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A STUDY OF ISSUIS AND CHALLENGES FACED BY FARMERS TO AVAIL THE CROP INSURANCE SCHEMES IN MAHARASHTRA STATE

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ABSTRACT:

Crop insurance is necessary for the farmers to protect them against financial issues. Crop insurance is indispensable for the prosperity of farmers and policy instruments to deal with the perils present in agriculture. But the implementation of Crop insurance largely depends on the farmer's attitude. The present study discusses the outcomes of the study in the area of crop insurance. It measures the present situation of crop insurance scheme and challenges of crop insurance, examines the awareness and attitude of farmers towards crop insurance

Key Words: *Crop insurance, Farmers awareness, Attitude, Challenges and policy.*

INTRODUCTION:

Agriculture plays a vital role in India's economy. Over 58.00 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product. Agriculture being the function of physical, socio-institutional, techno-economic factors, which are dynamic in nature, keeps on changing with the basis objective of increasing production and generation of food grain surplus. Agriculture in India is highly susceptible to risks like droughts and floods. Farmers have developed risk management strategies to cope with these adverse events, sometimes with the assistance of the governments. It is necessary to protect the farmers from natural calamities and ensure their credit eligibility for the next season. For this purpose, the Government of India introduced many agricultural schemes throughout the country. Government of India has made experiments and efforts by introducing various schemes of crop insurance such as First individual approach scheme (1972-1978), Pilot

Crop Insurance Scheme (1979-1984), Comprehensive Crop Insurance Scheme (1985-1999), Experimental Crop Insurance Scheme (1997-1998), Pilot Scheme on Seed Crop Insurance And National Agricultural Insurance Scheme (1999-2000 onwards), The government of India in co-ordination with General Insurance Corporation of India(GIC) had introduced scheme called the National Agricultural Insurance Scheme which commenced from Rabi season 1999-2000. Agricultural Insurance Company of India Ltd. (AICIL) which was incorporated in December 2002 and started operating from April 2003 took over the implementation of the NAIS. Pradhan Mantri Fasal BimaYojana (2016 onwards) PMFBY Has-been the most recent avatar of crop insurance in the country. Pooling in the important learning from all the earlier schemes and taking into consideration of access to technology in the recent days, Pradhan Mantri Fasal BimaYojana promises to take care of the loopholes of earlier schemes.

REVIEW OF LITERATURE:

Karthik.T.T in his research titled “A study on crop insurance in Madurai district” that in spite of the schemes introduced periodically in India for agriculture insurance has not ensured the purpose. Crop insurance coverage in terms of area, database of farmers and agricultural output is not sufficient enough; payment of indemnity based on area approach has settled the claim for unaffected farmers. Government should take initiatives to redesign by providing appropriate mechanisms and providing financial support for agricultural insurance. Providing similar help to private sector insurers would also provide a provision to increase insurance coverage and viability of the insurance schemes over time.

Studies have revealed that farmers expressed negative perception and attitude towards agricultural insurance. However, evidence from literatures also shows that, some insurance programmes are perceived positively by farmers. **Mojarradi, Zamani, and Zarafshan, (2008)** used path analysis to test for exogenous variables, perception towards agricultural insurance as an intervening variable and attitude towards agricultural insurance as the dependent variable. They reported that farmers had positive attitude towards private crop insurance agents. Also, **Garforth (2005)** used stated attitude to measure how good or bad the respondent felt it would be to take out insurance for their farm to cover against consequential losses. The findings indicated that the stated attitude of the whole sample was neutral to slightly positive.

Yazdanpanah, et al. (2009) attributed farmers’ satisfaction with crop insurance to several factors; commitment to bank and quality of services for farmers insured previously, and bank image, quality of service for currently insured farmers, quality of service, and indemnity for all farmers.

Rostami, et al. (2007) showed that several individuals, economic, and social factors influence farmers’ attitude toward agricultural insurance. The most important factors in this area are education, area of lands used and diversity in production, risk aversion, and type of ownership.

OBJECTIVES OF THE STUDY:

1. To study the crop insurance schemes in India.
2. To study the challenges faced by farmers in crop insurance
3. To study the farmers awareness and attitude towards crop insurance.

HYPOTHESIS OF THE STUDY:

H₀: There is no significant association between education of the farmers and their awareness of crop insurance schemes

H₀: There is no significant association between Farm size of the farmers and their awareness of crop insurance schemes

H₀: There is no significant association between Farming Experience of the farmers and their awareness of crop insurance schemes

H₀: There is no significant association between annual income of the farmers and their awareness of crop insurance schemes

RESEARCH METHODOLOGY:

The present study is exploratory in nature, involving primary data. For the purpose of present study, selection of sample of respondents was made by following random sampling through all over the Maharashtra state and on the whole a sample size of 800 respondents was planned from the farmer community. The samples consist of marginal, small and large farmers. The data has been collected by administering the self-structured questionnaire used for collection of primary data from respondents. The analysis of data collected has been carried out by using simple frequencies, likert scale, Chi-square test and percentage analysis.

CROP INSURANCE SCHEMES IN INDIA:

Pilot Crop Insurance Scheme: (PCIS) (1979-1980) General Insurance Corporation in collaboration with the state government introduced this scheme in 26 areas of Gujarat, 23 areas in West Bengal and 17 areas in Tamil Nadu. Subsequently it was extended to other states. The scheme covered Cereals, Millets, Oilseeds, Cotton, Potato, Gram and Barley. The scheme covered 6.27 lakh farmers who paid premium worth Rs. 195.01 lakhs. The claims paid Amounted to Rs. 155.68 lakhs with claim premium ratio of 0.80.

Comprehensive Crop Insurance Scheme: (CCIS) (1985-1999) Comprehensive crop insurance scheme was an extension of PCIS. It was made compulsory for loanee farmers and was implemented by GIC. The premium rates were 2 percent of the sum insured for cereals and millets, and 1 percent for pulses and oilseeds. The union government and the state government shared premium and claims in the ratio of 2:1. Small and marginal farmers received 50% premium subsidy. The limit of sum insured was pegged at Rs. 10,000/- per farmer per hectare. The participation by states was on voluntary basis. The Government of India under the scheme was reimbursing 50 percent of administrative expenses to GIC.

Experimental Crop Insurance Scheme: (ECIS) (RABI 1997-1998) This scheme was introduced on an experimental basis to additionally cover non-loanee small / marginal farmers in 14 districts of five States. It entailed 100 percent premium subsidy for small / marginal farmers. The scheme covered 4.55 lakh farmers who paid Rs. 2.84 crore as premium and collected claims worth Rs. 37.80crore. This resulted in a fairly high claim premium ratio of 13.31.

Farm Income Insurance Scheme: (FIIS) (2003-2004) to take care of variability in income arising out of fluctuations in the yield and market price, the government introduced a pilot project, viz. Farm Income Insurance Scheme (FIIS) during Rabi 2003-04 seasons. The objective of the scheme was not only to protect the income of the farmer, but also to reduce the government expenditure on procurement at Minimum Support Price (MSP). The other main objectives were to encourage crop diversification and also to give fillip to private trade, etc.

National Agricultural Insurance Scheme (NAIS): The National Agricultural Insurance Scheme (NAIS) was initiated in the year 1999-00 by redesigning an existing insurance scheme called the Comprehensive Crop Insurance Scheme of India (CCIS), which operated in the country since 1985. The NAIS provides insurance cover for yield losses of food crops, oilseeds and annual commercial/horticultural crops due to natural calamities, pests and diseases. For Food crops and oilseeds: ranges from 1.5 to 3.5 per cent of SI or actuarial rates, whichever is less Annual Commercial and horticultural crops: actuarial rates Varies depending on the shortfall of actual yield from the threshold yield in the unit area of insurance and the sum insured by the farmers.

Weather Based Crop Insurance Scheme (WBCIS): The Weather Based Crop Insurance Scheme (WBCIS) was introduced by the Government of India in 2007-08 on a pilot basis in selected areas of a few States. The introduction of WBCIS was based on the fact that a similar scheme piloted by the Agriculture Insurance Company of India (AIC) since 2004 was argued to have distinct advantages over NAIS. WBCIS is based on deviation of weather parameters (such as rainfall, humidity, frost and temperature) from the desired value in a period in the insurance unit. In 2009-10, the scheme covered about 30 crops in 13 States during Kharif and 11 States during the Rabi season. In areas and crops where WBCIS is being implemented, NAIS is not available to farmers. Also, as in NAIS, for areas and crops for which the scheme is implemented, participation is compulsory for loanee farmers and is optional for others. For Food crops and oilseeds: ranges from 1.5 to 3.5 per cent of SI or actuarial rates (capped at 10 per cent for kharifand 8 per cent for Rabi), whichever is less Annual Commercial and horticultural crops: ranges from 2 to 6 per cent of SI (actuarial rates capped at 12 per cent) Varies depending on the difference between the actual value and the trigger value of the weather parameter and the cost of inputs per unit area declared by AIC

Pradhan Mantra FasalBimaYojana (PMFBY): launched on 13 January, 2016 is a branch new insurance scheme of the central government. The scheme which is administered by the ministry of Agriculture and farmers' welfare will be implemented in all the states with the cooperation of the respective state governments. The scheme targets at providing a better insurance support to the farmers by low premium insurance cover. The new crop insurance scheme removes the capping on premium subsidies when compared to earlier schemes. It also covers risks like post-harvest losses, preventive sowings and many localized calamities like cyclones, which were excluded in most of the earlier schemes. Giving high priority to awareness creation is also a welcome step in this scheme.

ANALYSIS AND INTERPRETATION:

Table No. 1

Challenges faced by farmers in crop insurance

Sr. No	Problems faced by farmers	No. of Respondents	Percentage
1	The premium rate of crop was higher	258	32.25
2	Delay in settlement of claims	194	24.25
3	Lack of awareness	166	20.75
4	Premium is additional burden to the farmer therefore willingly they do not want to avail this facility	70	8.75
5	Time consuming procedures	112	14
	Total	800	100

Source: Field Survey

The higher rate of premium for crop was the major problem of the farmers. Another big problem of farmers is delay in settlements. The next problem reported by farmers is Lack of awareness. Lastly near about 8.75 percent farmers say that it is an additional burden to them therefore willingly they do not want to avail this facility

Table No. 2

Awareness of farmers about crop insurance

Sr. No	Awareness	No. of Respondents		Percentage	
		Yes	No	Yes	No
1.	Do you know the information about crop insurance?	572	228	71.5	28.5
2.	Do you know the procedure of taking crop insurance?	516	284	64.5	35.5
3.	Need for arrangement of workshop/orientation program?	596	204	74.5	25.5

Source: Field Survey

Out of total respondents 71.5% know what is crop insurance? But only 64.5% farmers know the procedure of insuring crop. It is indicate that farmers are aware about crop insurance. 74.5% respondents are said that there is a need of arranging such type of program.

Table No. 3
Source of information

Sr. No.	Source	No. of Respondents	Percentage
1.	Bank/Financial Institution	296	37
2.	Newspaper/TV./Radio	224	28
3.	Agri. Department	72	9
4.	NGOs or any other agency	18	2.25
5.	Fallow Farmers	190	23.75
	Total	800	100

Source: Field Survey

The above table shows that, out of 100 numbers of respondents 37% farmers came to know about this crop insurance through bank and financial institution, 28% through Newspaper/TV/Radio, 9% through Agri. Department, 23.75% through fallow farmers.

ATTITUDE OF FARMERS TOWARDS CROP INSURANCE SCHEME:

In the Likert scale, the farmers were asked to respond to each of the statements in terms of five degrees usually as – a) Strongly Agree b) Agree c) No Opinion or Undecided d) Disagree and e) Strongly Disagree. These five points constitute the scale. Each point on the scale carries a score. The answers supporting the statement 'fully' are given the maximum score of five, while the answers on the other end receive a score of one. At one extreme of the scale there is strong agreement with the given statement and at the other, strong disagreement, and between them lie intermediate points. Then all the score values are totaled for each question and the total score for each question is divided by the maximum possible score and multiplied into one hundred (in terms of percentage). Thus, the final score represents the extent of the support to the statement mentioned in the question. If the final score is more than 75 per cent, then it is said to be that there is strong agreement to the given statement. If it is 50 to 75, there is agreement and if it is less than 50 it shows disagreement to the given statement. In the above said ways, the attitudes of farmers are analyzed by the researcher for the purpose of this study.

In this study, for analyzing the attitude of farmers towards crop insurance schemes, 20 statements are placed before the respondents. The sample respondents of Maharashtra state are asked to state their opinion towards these 20 statements. With a view to finding out the opinion, the respondents are asked to indicate whether they strongly agreed or agreed or no opinion or disagreed or strongly disagreed about the given statements. For eliciting the responses the following statements are given to them in the sample study:

Table 4
ATTITUDE OF FARMERS TOWARDS CROP INSURANCE
SA=Strong Agreement; A=Agreement; DA=Disagreement;

Sr. No.	Statements	Total Score	Final Score %	Mean Score	Opinion of Farmers
1	Protects against loss or damage of crops	3094	77.35	3.87	SA
2	Gives financial security	3108	77.7	3.89	SA
3	It helps in reducing the risks	2908	72.7	3.64	A
4	Provides guarantee for the banker	2912	72.8	3.64	A
5	Premium rate is reasonable	2539	63.48	3.17	A
6	Quick settlement of claims	1913	47.83	2.39	DA
7	Easily accessible through bank	2888	72.2	3.61	A
8	Structured compensation payouts	2389	59.73	2.98	A
9	Schemes are modified by the Central Government	3057	76.43	3.82	SA
10	Served by the Agricultural Insurance Company	3106	77.65	3.88	SA
11	Follows simple formalities	3092	77.3	3.87	SA
12	Motivation from banks/financial institutions	2767	69.18	3.46	A
13	Adequate publicity.	1973	49.33	2.47	DA
14	Covers wide range of crops.	2905	72.63	3.49	A
15	Premiums are shared by Government	2993	74.83	3.74	A
16	Covered by the National Agricultural Insurance Scheme	2619	65.48	3.27	A
17	Rainfall variations reduce crop yields.	2715	67.88	3.39	A
18	Crop insurance schemes are well defined	2780	69.5	3.48	A
19	Voluntary coverage for non-loanee farmers.	2790	69.75	3.49	A
20	Compulsory coverage for loanee farmers.	2943	73.58	3.68	A

(Source:-Field Survey Calculated on the basis of Questionnaire)

From the above Table 4 it is understood that of the 20 statements given, 'strong agreement' is seen for 05 statements, 'agreement' is shown for 13 statements and the remaining 02 statements are 'disagreement' by the sample farmers

HYPOTHESIS TESTING

Chi-square test The Chi-square test is an important test of significance developed by statisticians. It is used in the context of sampling analysis for comparing obtained variance to a theoretical variance. As a non-parametric test, it can be used to evaluate the contingencies between two nominal measures. In the present study, the Chi-square test is used to test the association between two attributes.

The chi-square statistic is to carry out through the difference between the observed and the expected frequencies in the cells of the contingency table using the following formula. (i.e. $\chi^2 = \sum (O-E)^2/E$). The table value of chi-square is calculated by (R-1) (C – 1) degree of freedom at required percent level of significance whereas R and C denote Rows and Columns of the contingency table. If the calculated χ^2 value is greater than the table value, it is concluded that there is a relationship between the two nominal measures and vice-versa.

Education and Awareness of Crop Insurance Schemes

H₀: There is no significant association between education of the farmers and their awareness of crop insurance schemes

Table 5

EDUCATION AND AWARENESS OF CROP INSURANCE SCHEMES

Education	Awareness of Crop Insurance Schemes		Total
	Aware	Unaware	
Illiterate	86	79	165
SSC	298	46	344
HSC	199	9	208
Graduate	35	11	46
Post Graduate	5	32	37
Total	623	177	800
$X^2=206.094; df=4; T.V=1.838$			

(Source:-Field Survey Calculated on the basis of Questionnaire)

Table 5 shows that 86 out of 165 farmers are Illiterate, are aware of the crop insurance schemes, 298 out of 344 farmers who are SSC, 199 out of 208 farmers are HSC and 35 out of 46 farmers are Graduate, have awareness of the crop insurance schemes but the remaining farmers do not. In addition, Table 5 shows that the calculated value of χ^2 between Education of the farmers and their awareness is 206.094 which is greater than the table value 1.838 at one percent significant level. **Hence, null hypothesis is rejected and it is concluded that there is a significant association between education of the farmers and their awareness of crop insurance schemes.**

Farm Size and Awareness of Crop Insurance Schemes

H0: There is no significant association between Farm size of the farmers and their awareness of crop insurance schemes

Table 6
FARM SIZE AND AWARENESS OF CROP INSURANCE SCHEMES

Farm Size	Awareness of Crop Insurance Schemes		Total
	Aware	Unaware	
Less than 2.5 acres	174	43	217
Less than 5 acres	242	92	334
More than 5 acres	207	42	249
Total	623	177	800
$X^2=10.360; df=2; T.V=0.0056$			

(Source:-Field Survey Calculated on the basis of Questionnaire)

Table 6 shows that 174 out of 217 farmers are less than 2.5 acres farm are aware of the crop insurance schemes, 242 out of 334 farmers are less than 5 acres farm are aware of the crop insurance schemes and 207 out of 249 farmers are more than 5 acres farm have awareness of crop insurance schemes but the remaining are not. Moreover, it is observed from the Table 6 that the calculated value of χ^2 between Farm size of the farmers and their awareness is 10.360 which are greater than the table value 0.0056 at one percent significant level.

Therefore, null hypothesis is rejected. It is reported that there is a significant association between farm size of the farmers and their awareness of crop insurance schemes.

Farming Experience and Awareness of Crop Insurance Schemes

H₀: There is no significant association between Farming Experience of the farmers and their awareness of crop insurance schemes

Table 7

FARMING EXPERIENCE AND AWARENESS OF CROP INSURANCE SCHEMES

Farming Experience	Awareness of Crop Insurance Schemes		Total
	Aware	Unaware	
5 Years	55	63	118
6 to 10 Years	300	59	359
11 to 15 Years	195	23	218
More than 16 Years	73	32	105
Total	623	177	800
$X^2=94.891; df=3; T.V=1.947$			

(Source:-Field Survey Calculated on the basis of Questionnaire)

Table 7 shows that 55 out of 118 farmers are 5 years farming experience, are aware of the crop insurance schemes, 300 out of 359 farmers who are 6 to 10 years farming experience, 195 out of 218 farmers are 11 to 15 years farming experience and 73 out of 105 farmers are more than 16 years farming experience, have awareness of the crop insurance schemes but the remaining farmers do not. In addition, Table 7 shows that the calculated value of χ^2 between farming experience of the farmers and their awareness is 94.891 which is greater than the table value 1.947 at one percent significant level. **Hence, null hypothesis is rejected and it is concluded that there is a significant association between farming experience of the farmers and their awareness of crop insurance schemes.**

Annual income and Awareness of Crop Insurance Schemes

H₀: There is no significant association between annual income of the farmers and their awareness of crop insurance schemes

Table 8

ANNUAL INCOME AND AWARENESS OF CROP INSURANCE SCHEMES

Income	Awareness of Crop Insurance Schemes		Total
	Aware	Unaware	
Upto 100000	160	27	187
100001-200000	193	49	242
200001-300000	158	32	190
300001-400000	79	22	101
Above 400000	33	47	80
Total	623	177	800
$X^2=72.2739$; $df=4$; $T.V=7.5114$			

(Source:-Field Survey Calculated on the basis of Questionnaire)

Table 8 shows that 160 out of 187 farmers income are up to 100000, are aware of the crop insurance schemes, 193 out of 242 farmers who have 100001-200000 annual income, 158 out of 190 farmers annual income is 200001-300000, 79 out of 101 farmers annual income is 300001-400000 and 33 out of 47 farmers annual income is Above 400000 have awareness of the crop insurance schemes but the remaining farmers do not. In addition, Table 8 shows that the calculated value of χ^2 between annual income of the farmers and their awareness is 72.2739 which is greater than the table value 7.5114 at one percent significant level. **Hence, null hypothesis is rejected and it is concluded that there is a significant association between annual income of the farmers and their awareness of crop insurance schemes.**

CONCLUSION:

Agriculture in India is highly susceptible to risks like droughts and floods. It is necessary to protect farmers from natural calamities and ensure their credit eligibility for the next season. For this purpose, the government of India introduced many agriculture crop insurance schemes throughout India. In this context, insurance companies are playing a major role to help the farmers. To encourage the farmers the insurance company should understand the needs of the farmers, but understanding farmers is complex, as it is related to psychology of farmers and also depends on various factors, which have a direct bearing on climatic changes.

The study concludes that farmers play an important role in crop insurance, once the farmers are satisfied they will bring more wealth to the nation.

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