

Chapter 63


Agriculture Business Problems: Analysis of Research and Probable Solutions in Africa

Kenneth David Strang

 <https://orcid.org/0000-0002-4333-4399>

APPC Research, Australia

Ferdinand Ndifor Che

 <https://orcid.org/0000-0003-4823-2858>

W3-Research, USA & APPC Research, Australia

Narasimha Rao Vajjhala

 <https://orcid.org/0000-0002-8260-2392>

University of New York Tirana, Albania

ABSTRACT

Researchers need to investigate global life-threatening problems tied to agriculture such as food insecurity and malnutrition pandemics. This chapter reviews empirical fact-based state-of-the-art literature underlying the agri-business adoption barriers and the agriculture food insecurity crises. The authors focus their effort on identifying the hot spots of global agriculture problems, in developing nations. They use critical analysis to identify the most pressing issues and controversies surrounding West Africa. They then explore empirical literature suggesting possible remedies and future research needs to resolve the agriculture problems, in a way that these concepts would generalize globally and be of interest to other scholars. They produce several conceptual models to assist future agriculture research scholars including keyword thematic diagrams, cross-case subject analysis, topic contingency analysis, and literature topic synthesis. They then focus on probable solutions and they create several conceptual models to summarize those. They close with recommendations for future research.

DOI: 10.4018/978-1-6684-5352-0.ch063

INTRODUCTION

The objective of this chapter is to examine the key challenges which hinder effective agriculture advancement and in particular to identify the reasons farmers are not adopting information systems to improve the agricultural sector productivity in West Africa. West Africa is the focus here for two reasons. First, the world is too large a scope to address in a single chapter. Second, Nigeria was the specific focus for this chapter since it has the largest population in Africa, it is located in West Africa, and the citizens are relatively high technology-literate at least with mobile phones (Adetimehin, Okunlola, & Owolabi, 2018). Thus the aim of this chapter is to develop a framework and a current literature review to inform key stakeholders namely, agriculture software developers, agricultural industry practitioners, agricultural extension professionals, academic researchers, and government researchers.

Agriculture is an important world-wide contributing factor towards economic growth (Adesiji et al., 2014), but most African countries significantly lag developed countries in effective food production - and the outlook is worsening (Lamboll et al., 2018; Michalscheck et al., 2018). Empirical studies completed in Western Africa identified numerous causal factors which constrained agriculture productivity improvement, including government, industry and farm-related problems such as inadequate training (Che, Strang, & Vajjhala, 2020). More than one researcher found that West African farmers need better information technology in order to improve the agriculture value chain efficiency (Omotayo, 2017). Some researchers studied the problems underlying government funding to promote agricultural socio-economic benefits in developing countries (Olowogbon, Yoder, Fakayode, & Falola, 2019). Terrorism, lack of training, and other systemic issues were found to negatively impact agriculture in West Africa (Adelaja & George, 2019; Strang, Bitrus, & Vajjhala, 2019). Another researcher claimed a critical agriculture problem was that farmers do not adopt modern software or technology (Soeparno, Perbangsa, & Pardamean, 2018). Yet other researchers have identified dozens of problems underlying the poorly performing agriculture industry (Fasona et al., 2016; Lamboll et al., 2018; Olowogbon et al., 2019; Omotayo, 2017; Ukpong & Obok, 2018).

Effective agriculture production is an essential requirement for developing nations especially in Africa because with differences in currency along with import-export trade, it is too costly to not domestically produce food (AGAR, 2018; FAO, 2017). In fact, many African countries, especially Nigeria, have been in a food security crisis during the last 10 years without resolution (Strang, Che, & Vajjhala, 2019). Food supply insecurity and lack of self-sufficiency continue to be major issues for African countries (AGAR, 2018; Azih, 2008; FAO, 2017). For example, African countries met 89% of food production requirements in the 1960s but dropped to 75% by 2000 and continues to decline in some West African countries (Takeshima, 2018). This drop in self-sufficiency was caused by political, economic and environmental issues (AGAR, 2018; Olorunfemi, Olorunfemi, Oladele, & Adekunle, 2018). Many developing countries are now focusing on improving agricultural productivity through the use of information technology hardware and application software (Oyegoke & Dabai, 2018; Usman & Ahmad, 2018; Wongsim, Sonthiprasat, & Surinta, 2018) along with training and mentoring from extension workers (Adetimehin, Okunlola, & Owolabi, 2018; Kazeem, Dare, Olalekan, Abiodun, & Komolafe, 2017; Michael, Giroh, Polycarp, & Ashindo, 2018).

By 2020, the Covid-19 'corona virus' world-wide pandemic declared by the World Health Organization (2020), and global market volatility, further exacerbated the agriculture productivity problems and food insecurity crisis, especially in African regions. With global supply chain import-export and international travel practically shut down for months, agriculture practitioners and scholars need some

24 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/agriculture-business-problems/299309

Related Content

Greenhouse Gas (GHG) Emissions From Municipal Solid Waste (MSW) in Oman

Tariq Umar (2022). *International Journal of Social Ecology and Sustainable Development* (pp. 1-26).

www.irma-international.org/article/greenhouse-gas-ghg-emissions-from-municipal-solid-waste-msw-in-oman/305125

Consumer Awareness and Perception of Online Services: A Comparative Analysis of Brand Preferences and Decision-Making Processes

Meenu Kumari and Amit Dutt (2024). *Smart and Sustainable Interactive Marketing* (pp. 178-197).

www.irma-international.org/chapter/consumer-awareness-and-perception-of-online-services/337511

Educate for Life: The Sustainable Development of the Classroom of Class

Johanna Rosalí Reyes (2020). *Global Approaches to Sustainability Through Learning and Education* (pp. 154-170).

www.irma-international.org/chapter/educate-for-life/237444

Green Economics and Urbanization in OIC Member Countries

Nima Norouzi (2022). *Handbook of Research on Building Inclusive Global Knowledge Societies for Sustainable Development* (pp. 130-142).

www.irma-international.org/chapter/green-economics-and-urbanization-in-oic-member-countries/305189

A General Approach for Financial Quantification of Climate Change Risk for Enterprises

Mahesh Gangaram Kanakand Sunita Purushottam (2020). *Technological Innovations for Sustainability and Business Growth* (pp. 105-146).

www.irma-international.org/chapter/a-general-approach-for-financial-quantification-of-climate-change-risk-for-enterprises/238932