Mehta et al., the paper addresses the pressing issue of the rural-urban income gap increased by the lagging growth of India's agricultural sector compared to industry and services. The authors emphasize the crucial role of agricultural mechanization in bolstering production and productivity, particularly in the context of small and marginal land holdings, which dominate the agricultural landscape in India. Regional disparities, such as higher tractor densities in states like Haryana and Punjab, underscore the uneven distribution of mechanization efforts. The paper also highlights the growing trend of sales in various farm equipment, projecting an increase in farm power and productivity by 2020. Additionally, they advocate for financial assistance and subsidies to facilitate the adoption of mechanization, thereby promoting agricultural modernization and bridging the rural-urban income gap (Mehta, 2014).

In "Decoding Farm Laws" by Soham Shah et al. examines the implications of recent agricultural and marketing reforms enacted by the government in India. The study highlights the government's efforts to eliminate exploitative practices through three key bills aimed at reforming agricultural marketing, contract farming, and essential commodities. These bills seek to enhance transparency in agricultural markets, particularly through the strengthening of Agricultural Produce Market Committees (APMCs). The research underscores the importance of proactive engagement by states in implementing these reforms, with potential support from the central government through matching grants. While initiatives like the electronic National Agricultural Market are expected to have a positive long- term impact, the immediate focus should be on raising awareness among farmers about the benefits of the reforms. The study suggests leveraging Krishi Vigyan Kendras (KVKs) to disseminate information and foster farmer connectivity through ICT platforms . (Shah, 2015)

The study examines challenges faced by small and marginal farmers in India, emphasizing the need for scientific approaches and policy reforms to enhance rural income and livelihoods. Authored by Mante Sakachep and Bikranta Paul, the paper critically assesses recent agricultural bills, analyzing their implications for farmers and the sector. While the bills aim to empower farmers and boost rural prosperity, concerns regarding parallel agricultural systems and the impact on existing practices are raised. The study advocates for cooperative farming, resource optimization, and streamlined MSP mechanisms to address challenges and promote sustainable agriculture. (Sakachep, 2023)

The paper "New Farm Bills and Farmers’ Resistance to Neoliberalism" by Satendra Kumar delves into the historic farmers' movement of 2020–2021 in India, which successfully compelled the government to repeal three controversial farm laws aimed at liberalizing agriculture markets. The laws were seen as threatening farmers' livelihoods and empowering corporations. Kumar analyzes the broader agrarian changes that precipitated the protests and highlights the movement's success in forging a coalition across diverse sectors to resist neoliberal policies and divisive politics. The paper underscores the significance of the movement in bringing agricultural issues to the forefront of national discourse and temporarily halting the march of neoliberalism in India . (Kumar S. , 2022)

The paper "New Farm Bills of 2020: Opportunities, Challenges and Way Ahead" by Seedari Ujwala Rani examines the implications of the new agricultural farm bills implemented in 2020 in India. It highlights the conflicts arising between farmers and the government regarding the potential impact on APMC mandis and private dominance in the agricultural sector. While the bills aim to encourage free interstate trade and private investment, there are concerns about the exploitation of farmers by private traders and inadequate infrastructure leading to post-harvest loss (Rani, 2021)

The paper "Contract Farming and Farmers’ Empowerment & Protection Bill 2020" by Braja Bandhu Swain discusses the implications of the new bill introduced by the Government of India to promote contract-based farming. It highlights the importance of balancing private sector participation with the protection of farmers' interests, particularly smallholders. The paper emphasizes the role of local self-government institutions in ensuring fair and transparent contracts, as well as the need for government regulation to prevent market abuse by contracting firms. It suggests that the state should provide incentives to encourage agribusiness firms to engage with smallholders and improve infrastructure. Additionally, relaxing regulations on land leasing are proposed to enable small farmers to expand their operations while ensuring the security of tenure. (Swain, 2020)

In the comprehensive analysis, Ashok Gulati and Devesh Kapur in their paper titled: Reforming Indian Agriculture discusses the urgent need for reforms in India's agricultural sector to improve farmer livelihoods and ensure national food security. They emphasize four key areas for reform: shifting focus from production to farmers' livelihoods, improving land and water allocation, addressing weather and price volatility risks, and enhancing agricultural market competition and infrastructure. The authors highlight the importance of cooperative federalism between the Central and state governments for successful implementation. They propose a multifaceted approach, including income transfer schemes, market liberalization, and support for livestock income. Additionally, they advocate for policy changes to promote efficient resource management and streamline trade policies to foster stable and predictable market conditions. The article offers a comprehensive roadmap for policymakers to achieve sustainable agricultural growth and enhance farmer incomes in India. (Gulati A. K., 2020)

Farmers protest 2.0: What do they want? What is their strategy ( ECONOMIC TIMES ) : As farmers from Punjab, Haryana, and Western Uttar Pradesh march towards Delhi , a new wave of protests is underway. Unlike the previous demonstrations, this time the farmers are demanding a range of measures from the Central government to ensure the financial viability of farming. Spearheaded by a breakaway faction of the Sanyukt Kisa Morcha (SKM), this protest excludes major farmer leaders from the previous movements. Their demands include Legal Guarantee of Minimum Support Price (MSP) for all crops and Implementation of the recommendations of the MS Swaminathan committee on agriculture (THE ECONOMIC TIMES , 2024).

The article from INDIAN EXPRESS discusses MSP and farmers’ protests and why MSP is one of the key demands of the farmers who are protesting against the new farm laws. It also discusses the pros and cons of MSP and how it can be guaranteed to farmers. The article compares two approaches to support farmers’ incomes: price support through MSP and direct income support through cash transfers. It argues that price support can distort market signals and benefit only a few crops, while income support can be more inclusive and less market-distorting. The article explores a third option of price deficiency payments (PDP), which involves paying farmers the difference between the market price and the MSP, without the government procuring or stocking any crop. It cites the examples of Madhya Pradesh and Haryana, where PDP schemes have been implemented for some crops.The article suggests that a nationwide PDP scheme with 50% Central funding could incentivise other states to build the market infrastructure and systems that would enable farmers to get MSP, whether by law or otherwise. (Damodaran, 2024)

# RESEARCH GAP

After reading all research papers and preparing research litreture review It is evident that there is lack of work on finding gaps between msp given by the government and MSP recommended by swaminathan committee ( c2 + 50% MSP formula ) . the gap between two MSP in percentage is crucial for policymakers to frame effective policies according to prevalent condition. This will also help farmers for deciding their cultivation crops which will help to enhance their income.

# VARIABLES

Minimum Support Price (MSP): The Minimum Support Price is a government-fixed price at which the agricultural produce is procured from the farmers. Aiming to provide them with a guaranteed income for their crops and to stabilize market prices. It serves as a safety net for farmers. Ensuring them a minimum price for their produce, thereby protecting them from market fluctuations and price volatility.

C2 Cost (Comprehensive Cost) : In agriculture, It refers to a comprehensive measure of the total cost of crop cultivation. It includes paid-out costs for inputs such as seeds, fertilizers. pesticides, hired labor, machinery, and irrigation. Additionally, it accounts for the imputed value of family labour, representing the unpaid work contributed by family members. Fixed costs are also included, such as the rental value of owned land and the interest on fixed capital assets like machinery, equipment, and buildings . This comprehensive cost helps to find exact MSP recommended by swaminathan committee to enhance the farmers real income.

# METHODOLOGY

Research Design - This research employs a quantitative research design to analyze the gap between the Minimum Support Price (MSP) set by the government and the MSP recommended by the Swaminathan Committee. The study involves a comparative analysis of historical data to identify the gaps and assess their effect on farmers and agricultural policy.

Data Collection - Data for this study was collected from secondary sources, including: 1. Government Reports: Official documents and reports on MSP announced by the Ministry of Agriculture, the government of India over the past years. 2. CACP Annual Reports: Detailed c2 that is cost of cultivation include imputed cost of rent and imputed cost interest on capital assets which helped us to formulate Swaminathan committee recommended MSP.

Data Analysis - The analysis was carried out in the following steps: 1. Comparative Analysis: The MSP announced by the government was compared with the MSP recommended by the Swaminathan Committee for various crops over multiple years. Comparative analysis is based on Burley's rather simple concept, yet it requires sophisticated, novel approaches in generating the large amounts of new data that are required (Jennings, 1999) 2. Statistical Methods: Descriptive statistics were used to summarize the data.

Analytical Tools - Microsoft Excel was used For data organization, basic statistical analysis, and visualization.

Limitations - The study has certain limitations: Data Availability: The analysis is limited by the availability and accuracy of only and only secondary and historical data. External Factors: The study does not account for external factors such as policy changes, economic shifts, and environmental conditions that might influence MSP decisions.

## 7.1 DATASET COLLECTION:

The data for this research were collected from a variety of secondary sources to ensure comprehensive and reliable analysis. The primary sources of data include official government reports and documents detailing the Minimum Support Prices (MSP) announced over the years. Specifically, reports from the Ministry of Agriculture and Farmers' Welfare and the Commission for Agricultural Costs and Prices (CACP) were collected for the years 2013-14 to 2022-23. Additionally, the recommendations made by the Swaminathan Committee were sourced from its published reports and related documentation. Agricultural statistics, such as production costs, market prices, and economic indicators. were obtained from the aforementioned sources. These data sets provide the necessary information to perform a comparative analysis of the MSP values and to identify trends and discrepancies over time.

Table 1 THE DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2013-2014, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50% :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP (Rs./quintal)** | **C2+50% (Rs./quintal)** | **Gap (%)** |
| **Paddy** | **1266.28** | **1310** | **1899.42** | **-44.99%** |
| **Jowar** | **1788.2** | **1500** | **2682.3** | **-78.82%** |
| **Bajra** | **1075.16** | **1250** | **1612.74** | **-29.02%** |
| **Maize** | **1164.7** | **1310** | **1747.05** | **-33.36%** |
| **Ragi** | **1793.87** | **1500** | **2690.805** | **-79.39%** |
| **Arhar (Tur)** | **4214.45** | **4300** | **6321.675** | **-47.02%** |
| **Moong** | **4970.77** | **4500** | **7456.155** | **-65.69%** |
| **Urad** | **4316.98** | **4300** | **6475.47** | **-50.59%** |
| **Cotton** | **3479.84** | **3700** | **5219.76** | **-41.07%** |
| **Groundnut** | **3880.25** | **4000** | **5820.375** | **-45.51%** |
| **Sunflower** | **3862.61** | **3700** | **5793.915** | **-56.59%** |
| **Soyabean** | **2225.84** | **2500** | **3338.76** | **-33.55%** |
| **Sesamum** | **4812.25** | **4500** | **7218.375** | **-60.41%** |
| **Nigerseed** | **4012.91** | **3500** | **6019.365** | **-71.98%** |

Table 1 reveals the minimum support prices (MSP) for various crops are significantly lower than the production costs plus a 50% margin (C2+50%). The maximum gap is observed in Jowar, with a -78.82% difference, where the MSP is Rs. 1500 per quintal compared to a C2+50% cost of Rs. 2682.3. On the other hand, the minimum gap is seen in Bajra, with a -29.02% difference, where the MSP is Rs. 1250 per quintal against a C2+50% cost of Rs. 1612.74. For instance, Paddy has a 44.99% gap, while Ragi shows a 79.39% gap. These figures highlight that the MSPs are not sufficient to cover production costs and provide the intended 50% profit margin. This discrepancy underscores the economic challenges faced by farmers, as they receive prices that do not adequately compensate for their expenses and efforts.

Table 2 DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2014-2015, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50%:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP (Rs./quintal)** | **C2+50% (Rs./quintal)** | **Gap (%)** |
| **Paddy** | **1266.28** | **1360** | **1899.42** | **-39.66%** |
| **Jowar** | **1788.2** | **1530** | **2682.3** | **-75.31%** |
| **Bajra** | **1075.16** | **1250** | **1612.74** | **-29.02%** |
| **Maize** | **1164.7** | **1310** | **1747.05** | **-33.36%** |
| **Ragi** | **1739.87** | **1550** | **2609.805** | **-68.37%** |
| **Arhar (Tur)** | **4214.25** | **4350** | **6321.375** | **-45.32%** |
| **Moong** | **4970.77** | **4600** | **7456.155** | **-62.09%** |
| **Urad** | **4316.98** | **4300** | **6475.47** | **-50.59%** |
| **Cotton** | **3479.84** | **3750** | **5219.76** | **-39.19%** |
| **Groundnut** | **3880.25** | **4000** | **5820.375** | **-45.51%** |
| **Sunflower** | **3862.61** | **3750** | **5793.915** | **-54.50%** |
| **Soyabean** | **2225.84** | **2560** | **3338.76** | **-30.42%** |
| **Sesamum** | **4812.25** | **4600** | **7218.375** | **-56.92%** |
| **Nigerseed** | **4012.91** | **3600** | **6019.365** | **-67.20%** |

Table 2 reveals the comparison between the minimum support prices (MSP) and the calculated production costs with a 50% margin (C2+50%) for various crops in India. The data reveals that the MSPs are generally lower than the C2+50% values, indicating a shortfall in the expected profit margin for farmers. The largest gap is observed in Jowar, with a -75.31% difference, where the MSP is Rs. 1530 per quintal compared to a C2+50% cost of Rs. 2682.3. In contrast, Bajra has the smallest gap at -29.02%, with an MSP of Rs. 1250 per quintal and a C2+50% cost of Rs. 1612.74. For Paddy, the gap is -39.66%, while Ragi shows a -68.37% gap. These figures demonstrate the insufficient MSPs, which fail to cover production costs and provide the intended profit margin, thus highlighting the economic challenges faced by farmers.

Table 3 DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2015-2016, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50%:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP (Rs./quintal)** | **C2+50% (Rs./quintal)** | **Gap (%)** |
| **Paddy** | **1324** | **1410** | **1986** | **-40.85%** |
| **Jowar** | **1929** | **1570** | **2893.5** | **-84.30%** |
| **Bajra** | **1154** | **1275** | **1731** | **-35.76%** |
| **Maize** | **1223** | **1325** | **1834.5** | **-38.45%** |
| **Ragi** | **2069** | **1650** | **3103.5** | **-88.09%** |
| **Arhar (Tur)** | **4272** | **4425** | **6408** | **-44.81%** |
| **Moong** | **5025** | **4650** | **7537.5** | **-62.10%** |
| **Urad** | **4483** | **4425** | **6724.5** | **-51.97%** |
| **Cotton** | **3767** | **3800** | **5650.5** | **-48.70%** |
| **Groundnut** | **4195** | **4030** | **6292.5** | **-56.14%** |
| **Sunflower** | **4114** | **3800** | **6171** | **-62.39%** |
| **Soyabean** | **2418** | **2600** | **3627** | **-39.50%** |
| **Sesamum** | **5189** | **4700** | **7783.5** | **-65.61%** |
| **Nigerseed** | **4068** | **3650** | **6102** | **-67.18%** |

Table 3 reveals the comparison between the minimum support prices (MSP) and the production costs plus a 50% margin (C2+50%) for various crops. The data indicates a consistent shortfall between the MSP and the C2+50% value across all crops. The most significant gap is observed in Ragi, with a -88.09% difference, where the MSP is Rs. 1650 per quintal, while the C2+50% cost is Rs. 3103.5. Jowar also has a substantial gap of -84.30%, with an MSP of Rs. 1570 compared to a C2+50% cost of Rs. 2893.5. The smallest gap is for Bajra, at -35.76%, with an MSP of Rs. 1275 per quintal against a C2+50% cost of Rs. 1731. For Paddy, the gap is -40.85%, with an MSP of Rs. 1410 and a C2+50% cost of Rs. 1986. These discrepancies reveal that the current MSPs are insufficient to provide farmers with the intended 50% profit margin over their production costs, highlighting the financial difficulties faced by the agricultural sector.

Table 4 DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2016-2017, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50%:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2Cost (Rs./quintal)** | **MSP (Rs./quintal)** | **C2+50% (Rs./quintal)** | **Gap (%)** |
| **Paddy** | **1378** | **1470** | **2067** | **-40.61%** |
| **Jowar** | **1992** | **1625** | **2988** | **-83.88%** |
| **Bajra** | **1218** | **1330** | **1827** | **-37.37%** |
| **Maize** | **1286** | **1365** | **1929** | **-41.32%** |
| **Ragi** | **2150** | **1725** | **3225** | **-86.96%** |
| **Arhar (Tur)** | **4314** | **4625** | **6471** | **-39.91%** |
| **Moong** | **5191** | **4800** | **7786.5** | **-62.22%** |
| **Urad** | **4661** | **4575** | **6991.5** | **-52.82%** |
| **Cotton** | **3750** | **3860** | **5625** | **-45.73%** |
| **Groundnut** | **4300** | **4120** | **6450** | **-56.55%** |
| **Sunflower** | **4418** | **3850** | **6627** | **-72.13%** |
| **Soyabean** | **2542** | **2675** | **3813** | **-42.54%** |
| **Sesamum** | **5570** | **4800** | **8355** | **-74.06%** |
| **Nigerseed** | **4320** | **3725** | **6480** | **-73.96%** |

Table 4 reveals the difference between the minimum support prices (MSP) and the production costs with a 50% profit margin (C2+50%) for various crops. The data indicates a consistent gap, with the largest gap observed in Ragi at -86.96%, where the MSP is Rs. 1725 per quintal compared to a C2+50% cost of Rs. 3225. This means farmers are getting significantly less than the expected profit margin. On the other hand, the smallest gap is seen in Bajra, with a -37.37% difference, where the MSP is Rs. 1330 per quintal against a C2+50% cost of Rs. 1827. The gaps in other crops, like Jowar (-83.88%) and Paddy (-40.61%), also highlight that the MSPs are not sufficient to cover the production costs and provide the intended profit margin, affecting farmers' income and financial stability.

Table 5 DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2017-2018, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50% :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP (Rs./quintal)** | **C2+50% (Rs./quintal)** | **Gap (%)** |
| **Paddy** | **1484** | **1550** | **2226** | **-43.61%** |
| **Jowar** | **2089** | **1700** | **3133.5** | **-84.32%** |
| **Bajra** | **1278** | **1425** | **1917** | **-34.53%** |
| **Maize** | **1396** | **1425** | **2094** | **-46.95%** |
| **Ragi** | **2351** | **1900** | **3526.5** | **-85.61%** |
| **Arhar (Tur)** | **4612** | **5450** | **6918** | **-26.94%** |
| **Moong** | **5700** | **5575** | **8550** | **-53.36%** |
| **Urad** | **4517** | **5400** | **6775.5** | **-25.47%** |
| **Cotton** | **4376** | **4020** | **6564** | **-63.28%** |
| **Groundnut** | **4089** | **4450** | **6133.5** | **-37.83%** |
| **Sunflower** | **4526** | **4100** | **6789** | **-65.59%** |
| **Soyabean** | **2921** | **3050** | **4381.5** | **-43.66%** |
| **Sesamum** | **5706** | **5300** | **8559** | **-61.49%** |
| **Nigerseed** | **5108** | **4050** | **7662** | **-89.19%** |
|  |  |  |  |  |

Table 5 reveals the comparison between the minimum support prices (MSP) and the production costs with a 50% profit margin (C2+50%) for various crops. It shows that the MSPs are generally lower than the C2+50% values, indicating that farmers are not receiving the intended profit margin. The most significant gap is observed in Nigerseed, with an -89.19% difference, where the MSP is Rs. 4050 per quintal compared to a C2+50% cost of Rs. 7662. In contrast, the smallest gap is seen in Urad, with a -25.47% difference, where the MSP is Rs. 5400 per quintal against a C2+50% cost of Rs. 6775.5. Other notable gaps include Moong at -53.36% and Paddy at -43.61%. These figures highlight that the current MSPs are inadequate to cover the production costs and ensure a sufficient profit margin, posing financial challenges for farmers.

Table 6 DATA FOR THE C2 COST AND MINIMUM SUPPORT PRICE (MSP) OF KHARIF CROPS FOR THE YEAR 2018-2019, ALONG WITH THE GAP PERCENTAGE BETWEEN MSP AND C2+50%:

(In rupees)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50%)** |  | **Gap (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |  |
| **Paddy** | **1560** | **1750** | **2340** |  | **-33.71%** |
| **Jowar** | **2183** | **2430** | **3274.5** |  | **-34.75%** |
| **Bajra** | **1324** | **1950** | **1986** |  | **-1.85%** |
| **Maize** | **1480** | **1700** | **2220** |  | **-30.59%** |
| **Ragi** | **2370** | **2897** | **3555** |  | **-22.71%** |
| **Arhar (Tur)** | **4981** | **5675** | **7471.5** |  | **-31.66%** |
| **Moong** | **6161** | **6975** | **9241.5** |  | **-32.49%** |
| **Urad** | **4989** | **5600** | **7483.5** |  | **-33.63%** |
| **Cotton** | **4514** | **5150** | **6771** |  | **-31.48%** |
| **Groundnut** | **4186** | **4890** | **6279** |  | **-28.40%** |
| **Sunflower** | **4501** | **5388** | **6751.5** |  | **-25.31%** |
| **Soyabean** | **2972** | **3399** | **4458** |  | **-31.16%** |
| **Sesamum** | **6053** | **6249** | **9079.5** |  | **-45.30%** |
| **Nigerseed** | **5135** | **5877** | **7702.5** |  | **-31.06%** |
|  |  |  |  |  |  |

TABLE 6 reveals the difference between the minimum support prices (MSP) and the production costs with a 50% profit margin (C2+50%) for various crops. It highlights the gaps, indicating how much the MSPs fall short of providing the intended profit margin. The smallest gap is observed in Bajra, with only a -1.85% difference, where the MSP is Rs. 1950 per quintal compared to a C2+50% cost of Rs. 1986. On the other hand, the largest gap is seen in Sesamum, with a -45.30% difference, where the MSP is Rs. 6249 per quintal against a C2+50% cost of Rs. 9079.5. Other notable gaps include Urad with a -33.63% difference and Paddy at -33.71%. These gaps demonstrate that the current MSPs are generally inadequate to cover the production costs and ensure the intended profit margin, reflecting the economic challenges faced by farmers in the agricultural sector.

Table 7 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR KHARIF CROPS FOR THE YEAR 2019-20:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **c2+ 50%** | **Gap Percentage (%)** |
| **(Rs./quintal)** |
| **Paddy** | **1619** | **1815** | **2428.5** | **-33.80%** |
| **Jowar** | **2324** | **2550** | **3486** | **-36.71%** |
| **Bajra** | **1463** | **2000** | **2194.5** | **-9.73%** |
| **Ragi** | **2672** | **3150** | **4008** | **-27.24%** |
| **Maize** | **1570** | **1760** | **2355** | **-33.81%** |
| **Tur (Arhar)** | **5417** | **5800** | **8125.5** | **-40.09%** |
| **Moong** | **6359** | **7050** | **9538.5** | **-35.30%** |
| **Urad** | **5460** | **5700** | **8190** | **-43.68%** |
| **Groundnut** | **4352** | **5090** | **6528** | **-28.25%** |
| **Sunflower Seed** | **4957** | **5650** | **7435.5** | **-31.60%** |
| **Soyabean (yellow)** | **3422** | **3710** | **5133** | **-38.36%** |
| **Sesamum** | **6125** | **6485** | **9187.5** | **-41.67%** |
| **Nigerseed** | **5913** | **5940** | **8869.5** | **-49.32%** |
| **Cotton** | **4678** | **5255** | **7017** | **50** |

Table 7 reveals the minimum support prices (MSP) with the production costs plus a 50% profit margin (C2+50%) for various crops, showing the gap percentage between them. Bajra has the smallest gap at -9.73%, with an MSP of Rs. 2000 per quintal and a C2+50% cost of Rs. 2194.5. In contrast, Nigerseed shows the largest gap of -49.32%, with an MSP of Rs. 5940 and a C2+50% cost of Rs. 8869.5. Notable gaps include Urad at -43.68% and Tur (Arhar) at -40.09%. Cotton has a positive gap, suggesting a potential profit margin. These discrepancies highlight that the MSPs for most crops are not sufficient to provide the expected profit margin over production costs, underscoring the financial difficulties faced by farmers in covering their production expenses.

Table 8 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR KHARIF CROPS FOR THE YEAR 2020-21 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **c2+ 50%** | **Gap Percentage (%)** |
| **(Rs./quintal)** |
| **Paddy** | **1667** | **1868** | **2500.5** | **-33.86%** |
| **Jowar** | **2393** | **2620** | **3589.5** | **-37.00%** |
| **Bajra** | **1555** | **2150** | **2332.5** | **-8.49%** |
| **Ragi** | **2763** | **3295** | **4144.5** | **-25.78%** |
| **Maize** | **1606** | **1850** | **2409** | **-30.22%** |
| **Tur (Arhar)** | **5464** | **6000** | **8196** | **-36.60%** |
| **Moong** | **6289** | **7196** | **9433.5** | **-31.09%** |
| **Urad** | **5570** | **6000** | **8355** | **-39.25%** |
| **Groundnut** | **4512** | **5275** | **6768** | **-28.30%** |
| **Sunflower Seed** | **5079** | **5885** | **7618.5** | **-29.46%** |
| **Soyabean (yellow)** | **3513** | **3880** | **5269.5** | **-35.81%** |
| **Sesamum** | **6215** | **6855** | **9322.5** | **-36.00%** |
| **Nigerseed** | **6525** | **6695** | **9787.5** | **-46.19%** |
| **Cotton** | **4935** | **5515** | **7402.5** | **-34.22%** |

Table 8 reveals the minimum support prices (MSP) and production costs plus a 50% profit margin (C2+50%) for various crops, showing the gap percentage between them. Bajra has the smallest gap at -8.49%, with an MSP of Rs. 2150 per quintal and a C2+50% cost of Rs. 2332.5. The largest gap is found in Nigerseed, at -46.19%, where the MSP is Rs. 6695 and the C2+50% cost is Rs. 9787.5. Other significant gaps include Urad at -39.25% and Tur (Arhar) at -36.60%. These percentages reveal that the current MSPs often fall short of covering production costs and providing the expected profit margin, indicating the financial challenges faced by farmers in achieving adequate returns for their produce.

Table 9 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR KHARIF CROPS FOR THE YEAR 2021-22:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **c2+ 50%** | **Gap Percentage (%)** |
| **(Rs./quintal)** |
| **Paddy** | **1727** | **2040** | **2590.5** | **-26.99%** |
| **Jowar** | **2478** | **2738** | **3717** | **-35.76%** |
| **Bajra** | **1579** | **2250** | **2368.5** | **-5.27%** |
| **Ragi** | **3004** | **3377** | **4506** | **-33.43%** |
| **Maize** | **1654** | **1870** | **2481** | **-32.67%** |
| **Tur (Arhar)** | **5291** | **6300** | **7936.5** | **-25.98%** |
| **Moong** | **6110** | **7275** | **9165** | **-25.98%** |
| **Urad** | **5133** | **6300** | **7699.5** | **-22.21%** |
| **Groundnut** | **4732** | **5550** | **7098** | **-27.89%** |
| **Sunflower Seed** | **5027** | **6015** | **7540.5** | **-25.36%** |
| **Soyabean (yellow)** | **3439** | **3950** | **5158.5** | **-30.59%** |
| **Sesamum** | **6653** | **7307** | **9979.5** | **-36.57%** |
| **Nigerseed** | **6441** | **6930** | **9661.5** | **-39.42%** |
| **Cotton** | **5169** | **5726** | **7753.5** | **-35.41%** |

The table compares the minimum support prices (MSP) and production costs plus a 50% profit margin (C2+50%) for various crops, highlighting the gap percentage between them. The smallest gap is observed in Bajra, at -5.27%, with an MSP of Rs. 2250 per quintal and a C2+50% cost of Rs. 2368.5. In contrast, the largest gap is found in Nigerseed at -39.42%, where the MSP is Rs. 6930, while the C2+50% cost is Rs. 9661.5. Notable gaps include Urad at -22.21% and Tur (Arhar) and Moong both at -25.98%. These gaps indicate that, despite the MSPs, farmers are often unable to achieve the expected profit margin, suggesting a need for better price support mechanisms to ensure adequate returns.

Table 10 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR KHARIF CROPS FOR THE YEAR 2022-23:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **c2+ 50%** | **Gap Percentage (%)** |
| **(Rs./quintal)** |
| **Paddy** | **1805** | **2040** | **2707.5** | **-32.72%** |
| **Jowar** | **2676** | **2970** | **4014** | **-35.15%** |
| **Bajra** | **1684** | **2350** | **2526** | **-7.49%** |
| **Ragi** | **3198** | **3578** | **4797** | **-34.07%** |
| **Maize** | **1713** | **1962** | **2569.5** | **-30.96%** |
| **Tur (Arhar)** | **5601** | **6600** | **8401.5** | **-27.30%** |
| **Moong** | **6486** | **7755** | **9729** | **-25.45%** |
| **Urad** | **5641** | **6600** | **8461.5** | **-28.20%** |
| **Groundnut** | **4941** | **5850** | **7411.5** | **-26.69%** |
| **Sunflower Seed** | **5392** | **6400** | **8088** | **-26.38%** |
| **Soyabean (yellow)** | **3724** | **4300** | **5586** | **-29.91%** |
| **Sesamum** | **7304** | **7830** | **10956** | **-39.92%** |
| **Nigerseed** | **6424** | **7287** | **9636** | **-32.24%** |
| **Cotton** | **5397** | **6080** | **8095.5** | **-33.15%** |

Table 10 reveals the comparison of the minimum support prices (MSP) and production costs plus a 50% profit margin (C2+50%) for various crops, along with the gap percentage between them. Bajra shows the smallest gap at -7.49%, with an MSP of Rs. 2350 per quintal and a C2+50% cost of Rs. 2526. In contrast, Sesamum experiences the largest gap of -39.92%, where the MSP is Rs. 7830 against a C2+50% cost of Rs. 10956. Other notable gaps include Tur (Arhar) at -27.30% and Soyabean (yellow) at -29.91%. These figures suggest that while some crops have relatively small disparities between MSP and production costs, many others face significant gaps, indicating that the current MSPs are insufficient to cover the full production costs plus a reasonable profit margin. This discrepancy highlights the financial challenges faced by farmers in achieving satisfactory returns.

Table 11 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR KHARIF CROPS FOR THE YEAR 2023-24:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **c2+ 50%** | **Gap Percentage (%)** |
| **(Rs./quintal)** |
| **Paddy** | **1911** | **2183** | **2866.5** | **-31.31%** |
| **Jowar** | **2833** | **3180** | **4249.5** | **-33.63%** |
| **Bajra** | **1811** | **2500** | **2716.5** | **-8.66%** |
| **Ragi** | **3328** | **3846** | **4992** | **-29.80%** |
| **Maize** | **1797** | **2090** | **2695.5** | **-28.97%** |
| **Tur (Arhar)** | **5993** | **7000** | **8989.5** | **-28.42%** |
| **Moong** | **7218** | **8558** | **10827** | **-26.51%** |
| **Urad** | **6239** | **6950** | **9358.5** | **-34.65%** |
| **Groundnut** | **5350** | **6377** | **8025** | **-25.84%** |
| **Sunflower Seed** | **5960** | **6760** | **8940** | **-32.25%** |
| **Soyabean (yellow)** | **4019** | **4600** | **6028.5** | **-31.05%** |
| **Sesamum** | **7864** | **8635** | **11796** | **-36.61%** |
| **Nigerseed** | **6793** | **7734** | **10189.5** | **-31.75%** |
| **Cotton** | **5786** | **6620** | **8679** | **-31.10%** |

Table 11 provides an overview of the minimum support prices (MSP) and production costs plus a 50% profit margin (C2+50%) for various crops, highlighting the gap percentage between them. Bajra shows the smallest gap at -8.66%, with an MSP of Rs. 2500 per quintal and a C2+50% cost of Rs. 2716.5. The largest gap is seen in Sesamum, with a -36.61% difference between an MSP of Rs. 8635 and a C2+50% cost of Rs. 11796. Other notable gaps include Urad at -34.65% and Sunflower Seed at -32.25%. These differences suggest that, while some crops have relatively small disparities, many others have significant gaps between the MSP and production costs plus a reasonable profit margin. This highlights the financial challenges faced by farmers in achieving fair compensation for their produce.

Table 12 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR RABI CROPS FOR THE YEAR 2013-14 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1066.26** | **1350** | **1599.39** | **-18.47%** |
| **Barley** | **861.95** | **980** | **1292.925** | **-31.93%** |
| **Gram** | **2327.2** | **3000** | **3490.8** | **-16.36%** |
| **Masur** | **3161.52** | **2900** | **4742.28** | **-63.53%** |
| **R&m** | **1987.43** | **3000** | **2981.145** | **0.63%** |
| **Safflower** | **3338.39** | **2800** | **5007.585** | **-78.84%** |

Table 12 reveals significant gaps between the Minimum Support Prices (MSP) and the calculated C2+50% costs for various crops. Wheat's C2 cost is Rs. 1066.26 per quintal with an MSP of Rs. 1350, leading to a gap of -18.47% from the C2+50% cost of Rs. 1599.39. Barley shows a larger gap of -31.93%, with a C2 cost of Rs. 861.95 and an MSP of Rs. 980, compared to a C2+50% cost of Rs. 1292.925. Gram has a relatively smaller gap of -16.36%, with its C2 cost at Rs. 2327.2, an MSP of Rs. 3000, and a C2+50% cost of Rs. 3490.8. Masur has a substantial gap of -63.53%, with a C2 cost of Rs. 3161.52, an MSP of Rs. 2900, and a C2+50% cost of Rs. 4742.28. Rape and Mustard (R&M) show a minimal gap of 0.63%, with C2 cost at Rs. 1987.43, MSP at Rs. 3000, and a C2+50% cost of Rs. 2981.145. Safflower faces the largest gap at -78.84%, with its C2 cost at Rs. 3338.39, an MSP of Rs. 2800, and a C2+50% cost of Rs. 5007.585.

Table 13 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR RABI CROPS FOR THE MARKETING SEASON 2014-15 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1108.57** | **1400** | **1662.855** | **-18.78%** |
| **Barley** | **1034.9** | **1100** | **1552.35** | **-41.12%** |
| **Gram** | **2865.3** | **3100** | **4297.95** | **-38.64%** |
| **Masur** | **2760.1** | **2950** | **4140.15** | **-40.34%** |
| **R&m** | **2368.07** | **3050** | **3552.105** | **-16.46%** |
| **Safflower** | **3501.21** | **3000** | **5251.815** | **-75.06%** |

Table 13 Reveals the difference between the Minimum Support Prices (MSP) and the calculated C2+50% costs for different crops. Wheat has a C2 cost of Rs. 1108.57 per quintal with an MSP of Rs. 1400, resulting in a gap of -18.78% compared to the C2+50% cost of Rs. 1662.855. Barley shows a significant gap of -41.12%, with a C2 cost of Rs. 1034.9 and an MSP of Rs. 1100, against a C2+50% cost of Rs. 1552.35. Gram's gap is -38.64%, with its C2 cost at Rs. 2865.3, MSP at Rs. 3100, and C2+50% cost of Rs. 4297.95. Masur has a gap of -40.34%, with a C2 cost of Rs. 2760.1, MSP of Rs. 2950, and C2+50% cost of Rs. 4140.15. Rape and Mustard (R&M) shows a gap of -16.46%, with a C2 cost of Rs. 2368.07, MSP of Rs. 3050, and C2+50% cost of Rs. 3552.105. Safflower exhibits the largest gap of -75.06%, with a C2 cost of Rs. 3501.21, an MSP of Rs. 3000, and a C2+50% cost of Rs. 5251.815.

Table 14 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR RABI CROPS FOR THE MARKETING SEASON 2015-16 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1147** | **1450** | **1720.5** | **-18.66%** |
| **Barley** | **1065** | **1150** | **1597.5** | **-38.91%** |
| **Gram** | **2981** | **3175** | **4471.5** | **-40.83%** |
| **Masur** | **2952** | **3075** | **4428** | **-44.00%** |
| **R&m** | **2455** | **3100** | **3682.5** | **-18.79%** |
| **Safflower** | **3685** | **3050** | **5527.5** | **-81.23%** |

Table 14 reveals the differences between the Minimum Support Prices (MSP) and the calculated C2+50% costs for various crops. Wheat, with a C2 cost of Rs. 1147 per quintal and an MSP of Rs. 1450, has a gap of -18.66% compared to the C2+50% cost of Rs. 1720.5. Barley shows a significant gap of -38.91%, with a C2 cost of Rs. 1065, an MSP of Rs. 1150, and a C2+50% cost of Rs. 1597.5. Gram's gap is -40.83%, with a C2 cost of Rs. 2981, an MSP of Rs. 3175, and a C2+50% cost of Rs. 4471.5. Masur exhibits a gap of -44.00%, with a C2 cost of Rs. 2952, an MSP of Rs. 3075, and a C2+50% cost of Rs. 4428. Rape and Mustard (R&M) shows a gap of -18.79%, with a C2 cost of Rs. 2455, an MSP of Rs. 3100, and a C2+50% cost of Rs. 3682.5. Safflower has the largest gap at -81.23%, with a C2 cost of Rs. 3685, an MSP of Rs. 3050, and a C2+50% cost of Rs. 5527.5.

Table 15 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2016-17 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1163** | **1525** | **1744.5** | **-14.39%** |
| **Barley** | **1089** | **1225** | **1633.5** | **-33.35%** |
| **Gram** | **3102** | **3425** | **4653** | **-35.85%** |
| **Masur** | **3098** | **3325** | **4647** | **-39.76%** |
| **R&m** | **2605** | **3350** | **3907.5** | **-16.64%** |
| **Safflower** | **3734** | **3300** | **5601** | **-69.73%** |

Table 15 reveals the C2 costs and Minimum Support Prices (MSP) for various crops. For wheat, the C2 cost is Rs. 1163 per quintal, while the MSP is Rs. 1525, resulting in a gap of -14.39%. Barley has a C2 cost of Rs. 1089 per quintal and an MSP of Rs. 1225, showing a gap of -33.35%. Gram has a C2 cost of Rs. 3102 per quintal and an MSP of Rs. 3425, with a gap of -35.85%. Masur's gap stands at -39.76%, with a C2 cost of Rs. 3098 per quintal and an MSP of Rs. 3325. R&M's gap is -16.64%, with a C2 cost of Rs. 2605 per quintal and an MSP of Rs. 3350. Safflower shows the largest gap of -69.73%, with a C2 cost of Rs. 3734 per quintal and an MSP of Rs. 3300.

Table 16 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2017-18 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1203** | **1625** | **1804.5** | **-11.05%** |
| **Barley** | **1119** | **1325** | **1678.5** | **-26.68%** |
| **Gram** | **3185** | **4000** | **4777.5** | **-19.44%** |
| **Masur** | **3360** | **3950** | **5040** | **-27.59%** |
| **R&m** | **2773** | **3700** | **4159.5** | **-12.42%** |
| **Safflower** | **3952** | **3700** | **5928** | **-60.22%** |

Table 16 reveals the C2 costs, MSP, and gap percentages for various crops. Wheat has a C2 cost of Rs. 1203 per quintal, with an MSP of Rs. 1625, leading to a gap of -11.05%. Barley’s C2 cost is Rs. 1119 per quintal, with an MSP of Rs. 1325, resulting in a gap of -26.68%. Gram's C2 cost is Rs. 3185 per quintal, with an MSP of Rs. 4000, showing a gap of -19.44%. Masur's C2 cost is Rs. 3360 per quintal, with an MSP of Rs. 3950, leading to a gap of -27.59%. For R&M, the C2 cost is Rs. 2773 per quintal, with an MSP of Rs. 3700, resulting in a gap of -12.42%. Safflower has the largest gap at -60.22%, with a C2 cost of Rs. 3952 per quintal and an MSP of Rs. 3700.

Table 17 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2018-19 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1256** | **1735** | **1884** | **-8.59%** |
| **Barley** | **1190** | **1410** | **1785** | **-26.60%** |
| **Gram** | **3526** | **4400** | **5289** | **-20.20%** |
| **Masur** | **3727** | **4250** | **5590.5** | **-31.54%** |
| **R&m** | **3086** | **4000** | **4629** | **-15.73%** |
| **Safflower** | **3979** | **4100** | **5968.5** | **-45.57%** |

Table 17 reveals the data for C2 costs, MSP, and gap percentages for various crops. Wheat has a C2 cost of Rs. 1256 per quintal, an MSP of Rs. 1735, resulting in a gap of -8.59%. Barley's C2 cost is Rs. 1190 per quintal, with an MSP of Rs. 1410, resulting in a gap of -26.60%. For Gram, the C2 cost is Rs. 3526 per quintal, with an MSP of Rs. 4400, resulting in a gap of -20.20%. Masur's C2 cost is Rs. 3727 per quintal, with an MSP of Rs. 4250, leading to a gap of -31.54%. R&M has a C2 cost of Rs. 3086 per quintal, an MSP of Rs. 4000, and a gap of -15.73%. Safflower has the highest gap percentage at -45.57%, with a C2 cost of Rs. 3979 per quintal and an MSP of Rs. 4100.

Table 18 DATA FOR C2 COST, MSP, AND THE GAP PERCENTAGE DIFFERENCE BETWEEN MSP AND C2+50% FOR RABI CROPS FOR THE MARKETING SEASON 2019-20 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1339** | **1840** | **2008.5** | **-9.16%** |
| **Barley** | **1247** | **1440** | **1870.5** | **-29.90%** |
| **Gram** | **3838** | **4620** | **5757** | **-24.61%** |
| **Masur** | **4215** | **4475** | **6322.5** | **-41.28%** |
| **R&m** | **3277** | **4200** | **4915.5** | **-17.04%** |
| **Safflower** | **4072** | **4945** | **6108** | **-23.52%** |

Table 18 reveals the comparison between the minimum support price (MSP) and the cost of production (C2) for different crops, along with the percentage gap. For wheat, the C2 is Rs. 1339, and the MSP is Rs. 1840, with a gap of -9.16%. Barley’s C2 is Rs. 1247, and the MSP is Rs. 1440, resulting in a gap of -29.90%. For gram, the C2 is Rs. 3838, and the MSP is Rs. 4620, with a gap of -24.61%. Masur has a C2 of Rs. 4215 and an MSP of Rs. 4475, leading to a gap of -41.28%. R&M’s C2 is Rs. 3277, and the MSP is Rs. 4200, resulting in a gap of -17.04%. Lastly, safflower’s C2 is Rs. 4072, with an MSP of Rs. 4945, showing a gap of -23.52%. These gaps indicate that the MSP falls short of covering the cost plus 50% for each crop.

Table 19 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2020-21 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1425** | **1925** | **2137.5** | **-11.04%** |
| **Barley** | **1347** | **1525** | **2020.5** | **-32.49%** |
| **Gram** | **4023** | **4875** | **6034.5** | **-23.78%** |
| **Masur** | **4286** | **4800** | **6429** | **-33.94%** |
| **R&m** | **3401** | **4425** | **5101.5** | **-15.29%** |
| **Safflower** | **4593** | **5215** | **6889.5** | **-32.11%** |

Table 19 illustrates the comparison between the minimum support price (MSP) and the cost of production (C2) for various crops, along with the percentage gap. For wheat, the C2 cost is Rs. 1425 per quintal, and the MSP is Rs. 1925, with a gap of -11.04%. Barley has a C2 cost of Rs. 1347 and an MSP of Rs. 1525, resulting in a gap of -32.49%. For gram, the C2 cost is Rs. 4023, and the MSP is Rs. 4875, with a gap of -23.78%. Masur shows a C2 cost of Rs. 4286 and an MSP of Rs. 4800, leading to a gap of -33.94%. R&M's C2 cost is Rs. 3401, with an MSP of Rs. 4425 and a gap of -15.29%. Lastly, safflower has a C2 cost of Rs. 4593, with an MSP of Rs. 5215, showing a gap of -32.11%. These negative percentages indicate that the MSPs are lower than the cost plus 50% for each crop.

Table 20 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2021-22:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1467** | **1975** | **2200.5** | **-11.42%** |
| **Barley** | **1404** | **1600** | **2106** | **-31.63%** |
| **Gram** | **4012** | **5100** | **6018** | **-18.00%** |
| **Masur** | **4204** | **5100** | **6306** | **-23.65%** |
| **R&m** | **3470** | **4650** | **5205** | **-11.94%** |
| **Safflower** | **4908** | **5327** | **7362** | **-38.20%** |

Table 20 compares the minimum support price (MSP) with the cost of production (C2) for various crops, highlighting the percentage gap. For wheat, the C2 cost is Rs. 1467 per quintal, with an MSP of Rs. 1975 and a gap of -11.42%. Barley has a C2 cost of Rs. 1404 and an MSP of Rs. 1600, resulting in a gap of -31.63%. For gram, the C2 cost is Rs. 4012, and the MSP is Rs. 5100, with a gap of -18.00%. Masur shows a C2 cost of Rs. 4204 and an MSP of Rs. 5100, leading to a gap of -23.65%. R&M's C2 cost is Rs. 3470, with an MSP of Rs. 4650 and a gap of -11.94%. Lastly, safflower has a C2 cost of Rs. 4908, with an MSP of Rs. 5327, showing a gap of -38.20%. These figures indicate that the MSPs are below the cost plus 50% for all crops.

Table 21 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2022-23:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **(C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1518** | **2015** | **2277** | **-13.00%** |
| **Barley** | **1439** | **1635** | **2158.5** | **-32.02%** |
| **Gram** | **4117** | **5230** | **6175.5** | **-18.08%** |
| **Masur** | **4422** | **5500** | **6633** | **-20.60%** |
| **R&m** | **3506** | **5050** | **5259** | **-4.14%** |
| **Safflower** | **5050** | **5441** | **7575** | **-39.22%** |

Table 21 provides a comparison between the cost of production (C2), minimum support price (MSP), and the percentage gap for various crops. For wheat, the C2 cost is Rs. 1518 per quintal, with an MSP of Rs. 2015 and a gap of -13.00%. Barley has a C2 cost of Rs. 1439, an MSP of Rs. 1635, and a gap of -32.02%. Gram shows a C2 cost of Rs. 4117 and an MSP of Rs. 5230, resulting in a gap of -18.08%. Masur has a C2 cost of Rs. 4422, an MSP of Rs. 5500, with a gap of -20.60%. R&M's C2 cost is Rs. 3506, with an MSP of Rs. 5050, and a gap of -4.14%. Finally, safflower has a C2 cost of Rs. 5050, with an MSP of Rs. 5441 and a gap of -39.22%. These negative percentages indicate that the MSPs are lower than the cost plus 50% for all the crops.

Table 22 DATA FOR THE MSP AND C2 COST FOR RABI CROPS FOR THE MARKETING SEASON 2023-24 :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Crop** | **C2 Cost (Rs./quintal)** | **MSP** | **Gap (C2+50% )** | **Gap Percentage (%)** |
| **(Rs./quintal)** | **(Rs./quintal)** |
| **Wheat** | **1575** | **2125** | **2362.5** | **-11.18%** |
| **Barley** | **1487** | **1735** | **2230.5** | **-28.56%** |
| **Gram** | **4341** | **5335** | **6511.5** | **-22.05%** |
| **Masur** | **4608** | **6000** | **6912** | **-15.20%** |
| **R&m** | **3740** | **5450** | **5610** | **-2.94%** |
| **Safflower** | **5135** | **5650** | **7702.5** | **-36.33%** |

Table 22 reveals the data for the cost of production (C2), minimum support price (MSP), and the gap percentage between C2+50% and MSP for various crops. For wheat, the C2 cost is Rs. 1575 per quintal, and the MSP is Rs. 2125, resulting in a gap of -11.18%. Barley has a C2 cost of Rs. 1487 and an MSP of Rs. 1735, with a gap of -28.56%. For gram, the C2 cost is Rs. 4341, and the MSP is Rs. 5335, resulting in a gap of -22.05%. Masur shows a C2 cost of Rs. 4608 and an MSP of Rs. 6000, with a gap of -15.20%. R&M's C2 cost is Rs. 3740, with an MSP of Rs. 5450, resulting in a gap of -2.94%. Lastly, safflower has a C2 cost of Rs. 5135 and an MSP of Rs. 5650, with a gap of -36.33%. These percentages indicate that the MSPs are lower than the C2+50% value for all the crops.

## 7.2 RESULT AND DISCUSSION

In conclusion, the examination of the hidden truths surrounding the farmer's protest reveals a complex landscape of agricultural policy and practice in India. India exhibits considerable heterogeneity in geography, climate, infrastructure, production structure and socio-cultural development; and inter-state variation in income growth could be due to significant differences in such structural characteristics across states (Pratap S. Birthal, 2011) Through a comprehensive literature review, we have delved into the introduction and changing dynamics of agriculture in the country, decoding the implications of the 2020 farm laws, understanding the farmer protests and their broader impact, and analyzing government policies and agricultural reforms. Furthermore, the analysis of MSP and input costs underscores the critical importance of addressing the imbalance between these factors to enhance farmers' real income. Bridging this gap requires nuanced policy interventions and innovative strategies that prioritize farmers' welfare and sustainability. The comprehensive analysis of Minimum Support Prices (MSPs) compared to the Cost of Cultivation (C2) and benchmark prices (C2+50%) for various crops in India provides valuable insights into the pricing dynamics and economic sustainability of agricultural practices. Across the analyzed crops, we observe a varied landscape of pricing scenarios.

Crops like Wheat, Gram, Lentil (Masur), and Rapeseed & Mustard demonstrate favorable returns for farmers, with MSPs exceeding the benchmark prices, indicating robust returns and promising prospects for cultivation. Barley also shows reasonable returns, albeit with a moderate positive percentage difference. Conversely, some crops exhibit disparities between MSPs and benchmark prices. While Safflower demonstrates stability in pricing, the modest positive percentage difference suggests comparatively modest returns for farmers.

**CONCLUSION**

These findings underscore the importance of aligning MSPs with production costs to ensure fair and sustainable returns for farmers. Mere increase of minimum support price(MSP) for crops alone would not guarantee better income for farmers unless procurement infrastructures are sufficiently strengthened. Therefore, along with remunerative MSP for different crops, if procurement arrangements and other non-price (technology, credit and irrigation) incentives are packaged and sequenced appropriately, farm income can be increased sustainably (Narayanamoorthy, 2017). Adjusting MSPs to accurately reflect production costs can promote economic viability, equity, and resilience in the agricultural sector. Policymakers must consider these insights when formulating agricultural policies to support the welfare and prosperity of farmers and foster a more sustainable and inclusive agricultural landscape in India. Also, Farmers need to understand wisely the demand-supply pattern of crops. This will help to transform the agriculture sector to more business oriented. The problems of overproduction and underproduction leading to loss of farmers, consumers and government can be resolved through proper cropping patterns. As the population grows and meets the demand for food, it is necessary to increase the production rate. This can be done by choosing the proper season for the proper crop and employing the proper cultivation land (Shivali Amit Wagle, 2021) . Agricultural universities can play a major role in enhancing the agricultural condition. Becoming more scientific in the field will help farmers to enhance their socio-economic conditions of farmers.

Ethical Approval - This research adheres to ethical guidelines by ensuring the use of publicly available data and maintaining.

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3.

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