AGRICULTURAL INSURANCE IN INDIA: MITIGATING RISKS AND ENSURING RESILIENCE

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Abstract

Agriculture in India is vulnerable to risks such as climate change, natural disasters, and market fluctuations, necessitating effective risk management strategies. This study investigates the importance of agricultural insurance as a means to mitigate these risks, with a focus on its effectiveness and the challenges it faces in the Indian context. The primary objectives are to assess the impact of existing insurance schemes on the resilience of farmers, identify obstacles to widespread adoption, and suggest measures for enhancement. Through analysis of secondary data, the study finds that while initiatives like the Pradhan Mantri Fasal Bima Yojana provide a safety net, their impact is limited by factors such as low awareness, high premium costs, and complex claim procedures. The study highlights the critical need for improvements, such as increased farmer education and simplified claim processes, to boost participation in agricultural insurance. The key finding is that addressing these issues can greatly enhance farmers' financial stability and lead to more consistent agricultural outputs.

Keywords:- Agricultural insurance, Crop Insurance, Agricultural Schemes, Insurance Adoption, Sustainable Agriculture.

Agriculture, the backbone of India's economy, faces numerous uncertainties that can significantly impact the livelihood of millions of farmers. With varying weather conditions, pest outbreaks, and market fluctuations, the sector is highly susceptible to risks that can jeopardize crop yields and, consequently, farmers' income. In this context, agricultural insurance emerges as a crucial tool designed to mitigate such risks, offering a safety net that helps ensure financial stability and resilience for agricultural households.

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Despite its potential benefits, the adoption of agricultural insurance in India has been uneven, influenced by various challenges and barriers.

Statement of the Problem

The agricultural sector in India is confronted with numerous risks that can lead to severe economic losses for farmers. Although agricultural insurance is intended to provide a safeguard against these risks, its implementation and uptake have not been universally successful. The problem lies in assessing the true requirement and significance of agricultural insurance, understanding why a significant portion of the farming population does not avail themselves of these insurance schemes, and exploring the various insurance products available. This study aims to evaluate the necessity and impact of agricultural insurance, identify barriers to its adoption, and explore the range of available insurance schemes in India. The insights gained will help inform policy improvements and enhance the effectiveness of agricultural insurance in supporting farmers and strengthening the agricultural sector's resilience.

Scope of the Study

This study focuses on the role of agricultural insurance in India, particularly its effectiveness in mitigating the risks and enhancing resilience among farming communities. The scope encompasses a comprehensive analysis of the existing agricultural insurance schemes, the factors influencing their adoption, and the challenges faced by farmers in accessing these insurance products. The study also covers various crops and regions across India, assessing the disparities in insurance adoption and the impact of different insurance models, such as crop-specific and weather-based schemes.

Significance of the Study

The significance of this study lies in its potential to inform policy-making and improve the implementation of agricultural insurance schemes in India. By identifying the key challenges and barriers to adoption, this research provides valuable insights into the needs and preferences of farmers regarding insurance products. Furthermore, the study's findings can aid in the development of more effective and inclusive insurance policies, which are crucial for ensuring the financial stability of farmers and the overall sustainability of the agricultural sector. The research also highlights the importance of agricultural insurance in promoting economic resilience, supporting rural livelihoods, and encouraging the adoption of modern agricultural practices. Through a detailed examination of the current state of agricultural insurance in India, this study contributes to the broader discourse on risk management in agriculture and offers practical recommendations for enhancing the reach and effectiveness of insurance schemes.

Objectives of the Study

a. To evaluate the need, importance, and necessity of agricultural insurance.

b. To identify the challenges, solutions, and reasons why agricultural households may not insure their crops.

c. To explore the multitude of agriculture schemes offered in India.

Methodology of the Study

The study primarily used secondary data collected from various publications, government reports, newspapers, journals, and the official portal of the Government of India.

Importance of Agricultural Insurance

Agricultural insurance is designed to protect farmers financially against the loss of crops or livestock due to natural disasters, pests, and diseases. It helps stabilise farm income, encourages investment in agriculture, and promotes economic stability in rural areas. By mitigating risks, insurance enables farmers to adopt new technologies and practices that can enhance productivity and sustainability.

The following table (Table 1) shows the distribution of agricultural households reporting crop production, insuring the crop, and experiencing crop loss, in per cent which reflects the need, importance and necessity of agriculture insurance.

Interpretation and Explanation

1. Overview:

The table presents data on the percentage of agricultural households that reported crop production, insurance coverage, and experienced losses during two periods: July-December 2018 and January-June 2019. The table covers major crops like paddy, jowar, maize, moong, and cotton.

2. Crop Insurance Uptake

The percentages of households insuring their crops vary significantly across different crops and periods. For example, the insurance uptake for paddy increased from 8.3 per cent in the latter half of 2018 to 13.9 per cent in the first half of 2019. Similarly, the percentage of households insuring jowar rose from 12.9 per cent to 19.5 per cent during the same periods. These increases suggest a growing awareness and utilization of crop insurance among farmers, potentially due to outreach efforts or increasing recognition of the benefits of insurance.

3. Crop Losses

The data also reveal the percentage of households experiencing crop losses. For instance, 38.4 per cent of households growing paddy reported losses in July-December 2018, which decreased to 24.9 per cent in January-June 2019. In contrast, crops like jowar saw an increase in reported losses, from 48.9 per cent to 53.2 per cent, indicating variability in risk exposure or environmental conditions affecting different crops.

4. Comparison across Crops

The insurance uptake and reported losses vary across different crops. For instance, cotton had a relatively higher insurance coverage, with 25.4 per cent in the second half of 2018 and 28.8 per cent in the first half of 2019, along with moderate reported losses (45.7 per cent and 47.4 per cent). In contrast, crops like maize and moong had lower insurance uptake and higher reported losses, suggesting differences in risk perception or the economic viability of insuring certain crops.

5. Key Insights

a. Increase in Insurance Coverage: The general trend shows an increase in the

Table 1

Distribution of agricultural households reporting crop production, insuring the crop, experienced crop loss, in percent

Crop	Percentage of households insuring the crops during	Percentage of households experienced loss
	July – December 2018	
Paddy	8.3	38.4
Jowar	12.9	48.9
Bajra	11.8	52.8
Maize	5.6	46.2
Ragi	2.3	59.5
Arhar	16.6	48.5
Urad	10.1	65.1
Moong	18	70.2
sugarcane	4.3	22.2
Potato	1.2	33.5
groundnut	15.9	46.7
coconut	1.8	27.7
soyabean	27.5	40.7
Cotton	25.4	45.7
	January - June 2019	
Paddy	13.9	24.9
Jowar	19.5	53.2
Maize	4.2	29.6
Wheat	6.8	35.1
Gram	15.3	45
Arhar	6.3	60.6
Moong	3	64.3
Masur	6.4	36.8
sugarcane	7.5	33
Potato	5.6	32.2
Onion	4.1	29.1
mustard	8.9	35.4
coconut	1.1	32.4
Cotton	28.8	47.4

Source: Situation Assessment survey, NSS 77th round

percentage of insured crops over time, indicating a positive movement towards risk mitigation through insurance.

b. Variability in Losses: The varying percentages of crop losses across periods and crops highlight the differential impact of climatic and other risk factors.

c. Low Uptake for Certain Crops: Despite the availability of insurance, the uptake remains low for crops like maize and moong, possibly due to high premiums, lack of awareness, or perceived inadequacy of insurance coverage.

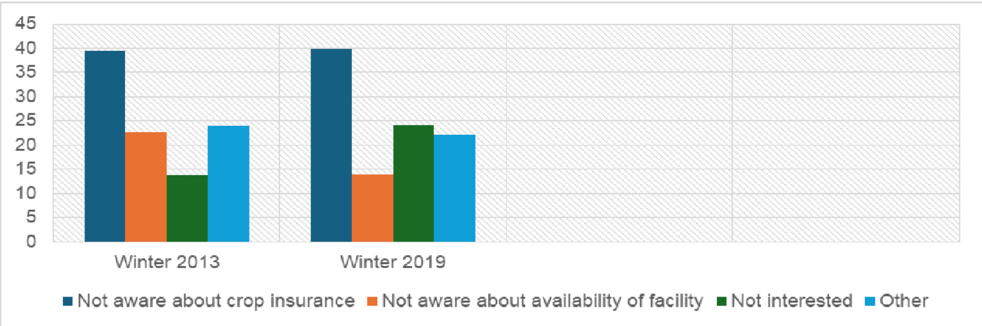
Challenges and Solutions

The data from the National Sample Survey (NSS) 70th and 77th demonstrates some of the reasons why agricultural households do not insure their crops which are the major challenges.

The data, sourced from the Situation Assessment Survey NSS 70th and 77th rounds, reveals that a significant proportion of households refrain from purchasing crop insurance due to a perceived lack of need, suggesting a lack of awareness or understanding of the benefits. Other notable reasons include the high cost of premiums, complicated claim procedures, and inadequate coverage offered by insurance policies. These barriers emphasize the need for enhanced education and outreach, streamlined insurance processes, and more comprehensive and affordable insurance products to encourage greater participation in crop insurance schemes.

Figure 1

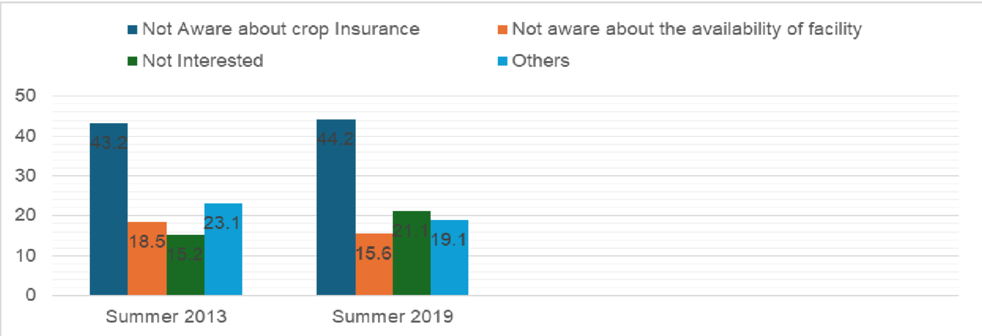
Distribution of agricultural households not insuring their crops by reason for wheat in per cent



Source: Situation Assessment survey, NSS 70th round and 77th round

Figure 2

Distribution of agricultural households not insuring their crops by reason for paddy in per cent



Source: Situation Assessment survey, NSS 70th round and 77th round

The present state of crop insurance reveals that merely a fraction of households have taken advantage of such coverage, and discrepancies persist across various regions of India.

It becomes increasingly evident that enhancing awareness about crop insurance among farming households is imperative. This is where agricultural extension services emerge as a pivotal player in disseminating information about crop insurance. Necessary steps must be taken to ensure awareness about agriculture insurance by conducting various awareness programs by the government.

Other reasons

1. High Premium Costs

The cost of premiums can be prohibitive for small and marginal farmers, making it difficult for them to afford insurance coverage.

2. Complex Claim Processes

Lengthy and complicated claim processes can deter farmers from purchasing insurance. Delays in claim settlements can lead to financial distress.

3. Inadequate Coverage

Existing insurance schemes may not cover all types of risks faced by farmers, such as those related to market prices or non-weather-related risks.

4. Poor Infrastructure and Accessibility

Limited access to insurance providers and poor infrastructure in rural areas can restrict farmers' ability to purchase insurance and file claims.

5. Trust and Credibility Issues

Past experiences of delayed or denied claims can lead to distrust in insurance schemes among farmers.

Agricultural Insurance Schemes in India

Key Schemes: PMFBY and RWBCIS

Introduced by the central government in January 2016, the Pradhan Mantri Fasal Bima Yojana seeks to address multiple objectives such as furnishing insurance protection to farmers against crop failure, stabilizing their income, and motivating the adoption of modern agricultural practices. The Union Budget allocated Rs 9,000 crore to the scheme in the fiscal year 2017-18, showing an increase from the Rs 5,501 crore allotted in 2016-17. This initiative extends its coverage to encompass all categories of farmers, including tenant farmers and sharecroppers, who cultivate specific crops in designated areas. The ambit of the scheme includes a diverse range of crops such as cereals, pulses, oilseeds, vegetables, and spices. Notably, during the Kharif season of 2016, the program achieved coverage of 367 lakh farmers, amounting to Rs 1,41,625 crore, showcasing an improvement over the Kharif season of 2015, which covered 309 lakh farmers and provided a sum of Rs 69,307 crore.

The primary aim of the PMFBY and RWBCIS is to offer extensive insurance coverage against crop failure, thereby assisting in stabilizing the income of farming households and motivating them to adopt innovative farming practices. These initiatives extend insurance

Table 2

Agriculture Insurance Schemes in India (chronologic order)

Start and end year	Name of crop insurance scheme	Primary features of the scheme
1972-78	First individual approach crop insurance scheme	First scheme in India after independence; voluntary and limited in scale
1979-84	Pilot crop insurance scheme	First area index-based scheme' confined to loanee farmers; voluntary; 50 per cent subsidy on premium for marginal and small farmers.
1985-99	Comprehensive crop insurance schemes	Crop insurance made mandatory for loanee farmers' available to all' 50 per cent subsidy on premium for marginal and small farmers.
1997-98	Experimental crop insurance schemes	Fully subsidized scheme.
1999-2016	National Agricultural insurance schemes (NAIS)	Sharecroppers were included in insurance cover.
2007 to present	Weather based Crop Insurance Scheme (WBCIS)	First scheme to ascertain crop loss based on deviation in rainfall.
2010-2016	Modified National Agricultural Insurance Schemes (MNAIS)	Private sector participation encouraged' immediate partial payment to affected farmers introduced.
2016 to present	Pradhan Mantri Fasal Bima Yojana (PMFBY)	Premium rates lowered; use of technology emphasized; heavily subsidized; mandatory to loanee farmers until 2019; voluntary to all from 2020.

Source: Situation Assessment survey, NSS 77th round

protection to farmers engaged in cultivating specific crops within designated regions. The selection of eligible crops and areas for insurance is determined by individual States. These insurance schemes are founded on historical data related to crop yields and weather conditions. While initially, crop insurance was often tied to farmers accessing credit through mechanisms like the Kisan Credit Card, current practices allow farmers without loans to voluntarily opt for coverage.

Findings

The study presents data on the percentage of agricultural households that reported crop production, insurance coverage, and experienced crop losses during two periods: July-December 2018 and January-June 2019. Key findings include:

- The percentage of households insuring their crops varies significantly across different crops and periods. For instance, the insurance uptake for paddy increased from 8.3 per cent in the latter half of 2018 to 13.9 per cent in the first half of 2019. Similarly, jowar saw an increase from 12.9 per cent to 19.5 per cent.

- There were notable differences in the percentage of households experiencing crop losses. For example, 38.4 per cent of households growing paddy reported losses in July-December 2018, which decreased to 24.9 per cent in January-June 2019. On the other hand, crops like jowar experienced an increase in reported losses from 48.9 per cent to 53.2 per cent.
- There was significant variability in insurance uptake and reported losses across different crops. Cotton had relatively higher insurance coverage and moderate reported losses compared to other crops like maize and moong, which had lower insurance uptake and higher reported losses.
- Many farmers are unaware of the benefits and availability of agricultural insurance. Even those who are aware may not fully understand its importance.
- A significant proportion of households abstain from purchasing crop insurance due to reasons such as a perceived lack of need, high premiums, complicated claim procedures, and inadequate coverage
- In Winter 2013, 39.4 per cent of households were not aware of crop insurance, which slightly increased to 39.79 per cent in Winter 2019.
- The percentage of households not interested in crop insurance rose from 13.8 per cent in Winter 2013 to 24.2 per cent in Winter 2019.
- Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Weather-Based Crop Insurance Scheme (WBCIS) are the key schemes in India that aims to provide comprehensive insurance coverage against crop failure, stabilizing farmers' income and encouraging modern agricultural practices.

Recommendations and Suggestions

1. Conducting awareness campaigns through various channels to educate farmers about the benefits of agricultural insurance.
2. Providing subsidies on insurance premiums for small and marginal farmers and developing affordable micro-insurance products.
3. Using technology to streamline claim processes and ensure faster settlements.
4. Including a broader range of risks in insurance schemes to provide comprehensive protection to farmers.
5. Enhancing rural infrastructure and expanding the reach of insurance providers.
6. Ensuring transparency in insurance processes and prompts settlement of claims to build trust among farmers.

Conclusion

Agricultural insurance in India represents a significant stride towards mitigating diverse risks and enhancing resilience within the agricultural sector. Its evolution from a financial tool to a robust

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mechanism safeguarding farmers' livelihoods is evident. Agricultural insurance empowers farmers to make informed choices and adopt modern farming techniques without the perpetual dread of overwhelming losses. The effectiveness of agricultural insurance hinges on a multi-faceted approach involving governmental initiatives, partnerships with insurance firms, and proactive engagement of farmers. Continuous refinement of insurance mechanisms, coupled with proactive adaptation to emerging challenges, will be key in safeguarding the future of Indian agriculture.

References

1. *Raju, S. S., & Chand, R. (2008). "Agricultural Insurance in India: Problems and Prospects." Review of Agrarian Studies, 18(2), 44-56.*
2. *Kumar, P., & Chand, R. (2015). "Role of Crop Insurance in Mitigating Risks in Indian Agriculture." Indian Journal of Agricultural Economics, 70(1), 45-62.*
3. *Vyas, V. S. (2008). "Risk, Vulnerability, and Insurance: Evidence from the Micro Finance and Risk Initiative (MFIR)." Economic and Political Weekly, 43(5), 42-49.*
4. *Chand, R., & Raju, S. S. (2009). "Factors Influencing Farmers' Willingness to Pay for Crop Insurance: An Empirical Study from India." Agricultural Economics, 40(3), 300-311.*
5. *Banerjee, D., & Bhattacharya, U. (2011). "Innovations in agricultural insurance in India: Retrospect and prospect." Indian Journal of Agricultural Economics, 66(3), 457-471.*
6. *National Sample Survey Office. (2014). Situation assessment survey of agricultural households: NSS 70th round. Ministry of Statistics and Programme Implementation, Government of India.*
7. *National Sample Survey Office. (2021). Situation assessment survey of agricultural households: NSS 77th round. Ministry of Statistics and Programme Implementation, Government of India.*
8. *Government of India (2020). "Pradhan Mantri Fasal Bima Yojana (PMFBY): Annual Report 2019-2020." Ministry of Agriculture and Farmers' Welfare.*
9. *The Hindu Business Line (2021). "Why Crop Insurance Schemes in India Are Failing Farmers."*