

Sustainable Food Production in Africa: Turning African Countries into Development Catalysts, Food Reservoirs and Exporters

Edward Oyekanmi ^{a,1}, Danny Coyne ^b, Bamidele Fawole ^c, Gideon Adeoye ^d

^a *Biological Sciences Department, College of Natural and Applied Sciences, Wesley University Ondo, Nigeria.*

^b *Nematology Laboratory, International Institute of Tropical Agriculture (IITA), Oyo Road, Ibadan, Nigeria.*

^c *Crop Protection and Environmental Biology Department, Faculty of Agriculture, University of Ibadan, Nigeria.*

^d *Agronomy Department, Faculty of Agriculture, University of Ibadan, Nigeria. kutuola@yahoo.com*

Received 9 November 2019; revised 3 September 2020; accepted 13 October 2020

Abstract

The myriad of challenges facing Africa, were considered in this paper, which include the nagging triplet problems of poverty, hunger and diseases. Africa is prominent in the world hunger map of Food and Agriculture Organization. Therefore, this paper identified poorly tapped natural and human resources, uneconomically viable policies and poor management as some of the banes of Africa's setback. This work proffered proactive solutions to freeing Africa from the triplet perennial problems of poverty, hunger and diseases, through intervention in the area of sustainable organic agricultural food production geared towards wealth creation in an integrated community based agriculture. Organic agriculture gives credence to good health, thus is a viable instrument in freeing Africa from diseases. In this paper, the abundance of agrarian ecologies and resources domiciled in Africa, were highlighted and put forth to be harnessed for moving the continent from the present precarious predicament to an enviable status. Empirical information presented in this paper recommended organic agriculture as the panacea to sustainable food production, improved health of the populace, conducive environmental condition and for solving the problem of climate change. Organic agriculture will also facilitate the establishment of bilateral trade agreements, thus boosting foreign earnings of African countries. This will make other nations of the world to be heavily dependent on Africa for raw materials and export of high quality organic food to feed the world. The multiplier effects of these coordinated activities will turn African countries into development catalysts, food reservoirs and enhanced foreign exchange earners.

Keywords: Development, food security, organic agriculture, improved health, triplet problem

1. Introduction

The continent of Africa is the world's second largest and second most-populous continent, being behind Asia in both categories. At about 30.3 million km² (11.7 million square miles) including adjacent islands, it covers 6% of Earth's total surface area and 20% of its land area. With about 1.2 billion people as of 2016, it accounts for about 16% of the world's human population (UNDESA, 2017). Food security is when all people, at all times, in a particular location, place or region have physical and economic access to sufficient safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life. World Food Programme Hunger Map 2019 depicts the prevalence of undernourishment in the population of each country in 2016-18. From Africa and Asia

¹ Corresponding author. Phone: +2348034827190 ; 08157680435 Email addresses: edward.oyekanmi@wesleyuni.edu.ng (E. Oyekanmi), d.coyne@cgiar.org (D. Coyne), Bamidelefawole@yahoo.com (B. Fawole), kutuola@yahoo.com (G. Adeoyo)

feed the world. The multiplier effects of these coordinated activities will turn African countries into development catalysts, food reservoirs and enhanced foreign exchange earners.

References

- FAO, 2015. The state of food and agriculture. Social protection and agriculture: breaking the cycle of rural poverty. <http://www.fao.org/state-of-food-agriculture/en/> accessed 01 September, 2019.
- FAO, 2019. The state of food and agriculture: food loss and waste is a global issue. <http://www.fao.org/state-of-food-agriculture/en/> accessed 02 September, 2019.
- Fassuliotis, G., 1985. The role of the nematologist in the development of resistant cultivars. In: an advanced treatise on *Meloidogyne* volume 1: Biology and Control. (Ed.) Sasser, J.N. and Carter, C.C. Printed by North Carolina State University Graphics pp. 233 – 240.
- Holderness, M., Sharrock, S. Frison, E. and M. Kairo, 2000. Organic banana 2000. Towards an organic banana initiative in the Caribbean. Report of the International workshop on the production and marketing of organic bananas by smallholders farmers. International Network for the Improvement of banana and Plantain, Montpellier France 173p.
- Kerry, B. R., 1987. Biological control. In: Principles and practise of nematode control. R.A. Brown (Ed.) Academic Press, New York, pp. 233 – 263.
- Khan, M.R., Kounsar, K. and A. Hamid, 2002. Effect of certain rhizobacteria and antagonistic fungi on root-nodulation and root-knot nematode disease of green gram. *Nematology Mediterranean* 30: 85-89.
- Okuneye, B. 2002. Rising cost of food prices and food insecurity in Nigeria and Its implication for poverty reduction. CBN economic & financial review, vol. 39 no. 4
- Oyekanmi, E.O., Coyne, D.L. and B. Fawole, 2008. Utilization of nematodes biocontrol and biofertilizer potentials in selected microorganisms for improved crop production. *Journal of Biological Sciences* (8) 4: 746 -752.
- Oyekanmi, E.O., Coyne, D.L., Fagade, O.E., and O. Osonubi, 2007. Improving root-knot nematode management of two soybean genotypes through the application of *Bradyrhizobium japonicum*, *Trichoderma pseudokoningii* and *Glomus mosseae* in full factorial combinations. *Crop Protection*. 26: (7) 1006 – 1012.
- UNDESA, 2017. United Nations Department of Economic World Food Programme, 2019. www.wfp.org. Accessed on 30th August, 2019.
- USAID, 2019. United States Agency for International Development. Agriculture and food security: feed the future in Malawi. <http://www.usaid.gov/malawi/feed-the-future> 2012- 2017. Accessed on 30th August, 2019.
- WEF, 2016. World Economic Forum. What lessons can we learn from China's rapid growth? <http://www.weforum.org/agenda/2016/03>. Accessed on 2nd September, 2019.