VOL 2 NO 8: AUGUST, 2025
AN OPEN ACCESS PEER-REVIEWED JOURNAL
Frontline Professionals Journal 2(8), 57-62, EISSN 1596-0501

Original Research Article

SUSTAINABLE FOOD SECURITY THROUGH SCHOOL FARM PROGRAMMES

Author: Ebireketa Egilense Evelyn[1]

[1]Department of Vocational Education, Delta State University, Abraka, Delta State.

Corresponding Author: Ebireketa Egilense Evelyn[1]

Email: evelynebireketa@gmail.com

Authors' contributions
This study was a collaborative effort of the author. The author reviewed and approved the final version of the manuscript for publication.

Article Information
EISSN 1596-0501
Website:https://frontlineprofessionalsjournal.info
Email: frontlineprofessionalsjournal@gmail.com

CITATION*:* Ebireketa Egilense Evelyn (2025). Sustainable food security through school farm programmes *Frontline Professionals Journal* 2(8), 57-62

ABSTRACT
This paper examines the role of School Farm Programmes in achieving sustainable food security in Nigeria. Drawing from literature and best practices, it highlights the importance of integrating practical agricultural education into school curricula to equip students with relevant farming skills, increase local food supply, and promote sustainable agricultural practices. The study discusses the concept of the School Farm Programme, its benefits, challenges, and strategies for effective implementation. Findings suggest that the programme has significant potential to enhance food security, reduce youth unemployment, and encourage environmentally friendly farming practices when supported with adequate funding, technical expertise, and policy interventions.

Keywords: food security, school farm programme, sustainable agriculture, agricultural education.

INTRODUCTION

Food security is a critical concern for sustainable development, particularly in developing countries such as Nigeria where poverty, unemployment, and population growth continue to put pressure on agricultural systems (Food and Agriculture Organization [FAO], 2009; World Bank, 1986). The concept of food security, as defined by the FAO, refers to a condition where all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life (FAO, 2010). In recent decades, various initiatives have been introduced to address food insecurity, one of which is the School Farm Programme. This programme integrates agricultural education into school activities by establishing farms where

students can learn practical agricultural skills, contribute to food production, and promote self-reliance (Osinem, 2004).

Concept of the School Farm Programme

The School Farm Programme involves the establishment and maintenance of farms within primary, secondary, and tertiary institutions for both educational and productive purposes (School Farm Programme, 2021). Students actively participate in planting, nurturing, harvesting, and processing crops, as well as managing small-scale livestock enterprises. This not only serves as a hands-on learning experience but also enhances food availability within the school community. Osinem (2004) emphasized that school farms can be profitably managed when run systematically, generating income to support school feeding programmes and other educational activities. The programme also strengthens agricultural knowledge among students and prepares them for possible careers in agribusiness.

Importance of the School Farm Programme in Achieving Food Security

School farm program constitutes a significant means of attaining food security in diverse ways (Arko-Achemfuor, 2014). These programs increase the agricultural practices efficiently, increasing the supply of food locally, creating jobs among the youth, and adopting sustainable approaches (Ezhim *et al.,* 2019; Arko-Achemfuor, 2014). The effect of school farm operations is highly associated with improved practical agricultural ability as the programs are hands-on academies in crop, animal raising, post-harvest management, and sustainable agricultural production (Arko-Achemfuor, 2014). Through this type of learning, students can solidify theoretical information with practical uses and begin to develop skills necessary to succeed in the agricultural field in the future (Ezhim *et al.,* 2019). This hands-on encounter is essential since a significant number of secondary school graduates would be lacking skills to apply agricultural methods in some areas to ensure food security.

Agricultural education can be of great importance in imparting knowledge, skills, and attitudes when it comes to the management of environmental resources and, consequently, food productivity (Ezhim *et al.,* 2019). By providing young people with these skills, school farm programs contribute to enhancing productivity and achieving innovations in the agrarian environment to a great extent (Ezhim *et al.,* 2019).

Direct involvement in organic agriculture, such as an experience with it, can enhance the health of the agro-ecosystem and biodiversity and remove artificial supplements (Padath, 2025). Also, school farms communities contribute to local food security by supplying fresh foods that are fed to school communities (Ezhim *et al.,* 2019). The availability of locally grown food through direct supply limits the dependence on outside food and provides students with nutritious foods even when the outside sources are unavailable (Ezhim *et al.,* 2019). The possibility of integrating local farms with schools is relevant to encourage the implementation of local produce in schools and educational activities associated with the aforementioned concept of agriculture and nutrition (Kashyap *et al.,* 2023). Farm-to-school programs have the potential of benefiting the local economy through increment of local food sales and creation of employment opportunities (Kashyap *et al.,* 2023). Such a focus on local food production benefits the local economy due to school farms prioritizing local businesses in sourcing their aspects and services, which generates a positive cycle (Ezhim *et al.,* 2019). The career interests instilled in students via the school farm programs enable them to engage in self-employment in the agrarian sector to address the problematic issue of young people.

Sustainable Agricultural Practices in School Farms

There have been growing interventions that have focused on the adoption of sustainable agriculture practices in school farms in an attempt to foster food accessibility and educational benefits (Farag *et al.,* 2021). Sustainable farming combines the efforts meant to protect the environment, stabilize the process of economic profitability, and support social well-being (Amruddin *et al.,* 2024). School farms are places where students can learn through experience, which gets them close to nature and teaches them useful new skills (Farag *et al.,* 2021). Schools can

also educate students on the aspect of responsible farming by integrating sustainable practices, and how it can help the world resolve issues. Sustainable agriculture is geared towards the present-day food demand and ensuring that future generations are in a position to reproduce this demand. This practice includes agriculture whereby the processes used to cultivate crops do not harm the quality of the soil, water, and air, but rather must supply people with the necessary portion of food.

The most important key practices are the decrease in the use of chemical inputs, water saving, and soil condition (Bhat *et al.,* 2021; Lhaj *et al.,* 2024). Organic farming is one of the inseparable parts of sustainable agriculture, which focuses on the usage of organic matter to minimize environmental and ecological changes (Bhat *et al.,* 2021; Gamage *et al.,* 2023). It increases soil fertility, decreases soil erosion and enhances carbon sequestration (Bhat *et al.,* 2021; Gamage *et al.,* 2023). Composting of farm waste has the potential of converting waste into useful organic agricultural fertilizers which enhance soil fertility and subsequently better agricultural yields (Lhaj *et al.,* 2024). School farms will be able to use composting as a waste management tool and fertilizer for their soils in school farm agriculture, resulting in a closed-loop system (Kiran, 2023). Water conservation is the other important characteristic of sustainable agriculture (Sulaiman *et al.,* 2024). The effective irrigation systems and water management practices are critical to limiting water use and water pollution (Sulaiman *et al.,* 2024).

Schools may adopt strategies such as rainwater harvesting and drip irrigation in order to reduce the use of water at the same time ensuring that the crop performances are not changed (Scott & Wu, 2024). The benefit of this strategy is that it saves water and can educate students on the value of proper water management in farming (Farag *et al.,* 2021). Although sustainable agricultural practices have been associated with multiple benefits, barriers may be in the way. The use of these practices may be obstructed by social, economic and environmental reasons. In order to rise above these obstacles, farmer acceptance must be boosted along with environmentally friendly agricultural practices. School farms can be used as an example and also demonstrate the viability and efficiency of sustainable practices to the community as a whole (Farag *et al.,* 2021). Schools can be the key to ensuring a shift toward more sustainable agriculture by offering education and practical experience (Sorensen *et al.,* 2021).

Challenges of the School Farm Programme

Despite its benefits, the programme faces several challenges:

-Insufficient Funding – many schools lack adequate resources for farm tools, seeds, and fertilizers (World Bank, 1986).

-Lack of Technical Expertise – without trained agricultural educators, farm productivity remains low (Osinem, 2004).

-Climatic Variability – unpredictable weather patterns can lead to crop failure (FAO, 2010).

-Poor Policy Support – inadequate government policies limit the programme's sustainability.

Strategies for Strengthening the Programme

To maximize the contribution of school farms to sustainable food security, the following strategies are recommended:

1. Capacity Building for Teachers – through agricultural training workshops (Metu, Kalu, & Ezenekwe, 2015).
2. Government Funding and Incentives – provision of grants, farm inputs, and infrastructure.
3. Integration into Curriculum – making agricultural science practical compulsory.
4. Monitoring and Evaluation – regular assessment of farm productivity and learning outcomes.

CONCLUSION

School farm programmes in Nigeria have great potentials for promoting sustainable food security through integration of agricultural education and food production. Through these initiatives, the students acquire skills and experience to engage in farming activities including crop production, raising livestock, and good land use practices. In addition to theoretical learning in the classroom, school farms enable young people to get practical exposure in farming, which leads to development of skills associated with farming, innovation, and interest in venturing into agribusiness.

School farms have the primary impact of enhancing nutrition at schools and within the communities. Outputs of the farms can supplement school feeding programmes so that children have access to fresh, nutritious food. This not only benefits the health of the students as well as cognitive functioning of the students but also saves on costly external food provisions. Besides, school farms will enhance diversity and adaptability to environmental changes through the use of locally adapted crops and farming methods. Besides their educational and nutritional provisions, school farms will provide a chance at income generation. Agricultural surpluses can be sold and the resulting income used in purchasing or repairing schools and school materials and/or can be used to expand the farming businesses. This entrepreneurial component promotes financial sustainability and will provide students with the skills of how to manage an agribusiness, market, and cooperative skills. It is also imperative to promote green farming. School farms can be used as model farms on organic farming, water, and soil fertility management, as well as climate-smart farming. They also advance the sustainable practices in the wider community since they adopt and present these practices in ways that enhance awareness and adoption in the community. To make the most of these advantages, however, it will be necessary to have firmer support. School farming requires sufficient funds, training of teachers, availability of modern tools and policy structures that would incorporate school farming into national education and agriculture policies. Enhancing such programmes would allow Nigeria to address the challenges of its food security issues in the long term as well as educating a generation of crops farmers ready with the know-how, ideas and care of the environment.

REFERENCE

Amruddin, A., Yovita, Y., Sulandjari, K., Tanur, E. A., & Andriyani, L. Y. (2024). Sustainable Agricultural Practices and Environmental Stewardship: A Global Analysis of Farmer Adoption and Impact. *Global International Journal of Innovative Research*, *2*(3), 595–603. https://doi.org/10.59613/global.v2i3.114

Arko-Achemfuor, A. (2014). Teaching Permaculture to Ensure Food Security in Rural South Africa: The Case Study of Tiger Kloof. *Journal of Human Ecology*, *47*(3), 251–255. https://doi.org/10.1080/09709274.2014.11906759

Bhat, S. J. A., Geelani, S. M., Dijoo, Z. K., Bhat, R. A., & Khanday, M. ud din. (2021). Sustainable Agricultural Practices. In *Microbiota and Biofertilizers, Vol 2* (pp. 161–174). Springer International Publishing. https://doi.org/10.1007/978-3-030-61010-4_8

Ezhim, I. A., Asogwa, V., & Ochu, A. O. (2019). Mechanisms for ensuring food security and sustainable environment through youths' participation in agricultural education. *Sustainability, Agri, Food and Environmental Research*, *7*(4). https://doi.org/10.7770/safer-v0n0-art1565

Food and Agriculture Organization. (2009). Declaration of the World Summit on Food Security. ftp://ftp.fao.org/docrep/FAO/meeting/018/k6060e.pdf

Food and Agriculture Organization. (2010). Global forest resources assessment main report. Forestry Paper, 163.

Gamage, A., Gangahagedara, R., Gamage, J., Jayasinghe, N., Kodikara, N., Suraweera, P., & Merah, O. (2023). Role of organic farming for achieving sustainability in agriculture. *Farming System*, *1*(1), 100005. https://doi.org/10.1016/j.farsys.2023.100005

Kashyap, P., Jablonski, B. B. R., & Bauman, A. (2024). Exploring the relationships among stocks of community wealth, state farm to school policies, and the intensity of farm to school activities. *Food Policy*, *122*, 102570. https://doi.org/10.1016/j.foodpol.2023.102570

Metu, A. G., Kalu, C., & Ezenekwe, U. R. (2015). Demographic pattern and sustainable development in Nigeria. In A. C. Mbanefo & A. U. Nnonyelu (Eds.), Challenges of sustainable development: A social sciences approach.

Osinem, E. C. (2004). Management of school farm for profit. Unpublished lecture mimeograph, Department of Vocational Teacher Education, University of Nigeria.

School Farm Programme. (2021). What is farm-to-school?. http://www.farmtoschool.org/about/what-is-farm-to-school

Padath, P. (2025). Hands-on harvest: Participatory organic farming education on campus. *World Scientific Research*, *12*(1), 8–15. https://doi.org/10.20448/wsr.v12i1.6515

Sørensen, L. B., Germundsson, L. B., Hansen, S. R., Rojas, C., & Kristensen, N. H. (2021). What Skills Do Agricultural Professionals Need in the Transition towards a Sustainable Agriculture? A Qualitative Literature Review. Sustainability, 13(24), 13556. https://doi.org/10.3390/su132413556

Sulaiman, A. S. S., Wayayok, A., Aziz, S. A., Yun, W. M., & Leifeng, G. (2024). Advancements in Crop Water Modelling: Algorithmic Developments and Parameter Optimization Strategies for Sustainable Agriculture: A Review. *Basrah Journal of Agricultural Sciences*, *37*(2), 310–325. https://doi.org/10.37077/25200860.2024.37.2.24

Sunaiana, Dr. Hansdeep Kaur, & Sonu Pateer. (2025). A Conceptual Review of Sustainable Agriculture Approaches and Practices: Toward Sustainable Agricultural Transitions. *Economic Sciences*, *21*(1), 903–913. https://doi.org/10.69889/haqs3r53

World Bank. (1986). Poverty and hunger issues and options for food security in developing countries.