

Performance Analysis of Pradhan Mantri Fasal Bima Yojana

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ABSTRACT

India is an agrarian country and Indian agriculture is mainly dependent on nature i.e. rain. Due to this, the agricultural sector is considered to be uncertain and affected from natural climate or disaster. For this reason, the 'Pradhan Mantri Fasal Bima Yojana' (PMFBY) has been implemented in the entire country including Maharashtra since 2016. For the prosperity of this scheme, the Maharashtra government has implemented the 'One Rupee Scheme'. Therefore, this research paper has analysed and studied the performance of PMFBY in Maharashtra state.

In this study, an attempt has been made to evaluate the rate of farmer participation under crop insurance, comparison of insurance premium and insurance claim, major challenges and shortcomings in the implementation of the scheme and farmers benefited under the PMFBY during 2020 to 2024. For achieving study purpose, the secondary data has been collected through the internet, books, previous research works, government reports, and dissertations, and its analysis and interpretation has been done. In this study, it is seen that the effect of the scheme 'One Rupee Scheme' implemented by the Maharashtra government from 2023 is noticeable. This has led to an increase in farmer participation, insurance coverage, and insurance claims, but not to the desired extent. Still, the 'One Rupee Scheme' can be considered a boon for farmers.

(Keywords: PMFBY, One Rupee Scheme, Maharashtra, Crop Insurance, Crop Insurance Scheme, Area Insurance)

1. INTRODUCTION

India is an agrarian country and Indian agriculture is mainly dependent on nature i.e. rain. therefore, the agricultural sector is considered as an uncertain or risks sector. Due to the continuous drought, short rainfall or over rainfall and climate change crisis in many regions of India, the agricultural sector has become very sensitive to the nature. Among them, Maharashtra is considered to be a very productive and agriculturally important state in India. According to the report of 2024-25, Uttar Pradesh is the first state in India's Agri-production with a share of 28.52% and Maharashtra is the second largest state with a share of 13.14% in Agri-production (Ministry of Commerce & Industry, Govt. of India 2024-25). While Maharashtra is the second largest state in agricultural production, it is surrounded by many uncertain risks. To protect the agricultural sector from these uncertain risks, the Government of India has implemented many crop insurance schemes. In India, the General Insurance Corporation first launched the Basic Crop Insurance Scheme on an individual basis between 1972-1978. After this, on the recommendation of Prof. V. M. Dandekar, the Government of India implemented the Pilot Crop Insurance Scheme across the country from 1979 to 1984. In reality, it can be said that the universalization of crop insurance in India began with this scheme. After this, the Government of India implemented many schemes, including the Comprehensive Crop Insurance Scheme (1985), the National Agricultural Insurance Scheme (1999), the Weather Based Crop Insurance Scheme (2007), etc.

Now, to provide financial protection to farmers against crop losses, the Government of India launched the 'Pradhan Mantri Fasal Bima' (PMFBY) on 13 January 2016. The scheme is one of the largest crop insurance programmes in the world and provides insurance cover to farmers against natural calamities and crop losses (Rajan Kumar Ghosh (2018). At the same time, during 2023, the Maharashtra government has implemented the 'One Rupee Insurance Scheme'. This research paper has studied how this scheme was implemented in Maharashtra and how fruitful it was for the farmers. The success and failure of this scheme will be focused on this study.

REVIEW OF LITERATURE:

Rajan Kumar Ghosh (2018), he studied on PMFBY. He has explained that the scheme is based on a 'field approach' and provides comprehensive coverage; but, the main challenges are delay in getting compensation, technical errors in crop harvesting experiments (CCE) and low

participation of non-lonee farmers. While insurance companies made 25% profit in 2016-17, they may face high risks in drought-related situations, so technical improvements and timely settlement of claims are necessary to make the scheme successful.

Rajesh Tiwari et. al. (2020) in their research paper “Crop Insurance in India: A Review of Pradhan Mantri Fasal Bima Yojana (PMFBY)” have clinically examined the effectiveness of the PMFBY in the Indian agriculture sector. As per the study, Indian farmers are continuously subjected to ‘systematic neglect’ and financial marginalization due to the vagaries of nature and adverse weather conditions, leading to increasing rates of depression and suicide in rural areas. The study reveals that the scheme, launched in 2016, suffers from serious flaws such as inadequate state support, unworkable subsidy model and long delays in compensation, which appear to benefit insurance companies and administrators more than farmers. The authors strongly recommend decoupling crop insurance from political interests and adopting a technology-friendly, demand-driven approach based on the three pillars of ‘speed, diversity and verification’, so that the scheme can truly serve as a social safety net for the affected farmers.

Netaji Kale (2021), He studied the performance of PMFBY in India, He has explained that although the scheme is technically sound, administrative delays, errors in crop harvesting experiments and lack of information have limited the participation of non-lonee farmers. In this study, he suggested that to increase the effective coverage of the scheme, it is necessary to conduct awareness raising through face-to-face visits to rural areas and make the processing of crop loss claims faster and more transparent.

Gajendra Singh et. al. (2025) they conducted a study on Progress and Status of Pradhan Mantri Fasal Bima Yojana assessed the performance of the scheme from 2016 to 2024. This study highlight that although the number of crops insured has increased from 189 to 288, the national coverage of the scheme has remained inconsistent, with only 70% of the states/UTs participating. Although the number of farmer applications has increased to 1,390.06 lakh by 2023-24, the actual outreach has remained unsatisfactory, reaching only 17.69% to 25.62% of the total landholding farmers. The cost-benefit analysis shows that although farmers have received claims worth 5.14 times the premium they paid, the overall success is questionable as the payouts are only 9.06% of the total sum insured. Finally, the researchers advocate for comprehensive risk reduction strategies and technological advancements to effectively protect farm livelihoods from natural disasters.

2. RESEARCH OBJECTIVES:

The main objectives of this study can be stated as follows.

- To study the extent of farmer registration under crop insurance in Maharashtra.
- To analyze the insurance premium and insurance return.
- To analyze the actual insurance premium and insurance return received.
- To see how many farmers have actually benefited under this scheme.
- To identify the major challenges and shortcomings in the implementation of the scheme.

3. RESEARCH METHODOLOGY:

This study is analytical and descriptive; hence the secondary data has been collected for achieving the objectives of the study.

Data Source: the secondary data has been collected from Government Reports, books, journals, research papers, dissertations, etc.

Period of Study: the period of the study has considered 2020 to 2024, in this time period the data has been analysed and interpreted on the point of view of the objectives and result seen.

Statistical Tools: the secondary data has been analysed with the help of percentages, averages and comparative charts for detail interpretation of the study objectives.

5. PERFORMANCE ANALYSIS OF PMFBY IN MAHARASHTRA

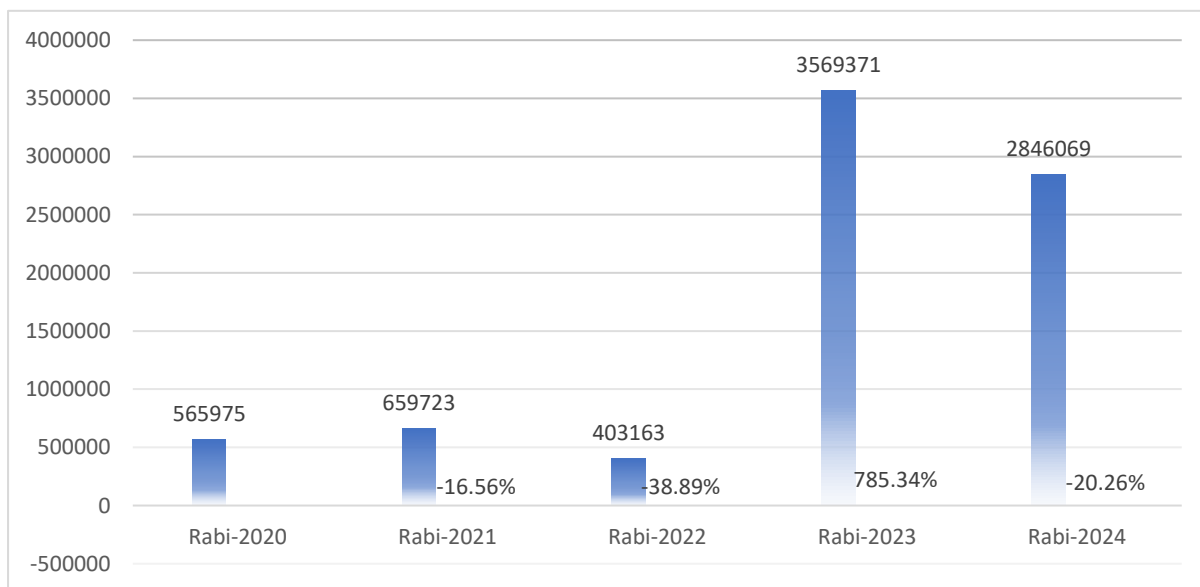
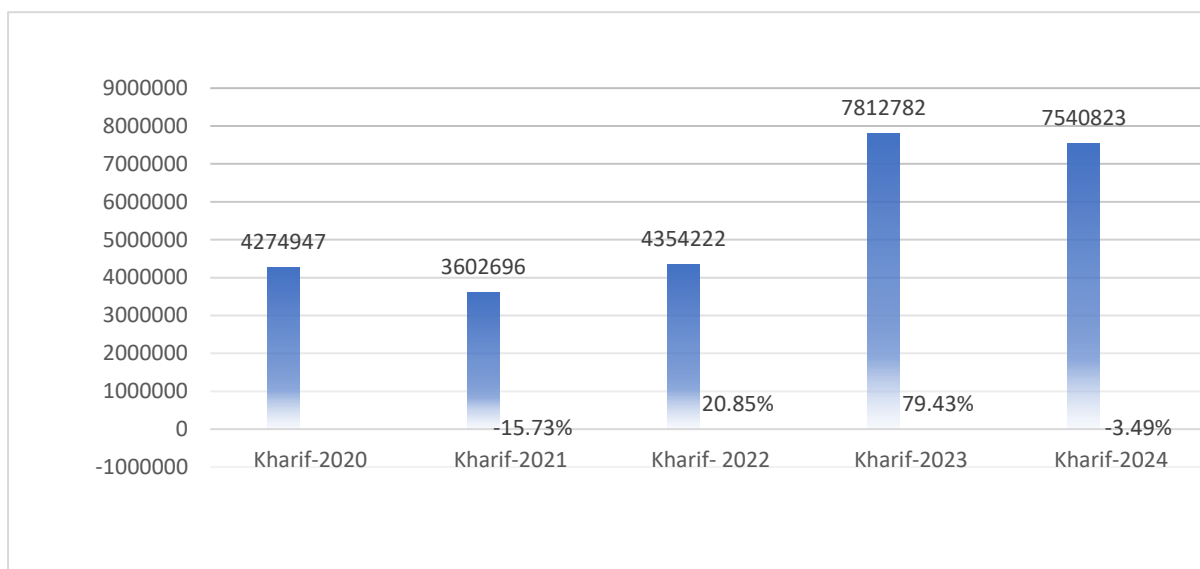
a) Farmer Participation:

The number of farmers who participated in the Pradhan Mantri Fasal Bima Yojana in the state of Maharashtra during 2020 to 2024 can be seen from the following chart 01 and 02.

Under Pradhan Mantri Fasal Bima Yojana in the year 2020-2024, a total of 2,75,85,470 farmers participated in the Kharif season and 80,44,301 farmers in the Rabi season. As on average, 55,17,094 farmers participated in the Kharif and 16,08,860 farmers in the Rabi season. It is notable that the maximum number of farmers in Maharashtra prefer crop insurance in the

Kharif season. According to the data of 2015-16, there are a total of 1.53 lakh farmers in Maharashtra, out of which only 55 lakh farmers participate in the PMFBY in the Kharif season, i.e. 35.94% of the farmers participate. On the contrary, only 10.51% of the farmers participate in the Rabi season.

Chart 01 & 02: Farmers Participations & its Growth Rate



The above chart 01 and 02 shows that the farmers participation and its growth under PMFBY in Kharif and Rabi Season during 2020 to 2024. It indicates that there has been a surprising increase in the farmer participation rate in the Kharif season by 20.85% and 79.43% in 2022 and 2023. Also, the farmer participation growth in the Rabi season of 2023 shows a very large increase of 785.34%. On the contrary, the farmer participation growth in the Kharif season

shows a large decrease in 2021 (-15.73%) and 2024 (-3.49%). Similarly, there has been a decrease of -16.56%, -38.89% and -20.26% in the Rabi season of 2021, 2022 and 2024 respectively. This shows that, during 2020 to 2024 there has been an average increase of 81.07% in the Kharif season and 709.63% in the Rabi season. This shows that the 'One Rupee Insurance' scheme launched by the Maharashtra Government has led to a huge increase in the participation of farmers in Maharashtra under PMFBY. It is clear that 'One Rupee Insurance' scheme has a milestone of PMFBY in Maharashtra state.

b) Area Insurance:

The following charts 03 indicates the area covered under PMFBY in the Maharashtra state during 2020 to 2024. It indicates that, a total insured area of 38005.19 thousand hectares was covered under this scheme in the of Maharashtra during the Kharif season of 2020 to 2024. Its average was 7,601.038 thousand hectares. On the contrary, a total insured area of 10937.32 thousand hectares was covered under the insurance scheme during the Rabi season and its annual average is 2,187.46 thousand hectares. This indicates that, maximum area is insured during the Kharif season (77.65%) than during the Rabi season (22.35%) under the PMFBY. It resulting that, kharif season has a lot of uncertainty and risk season compare to Rabi season in Maharashtra state. According to the report of Maharashtra Goatmeat 2015-16, there are approximately 17,470 thousand hectares area considered as net sowing area in Maharashtra. Therefore, 43.51% of the Kharif area and 12.52% of the Rabi area in Maharashtra is covered under the PMFBY scheme. This shows that less than 50% of the area in Maharashtra is covered under insurance. **Chart 03: Area insured under PMFBY in Kharif & Rabi Season**

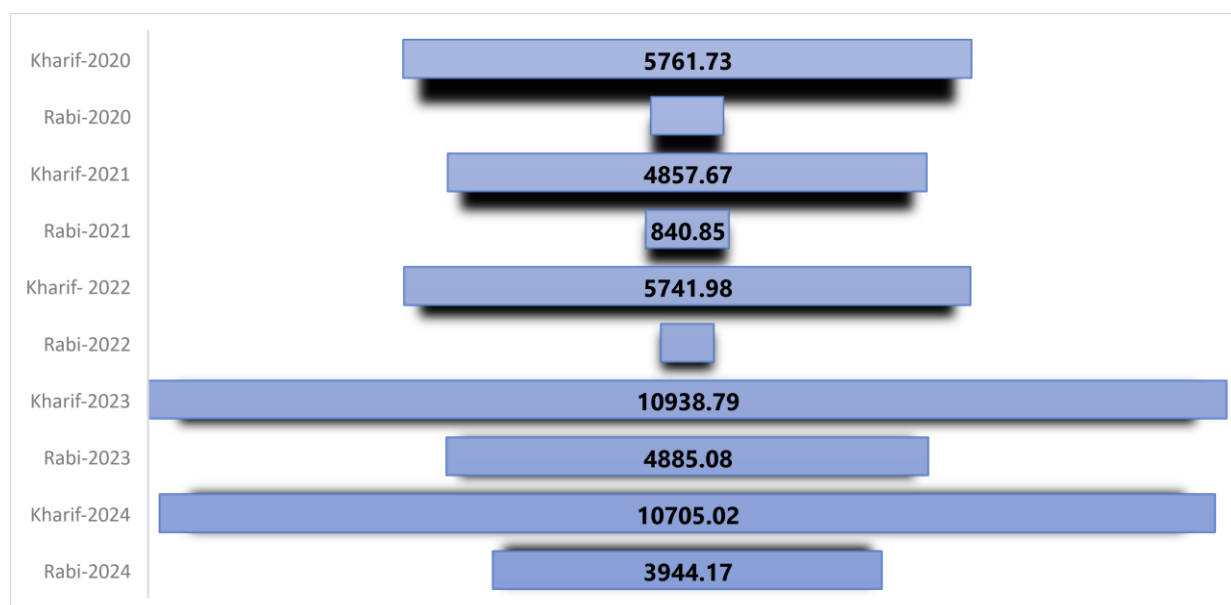


Chart 03 indicate that, there has been a significant increase in the area insured during the Kharif and Rabi seasons of 2023 and 2024 in Maharashtra. There has been very little growth or decline in the Kharif and Rabi season seem in 2020 to 2022. However, there has been a significant increase in the area insured during the Kharif and Rabi seasons in 2023, this increase has been attributed to the 'One Rupee Insurance' scheme in Maharashtra state.

c) Total Premium (Farmers and Government) and Claims Received:

During 2020 to 2024, The total amount of premium paid by farmers and the government and the total claims or refunds received in return under the PMFBY in Maharashtra can be seen from chart 04 & 05.

During the Kharif season from 2020 to 2024, farmers and the government together paid a total premium of Rs. 29,47,419.35 lakhs and in return, farmers received a total claim of Rs. 21,41,441 lakhs. This is a percentage of 72.65%, i.e. farmers were given 72.65% of the total premium. This shows that the insurance companies benefited by 27.35%. Similarly, during the Rabi season, farmers and the government together paid a total of Rs. 5,23,839.09 lakhs and in return, farmers received a total claim of Rs. 1,26,226 lakhs. This percentage is 24.10%, meaning that only 24.10% of the total premium was paid to the farmers. it indicates that, the insurance companies made a profit of 75.9% in Rabi season during 2020 to 2024. This shows that in the year 2020 to 2024, the insurance company paid 65.33% of the total premium during the Kharif and Rabi seasons and the insurance company made a profit of 34.67% from Maharashtra state.

Chart 04: Total Premium (Farmers and Government) and Claims Received in Kharif Season

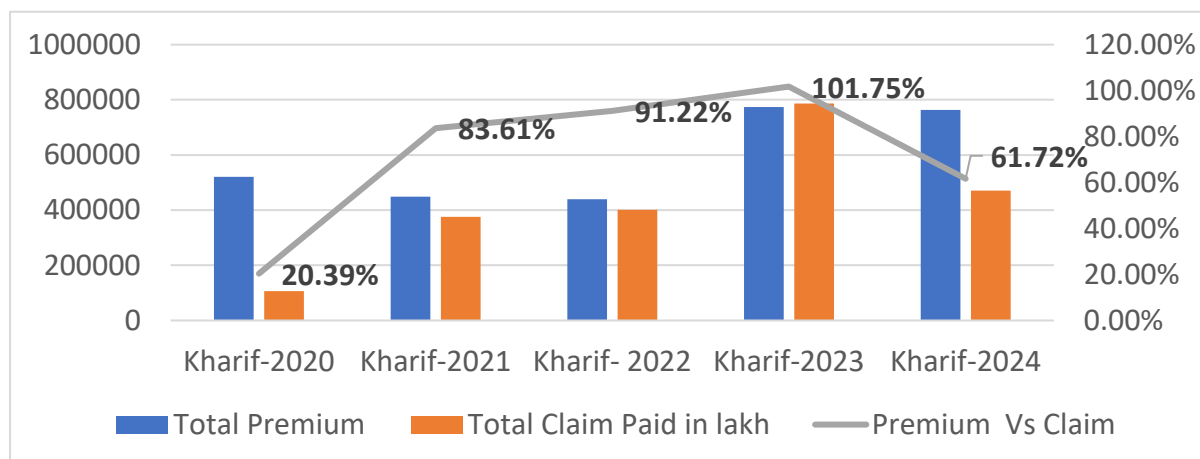
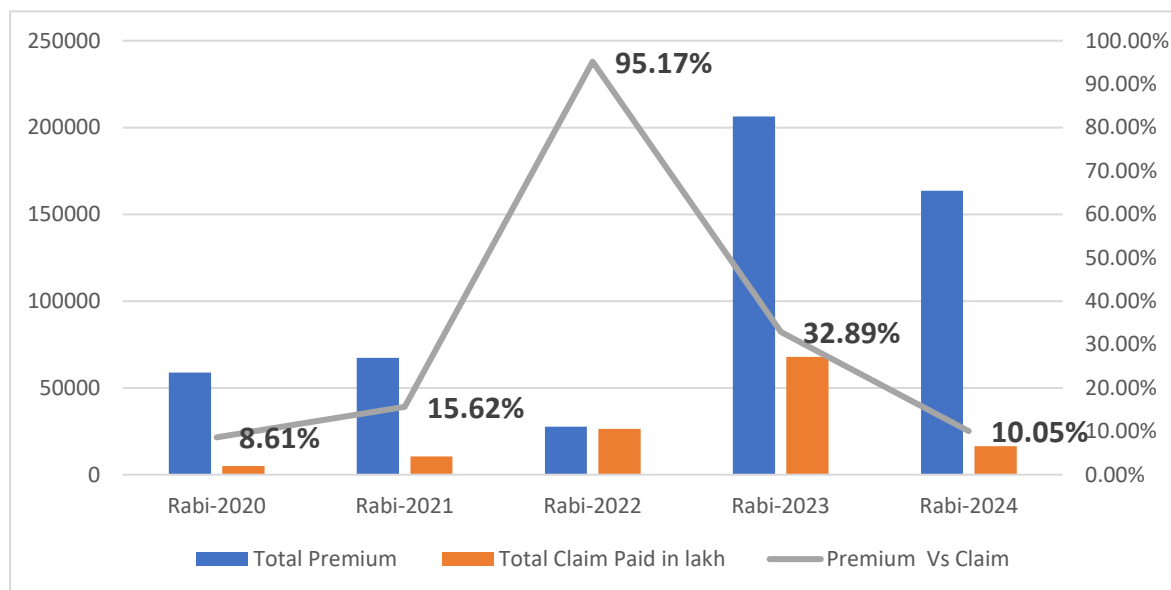


Chart 04 indicates that, in the year 2020, the insurance claim (20.39%) was very low as a compare to premium paid in kharif season. After that, during 2021 to 2023, the insurance claim received by farmers increased by 83.61%, 91.22% and 101.75% respectably under PMFBY in Kharif season and in the year 2024, the insurance claim was declined by 61.72%.

Chart 05: Total Premium (Farmers and Government) and Claims Received in Rabi Season



As per the chart 05, the insurance claims received were very less compared to the premium paid during the Rabi season except 2022. The claims received by farmers were 8.61% in 2020, 15.62% in 2021, 32.89% in 2023 and 10.05% in 2024. This shows that farmers do not prefer crop insurance during the Rabi season as they get very less claims. And also, the Rabi season has much less risky than the Kharif season in Maharashtra.

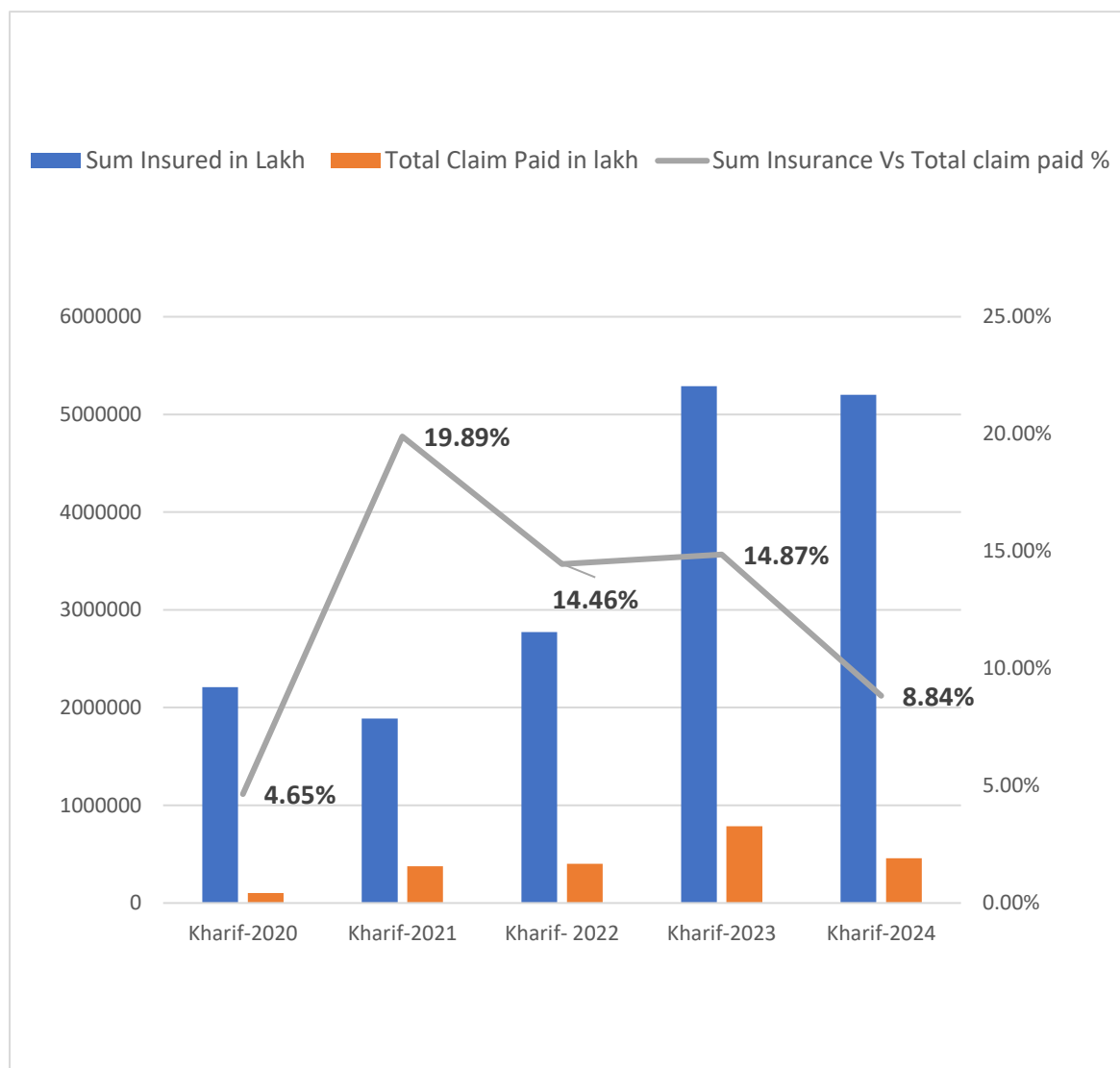
d) Sum Insured vs. Claim paid:

The total Sum Insured vs Claim paid under the PMFBY in Maharashtra are shown in chart 6 and 7.

During 2020 to 2024, there was a total Sum Insured of Rs. 173,57,105.39 lakh under the PMFBY during the Kharif season. Against this, farmers received insurance claims of Rs. 21,41,441 lakhs. Similarly, there was a total Sum Insured of Rs. 43,94,987.38 lakh during the Rabi season, against which insurance claims of Rs. 1,26,226 lakhs were received. As an average, only 12.34% of kharif season and 2.87% of Rabi season insurance claims were

received against a total Sum Insured in Maharashtra state. This shows that very few insurance claims are received under the PMFBY scheme or the insurance claims are not settled quickly.

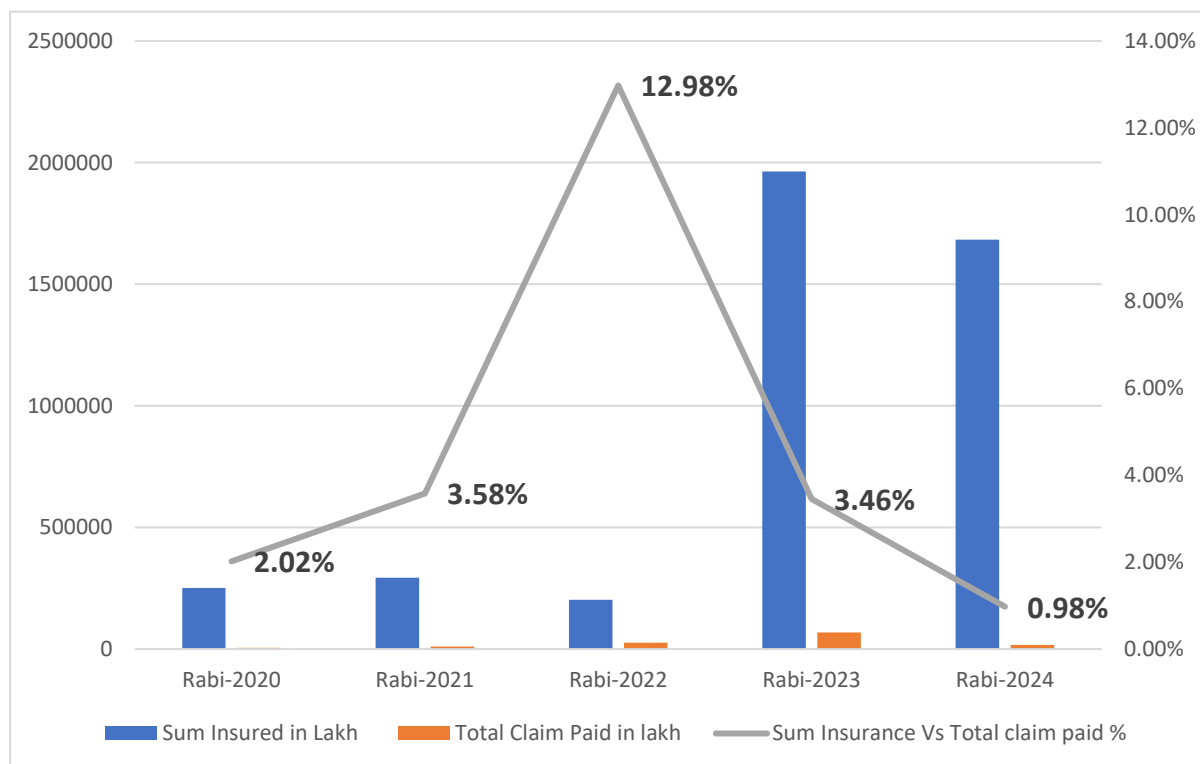
Chart 06: Total Insurance Coverage Amount vs. Insurance Claims in Kharif Season



The chart 06 illustrates the percentage of claims received against the sum insured for the Kharif season (2020-2024) in Maharashtra state under PMFBY. It shows that claims received against the sum insured has 4.65% in 2020, 19.89% in 2021, 14.46% in 2022, 14.87% in 2023 and 8.84% in 2024. During these five years, the average insurance claim/refund received by the farmer was 12.34% more than the sum insured. This shows that, a very few insurance claims have been received under this PMFBY scheme in Maharashtra. But it is more than the total insurance premium paid by the farmer and the government. It is clear that, the PMFBY scheme

is working well in Maharashtra, this scheme is active as a financial aid to the farmers during the period of loss.

Chart 07: Total Insurance Coverage Amount vs. Insurance Claims in Kharif Season



The above chart 07 shows that during the Rabi season, the insurance claims/returns were 2.02% in 2020, 3.58% in 2021, 12.98% in 2022, 3.46% in 2023 and 0.98% in 2024, it was a more than the sum insured. In these five years, the average insurance claims/returns were 2.87% more than the sum insured. This shows that very few insurance claims have been received under this PMFBY scheme in Maharashtra.

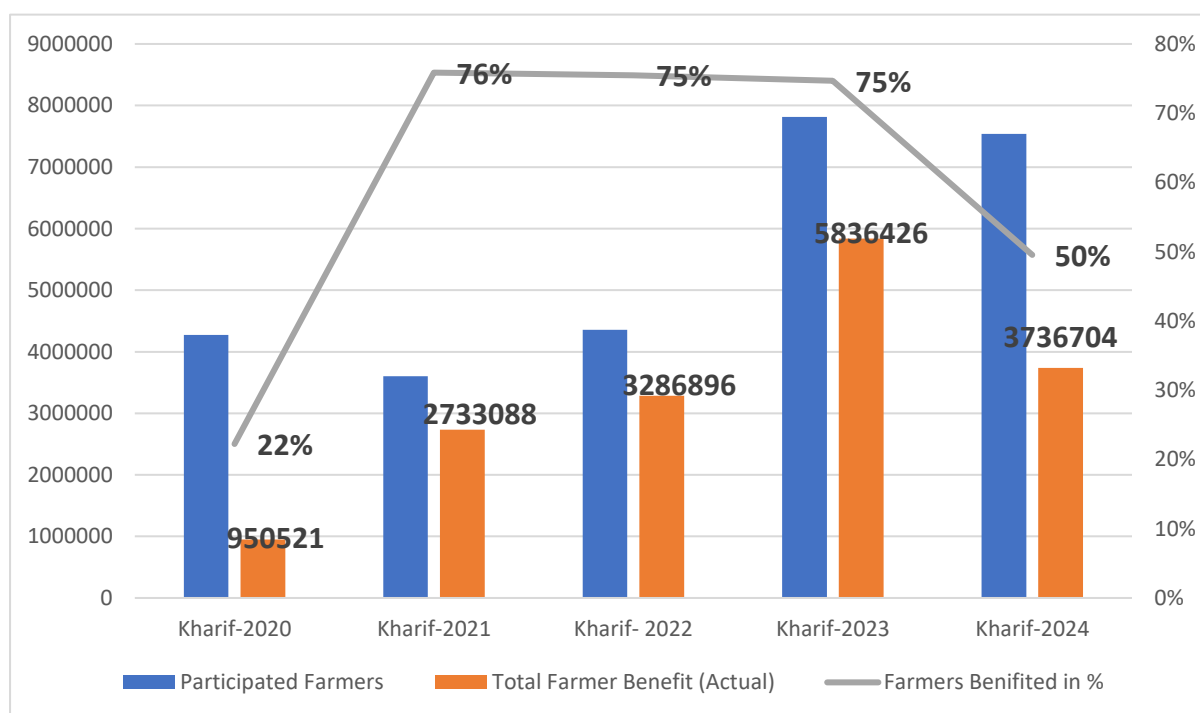
PMFBY is a financial boon for a farmer during times of natural calamities. It reduces agricultural risks by providing higher returns to farmers than the premium. But due to differences between the Crop Crop Experiment (CCE) figures and the actual losses reported by insurance companies, claims are often rejected.

E) Total participating and total beneficiary farmers under PMFBY:

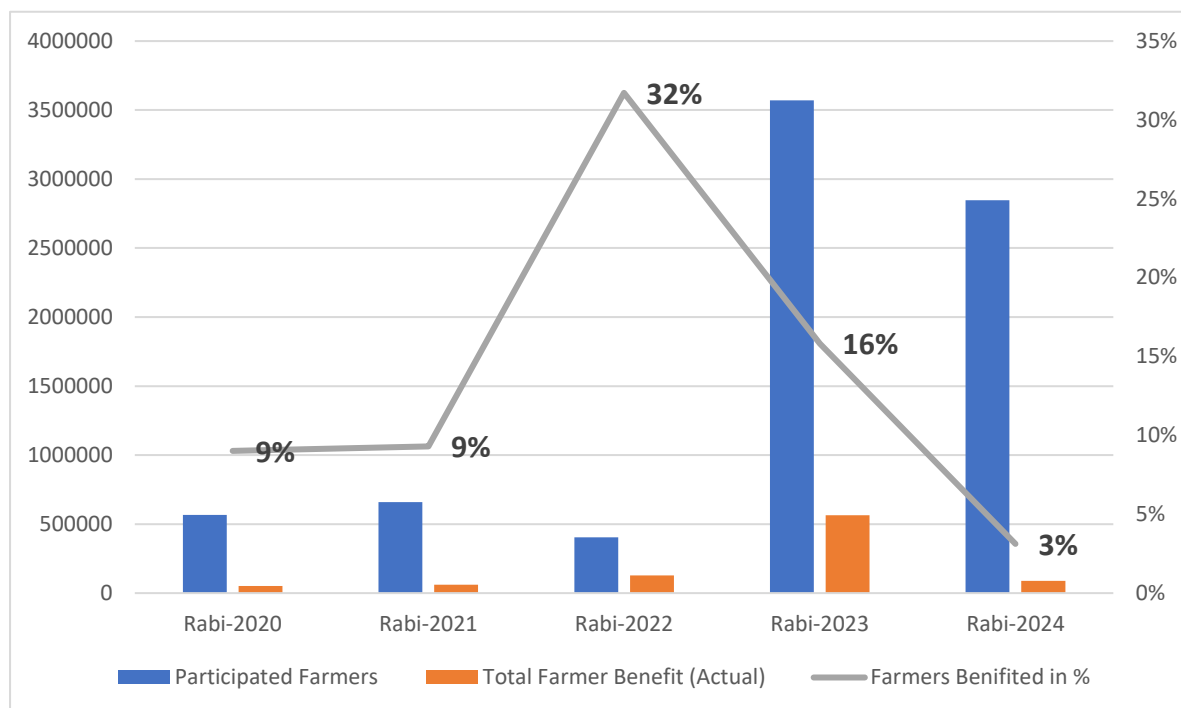
The total number of farmers participating under the PMFBY scheme in the Maharashtra state and the total number of actual beneficiary farmers are shown in the chart 8 and 9 below.

From this it can be seen that during the Kharif season in Maharashtra, a total of 2,75,85,470 farmers participated under the PMFBY scheme and out of these, 1,65,43,535 farmers were beneficiaries in Maharashtra. That is, 60% of the farmers took benefit of this scheme. On the contrary, in the Rabi season, 80,44,301 farmers participated and out of these, only 8,93,792 farmers were beneficiaries. That is, only 11% of the farmers actually benefited from this scheme. It shows that, a very low farmers benefitted under this scheme in Maharashtra.

Chart 08: Total Farmers participated Vs Benefited in Kharif Session Under PMFBY



The above table 08 illustrates the percentage of farmers benefited against participation in the Kharif session under PMFBY. It can be seen that in 2020, the percentage of farmers benefited was very low, i.e. 22% only in the Kharif season. But after that, it increased extremely, it was 76% in 2021, 75% in 2022 and 2023. Then it declined to 50% in 2024. This shows that the PMFBY scheme is playing the most important role in the losses in the agriculture sector. Therefore, this scheme provides more benefits to the farmers and works to get relief from the losses incurred.

Chart 09: Total Farmers participated Vs Benefited in Kharif Session Under PMFBY

The above chart 09 expressions that very few farmers benefited from the Rabi season under PMFBY in Maharashtra. On an average, 11% of farmers benefited from this scheme from the year 2020 to 2024. In the year 2020 and 2021, it was 9%, increased slightly to 31% in 2022, 16% in 2023 and much lower to just 3% in 2024. This shows that the Rabi season is very low risky season for the state of Maharashtra. At the same time, it is seen that farmer participation is low in many divisions as agriculture is dependent only on rains.

6. KEY CHALLENGES OF THE PMFBY IN MAHARASHTRA STATE

a. Farmer participation: There are a total of 1.53 lakh farmers in the Maharashtra state, out of which 35.94% in the Kharif season and 10.51% in the Rabi season are seen participating in the PMFBY scheme. The One Rupee scheme for insurance has been implemented in Maharashtra, so it is a challenge to get 60-70% and 30-40% farmers to participate in the Kharif & Rabi season respectively. The government needs to pay attention to this and increase this ratio.

b. Less insured area: According to the data of 2015-16, approximately 17,470 thousand hectares of agricultural land in Maharashtra is considered as net sowing area. Accordingly,

43.51% of the Kharif season area and 12.52% of the Rabi season area in Maharashtra comes under the PMFBY scheme. This needs to be increased.

c. Technical difficulties: There are 43,000 to 44,000 thousand villages in Maharashtra. Due to this, errors on the crop insurance portal cause difficulties for farmers in rural areas while registering. As a result, the participation rate decreases.

d. Delay in compensation: Due to delays by insurance companies and the government, farmers have to wait 6 to 10 months to get assistance. At the same time, there is a delay in the assessment of damage in case of disaster, flood, less or more rain.

e. Lack of transparency: There are prevalent complaints about lack of transparency in the survey of damage by insurance companies. At the same time, all farmers who have suffered more and less damage get the same insurance refund.

7. CONCLUSION

PMFBY scheme is a boon for farmers in Maharashtra and is an important safety net, but the implementation of this scheme is not completely perfect. Although farmer participation has increased in Maharashtra due to the One Rupee Insurance Scheme, 35.94% farmers have participated in the Kharif season and 12.51% in the Rabi season in the last five years. To increase this rate, the government needs to gain the trust of farmers. At the same time, a very small area (43.51% of the Kharif season and 12.52% of the Rabi season) is covered by this scheme. To increase this, it is necessary to simplify the process of the scheme, make claims in a timely manner and create awareness.

From this observation, it is clear that crop insurance companies have made a large profit from the year 2020 to 2024. In the Kharif season, 72.65% of the total insurance premium was given to farmers and in the Rabi season this proportion was very low, i.e. 24.10%. Due to this, it is necessary to control the profiteering of insurance companies and provide accurate compensation using technology (Remote Sensing, Drones). For this, it is necessary to increase the use of 'Remote Sensing' and 'Satellite Data' in the insurance refund process and empower the grievance redressal centers of insurance companies at the district level.

From many observations, it has been noticed that insurance companies do not provide insurance claims on time. Due to this, the attitude of farmers towards this scheme is changing.

For this, it is necessary to set a time limit for getting insurance refunds on time and impose penalties on companies that violate it. Only then will this scheme be more successful and make farmers financially stronger and wiser.

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