



# Risk Management in Agricultural Business: Insurance as a Viable Option in Nigeria

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

Agriculture contributes to the economy, provides employment, export revenue earnings and poverty eradication. Although huge capital investment is usually involved, however, a crisis in the sector is capable of crippling the nation.

Agriculture depends heavily on nature and because of the unpredictability of nature, a lot of natural disasters capable of taking investors out of the business are associated with farming.

Agricultural risks are usually multi-perils, and characterized by high severity and frequency.

The need to identify, analyze and consider economic and effective control of the risks can not be overemphasized. Hence, different control measures such as avoidance of risk, loss reduction, loss prevention, retention and risk transfer options were discussed in the paper.

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Insurance, a risk management strategy that involves the transfer of the associated uncertainties of an event or activity to a professional risk carrier was identified as a viable option that could effectively mitigate the inherent natural disasters threatening national food security. Stakeholders, especially extension personnel and those saddled with the operation of the Agricultural Insurance Scheme are admonished to create awareness and educate agro-prenuers on the scheme.

*Keywords: Insurance; agricultural risk; retention; risk transfer; insurance policy.*

## 1. INTRODUCTION

Agriculture has always been a vital component of the Nigerian economy based on its contribution to the Gross Domestic Product (GDP), employment and foreign exchange earnings.

According to Mahmood Abubakar [1], the agricultural sector contributed 23 percent to the Nation's Gross Domestic Product (GDP) in the first half of 2022 to top the chart of seven other sectors identified to have contributed to Nigeria's economy during the period.

Nigeria's diverse vegetation from the tropical rain forest in the coastal states to the Guinea and Sudan savannah in the middle belt areas, sahel savannah in the far North and the semi-temperate vegetation on the plateau makes possible the cultivation of a variety of food crops, tree crops and cash crops. The biodiversity of Nigeria's climate is able to support the production of a variety of livestock, fishery and forestry in the country [2].

According to Abolade [3], farm holdings in Nigeria fall under three broad categories, small scale with 0.1 to 5.99 hectares, medium scale with 6 to 9.99 hectares, and large scale with upward of 10 hectares.

According to a survey conducted in 1992, 82 million hectares or 90.01 %of Nigeria's 91 million hectares total land area were found cultivable in a survey, only 42% or 38 million hectares were under cultivation .This is mostly by traditional subsistence, smallholder farmers most of whom depend largely on rainfed agriculture for their farming operation [4].

Despite the enormous potential of agricultural growth in the country, the sector is confronted with myriads of risks that are natural as agriculture depends on natural resources such as water, soil, wind and biodiversity to meet the needs of man [5].

Agricultural risks are usually devastating and salvages may not be realizable, hence the need to tackle it headlong and put in place effective risk mitigation and management practices that will enable agropreneurs to continue the business [6].

Many new entrants and even the practicing agro-business entrepreneur have not been successful and are expeditiously thrown out of business by unforeseen happenings and situations especially as related to weather; these are an integral part of risks in agricultural business which must be well managed and understood.

The aim of this paper is to draw attention to agricultural business as a risk-prone venture, identify different types of risk that may be encountered in agriculture, espouse various control measures, explain the concept of insurance as regards Nigeria Agricultural Insurance Scheme, do a synopsis of Agricultural Insurance Policies in Nigeria and highlight benefits to farmers.

The discussion in this paper provides answers to the following questions:

- a. Why agriculture is tagged a high risk venture?
- b. What are the possible ways of controlling risk in agriculture?
- c. What are the available types of agricultural insurance policies in Nigeria?
- d. What are the accruable benefits of agricultural insurance to Nigerian farmers?

## 2. AGRICULTURAL AS A RISK-PRONE ENTERPRISE

Agriculture is considered a highly risky venture, and this has discouraged a lot of potential investors in Agriculture over the years, it is also responsible for the unwillingness of conventional insurance companies to carry Agricultural risks.

Some of the characteristics of Agriculture that make it risk-prone includes:

- a. Dependence heavily on nature, and because of the unpredictability of nature, a lot of natural disasters are associated with farming. These are called 'acts of God' such as drought, fire, flooding, pest and disease outbreaks, etc.
- b. Huge capital outlays are usually involved. Agriculture is capital intensive, a crisis is capable of crippling the enterprise.
- c. Agricultural Risks are usually multi-perils; drought, fire, pests, diseases, flooding, if one does not happen the other may happen.
- d. High severity and high frequency of loss situations. Risks are assessed in terms of their severity and frequency. In conventional insurance, the usual pattern is to have a high frequency of low severity incidents or a low frequency of high severity incidents.
- e. The pattern in Agriculture is more of high frequency and high severity [7].

### **3. INSURANCE AS A RISK MANAGEMENT STRATEGY**

Risk is defined as the uncertainty of loss i.e. the possibility of a bad event occurring.

Every human activity is confronted with one or more risk situations.

According to Adeyefa [7], risk management is the identification, evaluation and economic control of those risks which threaten the assets or earning capabilities of an organization, once risks have been identified and analyzed, one must consider how they can be economically and effectively controlled.

According to Olagunju [8], traditionally, risks could be controlled in the following ways:

- A. Avoidance of the risk
- B. Loss Reduction
- C. Loss Prevention
- D. Risk Transfer (Insurance)
- E. Retention

Avoidance of risk and loss prevention could further be categorized as physical control of risk

while risk transfer (insurance) and retention are referred to as financial control of risk. In the context of agricultural risks, avoidance of risks is not possible, because if farmers refuse to invest in agriculture, then no food will be produced, survival may not be possible and the nation is doomed.

The Loss reduction and prevention strategies are quite possible in agriculture, but there are situations that are always beyond the farmers' control. Retention of the risks is not a wise economic decision as it is only ideal for risks of low frequency and low severity, a class into which agriculture does not belong.

Therefore, the most practically feasible option for effective control of agricultural risk, for stabilization of income, continued profitability and growth is by the risk transfer mechanism of Insurance.

Insurance is therefore a risk-management strategy that involves the transfer of the associated uncertainties of an event or activity to professional risk carriers (insurance companies) for a fee (Premium).

### **4. THE NIGERIAN AGRICULTURAL INSURANCE SCHEME (NAIS)**

The NAIS was set up by the Federal Government of Nigeria in 1987 to offer protection to the Nigerian farmers from the effects of natural disasters and thereby address the threat to national food security.

The main objectives of the scheme include:

1. Promote agricultural production since it would enhance greater confidence in adopting new and improved farming practices and in making greater investments in the agricultural sector of the Nigerian economy and thereby increasing the total agricultural production;
2. Provide financial support to farmers in the event of losses arising from natural disasters, by paying them indemnity sufficient to keep them in business;
3. Enable lending institutions to lend more to farmers and agriculture in general.
4. Minimize or eliminate the need for emergency assistance provided by the government during periods of agricultural disasters.

## 5. TYPES OF AGRICULTURAL INSURANCE POLICIES UNDER THE NAIS SCHEME

- a. Arable crop insurance policy
- b. Livestock insurance policy (cattle, sheep, goat, pig, rabbit, grass cutter)
- c. Poultry insurance policy
- d. Bee-keeping insurance policy (Apiary)
- e. Fishery insurance policy
- f. Plantation fire insurance policy (Oil-palm, cocoa, sugar cane).

## 6. SCOPE, DURATION OF COVER AND POLICY EXCLUSIONS

The scope of cover for livestock is death and injury to the insured animals due to accidents, diseases and collapse of a fish pond. The insured perils for crops include fire, drought, pests and diseases outbreak, flooding, windstorm etc.

For crops, cover is from germination to physiological maturity hence for maize it is three months, for cassava is one year, for rice four months, etcetera.

For livestock, it depends on the lifespan of the animal up to a maximum of one year.

For fishery, cover is from fingerlings to 6 months for grow-out fishery while brood stocks can be covered for one year.

Exclusions are permanent features of all insurance policies, the purpose is to control the quality of risks and make the policyholder to continue to have an interest in the subject matter of insurance.

Agricultural Insurance policies therefore, do not cover the following:

1. Malicious or willful injury or neglect, unskillful treatments.
2. Theft, mysterious disappearance, shortages including the infidelity of the insured or employee or either.
3. Diseases that are controllable by vaccination and / or medication, unless such animals have been properly vaccinated and medicated at all times and all other necessary preventive measures taken against such diseases continuously.
4. Government slaughter order or slaughter from any other public authority.
5. Earthquake, war and allied risks.
6. Nuclear energy of any kind.

The loss assessment shall be done on the basis of the cost of production at the time of loss in proportion to the insured sum [8].

## 7. BENEFITS OF INSURANCE TO NIGERIAN FARMERS

- a. Extension/farm advisory services: The Nigerian Agricultural Insurance Corporation proffers technical advisory services to farmers during pre-insurance inspections and regular monitoring of the insured farms. The farmer will have the opportunity of obtaining first-hand information on the latest farming technologies and the status of the agricultural industry in the country at all times.
- b. Payment of Compensation: The insured farmer will be compensated in the event of losses in his farm, due to insured perils. The financial compensation will enable the affected farmer to go back into production and thereby stabilizes his income.
- c. Peace of Mind: The insured farmers will be free from worry and anxiety that may occur from unpredictable losses in their farms, unlike their other colleagues who do not take cover for their farms.
- d. The insurance cover provides financial security for the insured farmers to maximum of one year.
- e. Enhance the confidence of the farmers: The insured farmer will have confidence to adopt new technology and management methods against the background of insurance protection for his stock.
- f. More investible fund for production: The insured farmer will have no need to set aside fund to meet unforeseeable losses to his farm, and the fund could be freed and channeled into a more rewarding and productive sector of agriculture.
- g. Collateral Security: The farm insurance could serve as a collateral security for loans to be accessed from banks and other financial institutions. The banks and other financial institutions would be encouraged to increase credit flow to agriculture [5].

## 8. CONCLUSION

Agricultural business is bedeviled with a lot of risks which are mainly weather induced and thereby widening the scope of losses as disaster does not discriminate. This discussion has established the importance of the need by agropreneurs to understand the concept of

insurance as related to agricultural business. From this discussion, it is obvious that an agricultural insurance strategy is a viable option to manage risks associated with agriculture and can also bring about sustainable agriculture in Nigeria. It is the option that can retain farmers back in business when unexpected happens on the farms.

It is therefore, necessary for agricultural stakeholders particularly extension personnel and all those saddle with the implementation of the scheme to consciously create awareness enlighten, and educate agropreneurs on the laudable scheme.

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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