IJAAR PUBLISHING®

African Journal of Sustainable Agricultural Development | ISSN: 2714-4402
Vol. 5, Number 3 (July-September, 2024) | www.ijaar.org/ajsad

YOUTH AGRIPRENEURSHIP: A CASE STUDY OF FEED THE FUTURE NIGERIA INTEGRATED AGRICULTURE ACTIVITY, NORTHEAST NIGERIA

[1]Shakiru Oluwatosin Quadri, [2]Prakash Kant Silwal, [3]Bassey Archibong and [4]Adamu Jibrilla

[1,2,3]Feed the Future Nigeria Integrated Agriculture Activity, International Institute of Tropical Agriculture (IITA), Nigeria
[4]Department of Economics, Adamawa State University, Mubi, Adamawa State, Nigeria

ABSTRACT

This study focuses on youth agripreneurship in Northeast Nigeria by thoroughly analysing the role of USAID Feed the Future Nigeria Agriculture Activity in promoting youth participation in agribusiness for sustainable income generation, livelihoods and poverty reduction. The study employs survey research design and collects data on the respondents/participants or beneficiaries of the intervention in the area of crop production, spray service provision and agri processing focusing on Tomapepo production. The study's sample size of 380 was determined from the total population of 7,986 participants in the program and data was collected using structured questionnaires administered by trained data collectors. Descriptive analysis method was used to analyse the data. The findings revealed that, 96.28% of the respondents indicated that FTF program taught them crop production in more detail demonstrating the how effective the program has been able to increase knowledge and skills in crop production. Furthermore, over 75% of the Spray Service Providers (SSPs) have gained better understanding of responsible pesticide use, illustrating how effective FTF has been in bringing vital knowledge and best practice into this agribusiness. Similarly, a combined 90.69% of respondents self-rated their capability for business planning and management as "Excellent" or Good", together reflecting a strong grounding in business planning and management among nearly all participants. The study recommended among others that government and non-governmental organisations especially USAID Feed the Future, should consider sustaining and expanding such training intervention programs, ensuring that they are accessible to a broader audience while addressing any areas of the training that might require improvement. This approach will help maximize the program's impact, equipping younger agripreneurs with the skills needed to thrive in agriculture. There should be a focus on creating an enabling environment that allows these young agripreneurs to translate their skills into substantial productivity gains, thereby contributing more effectively to food security and economic development in Northeast Nigeria.

Keywords: Youth agripreneurship, Agribusiness, Tomapepo, Crop production, Spay Service Providers, USAID Feed the Future.

Quadri, S. O., Silwal, P. K., Archibong, B. & Jibrilla, A. (2024). Youth Agripreneurship: A Case Study of Feed the Future Nigeria Integrated Agriculture Activity, Northeast Nigeria. *African Journal of Sustainable Agricultural Development*, *5*(3), 39-64. DOI: 10.5281/zenodo.13928059

INTRODUCTION

Agriculture has been acknowledged as the major source of employment for the majority of people in developing countries, especially in Nigeria. This is particularly due to the numerous opportunities available within the agricultural sector, ranging from crop production business for both cash and food to livestock production.Two-thirds of rural young people rely on agriculture as their main source of income, providing opportunities for livelihoods (Surajo & Karim, 2016). Statistics have shown that 60% of Nigerians are between the ages of 18 and 35 (Folasade, 2019) highlighting the country's youthful population. However, youth unemployment in Nigeria is one of the issues identified as plaguing the country, while other decent job alternatives and opportunities are scarce.This worry can be overcome by providing more work outside of formal labour markets, especially in the agribusiness industry for young people to earn a living from and ultimately drive the nation forward. The African Union, including Nigeria, has spearheaded several initiatives aimed at youth empowerment, realising the necessity of doing so as a precondition for achieving the socio-economic transformation of Africa. These initiatives recognise the significance of investing in and establishing the conditions and possibilities for young individuals to accomplish their maximum potential (Daniel, 2019).

However, although governments, development partners and private sector stakeholders recognize the potential of youth and have adopted a plethora of initiatives to support youth entrepreneurship, the number of youths who are working poor remains high and is projected to continue rising. Moreover, about 50% of this populace resides in rural regions, where employment insecurity can be considerably more severe. The problem is made worse by the fact that young people's unemployment rates are expected to be over three times greater than those of adults (AU, 2020; Dakare, 2023).

Therefore, a key strategy for accomplishing the structural transformation required to accelerate economic development in many developing countries is the idea of youth agripreneurship (Dias, & Ferreira, 2019). Successful rural transformation is critical to achieving Sustainable Development Goals (SDGs), especially the elimination of hunger and malnutrition,(Folasade, 2019). A paradigm change is necessary to restore these rural economies and realize their full potential. The active participation and empowerment of youth in agricultural enterprises must be given top priority in developing nations. Consequently, this will play a crucial role in propelling economic expansion, attaining food sovereignty, and eventually constructing a more sustainable future(Sumberg et al. 2024). Additionally, Nigeria is endowed with an abundance of resources that could lead to an abundant future in agriculture. With 74 million hectares of fertile land, the country has the land to produce enough food to feed itself and address the urgent problem of youth unemployment (Sumberg & Hunt, 2019). This change depends on young Nigerians' active participation in the agriculture industry (Folasade, 2019).

In particular, the situation of youth unemployment in northeastern Nigeria is concerning due to the perilous environment generated by the continuing Boko Haram insurgency, many people were displaced experiencing severe problem of lack of opportunities, food insecurity and poverty (Quadri et al. 2018). A multi-stakeholder strategy in Nigeria is required to create an environment that is conducive to youth agripreneurship. Support for youth entrepreneurship in the crop, livestock and fisheries sectors of agriculture is genuinely required by the government, the private sector, non-governmental organizations, and donors (Quadri et al, 2018).

In line with the challenges facing the youth in Nigeria and particularly, the devastating effect of the insurgency in Northeast Nigeria, the USAID Feed the Future Nigeria Integrated Agriculture Activity provided comprehensive intervention programmes in various areas including agribusiness.The essence of the intervention was for USAID to helpNortheastern Nigeria's economy rebound from the destruction brought about by the Boko Haram conflict (Quadri et al, 2018). The goal of the activity was to reintegrate vulnerable communities that have been displaced by the violence into routine farming and agricultural value chain. The program has a strong emphasis on the application of good agricultural practices (GAP), climate-smart agricultural technologies and interventions that target

nutrition.Furthermore, intensive trainings were provided where the curriculum placed a high priority on developing entrepreneurial abilities and market linkages in the agricultural sector.

The Feed the Future Nigeria Integrated Agriculture Activity's strategy offers a longer-term vision of economic growth, in contrast to many intervention organizations in the region who mostly focus on short-term humanitarian help. The Feed the Future Nigeria Integrated Agriculture Activity is implemented in the states of Adamawa, Borno, Gombe, and Yobe with the aims to achieve three key goals: promoting equitable and sustainable economic growth through agriculture, strengthening community and agricultural system resilience, and guaranteeing a healthy population, with a focus on women and children in these targeted areas(Quadri et al, 2018).

With the Feed the Future Nigeria Integrated Agriculture Development Programme serving as a case study, the primary goal of this research is to examine youth agripreneurship in northeastern Nigeria focusing specifically on the role of USAID Feed the Future Nigeria Integrated Agriculture Activityin promoting young people in northeastern Nigeria to engage in agricultural businesses. While several studies have examined youth agripreneurship, this study appears to be the first to specifically examine the role of USAID Feed the Future Nigeria Integrated Agriculture Activity in promoting youth agripreneurship in the northeast Nigeria. Following this introduction, the study is structured into literature review, methodology, results and discussion as well as conclusion and recommendations.

LITERATURE REVIEW

Concept of Agripreneurship

Agripreneurship, as noted by Cares (2015), is about considering farming as a serious commercial endeavour rather than merely a way of life. An agripreneurship sees a potential for investment rather than just a farm. Building long-lasting companies specializing in agricultural commodities (goods and services) is the main aim of agripreneurs. They can increase productivity and discover new methods to add values by being innovative. Agripreneurship encompasses a wide range of endeavours, including horticulture, fisheries, cattle, and poultry, in addition to crops **()**. Furthermore, agripreneurs, according to Carr and Roulin (2016) expands by taking the whole food system into account in addition to the farm ranging from processing and packaging to logistics and support services, food preparation as well as waste management.

Agriculture is universally recognised as having great scope to assist national income while directly providing employment and source of income to a vast and often marginalised segment of a population (Bairwa et al., 2014; Pandey, 2013). Agripreneurship is a key to making the agriculture sector more attractive and profitable (Bairwa et al 2014) especially for the upcoming and young individuals. The sector has a great potential of giving rise to entrepreneurship, particularly when managed with the most essential agricultural resources like soil, seeds and water based on market demand and some other viability and success factors (Bairwa et al 2014). People who are risk taker having the zeal to learn new things related agricultural operations tend to become successful agripreneurs **(**Mkong et al. 2021**)**. It is argued that improving the future of youth and equipping them to face contemporary economic challenges and take good and viable opportunities ahead, agripreneurship not only serve as a vehicle, but a necessity for improving productivity and commercialisation in agriculture and allied sectors. Agripreneurial skills are the skills needed to perform tasks and activities well in a farm business and these skills can be developed through learning experience or better still, practicing them. In rapidly changing environments where technology is advancing, open-minded farm entrepreneurs will be overwhelmed with receiving challenges faster than they rationally can answer them (Hanf & Muller, 1997). These skills, according to Pandey (2013) are associated with the identified core elements of entrepreneurial competence which are highlighted as being attributes for the effective organization of entrepreneurs including the ability to identify opportunities, build and use relationships, organize effectively, think strategically, engage conceptually with new ideas and problems and finally solving the problems.

According to Uneze (2013), agripreneurship involves grassroots, responsible, innovative business, that is sustainable and directly market-oriented agriculture. It underscores sustainable agriculture as the form of sustainability that is inherently interconnected, taking a systems approach to identify the complex synergy between the economic, environmental and social sector (Folasade, 2019; Uneze, 2013). The growth of agripreneurship has been driven by various factors such as increasing preference for organic food and demand for higher grade agricultural products, segmental efficiency in primary agriculture activities like dryland agriculture, fishery or wildcrafting through low-cost technology application options and a better potential seeking private sector towards the participation in agribusiness at multiple scales (Uneze, 2013; Mulema et al. 2021). Agripreneurship provides opportunities within several types of agricultural activities, directly and indirectly related to the farming process (Folasade, 2019). In each case, the scope and extent of activities are exposed to include on-farm — production, processing, farm input manufacturing, and agro-services; as well as off-farm enterprises such as agro-tourism entrepreneurship. Agripreneurship has been identified as a means of minimising or addressing malnutrition. Literature has shown that addressing maternal and child undernutrition remains a priority which results in socio-economic imperatives require that households as well as national food supplies be adequately supported, further accentuating the essence of agripreneurship.

According to Uneze (2013), there are many advantages of agripreneurship including helping in better identification of existing and new opportunities thereby ensuring production of innovative agribusiness ideas leading to adoption of much more effective procedures at lower costs for the agricultural commodities. This also adds value for agricultural products making it easier on how consumers can access socially and culturally. Agripreneurship is fundamental to job creation, revenue generation and youth empowerment. It builds a community of producers who are solutions-focused and educated in sustainable practices that come hand in hand with higher social responsibility. It also nurtures youth empowerment and promotes construction of rural infrastructure, thereby creating conditions for the growth of non-agricultural enterprises in rural regions.

Youth Participation in Agripreneurship

Youth engagement in agripreneurship has enormous potentials to boost employment and achieve sustainable development especially in a developing country like Nigeria. Engaging youth and utilizing their abilities in agricultural businesses such as production and value chain are crucial (Folasade 2019). According to Folasade (2019), viable business solutions can be explored that can propel agricultural growth and employment creation by engaging and empowering youth.

The involvement of youth in agriculture and agricultural value chain is imperative in responding to the needs of food security, addressing the consequences of unemployment amongst young population, increasing the income of young population and reducing poverty (Addo, 2018). It is also crucial in addressing ageing farmers issue and adapting to technological and digital revolution in agribusiness sector. Youth engagement in agribusiness will facilitate the process of meeting changing trends of food needs and consumption demands, mitigating environmental changes and natural resource degradation that comes with climate change.

In the contemporary developing world, where graduates find it difficult to obtain jobs, it becomes more imperative for them to brace entrepreneurial skills in the agricultural sector which is acknowledged to have great and numerous opportunities. It is argued that professional and technical training can be absorbed and internalised more easily by the young school graduates thereby boosting the productivity of the sector, enhancing the local economy, increasing income and eradicating poverty. The level of education and exposure will provide a solid foundation for learning innovative skills, allowing them to actively and successfully engage in agribusiness where the benefits may be enjoyed directly by the participating youth and indirectly by the society.

Agripreneurship in Nigeria

In addition to revamping the agricultural sector via increase in funding opportunities, some have argued that government, especially in collaboration with the private sector should be able to establish well-equipped agripreneurship development centres and set up regular agripreneurship development programmes to empower youth so that they can become the drivers of economic growth (Otache, 2017; Ouko et al., 2022). According to Otache (2017), these initiatives should be focused upon training and developing existing and future agripreneurs by equipping them with the skills to apply modern agricultural technologies and practices which would eventually foster creativity and innovation thereby enabling them to build successful agribusinesses that can drive growth and sustainability in the agricultural sector.

Ouko et al. (2022) review the prospect of youth's venture in agripreneurship for poverty reduction and improvement of rural employment in Kenya based on a comprehensive literature review related to youth engagement in agripreneurship. Their findings showed that youth engagement in agripreneurship has the possibility of strengthening food production and will facilitate greatly in resolving the challenges of increasing joblessness and poverty rates among the growing population in Kenya. For these to be chieved, Ouko et al. (2022) recommend entrepreneurial education, training of rural youths and provision of start-up capital for the graduating students to increase the chances of uptake of agriculture as an enterprise through the establishment of agripreneurship ventures. Similar to the view of Otache (2017) in Nigeria, they suggest that the government should establish a developmental fund to support the start-up process of agripreneurship to establish agricultural incubation centres in Kenya which will help in achieving the Sustainable Development Goals (SDGs) and Vision 2030 goals of transformation of smallholder agriculture from subsistence to an innovative, commercially oriented, and modern agricultural sector while eradicating poverty and providing employment opportunities to the youth.

Efforts of the USAID Feed the Future Nigeria Integrated Agriculture Activity

The USAID Feed the Future Nigeria Integrated Agriculture Activity (also called the Activity)began its intervention programmes in northeast Nigeria in 2019 with the aim of providing economic opportunities in farm and non-farm activities for youth and women in the Northeast which has been devastated by the insurgency. The Activity endeavours to identify opportunities for youth and women in the agribusiness and non-farm micro enterprise clusters. The approach is to deliberately leverage the energy and entrepreneurial abilities of women and youth, and strategically address the constraints limiting their active participation in the market. To this end, the Activity helps by providing training, mentorship, funding, technical advisory services, improved technology, private sector involvement, and the right institutional support to productively engage the women and youth population of Adamawa, Borno, Gombe, and Yobe States of northeast Nigeria in agricultural value chains toward sustainable livelihoods. This is to reduce the rate of unemployment in the region and prevent recruitment of idle youth by the insurgents.

In its efforts to facilitate economic recovery of the devastated Northeast region through youth engagement in agriculture and by building agripreneurs, the Activity has succeeded in training and supporting about 7,986 women and men in the four intervention states. The skills these trainings imparted were critical for overcoming the obstacles in the region and prospering in agriculture. Growing essential crops like maize, rice, and soybeans as well as producing livestock like chickens, goats, sheep, and fish were just a few of the themes covered in the trainings. They also concentrated on taking advantage of chances found in the agriculture value chain. The program gave these young entrepreneurs a well-rounded skill set for success by teaching them how to operate, maintain, and even construct farm machinery in addition to farming, with at least 5000 youth and women participants have adequate training in agribusiness and entrepreneurial skills. Furthermore, thousands of women and youth have also gained an expanded range of income generating opportunities and skills linked to target value chains (labour-saving mechanization, processing, aggregation, and service sector) while a minimum of 500 youth and women received training in farm machinery operations. Additionally, an estimated 200 youth and women were trained in farm machinery repairs and maintenance skills while 2500 youth and women have increased their capacity to engage with

financial institution to access financial services for intensification and diversification of economic activities. Moreover, 900 women and 675 youth were specifically trained to become community-based seed entrepreneurs (CBSEs) to facilitate easy access to improved seed varieties while providing economic opportunities for the agripreneurs in this category.

Review of Empirical Studies

Several studies have examined youth agripreneurship providing varying findings and insights about the role of agripreneurship in the development of youths. Magagula and Tsvakirai, (2020) investigates the nature of youth perceptions and how such perceptions influence their intentions to engage in agripreneurship in Sub-Saharan Africa (SSA) where their findings reveal that the youth generally held positive economic perceptions of the agricultural sector in the region. It was shown that along with the provision of secondary school agricultural education and a significant amount of financial support, these perceptions positively influenced the youth intentions to participate in agripreneurship, affirming the need for improving awareness of the economic opportunities available in the agricultural sector. To sustain these positive perceptions among the youth in SSA, Magagula and Tsvakirai, (2020) recommend that programmes that encourage agripreneurship should target both the socio-economic and cognitive limitations of youths in the region.

Arafat et al. (2018) study the drivers of entrepreneurship in Agriculture industry, they concentrate on early-stage entrepreneurial activities. The paper investigates the role of different cognitive and social capital related considerations in shaping individuals' decision making to engage into agribusiness entrepreneurship. Drawing on the 2013 Global Entrepreneurship Monitor (GEM) administered Adult Population Survey (APS), the study is based on surveys of 69 countries and interviews with more than 1,470 individuals from within their population who are entrepreneurs/ nascent entrepreneurs in agriculture. Arafat et al. (2018) show that the cognitive and social capital are important factors in stimulating early-stage socioeconomic activity in agribusiness. Opportunities for agribusiness entrepreneurship will depend on a person's capability to identify opportunities, capabilities and social network competencies with other existing entrepreneurs. The study also suggests that the fear of failure is itself not a significant obstacle to entrepreneurship expansion in this industry — reducing concerns about risk aversion among nascent entrepreneurs, a long-standing, non-evidence-based concern.

Adesina and Favour (2016) investigated a Youth in Agriculture Program (YIAP) in another study and discovered that youth engagement is significantly influenced by a positive attitude. However, their investigation also revealed barriers that deter young people, such as low agricultural profitability and a lack of equipment and training facilities. This emphasizes how Nigeria's agricultural sector needs to concentrate on value addition in order to increase the appeal of farming.

Adeyanju et al. (2020) provides a more thorough viewpoint using the Fadama program as a case study where they investigated the effects of agricultural initiatives on youth engagement in agribusiness countrywide. They discovered that perceptions of the program, age, and education all had an impact on participation. Significantly, the study found that these initiatives had a favourable effect on young people's future interest in agribusiness. This implies that more funding for these kinds of intervention initiatives could lead to the creation of jobs and a more positive perception of agriculture among youth.

Similarly, under the Fadama Graduate Unemployed young and Women Support (GUYS) program, Adeyanju, Mburu, and Mignouna (2021) conducted a study investigating the effects of agricultural training programmes on youth agripreneurship performance in Nigeria. The show that the degree of agribusiness training received by young agripreneurs has a significant impact on how well they do in agricultural operations over the evaluation period. In Ghana and Malawi, youth involvement in sustainable agriculture was examined by Zulu et al. (2021). They discovered that obstacles young people experience include exclusion from community groups and decision-making processes,

unfavourable opinions from others, and challenges obtaining money and land. Mulema et al (2021) also examined the factors that support and impede youth involvement in agribusiness in Zambia and Vietnam. In Zambia, youth were mostly engaged in the direct production of cattle and crops. Things were different in Vietnam, where youth were engaged in providing necessities to farms, moving cargo, and even counselling other farmers. According to the survey, young people in Vietnam were deterred from pursuing agribusiness due to bad perceptions about agriculture. Many issues were noted in Zambia, such as the insufficient profitability of enterprises, the lack of defined ambitions among young people, and the difficulty in obtaining capital to launch a business.

In the same vein, Mkong et al (2021) examined the elements that influenced Cameroonian college students' choices to major in agriculture as well as the areas of the sector they found most appealing. They employed a technique known as a SWOT analysis, which takes into account both chances and dangers as well as strengths and weaknesses, to comprehend the viewpoints of the kids. The study discovered that a number of factors, such as the students' gender, family income, parents' educational attainment, previous coursework, and prior farming experience, influenced their decision making. The study also examined the factors that motivated students to launch their own farming ventures following graduation. It was discovered that the academic year and the pupils' upbringing were important factors. Because they believed it would be simpler to locate land there, students who grew up in rural areas were more likely to wish to launch their own businesses after graduation.

In a similar scenario, what encourages Nigerian university students enrolled in agriculture studies to continue agricultural employment after graduation was the subject of a more recent study conducted by Inegbedion and Islam (2021). They polled nine hundred students at four different universities in Nigeria. Their results are consistent with Mkong et al.'s (2021). According to both research, students from rural backgrounds are more likely to think about starting their own agricultural business because they think it's simpler to get access to land there. Additionally, Inegbedion and Islam (2021) discovered that students' conviction that agriculture may provide a successful long-term job and their trust in their ability to run an agricultural enterprise are important motivators.

Also, Njeru et al. (2015) conducted a significant study that examined the perceptions of young Kenyans toward agriculture. They discovered that a large number of young Kenyans had a poor opinion of agriculture. Numerous reasons contribute to this attitude, such as out-of-date training programs, inadequate agricultural education in rural areas, and the use of farm work as a form of punishment in schools. Cheteni (2016) discovered, in a similar vein, that young people's disinterest in agriculture in South Africa stems from their poor perception of the industry, which they frequently perceive as unattractive.

Njeru (2017) discovered in another study conducted in Kenya that the attitudes of youth about agriculture had a direct impact on their engagement. More people participated who had a positive view of agriculture. The survey also showed that although some young people thought agriculture wasn't profitable, others felt there weren't enough positive role models in the field. Additionally, they believed that farming was a lowly profession for elderly and uneducated people.

Also, Priyaraj (2017) investigated the variables impacting individuals' choices to work in agriculture in India. Ninety people in Kerala's Kannur district were surveyed. The study discovered that people were considerably deterred from entering the profession by unfavourable perceptions about agricultural entrepreneurship, or agripreneurship. The report suggested awareness-raising efforts to inform the public about the prospects in agriculture and promote involvement in agribusiness as a solution to this problem.

In a 2017 study, Mukembo examined whether students could apply their knowledge of poultry science and entrepreneurial abilities in practical settings by participating in an agripreneurship-focused project-based learning program. Remarkably, the study discovered that students' interest in becoming agricultural entrepreneurs (agripreneurs) was highly influenced by their perception of their own competence in managing an agricultural business, or their perceived agripreneurship abilities. Mukembo (2017) also discovered that a greater proportion of study participants were female than

male and had a strong desire to become agripreneurs. This is in contrast to their own study conducted in Uganda (Mukembo et al., 2020), which discovered that men showed greater interest. This variation among nations may be the result of different agribusiness opportunities' accessibility or local knowledge of those options. Pelzom and Katel's (2018) study examined the attitudes of young people in rural Bhutan toward agriculture and if they were interested in becoming agricultural entrepreneurs. According to the survey, young people who grow up in rural areas and have farming parents are more likely to think that agriculture is a viable career choice.

Adeyanju (2019) investigated the effects of the Fadama GUYS training program in Nigeria on the agripreneurship performance of youth. They polled 977 youth and analysed the results using a unique statistical method. According to the study, young people's success in agripreneurship was influenced by how they felt about the training and how they saw agribusiness in general. According to the study, empowering programs aimed at enhancing youth perceptions of agripreneurship may serve as a catalyst for increased youth participation in agriculture.

In Njombe, Tanzania, Ng'atigwa et al. (2020) investigated the variables that affected young people's engagement in horticultural enterprises. They polled 576 youth and analysed the results using statistical techniques. According to their research, young people were more inclined to get involved in horticultural agribusiness if they had a favourable opinion of it. According to the study, funding training initiatives that educate youth on cutting-edge post-harvest management strategies may enhance their understanding of agripreneurship and inspire them to participate in horticultural enterprises.

The impact of youth perceptions of agriculture on their interest in launching agricultural firms (agripreneurship) was investigated by Magagula and Tsvakirai (2020). Their conclusions demonstrated that the study's young participants held a favourable opinion of agriculture as a whole. However, their belief about receiving financial support played a major role in influencing their enthusiasm in agripreneurship. Put another way, people were more inclined to wish to launch an agricultural business if they thought they could get financial assistance.

Similarly, the elements influencing agricultural university students' decisions to become agripreneurs (agricultural entrepreneurs) were investigated by Shidiq (2020). The study polled 204 students and made use of a well-known theory known as the theory of planned conduct. The data were analysed using a statistical technique known as partial least squares structural equation modelling. According to the study, students' intentions to become agripreneurs were significantly influenced by their attitudes toward agripreneurship, personal traits, their perceptions of others' opinions of agripreneurship (subjective norms), and their self-assurance in their capacity to succeed (perceived behavioural influences).

Furthermore, factors impacting young people's interest in launching agricultural companies, or agripreneurship, in the eastern Democratic Republic of the Congo (DRC) were also investigated by Effiom, et al. (2021). They analysed data from 600 youth in the eastern Democratic Republic of the Congo (DRC) using a statistical technique known as partial least squares structural equation modelling (PLS-SEM), much like Shidiq (2020). It's interesting to note that most young people did not view agribusiness as their first career choice, according to the report. Agribusiness was not the top job choice for the majority of young people in the research, but those who thought that starting an agricultural business was a respectable and socially acceptable endeavour were more likely to be interested in doing so. This shows that societal norms that promote a positive perception of agripreneurship can be quite effective in motivating young people to pursue jobs in this industry.

In Ondo State, Nigeria, a study by Ikuemonisan and Akinbola (2021) examined the variables influencing students' interest in launching agricultural enterprises, or agripreneurship. 120 students at state-run universities participated in the poll, and the data were analysed using a variety of statistical techniques. They discovered that students' opinions of their educational experiences and age had a beneficial impact on their propensity to become agribusiness owners. Interestingly, though, the way that students saw mentorship prospects discouraged them from pursuing the area.

Theoretical Framework

The framework for the study is the theory of change. The basis for effect evaluation is the central idea of this approach, according to Rogers (2014). It is an essential part of any effect evaluation because of the study's focus on causes and effects (Gertler et al., 2016). The idea, developed by Weiss (1995), describes the workings and reasoning behind an initiative's (such a training intervention's) efficacy. In other words, it explains how the activities undertaken by an intervention refers to the way in which a project, program, or policy contributes to an outcome or set of outcomes that bear the acknowledged or predicted consequences. Moreover, as mentioned by Blamey & Mackenzie (2007) and Rogers (2014), it clarifies how an intervention produces the desired results and recognizes the context in which a program is being evaluated in addition to the participant characteristics. According to Gertler et al. (2016), the theory clarifies the program's causal logic in plain language, explores the conditions that must be met to obtain the conclusion, and defines a sequence of activities that result in results.

For example, Connell and Kubisch (1998) and Stein and Valters (2012) further, defining the idea as a "systematic and cumulative study of the links between activities, outcomes, and contexts of the initiative." This implies that determining the anticipated outcomes and the steps that must be taken to achieve them should form the basis of any program assessment. For instance, using agripreneurship to empower youth was the ultimate goal of the feed the future Nigeria integrated agriculture development effort in northeastern Nigeria.

However, the majority of this project was started with the intention of providing agricultural training, which covers knowledge of how to produce crops and livestock as well as marketing, processing, and money management strategies. Weiss (2011) lists three important advantages of using this concept as the foundation for program assessment. First, it makes it easier to maintain the focal point of the program front and centre. Secondly, it facilitates the integration of evaluation results into a broader theoretical and programmatic knowledge base. Lastly, it provides information that matters more for actual policy choices.The explanation provided by Gertler et al. (2016) states that the chains of events (USAID programme) encompass all of the activities that occur during the agricultural program and are intended to achieve the desired effects, which include improved youth empowerment and agripreneurship performance. Young people are exposed to a variety of agribusiness training programs in order to provide them with the abilities and character traits needed to excel in the agripreneurship industry and improve their performance.

METHODOLOGY

Description of Study Area

This research was conducted in northeastern Nigeria, with a particular focus on the states where USAID Feed the Future Nigeria Agriculture Activity intervention areas are localized to help hardworking youth and women accelerate economic recovery through agriculture-driven economic growth while strengthening their livelihoods strategies. The northeastern part of Nigeria has remained one of the most economically marginalized areas in the country, and over recent years it has been plagued by devastating insurgency carried out largely by Boko Haram. In this context, women were identified as the most affected demographic due to actions of violence against them carried out by distinguished insurgents with cases of abduction and kidnapping, sexual violation in addition to all forms of breach directed at girls and women over the last ten years.
The study has identified Borno and Adamawa as focal states, where USAID Feed the Future Nigeria Integrated Agriculture Activity interventions are-beamed on. Borno State is located in the northeast Nigeria sharing boarders with Chad to its northeast, Niger from the Northwest and Cameroon from The East. The region lies between latitude 10° and 14°N and longitude 11 °and 14°E, covering over a vast expanse of semi-arid land. The insurgency of Boko Haram and the Islamic State in West Africa Province (ISWAP) insecurity has a disastrous effect on the state as insecurity has become common place. These groups have been present in the area for more than 10 years, which has resulted in wide-scale violence and displacement along with infrastructure crumbling. This insecurity has paralyzed the economy of that area, increased poverty levels and stalled development programs in such an

immensely endowed region. An overwhelming majority of the people in Borno State live below poverty line, and many are unable to meet their basic needs. During the protracted conflict, agriculture has been disrupted in a significant manner which included cutting access to critical services, inside and outside of Syria. Youth in Borno State face significant barriers, particularly with respect to limited economic opportunities.

Adamawa State, another state and the north-eastern part of Nigeria shares boarder to Borno at its North; Gombe on Western side having Taraba South by southwestwere Cameroon international border straits. Adamawa falls between latitudes 7° and 11°N, and longitudes 11°and 14 °E with mountain ranges like Madagali hills valleys & plains river systems regulated by Elephant grassland. The state has dealt with significant security problems largely due to the damage done by Boko Haram from neighbouring Borno State. While Adamawa state has not been hit as hard by the insurgency, certain areas within it are now experiencing violence and humanitarian crises with disruptions to local economies caused by insurgent activities. The poverty challenge in Adamawa is still glaring and with a critical mass of the population below the poverty line. This interplay of conflict and restricted economic opportunities has exacerbated the poverty situation, especially in rural areas where necessary services or infrastructure is missing. Empowerment of women in Adamawa State is also a herculean task with the majority being denied opportunities for sound education, health services and economic emancipation. Cultural norms and entrenched gender inequality also limit their ability to participate more fully in the economic and social life of the state.

Study design

This study employssurvey-based cross-sectional research to generate data on some of the identified beef management practices among beneficiaries that participated in USAID Feed the Future (FTF) training and support programs. The survey research design was used because it is an excellent way to systematically collect information from the broad range of stakeholders who might have personal and collective experiences with respect to changes associated with how FTF operates.

In order to provide a comprehensive understanding of the program, both qualitative and quantitative data collection methods were used in this study. Open-ended questions, interviews or focus group discussions were used to collect qualitative data for gaining a deeper understanding of the participants' personal experiences, views and challenges. Importantly, this qualitative data reveals the nuanced effects of FTF interventions by elucidating individual and contextual factors that influence participants' responses to the program.

On the other hand, structured questionnaires with close ended questions required quantitative data that was used to measure specific variables like any change in knowledge or skills and business outcomes. The quantitative method helps to statistically analyse patterns and relationships regarding how successful participants felt in relation so their FTF session.The data that was collected was then analysed through descriptive method. Descriptive statistics were done to describe the typical characteristics of dependent and independent variables, including frequencies and percentages for categorical features that provide a snapshot profile summarizing who responded (or not) about each question.

Population and Sample

The population of the study included all the participants/beneficiaries of the USAID Feed the Future in different enterprises from Adamawa and Borno states. The total beneficiaries of the intervention are 7,986 providing a total population for this study. The sample size for the study was determined using Taro Yamane's formula:

$$n = \frac{N}{1 + Ne^2} \quad \text{---------- (1)}$$

Where n = sample size

N = population size

e = the acceptable sampling error (margin of error)

Substituting the N = 7,986 and e = 0.05 (5% error) into equation 1, the resulting sample size for this study is 380.

Method of Data Collection

The research utilized a primary approach for data acquisition through the distribution of structured questionnaires facilitated by qualified research aides from Adamawa and Borno states, utilizing the Kobocollect mobile-based data collection application as an instrumental tool.

Method of Data Analysis

The study employed descriptive method of data analysis in the forms of tables. The descriptive method aided in describing the nature, and distribution of the data collected.

4. RESULTS AND DISCUSSION

This section provides the results of the data collected and discussed the findings using descriptive method in the form of frequency tables. It focuses on the perceptions of the respondents/participants about the role of Feed the Future Nigeria Integrated Agriculture Activity in promoting and facilitating youth agripreneurship for sustainable agriculture-led growth and building resilience among youth in the Northeast region.

4.1 Perceptions of Participants/Respondents on the Role of Feed the Future Training and other Support Interventions in Crop Production Business

This section presented the perceptions of participants related to Feed the Future (FTF) training and support interventions towards improved crop production businesses among youth in Northeast Nigeria. The FTF program focused on building young agripreneurs who represent the face of hope for economic growth in the northeast region.

Table 4.1.1 Can you say that the FTF program provided you with a better understanding of crop production?

Response	Frequency	Percent
No	12	3.72
Yes	311	96.28
Total	323	100.00

Source: Field Survey, 2024.

The data shows that participants in Northeast Nigeria have an overwhelmingly positive opinion of the Feed the Future (FTF) program, especially when it comes to how they perceive its impact on their knowledge about crop production strategies. Of 323 respondents,96.28% (311) claimed that FTF program taught them crop production in more detail. It is a high percent achieving program that shows how effective the program has been able to increase knowledge and skills in crop production, which should be the core of successful youth agripreneurs region wide. The program was unhelpful for 12 participants (3.72%).

4.1.2 How can you rate your understanding of crop pre-planting, planting and post-plant Management as a result of FTF Training Intervention (Agronomic Practices for Maize, Rice and Sorghum)?

Response	Frequency	Percentage

a. Excellent	216	67.50
b. Good	92	28.75
c. Satisfactory	11	3.44
e. Poor	1	0.31
Total	320	100.00

Source: Field Survey, 2024.

A highly favourable result was found in the assessment of crop pre-planting, planting and post plant management among maize, rice and sorghum following the FTF training intervention. Of the 320 respondents,65.7% of people (216 participants) rated their comprehension as “Excellent.” This indicates that the level of agronomic information required in managing a crop successfully is something these farmers acquired effectively through learning using FTF program. Furthermore, 92 (or 28.75%) participants chose 'Good', which is simply a testament that it was able to lift up near all candidates. So put together, 96.25% of responses (Excellent + Good) believe that the training has benefitted them in enhancing their understanding on agronomic practices. A small number of responses (3.44%) rated knowledge as "Satisfactory", suggesting additional support, or reinforcement in the training materials might be needed. Although the program was overall very effective, one respondent rated his/her understanding of it as “Poor” (0.31%), indicating that there is some need for filler work in places where greater depth may be necessary to effectively impact all the participants.

Table 4.3 By how many bags of output (100kg= one bag) do you believe your crop production has increased because of the Training by the USAID Feed the Future

Response	Frequency	Percentage
Less than 100 kg	176	68.75
100-200 kg	43	16.80
201-300 kg	18	7.03
301-400 kg	8	3.13
401-500 kg	4	1.56
501-600 kg	2	0.78
601-700 kg	3	1.17
701-800 kg	1	0.39
901-1000 kg	1	0.39
Total	256	100.00

Source: Field Survey, 2024.

Data on anticipated crop production (in 100 kg bags) help to evaluate the perceptions of beneficiaries with regard to their agricultural productivity as a result of the Feed-the-Future training intervention. A total of 176 out of 256 respondents who responded to this question, predicted their crop production increases by less than a paltry extra weight (100 kg). In other words, most of the participants feel that they should see at least a slight increase in yield (likely enough to offset their costs), even if everything goes fine following those trainings—this is under assumption made available resources and environmental conditions.

A proportionately smaller number of respondents, 43 (16.80%), anticipate in the same gain range as productivity increases but with an output between 100-200 kg/ turning marginally favourable. The responses display fewer participants, 7.03% or (18), responded to larger production increase of somewhere between 201-300 kg and only 3.13% (8) participants indicated increased output between 301-400kg. Also, a minor percentage, 1.56% (5 participants) showed that their production rose majorly between 401-500 kg, with less than a handful expected gains of between 501-1000kg.

Table 4.1.4 How can you rate your understanding of the problems and prospects of crop

production as a result of the USAID Feed the Future Training?

	Frequency	Percentage
a. Excellent	179	56.11
b. Good	119	37.30
c. Satisfactory	21	6.58
Total	319	100.00

Source: Field Survey, 2024.

The evaluation of participants' understanding of the problems and prospects related to crop production following FTF training intervention showed a broad level comprehension among them. Most of the participants 179, (56.11%), believed their comprehension to be "Excellent"; This reveals that well over 50% of the respondents are very confident in their ability to find and enter crop production challenges and opportunities. There were also 119 respondents (37.30%) who indicated understanding "Good". Together, these answers represent 93.41% of the respondents as possessing a sound knowledge base on issues and potentials in crop production, indicating that FTF leading to useful lesson learnt can effectively provide participants with necessary insights for successful agripreneurship. Also, 9.5% of the respondents who participated understood better and considered themselves with "Satisfactory" understanding while a small size base, 6.58%, equivalent to 21 participants rated this statement in between the levels mentioned above. This does tell us that some participants might need a bit more instruction to grasp every detail of crop production, but at least they know something beforehand.

Table 4.1.5 Can you say that the FTF program in this category has improved your productivity?

Response	Frequency	Percentage
No	18	5.56
Yes	306	94.44
Total	324	100.00

Source: Field Survey, 2024.

Participants overwhelmingly regard USAID Feed the Future (FTF) program to have a positive impact on their productivity. Majority of the participants, 306, reported an improvement in productivity after participating in FTF, totalizing a rate equivalent to 94.44% perfect scores out of 324 responses. Such an overwhelming majority points at how much the program has brought about a change in agricultural practices and productivity of farmers across the intervention states. This indicates that most of the participants have successfully implemented what they learned in the program (which means it was effective), which is driving changes in their productivity.

The program had, not surprisingly, no effect on the productivity of 18 (5.56% in contrast). This percentage seems small, but it reflects some kind of exceptionality or a missed gap in the program for those few. This could be due to circumstances that are only pertinent to the individual, or a divergence in previous learning perhaps; but some factor apparently makes it impossible for people really ever use what was learned. The FTF program which affirmatively reported high level of productivity improvement among the beneficiaries/participants can be taken as contributing significantly to agricultural development in Northeast Nigeria where food security and economic stability is a major worry.

Table 4.1.6 How do you describe the improvement in your productivity as a result of FTF Training Intervention?

Response	Frequency	Percentage
a. Very little improvement	29	9.60
b. Some improvement	18	5.96
c. Moderate improvement	229	75.83

d. Significant improvement	22	7.28
e. Very significant improvement	4	1.32
Total	302	100.00

Source: Field Survey, 2024.

A positive albeit uneven effect is also found in participants' self-assessed increase in productivity from the Feed the Future (FTF) training intervention. 75.83 % [229 participants] expressed witnessing moderate improvement. A slightly lower number of respondents, 7.28% (22) stated "significant Improvement," and only a tiny percentage represented by four individuals reported that they experienced an even much higher rate level i.e., about “1.32 %,” explaining very significant improvement in their productivity as described by the parameter. These statistics imply the training profited a lot of individuals, sooner or later sufficiently that their efficiency enhanced considerably. These results suggest that agricultural training programs such as FTF should be sustained and improved. The large number of participants showing mild to significant improvements indicates that such projects should be invested in further.

4.2 Perceptions on how Feed the Future Training and other support Interventions impacted the Spray Service Providers (SSP) in Northeast Nigeria

This section examined the perceptions of Spray Service Providers (SSPs) in Northeast Nigeria on how Feed the Future (FTF) training and support interventions have changed their professional skills and practices. The purpose of the FTF program was to improve SSP knowledge and capacity as they are major contributors to ensuring pesticide application in agricultural production meets safety standards while building their career as agripreneurs. It examines from the perspectives of SSPs, experiences and feedback on how FTF interventions have contributed to strengthening their skills in pesticide management (use equipment, detect counterfeit products are find good practices for environmental and human safety). These results provide important insights for policy makers and program designers in their efforts to enhance agricultural productivity as well increase safety of the production process.

Table 4.2.1 How can you rate your knowledge of responsible use of pesticides as a result of the USAID the Feed the Future Training?

	Frequency	Percent
Excellent	118	37.34
Good	122	38.61
Satisfactory	68	21.52
Fair	7	2.22
Poor	1	0.32
Total	316	100.00

Source: Field Survey, 2024.

Overall, the assessment of Spray Service Providers (SSPs) in Northeast Nigeria indicates positive changes from SSPs about responsible use of pesticides following Feed the Future (FTF) training and support interventions as shown in the table. A total of 316 respondents rated their knowledge as "Excellent" (37.34% [118 participants]) or "Good" (38.61% [122 participants]). In combination these figures show that over 75% of the SSPs have better understanding of responsible pesticide use, illustrating how effective FTF has been in bringing vital knowledge and best practice into this agribusiness.

Another 21.52 % (68) considered their knowledge to be on 'Satisfactory' which showed that these participants do know what the pesticides are but there is a room for improvement. This group accounts for the large chunk of SSPs with potential to gain from further or refresh training in best practices that would help them bump their knowledge up a notch.

The proportion of those who rated their knowledge to be "Fair" was 2.22% (7 participants) and a only

one participant representing 0.32 % rated theirs as "Poor", inferring that for very few individuals this training is not effective which can also be looked at critically. Some of these people may need focused assistance or alternative delivering techniques to determine that they meet the level for safe and proficient pesticide application.

These results overall demonstrate the effectiveness of FTF training to increase SSPs knowledge and improve their practices in terms of pesticide use. The fact that so many practitioners rate themselves as “Excellent” or at least having a good understanding indicates success in promoting responsible pesticide management essential for environmental sustainability and the welfare of agricultural workers and communities alike. Yet as the existence of a minority who felt less knowledgeable implicit, there will continue to be demand for intensive training efforts and potentially more individualised educational approaches just so that all SSPs are up to speed regarding pesticides applications. This highlights the need for ongoing supportive policy and education to enable high-level performance of pesticide use in this region by policymakers and program designers.

Table 4.2.2 As a result of the FTF training, has your skill of the use of Knapsack sprayer improved?

	Frequency	Percent
No	13	4.04
Yes	309	95.96
Total	322	100.00

Source: Field Survey, 2024.

The comprehensive training program for Spray Service Providers shows significant performance improvement as it relates to being skilled in knapsack spray rating post training by the Feed the Future (FTF). The improvement in skills to use knapsack sprayer as evaluated among the trainees, an overwhelming 95.96% (309) out of 322 respondents responded that they had improved. This large majority highlights how well the FTF program is improving these much-needed on-the-job practical skills, for both time-efficiency and safety during pesticide applications.

This is a very important improvement for the efficient use of pesticides, which is vital to protect crops and reduce environmental as well as health risks. However, the small subset of participants that did not show any improvements to skill may require additional research and more focused interventions addressing unique impediments to skill development.

Table 4.2.3: How can you rate your skill of calculating, measuring and mixing of pesticides as a result of the USAID Feed the Future Training?

	Frequency	Percentage
a. Excellent	196	61.06
b. Good	98	30.53
c. Satisfactory	25	7.79
d. Fair	1	0.31
e. Poor	1	0.31
Total	321	100.00

Source: Field Survey, 2024.

These results demonstrate a strong positive impact on the assessment of SSPs' skills in computing, measuring and mixing pesticides after they receive training through Feed the Future (FTF initiatives). Overall, 61.06% (196 participants) of the 321 respondents rated their skills as "Excellent" meaning most are at an advanced stage in getting accurate measurement of pesticides.

Also, 98 participants/respondents who consider their abilities “Good” (30.53%) supports this training effectiveness. This high overall percentage (91.59%) therefore confirms that the training was in great part effective at enhancing technical competence with pesticides amongst participants. A smaller minority classified their abilities as “Satisfactory” (7.79% or 25 students), indicating that

these respondents have some basic knowledge but also may benefit from additional practice. Only 0.31% (1 participant each) rated their skills as "Fair" or Poor," which suggests that the training was slightly less effective for only a tiny proportion of participants with greater needs accessed, in order to ensure they reach sufficient levels before moving on.

Table 4.2.4: As a result of the FTF training program, can you identify counterfeit and illegal pesticides?

	Frequency	Percentage
No	23	7.12
Yes	300	92.88
Total	323	100.00

For the ability of participants to detect counterfeit and illegal pesticides, following the Feed the Future training program we also noticed a very high positive result. With a total of 323 respondents, the training was able to help 92.88 per cent (300 participants) in identifying counterfeit and illegal pesticides now as highlighted above. It is this high percentage of people that appear to reflect the success of FTF program engaging its participants to have knowledge and awareness about authenticity identification and evaluation on pesticides which are important for agricultural chemicals utilization in a safe way.

Another 7.12% (23 respondents) of the group felt unable to identify counterfeit and illegal pesticides, meaning that training had not a significant impact on this minor portion of population This might flag certain problems or areas of training that would have to be re-addressed so that all participants are able identify counterfeit pesticides with certainty.

4.3 Perceptions on the Impact of FTF on General Management Skills of the Respondents/Participants

This section provides participants perceptions about how the Feed the Future (FTF) program affected their general management skills. Given the critical importance of stewardship to ensure success and sustainability in agribusiness ventures, it is planed that FTF will consolidate improvements among youth and women. The program aims to empower them, through personalized training and support with the specific knowledge and skills they require in order to successfully manage their enterprises.

Table 4.3.1: How can you rate your enterprise management/business planning skills as a result of the USAID Feed the Future Training?

Response	Frequency	Percentage
Excellent	172	53.42
Good	120	37.27
Satisfactory	25	7.76
Fair	4	1.24
Poor	1	0.31
Total	322	100.00

Source: Field Survey, 2024

Although the survey results show that respondents are very comfortable in their assessment of enterprise management and business planning skills, such confidence is fully justified. Of the 322 participants an overwhelming majority (53.42%, n = 172) reported they were “Excellent” at overseeing and planning business affairs, thus suggesting a high level of both competence and

readiness for this area. This suggests that these participants have been well trained and supported (e.g., through the FTF program) to build agribusiness managerial skills.

Another 37.27% (120 respondents) found their ability level to be “Good”, which highlights the general efficacy of the training, with almost all participants being at least adequately proficient in management practices commonly seen across enterprises. Combined, 90.69% of respondents self-rated their capability for business planning as “Excellent” or Good”, together reflecting a strong grounding in business planning and management among nearly all participants.

Fewer respondents assessed their capabilities as Satisfactory (7.76%, 25 responders), Fair (1.24%, 4 responders), and Poor (0.31%, or one responder). These ratings indicate that although most participants are self-assured in their knowledge and skills, there exists a minority within the group for whom development may be needed to increase levels of proficiency.

In general, these results show the influence of training interventions to stimulate entrepreneurial and managerial skills that is indispensable for agribusiness opportunities. These results have implications for policy makers and program designers, suggesting that the development of such training programs should continue to prioritise maintaining high quality standards while also catering towards those who still need further development in order to achieve excellence in managing their enterprise.

Table 4.3.2: How do you rate your skill of undertaking business feasibility study After FTF Training?

Response	Frequency	Percentage
Excellent	206	64.17
Good	95	29.60
Satisfactory	17	5.30
Poor	3	0.93
Total	321	100.00

Source: Field Survey, 2024

Participants' performance is great when evaluating their ability to conduct a business feasibility study post Feed the Future training (FTF). A majority of the 321 respondents—64.17% (206 respondents) graded their skills at feasibility studies as “Excellent.” And that means participants have become much better at screening business ideas — the lifeblood of successful agribusiness.

What is more, 29.60% (95 responses) rated their skills as 'Good', so it seems that almost all users are effectively skilled in this aspect after the training process. The collective "Excellent" and "Good" scores, totalling at 93.77% of the responses, validates the effectiveness of FTF in refining an individual's critical analytical skills to help them make sound decisions when it comes to agribusiness. Then, a smaller portion of respondents deemed their skills as "Satisfactory" (5.30%, or 17) which indicates that these participants have learned how to carry out feasibility studies properly but there could be additional improvement opportunities available. And only 3 respondents (0.93%) rated their skills Poor, which speaks to a very high level of training efficacy and that there are merely a small handful of participants who may require additional assistance.

Table 4.3.3: How can you rate your marketing skill after the FTF Training?

Response	Frequency	Percentage
Excellent	148	46.25
Good	113	35.31
Satisfactory	55	17.19
Fair	2	0.63
Poor	2	0.63
Total	320	100.00

Source: Field Survey, 2024

Results of the evaluation of entrepreneurship satisfaction with the Feed-The-Future (FTF) training relating to marketing skills, a core business attribute, provide an impressive finding. Nearly half of the participants (148) have excellent improved their marketing skills and possibly this is a positive sign for well promotion & distribution to sell their agriculture products. Meanwhile, 35.31% (113 people) said they were "Good" at marketing, which is a strong sign that FTF training has allowed users to skill-up. Overall, the "Excellent" and "Good" ratings total 81.56% of respondents highlighting that a good chunk have already learned those valuable lessons from marketing side which would in turn help them with building their agribusiness growth.

Furthermore, 17.19% (55) of the participants self-rated their marketing skills as 'Satisfactory,' which makes a smaller fraction of those respondents who enjoyed having some marketing skills but also felt they can improve more on it. However, the result shows that only less than 1% of respondents rated their skills as 'Fair' (2/319) or below the midway point, and only a minimal number said they were low overall at "Poor"(2) suggesting the need for additional support.In general, virtually all participants are fully trained to effectively market their products, thus increasing competitiveness and profitability within the agricultural community.

4.4 Perceptions on the Role of Feed the Future in Building Youth Agripreneurs in Agri Processing (Tomapepo – locally made tomato paste)

This section provides detail analysis of the role of USAID Feed the Future Nigeria Integrated Agriculture Activity in promoting youth agripreneurship in Tomapepo production which was introduced by the Activity to empower women and youth in tomato processing. The section focuses on identifying the beneficiaries of the Tomapepo training program, analysing their knowledge of the product, business registration and market dynamics.

Table 4.4.1: Did you benefit from the FTF training on how to produce Tomapepo?

	Frequency	Percent
No	20	6.23
Yes	301	93.77
Total	321	100.00

Source: Field Survey, 2024.

Results from the assessment on Feed the Future (FTF) program's impact of building youth agripreneurs based in a provision area starting up with early transformative processing preferences such as Tomapepo(Tomato paste indigenous produce), undoubtedly confirms an enormous advantage. A total of 301 out of all respondents (321) or an extensive majority equivalent to record high level, specifically amounting to 93.77% indicated that the FTF training on Tomapepo was useful in improving their skills. The high percentage implies that the FTF program has been effective in training young agripreneurs to acquire knowledge and skills on value-added processing within the agricultural sector.

While 93.8% (302 respondents) of those surveyed found they benefited, there are still those left unsatisfied with their experience. The remaining small minority may among other things reflect barriers in accessibility, understanding etc which inhibited the extent they could make best use of the available training.

Collectively, these data support that the FTF program is an important conduit for helping to promote young peoples' involvement in agri-processing by means of Tomapepo production. Its success is important to transboundary movement of local food, minimize post-harvest losses and create economic access for the youth agripreneurs.

Table 4.4.2: How can you rate your overall knowledge of Tomapepo Business as a result of the USAID Feed the Future training?

	Frequency	Percent
Excellent	225	75.76
Good	59	19.87
Satisfactory	12	4.04
Poor	1	0.34
Total	297	100.00

The result of the evaluation toward participants in general knowledge about Tomapepo (local made tomato paste) after attending training FTF seen more positive impact. A total number of 225 answered this question, and a significant amount (75.76%) rated their knowledge of Tomapepo as Excellent. This reaction reinforces the effectiveness of optimizing more participants in agri-processing to be competent enough. Furthermore, 19.87% of the participants expressed that they had a good understanding of Tomapepo business. The combined excellent and good amount to 95.63% indicating that almost all of the participants have learned a strong theoretical and practical background for being successful in the Tomapepo business.

Fewer still rated with a more moderate amount of understanding, "Satisfactory' (4.04%, or 12), again putting it in the 'decent but room for improvement category'. The training was less effective for 0.34%, or only one participant, which suggests that extra help is needed to bring this person up to an acceptable level of proficiency. Taken together, these results demonstrate the substantial effectiveness of FTF training in increasing participants' knowledge about Tomapepo production.

Table 4.4.3: Have you registered your Tomapepo business with any government agency?

	Frequency	Percent
No	33	10.31
Yes	287	89.69
Total	320	100.00

Source: Field Survey, 2024.

The participating producers of Tomapepo who were asked about the registration status of their businesses with government agencies after being trained by Feed the Future (FTF). Of 320 respondents who answered this question, the majority (89.69%, n =287) registered Tomapepo as a business with a government department The fact that 97% of the participating youth have now fully registered their businesses shows very high registration rate reinforces this, since formalization is a popular thing among young agripreneurs which in turn leads to access to legal protection. support services and market opportunities benefits from operating as FTF beneficiaries do with supermarket chains or other buyers who are looking for minimal risk transactions without all the time required on due diligences."

And yet 10.31% (33 respondents) have also not registered their businesses which suggests that a minor group of participants might find it difficult to comprehend the importance or ease in using, and subsequently signing up for such systems as well. This subset is indicative of an area that could arguably require more support or guidance and can be fully incorporated into the formal economy.
These results demonstrate a solid impact of the FTF program on increasing business formalization among Tomapepo producers, an essential step for sustainability and eventual growth in agri-processing. These findings point towards the ongoing need to encourage business registration among those who have yet to formalize their firms in order for these youth-led enterprise is able to reach their economic potential of policymakers and program designers.

Table 4.4.4: Did FTF Integrated Agriculture Activity facilitate the registration of your Tomapepo Business?

	Frequency	Percent
No	3	1.07

Yes	277	98.93
Total	280	100.00

Source: Field Survey, 2024.

There is nearly uniform agreement among participants in the assessment of whether or not the FTF Integrated Agriculture Activity has helped promote Tomapepo businesses' registration. Of the 280 people that responded to this question, a notable percentage of 98.93% (277 individuals) indicated that FTF had indeed significantly facilitated in the registration process for Tomapepo businesses. This almost universal response is a testament to the value it delivers in mentoring and accompaniment of young agripreneurs during formalizationfor business authenticity and longevity.
However, an extremely small percentage (1.07%) of the participants indicated that FTF program was not effective towards their business registration. While this is an extremely small size, it indicates that there may have been unique instances in which participants did not need help — or the program was insufficient to meet all their challenges.

The findings suggest that overall, FTF Integrated Agriculture Activity was very successful in assisting participants to formalize their businesses (especially for Tomapepo). This high facilitation rate highlights the program as crucial in getting youth agripreneurs to be part of formal economy where they can achieve scale and success.

Table 4.4.5: Have you been able to increase your Tomapepo buyers as a result of the training and support received from the FTF Integrated Agriculture Activity?

Response	Frequency	Percent
No	10	3.13
Yes	310	96.88
Total	320	100.00

Source: Field Survey, 2024.

The assessment of whether there has been increases in Tomapepo Buyers as a result Feed the Future (FTF) Integrated Agriculture Activity shows an impressively result with 96.88% (310 participants) out of a total 320 respondents responded positively to the question. In fact, the majority of respondents saw such improvement in their marketing skills and acquiring customers that it led to business success.A mere 3.13% (10 participants) said they were unable to grow their buyers. While this is only a tiny proportion of overall participants, it points at possible unique problems or issues that the program might expect to address in further waves. Overall, the results show that FTF Integrated Agriculture Activity has a significant contribution and empowering impact on how to effectively sell Tomapepo products andgain more buyers. Overwhelming customer acquisition growth is a strong indicator that the program has had significant impact on helping youth agripreneurs increase their market reach.

Table 4.4.6: By what percentage has your Tomapepo sales revenue increased as a result of the training by USAID Feed the Future?

	Frequency	Percentage
1-10%	179	69.92
11-20%	32	12.50
31-40%	9	3.52
41-50%	17	6.64
More than 50	19	7.42
Total	256	100.00

Source: Field Survey, 2024.

Results show that participants experienced a significant increase in Tomapepo sales revenue after the completion of training by Feed the Future (FTF) Nigeria Integrated Agriculture Activity, with different proportions achieving growth. Of the 256 respondents that answered this question, the

mostsignificant percentage (69.92% or 179 participants) of the respondents indicated that their sales revenue improved by a modest 1-10%. A smaller group of 12.50% saw their revenue increase, by around three times as much (+11-20%), suggesting a more pronounced boost in sales performance from the training. The result also shows that7.42% (19 people) saw a revenue increase of more than +50%, and 3.52%(9 people) experienced up to 40%,6.64% (17 people) witnessed revenue increase between 41 and 50%. These numbers show that the FTF training is yielding large economic successes for the participants.

The results suggest that FTF Integrated Agriculture Activity has been highly effective in increasing sales revenue for most Tomapepo producers — including a group with modest gains, another who experienced drastic improvements and some maintaining or even decreasing their revenues. This shows the results of how the program gave a boost to business performance & revenue generation amongst youth agripreneurs.

Conclusion

This study focuses on youth agripreneurship in Northeast Nigeria by thoroughly analysing the role of USAID Feed the Future Nigeria Agriculture Activity in promoting youth participation in agribusiness for sustainable income generation, livelihoods and poverty reduction. The study employs survey research design and collects data on the respondents/participants or beneficiaries of the intervention in the area of crop production, spray service provision and agri processing focusing on Tomapepo production. The study's sample size of 380 was determined from the total population of 7,986 participants in the program and data was collected using structured questionnaires administered by trained data collectors.

The analysis of perceptions of participants/respondents on Feed the Future training and other support interventions in crop production businessprovided positive outcome based on the responses from the participants. In fact, 96.28% of the respondents indicated that FTF program taught them crop production in more detail demonstrating the how effective the program has been able to increase knowledge and skills in crop production. Also, 65.7% of them rated their comprehension of the training on agronomy as "Excellent." This indicates that FTF program has provided the participant with high level of agronomic information required in managing a crop successfully. Substantial percentage (over 90%) of the participants had good and excellent understanding of the prospects and problems of crop production.

Furthermore, perceptions on how Feed the Future training and other support interventions impacted the Spray Service Providers (SSPs) in Northeast Nigeria also shows some interestingly positive results. Over 75% of the SSPs have better understanding of responsible pesticide use, illustrating how effective FTF has been in bringing vital knowledge and best practice into this agribusiness.The training was able to help about 92.88%of the respondents in identifying counterfeit and illegal pesticides reflecting the success of FTF program engaging its participants to have knowledge and awareness about authenticity identification and evaluation on pesticides which are important for agricultural chemicals utilization in a safe way.In the area of pesticide management, SSPs reported substantial gains in their ability to use pesticides responsibly, operate knapsack sprayers, and identify counterfeit products, highlighting the program's success in promoting safe agricultural practices. The positive feedback from SSPs suggests that the FTF interventions are helping to improve environmental safety and crop productivity in the region.

Similarly, perceptions on the impact of FTF on general management skills of the respondents/participants indicate that a combined, 90.69% of respondents self-rated their capability for business planning and management as "Excellent" or Good", together reflecting a strong grounding in business planning and management among nearly all participants. Also, collective "Excellent" and "Good" scores, totalling at 93.77% of the responses, validates the effectiveness of FTF in refining their analytical skills to help them make sound decisions when it comes to agribusiness. Moreover, overall, "Excellent" and "Good" ratings totalling 81.56% of respondents

highlighted that they learned valuable lessons from marketing side which would in turn help them facilitating their agribusiness growth.The role of Feed the Future Nigeria Integrated Agriculture Activity in promoting agri processing has also been overwhelmingly acknowledged by the participants. Perceptions on the role of Feed the Future in building Youth Agripreneurs in Tomapepo production have been very positive. An extensive majorityamounting to 93.77% indicated that the FTF training on Tomapepo was useful in improving their skills.

Recommendations

Based on the findings of this study, the following recommendations have been made:

1. Government and non-governmental organisations especially USAID Feed the Future, should consider sustaining and expanding such training intervention programs, ensuring that they are accessible to a broader audience while addressing any areas of the training that might require improvement. This approach will help maximize the program's impact, equipping younger agripreneurs with the skills needed to thrive in agriculture.
2. Policymakers should focus on creating an enabling environment that allows these young agripreneurs to translate their skills into substantial productivity gains, thereby contributing more effectively to food security and economic development in Northeast Nigeria.
3. Policymakers should focus on identifying and addressing the barriers that prevent some participants from achieving significant productivity gains, such as access to resources, technology, or additional training. By so doing, it will help in maximizing benefits associated with future interventions which will further contribute to food security and economic development in the region.
4. Future agripreneurship interventions should ensure that diverse needs of all participants are taken into account to maximize the overall impact.

REFERENCES

Addo, L. K. (2018). Factors influencing Agripreneurship and their role in Agripreneurship Performance among young Graduate Agripreneurs. International Journal of Environment, Agriculture and Biotechnology, 3(6). 2051-2066.

Adesina, T. K., & Favour, E. (2016). Determinants of participation in youth-in-agriculture programme in Ondo State, Nigeria. Journal of Agricultural extension, 20(2), 104-117.

Adeyanju, D. F. (2019). Impact Of Agricultural Training Programmes on Youth Agripreneurship Performance and Empowerment in Nigeria (Doctoral dissertation, University of Nairobi).://erepository.uonbi.ac.ke/bitstream/handle/11295/108201/Adeyanju_Impact%
20Agricultural%20Training%20Programmes%20On%20Youth%20Agripreneurship%20Performance%20And%20Empowerment%20In%20Nigeria.pdf?sequence = 1

Adeyanju, D. F. (2019). *Impact Of Agricultural Training Programmes On Youth Agripreneurship Performance And Empowerment In Nigeria* (Doctoral dissertation, University of Nairobi).

Adeyanju, D., Mburu, J., Mignouna, D. B. (2020) Impact of Agricultural Programs on youth Engagement in Agribusiness in Nigeria: A Case Study. Journal of Agricultural Science, 12(5). 145-154.

Adeyanju, D., Mburu, J., Mignouna, D., & Akomolafe, K. J. (2021). Determinants of youth participation in agricultural training programs: the case of Fadama program in Nigeria. International Journal of Training Research, 19(2), 142-166.

Allen, A., Howard, J., Kondo, M., Jamison, A., Jayne, T., Snyder, J., ... & Yeboah, K. F. (2016). Agrifood youth employment and engagement study. *Michigan State University: East Lansing, MI, USA.*

Bairwa, S. L., Lakra, K., Kushwaha, S., Meena, L. K., & Kumar, P. (2014). Agripreneurship development as a tool to upliftment of agriculture. International Journal of Scientific and Research Publications, 4(3), 1-4.

Blamey, A., & Mackenzie, M. (2007). Theories of change and realistic evaluation: peas in a pod or apples and oranges?. *Evaluation*, *13*(4), 439-455.

Cheteni, P. (2016). Youth Participation in Agriculture in the Nkonkobe District Municipality, South Africa. Journal of Human Ecology, 55(3), 207-213.

Connell, J. P., & Kubisch, A. C. (1998). Applying a theory of change approach to the evaluation of comprehensive community initiatives: progress, prospects, and problems. *New approaches to evaluating community initiatives*, *2*(15-44), 1-16.

Cooper, A. (2023). Partnering for Impact: Leveraging Feed the Future Innovation Labs to Achieve the US Agency for International Development's Food Security Objectives at the Mission Level.

Dakare, O. (2023). Fostering Agropreneurship Practice in Nigeria: A Look Beneath The Surface. *Management & Marketing Journal*, *21*(1).

Dias, C. S., Rodrigues, R. G., & Ferreira, J. J. (2019). Agricultural entrepreneurship: Going back to the basics. *Journal of Rural Studies*, *70*, 125-138.

Dviwedi, A. K. (2018). Determinants of Agricultural Entrepreneurship: A GEM Data Based Study.

Effiom, M. E. M., & Efi, A. (2021). Entrepreneurship: An Option For The Mitigation Of Social Upheavals Among Nigerian Youths Social Upheavals Among Nigerian Youths. *International Journal of Management Studies, Business & Entrepreneurship Research ss & Entrepreneurship Research*, *6*(2).

Gertler, P. J., Martinez, S., Premand, P., Rawlings, L. B., & Vermeersch, C. M. (2016). *Impact evaluation in practice*. World Bank Publications.

Ghali, S., Goedhuys, M., Grimm, M., Meysonnat, A., Nillesen, E., Reitmann, A. K., & Zouari, S. (2018). Women's and Youth Empowerment in Rural Tunisia-An Assessment Using the Women's Empowerment in Agriculture Index (WEAI). *Taqeem impact report series*, *11*.

Guadri, S., Silwal, P., Archibong, B., &Luwa, S. (2024). Feed the future Nigeria integrated agriculture activity: footprints of youth and women engagement in economic and

entrepreneurial activities, northeast Nigeria. *International journal of African innovation and multidisciplinary research*.

Hanf, C. H., & Müller, R. A. E. (1997). Schlüsselaktivitäten betrieblicher Anpassung: Informationsbeschaffung, Wissensakquisition, Erwerb von Fertigkeiten. *Proceedings "Schriften der Gesellschaft für Wirtschafts-und Sozialwissenschaften des Landbaues eV"*, *33*, 207-218.

Ikuemonisan, E. S., & Akinbola, A. E. (2021). Agripreneurship and Agricultural Labour Market: Agripreneurial Intentions among Undergraduate Students in Ondo State, Nigeria Agripreneurship and Agricultural Labour Market: Agripreneurial Intentions among Undergraduate Students in Ondo State, Nigeria. *European Journal of Agriculture and Food Sciences*, *3*(3), 76-85.

Inegbedion, G., & Islam, M. M. (2021). Willingness and motivation of Nigerian youth to pursue agricultural careers after graduation. International Journal of Agricultural Science, Research and Technology (IJASRT) in Extension and Education Systems, 11(1), 55 69.

Kuratko, D. F., & Audretsch, D. B. (2009). Strategic entrepreneurship: exploring different perspectives of an emerging concept. *Entrepreneurship theory and practice*, *33*(1), 1-17.

Lyocks, J. S., Lyocks, S. W. J., & Kagbu, J. H. (2013). Mobilizing Youth for Participation in Nigerian Agricultural Transformation Agenda: A Grassroots' Approach. Journal of Agricultural Extension, 17(2), 78-87.

Magagula, B., & Tsvakirai, C. Z. (2020). Youth perceptions of agriculture: Influence of cognitive processes on participation in agripreneurship. Development in practice, 30(2), 234-243.

May, D., Arancibia, S., Behrendt, K., & Adams, J. (2019). Preventing young farmers from leaving the farm: Investigating the effectiveness of the young farmer payment using a behavioural approach. *Land use policy*, *82*, 317-327.

Mkong, C. J., Abdoulaye, T., Dontsop-Nguezet, P. M., Bamba, Z., Manyong, V., & Shu, G. (2021). Determinant of University Students' Choices and Preferences of Agricultural Sub-Sector Engagement in Cameroon. Sustainability, 13(12), 6564.

Mujuru, J. T. (2014). Entrepreneurial agriculture for human development: a case study of Dotito Irrigation Scheme, Mt Darwin.

Mukembo, S. C., Edwards, M. C., & Robinson, J. S. (2020). Comparative analysis of students' perceived agripreneurship competencies and likelihood to become agripreneurs depending on learning approach: A report from Uganda. Journal of Agricultural Education, 61(2), 93-114.

Mulema, J., Mugambi, I., Kansiime, M., Chan, H. T., Chimalizeni, M., Pham, T. X., & Oduor, G. (2021). Barriers and opportunities for the youth engagement in agribusiness: empirical evidence from Zambia and Vietnam. Development in Practice, 1-17.

Ng'atigwa, A. A., Hepelwa, A., Yami, M., &Manyong, V. (2020). Assessment of factors influencing youth involvement in horticulture agribusiness in Tanzania: A case study of Njombe Region. Agriculture, 10(7), 287.

Njeru, L. K. (2016). Influence of selected factors on youth participation in agriculture in Kajiado North Sub-County, Kenya (Doctoral dissertation, Egerton University).

Njeru, L. K. (2017). Youth in agriculture: Perception and challenges of enhanced participation in Kajiodo North Sub County, Kenya. Greener Journal of Agricultural Sciences, 7(8), 203-209.

Njeru, L. K., Gichimu, B. M., Lopokoiyit, M. C., & Mwangi, J. G. (2015). Influence of Kenyan Youth's Perception towards Agriculture and Necessary Interventions; a Review. Asian Journal of Agricultural Extension, Economics & Sociology, 5(1), 40-45.

Ogunsanya, O., Anwana, E., & Mthembu, N. (2024). University Entrepreneurship Programmes and their Implications for Youth Development in South Africa's Developmental Agenda: Case Studies from KwaZulu Natal. *African Journal of Inter/Multidisciplinary Studies*, *6*(1), 1-14.

Otache, I. (2017). Agripreneurship development: a strategy for revamping Nigeria's economy from recession. *African Journal of Economic and Management Studies*, *8*(4), 474-483.

Ouko, K. O., Ogola, J. R. O., Ng'on'ga, C. A., & Wairimu, J. R. (2022). Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya. *Cogent Social Sciences*, *8*(1), 2078527.

Pandey, Geeta (2013) Agripreneurship Education and Development: Need of the Day, Asian Resonance, 2(4),155 – 157.

Pelzom, T., & Katel, O. (2018). Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan. Development, Environment and Foresight, 3(2), 92-106.

Priyaraj, P. M. (2017). Career choices and agripreneurship. ZENITH International Journal of Business Economics & Management Research, 7(6), 17-23.

Ragsdale, K., Read-Wahidi, M. R., Wei, T., Martey, E., & Goldsmith, P. (2018). Using the WEAI+ to explore gender equity and agricultural empowerment: Baseline evidence among men and women smallholder farmers in Ghana's Northern Region. *Journal of Rural Studies*, *64*, 123-134.

Rajaei, Y., Yaghoubi, J., & Donyaei, H. (2011). Assessing effective factors in development of entrepreneurship in agricultural cooperatives of Zanjan province. *Procedia-Social and Behavioural Sciences*, *15*, 1521-1525.

Rogers, P. (2014). *Theory of change: methodological briefs-impact evaluation No. 2* (No. innpub747).

Shidiq, M. R. (2020). Determinants of agripreneurial career intentions: evidence from agriculture students. *Journalof Manajemen &Agribusiness*, *17*(2), 128-128.

Stauropoulou, A., Sardianou, E., Malindretos, G., Evangelinos, K., & Nikolaou, I. (2023). The effects of economic, environmentally and socially related SDGs strategies of banking institutions on their customers' behavior. *World Development Sustainability*, *2*, 100051.

Stein, D., & Valters, C. (2012). Understanding theory of change in international development.

Sumberg, J., & Hunt, S. (2019). Are African rural youth innovative? Claims, evidence and implications. *Journal of Rural Studies*, *69*, 130-136.

Sumberg, J., Holland-Szyp, C., Yeboah, T., Oosterom, M., Crossouard, B., & Chamberlin, J. (2024). Young people, livelihood building and the transformation of African agriculture: A reality check. *Global Food Security*, *41*, 100759.

Surajo, A. Z., & Karim, A. Z. (2016). Youth unemployment and poverty in Nigeria: A threat to sustainable growth and development. *International Journal of scientific research and management*, *4*(12), 4919-4928.

Surajo, A. Z., & Karim, A. Z. (2016). Youth unemployment and poverty in Nigeria: A threat to sustainable growth and development. *International Journal of scientific research and management*, *4*(12), 4919-4928.

Surajo, A. Z., & Karim, A. Z. (2016). Youth unemployment and poverty in Nigeria: A threat to sustainable growth and development. *International Journal of scientific research and management*, *4*(12), 4919-4928.

Uneze, C. (2013). Adopting agripreneurship education for Nigeria's quest for food security in vision 20: 2020. *Greener Journal of Educational Research*, *3*(9), 411-415.

USAID. 2019. "Engaging Youth in Agriculture through Information and Communication Technologies". Washington DC: USAID. https://www.usaid.gov/sites/default/files/documents/15396/Feed-the Future-CaseStudy-Youth-Ag-ICT.pdf.

Weiss, C. H. (1995). Nothing as practical as good theory: Exploring theory-based evaluation for comprehensive community initiatives for children and families. *New approaches to evaluating community initiatives: Concepts, methods, and contexts*, *1*, 65-92.

Zulu, L. C., Djenontin, I. N., & Grabowski, P. (2021). From diagnosis to action: Understanding youth strengths and hurdles and using decision-making tools to foster youth-inclusive sustainable agriculture intensification. Journal of Rural Studies, 82, 196-209.