

**CLIMATE CHANGE, FOOD SECURITY, NATIONAL SECURITY and ENVIRONMENTAL RESOURCES**

**GLOBAL ISSUES & LOCAL PERSPECTIVES**

Edited by

**Ahmed Makarfi**

**Ignatius Onimawo**

**Prince Mmom**

**Ani Nkang**

**Abdullahi Mustapha**

**Eteyen Nyong**

**Published By:**

**Society for Agriculture, Environmental Resources & Management (SAEREM)**

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

**Climate Change, Food Security, National Security and Environmental  
Resources (Global Issues & Local Perspectives)**

**First published 2024**

**SAEREM World**

**Nigeria**

**C 2023 Eteyen Nyong**

**Typeset in Times New Roman**

**All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or others means, now, known or hereafter invented including photocopying and recording or in any information storage or retrieved system, without permission in writing from the copyrights owners.**

**Climate Change, Food Security, National Security and Environmental  
Resources (Global Issues & Local Perspectives)**

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## **TABLE OF CONTENTS**

Preface

Editorial Note

Table of Contents

Acknowledgement

Dedication

## **Part one: CLIMATE CHANGE**

### **Chapter 1:**

**The Concept of Technical Efficiency and Effects Climate Change on Palm Oil Processing**

Eteyen Nyong

### **Chapter 2:**

**Environmental Resource Policy: Forestry and Climate Change Challenges.**

Bolaji, K.A , Kabir G.H and Arowolo O.V.

### **Chapter 3:**

**A Review of the Impact of Bush Burning on the Environment: Potential Effects on Soil Chemical Attributes**

Chiroma, A. M. and Alhassan, A. B.,<sup>1</sup>

### **Chapter 4**

# **Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)**

## **Effect of Climate Change on Income and Constraints of Periwinkle Harvesters in Nigeria**

Eteyen Nyong

### **Chapter 5:**

#### **The Nexus between Climate Change and Agricultural Production in Nigeria**

<sup>1</sup>Ettah, O. I., <sup>2</sup>Igiri, Juliana and <sup>3</sup>Ettah, Goddy I.

## **Part two: FOOD SECURITY**

### **CHAPTER 6**

#### **Trend of Climate Change Variables: Food Security and Perception on Arable Crop Farmers in South-South Nigeria.**

Eteyen Nyong

### **CHAPTER 7**

#### **Social Media Marketing Culture As an Innovation of Delivering Growth in Post-Covid-19 Era**

Sadiq Mohammed Sanusi<sup>1</sup> and Ahmad Muhammad Makarfi<sup>2</sup>

### **CHAPTER 8**

#### **Digital Agricultural Marketing as A New Age Technologies in Post- Covid-19 Era**

Sadiq Mohammed Sanusi<sup>1</sup> and Ahmad Muhammad Makarfi<sup>2</sup>

### **CHAPTER 9**

#### **Climate Change, Pollution and National Insecurity**

Ogbanje, Elaigwu Christopher & Umar, Haruna Suleiman  
SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5

**CHAPTER 10**

**Insecurity: Impacts on Agro-Allied Industries and Food Production**

Salami, Azeez Oyeniya

**CHAPTER 11**

**Evolution of Desert Encroachment Narratives and how it affects Desertification Policy Implementation in Nigeria**

Abdullahi Umar; Abdullahi Adamu; Kabiru Shehu; Ismail Alfa Adamu and Sadiq Abdullahi

**CHAPTER 12**

**Soil Conservation Management: Climate Change and Food Sufficiency**

Eze, Kingsley Chijioke<sup>\*</sup> Obasi, Nnenna Patrick and Inyang, Otoobong Anwanabasi.

**CHAPTER 13**

**A Review of the Impact of Bush Burning on the Environment: Potential Effects on Soil Physical Attributes**

Alhassan, A. B.,<sup>1\*</sup> and Chiroma, A. M.,<sup>1</sup>

**CHAPTER 14**

**Effect of Carbon Dioxide (Co<sub>2</sub>) Emission on Rice Production in Nigeria**

<sup>1</sup>Ibrahim Mohammed Kebiru, <sup>2</sup>Husseini Salihu, <sup>1</sup>Shaibu Ufedo Monday

**Chapter 15**

**Turkey Farming**

SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5

Balogun, B.I PhD

## **Part three: NATIONAL SECURITY**

### **Chapter 16**

#### **Anthropogenic Activities: Implications on the Population and Diversity of Fauna-Avifauna Species of old Oyo Forest**

Adedoyin, S.O., Omifolaji, J.K., Jatto, S.O.S., Oluwagbemi, T., and Sale, F.A.

### **Chapter 17**

#### **Conservation of Forest Resources in Nigeria: Case Study of Indigenous Forest Food Plants Species**

Okonkwo, H. O, Nsien, I. B., and Akomolede, L. A

### **Chapter 18**

#### **Duck Farming**

Balogun, B.I PhD

### **Chapter 19**

#### **Poaching and Trade in Wildlife Products: A Global Perspective**

Okonkwo, H. O, Nsien, I. B., and Akomolede, L. A.

### **Chapter 20**

#### **Peace Education and Critical Peace Education: Eradicating Violence and Promoting Peace in Nigerian Schools**

Abdulganiy Aremu SULYMAN and Duze Daniel ALI

#### **Chapter 21**

#### **Idealist Education and PEANism as Panaceas for Security Challenges in Nigeria**

SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5

## **Part four: ENVIRONMENTAL RESOURCES**

### **Chapter 22**

#### **Soil Conservation Management: Climate Change and Food Sufficiency**

Lukuman Lekan, ADELAKUN

### **Chapter 23**

#### **Environmental Conservation: Food Production, Resource Management, Food Security, and Sustainability**

Adeyemi Patrick OYEKAN

### **Chapter 24**

#### **Analysis of Green Leafy Vegetable Profitability and Risk Management among Women Marketers in Ekiti State, Nigeria**

Ajibade, Y.E.\*<sup>1</sup>, Folayan, J.A.<sup>2</sup>, Akinyemi, M.<sup>3</sup>, Ayeni, M.D.<sup>4</sup>, Musa, V.H.<sup>5</sup>, and Oni, S.O.<sup>6</sup>.

### **Chapter 25**

#### **Environmental Communication: The Media and Climate Change Issues**

Triumph-Aruchi Eteyen Nyong

### **Chapter 26**

#### **Ecotoxicology and Micro Bioindicators Assessment of Environmental Pollution**

SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5

# Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

Mansur Abdul Mohammed

## Chapter 27

### **Climate Change Impacts on Water Resources in Nigeria**

Muhammad Muhammad Makki, and Umar Faruk Lawan

## Chapter 28

### **Pigeon Farming**

Balogun, B.I PhD

## Chapter 29

### **Environmental Resources Policy: Water Management, Pollution, Floods, and Climate Challenges in Forestry**

\*Timothy Adewole ADEDIGBA. and Lukuman Lekan, ADELAKUN

## Chapter 30

### **Agricultural Marketing**

Ajie, E. N.



## **Preface**

This book adopts an exegetical approach as well as a pedagogic model, making it attractive agriculture and environmental economics teachers, professional practitioners and scholars. It eschews pedantry and lays bare the issues in such clarity that conduces to learning. The book elaborates on contemporaneous climate change, food security, national security and environmental resources issues of global significance and at the same time, is mindful of local or national perspectives making it appealing both to international and national interests. The book explores the ways in which climate change, food security, national security and environmental resources issues are and should be presented to increase the public's stock of knowledge, increase awareness about burning issues and empower the scholars and public to engage in the participatory dialogue climate change, food security, national security and environmental resources necessary in policy making process that will stimulate increase in food production and environmental sustainability.

*Climate Change, Food Security, National Security and Environmental resources: Global issues and Local Perspectives* is organized in four parts. Part One deals with Climate Change with Six Chapters, Part Two is concerned with Food Security with Nine chapters, Part Three deals with National Security with Five Chapters, while Part Four pertains Environmental Resources, has Five Chapters.

**Ahmed Makarfi / Eteyen Nyong**

**April 2024**

**Chapter 30**

**Agricultural Marketing**

**Ajie, E. N.**

Department of Agricultural Economics and Extension

Ignatius Ajuru University of Education, Port Harcourt, Rivers State, Nigeria.

**Unit 1: Introduction**

**Unit 2: Types of Agricultural marketing**

**Unit 3: Challenges in Agricultural Marketing**

**Unit 4: Suggestions to Improve Agricultural Marketing**

**Unit 5: Future Direction for Agricultural Markets**

**Unit 6**

**Unit 6: Other Emerging Trends**

**Unit 1: Introduction**

Agricultural marketing plays a pivotal role in connecting farmers to consumers and facilitating the flow of agricultural products from the farm gate to the consumers. This chapter provides an overview of agricultural marketing concepts, importance of agricultural marketing, types of agricultural markets, the agricultural marketing channels, agricultural marketing functions, challenges in agricultural marketing and strategies for effective agricultural marketing. The chapter also highlights agricultural marketing channels, agricultural marketing functions and challenges in agricultural marketing. Finally, it explores the strategies for effective agricultural marketing including building relations with buyers and suppliers.

**Definition of Agricultural Marketing and Market Overview.**

Marketing is an essential part of the production process, which encompasses all business services (transportation, grading and standardization, processing, packaging, financing, risk bearing) that occur from the initial point of

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

production (farm or farm gate) to the ultimate or final consumers. Marketing is essentially a commercial activity and consists of all aids to commerce as listed above.

A market on the other hand, is an arrangement to facilitate exchange of goods and services. It is also generally known as an institution, area, setting, means or mechanism, through which the intentions of actual and potential buyers or consumers and sellers or producers of the produce, services, inputs or resources for exchange to be effected are made possible. It is note worthy that any mechanism or means that connects the buyers with the sellers of products or services is known as a market. For example, negotiations can be made through email, whatsapp, video meetings (zoom, google meet), letter, telephone etc.

### Definition of agricultural markets:

- i) **As a place:** E.g Fresh fish market.
- ii) **Season:** E.g December market, rainy season market, dry season market.
- iii) **Product:** E.g Maize market, rice market, fruit market, vegetable market.
- iv) **Institution :** E.g Organizations or associations for transfer of title of goods and services.

### Importance of Agricultural Marketing

Marketing is important for the following reasons.

1. Enables the marketer to know the tastes and preferences of the customers.
2. Fulfilling the needs of the buyers by giving them what they want.
3. Through innovations in marketing, buyers have superior goods at affordable prices.
4. Buyers are able to get international brands of goods at their doorsteps due to latest developments in marketing.
5. Buyers now have many alternatives, unlike before due to the growth of marketing.
6. It has updated technology in tune with the needs of consumers.
7. Helps the marketer in selection with the right promotional tools.
8. Guides the producers in the selection of appropriate distribution channels for the products.
9. Provides employment opportunities for many. Examples are brokers, commission agents, truck operators, wholesalers, retailers etc. who are engaged in the field of marketing.
10. Goods which were once considered “a beyond the reach of the common man” are now common household items.
11. Promotes the expansion of agro-based companies while also stimulating the economy’s general development.

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

12. Through price signals, it enables farmers to plan production in accordance with the needs of the economy.
13. Adoption and spread of new technology.
14. Addition to national income.
15. Creation of utility and satisfying it.

### Marketing Utility

Recall that marketing is gainfully satisfying other people's needs and needs satisfaction can be viewed as utility consumers enjoy. Utility thus, refers to the value of marketing which customers derive from goods and services. The five types of utility are mainly.

- **Form Utility:** which is changing the form of the raw products to other forms, for example, palm fruits to edible cooking oil, cassava tubers to garri or cassava flour.
- **Time Utility:** created or achieved through storage.
- **Place Utility:** is created or achieved through transportation of various food products from the farms or farm gate to the markets.
- **Possession Utility:** is created by exchange of ownership of that product.
- **Information Utility:** is done through informing the buyers that the products exist, how to use it, the price and other related information of the available products.

### Characteristics of Marketing of Agricultural Produce and Products

Agricultural products are characterized by:

- ❖ Perishability of the products
- ❖ Seasonality of production
- ❖ Bulkiness of products
- ❖ Variation in quality of products
- ❖ Irregular supply of agricultural products
- ❖ Small size and scattered holdings
- ❖ Processing needs of the produce
- ❖ Time lag of agricultural products
- ❖ Produce are subject to the law of diminishing returns.

### Unit 2

# Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

## Types of Agricultural Marketing

These are agricultural marketing methods that can help farmers, producers and marketers to effectively promote and sell their products, thereby increasing their income and competitiveness in the market (or increasing their market shares). They include:

- a. Direct Marketing
- b. Indirect Marketing
- c. Wholesale Marketing
- d. Retail Marketing
- e. Cooperative Marketing
- f. Contract Marketing
- g. Digital Marketing
- h. Organic Marketing
- i. Specialty Marketing
- j. Export Marketing
- k. Value Chain Marketing Services

### a) Direct Marketing

Direct Agricultural Marketing has to do with the process of selling agricultural products directly to consumers. It has the salutary benefit of eliminating intermediaries such as wholesalers, retailers and processors, thereby allowing farmers to retain a larger share of their profit margin, build direct relationship with their customers, improve price transparency and increase control over supply chain.

### Direct Marketing Options/ Channels

#### ❖ Farm Gate and Farmers' Markets

These are physical markets where farmers sell their products directly to their customers.

#### ❖ Community Supported Agriculture (CSA) Programmes

Here consumers purchase shares in a farm's production and receive regular deliveries of fresh produce.

#### ❖ Farm Stand

These are on-farm retail outlets where farmers sell their products directly to consumers.

#### ❖ Online Platforms.

These are digital market places, social media and e-commerce websites that connect farmers directly with consumers.

#### ❖ Roadside Stands

These are temporary or seasonal retail outlets where farmers sell their products directly to consumers.

#### ❖ U-pick Operations

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

Under the U-pick or pick-your-own operations, customers come to the farm to do the harvesting by themselves and thereafter transport it home.

### Less common options include:

- **Web and mail-order sales**

This is a valuable means through which some producers use the web to take orders and payments. After the placement of orders and payments, a designated point of delivery is arranged. Others also do both the order and payment transactions online after which the product is delivered to the customer's home.

- **Agritourism**

These are tourism initiatives that can facilitate the organization of tourist events. In addition to purchasing local foods, families frequently anticipate entertainment and education. Corn mazes, hydrides, festivals, petting farms, and musical events are among the several intriguing activities that may enhance the enjoyment of a farm trip. Agritourism activities are compelling and engaging, attracting clients from a broad region.

- **Retailers, restaurants and other establishments**

Direct sales to establishments like grocery shops, restaurants, hotels, and schools require the same level of care as sales to consumers, but they also provide opportunities for savings and repeat business.

### Generally, it should be noted that:

- i. Successful farm-direct marketing necessitates a synthesis of technical, business, and interpersonal abilities, which will differ based on the kind of crops cultivated, the quantity of produce available for direct sale, and the selected marketing channels.
- ii. It is prudent to choose the marketing option(s) that align with the individual's capabilities and willingness in relation to client demands.
- iii. The direct marketer is accountable for merchandising, display, quality control, price, packaging, and other marketing facets.
- iv. The direct marketing enterprise should enhance your total agricultural operation regarding the utilization of land, labour, money, and time management.
- v. Understanding the financial prerequisites. This will fluctuate based on the direct marketing strategy you want to employ and the scale of the business.
- vi. The direct marketing strategy must be formulated to enhance the farm's production capabilities.
- vii. It is essential to ascertain sufficient client interest in the product or product combination you want to offer.
- viii. Each marketing alternative entails distinct prices, time requirements, packaging, gasoline, supplies, and market fees or charges that must be comprehensively assessed prior to selecting the optimal marketing strategy.

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

### b) **Indirect Marketing**

The indirect marketing option involves the process of selling agricultural products to some intermediaries such as wholesalers, retailers, processors, exporters, etc.

Here, farmers focus primarily on production, leaving marketing and distribution activities to intermediaries

Intermediaries in indirect agricultural marketing include wholesalers, retailers, processors, exporters and commission agents.

### **Channels for Indirect Agricultural Marketing**

These include traditional wholesale markets, terminal markets, electronic trading platforms and brokerage firms. The advantages of indirect agricultural marketing includes: increased market reach, specialization, economies of scale and risk management, while loss of control, reduced profit margins quality control issues and dependence on intermediaries are some of the disadvantages of indirect marketing.

### c) **Wholesale Marketing**

Wholesaling activities or marketing encompass any actions undertaken by enterprises primarily involved in wholesaling. Wholesalers primarily get goods from manufacturers and predominantly distribute them to retailers, industrial consumers, other wholesalers, and occasionally sell straight to end consumers.

### **Classification Of Wholesalers According to Functions**

Here, the two broad types are: full-function and limited function wholesalers

#### **Full-function wholesalers:**

- i. These wholesalers provide credit to retailers for purchases.
- ii. Provide the retailers with market information
- iii. Make fast delivery of orders to retailers
- iv. Help both the producers and retailers transport products
- v. Make contact with suppliers and retailers
- vi. Communicate information about producer's merchandise offering to retailers
- vii. Determine the needs of the retailers through casual or informal research to enable them pass information about consumer needs to the producers.
- viii. Can fund the production by giving loans or cash advances

Full-service or full-function wholesalers are further classified on the basis of the range of products offered as single-line wholesalers, specialty wholesalers and general merchandise wholesalers.

**SAREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

The single-line wholesalers are full-service merchant wholesalers who carry a wide assortment of goods within a single product line or merchandise category. The specialty wholesalers on the other hand handle a very narrow range of products within a given product line, while the general merchandise wholesalers carry out a wide assortment of goods in several unrelated merchandise line. He can handle cassava, poultry enterprise, grocery, appliances, furniture etc.

### **Limited function wholesalers:**

The limited function wholesalers as the name suggests, perform only some of the full range of functions performed by the wholesalers. They include the cash-and-carry wholesalers who require their customers to call at their business premises to obtain the merchandise for which they must pay cash at the time of purchase; drop-shippers or desk jobbers who eliminate the storage function in order to reduce cost and improve profits; truck or wagon jobbers who sell for cash, carry limited stock and deal in only nationally advertised and fast-moving perishable merchandize, usually food products including fruits and vegetables, rack jobbers or merchandizers who assist retailers in displaying and shelving their wares, mail order wholesalers who sell merchandise by mail. Essentially for this reason, he publishes catalogues as a basis for obtaining orders from customers.

### **d) Retail Marketing**

Retail Agricultural Marketing has to do with the process of selling agricultural products directly to the ultimate consumers through supermarkets, local markets, grocery stores, farms or farm gates.

### **Examples of retail agricultural marketing types are:**

Supermarkets and grocery stores that sell a wide range of agricultural products; farm markets which are specialized retail outlets that sell fresh produce and other agricultural products; roadside stands which are temporal or seasonal retail outlets; farmers markets which are physical markets where farmers sell their produce; Online retail platforms which are digital platforms that connects farmers with consumers and facilitate online sales; consumer co-operative stores which are economic associations of consumers for the purpose of purchasing goods from producers or wholesalers so as to retail them to members of the co-operatives who by definition are final consumers.

Consumer co-operative stores can also sell to non-members; house-to-house retailing or door-to-door retailing which has to do with peddling and hawking. This is a form of zero store retailing because sales are not made out of a store but possibly at the house or premises, office or business points of the buyer, kiosks which are located at strategic points in residential, commercial and industrial areas of major towns and cities. Aside agricultural products, they sell soft drinks, batteries, stationeries, matches, detergents, confectionaries, etc. also included here are scrambled merchandisers who are retailers that carry out any product lines that they feel they can sell profitably, put succinctly, this has to do with mixing of unrelated products, for example, supermarkets and departmental stores sell unrelated



## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

products like drugs, clothes, toys, food items, insurance, auto repairs. Also, drug stores sell stationeries, furniture, ice cream etc.

### e) Cooperative Marketing

Cooperative marketing groups are associations or groups of producers formed mainly for the collective marketing of their produce and for securing inputs for their members, the advantages that result from large-scale business which an individual cultivator cannot secure due to his small marketable surplus. Put more appropriately, cooperative marketing societies are established essentially for collectively marketing the products of the members. The primary goal of agricultural marketing cooperatives is to improve the market position and negotiating power of their members, resulting in the enhancement of their economic well-being.

The concept of commercialization is emphasized and they somehow resemble private business organizations in the method of their operations. However, they differ from the capitalistic system majorly in their motives and organizations.

#### Functions of cooperative marketing societies:

- They promote their members' products at equitable rates.
- They protect their members from exorbitant marketing expenses and unethical methods.
- They provide credit facilities to their members.
- They facilitate the communal storage of members' items.
- They offer grading services and market knowledge that would facilitate obtaining favorable prices for their items.
- They implement a pooling structure to enhance negotiating power compared to individual members with comparatively lesser quantities of output.
- They facilitate the export of their members' products to enhance returns.
- They coordinate the collective transportation of their members' produce from the hamlet to the market, thereby decreasing transportation costs.
- They coordinate the provision of necessary inputs for farmers, such as enhanced seed varieties, fertilizers, insecticides, and pesticides.
- Members can engage in social networking and social activities as co-operators.

#### The reasons for the seemingly slow growth of co-operative marketing organizations include:

- i. Marketing societies are typically situated in large markets or cities where efficient and economical transportation options for transporting produce from villages to the societies are lacking.

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

- ii. Most farmers are in debt to local traders and sign into advance arrangements with them for the selling of their products.
- iii. The majority of farmers urgently want cash at post-harvest to fulfil personal obligations, prompting them to sell their produce to local dealers.
- iv. Members exhibit a deficiency in loyalty towards co-operative marketing organizations due to a lack of cooperative sentiment and inadequate education.
- v. Rivalries among farmer members lead to hesitation and impede the society's success.
- vi. Some members lack faith in cooperative organizations due to the prevalent financial losses experienced by most cooperative societies.
- vii. Certain managers of cooperative societies fail to provide business counsel to members.
- viii. Many societies lack the financial resources to satisfy the credit requirements of farmers, particularly in relation to the collateralization of items offered for sale.
- ix. Storage facilities are very insufficient, leading to the disposal of produce upon arrival, which therefore results in diminished product pricing.
- x. Over exploitation of middle men can weaken the cooperative structure, making it difficult for farmers to work together.

**Benefits of Agricultural cooperative marketing includes:** improved market access, increased bargaining power, reduced transaction cost, enhanced product quality and improved income. **However**, there are some challenges which include financial constraints, competitions and regulatory framework among others.

### f) **Contract Marketing**

Agricultural Marketing Contract consists of a written agreement between a farmer or producer and a buyer. It can be between individual farmers or cooperative farmers and a merchant or a company. A unique condition for contract farming is that critical inputs are provided by the parties, for instance farmers may provide their lands and labour while other party provide funds and or other inputs. The written agreement outlines the terms and conditions of the sale of the agricultural product.

**Key elements of the marketing contract include:** identifying parties involved (farmer or producer and the buyer); description of the agricultural product being sold including the type, quality and quantity; specification of the price of the product as well as the payment terms, in addition to the method of payment, payment schedule and interest rates if any; delivery terms including date, time, place as well as transportation and storage tasks; quality standards that the product must meet in addition to grades, standards or certifications; liabilities or warranties associated with the product in addition to guarantees of quality or performance; process for dispute resolution in addition to mediation, arbitration or litigation; outline the conditions under which the contract can be terminated, in addition to notice periods and applicable penalties if any; governing laws. Finally, signing of the contract by both parties including the farmer or producer and the buyer.

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

Forward contract, futures contract, option contract, production contract and marketing contract are types of agricultural marketing contracts.

### g) **Digital Marketing**

Digital Marketing, as the name suggests is the use of digital technology mainly on the internet to promote or market products, brands or services. Phones, display advertising, search engines, social media platforms, emails and websites. Digital marketing can be used to promote various agricultural products, services and businesses for wider outreach. The use of artificial intelligence in data mining and targeting can improve effectiveness of digital marketing

**Types of digital marketing include:** Search engine optimization and pay-per-click advertising, which involves the creation and dissemination of online advertisements that incur a charge for each user click. Social media marketing is the promotion of products or services on platforms such as Facebook, X (formerly Twitter), and Instagram. Email marketing involves dispatching targeted and individualized communications to consumers or prospective customers via email. material marketing is the process of developing and disseminating valuable and pertinent material designed to attract and maintain a certain audience. Influencer marketing seeks to collaborate with individuals of influence who own substantial followings to promote businesses or services. Affiliate marketing is the practice of collaborating with affiliates who endorse items or services in return for a commission.

**Benefits of digital marketing are:** increased reach, improved brand awareness, cost-effective, measurable results and targeted advertising.

Some risk of digital marketing: internet fraudsters, poor internet connectivity, poor electrical power supply

### h) **Organic Marketing**

Organic marketing is a "natural" method of drawing people to products and services gradually, as opposed to "artificial" or sponsored marketing. It can be linked to goodwill which is the likelihood that old customers will resort to where they do business.

Organic marketing encompasses strategies that do not entail direct financial investment in ads. A company achieves organic reach when customers become aware of its existence through unpaid online distribution. In contrast to paid marketing, organic marketing approaches cultivate and enhance consumer connections through encounters. Organic marketing refers to the promotion of products, services, or brands without the expenditure on ads. Businesses prioritize the creation of high-quality content, the cultivation of client connections, and the utilization of social media platforms to enhance brand exposure and boost website traffic.

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

**Characteristics of organic marketing are mainly:** non-paid advertisements, high quality and valuable content-driven, customer-centric /focused and a long-term strategy that needs patience, persistence with continuous effort.

To ensure an organically strong business growth, there is need to: develop a strong online presence, produce high-quality relevant content, leverage search engine optimization, build and engage with your email list, utilize social media marketing, focus on customer referrals and word-of-mouth, partner with other businesses and influencers, optimize your website for conversions of visitors to customers, use data and analytics to inform your decision, and continuously improve and adapt.

Organic marketing is beneficial in the areas of being cost-effective, increased credibility, improve brand awareness, drive targeted traffic to websites and can produce long-term results, long after the initial effort has been made. However, it is not free from challenges which include: being time-consuming, highly competitive, constant algorithm changes and challenges in measuring successes in this type of marketing and difficulty in creating high-quality, engaging, and relevant content consistently.

### i) **Agricultural Specialty Marketing**

This refers to the promotion and sale of specialized agricultural products. Examples are organic products, artisanal cheeses, heirloom varieties, local food marketing and others.

This unique marketing is mainly characterized by: niche market focus on health-conscious consumers, foodies, and environmentally aware buyers; emphasizes on product uniqueness; premium pricing; and targeted marketing channels.

**Benefits include:** increased revenue, differentiation, targeted marketing in addition to preservation of traditional practices while the challenges are competition, regulatory compliance, targeted marketing and distribution channels, which more often than not are costly and time-consuming to establish. The producers may also encounter the challenges of scaling their production to meet demand, while at the same time, grappling with the maintenance of the unique characteristics and quality of their special products.

### j) **Export Agricultural Marketing**

This has to do with the promotion and sales of agricultural products to international or foreign markets. Before embarking on this, understanding the needs and preferences of the foreign buyers, complying with international regulations and standards and developing effective marketing strategies are to be properly attended to. It is necessary to note major aspects of the export agricultural marketing, some of which are: market research, product adaptation, packaging and labeling and ensuring that they comply with international regulations and are appealing to the buyers, logistics and transportation and ensuring compliance with international regulations.

**SAREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

**Branding and Positioning:** Digital marketing, trade shows and exhibitions, partnerships and collaborations and developing market development assistance programmes from government agencies and trade associations to support export marketing are notable export agricultural marketing strategies. They are faced with some challenges such as: market access barriers (tariffs, quotas and regulatory requirements), competition, logistics (including transportation, storage and handling), language and cultural barriers and risk management. However, the benefits are cheering. They include (but not limited to): increased revenue, diversified markets, improved competitiveness, job creation and the much debated and desired increased food security.

### Unit 3

#### Challenges in Agricultural Marketing

The agricultural sector is saddled with several challenges that can affect the efficiency and effectiveness of marketing efforts. These challenges are classified into internal, external, technological, social and environmental. Governments, private sector companies and farmers each have their roles to play in tackling these challenges. These challenges are briefly highlighted.

#### Internal Challenges

1. Limited market access by small-scale farmers who often lack access to markets that negate their ability to sell their products
2. Poor infrastructure like transportation, storage and handling facilities which results in post-harvest losses and reduced market access.
3. Limited Financial Resources as most farmers lack the financial resources to invest in marketing, which results in limited market penetration.
4. Lack of market information: More often than not, farmers do not have accurate and timely market information. This makes it difficult for them to be guided in making important and result-oriented decisions.

Characteristics of agricultural produce and products such as bulkiness and perishability often pose some limitations

#### External Challenges

1. Market Fluctuations: As always, agricultural markets are subject to fluctuations in supply and demand, which result in price volatility.
2. Competition: It is difficult for farmers to differentiate their products since agricultural markets are highly competitive.
3. Regulatory Frameworks: Complex regulatory frameworks can create barriers to market access.

**SAREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## **Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)**

4. Climate change which can impact agricultural productivity, and result in reduced market supply and as expected, increased prices.
5. Some government policy like exchange rate fluctuations and abuse of trade liberalization which can make a country a dumping ground can pose adversity for farmers

### **Technological Challenges**

1. Limited adoption of technology since many farmers lack access to technology which can improve marketing efficiency.
2. Digital divide between urban and rural areas can limit farmers from digital marketing channels.
3. Data Management as managing and analyzing large datasets can be a challenge for farmers, thereby making it difficult for them to make data-driven marketing decisions.
4. Poor technical knowledge literacy of farmers
5. Limited Access to Education and Training: Lack of access to education and training programmes limit the marketing skills and knowledge of the farmer.

### **Social Challenges**

1. Due to limited market orientation, some farmers may lack a market orientation thereby focusing on production instead of marketing.
2. Social and Cultural Barriers: Social and cultural barriers can limit farmers' access to markets and information.
3. Modernization and changing taste of people
4. Cultural dynamism

### **Environmental Challenges**

1. Sustainability: For agricultural marketing to be relevant, it must balance economic, social and environmental sustainability.
2. Climate change: Climate change can negatively impact agricultural production, resulting to reduction or decrease in market supply and increase in prices of products.
3. Environmental Regulations: which can create barriers to market access and attendant costs.
4. Pollution: Pollution can damage the reputation of agricultural businesses and brands, affecting consumer trust and loyalty.

## **Unit 4**

### **Suggestions to Improve Agricultural Marketing**

**SAREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

Enhancing the marketing mechanism for agricultural goods will enable farmers to improve their economic conditions. The accompanying initiatives are proposed to enhance the agricultural marketing system:

### 1. Establishment of Regulated Markets

A controlled market seeks to eradicate unhealthy and unethical behaviours, minimize marketing costs, and offer support to producers. An instance of this is the inaugural controlled market (Karanjia Cotton Market) in India, established to facilitate the provision of pure cotton at equitable rates to the textile mills in Manchester, UK, under the Hyderabad Residency Order in 1886. The Nigerian government might implement a similar program to maintain sustainability in agricultural output. In controlled markets, management should be entrusted to market committees including producers, merchants, officials from marketing societies, and representatives from agricultural animal husbandry. The institute ought to be self-sustaining, statutory, and autonomous. Funds would be generated by license fees and market fees on the designated agricultural produce traded within the market yard. Nevertheless, the conventional market offers the following advantages:

- i. Farmers are urged to deliver their goods directly to markets.
- ii. Farmers are safeguarded from the exploitation by market intermediaries.
- iii. Farmers are guaranteed improved pricing for their produce.
- iv. Farmers have access to current market information. The marketable surplus of farmers will increase as marketing costs decrease and producers' share rises.

### 2. Standardization and Grading

Standard specifications and grading must be formulated to benefit a broad spectrum of producers, merchants, and consumers; hence, standards should align with market demands and preferences. A single grade should convey identical implications on product quality to producers, merchants, and consumers. It must possess a mutually agreeable description. They must embody commodity attributes that are universally acknowledged by all categories of purchasers. The grading must be straightforward, unambiguous, and comprehensible. The Nigerian government can implement policies that mandate the standardization of agricultural products, requiring that graded items bear a logo or label to indicate compliance with all standardization and grading criteria for packaging, sealing, etc. Only traders who adhere to these regulations will be permitted to operate. "Certificate of Authorization"

### 3. Improvement in Handling and Packaging

This pertains to the use of innovative procedures for the physical management of commodities during different marketing stages, such as the utilisation of cold storage (mechanical refrigeration) for perishables and novel packing methods. The optimal management and appropriate containers among the various options are intended to protect against dust, heat, rain, and other elements, therefore preventing significant physical losses and quality degradation.

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

### 4. Provision of Storage Facilities

The implementation of scientific procedures and the provision of suitable storage facilities, according to the nature and features of the items as well as the climatic conditions of a location, can mitigate physical damage and quality deterioration. Consequently, a licensed warehouse is required, which offers the following advantages:

- i. Minimizes storage waste of diverse commodities through the provision of scientific storage facilities.
- ii. Aids the government in the systematic selling of agricultural commodities.
- iii. Presenting standard grades and specifications.
- iv. Issues warehouse receipts, a negotiable instrument enabling commercial banks to provide financing to producers and dealers.
- v. Aids the government in implementing price support activities.

Nonetheless, there will be methods for storage that are not excessively cumbersome. The depositor wishing to store the produce in the warehouse must submit a written demand using the application format specified by the facility. The goods designated for storage will be properly packaged and transported to the warehouse. The depositor must reveal all facts of the commodity, including its market worth, in the application form. The product designated for storage shall be assessed and weighed by qualified technical staff prior to its storage. Diverse storage fees will be applicable for various commodities, and the stored goods will be insured against potential dangers such as fire, theft, floods, strikes, and civil unrest.

### 5. Improving Transport Facilities

Linkage and related road development are essential for the success of market structure. The availability of effective transportation enables farmers to access their chosen markets to obtain pricing advantages. Rural roads are typically in poor condition throughout all seasons, especially during the rainy season. Investment in infrastructure, particularly highways, should be prioritized. Additionally, perishables cannot be conveyed in closed waggons, necessitating the provision of adequate ventilation for their transportation.

### 6. Market Information

We have newspapers, price bulletins, and reports from government bodies that give market information. This information would be far more beneficial if an educational programme were established to examine and understand market data. The raw data undoubtedly offers great insights, but adept interpretation renders it beneficial to the farmers.

### 7. Market Research



## **Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)**

Market research is the analysis of customer demand conducted by a corporation to enhance its production and promote its goods. It focusses on customer demands, preferences, perceptions of a product, market accessibility, and marketing efficiency. Marketing research must be prioritized to enhance the marketing system.

### **8. Market Extension**

This entails the distribution of essential marketing information to producers. Farmers will receive guidance on customer preferences, grading, packaging, transportation, and other relevant factors to enhance their profitability.

### **9. Provision of Agricultural Marketing Training to Farmers**

The provision of training is crucial due to the malpractices employed by various market participants. The farmer need training in product planning, including crop selection and varieties, preparation of produce for marketing, awareness of malpractices and regulations, market information, and promotion of collective marketing.

### **10. Cooperative Marketing**

Cooperative marketing refers to the systematic sale of agricultural goods on a non-profit basis, aimed at benefiting the individual producer. Cooperative marketing is organized by farmers, with earnings split among farmer-members according to the volume of produce they market. The agricultural marketing system must fundamentally incentivize producers to enhance productivity, guarantee farmers equitable pricing for their goods, and provide consumers with commodities at fair prices. Consequently, cooperative marketing groups ought to be founded to fulfil the needs of farmers.

#### **The advantages of cooperative marketing include:**

- i. Facilitate the sale of members' produce
- ii. Offer loan facilities secured by agricultural output
- iii. Provide grading services to enhance pricing
- iv. Arrange for scientific storage of members' produce, organize the provision of inputs necessary for farmers.
- v. Implement a method for consolidating members' product to strengthen negotiating power through collective action.
- vi. Facilitate the export of produce to ensure farmers receive improved returns.
- vii. Serve as a governmental representative in the acquisition of food grains, among other items.

### **11. Availability of Cold Storage Facilities and Refrigerated Transportation**

For perishable commodities such as fruits and vegetables, quality losses are substantial; thus, it is essential to implement strategies and develop techniques to minimize and mitigate these losses. Preservation is, thus, an essential act of production and a crucial connection between production and consumption. Cold storage is crucial for

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

the effective selling of horticultural goods, as it has a specific production season and the quality of the supply rapidly declines post-harvest. Most fruits and vegetables lose moisture to the surrounding air if the humidity is below saturation. Maintaining humidity levels between 80 and 95 percent in appropriate cold storage is feasible, and refrigeration effectively mitigates moisture loss. Additionally, refrigerated shipping for perishable goods is essential throughout their transit via marketing channels. In addition to road transport, railway waggons must be appropriately adapted for the conveyance of perishable goods.

### 12. Advancement of Physical Marketplace

Physical marketplaces for fruits and vegetables experience operational and managerial deficiencies. A national plan to identify markets of significance for fruits and vegetables and to provide necessary infrastructure from an export perspective in these areas is essential.

## Unit 5

### Future Direction in Agricultural Marketing

Future direction of agricultural marketing is expected to be shaped by some factors which include (but not limited to) technological advancements, changing consumer preferences and shifting market trends.

Some Potential Future Directions in Agricultural Marketing are:

#### 1) Digitalization and E-Commerce

- i. **Online Marketplaces:** Online platforms will continue to play a key role in connecting farmers with wholesalers, retailers and consumers.
- ii. **E-Commerce:** To sell their products directly to consumers, agricultural businesses will increasingly use E-Commerce platforms.
- iii. **Digital Payments:** To make transactions faster, easier and more secure, digital payment system will become more prevalent.

#### 2) Sustainability and Environmental Considerations

- i. **Sustainable Agriculture:** Marketing efforts will necessarily emphasize climate – resilient agricultural practices and products.
- ii. **Environmental Labeling:** For consumers to make informed choices, environmental labeling and certification programmes will become more widespread

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

- iii. **Climate-smart Agriculture:** Climate- resilient agricultural practices and products will be emphasized by marketing efforts.

### 3) Data-Driven Marketing

- i. **Precision Agriculture:** Valuable data for targeted marketing will be provided by precision agriculture technologies (such as drones, satellite imaging) and sensor systems.
- ii. **Data Analytics:** It is expected that advanced data analytics will help agricultural businesses to better understand consumer behavior preferences and trends.
- iii. **Artificial Intelligence (AI):** Artificial Intelligence (AI)- powered marketing tools will enable personalized marketing, predictive analytics and automated decision making.

### 4) Changing Consumer Preference

- i. **Health-Conscious Consumers:** For better results, agricultural marketing will focus more on promoting healthy, nutritious and safe food products.
- ii. **Plant-Based diets:** Plant-based diets will gain more popularity, driving demand for plant-based protein sources and other related products.
- iii. **Experiential Marketing:** Immersive experiences, such as farm tours and workshops, to connect with consumers and promote their products will be created by agricultural businesses.

### 5) Globalization and Trade

- i. **International Trade:** Changing global trade policies, tariffs and regulations will need to be adopted by agricultural marketing businesses.
- ii. **Export Market Development:** Focus will be made on developing export markets, particularly in regions with growing demand for high quality food products.
- iii. **Global Supply Chain Management:** As agricultural businesses navigate complex global supply chains, effective supply chain management will become increasingly important.
- iv. **Multinational Cooperation:** Multinational cooperations provide host countries with access to new markets, enabling them to provide goods and services.

### 6) Provenance Marketing

This emphasizes on the origin and ethical aspects of food production. This is achieved through storytelling in packaging, incorporating QR codes that lead to interactive farm tours, and creating brands that represent a set of values, rather than just a product.

### 7) Community Supported Agriculture (CSA)

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

This allows consumers to subscribe to the harvest of a certain farm, creating a closer connection between farmers and consumers. The CSA not only ensures fresh, seasonal produce for members, but also fosters a sense of community and shared responsibility.

### 8) Influencer Partnerships

These have also become a popular way to reach potential customers, with influencers helping to amplify the messages of sustainable and organic farming practices.

## Unit 6

### Other Emerging Trends

#### i. Vertical Farming

To offer new marketing opportunities, vertical farming (indoor agriculture/controlled environment agriculture) will become more prominent eg aeroponics and hydroponics.

#### ii. Blockchain Technology

To enhance transparency, traceability and food safety in agricultural supply chains, blockchain technology will be used.

#### iii. Agricultural Tourism

To provide opportunities for farmers to diversify their income streams and promote their products, agricultural tourism will continue to grow.

### References

Agbonifoh, B, Ogwo, E., Nnolim, D. and Nkamnebe, A. (2007). Marketing in Nigeria: Concepts, Principles and Decisions. Afriflowers Books. Second Edition. ISBN: 978-33537-7-2

Ajie, E. N. (2022). A Text Book of Agricultural Marketing. Artangle Brand, Port-Harcourt, Nigeria ISBN: 978-978-52146-5-6.

ATTRA-NCT. (2016). Attra Sustainable Agriculture. Thea Rittenhouse, National Center for Appropriate Technology Agriculture Specialists- Direct Marketing. <https://attra.ncat.org/publication/direct-marketing/>

Farm-Direct Marketing: An Overview and Introduction. (2023). Osu Extension Catalog/ A PNW Extension Publication: Peer Reviewed. Oregon State University.

**SAEREM BOOK CHAPTERS First Published 2024 ISBN 978-978-60709-9-5**

## Climate Change, Food Security, National Security and Environmental Resources (Global Issues & Local Perspectives)

Folarin G.S. (2013). The Major Problems Confronting Agricultural Marketing in Nigeria. Available online: <https://www.slideshare.net/slideshow/agric-marketing/17277353>. Accessed 15th February 2025.

Jobya Inc. (2025). What does the future hold for agricultural market analyst? [https://jobya.com/library/roles/qysoieis/agricultural\\_market\\_analyst/articles/qysoieis\\_ag\\_market\\_analysis\\_future\\_career](https://jobya.com/library/roles/qysoieis/agricultural_market_analyst/articles/qysoieis_ag_market_analysis_future_career)

Megan L. Bruch and Matthew D. Ernest (2010). Choosing Direct Marketing Channels for Agricultural Products. Independent Writer Center for Profitable Agriculture. <https://utia.tennessee.edu/publications/wp-content/uploads/sites/269/2023/10/PB1796.pdf>

Mkpado M. (2013). Prospective of Agribusiness for the Future Sub-Saharan Africa. *International Journal of Rural Studies* Vol. 20 No 2.

Moyes, D. (2012). Agricultural Marketing for 3<sup>rd</sup> Year Agricultural Economics Students, Ethiopia.

ONDEMAND CMO (2022). What is Organic Marketing. Available online: <https://www.ondemandemo.com/b/org/what-is-organic-marketing/> accessed on 10 August 2022.

Philip Kotler and Gary Armstrong (1991). Principles of Marketing: Annotated Instructor's Edition, Fifth Edition. Prentice-Hall, Inc. Englewood Cliffs, New Jersey 07632. ISBN: 0-13-721614-9.

Sanne, P.N.C. & Wiese, M. (2018). 'The Theory of Planned Behaviour and User Engagement Applied to Facebook Advertising', *South African Journal of Information Management* 20(1), a915. <https://doi.org/10.4102/sajim.v20i1.915>

Wader, L. K and Murthy (2008). A Text Book of Agricultural Marketing and Co-operation. Indian Council of Agricultural Research, New Delhi; ISBN: 978-81-7164-009-5.