CHAPTER 11
Agricultural Insurance

OBJECTIVES

At the end of the chapter, students should be able to:
â—† define agricultural insurance.
â—† state the importance of agricultural insurance.
â—† list and explain agricultural insurance products.
â—† mention and discuss product application in agriculturalinsurance.
â—† explain agricultural reinsurance.
â—† state the roles of public sector in agricultural insurance.

11.1 Introduction

Agricultural production faces a lot of risks of different kinds and nature. However, the most often encountered are those associated with production and marketing. The risks affect the farmers as well as all those involved in the agricultural business value chain. Therefore, risks in the agricultural enterprise must be minimized or containedeffectively. Risk management with regard to agriculturalinsurance has not received the required attention in Nigeria – neither by the government nor by the farmers. Yet, as a necessity, effective risk managementis a step towards national food security and the farmerâ€™s fi nancial independence. Agriculturalinsurance is an effective way of providing security against unexpected events such ascrop failure or disasters.

11.2 Meaning of Agricultural Insurance

Agricultural insurance is the equitable transfer of the risk of failure or loss in agricultural production from the farmer to another body for a premium or guaranteed sum in order to prevent a greater loss.

Agricultural risk management involves a combination of technical and fi nancial tools. Risks may be transferred to a third party through an insurance contract to take care of the fi nancial effects of these risks by creating a contingency reserve. Agricultural insurance covers all aspects of production and is
not limited to crops alone but to other sectors as well such as livestock, forestry, aquaculture, greenhouses and blood stock. Liability is a broad concept that covers the legal claims against the insured agricultural material, or enterprises. Most often, the farmerâ€™s insurance policy will normally include liability coverage which protects the farmer in case someone (a third party) is affected in anywayby the activities on the farm or those arisingfrom the use of the farm produce or products.

11.3 Importance of Agricultural Insurance

1. It helps to protect the farmerâ€™s business against hazards and uncertainties.
2. It helps to enhance adequate foodsecurity in the country. Once there is adequate insurance most farmers will produce despite the uncertainties in agricultural production.
3. It helps to remove the diffi culties faced by agricultural value chain in achieving adequate diversifi cation.
4. It helps to reduce the complexity of the biological and technical processes of production.
5. It aids the development of infrastructure to reduce or minimize the effects of the sources of agricultural risks.
6. It creates employment opportunities for people.
7. It provides adequate information on combating agricultural risk.

11.4 Types of Agricultural Insurance Products

The following are agricultural insurance products based on the method of determining how claims are calculated:

(a) Indemnity-based insurance products
(b) Damage-based insurance products
(c) Yield-based insurance products
(d) Revenue agricultural insurance products
(e) Index-based agricultural insurance products

1. Indemnity-based insurance products:
It is the payout on the actual loss at the insured unit level.
2. Damage-based insurance: This is a sum insured which the farmer pays at the inception of the contract on production cost or expected crop yield revenue. Deductibles and franchises are normally applied to reduce the incidence of false claims and to encourage improvement in risk management.
3. Yield-based insurance: The sum insured is defi ned in terms of the expected yield to the produce. It can be set at 50–70% of the expected yield.
4. Revenue agricultural insurance: This product protects the parties from the consequences of low yields, low prices or both. It provides significant benefi ts to producers that rely on short-term crop financing (soya bean and maize).
5. Index-based insurance: The payout is based on the value of an â€˜indexâ€™, not on loses measured in the fi eld. The indices are variables like rainfall and temperature.

11.5 Product Application in Agricultural Insurance

(a) Crop insurance
(b) Livestock insurance
(c) Aquaculture insurance
(d) Forestry insurance
(e) Green house insurance
(f) Bloodstock insurance

1. Crop insurance: This covers crops such as plantation crops and fruits – horticulture. The insurance claim is calculated by measuring the percentage of damage in the fi eld soon after the damage occurs.
2. Livestock insurance: Covers bulls, cows and heifers, swine, sheep and goat. It is calculated based on the mortality index and also cost on government to slaughter or to curtail outbreak of relevant diseases.
3. Aquaculture insurance: Takes care of breeding and raising of aquatic animals. The sum insured is defi ned to cover meteorological events, diseases, pollution, predator attacks, collision, oxygen, depletion, changes in pH and salinity, theft and escape include offshore.
4. Forestry insurance: Protects standing timber stocks against fi re, lightening explosion, wind storm, fl ood, volcanic eruption and aircraft impact. The sum insured is determined on tiered bases with young plantation valued at establishment costs, medium-aged plantation at lower of establishment cost and matured plantations at commercial value.
5. Greenhouse insurance: This type of production is capital intensive and relies heavily on the service ability of the infrastructure which the producer has put in place. Infrastructure is insured against damage from storm, water, fire, lightning, malicious acts and aircrafts impact. Coverage can be extended to machinery breakdown and electronic equipment. The sum is determined on either an agreed value or production cost basis. The rate varies from 0.3% to 0.7% of the total sum.
6. Bloodstock insurance: Provides coverage for valued animals such as horse. They are insured against mortality, disability, infertility, medical treatment and surgery. The insurance is determined by the prices that the animal has won or the present value of the future process that it potentially

will win. Bloodstock insurance normally insures theiranimals higher than the market value.

11.6 Agricultural Reinsurance

Reinsurance is a design whereby the governmentB and the private organisations partner in providing advisory services in:
(a) Risk assessment
(b) Risk modelling
(c) Pricing
(d) Risk structuring
(e) Operation manuals
(f) Risk rating
(g) Risk accumulation control software
(h) Awarding of insurance contact

Several forms of reinsurance cession are used by insurance industry to cede agricultural risks. Examples are:
(a) Quota share reinsurance cession
(b) Stop loss reinsurance protection
(c) Surplus share cession
(d) Catastrophic excess of loss protections

11.7 Roles of Public Sector in Agricultural Insurance

Government may adopt the following approaches to intervene in agricultural insurance markets through:
1. Premium subsidies to support crop and livestock insurance.
2. Investment in product research and development, training and information gathering for crop and livestock insurance.
3. Agricultural insurance legislation to support agricultural insurance and security for the farmers.
4. Public sector re-insurance on crop and livestock insurance.
5. Administration cost subsidies to encourage agricultural insurance scheme.
6. Partnership with the private sectors for a successful agricultural insurance market.

ACTIVITY
Visit an insurance company and observe all their activities. Write down your observations for class discussion.

SUMMARY

â—† Agricultural insurance is the equitable transfer of risk of loss from one entity to another in exchange for a premium.
â—† Importance of agricultural insurance include:
    â– Protection of farmerâ€™s business
    â– Enhancement of food security
    â– Overcome diffi culties faced by farmers to achieve adequate diversifi cation.
    â– Help to combat geographical complexity
    â– Combination of technical and fi nancial tools.
â—† Agricultural insurance products include:
    â– Indemnity-based product
    â– Damage-based product
    â– Yield-based product
    â– Revenue product
    â– Index-based product

â—† Product application in agricultural insurance includes:

- â– Crop insurance
- â– Livestock insurance
- â– Aquaculture insurance
- â– Forestry insurance

REVISION QUESTIONS

ESSAYS

1. (a) What is agricultural insurance?
(b) List four agricultural insurance products.
2. (a) Enumerate fi ve importance of agricultural insurance.
(b) Explain agricultural reinsurance.
3. State four roles of public sector in agricultural insurance.
4. List and explain four product applications in agricultural insurance.

OBJECTIVE QUESTIONS

1. Agricultural insurance covers the following except
(a) crop. (b) livestock. (c) mining. (d) forestry.
2. Agricultural insurance is
(a) the equitable transfer of a risk of loss from one entity to another.
(b) the act of managing agriculture.
(c) science of agricultural business.
(d) act of disassociation from risk.
3. Agricultural insurance products consist of
(a) damage-based products. (b) associate products.
(c) combating products. (d) demurrage-based products.
4. Forestry insurance involves
(a) taking care of forest trees. (b) insurance covering forestry.
(c) forestry management. (d) forestry establishment.
5. Bloodstock insurance applies to
(a) blood bank. (b) blood meal.
(c) prized animal. (d) blood transfusion.

Answers to Objective Questions

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1. c 2. a 3. a 4. b 5. c