

(RESEARCH ARTICLE)



Perceived effectiveness of village alive development initiative (Vadi) programme among arable crop farmers in Kwara state, Nigeria

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International Journal of Life Science Research Archive, 2024, 06(02), 001–008

Publication history: Received on 03 February 2024; revised on 24 March 2024; accepted on 27 March 2024

Article DOI: <https://doi.org/10.53771/ijlsra.2024.6.2.0041>

Abstract

The study analyzed the perceived effectiveness of Village Alive Development Initiative (VADI) Programme among Arable Crop Farmers in Kwara State. The specific objectives of the study were to describe socio-economic characteristics of arable crop farmers in the study area, examine the perceived effectiveness of VADI programme in the study area, and identify the constraints faced by arable crop farmers in accessing VADI programme in the study area. Primary data were collected from 120 VADI beneficial through purposive and random sampling techniques. Descriptive and inferential statistics tool such as mean scores derived from a 3 – point likert scales, were used as analytical tools. The study revealed that majority (71.67%) of the respondents was male. The study showed that the most perceived effectiveness of VADI activities as indicated by the respondents was VADI cooperative/savings (MS=1.426) which was ranked first. Furthermore, result on constraints facing arable crop farmers in accessing VADI programme revealed that the most severe constraints was poor road network with a Mean Score of 1.252. This study recommends that more rural communities in Nigeria should be given equal opportunity to enjoy this VADI programme.

Keywords: Effectiveness; Arable crop; Farmers; VADI

1. Introduction

Arable cropping is subjected to different challenges such as low access to credit, land scarcity, poor soil fertility, natural hazards, soil degradation, diseases and pests' infestation, as well as disparity in rainfall and temperature [1]. Also, the farmers needed money for paying wages, procuring agricultural inputs and marketing of produce as well as in transportation, storage, processing and other agricultural marketing related activities [2]. Meanwhile, the agriculture sector is one of the leading non-oil sectors in Nigerian with almost 70 percent of its total population engaged in agriculture [3]. Since 1960, most rural dwellers have been migrating to the urban centre in search of greener pasture for better living condition which leads to abandon of agricultural activities.

However, there is a pressing need to examine the potential productivity of every agricultural investment and to evaluate whether it is financially viable in the short, medium and long- term. Thus, in the process of exploring business concept, economic principles, and management tools needed for successful agribusiness operation, requires that knowledge and skills management, marketing and finance must be developed with importance on the specific requirements of the agribusiness sector.

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Over the time, federal government of Nigeria have been set aside agricultural developments programmes for aspiring farmers to exploit government resources as well promoting agriculture growth and development. For example, Nigerian Agricultural and Cooperative Bank (N.A.C.B.) established in 1973; Rural Banking Programme was created in 1977; and more recently the Bank of Agriculture, Commercial and microfinance banks [4]. These aforementioned financial institutes are supported by government to extend credit services to agricultural development programme thus improve agricultural output and productivity. Also, attempt has been made by Agricultural and Rural Management Training Institute (ARMTI) on self-reliance in food production and improves food security among peasant farmers through Village Alive Development Initiative (VADI)

Meanwhile, ARMTI conducted a socio-economic survey in four selected communities of Kwara State as part of her mandate, to assess the major problems causing low agricultural productivity in the state. The survey showed that more than 80% of the dwellers of the selected communities lived below poverty line [5]. The result of the survey gave birth to the VADI programme, as an action oriented research which initially took off in 1995 as Village Alive Women Association (VAWA) in the communities of Fufu, Elerinjare, Falokun-Oja and Apa-Ola in Kwara State.

Globally, agriculture has been experiencing decline in productivity. Farmers' inadequate access to credit services is the main factors responsible for agricultural productivity declined. Despite the efforts of Federal Government of Nigeria and Ministry of Agriculture and Rural development to combat the problem of access to credit and land thus, the problem remains without radical solution. Hence, the aim of this study was to examine the perceived effectiveness of Village Alive Development Initiative (VADI) among arable crop farmers in Kwara State, Nigeria. The specific objectives of the study were to describe socio-economic characteristics of arable crop farmers in Kwara State, examine the perceived effectiveness of VADI programme in the study area, and identify the constraints faced by arable crop farmers in accessing VADI programme in Kwara State.

2. Material and methods

This research was carried out in Kwara State, Nigeria. This State like other North Central states is experiencing lesser rainfall with an annual rainfall ranging between 1000 mm and 1,500 mm. December and January fall within the cold and dry harmattan period. The average maximum temperature varies between 30°C and 35°C. The state has sixteen (16) Local Government Areas (LGAs). The main occupation of people in the study area is predominantly agriculture which they practice on a subsistence level.

A purposive and random sampling technique was employed in the selection of the respondents in the study area using a three-stage sampling technique. In the first stage, two L.G.As were purposively selected out of the three L.G.As involved in the VADI programme base on their effectiveness in the programme. At the second stage, nine VADI communities were randomly selected from which one hundred and twenty (120) respondents were involved in the study at the third stage. The primary data for the study was collected using structured-interviewer administered questionnaires.

Most of the data were presented in descriptive and tabular forms. Descriptive statistics such as frequency counts and percentage was used to describe the socio-economic characteristics of the respondents.

The perceived effectiveness of VADI programme in the study area, and the constraints faced by arable crop farmers in accessing VADI programme were analyzed using a 3-point Likert scale. Scale was placed on each VADI activities ranging from very effective, effective, and not effective, while for the Constraints faced by the respondents in accessing the programme the scale ranges from very severe, severe, and not severe. The respondents were asked to indicate their level of agreement with a given statement by means of an ordinal scale.

3. Results and discussion

3.1 Socio-economic and Demographic Characteristics of the Respondents

The Socio-economic Characteristics of the respondents were presented in Table 1. Analysis in table 1 shows that averagely the respondents were aged 56 years. This means that majority of the respondents were elderly farmers in the sampled communities which may be as a result of relocation of active men from rural areas to urban centers due to unemployment, low income, poor adequate infrastructures, lack of proper education and poor health facilities. 34(28.33%) respondents out of the 120 respondents were females while 86 (71.67%) respondents were male. This could be attributed to tediousness attached to farming. Adisa and okunade [6] reported that most farm activities are very tedious, which makes it to be seen as men's work and they are mostly involved in production. Also, the domination

of male in this study could stem from the fact that farming activities are mostly carry out by men. This negates Nwaru's study [7] which says that women are accountable for most arable crop farming in their areas. More so, result shows that averagely the respondents' household size is 5 persons. This negates the report of National Bureau of Statistics [8], which in its classification estimated an average of 4 persons per household size in southern Nigeria. Furthermore, the mean year of farming experience was 17. Meanwhile, year of farming experience always used to measure farmers' managerial ability that is, the more experienced the farmer is, the more his ability to make decisions. This is in conjunction with studies done by Ntshangase et al. [9] which reported that a good number of the farmers that had long years of farming experience automatically such farmers are likely to make better choices that would boost their productivity. Majority (64.95%) of the respondents possesses farm size ranging between 3 plots to less than one hectare and averagely the respondents 'farm size is5. This was caused as a result of increased pressure on land resulting to urbanization which makes higher percentage of respondents to have access to less than one hectare of land for farming. Also, majority 92(78.63%) of the respondents chose VADI cooperative and others as their source of capital for farming. This implies that the major source of finance was through VADI cooperation. Moreover, result shows that the mean extension contact and extension training session were 6 and 5 times respectively in a year. This indicates that majority of the respondents could have extension service which could also improves their productivity and promotes right attitude among them. This attributed to the study done by Ragasa et al. [10] that there should be a regular visitation to the farmers by the extension officers in order to know their problems and educate them on the adoption of best innovation and technology practices which will proffer solution to their problems and also benefit them more in their production level.

Table1Distribution of the Respondents According to the Socio-economic Characteristics in the Study Area

Characteristic	Frequency	Percentage(%)	Mean
Age			
<30	12	10.00	56
31 – 40	15	12.50	
41 – 50	31	25.83	
51 – 60	42	35.00	
>60	20	16.67	
Sex			
Male	86	71.67	
Female	34	28.33	
Sourceofcapitalforfarming			
Personalsavings	7	5.98	
FamilyandFriends	2	1.71	
VADIcooperative	16	13.68	
VADIcooperativeandothers	92	78.63	
Farmsize			
<1hectare	76	64.95%	5
1-2hectare	29	24.75%	
2-3hectare	6	5.13%	
3-4hectare	4	3.42%	
>4hectare	2	1.71%	
YearsofFarmingExperience			
<10years	18	15.25%	17
10–20years	53	44.92%	

20-30years	44	37.29%	
>30years	3	2.54%	
Extension Contact had			
<4	34	28.81%	6
4 -8	55	46.61%	
8 - 12	17	14.41%	
12 - 16	8	6.78%	
>16	4	3.38%	
Extension Training Sessions Attended			
<2	28	23.53%	5
2 - 4	42	35.29%	
4 - 6	34	28.57%	
6 - 8	10	8.79%	
>8	5	4.11%	

Source: Field survey 2020

3.2 The Perceived Effectiveness of VADI Programme

Table 2 shows the mean scores (MS) achievement of VADI Programme with respect to effectiveness indicators. The most perceived effectiveness of VADI activities as indicated by the respondents was VADI cooperative/savings (MS=1.426) and ranked first. VADI cooperative/savings (MS=1.456) and farmers access to VADI credit/loan (MS=1.518) were ranked 2nd and 3rd respectively. Other activities in order perceived effectiveness are holding field meeting with farmers (MS=1.632), trainings/workshops (MS=1.635), VADI schedule meeting with farmers (MS=1.637), creating awareness of VADI programme (MS=1.644), VADI empowerment (MS=1.664), visiting farmers (MS=1.770), provisions for aged mobile banking (MS=1.826) and provisions for improved seed varieties/ farm inputs (MS=1.858) were ranked fourth, fifth, sixth, seventh, eighth, ninth, tenth, and eleventh respectively.

Farmers linkage to ADPs/agencies (MS=2.009) and VADI cluster farming (MS=2.052) were ranked twelfth and thirteenth respectively. The most not perceived effectiveness of VADI activities as indicated by the respondents was farmers linkage to off-takers, this was ranked fourteenth (MS=2.184).

Table 2 Distribution of the Respondents According to the Perceived Effectiveness of VADI Programme

VADI activities	Very effective n(%)	Effective n(%)	Not effective n(%)	Mean Scores (MS)	Rank
VADI Cooperative/Savings	69 (60)	43 (37.39)	3 (2.61)	1.426	1st
Farmers access to VADI Credit/Loan	64 (56.14)	48 (42.11)	2 (1.75)	1.456	2nd
VADI Credit/Loan Disbursement	58 (51.79)	50 (44.64)	4 (3.57)	1.518	3rd
Holding Field Meeting with Farmers	45 (39.47)	66 (57.89)	3 (2.63)	1.632	4th
Trainings/Workshops	46 (40)	65 (56.52)	4 (3.48)	1.635	5th
VADI Schedule Meeting with Farmers	46 (40.35)	62 (54.39)	6 (5.26)	1.637	6th
Creating Awareness of VADI Programme	44 (38.26)	68 (59.13)	3 (2.61)	1.644	7th
VADI Empowerment	43 (38.05)	65 (57.52)	5 (4.42)	1.664	8th
Visiting Farmers	31 (27.43)	77 (68.14)	5 (4.42)	1.770	9th

Provisions for Aged Mobile Banking	24 (20.87)	87 (75.65)	4 (3.48)	1.826	10th
Provisions for Improved Seed Varieties/ Farm Inputs	23 (20.35)	83 (73.45)	7 (6.19)	1.858	11th
Farmers Linkage to ADPs/Agencies	25 (22.52)	60 (54.05)	26 (23.42)	2.009	12th
VADI Cluster Farming	23 (20)	63 (54.78)	29 (25.22)	2.052	13th
FarmersLinkagetoOff-takers	17 (14.91)	59 (51.75)	38 (33.33)	2.184	14th

Source: Field survey, 2020

3.3 Constraints Faced by the Arable Crop Farmers in Accessing VADI Programme

Table 3 below shows the constraints facing arable crop farmers in VADI programme in order of severity. The most severe constraints as indicated by the respondents was poor road network (MS=1.252) and ranked first. This has been serious problems facing rural dwellers most especially farmers' area of socio-economic and the level of productivity of their lives. This affirmed with study done by Olukunle [11] were he stated that the little road and rail constructed in the rural and most of the urban areas normally crumbles due to poor maintenance. While no linkage with off-takers (MS=1.877) and inadequate equipment for farming (MS=1.982) were ranked second and third respectively in order of severity.

More so, inadequate farm inputs (MS=1.982), inadequate arable farm land for crops production (MS=2.071) and Inadequate access to extension service (MS=2.088) were ranked fourth, fifth and sixth respectively. However, the respondents indicated that Inadequate fund/loan (MS=2.161) and Inadequate knowledge usage (MS=2.735) as the least order of severities as well ranked seventh and eighth respectively. This implies that lack of knowledge and information about agricultural development programme of adopting modern farming techniques or lack of technical knowhow on implementation of new practices will also affect farmer's tendency to adopt them [12].

Table 3 Distribution of Constraint Faced by the Respondents

Constraints	Veryseveren(%)	Severen(%)	Not severe n(%)	Mean Scores(MS)	Rank
Poorroad	93 (80.87)	15 (13.04)	7 (6.09)	1.252	1 st
Nolinkagewithoff-takers	23 (20.18)	82 (71.93)	9 (7.89)	1.877	2 nd
Inadequateequipmentforfarming	11 (9.73)	93 (82.3)	9 (7.96)	1.982	3 rd
Inadequatefarminputs	14 (12.28)	88 (77.19)	12 (10.53)	1.982	4 th
Inadequatearablefarmlandforcropsproduction	17 (15.18)	70 (62.5)	25 (22.32)	2.071	5 th
Inadequate access toextension service	12 (10.53)	80 (70.18)	22 (19.3)	2.088	6 th
Inadequate fund/loan	12 (10.71)	70 (62.5)	30 (26.79)	2.161	7 th
Inadequateknowledgeonusage	5 (4.42)	20 (17.7)	88 (77.88)	2.735	8 th

Source: Field survey 2020

4. Conclusions

This study concluded that arable crop farmer's constructive benefits derived towards VADI programme has led to a change on their livelihood due to ease of access, participation and exploitation of VADI scheme. Proactive measures should be taking to the felt needs raised by the respondents and more VADI benefits should be provided for the respondents to enhance sustainability of the programme. Also, instigation of other relevant programmes should be given chance to improve agricultural productivity and create more access to fund. This study recommends that arable

crop farmers should be motivated for active participation in the VADI programme by Agricultural and Rural Management Training Institute (ARMTI). Continuity of any project depends on its ease of access and utilization by the end users. More rural communities in Nigeria should further be given equal opportunity to enjoy this VADI programme to combat some of the rural area problems and mitigate the problem of food insecurity in Nigeria.

Compliance with ethical standards

Acknowledgments

I extend my heart felt appreciate onto my colleagues and friends for their unwavering assistance and encouragement through out the course of this research.

Declaration of conflicts of interest

All authors declare that they have no conflict of interest

Authors Contribution

Olaniran, O, V., designed the research protocol. Protocol Revised by Jamiu, J. O and Oyekunle, O. O. Tolulope, O. I and Bolanle, S. A., carried out the collection and processing of the samples. Oluwaseyi, M. A., and Olaniran, O, V., supervised the analyses. Olaniran, O, V., Jamiu, J. O and Oyekunle, O. O., analyzed and interpreted the results. All authors contributed to the revision of this manuscript.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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Authors short Biography

	<p>OLANIRAN VICTOR OLAGOKE is a dedicated academic professional with a strong background in microbiology and agricultural extension. He holds a Post Graduate Diploma in Agricultural Extension & Rural Development, a Master of Science in Microbiology, and a Bachelor of Science in Microbiology. Some of his specialized skills include agricultural & microbiological research, project management, training and consultancy.</p>
	<p>JAMIU OLAKUNLE JIMOH a distinguished professional, holds a Bachelor of Agriculture degree from the prestigious university of Ilorin and furthered his education with a Masters in Agricultural Economics from the same university. Currently serving as a Senior Management Development Officer (SMDO) at the Agricultural and Rural Management Training Institute (ARMTI), Jimoh is passionate about contributing to the agricultural sector's growth. Beyond his professional pursuits, he finds joy in the realms of reading, writing and exercise.</p>
	<p>OYEKUNLE OPEYEMI, OYEWALE a proud native of Ipetumodu, Osun State, Nigeria, embarked on an educational journey in Iwo, Osun State, for both primary and secondary schooling. He pursued his National Diploma in Civil Engineering at OSCOTECH, Esa-Oke, Osun State, and later earned a Bachelor's degree in Agricultural and Environmental Engineering from FUTA. His academic pursuits continued with an MSc in Renewable Energy from Unilorin. Oyewale has diverse professional experience, serving as a project construction supervisor and data analyst at LADWAL Ventures LTD. Currently, he contributes to research, training, and consultancy services as a Management Development Officer at ARMTI, Ilorin.</p>
	<p>TOLULOPE OLAMIDE ILORI: An Advocate for Youth Development and Psychological Well-being Totulope stands at the forefront of educational and psychological support for adolescents, having honed her expertise with a solid academic foundation from the prestigious University of Ibadan. With a Bachelor of Education (B.ED) in Guidance and Counseling, she embarked on a journey to become an instrumental figure in guiding young minds through the labyrinth of their formative years.</p> <p>Her passion for youth development and her commitment to understanding the intricate workings of the adolescent psyche propelled her to pursue a master of Education (M.ED) in Adolescent Psychology and Youth Counseling. This advanced degree further solidified her role as a specialist equipped to tackle the complex challenges faced by today's youth.</p> <p>As a professional, Totulope is dedicated to creating environments that foster healthy psychological development and empower young individuals to navigate life's challenges with resilience and confidence. Her work is characterized by a compassionate approach, backed by theoretical knowledge and practical application in the field of adolescent psychology.</p> <p>Through her educational pursuits and professional endeavors, Totulope has emerged as a beacon of hope for many young individuals. Her commitment to their well-being is not just her profession, but her calling</p>
	<p>BOLANLE SAIDAT ADESINA Is a seasoned professional in the field of agriculture, holding a BSc in Agronomy from LAUTECH and an MSc in Agricultural Extension from Unilorin. With a passion for agricultural development, Bolanle currently serves as a Management Development Officer at ARMTI, where she contributes her expertise to the advancement of agricultural management practices and sustainable development initiatives.</p>



OLUWASEYI MARIA ABIODUN: Champion of Sustainable Agricultural Practices and Extension Services

Oluwaseyi is a dynamic professional in the agricultural sector, currently serving as a Management Development Officer at the Agricultural and Rural Management Training Institute (ARMTI). With a robust educational background and a hands-on approach to agricultural development, she is a key player in promoting sustainable farming practices and advancing the growth of the agricultural community.

Her journey began with a Bachelor of Science degree in Animal Production from the Federal University of Technology Akure, where she gained a comprehensive understanding of livestock management and the intricacies of animal husbandry. Her dedication to expanding her expertise led her to pursue a Master of Science degree in Agricultural Extension at the University of Ilorin, further equipping her with the skills necessary to drive change and innovation in the agricultural sector.

In her current role at ARMTI, Oluwaseyi utilizes her extensive knowledge to develop and implement training programs that enhance the capabilities of agricultural professionals. She is committed to bridging the gap between research and practice, ensuring that the latest advancements in agricultural science are accessible to farmers and agribusinesses.

Oluwaseyi's work is fueled by her passion for agricultural extension and her belief in the transformative power of education. She is not only a proponent of sustainable agriculture but also an advocate for empowering farmers through knowledge, thereby fostering a more productive and resilient agricultural industry.