A STUDY ON UTILISATION OF FUNDS ALLOCATED FOR CROP INSURANCE IN INDIA

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ABSTRACT

The agriculture sector occupies an important place in the Indian economy. Conditions such as weather, pest attacks, irregular rainfall and changes in moisture affecting agricultural yield are a common problem in India. To cover this risk, Pradhan Mantri Fasal Bima Yojna is a crop insurance scheme sponsored by the Government of India was launched in 2016. After implementation of this scheme still the farmers are not fully adopting it, but the report published by websites are stated that the level of utilization of scheme was increasing but actually after analysis it was found that only few farmers are getting the benefits from the scheme. There were contradictions between the opinions of farmers and published reports. In this context, the study has been conducted to evaluate the impact of crop insurance and its effective utilization of funds with special reference to Kanakapura Taluk in Karnataka. The study is descriptive and Exploratory in Nature. For the purpose of data analysis both primary data and secondary data were collected from farmers, various websites related to crop insurance and state wise crop insurance report was taken to check the effectiveness of the scheme in different states and also statistical tools like mean and percentage were used to study the impact of crop insurance on farmers and advanced excel is used to analyse the secondary data. Through the study, it was identified that the benefit derived by the farmers from Crop insurance is not satisfiable due to its stringent process and lack support from field officers. Apart from this, the contribution made by the farmers, State and Central government for crop insurance was not fully received by the farmers but only a fixed percentage was received as a claim based on the report submitted by the agricultural field officers who visited to that particular insured land. It was also noted that there was a drastic difference between the Applications received from farmers and applicants benefited from crop insurance, this difference may lead to under-utilization of funds allocated to crop insurance. If these underutilized funds had been invested in developmental activities of Government, which would have been the great sources of revenue generation. Based on the detailed report it was proved that, though the scheme is Yield Based but premium is paid by the farmer based on the Acres of land owned and what they have cultivated not on the expected crop yield.

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Keywords: *Crop Insurance, Natural Disasters, Fund Utilization, Farmers, Agricultural Sector.*

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Introduction

GDP From Agriculture in India decreased to 5688.80 INR Billion in the first quarter of 2022 from 6626.88 INR Billion in the fourth quarter of 2021.It is estimated that India's agriculture sector accounts only for around 14% of the country's economy but for 42% of total employment. As around 55% of India's arable land depends on precipitation, the amount of rainfall during the monsoon season is very important for economic activity here the concept Crop insurance as a risk management tool in agriculture has emerged in India since the turn of the twentieth century.

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Majority of the population in India is depends on agriculture for their livelihood. Crop production in India is largely depending on the weather and other issues like pests, diseases. These unpredictable and uncontrollable extraneous perils render Indian agriculture an extremely risky enterprise. It is here that crop insurance plays an important role in anchoring a stable growth of the sector. Pradhan Mantri Fasal Bima Yojana (PMFBY) 2016 has been the most recent version of crop insurance in the country. It is a crop insurance scheme sponsored by the Government of India with an aim to provide financial aid to farmers in case of crop loss or damage. Thus, it helps to reduce farmers stress and keep them motivated to continue with farming as an occupation. The various risk covered under this scheme include prevention of sowing, planting of seeds, damage to the standing crop due to non-preventable risks like drought, flood, landslide, etc. along with post-harvest losses.

Statement of the Problem

Recently in India, Due to floods and other natural disasters the growth of agricultural sectors are not stagnant and also the farmers are facing a lot of financial burdens. To overcome this, government of India has launched various programmes, subsidies and incentives to the farmers in that one of the important Schemes is crop insurance. After implementation of Crop insurance due to the lack of awareness among the farmers its utility was not reached the target level and also it was noticed that the funds allocated to such crop insurance was not fully utilized. Hence, in this paper an attempt has been made to find the reasons behind this problem.

Review of Literature

Vinayak Mahadev Dandekar (1973). "Crop Insurance in India", the study mainly focuses on agricultural cultivation issues in India, importance of crop insurance in India to overcome those problems and issues in implementation of Crop Insurance Scheme.

VS Vyas, Surjit Singh (2005). "Crop insurance in India: Scope for improvement", author revealed the importance of National Agricultural Insurance Scheme. The study is based on a detailed analysis of 11 crop seasons historical data, covering the Rabi season from 1999-2000 to the same in 2004-05.

Reshmy Nair (2010). "Crop insurance in India: changes and challenges", this study identifies the benefits of evaluation of the crop insurance programme in India through the multi-peril yield-based Insurance and Weather based Insurance (National Agricultural Insurance Scheme) evolve as a tool for dealing with natural disaster risks in agriculture.

Daniel Jonathan Clarke (2012). "Weather based crop insurance in India", this study provides a critical overview of weather index insurance market in India, including a review of indices used for insurance purposes and a description and analysis of common approaches to design and ratemaking.

Kolli N Rao (2010). "Index based crop insurance", this study analyses the feasibility of crop insurance schemes with 'yield index' based crop insurance on a countrywide basis since 1985. And also reveal the various risk associated with accessibility of crop insurance in India by farmers.

Ashok Gulati, Prerna Terway, Siraj Hussain (2018). "Crop insurance in India: Key issues and way forward", This paper made an attempt to analyse the key issues associated with this scheme and suggested the use of high technology and JAM trinity by linking land records of farmers with their Aadhaar numbers and bank accounts for assessment and faster settlement of claims.

KS Aditya, Tajuddin Khan, Avinash Kishore (2018). "Adoption of crop insurance and impact: insights from India", In this paper the author was made an attempt to understand the factors that influence farmers decision to buy crop insurance and subsequently assess its impact on farmers income, production expenses and productive investments in agriculture.

Subhankar Mukherjee, Parthapratim Pal (2018). "Impediments to the spread of crop insurance in India", this article comments on the feasibility of attaining the target of PMFBY by using the past historical data.

Research Gap

Through the review of literature, it was found that, various studies have been carried out to know the multi-dimensional aspects of crop insurance, no attempts have been made to study utilization of funds allocated to crop insurance and its impact on farmers in India with special reference to Karnataka reviewed so far. Hence, an attempt has been made in the present study to fill the research gap and highlights the problem of the farmers and the claiming and sanctioning process of crop insurance.

Objective of the Study

- To understand importance of Crop insurance scheme launched by government of India.
- To identify the fund allocation of crop insurance and its disbursement among the States.
- To study about the awareness and utility of scheme among the farmers in Karnataka with reference to Kanakapura Taluk.
- To know the reasons for underutilization of the facility provided through the scheme.

Scope of the Study

The Study is only confined to Farmers in Kanakapura Taluk. The opinions are obtained from various Farmers through questionnaire to understand the awareness and utilization of crop insurance.

Research Methods

This Study is Exploratory and Descriptive in Nature. Survey method has been used for the study. Judgemental Sampling Technique is used for the purpose of selection of Sample unit.

Sample Size

The sample size is 156 farmers in Kanakapura Taluk in karnataka.

Sources of Data Collection

Both Primary and Secondary are used for the study. The Primary Data is collected through Questionnaire Survey. Secondary data is collected from various reputed journals, magazines, reports, books, newspapers, internet sources and government official websites.

Tools for Data Analysis

The collected data were processed and presented in the form of tables, graphs and figures. The analysis was made with help of relevant statistical tools such as Percentage and Mean.

Limitations of the Study

- Only 4 year's data is used for analyses of utilisation of fund.
- The study covers famers in kanakapura Taluk, Karnataka

Data Analysis and Interpretations

Table 1: Awareness level of Crop Insurance

Parameters	No. of Respondent	Percentage
Yes	124	79.48%
No	32	20.51%
Total	156	100%

(Source: Primary Data)

Data Analysis and Interpretation

From the above table it was analyzed that among 156 respondents, 79.48% farmers have stated that they are aware of crop insurance and remaining 20.51% have stated that they are not aware of crop insurance. Hence, it was interpreted that majority of farmers are aware of crop insurance.

Table 2: Agricultural Land Owned by Farmers

Land	Respondents	Percentage
1 Gunte – 1 Acre	8	5.12%
1 Acre – 2 Acres	29	18.58%
2 Acres – 3 Acres	40	25.64%
3 Acres – 4 Acres1	60	38.46%
Above 5 Acres	19	12.17%
Total	156	100%

(Source: Primary Data)

Data Analysis and Interpretation

Table 2 represents the agricultural landholding of farmers, from this it can be inferred that Maximum of 38.46% of Landholding in this area is between 3 Acres – 4 Acres, nearest to that 25.64% farmer's landholding is between 2 acres – 3 Acres and Minimum of 5.12% farmer's landholding is between 1-Gunte - 1 Acre.

Table 3: Variety of Crops Cultivated

Crops	Respondents	Percentage
Ragi	46	29.48%
Paddy	35	22.43%
Mango	27	17.30%
Groundnut	22	14.10%
Horse gram	13	8.33%
Pegion pea	13	8.33%
Total	**156**	**100%**

(Source: Primary Data)

Data Analysis and Interpretation

From the above table it can be inferred that there are six types of crops grown in this region, majority of 29.48% are grown Ragi, closest to that 22.43% of this region were grown Paddy and equal importance is given to Horse Gram and also Pegion pea that is 8.33%.

Table 4: Sources of Water for Farming

Sources	Respondents	Percentage
Rain Water	68	43.58%
Bore Well	87	55.76%
Deep Well	1	0.64%
Total	**156**	**100%**

(Source: Primary Data)

Data Analysis and Interpretation

Table 4 states that there are three sources of water for farming are used in this area that is Rain Water, Bore Well and Deep Well. Maximum of 55.76% of farmers are depended on Bore Well and only Minimum of 0.64% are depended deep well for water source. Through this it can be inferred that majority of farmers are using Bore well and Rain water for cultivation of crops instead of Deep Well.

Table 5: Methods of Irrigation Used for Cultivation

Methods	Respondents	Percentage
Sprinkler	12	7.69%
Surface irrigation	132	84.61%
Drip irrigation	10	6.41%
Sub irrigation	0	0%
Manual irrigation	2	1.28%
Total	**156**	**100%**

(Source: Primary Data)

Data Analysis and Interpretation

From the above table, it was inferred that five methods of irrigation is followed in this region are Sprikler, Surface, Drip, Sub and Manual irrigation. Among these the best irrigation is method is Surface Irrigation because 84.61% of farmers are agreed to that, but the least one is Sub irrigation no one has agreed to it. Through this it was interpreted that soil in this area is Clay soil with low infiltration rates.

Table 6: Awareness Level of Crop Insurance Scheme among the Farmers

Options	Respondents	Percentage
Yes	124	79.48%
No	32	20.51%
Total	**156**	**100%**

(Source: Primary Data)

Data Analysis and Interpretation

From the above table it was inferred that among 156, respondents maximum of 79.48% of farmers are aware of crop insurance but only 20.51% are not aware of it. The table 6 reveals that awareness level of crop is not reached to all the farmers still more measures has to be taken by the government to create awareness among all the farmers.

Table 7: Mode of Communication of Crop Insurance Scheme to Farmers

Modes	Respondents	Percentage
Newspaper	11	8.87%
Agricultural department	81	65.32%
Banks	13	10.48%
Radio	5	4.03%
Social media	9	7.25%
Television	5	4.03%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretation

Table 7 extrapolate that among 124 respondents, top most of 65.32% farmers have aware of crop insurance through Agricultural department, next to that 10.48% of farmers have aware of it through Banks and equally 4.03% have aware of it through television and radio. It can be understood that even though variety of modes are used to create awareness about Crop insurance the farmers are highly depended on Agricultural departments due to trust and availability.

Table 8: Reasons behind Not Insuring Crops

Options	Respondents	Percentage
Long Process	3	9.37%
Corruption	7	21.87%
More Rules and Regulations	4	12.5%
Lack of Advertisement	18	56.25%
Total	32	100%

(Source: Primary Data)

Data Analysis and Interpretation

Table 8 shows the reason behind not ensuring crops, Through this it is observed that among 32 respondents, Utmost 56.25% of farmers are agreed that due to lack of advertisement, 21.87% are agreed that due to corruption and least of respondents agreed that due to long process i.e., 9.37% they are not insuring the crops. It can infer that apart from advertisement other factors like corruption, More rules and regulations and long process will also impact the farmers to take up crop insurance.

Table 9: Types of Crops Insured

Crops	Respondents	Percentage
Ragi	34	27.41%
Paddy	30	24.19%
Mango	21	16.93%
Groundnut	15	12.09%
Horse Gram	14	11.29%
Pegion Pea	10	8.06%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretation

From the above table it can be interpreted majority of 27.41% of farmers in this region is avail crop insurance for Ragi, nearest to that 24.19% of farmers are avail insurance for Paddy and only least of 8.06% are avail crop insurance for Pegion Pea. It can be understood that, in this area majority of farmers are depending on the cultivation of Ragi, Paddy and Mango.

Table 10: No. of Years of Crop Insurance Scheme Availed

Years	Respondents	Percentage
1	0	0%
2	15	12.09%
3	65	52.41%
4	41	33.06%
5	3	2.41%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretation

Table 10 shows the no. of years of crop insurance scheme utilised by the farmers, from that it is observed that 52.41% of farmers have insured the crops for 3 years, closest to that 33.06% and least of 2.41% farmers have insured for 4 years and least of 0% have insured for 1 year. It can be inferred that majority of farmers falls in the category of 3 and 4 years and no one falls under one year of crop insurance it indicates that the utilization level of crop insurance is increasing.

Table 11: Acres of Land Crop Insured by Farmers

Lands (in acres)	Respondents	Percentage
1 gunte to 1 acre	4	3.22%
1 acre	15	12.09%
2 acres	35	28.22%
3 acres	47	37.90%
4 acres	22	17.74%
5 acres	1	0.80%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretations

Above table 11 Shows the acres of land crop insured by farmers, it was identified that highest of 37.90% farmers are taken crop insurance for 3 acres of land, near to that 28.22% of farmers are taken up crop insurance for acres of land and least of 0.80% farmers are taken up crop insurance for 5 acres of land.

Table 12: Crop Insurance Premium Paid by the Farmers

Premium Amount	Respondents	Percentage
₹ 8 per Gunte	4	3.22%
₹ 308 per 1 acre	15	12.09%
₹ 615 per 2 acres	35	28.22%
₹ 923 per 3 acres	47	37.90%
₹ 1230 per 4 acres	22	17.74%
₹ 1538 per 5 acres	1	0.80%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretation

From the above table 12, it was inferred that though the majority of 37.90% of farmers are ensuring crop insurance for 3 acres, the premium paid by them is Rs.923 and minimum of 0.80 % are Paid the premium of Rs.1538 per 5 acres. It can be inferred that premium amount are based on the level of agricultural land not on the crops.

Table 13: Level of Crop Insurance Claimed

Options	Respondents	Percentage
Yes	124	100%
No	0	0%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretations

Table 13 shows the level of crop insurance claimed, it can be interpreted that among 124 farmers, 100% of farmers are claiming the crop insurance and least of 0% is related to not claiming of crop insurance, it was found that who have insured for crops they all are claiming the insurance amount.

Table 14: No. of Times Crop Insurance Claimed by Farmers

No. of times	Respondents	Percentage
1	38	30.69%
2	59	47.58%
3	23	18.54%
4	4	3.22%
5	0	0%
Total	124	100%

(Source: Primary Data)

Data Analysis and Interpretations

From the above table, which describe the no. of times farmers are claimed the crop insurance scheme, majority of 47.58% farmer's falls under the category of 2 times, nearest to that 30.69% farmers falls under the category of 1 time and no one are falls under the category of 5 times. Through this it can be inferred that majority of farmers who claimed crop insurance are falls under the category of 1 and 2.

Table 15: Percentage Insurance Claims Received

Category (in %)	Respondents	Percentage
0-20%	12	9.67%
20-40%	101	81.45%
40-60%	8	6.45%
60-80%	3	2.41%
Above 80%	0	0%
Total	**124**	**100%**

(Source: Primary Data)

Data Analysis and Interpretations

Table 15 shows the detailed report of percentage of claims received by the farmers, through this it was inferred that maximum of 81.45% of farmers are receiving claims between 20-40%, and no farmers are receiving claiming above 80%. From this it can be proved that there will be under-utilization of crop insurance fund. If majority of the farmers receiving only 20-40% of the claim there will be question of the remaining of 60-80% of Claim which was not received.

Table 16: Time Taken to Claim the Crop Insurance

Months	Respondents	Percentage
1-3	0	0%
3-5	3	2.41%
5-7	15	12.09%
7-9	98	79.08%
More than 9 months	8	6.45%
Total	**124**	**100%**

(Source: Primary Data)

Data Analysis and Interpretations

From the above table, which shows time details of time taken for claiming crop insurance amount, through this it can be interpreted that utmost of 79.08% farmers are received their claim between the period of 7-9 months, 12.09% of applicants received the claim between the period of 5-7 months and no one has received the claim within 1-3 months. As per the notification of government stated that a claim of crop insurance has to be taken between 30-45days but actually it was not implemented properly.

Table 17: Issues Associated with Crop Insurance

Reasons	Respondents	Percentage
No data has been updated regarding natural calamities	26	20.96%
No proper response from the officer	45	36.29%
Improper documents being provided by the farmers	33	26.61%
Fund not released from the government of India and state government	20	16.12%
Total	**124**	**100%**

(Source: Primary Data)

Data Analysis and Interpretations

From the above table, which elucidate the issues associated with crop insurance, It can be interpreted that among 124 farmers, 36.29% farmers are stated that lack of proper of response from officer, 26.61% farmers stated that improper documents provided by the farmers, 20.96% of farmers stated that No data has been updated regarding natural calamities and minimum of 16.12% stated that fund not released from state and central government properly on time. It was found that farmers who are adopting the crop insurance scheme to mitigate and reduce loss will also face the above issues to get the claim.

Table 18: Average Claims in Crop Insurance during the period of 2016-2020

State/UT Name	Farmers Applications Insured (Lakh)	Area Insured (Lakh)	Sum Insured	Farmers Share in Premium	Gross Premium	Reported Claims	Paid Claims	Farmer Applications Benefitted (Lakh)
					Rs. Crore			
A & N Islands	0.00375	0.003	0.9875	0.00475	0.08	0.06	0.04	0.00075
Andhra Pradesh	22.10125	18.75725	11442.56	177.6395	1161.105	1209.173	1205.935	11.459
Assam	2.98075	1.734	1211.938	17.3135	44.05	6.6525	2.335	0.0845
Bihar	12.54325	11.522	5437.275	95.979	611.215	187.3425	187.3425	1.08625
Chhattisgarh	21.5285	22.48325	7564.003	149.0768	696.4675	988.3825	983.88	7.38825
Goa	0.00625	0.00325	3.6175	0.04275	0.0475	0.0375	0.0375	0.0005
Gujarat	20.98675	27.80875	13453.03	374.859	3011.315	1369.235	1308.153	6.3875
Haryana	14.57875	20.745	13186.9	227.768	723.42	767.9925	766.315	3.817
Himachal Pradesh	3.2865	1.0605	792.8025	30.50925	77.91	57.3725	55.725	1.31275
Jammu & Kashmir	0.78175	0.64975	466.4375	6.43475	29.3	9.02	9.02	0.0965
Jharkhand	11.151	4.8415	2683.29	22.7015	309.1875	197.1725	24.8525	0.64175
Karnataka	22.8795	21.72275	9404.843	248.9673	1826.75	1813.99	1778.24	11.47725
Kerala	0.621	0.4535	314.36	6.45375	41.8625	41.835	41.8325	0.44775
Madhya Pradesh	74.50675	120.27075	39582.61	767.4665	4423.593	4401.613	4378.063	22.92925
Maharashtra	128.89225	74.739	26028.82	712.909	5330.615	4609.248	4605.123	63.1345
Manipur	0.05575	0.078	27.3175	0.48425	1.75	0.9425	0.9425	0.038
Meghalaya	0.01175	0.00625	6.4	0.18875	0.24	0.1125	0.1125	0.00225
Odisha	26.72575	15.06625	8881.65	175.6085	1153.463	1150.188	1140.185	6.9695
Puducherry	0.0765	0.06175	35.735	0.05625	2.4375	3.79	2	0.012
Rajasthan	85.42575	94.93475	26432.16	557.757	3487.428	3136.73	3136.698	26.7355
Sikkim	0.00575	0.00125	1.155	0.025	0.025	0.0375	0.0375	0.00075
Tamil Nadu	23.26625	12.619	7559.473	135.8883	1420.025	2363.348	2354.645	13.7955
Telangana	9.75825	10.00825	6783.595	170.223	594.76	454.4225	244.25	1.81
Tripura	0.155	0.0305	19.5025	0.42225	0.5725	0.635	0.6325	0.03575
Uttar Pradesh	58.83	49.5415	21981.49	406.6575	1304.105	635.34	629.3375	8.33125
Uttarakhand	2.22375	1.181	903.92	21.89375	74.55	60.62	60.6175	0.77975
West Bengal	33.24775	13.58825	9301.62	81.73975	519.1975	304.7	303.18	6.124
Grand Total	576.625	523.9	213507.5	4389.25	26845.5	23769.75	23219.5	194.875

(Source: Secondary Data (pmfby.gov.in))

Through the above table among all the states Maharashtra is benefited to highest of 63.14345 through this scheme and least benefited was A&N Islands only 0.00075 farmers an average of 4 years information between 2016-2020. In this table it was identified that there was a huge gap between the Farmers application Received and Farmers Application benefited. And also, there was huge difference between the Reported claims and Paid Claims.

Findings

- It was identified that half of the farmers have insured the crops for 3 years i.e., 52.41%.

- Highest of 37.90% farmers have taken crop insurance for 3 acres of land and least of 0.80% farmers are taken up crop insurance for 5 acres of land.

- It was found that majority of farmers are receiving only 20-40% of insurance amount.

- Time taken to proceed the claim was between 7-9 months which lead to decline in the level of crop insurance.

- 100% of farmers who took the crop insurance are using it but the percentages of insurance claims are very less. There will be question of remaining claim and its utilization.

- Majority of Farmers have stated that there was lack of proper response from agricultural officer.

- Through the study it was found that among all the states Maharashtra is benefited to highest of 63.14345 in average of 4 years information between 2016-2020.

- It was identified that there was a huge gap between the Farmers application Received and Farmers Application benefited. And also, there was huge difference between the Reported claims and Paid Claims.

Suggestions

- Awareness programs should be conducted in rural areas related to crop insurance and its detailed process with documents requirements.

- A proper measure has to be taken to increase the percentage of claim of crop insurance and also time period to process the fund should be reduced.

- A needful support and guidance is required for the farmer from the officers of Agricultural departments.
- Under-utilized funds has to be identified that should be accounted and utilized for the purpose of Farmers benefit and also that can invested in developmental activities.
- Transparency and Proper accountability of these funds will encourage the farmers to adopt crop insurance.
- Proper valuation norms are to be introduced to compute the insurance claims and also direct control of Government is required
- A detailed report has to be published related to unpaid crop insurance amount.

Conclusion

It can be concluded that, through the study various drawbacks of the crop insurance scheme were identified and also it clearly states those funds allocated for crop insurance scheme are not utilized fully. Hence government has to take up a initiatives to cover large number of farmers to avail the scheme and regular monitoring is required to check the effectiveness of the scheme and its benefits to the farmers.

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