
Fish Farmers' Attitude Toward Agricultural Insurance Scheme in Ondo State Nigeria

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Abstract

The study assessed fish farmers' attitude towards agricultural insurance scheme (AIS) in Ondo State, Nigeria. A multi-stage sampling procedure was adopted to select the respondents for the study. Data were obtained through questionnaire and were analysed using descriptive statistics and mean score from a five point Likert type of scale. The study showed the mean age of fish farmers to be 44.6±10.1years and the majority (83.4%) were married. The mean household size was 5±2 and about 96% were able to read and write. The mean years of fish farming experience was 13.54 and all of them were smallholders. More than half (57.3%) of the respondents had neutral attitude, 23.7 per cent had favourable attitude while 19 per cent had unfavourable attitude towards AIS. They perceived that insurance belongs to God and not any insurance company ($\mu= 1.8$) and that small scale farmer do not really need to insure their farms, ($\mu= 1.8$). The study recommended that the respondents should be empowered to increase their scale of fish production as this might change their attitude to the scheme. Also, government should re-subsidize agricultural insurance to enable serious farmers afford the premium.

Key words: Fish Farmers, Attitude, Agricultural Insurance Scheme

Introduction

Agricultural production faces myriad of risks than most other enterprises (Epetimehin, 2010). Risks in Agriculture are most certainly not independent of nature. This is because they go beyond all the well-known and researched entrepreneurial hazards and uncertainties of modern world. Owing to the fact that economic growth and agricultural growth are tied to each other, managing risks in agriculture is a big challenge to both the policy makers and researchers. Nevertheless, two major risks are of concern to the agricultural sector; these are price risk which is caused by potential volatility in prices and production risk resulting from uncertainty about the levels of production that primary producer can achieve from their current activities (Ramiro, 2009). He further posited that it is likely that these major risks will increase in the future- price risk due to liberalization of trade and production risk caused by the effects of climate change. Disasters can often not be prevented from happening but they can, to some extent, be predicted and arrangements can be made to reduce their impact. However, in some cases, disasters cannot be predicted and farmers will have to cope with major losses after the occurrence of the event. The trend towards agricultural specialization is likely to continue which will increase these risks as producers rely on the production of a smaller range of crops and consequently cannot diversify risks as effectively.

Agricultural insurance is considered an important mechanism to effectively address the risk to output and income resulting from various natural and manmade events (Lawal, B.O. and Ajayi, A.O, 2014). Agricultural insurance is a means of protecting farmers against financial losses due to uncertainties that may arise from named or all unforeseen perils beyond their control (Mojarradi, G.R., Zamani, G.H., Zarafshani, K., 2008; Suresh, D., Barahb, B.C., Ranganathana, C.R., Venkatrama, R., Gurunathana, S., Thirumoorthy, S.,2011). It is a method by which farmers can stabilize farm income and investment and guard against disastrous effect of losses due to natural hazards or low market. However, insurance is not the universal solution to the risk and uncertainties that farmers face. It can only address part of the losses resulting from some perils and is not a substitute for good on-farm risk-management techniques, sound production and farm management practices and investments in technology (Food and Agriculture Organization, 2013).

Attitude is a situation whereby farmers behave consistently favourable or unfavourable towards an object, product or service (Adah, 2015). He stated that it is the more or less permanent feelings, thoughts and predispositions a person has about certain aspects of his environment. Most agricultural programmes and innovations fade off after their pilot stage due to lack of interest on the part of the providers (Wixson and Katchoya, 2011) and low willingness to pay (demand) for the services or products (Enjolras and Adinolfi, 2013; Mahul, and Stutley, 2010), a behaviour influenced by farmers' attitude.

Eleri, O. E., Uduka, I. K., Akuto, N., Onuvae, P., Anwara, O (2012) and Patrick, (2010) opined that since farmers cannot predict the probability of occurrence of any of these and cannot bear these risks and uncertainties alone, they are faced with the option of transferring or sharing the risks involved in the day-to-day management of their farms with one or more individuals or firms. In view of the risks and uncertainties of

agricultural production in Nigeria, the Federal Government of Nigeria launched the Nigerian Agricultural Insurance Scheme (NAIS) on the 15th December, 1987 and the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) in June, 2011 as part of governments' efforts to enhance food production in Nigeria. Agricultural insurance looks into how risks and uncertainties can be effectively managed to the advantage of the farmers in the present and also in the future. Agricultural insurance is a necessary part of the institutional infrastructure essential for the development of agriculture, which is mainly a high risk enterprise. It also control lending environment for banks in which the agricultural value chain is well structured (Emmanuel, 2007, National Agricultural Extension Research Liaison Services, 1991).

Despite the challenges such as extreme climatic conditions, flood, water pollution, lack of adequate technology, fish diseases, problems of preservation, poor marketing, high cost of inputs and inadequate extension contact, etc. confronting fish farming in Nigeria, and agricultural insurance scheme being one of the strategies put in place to mitigate these challenges, there is dearth of information concerning the attitude of fish farmers in agricultural insurance Scheme, hence this study. The specific objectives of the study are to describe the socio-economic characteristics of fish farmers and to determine their attitude towards agricultural insurance scheme in the study area. It was hypothesized that there was no significant relationship between fish farmers' socio-economic status and their attitude to agricultural insurance scheme.

Methodology

The study was conducted in Ondo State of Nigeria. Men, women and youths involved in fish farming in Ondo State constituted the population from which the study sample was drawn. Multi-stage sampling procedure was adopted to select the respondents for the study. Ondo State is divided into four agricultural zones namely; Ondo zone, Owo zone, Ikare zone and Okitipupa zone. At the first stage, two LGAs were purposively selected from each of the four agricultural zones based on their pronounced involvement in fish farming. The second stage involved a random selection of two communities from each of the selected LGAs making a total of sixteen communities. The last stage was a proportionate sampling of 20 percent of the fish farmers in the sixteen communities making a total of 295 respondents out of 1728 registered fish farmers in Ondo State.

Questionnaire was used to elicit quantitative data from the respondents. Data collected were summarized with percentages, mean, standard deviation. Chi-square, correlation and regression analyses were employed to draw inferences.

Results and Discussions

Farmers' Demographic Characteristics

Table 1 shows the distribution of respondents by demographic characteristics. The result shows that the mean age of fish farmers in Ondo State was 44.6 ± 10.1 years. The findings showed that above average (58.6%) of fish farmers in Ondo State were still in their active years of life in which they could still be productive and contribute to the socio-economic wellbeing of the society. This age could influence their attitude to agricultural insurance scheme as young people are ready to try something new or

better still take risk. This finding is in line with that of Nnadi, F. N., Nnadi, C. D., Chikaire, J., Ummunnakwe, P. C., Ihenacho, R. A.,(2013), that participants of agricultural insurance were younger, and were more disposed to participating in Nigerian agricultural insurance scheme. This could be explained by their higher venturesomeness, innovativeness and more risk proneness. Also, Okunlola, J. O., Oludare, A. O., Akinwalere, B. O.,(2011) reported that most fish farmers were middle aged, agile and active to withstand the rigors of fish farming. About 78 % of the respondents were male while the remaining 22.0 per cent were female. The result indicated that there were more men in fish farming than women in the study area. This finding is similar to that of Adebo G. M. and. Ayelari T. A (2011) that 80 % of fish farmers were men. Since most of the fish farming activities requires time and energy which women might not be able to effectively cope with because of other responsibilities as housewife.

Table 1: Distribution of respondents by demographic characteristics

Demographic characteristics	Percentage (n=295)	
Age		
Below 31	8.2	Mean=45
31-40	31.7	SD=10
41-50	26.9	
Above 50	33.2	
Sex		
Male	78.0	
Female	22.4	
Religion		
Christian	94.5	
Islam	4.5	
Traditional	1.0	
Marital status		
Single	14.1	
Married	83.4	
Separated	0.3	
Widow(er)	2.0	
Household size		
Below 6	67.2	Mean=5
6-10	31.7	SD=2
Above 10	1.0	
**Literacy level		
Can only read	96.3	
Can read and write	95.9	
Years of formal education		
Below 7	10.8	
7-12	15.6	
13 and above	73.6	
Level of formal education		
No formal Education	1.7	
Adult Education	6.4	
Completed Primary Education	8.8	
Uncompleted Primary Education	2.4	
Completed Primary Education	8.5	
Tertiary Education	72.2	

Years of fish farming experience

Below 11	58.3	Mean= 14 years
11-20	20.3	SD=12
21-30	9.2	
Above 30	11.9	

Source: Field survey, 2015

About 94% and 4.7% of the respondents were Christians and Muslims, respectively while very few (1.0%) practised traditional religion. Despite the fact that all the respondents belong to one religion affiliation or the other, the majority (94.2%) still belonged to Christianity. This implied that Christianity might be the dominant religion in the study area. Religion affiliation could be a useful indicator in identifying and mobilizing fish farmers for meaningful participation in agricultural insurance. This is because farmers could easily interact with people of their faith and in doing so, they could discuss ideas related to agriculture.

A majority (83.4%) of the respondents were married. This implied that the majority of the respondents were married and were expected to be responsible because marriage is considered as respected institution where married people are regarded as mature and responsible with divorce being a culturally rare occurrence due to the stigmatization attached to it. With the majority of the respondents being married, the implication is that they would have more responsibility to meet up with as household members increase through procreation. Also, family member(s) have been a source of labour especially in fish farming operations, they could be a source of information and they could even be persuaded to participate in the scheme.

About 68 % of the respondents had household size of less than 6 members, while 31.5 % had between 6 and 10 members within their household while very few (1.0 %) had above 10 members. Mean household size was approximately 5 people. The result indicated that most of the respondents had household size of less than 6 members. This might be as a result of the economic situation of the country, education and high rate of unemployment leading many people into family planning so as to reduce birth rate. It might also be due to the fact that the traditional orientation of marrying more than a wife at a time and bearing as many children as possible as a sign of wealth is constantly fading away in the study area (Adesoji S.A, Olayode O.O and Ogundeji A. O., 2017). Since a majority of the respondents (59.3%) had at least 5 persons and the mean household size was 5 ± 2 , a considerable amount of labour could be derived from within the household to provide help on fish farm when needed. Division of labour could occur during fish farming activities so that more could be done within a short period and with less energy exertion.

About 96 % of the respondents could only read while 95.9 % could read and write. Also, about 10.8 % of the respondents had less than 7 years of formal education, 15.6 % had 7-12 years while 73.6 % had more than 12 years of formal education. It further revealed that 72.2 per cent had post-secondary school education. This means that a majority (99 %) of the respondents had one form of formal education. This high level of literacy could influence their attitude to Nigerian Agricultural Insurance Scheme. This finding corroborates Alfred, S. D. Y and. Fagbenro O.A(2015) assertion that high

level of literacy could be regarded as an advantage for the choice of source of information for fish production. Also, Okunlola (2009) and Agbamu (2006) stated that educational level is one of the factors that influenced adoption of new technology by farmers.

Above average (58.6%) of the respondents had at most 10 years of fish farming experience, 20.3 % had between 11 and 20 years of fish farming experience while 11.9 % had more than 30 years of fish farming experience. The mean years of fish farming was 13.54 ± 11.91 years. This is in contrast to the view of Alfred, S. D. Y., Fagbenro, O. A. (2015) assertion that above average (56%) of fish farmers in Ondo State had been into fish farming for over 10 years. The reasons might be due to new agricultural programmes such as agricultural transformation agenda which might encourage youth to take agriculture and the recent discovery that fish farming is a lucrative enterprise. Also, unemployment rate might make most youth to drift to fish farming. Some of the farmers had started fish farming since their childhood most especially those in the riverine area of the State. Since about 42 % of the respondents had more than 10 years of fish farming experience, they would have encountered one or more challenges associated with fish farming and this would prompt them to have favourable attitude towards agricultural insurance policy which is one of the strategies put in place to cushion these challenges.

Fish Farmers' Attitude towards Agricultural Insurance Scheme.

Table 2 shows that AIS was meant to protect farm against risk and reduces farmers' worries and stress ranked first with mean value of 2.0.

Table 2: Attitude of respondents towards agricultural insurance scheme

Attitude	Mean	Rank
Agricultural Insurance scheme is meant to protect farm against risk	2.0	1 st
Insurance belongs to God and not any insurance company	1.8	2 nd
I am aware that Insurance has a lot of benefits for both small and large scale farmers.	1.8	2 nd
Small scale farmer do not really need to insure their farms	1.8	2 nd
Agricultural Insurance is meant for all farmers regardless of the type of production	1.8	2 nd
Agricultural insurance is good for loan beneficiaries in the wake of failure of production	1.6	3 rd
Agricultural Insurance covers and pays for most of the damages experienced by farmers	1.6	3 rd
Only large scale farmers can buy insurance policy with the conditions	1.5	4 th
Agricultural insurance Scheme is very reliable	1.5	4 th
I have learnt to bear my own risk and do not need any insurance	1.5	4 th
Insurance companies are group of paper robbers	1.3	5 th
Agricultural Insurance is a deceit of the government and is meant to siphon farmers' money	1.3	5 th
Practicing agricultural insurance is a waste of time	1.3	5 th
With Agricultural Insurance, I can expand my agricultural production	1.3	5 th
Agricultural Insurance stabilizes the agricultural industry	1.3	5 th
With Agricultural Insurance, I am less worried about the incidence of pests and notable diseases on my fish farm	1.2	6 th
Agricultural Insurance alleviates the problem of collateral security often demanded as guarantee for loans	1.2	6 th
Insurance enables existing businesses to remain in operation	1.1	7 th
Insurance do not cater for most risks experienced by farmers	1.1	7 th
There is excessive bureaucratic processes in the operation of Agricultural insurance	1.1	7 th
Insurance companies would only cheat farmers at the end of the day	1.1	7 th
Constraints associated with agricultural insurance far outweighs its benefit	1.1	7 th
Insurance companies do not pay indemnity whenever they have to do so	1.0	8 th
Insurance is very costly to operate	1.0	8 th
Agricultural Insurance enhances agricultural households' welfare	1.0	8 th
Agricultural insurance involves too much laws and cannot be fully understood because of clauses	0.9	9 th
You need to know somebody before you can have your claim	0.8	10 th
Government is adequately funding agricultural insurance	0.7	11 th

Source; Field survey, 2015

This implied that the majority (60.3%) of the respondents were of favourable disposition to AIS meant to protect farm against risk and reduces farmers' worries and stress. The finding contradicts that of Lawal, B.O. and Ajayi, A. O, (2014) which reported that the majority of the respondents in his study area did not agree with the insinuation that agricultural insurance was meant to protect farm against risk and reduce farmers' worries and stress

These were followed by the following statements: insurance belongs to God and not any insurance company, small scale farmer does not really need to insure their farms, agricultural insurance is meant for all farmers regardless of the type of production, and awareness that insurance has a lot of benefits for both small and large scale farmers. This implied that about half (48.8%) of the respondents agreed that insurance had a lot of benefits for both small and large scale farmers. This finding contradicts that of Lawal *et. al.* (2014) which reported that the majority of the farmers disagreed with the allusion that insurance has a lot of benefits for both small and large scale farmers.

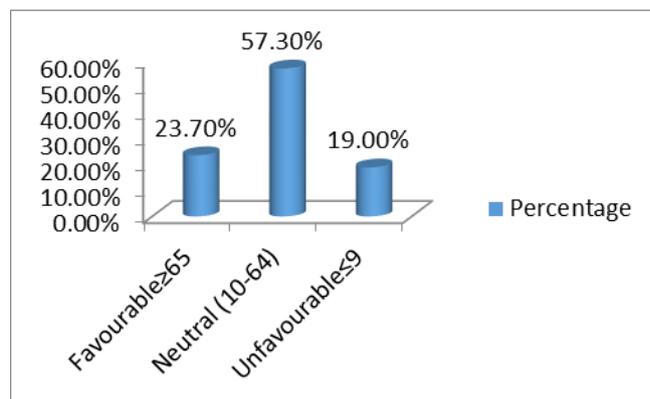
Agricultural insurance is good for loan beneficiaries in the wake of failure of production and AI covers and pays for most of the damage experienced by farmers ranked 3rd with mean value of 1.6. Only commercial farmers can buy insurance policy with the condition ranked 4th as well as agricultural insurance scheme is very reliable. Also, fish farmers had learnt to bear their risk and did not need insurance ranked 4th. This implies that above average (55%) of the respondents had other means to reduce the risks in fish farming. Five of the statements ranked 5th with mean value of 1.3. These are; insurance companies are group of paper robbers, agricultural insurance is a deceit of the government and is meant to siphon farmers' money, practising agricultural insurance is a waste of time, agricultural insurance stabilizes the agricultural industry and with agricultural insurance, I can expand my agricultural production. The finding underscored the need for more enlightenment of the respondents about the importance of their participation in AIS. Also, only two of the statements ranked 6th with mean value of 1.2 and these are; with agricultural insurance, I am less worried about the incidence of pests and notable diseases on my fish farm and I have access to credit from formal institutions because agricultural insurance alleviates the problem of collateral security often demanded as guarantee for loans. Insurance companies would only cheat farmers at the end of the day and there is excessive bureaucratic process in the operation of agricultural insurance ranked 7th. Also, constraints associated with agricultural insurance far outweighs its benefit, insurance does not cater for most of the risks experienced by farmers and insurance enables existing businesses to remain in operation and it encourages new ones to spring up thus guaranteeing continuous and sustainable economic growth ranked 7th as well with mean value of 1.1. This implied that very few (14.9%) of the respondents agreed that the constraints associated with agricultural insurance scheme far outweighed.

Furthermore, agricultural insurance enhances agricultural households' welfare which can possibly translate to general economic development, insurance is costly to operate and insurance companies do not pay indemnity whenever they have to do so ranked 8th with mean value of 1.0. This implied that very few (22.7%, 25.1% and

28.1%) of the respondents were of positive disposition to the assertions. Also, about 25% of the respondents saw insurance as costly to operate, this means that some of the fish farmers needed to know that payment of premium was based on the volume of one's investment. The more the worth of one's investment, the more the premium to be paid, although at a subsidized rate. Hence, fish farmers still need to be enlightened that insurance was more beneficial to them and that it gave them peace of mind whenever there was disaster, the loss would not be total as NAIC would indemnify such farmer.

Level of Attitude Towards Agricultural Insurance Scheme

Figure 1 reveals that more than half (57.3%) of the respondents had neutral attitude, 23.7 % had favourable attitude while 19 % had unfavourable attitude towards AIS in the study area which would affect their participation in the scheme. This implied that fish farmers in the study area still need enlightenment on the benefit of participation in AIS.



Mean Score = 37.04
 Standard deviation = 27.5
 Source; Field survey, 2015

Figure 1: Histogram showing respondents by their level of attitude towards agricultural insurance scheme

Factors Affecting Attitude Toward Agricultural Insurance Scheme

Table 3 shows that of all the variables subjected to multiple regressions, only six were found to be significant predictors. The R value of 0.710 indicates that the selected variables had strong correlation on the level of fish farmers' attitude towards AIS; About 50% of the variation in the dependent variable was explained by the independent variable ($R^2=0.505$, $p \leq 0.05$).

Table 3: Relationship between the socio economic characteristics and the attitude of fish farmers to AIS

Model	B	B	T
Constant	22.927		1.221
Awareness	1.880	0.461	7.472**
Age of respondent	1.073	0.040	0.672
Years of awareness	8.397	0.121	2.061**
Number of fish ponds	10.014	0.091	1.846
Number of years spent in school	-0.543	-0.013	-0.242
Number of sources of information	-0.587	-0.059	-1.108
Number of association belonged to	1.764	0.077	1.470
Frequency of travel	0.035	0.003	0.059
Number of sources of capital	-0.573	-0.224	-4.088**
Number of fish types reared	4.698	0.113	1.921
Income from fish farming	2.042	0.083	1.279
Income from other farming activities	4.416	0.030	0.589
Income from other occupation	-8.965	-0.159	-2.735**
Years in fish farming	-6.773	-0.241	-4.153**
Farm size	1.904	0.049	0.912
Amount paid per annum on farm rent	33.700	0.131	2.704**
Household size	4.679	0.082	1.390
Number of contact with extension agent	0.063	0.012	0.234

**P≤0.05.

Source; Field survey, 2015

Number of sources of capital (b=-0.224), income from other occupation (b= -0.159), and years in fish farming (b=-0.241), were significant (≤0.05) and negatively contributed to fish farmers' attitude towards AIS. Numbers of years of awareness (b=0.121), awareness of AIS (b= 0.461) and payment of farm rent annually (b= -0.251) was significant were significant (≤0.05) and positively contributed to the level of fish farmers' attitude towards AIS. These six variables are crucial in explaining fish farmers' attitude towards agricultural insurance scheme (AIS). This implies that anytime level of fish farmers' attitude towards AIS would want to be determined, these six variables should be carefully considered. Considering the magnitude of regression for each of the significant variable, a relationship is thus formed from the equation $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e_0$
 $Y = 1.221 + 0.461(7.472) + 0.121(2.061) - 0.224(-4.088) - 0.159(-2.735) - 0.241(-4.153) + 0.131(2.704)$

Conclusion and Recommendations

Fish farmers in Ondo State had neutral attitude to agricultural insurance scheme. The respondents should be empowered to increase their scale of fish production as this

might change their attitude to the scheme. NAIC should readily indemnify an insured farmer whenever there is disaster.

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