

Assessment of the Levels of Awareness and Use of Agricultural Insurance Scheme among the Rural Farmers in Kogi State, Nigeria

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The study investigated the levels of awareness and use of agricultural insurance scheme in Kogi State of Nigeria. A total of 240 respondents from eight communities were selected through a multistage random sampling technique. Data collected through structured questionnaire were analyzed using descriptive statistic, percentages and sigma scoring model. The results revealed that farmers in the State are mostly males (95%) with low levels of education and an average farm size of 3.2 hectares. The study further revealed that majority of the farmers belong to low income group with about 55 percent earning less than ₦100,000.00 per annum. The sigma score of 5.04 for the level of awareness showed a high level of awareness of agricultural insurance scheme among the rural farmers in the state. However, the sigma score of 3.26 reported for the level of use revealed a low level of agricultural insurance usage in the area. The major sources of information of agricultural insurance scheme to the farmers were cooperative societies (66%) and extension agents (65%). The major problems preventing the usage of agricultural insurance by the farmers in the State were fear of failure to honour agreement (75%), high insurance premium (66%), inadequate financial resources (65%) and non-coverage of many crops (61%). The study then recommended among others, the prompt payment of benefits to farmers and expansion of the scope of the scheme to cover other major crops. [Stephen Jimoh Ibitoye. Assessment of the Levels of Awareness and Use of Agricultural Insurance Scheme among the Rural Farmers in Kogi State, Nigeria. International Journal of Agricultural Science, Research and Technology, 2012; 2(3):143-148].

Key words: Agriculture, NAIC, Insurance, Awareness, Farmers

1. Introduction

Agriculture is the most notable occupation of most Nigerian, with over 70% of the 150 million people engaged in agricultural production (CBN, 2006). Agriculture has been provider of food for the teeming population and the largest employer of labor force in the country (Ugwu and Kanu, 2012). Agriculture also helps to generate foreign exchange.

Nigerian economy is still influence by agriculture despite the discovery of crude petroleum and rapid industrial development witnessed in the recent years. However, the Nigerian agriculture is still depending mainly on subsistence farming. This method involved small scale farmers operating fragmented farmland of between 0.1-3 hectares and producing about 80 percent of the total food output for the country (Aina and Omonona, 2012). Alna and Omonona (2012) further stressed that the rate of growth of Nigeria's food production has been slow. As a result of this, food demand has been growing at a rate higher than food production.

In other to bridge the gap between food production and demand, government of Nigeria had put in place a number of rural development strategies. One of these strategies is the Nigeria Agricultural

Insurance Corporation (NAIC). Risk according to Gupta (2008) is the probability of incurring a loss and insurance is the act of providing financial protection for property and life against death, loss or damage. Gupta (2008) also define insurance as the equitable transfer of a risk of loss from one entity to another in exchange for a premium or a guaranteed and quantifiable small loss to prevent a large and possibly devastating loss.

Agricultural insurance according to Epetimehin (2012) is designed to provide covers for financial losses incurred due to unexpected reduction in output from agricultural products. The major products are crops and livestock, with other minor ones like fisheries and forestry. Agricultural insurance in its widest sense may be defined as the stabilization of income, employment, price and supplies of agricultural products by means of regular and deliberate savings and accumulation of funds in small installments by many in favorable time periods to deprive some of the participants in bad time periods.

Agriculture, unlike many other investment activities, is faced with problems ranging from instabilities in input subsidies, agricultural yields,



Abstract

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product prices to post harvest losses and the invasion of pests and diseases. Other natural hazards such as flood, drought and fire outbreaks are equally important with regards to their impact on the success or failure of agricultural production. In order to boost agricultural production, it is important to reduce the impact of these risks and uncertainties to the barest minimum (Epetimehin, 2012).

In Nigeria the idea of agricultural insurance for farmers was first noted in 1978 by the Agricultural Credit Guarantee Scheme Fund (ACGSF) of Central Bank of Nigeria (CBN). The Federal Government of Nigeria eventually established the Nigeria Agricultural Insurance Corporation (NAIC) following its formal launching on the 15th December, 1987. The broad objective of NAIC is to offer protection for the farmers from the effects of natural disasters and to make sure that appropriate compensations are paid to keep the farmers in business after the losses. It was designed so that small, medium and large scale farmers will benefit from the scheme either as individuals or groups (Aina and Omonona, 2012).

According to Epetimehin (2012) the insurance cover currently provided by NAIC is limited to the followings:-

- i. Crop: Maize, cassava, rice, yam and sorghum.
- ii. Livestock: Poultry and cattle.
- iii. Tangible fixed assets: - Capital investment on the farm such as farm buildings, Machineries and equipment.
- iv. Farmers, farm labor/ employees and their dependants

For crop the scheme provided cover for fire outbreak, flood, drought, pests, diseases, lightning and windstorm. For livestock, the risk covered include; death or injury due to accident, disease, fire, lightning, windstorm and flood. Epetimehin (2012) further stressed that there will be no insurance cover for economic or financial losses resulting from any of the followings;

- a. Crop or livestock that is exposed to imminent or inevitable risks such as planting of crop or raising of livestock in a pest infested zone or an endemic area, drought or flood prone locations.
- b. Political risks or social upheavals:- any agricultural loss or failure from strike, revolution or work-to-rule.
- c. Farmer's negligence or poor production method.
- d. Farming in inaccessible locations.
- e. Theft of growing crops and livestock except where covered by terms of relevant policy endorsement.

The minimum farm size for insurance cover according to Okwoche, Asogwa and Obinne (2012) is 0.4 hectare (about one acre) with respect to crop

production. For poultry, the minimum stock levels for insurance cover are: 250 birds for broilers and cockerels, 500 birds for layers and breeding birds and 100 birds for turkeys. For cattle, the minimum stock that can attract insurance cover are 5 herds for dairy cattle, 2 herds for bulls and exotic breeds and 10 herds for calves, heifers and fatteners. Agricultural insurance policies protect farmers against unforeseen circumstances by stabilizing the income of the farmers. The farmers feel relaxed that they will be indemnified. This motivates them further to expand their activities which will result into greater agricultural output. Olubiyo, Hill and Webster (2009) further maintain that agricultural insurance serves as securities for bank loan as indemnification for financial losses suffered by farmers will also provide funds for servicing such loans. Agricultural insurance acts as production incentive which on the macro level improves the food production of the nation thereby reducing imports. Agricultural insurance enhances savings and encourages cooperation between government and the people. It could also be mentioned that it mitigates the burden on the national budget with respect to natural hazards. This study therefore seeks to find out the levels of awareness and use of this agricultural insurance scheme among the rural farmers of Kogi State since its inception about 25 years ago.

2. Materials and methods

The study area is Kogi State of Nigeria. Kogi State was created in August, 1991 out of Kwara and Benue States. The State is located in the central region of Nigeria. The headquarters of the state is Lokoja, which is situated at the Confluence of rivers Niger and Benue making the State to be popularly known as the Confluence State. The state like any other state in the country has three senatorial districts (Western, Central and Eastern senatorial districts). The state consists of 21 Local Government Areas. The state is located between latitude 6°30'N and 8°50'N and longitude 5°51'E and 8°00'E.

In the northern part, the state shares boundaries with Niger, Plateau and Nasarawa states and Federal Capital Territory (FCT). To the East, Kogi State shares common boundary with Benue state. To the west, it is bounded by Kwara, Ondo and Ekiti states and to the South by Enugu, Anambra and Edo States. Kogi state has a total population of about 3,278,487 people (NPC, 2007) and land area of about 30,354,74 square kilometers (KOSEEDS, 2004).

This study was conducted in Kogi state of Nigeria in the year 2012. Kogi State is divided into four agricultural zones (A, B, C and D). All the Local Government Areas (LGA) in each zone are similar in terms of vegetation, socio-cultural activities and

agricultural practices. One local government area was therefore randomly selected from each of the four zones. From each of the four local government areas selected, random samples of two communities were selected making a total of eight communities involved in the survey. Finally, from each of the eight communities a random sample of 30 farmers was selected to give a total of 240 respondents.

Both primary and secondary data were used in the study. Secondary data were collected from Kogi State NAIC office in journals, textbooks and annual report of Central Bank of Nigeria. The primary data on the other hand were collected through the use of structured questionnaire. The data obtained on socio-economic characteristics of respondents include: sex, age, family size, educational status, farming experience and farm size. Information was obtained on the awareness, sources of information and use of agricultural insurance scheme by the rural farmers of Kogi state. The entire instrument were successfully completed, recovered and analyzed by the researcher.

The data were analyzed using addition, mean and percentages. Sigma scoring method was used to determine the levels of awareness and use of agricultural insurance scheme among the rural farmers in Kogi state of Nigeria. The sigma method of scoring used to calculate the index of awareness and use of agricultural insurance is based on the principle that ordinary frequency numbers and percentages can be standardized by mathematical procedures in order to obtain normalized standard scores such standard scores can be used in parametric statistical analysis. This method was used by Audu, Ibitoye and Umar (2010) and Agbamu (2006) to study adoption levels of agricultural innovation. In order to standardize the scores of awareness and use of agricultural insurance, percentage of farmers who used the insurance cover is obtained and a value known as sigma distance is read from the statistical table of normal deviates.

The level of use of insurance cover can be obtained through sigma scoring method by following steps below (Audu, Ibitoye and Umar, 2010):

First obtain the percentage of farmers who used the insurance cover:

$$\frac{\text{Number of farmers using the cover} \times 100}{\text{Total number of respondents}} = A\%$$

This is followed by dividing the percentage (A %) by two and minus the answer from 100

$$100 - (A \% / 2) = B \%$$

Check B% on the statistical table of normal deviates to get the sigma distance (X). Next increase the value of the sigma distance using a constant figure of 2 and multiplying the result by the same constant.

$$(X + 2) \times 2 = Y$$

Since sigma method assigns weight in reverse direction on a 10 point scale, the actual sigma score would be 10 minus the answer (Y).

$$10 - Y = Z$$

Decision rule: Any mean score (Z) less than 5 is considered as low level of agricultural insurance use.

3. Results and discussion

The socioeconomic characteristics of the respondents is presented in Table 1. The socioeconomic variables considered for the study include: sex, age, marital status, family size, educational status, farm size, years of farming and income. The study showed that the males constitute about 95 percent of the respondents while the remaining 5 percent were females. This result is in agreement with Ibitoye (2010) who reported that more men were found in farming than women. The high percentage of male farmers in the state is expected because farming in Nigeria is done manually by the rural famers and some of the major operations require a lot of energy which may be too tedious for women to do.

Age distribution of the respondents showed that majority of them (52.5%) was less than 51 years of age. The remaining 47.5 percent of the respondents were above 50 years of age. The mean age was 43 years. Ibitoye (2011) classified productive age of farmers to be between 20 and 50 years. This implies that majority of the farmers in the State are still within the productive age. Ogundele and Okoruwa (2006) also asserted that only those farmers within the productive age group of 20 - 45 years are likely to possess the necessary strength to carry out farming operations.

The marital status of the respondents showed that about 89 percent of them were married. The remaining 11 percent were either single (2.5%), divorced (2.5%) or widowed (5.8%). This implies that farming in the study area was mostly carried out by married men. Family size of the respondents revealed that majority of them (93%) belong to the family size of 5-10 members. The mean family size was about 7 members per family. The mean family size recorded for this study is lower when compared with the average of 13 members recorded by Salisu (2001) for the northern part of the country.

About 44 percent of the respondents had no formal education. About 43 percent others had primary education while about 13 percent of the remaining respondents attained either secondary or tertiary education. It is thus obvious that the educational standard of the respondents are generally low. Formal education enables the farmers to obtain

useful information from media and other source. Formal education aid farmers to accept new technologies more readily to improve their farm income. Ibitoye (2011) found that the level of education of farmers in Kogi State of Nigeria, yielded positive significant relationship to adoption of improve cassava varieties.

The analysis of farm size showed that 88 percent of the respondents had less than 5 hectares of farmland. The mean farm size for the respondent was 3.2 hectares. The average farm size for this study was found to be higher than the 1.5 hectares reported by Agwu and Anyawu (1996) for south-Eastern part of Nigeria. Ibitoye (2010) found a positive but not significant relationship between farm size and adoption of improved maize varieties.

The result of the study revealed that about 43 percent had been in farming business for less than 10 years. About 30 percent others had been in farming business for the past 11 to 20 years and the remaining 27 percent had farming experience of more than 20 years. The survey on farm income of respondents showed that about 55 percent had less than ₦100,000 as annual farm incomes.

Table 1. Socio-Economic Characteristics of Respondents

Variables	Frequency	(%)
Sex		
Male	228	95.0
Female	12	5.0
Age (Years)		
Less than 25	6	2.5
25 – 50	120	50.0
Above 50	114	47.5
Marital status		
Single	6	2.5
Married	214	89.2
Divorced/ Widow	20	8.3
Family size (No.)		
Less than 5	10	4.2
5 – 10	224	93.3
Above 10	6	2.5
Educational Status		
No formal education	106	44.2
Primary education	104	43.3
Secondary education	16	6.7
Tertiary education	14	5.8
Farm Size (Ha)		
Less than 5	212	88
5 – 15	24	10
Above 15	4	2
Years of Farming		
Less than 10	104	43
10– 20	72	30
Above 20	27	11
Farm Income (₦)		
Less than 100,000	84	55.0
100,000 – 200,000	51	42.5
Above 200,000	6	2.5

Judging by the small farm size of the respondents coupled with the general low level of farm income, it implies that majority of the farmers is still operating at the subsistence level. This is in agreement with the opinion of Kurimoto (2002) that over 90 percent of the country food local supply come from the agricultural population who are small holder farmer.

The summary of the levels of awareness and use of agricultural insurance scheme in Kogi State is presented in table II. The level of awareness revealed that about 37 percent of the respondents were not aware of agricultural insurance scheme in the state. The sigma score reported for the non-awareness of agricultural insurance in the state is low.

The result further showed that about 63 percent of the respondents were aware of agricultural insurance scheme with sigma score of 5.04. The high sigma score reported for the awareness of agricultural insurance scheme in the area confirmed the high level of awareness of the scheme by the farmers in kogi state. The level of awareness revealed that about 46 percent of those respondents that were aware of the insurance scheme, never use it, while the remaining 17 percent had used the scheme before.

Investigation into the level of use of agricultural insurance scheme in the state showed that 83 percent of the respondents never use the scheme before. The sigma score of 5.57 for those who had never use the scheme confirmed a very high level of non-usage agricultural insurance scheme in the area.

Investigation into the source of information of agricultural insurance scheme is presented in table III. Cooperative societies ranked first among the source of information with 66 percent. This is closely followed by extension agents with 65 percent. Other major sources includes:- village meetings (48%), friends and relatives (26%) and commercial bank (17%).

Table 2. Distribution of Respondents According to the Levels of Awareness and Use of Agricultural Insurance Scheme.

Variable	F	(%)	Sigma score
Level of Awareness			
Not aware	88	36.7	3.78
Aware of the scheme	152	63.3	5.04
Total	240	100	
Aware but never use	111	46.3	
Aware and use	41	17.0	3.26
Total	240	63.3	
Level of Use			
Never use	199	83.0	5.57
(1 – 4 times	31	12.9	2.97
More than 4 times	10	4.1	1.93
Total	240	100.0	

Total 3. Distribution of Respondents According to the Source of Information of Agricultural Insurance Scheme.

Information Sources	F	%	Rank
Extension Agents	99	65	2
Friends and Relatives	40	26	5
Radio / Television	11	7	6
Print Media ⁵	3	8	
Village Meetings	73	48	4
Commercial Banks	26	17	3
Cooperative Societies	100	66	1
NAIC Agricultural Show	11	7	6

Total 4. Problems Militating Against the Use of Agricultural Insurance Scheme

Problems	F	%	Rank
High insurance Premium	100	66	2
Non – coverage of many crops	93	61	4
Lack of proper understanding of insurance operations	73	48	5
Inadequate financial resources	99	65	3
Uncooperative attitudes of Insurance officers	3	2	8
Non – remittance of funds to beneficiaries	41	27	6
Fear of failure to honour agreement	114	75	1
Against my religious beliefs	11	7	7

The problems militating against the use of agricultural insurance in the area of study is presented in table 4. Analysis of the problems showed that fear of failure to honor agreement ranked first among the problems facing the use of agricultural insurance scheme by the farmers. About 75 percent consented to this problem. The second ranked problem was high cost of insurance premium demanded by the NAIC(66%). This problem is closely followed by the problem of inadequate financial resources (65%). Other problem mention by the respondents include:- Non-coverage of many crops (61%), lack of proper understanding of agricultural insurance operations (48%) and non-remittance of funds to the beneficiaries (27%).

4. Conclusion

It can be concluded from this study that the level of awareness of agricultural insurance scheme in Kogi State of Nigeria is high. However, the level of use of scheme is low judging by the high level of non-usage of the scheme by the farmers in the area. This was as a result of mistrust existing between the

operators of the insurance scheme and the rural farmers in the state.

5. Recommendations

The following suggestions are offered to improve the performance of agricultural insurance scheme in Kogi State:

The federal governments of Nigeria through the central bank of Nigeria should expand the operations of NAIC to cover more crops in the country.

Fund should be paid to beneficiaries without delay. This will help to build the confidence of farmers on the sincerity of the scheme.

State government should further subsidize the insurance premium to make it affordable to most small scale farmers who forms the majority of the farming population in the state.

In order to reduce the level of un-awareness to the barest minimum level, the operators of the scheme should take advantage of the recent mobile phones of farmers compiled by the Federal Government of Nigeria to advertise their services.

Federal and State Governments should make it mandatory for farmers to produce agricultural insurance certificate as a condition for benefitting from government subsidies and incentives; this will encourage the level of usage of agricultural insurance scheme among the farmers in the state.

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