CHAPTER – IV

ANALYSIS ON AWARENESS OF FARMERS ABOUT
CROP INSURANCE SCHEMES

4.1 INTRODUCTION

This chapter is intended to analyze the awareness of farmers about Crop Insurance Schemes. It analyses the level of awareness of the farmers towards various crop insurance schemes and also the relationship between the socio-economic characteristics of farmers and their awareness levels. In addition, analyses like the major source of information for awareness, reason for availing loan, types of crops cultivated, insurance of crop under National Agricultural Insurance Scheme (NAIS) and the reasons for that, preference of insurance service providers, preference of aid or relief in case of loss of crops have also been done in this chapter. For analyses, the primary data collected through the schedule have been fully utilized. Statistical tools like mean, standard deviation, chi-square test, Garrett's ranking technique, and preference scores have been applied.

4.2 AWARENESS ABOUT CROP INSURANCE SCHEMES

In Tamil Nadu as well as in Madurai District, a number of crop insurance schemes have been offered to the farmers from time to time both by the Central and the State Governments. The researcher has made an attempt to analyze the levels of awareness of farmers on the various crop insurance schemes offered by the government. For assessing the level of awareness of farmers, 11 'Yes' or 'No' type questions were asked to the sample respondents about the crop insurance schemes and the results are exhibited in Table 4.1.

TABLE – 4.1

Sample Farmers' Awareness on Various Crop Insurance Schemes

Sl. No.	Crop Insurance Schemes	Loanee Farmers		Non-Loanee Farmers	
		No.	%	No.	%
1	First Ever Crop Insurance Scheme	232	83.2	59	72.8
2	Pilot Crop Insurance Scheme	270	96.8	77	95.1
3	Comprehensive Crop Insurance Scheme	275	98.6	79	97.5
4	State Crop Insurance Scheme	152	54.5	45	55.5
5	Experimental Crop Insurance Scheme	268	96.1	76	93.8
6	National Agricultural Insurance Scheme	279	100.0	81	100.0
7	Coffee Insurance Scheme	88	31.5	24	29.6
8	Varsha Bhima	142	50.9	33	40.7
9	Weather Based Crop Insurance Scheme	124	44.4	37	45.7
10	Rainfall Insurance Scheme	106	38.0	28	34.6
11	Modified National Agricultural Insurance Scheme	200	71.7	59	72.8
	Total Sample	**279**	**100.0**	**81**	**100.0**

It is inferred from the Table 4.1 that all the sample respondents (i.e. cent per cent) belonging to loanee category and non-loanee category are aware of the National Agricultural Insurance Scheme offered by the Agricultural Insurance Company of India. More than 90 per cent of loanee as well as non-loanee farmers are aware of the schemes like Pilot Insurance Scheme, Comprehensive Crop Insurance Scheme, and Experimental Crop Insurance Scheme.

Further, a majority of respondents know crop insurance schemes like First Ever Crop Insurance Scheme, State Crop Insurance Scheme, and Modified National Agricultural Insurance Scheme. The awareness levels in respect of these schemes are 83.2 per cent, 54.5 per cent, 71.7 per cent respectively for loanee farmers

whereas it is 72.8 per cent, 55.5 per cent and 72.8 per cent for non-loanee farmers. Around 51 per cent of loanee farmers are also aware about 'Varsha Bhima'. It is understood from the Table 4.1 that about less than 40 per cent of loanee as well as non-loanee farmers are aware of schemes likes Coffee Insurance Scheme and Rainfall Insurance Scheme. It is concluded that the all the sample respondents are aware about the latest scheme which is in operation in Madurai District i.e. National Agricultural Insurance Scheme.

4.3 LEVEL OF AWARENESS OF FARMERS

The researcher classified the farmers on the basis of the awareness on various crop insurance schemes. Three levels such as low, medium and high level of awareness were generated from the response scores given up by the sample farmers for the set of 11 'Yes' or 'No' type questions relating to the awareness on various crop insurance schemes offered over a period of time. First the response scores were aggregated across all the respondents and then mean and standard deviation were computed separately both for loanee and non-loanee farmers. The computed mean and standard deviation score in respect of 279 loanee farmers was 7.46 and 2.07 respectively whereas it is 7.42 and 2.05 respectively for 81 sample non-loanee farmers. The score value greater than or equal to mean plus standard deviation (i.e. ≥ Mean + Standard Deviation) and the score value less than or equal to mean minus standard deviation (i.e. ≤ Mean − Standard Deviation) have been taken as high level and low level of awareness respectively. The score values in between the low and high level of awareness have been taken as medium level of awareness. The generated results are depicted in Table 4.2.

TABLE – 4.2

Level of Awareness of Farmers on Crop Insurance Schemes

Awareness Level	Loanee Farmers		Non-Loanee Farmers	
	No.	%	No.	%
Low Level	48	17.2	17	21.0
Medium Level	168	60.2	50	61.7
High Level	63	22.6	14	17.3
Total	**279**	**100.0**	**81**	**100.0**

It is inferred from Table 4.2 that out of the 279 loanee farmers, 63 (22.6%) farmers belong to high level awareness group, 168 (60.2%) loanee farmers fall under the medium level awareness group and the remaining 48 (17.2%) loanee farmers come under the category of low level awareness group. In the case of non-loanee farmers, it is 17.3 per cent, 61.7 per cent and 21.0 per cent respectively. It is observed that high level awareness exists more among the loanee farmers (22.6%) than the non-loanee farmers (17.3%).

Moreover, the awareness of farmers has been measured with the help of nine socio-economic characteristic variables such as sex, age, religion, marital status, education level, nature of family, ownership of house, landholding pattern, and experience in farm activities. In order to find out whether these variables influence the awareness of farmers towards Crop Insurance Schemes, chi-square test has been applied. The chi-square test has been computed with the help of software package, viz. Statistical Package for Social Science (SPSS). Suitable hypotheses have also been framed and tested. These have been explained in the following pages.

4.3.1   Sex and Level of Awareness:

Sex is an important variable in determining the level of awareness about Crop Insurance Schemes.   Both male and female are engaged in farming activities. Hence, the sex of the farmers has been identified as one of the variables in influencing the awareness.   It is analyzed based on the farmers' category and exhibited in Tables 4.3 and 4.4.

4.3.1.1 Sex-wise Classification of Farmers under Loanee Category:

The sex-wise classification of farmers under loanee category and their level of awareness about crop insurance schemes are shown in Table 4.3.

TABLE – 4.3

**Sex Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Sex	Level of Awareness			Total
	Low	**Medium**	**High**	
Male	38 (79.2)	136 (81.0)	57 (90.5)	231 (82.8)
Female	10 (20.8)	32 (19.0)	6 (9.5)	48 (17.2)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

Table 4.3 indicates that out of 63 farmers with high level awareness under loanee category, 90.5 per cent are male and 9.5 are female. Among 168 farmers with medium level awareness, majority of 81 per cent constitute male and out of 48 farmers with low level of awareness, a major portion (i.e. 79.2%) of farmers are male. It is understood from the Table 4.3 that under loanee category, male farmers are having more awareness about Crop Insurance Schemes than the female farmers.

In order to see whether there is any relationship between the sex and level of awareness, chi-square test has been applied. The null hypothesis framed for this purpose is given below:

Null Hypothesis: "There is no significant relationship between the sex of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is presented here.

Computed Chi-square Value	**: 3.454**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

Since the calculated value is less than the table value, the null hypothesis is accepted. Hence, it is concluded that there is no significant relationship between the sex of farmers under loanee category and their level of awareness about Crop Insurance Schemes.

4.3.1.2 Sex-wise Classification of Farmers under Non-Loanee Category:

The sample farmers under non-loanee category and their level of awareness about crop insurance schemes on the basis of sex are given in Table 4.4.

TABLE – 4.4

**Sex Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Sex	Level of Awareness			Total
	Low	**Medium**	**High**	
Male	17 (100.0)	44 (88.0)	11 (78.6)	72 (88.9)
Female	-	6 (12.0)	3 (21.4)	9 (11.1)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It could be observed from the Table 4.4 that out of 14 sample farmers with high level awareness under non-loanee category, a major portion of 78.6 per cent are male. Further the table shows that out of 50 farmers with medium level awareness, the male farmers accounted for 88 per cent. In the low level awareness, all the 17 sample farmers i.e. 100 per cent are male. From the survey, it is concluded that cent per cent of non-loanee farmers have low level of awareness about crop insurance schemes.

The researcher has attempted to ascertain whether any significant relationship exists between sex and level of awareness. Chi-square test has been used to test the null hypothesis framed for this purpose.

Null Hypothesis: "There is no significant relationship between the sex of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following results:

Calculated Chi-square Value	**: 3.674**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

From the results of chi-square test, it is observed that the calculated value is less than the table value. So, the null hypothesis is accepted.

4.3.2   Age and Level of Awareness:

Age is considered as one of the variables in determining the level of awareness of farmers about crop insurance schemes. In the study, the age has been grouped into four categories. Tables 4.5 and 4.6 exhibit the age group on the basis of the category of farmers.

4.3.2.1 Age-wise Classification of Farmers under Loanee Category:

The classification of farmers on the basis of age under loanee category and the level of awareness about crop insurance schemes are shown in Table 4.5.

TABLE – 4.5

**Age Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Age	Level of Awareness			Total
	Low	**Medium**	**High**	
Up to 30 Years	1 (2.1)	11 (6.5)	5 (7.9)	17 (6.1)
31 to 40 Years	14 (29.2)	56 (33.3)	17 (27.0)	87 (31.2)
41 to 50 Years	23 (47.9)	63 (37.5)	39 (47.6)	116 (41.6)
Above 50 Years	10 (20.8)	38 (22.7)	11 (17.5)	59 (29.1)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is understood from Table 4.5 that out of 63 farmers with high level awareness under loanee category, 47.6 per cent fall in the category of '41 to 50 years', 27 per cent in '31 to 40 years' category, 17.5 per cent in 'above 50 years' category, and the rest 7.9 per cent in 'up to 30 years' category. Regarding medium level and low level awareness, a major portion of respondents fall in '41 to 50 years' followed by '31 to 40 years' category. While analyzing the table, it is observed that a higher proportion of farmers are found in the low level awareness than the high level of awareness.

In order to test whether there is any relationship between age and level of awareness, chi-square test has been applied. The null hypothesis framed for this purpose is given below:

Null Hypothesis: "There is no significant relationship between the age of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed result of the chi-square is given below:

Computed Chi-square Value   **: 4.611**
Table Value at 5% Level of Significance   **: 12.592**
Degree of Freedom   **: 6**
Hypothesis Result   **: Accepted**

The result shows that the calculated value (4.611) is less than the table value (12.592) at 5 per cent level of significance. Hence, the null hypothesis is accepted.

4.3.2.2 Age-wise Classification of Farmers under Non-Loanee Category:

        The age-wise classification of farmers under non-loanee category and their level of awareness about crop insurance scheme are shown in Table 4.6.

TABLE – 4.6

**Age Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Age	Level of Awareness			Total
	Low	**Medium**	**High**	
Up to 30 Years	3 (17.6)	3 (6.0)	-	6 (7.4)
31 to 40 Years	3 (17.6)	9 (18.0)	4 (28.6)	16 (19.8)
41 to 50 Years	5 (29.4)	26 (52.0)	5 (35.7)	36 (44.4)
Above 50 Years	6 (35.4)	12 (24.0)	5 (35.7)	23 (28.4)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

        It can be found from the Table 4.6 that out of 14 farmers with high level awareness under non-loanee category, a major portion of 71.4 per cent belongs to 'above 41 years' category. The table also shows that out of 50 farmers with medium level awareness, 52 per cent falls in the age group of '41 to 50 years' category. In the low level awareness, out of 17 farmers 35.4 per cent belongs to 'above 50 years' category. It is concluded that nearly 35 per cent of farmers both in low and high level awareness fall in 'above 50 years' category. Further, in '31 to 40 years' age group, a higher level proportion of farmers have high level awareness than the other levels.

        An attempt has been made by the researcher to find out whether there is any significant relationship between the age of farmers and their level of awareness. The null hypothesis formulated for this is given in the following page.

Null Hypothesis: "There is no significant relationship between the age of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The result of null hypothesis is given below:

Calculated Chi-square Value	**: 6.880**
Table Value at 5% Level of Significance	**: 12.592**
Degree of Freedom	**: 6**
Hypothesis Result	**: Accepted**

As the calculated value (6.880) is less than the table value (12.592) at 5 per cent level of significance, the null hypothesis is accepted.

4.3.3 Religion and Level of Awareness:

Farmers belonging to Hindu, Muslim and Christian religions are living in each and every part of India. The Madurai District of Tamil State is no exception to this. Some religious people are involved more in agricultural activities and may be interested to know more about crop insurance. So, the religion has been taken into account for analyzing the level of awareness of farmers about Crop Insurance Schemes. This fact has been depicted in Tables 4.7 and 4.8.

4.3.3.1 Religion-wise Classification of Farmers under Loanee Category:

Table 4.7 shows the religion-wise classification of sample farmers under loanee category and their level of awareness about crop insurance schemes.

TABLE – 4.7

**Religion Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Religion	Level of Awareness			Total
	Low	Medium	High	
Hindu	29 (60.4)	100 (59.5)	35 (55.6)	164 (58.8)
Muslim	12 (27.1)	43 (25.6)	18 (28.6)	74 (26.5)
Christian	6 (12.5)	25 (14.9)	10 (15.8)	41 (14.7)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

Table 4.7 indicates that out of 63 sample respondents with high level awareness under loanee category, 55.6 per cent are Hindus and 28.6 are Muslims. Among 168 respondents with medium level awareness, majority of 59.5 per cent constitute Hindu, following this Christian (25.6%) and Muslim (14.9%) come in order. Further, out of 48 farmers with low level of awareness, a majority of 60.4 per cent farmers belong to Hindu, 27.1 per cent are Muslims and the remaining 12.5 per cent are Christians. Overall, a higher proportion of low level awareness exists among the Hindu religious farmers and it accounts for 60.4 per cent.

In order to test whether there is any significant relationship between the religion of farmers and their level of awareness, the following null hypothesis was formulated.

Null Hypothesis: "There is no significant relationship between the religion of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is presented here.

Computed Chi-square Value	**: 0.530**
Table Value at 5% Level of Significance	**: 9.488**
Degree of Freedom	**: 4**
Hypothesis Result	**: Accepted**

As the calculated value is less than the table value, the null hypothesis is accepted. Hence, it is concluded that there is no significant relationship between the religion of farmers under loanee category and their level of awareness about crop insurance schemes.

4.3.3.2 Religion-wise Classification of Farmers under Non-Loanee Category:

The sample farmers under non-loanee category and their level of awareness about crop insurance schemes on the basis of religion are given in the following Table 4.8.

TABLE – 4.8

Religion Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category

Religion	Level of Awareness			Total
	Low	**Medium**	**High**	
Hindu	8 (47.1)	37 (74.0)	10 (71.4)	55 (67.9)
Muslim	4 (23.5)	4 (8.0)	2 (14.3)	10 (12.3)
Christian	5 (29.4)	9 (18.0)	2 (14.3)	16 (19.8)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It could be observed from the Table 4.8 that out of 14 farmers with high level awareness under non-loanee category, a major portion of 71.4 per cent are Hindus and the remaining 28.6 per cent of farmers are Muslim and Christian religions in equal proportion. Further the table shows that out of 50 farmers with medium level awareness, the Hindu, Christian and Muslim religious farmers accounted for 74 per cent, 18 per cent and 8 per cent respectively. In the low level awareness, out of 17 farmers, 8 farmers constituting 47.1 per cent are Hindus, 29.4 per cent are Christians and the remaining 23.5 per cent are Muslims. It is observed that high level awareness exists among the Hindu religious farmers under non-loanee category than other religious farmers. Further, 47.1 per cent of Hindu religious farmers are having low level of awareness whereas it is 23.5 per cent and 29.4 per cent respectively for Muslim and Christian farmers.

The researcher has attempted to ascertain whether any significant relationship exists between religion and level of awareness. Chi-square test has been used to test the null hypothesis framed for this purpose.

Null Hypothesis: "There is no significant relationship between the religion of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following result:

Calculated Chi-square Value **: 5.009**

Table Value at 5% Level of Significance **: 9.488**

Degree of Freedom **: 4**

Hypothesis Result **: Accepted**

The result reveals that as the calculated value (5.009) is less than the table value (9.488) at 5 per cent level of significance, the null hypothesis is accepted. So, it is concluded that there is no significant relationship between the religion of farmers under non-loanee category and their level of awareness about crop insurance schemes.

4.3.4 Marital Status and Level of Awareness:

Normally crop insurance schemes are availed both by the married and unmarried respondents. So, marital status has been identified as a variable for analyzing the level of awareness. Tables 4.9 and 4.10 explain this fact.

4.3.4.1 Marital Status-wise Classification of Farmers under Loanee Category:

The classification of farmers on the basis of marital status under loanee category and their level of awareness about crop insurance schemes are depicted in Table 4.9.

TABLE – 4.9

**Marital Status Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Marital Status	Level of Awareness			Total
	Low	Medium	High	
Married	46 (95.8)	149 (88.7)	58 (92.1)	253 (90.7)
Unmarried	2 (4.2)	19 (11.3)	5 (7.9)	26 (9.3)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is understood from Table 4.9 that a major portion of sample farmers, say more than 88 per cent in the high, medium and low level awareness, are married

farmers in the study. A meager per cent of farmers in high level (7.9%) and low level (4.2%) awareness category are unmarried ones. It is also found from the table that low level awareness farmers are more (95.8%) in married category when compared with other levels of awareness.

At this juncture, the researcher has attempted to ascertain whether any significant relationship exists between the marital status of farmers and their level of awareness, and the formulated null hypothesis is given below:

Null Hypothesis: "There is no significant relationship between the marital status of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is exhibited here.

Computed Chi-square Value	**: 2.438**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

The result shows that the calculated value is less than the table value at 5 per cent level of significance. Hence, the null hypothesis is accepted.

4.3.4.2 Marital Status-wise Classification of Farmers under Non-Loanee Category:

The marital status-wise classification of farmers under non-loanee category and their level of awareness about crop insurance schemes are displayed in Table 4.10.

TABLE – 4.10

**Marital Status Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Marital Status	Level of Awareness			Total
	Low	Medium	High	
Married	11 (64.7)	48 (96.0)	14 (100.0)	73 (90.1)
Unmarried	6 (35.3)	2 (4.0)	-	8 (9.9)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It can be seen from the Table 4.10 that more than 95 per cent of farmers in high level and medium level awareness belongs to married ones whereas it is 64.7 per cent in low level of awareness under non-loanee category. The table also shows all the farmers in high level awareness are married ones. Under low level awareness, nearly one-third are unmarried and two-thirds are married ones.

In order to see whether there is any relationship between marital status and level of awareness, chi-square test has been applied. The null hypothesis framed for this purpose is given below:

Null Hypothesis: "There is no significant relationship between the marital status of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test displays the following result:

Calculated Chi-square Value	**: 15.813**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Rejected**

From the above result of chi-square test, it is observed that the calculated value is greater than the table value. So, the null hypothesis is rejected. It means there is significant relationship exists between the marital status of farmers under non-loanee category and level of awareness about crop insurance schemes.

4.3.5 Education and Level of Awareness:

Education is an important factor which influences the level of awareness of farmers towards Crop Insurance Schemes in Madurai District. So, this factor has been taken into consideration for analysis. It is grouped into three categories viz. illiterate, up to secondary level and above secondary level. 'Up to secondary level' education comprises of primary as well as secondary level of education. Whereas the 'above secondary level' education consists of higher secondary/diploma as well as graduates and above. Analyzes in respect of this factor is presented in Tables 4.11 and 4.12.

4.3.5.1 Education-wise Classification of Farmers under Loanee Category:

The education-wise classification of farmers under loanee category and their level of awareness about crop insurance schemes are presented in Table 4.11.

TABLE – 4.11

**Education Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Education Level	Level of Awareness			Total
	Low	Medium	High	
Illiterate	16 (33.3)	50 (29.8)	9 (14.3)	75 (26.9)
Up to Secondary Level	27 (56.3)	83 (49.4)	42 (66.7)	152 (54.5)
Above Secondary Level	5 (10.4)	35 (20.8)	12 (19.0)	52 (18.6)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

Table 4.11 indicates that out of 63 farmers with high level awareness under loanee category, 66.7 per cent belong to 'up to secondary level' category and 19 per cent fall in 'above secondary level' category. Among 168 farmers with medium level awareness, a major portion 49.4 per cent fall in 'up to secondary level' category. Further, out of 48 farmers with low level of awareness, a majority of 56.3 per cent belongs to 'up to secondary level' category. It is clear from the study that the low level of awareness is more among the illiterate farmers and it accounts for 33.3 per cent.

In order to test whether there is any significant relationship between the education of farmers and their level of awareness, the following null hypothesis was formulated:

Null Hypothesis: "There is no significant relationship between the education of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is presented here.

Computed Chi-square Value	: **9.700**
Table Value at 5% Level of Significance	: **9.488**
Degree of Freedom	: **4**
Hypothesis Result	: **Rejected**

Since the calculated value is more than the table value, the null hypothesis is rejected.   Hence, it is concluded that there is significant relationship between the education of farmers under loanee category and their level of awareness about crop insurance schemes.

4.3.5.2 Education-wise Classification of Farmers under Non-Loanee Category:

The farmers under non-loanee category and their level of awareness about crop insurance schemes are depicted in Table 4.12.

TABLE – 4.12

**Education Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Education Level	Level of Awareness			Total
	Low	Medium	High	
Illiterate	5 (29.4)	12 (24.0)	4 (28.6)	21 (25.9)
Up to Secondary Level	9 (52.9)	32 (64.0)	9 (64.3)	50 (61.8)
Above Secondary Level	3 (17.7)	6 (12.0)	1 (7.1)	10 (12.3)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It could be observed from the Table 4.12 that out of 14 sample respondents with high level awareness under non-loanee category, a major portion of 64.3 per cent studied 'up to secondary level' and 28.6 per cent are 'illiterate'. Further

the table shows that out of 50 respondents with medium level awareness, a major portion of them (64%) fall in 'up to secondary level' education category. In the low level awareness, 52.9 per cent are in 'up to secondary level', 29.4 per cent are in 'illiterate' and the remaining 17.7 per cent fall in 'above secondary level' education. It is understood that the percentage of low level awareness is high among the 'illiterate' as well as 'above secondary level' education category when compared with the high level of awareness.

The researcher has attempted to ascertain whether any significant relationship exists between educational status and level of awareness. Chi-square test has been used to test the following null hypothesis:

Null Hypothesis: "There is no significant relationship between the education of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following results:

Calculated Chi-square Value　　　　　　**: 1.157**
Table Value at 5% Level of Significance　**: 9.488**
Degree of Freedom　　　　　　　　　　**: 4**
Hypothesis Result　　　　　　　　　　**: Accepted**

As the calculated value (1.157) is less than the table value (9.488) at 5 per cent level of significance, the null hypothesis is accepted. Hence, it is concluded that there is no significant relationship between the education of farmers under non-loanee category and their level of awareness on crop insurance schemes.

4.3.6   Nature of Family and Level of Awareness:

The nature of family has been taken as the criterion for awareness about crop insurance schemes. This is because in general, there is the possibility of more awareness among joint family members than the individual family members. Hence, the nature of family has been taken as one of the variables. The result of the study is exhibited in Tables 4.13 and 4.14.

4.3.6.1 Family-wise Classification of Farmers under Loanee Category:

The family-wise classification of farmers under loanee category and their level of awareness about crop insurance schemes are given in Table 4.13.

TABLE – 4.13

Nature of Family Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category

Nature of Family	Level of Awareness			Total
	Low	**Medium**	**High**	
Individual Family	40 (83.3)	134 (79.8)	49 (77.8)	223 (79.9)
Joint Family	8 (16.7)	34 (20.2)	14 (22.2)	56 (20.1)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is understood from Table 4.13 that out of 63 farmers with high level awareness under loanee category, 77.8 per cent of farmers fall in 'individual family' category and the rest 22.2 per cent belong to 'joint family' category. In medium level as well as in low level awareness, most of the farmers belong to 'individual family' category. It is observed from the study that the individual family has more awareness than the joint family. Thus, it breaks the general opinion i.e. the possibility of more awareness among joint family members than the individual family members.

However, the percentage of low level awareness is high among the individual family which is clear from the above table.

In order to test whether there is any significant relationship between the nature of family of farmers and their level of awareness, the following null hypothesis was formulated:

Null Hypothesis: "There is no significant relationship between the nature of family of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is depicted below:

Computed Chi-square Value	**: 0.531**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

The result shows that the calculated value is less than the table value at 5 per cent level of significance. Hence, the null hypothesis is accepted.

4.3.6.2 Family-wise Classification of Farmers under Non-Loanee Category:

The Table 4.14 explains the family-wise classification of farmers under non-loanee category and their level of awareness about crop insurance schemes.

TABLE – 4.14

**Nature of Family Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Nature of Family	Level of Awareness			Total
	Low	Medium	High	
Individual Family	12 (70.6)	45 (90.0)	13 (92.9)	70 (86.4)
Joint Family	5 (29.4)	5 (10.0)	1 (7.1)	11 (13.6)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is seen from Table 4.14 that among 14 sample farmers with high level awareness under non-loanee category, a vast majority of farmers, say 92.9 per cent, fall in 'individual family' category and the remaining 7.1 per cent in 'joint family' category. In medium level awareness it is 90:10 proportions. In low level of awareness, 70.6 per cent farmers fall in 'individual family' and the rest 29.4 per cent belong to 'joint family' category. It is observed that the proportion of high level awareness is more (i.e. 92.9%) among the individual family; and low level awareness is high (i.e. 29.4%) among the joint family under non-loanee category.

In order to see whether there is any relationship between the nature of family and level of awareness, chi-square test has been applied. The null hypothesis framed for this purpose is depicted below:

Null Hypothesis: "There is no significant relationship between the nature of family of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following result:

Calculated Chi-square Value	**: 4.671**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

From the result of chi-square test, it is observed that the calculated value is less than the table value. So, the framed null hypothesis is accepted.

4.3.7 Ownership of House and Level of Awareness:

There is the possibility of influencing the level of awareness of farmers based on the ownership of house. Hence, the researcher has made an attempt to know this fact and the results were shown in Tables 4.15 and 4.16.

4.3.7.1 Ownership-wise Classification of Farmers under Loanee Category:

The classification of farmers on the basis of ownership of house under loanee category and the level of awareness about crop insurance schemes are presented in the Table 4.15.

TABLE – 4.15

**Ownership of House Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Ownership of House	Level of Awareness			Total
	Low	**Medium**	**High**	
Owned	20 (41.7)	88 (52.4)	34 (54.0)	142 (50.9)
Not Owned	28 (58.3)	80 (47.6)	29 (46.0)	137 (49.1)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

Table 4.15 indicates that out of 63 sample respondents with high level awareness under loanee category, 54 per cent have stated they are having own houses and the remaining 46 per cent do not have own houses. Among 168 respondents with medium level awareness, majority of 52.4 per cent have own houses and out of 48 respondents with low level of awareness, a major portion (58.3%) of farmers do not have own houses. It is found from the study that those who are not having own houses were low level of awareness and the percentage is high (58.3%) in the sample study.

An attempt has been made by the researcher to find out whether there is any significant relationship between the ownership of house by farmers and their level of awareness, the following null hypothesis was formulated:

Null Hypothesis: "There is no significant relationship between the ownership of house by farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is presented here.

Computed Chi-square Value	**: 2.022**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	: 2
Hypothesis Result	**: Accepted**

As the calculated value (2.022) is less than the table value (5.991), the null hypothesis is accepted.

4.3.7.2 Ownership-wise Classification of Farmers under Non-Loanee Category:

The following Table 4.16 explains the ownership-wise classification of farmers having houses under non-loanee category and their level of awareness about crop insurance schemes.

TABLE – 4.16

**Ownership of House Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Ownership of House	Level of Awareness			Total
	Low	Medium	High	
Owned	11 (64.7)	26 (52.0)	7 (50.0)	44 (54.3)
Not Owned	6 (35.3)	24 (48.0)	7 (50.0)	37 (45.7)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is seen from Table 4.16 that among 14 farmers with high level awareness under non-loanee category, a fifty-fifty proportion is found for 'owned' and 'not owned' houses category. But, in medium and low level of awareness, a majority of farmers own houses and it is 52 per cent and 64.7 per cent respectively. Here, the low level of awareness exists more among the 'owned' house category of farmers.

In order to see whether there is any relationship between ownership of house and level of awareness, chi-square test has been applied. The null hypothesis framed for this purpose is given in next page.

Null Hypothesis: "There is no significant relationship between the ownership of house by farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following results:

Calculated Chi-square Value	**: 0.953**
Table Value at 5% Level of Significance	**: 5.991**
Degree of Freedom	**: 2**
Hypothesis Result	**: Accepted**

From the results of chi-square test, it is observed that the calculated value is less than the table value. So, the null hypothesis is accepted.

4.3.8 Landholding Pattern and Level of Awareness:

An attempt is made that there is any possibility of influencing the level of awareness of farmers based on their size of land holdings. So, it is taken as one of the variables. The result of the study is explained in Tables 4.17 and 4.18.

4.3.8.1 Landholding Size-wise Classification of Farmers under Loanee Category:

The classification of farmers on the basis of landholding under loanee category and their level of awareness about crop insurance schemes are displayed in the Table 4.17.

TABLE – 4.17

**Landholding Pattern Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Landholding Pattern	Level of Awareness			Total
	Low	Medium	High	
Up to 2.5 Acres	11 (22.9)	39 (23.2)	12 (19.0)	62 (22.2)
2.5 to 5.0 Acres	23 (47.9)	84 (50.0)	32 (50.8)	139 (49.8)
More than 5.0 Acres	14 (29.2)	45 (26.8)	19 (30.2)	78 (28.0)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is understood from Table 4.17 that out of 63 farmers with high level awareness under loanee category, 50.8 per cent of farmers hold a land size of '2.5 to 5.0 acres', 30.2 per cent hold 'more than 5 acres' and the rest 19 per cent hold 'up to 2.5 acres'. In medium level awareness it is 50 per cent, 26.8 per cent and 23.2 per cent respectively. But in low level awareness it is 47.9 per cent, 29.2 per cent and 22.9 per cent respectively. It is observed from the above table that the percentage of low level awareness is more (i.e. 22.9%) among the farmers who hold a land size of 'up to 2.5 acres' than the high level awareness (19%) farmers in the same category.

In order to test whether there is any significant relationship between the landholding pattern of farmers and their level of awareness, the following null hypothesis was formulated:

Null Hypothesis: "There is no significant relationship between the landholding pattern of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is exhibited below:

Computed Chi-square Value	**: 0.635**
Table Value at 5% Level of Significance	**: 9.488**
Degree of Freedom	**: 4**
Hypothesis Result	**: Accepted**

The result shows that the calculated value is less than the table value at 5 per cent level of significance. Hence, the null hypothesis is accepted.

4.3.8.2 Landholding Size-wise Classification of Farmers under Non-Loanee Category:

The landholding size-wise classification of farmers under non-loanee category and their level of awareness about crop insurance schemes are shown in Table 4.18.

TABLE – 4.18

**Landholding Pattern Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Land Holding Pattern	Level of Awareness			Total
	Low	**Medium**	**High**	
Up to 2.5 Acres	5 (29.4)	11 (22.0)	3 (21.4)	19 (23.5)
2.5 to 5.0 Acres	4 (23.5)	25 (50.0)	8 (57.2)	37 (45.7)
More than 5.0 Acres	8 (47.1)	14 (28.0)	3 (21.4)	25 (30.8)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It can be found from Table 4.18 that out of 14 farmers with high level awareness under non-loanee category, 57.2 per cent of farmers hold a land size of '2.5 to 5.0 acres', and the remaining 42.8 per cent are equally distributed under 'up to

2.5 acres' and more than 5 acres' category of landholding. In medium level awareness, 50 per cent of farmers hold a land size of '2.5 acres to 5 acres', 28 per cent 'more than 5 acres' and 22 per cent 'up to 2.5 acres' of land. But it differs in the case of low level awareness category of farmers, viz. 47.1 per cent hold 'more than 5 acres', 29.4 per cent 'up to 2.5 acres' and the remaining 23.5 per cent hold a land size between 2.5 acres and 5.0 acres. It is also inferred from the Table 4.18 that under the landholding size of 'up to 2.5 acres' and 'more than 5 acres', a major portion of farmers have low level of awareness than the high level of awareness.

The researcher has attempted to ascertain whether any significant relationship exists between landholding pattern and level of awareness. Chi-square test has been used to test the following null hypothesis:

Null Hypothesis: "There is no significant relationship between the landholding pattern of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test depicts the following result:

Calculated Chi-square Value	**: 4.741**
Table Value at 5% Level of Significance	**: 9.488**
Degree of Freedom	**: 4**
Hypothesis Result	**: Accepted**

It is concluded from the result that since the calculated value is less than the table value, the null hypothesis is accepted.

4.3.9   Experience and Level of Awareness:

Normally, a farmer can get high level of awareness by way of more experience in farm activities and vice-versa.   Hence, the researcher has taken 'experience' in farm activities as the last variable towards analyzing the level of awareness of farmers about crop insurance schemes. This fact is illustrated in Tables 4.19 and 4.20 for loanee and non-loanee category farmers respectively.

4.3.9.1 Experience-wise Classification of Farmers under Loanee Category:

The Table 4.19 explains the experience-wise classification of farmers under loanee category and their level of awareness about crop insurance schemes.

TABLE – 4.19

**Experience Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Loanee Category**

Experience	Level of Awareness			Total
	Low	**Medium**	**High**	
Less than 5 Years	1 (2.1)	16 (9.5)	4 (6.4)	21 (7.5)
5 to 16 Years	31 (64.6)	111 (66.1)	44 (69.8)	186 (66.7)
More than 16 Years	16 (33.3)	41 (24.4)	15 (23.8)	72 (25.8)
Total	**48 (100)**	**168 (100)**	**63 (100)**	**279 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It is evident from Table 4.19 that majority of farmers (i.e. more than 64%) in low, medium and high level awareness are having an experience between 5 and 16 years in the farm activities under loanee category. Further, 33.3 per cent, 24.4 per cent and 23.8 per cent of low, medium and high level of awareness farmers have 'more than 16 years' experience in farm activities. Low level awareness dominates more percentages in '5 to 16 years' as well as 'more than 16 years' experience

category. It is concluded that those who have more experience in farm activities, i.e. more than 16 years category, will have a higher level of proportion in low level of awareness.

With a view to testing whether there is any relationship between experience and the awareness level, chi-square test has been applied. For this purpose, a null hypothesis is framed as follows:

Null Hypothesis: "There is no significant relationship between the experience of farmers under loanee category and their level of awareness about Crop Insurance Schemes".

The computed chi-square test result is presented here.

Computed Chi-square Value	**: 4.310**
Table Value at 5% Level of Significance	**: 9.488**
Degree of Freedom	**: 4**
Hypothesis Result	**: Accepted**

It is inferred from the result of chi-square that the calculated value is less than the table value. Hence, the null hypothesis is accepted. Thus, it is concluded that there is no significant relationship between the experience of farmers under loanee category and their level of awareness about crop insurance schemes.

4.3.9.2 Experience-wise Classification of Farmers under Non-Loanee Category:

The experience-wise classification of farmers under non-loanee category and their level of awareness about crop insurance schemes are shown in Table 4.20.

TABLE – 4.20

**Experience Vs Level of Awareness of Farmers on
Crop Insurance Schemes under Non-Loanee Category**

Experience	Level of Awareness			Total
	Low	Medium	High	
Less than 5 Years	2 (11.7)	5 (10.0)	2 (14.3)	9 (11.1)
5 to 16 Years	8 (47.1)	29 (58.0)	9 (64.3)	46 (56.8)
More than 16 Years	7 (41.2)	16 (32.0)	3 (21.4)	26 (32.1)
Total	**17 (100)**	**50 (100)**	**14 (100)**	**81 (100)**

(Figures in parenthesis indicates percentages to respective column total)

It can be seen from the Table 4.20 that more than 57 per cent of farmers in high level and medium level awareness have an experience of 5 to 16 years under non-loanee category. But in low level of awareness, 47.1 per cent fall in '5 to 16 years' experience category followed by 41.2 per cent in 'more than 16 years' category. The table also shows that low level of awareness exists in more proportion (i.e. 41.2%) for non-loanee farmers having an experience of more than 16 years in farm activities.

The researcher has embarked upon ascertaining the relationship between experience and level of awareness about crop insurance schemes. For this purpose, chi-square test is used to test the following null hypothesis:

Null Hypothesis: "There is no significant relationship between the experience of farmers under non-loanee category and their level of awareness about Crop Insurance Schemes".

The calculated chi-square test reveals the following result:

Calculated Chi-square Value	**: 1.557**
Table Value at 5% Level of Significance	**: 9.488**
Degree of Freedom	**: 4**
Hypothesis Result	**: Accepted**

As the calculated value (1.557) is less than the table value (9.488), the null hypothesis is accepted and it is concluded that there is no significant relationship between the experience of farmers under non-loanee category and their level of awareness about crop insurance schemes.

4.4 SOURCE OF INFORMATION

Information can be sought from various sources. So, an attempt has been made by the researcher how the information about Crop Insurance Schemes has been obtained by the sample respondents and the result is displayed in Table 4.21.

TABLE – 4.21

Source of Information about Crop Insurance Schemes

Source	Loanee Farmers		Non-Loanee Farmers		All Samples	
	No.	%	No.	%	No.	%
Newspaper	24	8.6	16	19.8	40	11.1
Radio	15	5.4	7	8.6	22	6.1
Television	32	11.5	21	25.9	53	14.7
Fellow Farmers/Relatives	37	13.3	14	17.3	51	14.2
NGO	50	17.9	11	13.6	61	16.9
Bank/Financial Institutions	104	37.3	9	11.1	113	31.4
Live Free Calls	11	3.9	3	3.7	14	3.9
Other Sources	6	2.2	-	-	6	1.7
Total Samples	**279**	**100.0**	**81**	**100.0**	**360**	**100.0**

It is observed from Table 4.21 that out of 279 respondents under loanee category, more than one-third of farmers (37.3%) aware about crop insurance through bank / financial institutions, following this NGO (17.9%), fellow farmers / relatives (13.3%) and television (11.5%) come in order. In the non-loanee category, the source of awareness has differed, viz. television accounts for 25.9 per cent out of 81 sample respondents. Next to this, newspaper (19.8%), fellow farmers / relatives (17.3%), NGO (13.6%) and bank / financial institutions (11.1%) come in the order of priority.

Overall, out of 360 sample farmers, a major portion of sample respondents (i.e. 31.4%) aware about the crop insurance schemes through 'bank / financial institutions' and following this 'NGO' is the second main source which accounts for 16.9 per cent. From the analyses, it is concluded that the source 'bank / financial institutions' plays an information role in the awareness about crop insurance schemes.

4.5 AVAILING LOAN

In general, all the persons are interested to avail loan. No one is living in the world without any type of loan and it is presumed that all the people living in the world are normally borrowers. Hence, an attempt is made to know about the number of farmers who availed loan in the study area and whether it will be sufficient to them or not has also been attempted. This fact has been shown in Table 4.22.

TABLE – 4.22

Availing Loan and its Sufficiency

Particulars	Loanee Farmers		Non-Loanee Farmers		All Samples	
	No.	%	No.	%	No.	%
Availing Loan						
Yes	279	100.0	27	33.3	306	85.0
No	-	-	54	66.7	54	15.0
Total Samples	**279**	**100.0**	**81**	**100.0**	**360**	**100.0**
Sufficiency of Loan						
Yes	86	30.8	11	40.7	97	31.7
No	193	69.2	16	59.3	209	68.3
Total Samples	**279**	**100.0**	**27**	**100.0**	**306**	**100.0**

It is understood from the Table 4.22 that all the loanee farmers (i.e. 279 farmers) are the borrowers and availed loan from the bank / financial institutions whereas of the 81 farmers, one-third availed loan from different sources and the remaining two-thirds have not availed loan in the sample study. Overall, out of 360 sample farmers, 85 per cent farmers have availed loan. Hence, it is concluded that the majority of respondents have availed loan.

Regarding the sufficiency of loan, nearly 69 per cent of loanee farmers stated that the loan amount is not sufficient whereas it is 59 per cent in case of non-loanee category of farmers. In toto, around 68 per cent of farmers stated that the amount of loan provided is not sufficient.

From the above observation, it is concluded that a major portion of farmers have availed loan but it is insufficient for them.

4.5.1   Reasons for Availing Loan:

There are so many reasons to avail loan from a bank or financial institutions. But it may differ from each category of farmers. An attempt is made whether loans are availed for insuring crop or other purposes. The following Table 4.23 reveals the reasons for availing loan according to the choice of sample farmers.

TABLE – 4.23

Reasons for Availing Loan

Reasons for Loan	Loanee Farmers		Non-Loanee Farmers		All Samples	
	No.	Rank	No.	Rank	No.	Rank
To Insure Crop	84	II	-	-	84	III
Minor Irrigation	119	I	13	III	132	I
Plantation/Horticulture	61	IV	11	IV	72	IV
Land Development	74	III	14	II	88	II
Farm Mechanization	23	V	19	I	42	V
Other Reasons	8	VI	2	V	10	VI
Total Samples	**279**		**27**		**306**	

It is inferred from Table 4.23 that according to loanee farmers, the main reasons for availing loan are – minor irrigation, to insure crop and land development.   These have been placed in first, second and third positions respectively.   But the non-loanee farmers positioned the reason 'farm mechanization' as their main reason followed by 'land development' and 'minor irrigation' as their second and third reasons.   Overall, the first two reasons are assigned to 'minor irrigation' and 'land development' by the sample respondents. From this, it is clear that the reason 'to insure crop' is not a major reason for availing loan.

4.6 CROP CULTIVATION TYPES

Normally, crops can be classified as cereals, pulses, oil seeds and commercial crops. It may be notified or non-notified crops. Notified crops, which are announced from time to time by the government, are eligible for insurance under Crop Insurance Schemes. So, there is the possibility of cultivation of notified as well as non-notified crops by the sample farmers. Hence, an attempt is made to know it and the results are presented in the following Table 4.24.

TABLE – 4.24

Type of Crops Cultivated

Type of Crops	Loanee Farmers		Non-Loanee Farmers		All Samples	
	No.	%	No.	%	No.	%
Notified Crops	91	32.6	35	43.2	126	35.0
Non-Notified Crops	-	-	-	-	-	-
Both Notified & Non-Notified	188	67.4	46	56.8	234	65.0
Total Samples	279	100.0	81	100.0	360	100.0

It can be seen from Table 4.24 that out of a sample 279 loanee farmers, 188 farmers constituting 67.4 per cent are cultivating both the notified and non-notified crops and the remaining 32.6 per cent cultivating only notified crops. But this is 56.8 per cent and 43.2 per cent respectively in the case of non-loanee farmers. None of the farmers in the sample survey fall in the category of 'non-notified crops' and this indicates that the farmers are interested to cultivate both the notified and non-notified crops. It is also evidenced from the table that majority of sample farmers (i.e. 65%), are cultivating notified as well as non-notified crops in the study area.

4.7 HABIT OF INSURANCE OF CROPS

Whether the sample respondents are having the habit of insuring their notified crops under the National Agricultural Insurance Scheme or not has been attempted by the researcher. The result of analysis has been grouped based on the category of farmers, viz. loanee and non-loanee farmers.   This fact is displayed in the following Table 4.25.

TABLE – 4.25

Insurance of Notified Crops and Category

Particulars	All Samples	
	No.	%
Insuring Notified Crops		
Yes	360	100.0
No	-	-
Category of Farmers		
Loanee Farmers	279	77.5
Non-Loanee Farmers	81	22.5
Total Samples	**360**	**100.0**

It is found from the Table 4.25 that all the sample respondents (cent per cent) in the study have insured their notified crops under the National Agricultural Insurance Scheme. Of the 360 sample respondents, 279 respondents constituting 77.5 per cent fall in the category of 'loanee farmers' and the remaining 81 respondents constituting 22.5 per cent fall under 'non-loanee farmers' category. It is observed from the study that more than three-fourth of sample respondents in the study are loanee farmers.

4.7.1 Reasons for Insuring Crops by Loanee Farmers:

The reason may vary from one farmer to another. Hence, the sample farmers are asked to rank the reasons according to their priority. The ranks assigned by the farmers are computed by the Garrett's ranking technique for the purpose of analysis.[1] The ranks assigned to each reason by the sample farmers were converted into per cent position by using the following formula:

$$\text{Per cent position} = \frac{100\,(Rij - 0.5)}{Nj}$$

Where,

Rij = Rank given by the j th member for the i th reason, and

Nj = Number of reason ranked by the j th farmer.

The per cent position of each rank thus obtained was converted into scores by referring the table given by the Garrett. The scores of all farmers for each reason was then added together and divided by the number of farmers. Thus, the mean score of each reason has been obtained. Then rank was allotted based on the highest score of mean score for each reason. This procedure was adopted both for the loanee and non-loanee category of farmers separately. Table 4.26 depicts the computed total score, mean score and ranks assigned by the loanee farmers.

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[1] Henry E. Garrett and R.S. Woodworth (1981),"The Scaling of Mental Tests and Other Psychological Data", **Statistics in Psychology and Education**, Vakils, Feffer and Simons Ltd., Bombay, pp. 309-336.

TABLE – 4.26

Reasons for Insuring Crops by Loanee Farmers – Garrett's Rank

Reasons	Total Score	Mean Score	Rank	No. of Farmers Responded
Compulsion by the Bank	13855	57.02	I	243 (87.1%)
Protect against Losses	7948	53.34	III	149 (53.4%)
Reduces Premium Burden	7819	49.80	V	157 (56.3%)
Helps in Reducing the Risk	7750	49.68	VI	156 (55.9%)
Loanee from the Bank	9941	55.85	II	178 (63.8%)
Financial Security	8457	51.88	IV	163 (58.4%)
Other Reasons	6113	40.75	VII	150 (53.8%)
Total Samples				**279**

Table 4.26 exhibits the results of the Garrett's ranking technique towards the reasons for insuring crops under crop insurance scheme by the sample loanee farmers. It indicates that the reason 'compulsion by the bank' was responded by 87.1 per cent of farmers and has scored the highest mean score of 57.02 among various reasons. Hence, this reason has been ranked as the first. Next to this, the second rank is assigned to the reason 'loanee from the bank' (mean score of 55.85) and the third to 'protest against losses' (mean scor3e 53.34). These two reasons have been responded 63.8 per cent and 53.4 per cent of farmers respectively. The remaining reasons come in order and are ranked accordingly.

Based on the above analysis, it is concluded that due to the compulsion of bank, most of the loanee farmers were insuring their notified crops under the National Agricultural Insurance Scheme.

4.7.2   Reasons for Insuring Crops by Non-Loanee Farmers:

Attempt has also been made by the researcher to analyze the reasons of non-loanee farmers towards insuring crops under crop insurance scheme and it has been analyzed with the help of Garrett's ranking technique.   The calculated total scores as well as the mean scores and the ranks assigned are shown in Table 4.27.

TABLE – 4.27

Reasons for Insuring Crops by Non-Loanee Farmers – Garrett's Rank

Reasons	Total Score	Mean Score	Rank	No. of Farmers Responded
Protect against Losses	3773	67.38	I	56 (69.1%)
Reduces Premium Burden	3585	61.81	II	58 (71.6%)
Helps in Reducing the Risk	4142	55.23	IV	75 (92.6%)
Financial Security	2809	58.52	III	48 (59.3%)
Other Reasons	2345	45.98	V	51 (63.0%)
Total Samples				**81**

The results of the Garrett's ranking presented in Table 4.27 reveals that the first and the foremost reason for insuring crops is 'protect against losses' which was highlighted by the non-loanee category farmers. The computed total score for this reason is 3773 and the mean score is 67.38.   A sample of 56 farmers constituting 69.1 per cent responded to this reason. Next to this, the reason 'reduces premium burden' secured the second place, following this, 'financial security' placed in the third position. These two reasons have been responded by 71.6 per cent and 59.3 per cent respectively. The reasons such as 'helps in reducing the risk' and 'other reasons' are ranked as the fourth and the fifth respectively. From this it is noted that the non-loanee farmers' intention for insuring crops is to protect against losses.

4.8 PREFERENCE OF CROP INSURANCE SERVICE PROVIDERS

A number of insurance service providers are offering assistance to the farmers of Madurai District towards crop insurance scheme. An attempt is made towards the preference of crop insurance service providers by the sample respondents. So, the farmers are asked to rank the service providers. The Garrett's rank technique has been adopted for ranking the preference of crop insurance service providers and the result is shown in Tables 4.28 and 4.29.

4.8.1   Most Preferred Service Providers of Loanee Farmers:

The most preferred crop insurance service provider as pointed out by the loanee category sample respondents based on their choice has been analyzed with an easily understandable statistical tool Garrett's ranking. The computed total scores and the mean scores for each service provider are given in Table 4.28. In addition, the number of farmers responded to each service provider and the percentage have also been shown in the table.

TABLE – 4.28

Preference of Service Providers by Loanee Farmers – Garrett's Rank

Service Providers	Total Score	Mean Score	Rank	No. of Farmers Responded
Co-operative Bank	12983	59.56	I	218 (78.1%)
Commercial Bank	9797	56.63	II	173 (62.0%)
Rural Agent	7951	50.01	V	159 (57.0%)
NGOs	7720	53.24	III	145 (52.0%)
Self Help Group	7170	51.96	IV	138 (49.5%)
Post Office	5913	45.84	VI	129 (46.2%)
Others	5467	41.73	VII	131 (47.0%)
Total Samples				**279**

Table 4.28 shows the result of the Garrett's ranking technique towards the most preferred crop insurance service providers by the sample loanee farmers. It is inferred from the table that the first and foremost crop insurance service provider goes to 'co-operative bank' by scoring the highest mean score of 59.56. Next to this, 'commercial bank' (mean score 56.63) secured the second rank, and 'NGOs' (mean score 53.24) as their third choice. The crop insurance service providers like self help group, rural agent, post office and others are placed in fourth, fifth, sixth and seventh positions respectively. It is concluded that the co-operative bank is acting as the main crop insurance service providers for the loanee category of farmers.

4.8.2 Most Preferred Service Providers of Non-Loanee Farmers:

To find out the non-loanee farmers' most preferred crop insurance service providers, Garrett's ranking technique was applied. Table 4.29 highlights the calculated total scores as well as the mean scores and the rank assigned for each service providers by the sample non-loanee farmers.

TABLE – 4.29

Preference of Service Providers by Non-Loanee Farmers – Garrett's Rank

Service Providers	Total Score	Mean Score	Rank	No. of Farmers Responded
Co-operative Bank	2409	57.36	II	42 (51.9%)
Commercial Bank	3575	67.45	I	53 (65.4%)
Rural Agent	3545	51.38	IV	69 (85.2%)
NGOs	2813	54.10	III	52 (64.2%)
Self Help Groups	2347	51.02	V	46 (56.8%)
Post Office	1657	46.03	VI	36 (44.4%)
Others	1402	43.81	VII	32 (39.5%)
Total Samples				**81**

It is observed from the Table 4.29 that the non-loanee farmers have chosen the 'commercial bank' as their main crop insurance service providers. The computed mean score is 67.45. Hence, it is ranked as first. Around 65 per cent of sample farmers responded for this category. Following this, 'co-operative bank' got the second position by scoring a mean score of 57.36 and it was responded by 51.9 per cent of sample farmers. The third rank goes to 'NGOs' category and its mean score are 54.10. The other service providers are ranked in the descending order of the mean scores. The researcher comes to a conclusion that the commercial bank is the main dominator for crop insurance in respect of non-loanee category of farmers.

4.8.3   Comparison of Loanee and Non-Farmers' Views towards Most Preferred Crop Insurance Service Providers:

An attempt is made to compare the views of loanee and non-loanee sample farmers based on Tables 4.28 and 4.29. The result of analysis indicates that the loanee farmers preferred the 'co-operative bank' as their main crop insurance service providers whereas it is 'commercial bank' in respect of non-loanee farmers. The loanee farmers positioned the 'self help groups' as their second choice but it is 'co-operative bank' in the case of non-loanee farmers. From this it is concluded that the views expressed by the loanee and non-loanee farmers are not one and the same and there is much difference. Sixth and seventh ranks are unanimously ranked both by loanee as well as non-loanee farmers to 'post office' and 'others'.

4.9 SOURCE OF AID PREFERRED IN CASE OF CROP LOSSES

For identifying the preference of source by farmers towards aid or relief in case of crop losses, opinion has been sought from the sample farmers in varying degrees, viz. always, frequently, sometimes, very rarely and never. It will be helpful for the planners for disbursement of claims during losses.

The opinions of respondents were collected under each category and weights were assigned as 5, 4, 3, 2 and 1 respectively. For each category of response, the number of respondents is multiplied with the respective weight and the sum total is obtained. It is known as 'obtained opinion score'. It is then compared with the 'maximum opinion score' (number of respondents multiplied by five) of 1395 for loanee farmers and 405 for non-loanee farmers and multiplied by 100 for determining the percentage of preference of the respondents towards aid or relief in case of crop losses by the loanee category farmers in Madurai District. Thereafter ranking of various sources has been made on the basis of such percentages. For getting the mean score, the opinion score is divided by the total number of respondents. The results of analysis are shown in Tables 4.30 and 4.31.

4.9.1 Loanee Farmers' Source of Preference towards Aid:

The details of preference of sources by loanee category farmers towards aid or relief in case of crop losses are computed by applying weighted score method and it is displayed in Table 4.30.

TABLE – 4.30

Preference of Sources of Aid by Loanee Farmers – Weighted Score Method

Sources of Aid	No. of Loanee Farmers						Opinion Score	Mean Score	Preference Score (%)	Rank
	Always	Frequently	Some Times	Very Rare	Never	Total				
Bank Loan	38	44	61	71	65	279	756	2.71	54.19	VIII
Sale of Fixed Assets	42	139	32	47	19	279	975	3.49	69.89	V
Sale of Livestock	106	85	53	32	3	279	1096	3.93	78.57	III
Crop Insurance	110	123	32	5	9	279	1157	4.15	82.94	II
Friends & Relatives	64	71	86	33	25	279	953	3.42	68.32	VI
Moneylenders	87	90	56	41	5	279	1050	3.76	75.27	IV
Government Relief	156	77	41	5	0	279	1221	4.38	87.53	I
Asset Hypothecation	37	88	92	40	22	279	915	3.28	65.59	VII
Others	32	41	39	73	94	279	681	2.44	48.82	IX

Table 4.30 shows the analysis of opinion score, mean score, preference score and rank in respect of loanee category sample respondents towards the preference of sources of aid or relief. It is clear that the source of aid 'government relief' occupy the first rank by obtaining the highest preference score of 87.53 per cent followed by 'crop insurance' which obtained a preference score of 82.94 per cent. The third rank goes to the source of aid 'sale of livestock'. The computed mean score and preference score in respect of this source is 3.93 and 78.57 per cent respectively. The remaining sources such as moneylenders, sale of fixed assets, friends and relatives, asset hypothecation, bank loan and others have obtained the preference score in the descending order of merit. Hence, these sources are ranked from fourth to ninth respectively.

From the above analysis, it is concluded that a vast majority of loanee farmers prefers aid or relief from government in case of crop losses. Next only they expect claims from crop insurance.

4.9.2   Non-Loanee Farmers' Source of Preference towards Aid:

The source of preference of aid or relief by non-loanee farmers in case of crop losses has been analyzed with the help of weighted score. The mean score and preference score have also been computed and ranks are assigned for the different source of preference towards aid. The result of analysis is exhibited in Table 4.31.

TABLE – 4.31

Preference of Sources of Aid by Non-Loanee Farmers – Weighted Score Method

Sources of Aid	No. of Loanee Farmers						Opinion Score	Mean Score	Preference Score (%)	Rank
	Always	Frequently	Some Times	Very Rare	Never	Total				
Bank Loan	18	25	16	8	14	81	268	3.31	66.17	V
Sale of Fixed Assets	9	34	18	7	13	81	262	3.23	64.69	VII
Sale of Livestock	10	23	19	12	17	81	240	2.96	59.26	VIII
Crop Insurance	21	29	17	9	5	81	295	3.64	72.84	III
Friends & Relatives	20	32	14	9	6	81	294	3.63	72.59	IV
Moneylenders	17	19	21	16	8	81	264	3.26	65.19	VI
Government Relief	45	21	13	2	0	81	352	4.35	86.91	I
Asset Hypothecation	26	31	19	2	3	81	318	3.93	78.52	II
Others	8	12	30	17	14	81	226	2.79	55.80	IX

It can be seen from Table 4.31 that the source of aid 'government relief' holds the first rank by scoring the highest mean score (4.35) as well as the preference score (86.91%) by the non-loanee farmers. Next to this, the source 'asset hypothecation' is preferred by majority of farmers in case of crop losses. It has obtained a mean score of 3.93 and preference score of 78.52 per cent. The ranks third to fifth go to the sources viz. crop insurance, friends and relatives, and bank loan respectively in the order of priority. Remaining sources are also ranked accordingly.

It is understood from the study that the non-loanee farmers also expect government relief in case of crop losses which has been mostly preferred by them. Hence, it is concluded that getting relief from the government is the main source of sample farmers irrespective of their category viz. loanee or non-loanee.

4.10   SUMMARY

This chapter has analyzed the awareness of farmers about crop insurance scheme and also measured the level of awareness. The relationship between the socio-economic characteristics such as sex, age, religion, marital status, education, nature of family, ownership of house, landholding pattern, and experience in farm activities and their awareness levels have been tested by applying chi-square test.

Further, questions regarding the awareness such as major source of information for awareness, reason for availing loan, types of crops cultivated, and insurance of crop under National Agricultural Insurance Scheme (NAIS) have also been analyzed by percentile analysis; and the reasons for insuring crops have been attempted by the Garrett's ranking technique.

In addition, the preference of insurance service providers has been selected by applying the Garrett's rank and comparison is made between the preference of loanee and non-loanee farmers in this chapter. An attempt is made regarding the source of aid preferred in case of crop losses. For this purpose, total score, mean score and preference score have been computed by adopting the weighted scores and finally ranks were assigned.

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