



## **ASSESSMENT OF TRAINING NEEDS OF EXTENSION WORKERS IN BAUCHI STATE AGRICULTURAL DEVELOPMENT PROGRAM, NIGERIA**

<sup>1</sup>Adamu, H. A. <sup>2</sup>Abu, I. A. and <sup>3</sup>Yakubu, S.

<sup>1</sup>Department of Agricultural Extension and Rural Development,  
Abubakar Tafawa Balewa University Bauchi State, Nigeria.

<sup>2</sup>Department of Agricultural Extension Services, University of Maiduguri, Nigeria

<sup>3</sup>Department of Agricultural Economics,

Abubakar Tafawa Balewa University Bauchi State, Nigeria.

**Corresponding Author's E-mail:** hamisuadamuaem@gmail.com **Tel.:** 07030722380

### **ABSTRACT**

The study assessed the training needs of extension workers in Bauchi State agricultural development program, Nigeria. The study employed random sampling techniques to select 145 respondents across the three (3) agricultural zones. Data were collected using structured questionnaire and were analyzed using descriptive statistics. The results pointed out that majority (81.4%) of the respondents were male with small proportion of females. The results also showed that 26.5% and 25.0% of the respondents had Higher National Diploma and National Diploma, respectively. The findings revealed that all (100%) of the respondents reported the need for training of extension workers. The findings also showed that majority (58.6%) of the respondents received in-service training. The study recommended the needs to provide adequate financial support and continuous training in some key areas to support Bauchi State Agricultural Development Programme as at when due for proper planning and execution of training programmes for extension staffs. Motivation should also be put into consideration to improve in their job performance.

**Keywords:** Assessment, Bauchi, Extension workers, Sampling, Training needs.

### **INTRODUCTION**

Nigeria is one of the largest countries in Africa, with a total geographical area of 923,768 square kilometers and a population of 140 million (National Population Commission [NPC], 2006). It is situated within the tropics along the Gulf of Guinea on the West Coast of Africa (Kouadio *et al.*, 2016). The structure of Nigerian agriculture has been characterized historically by the large number of relative small scale family operation farms that account for about 80% of the total food population (Ahmed *et al.*, 2018), with the petroleum exploration in the sixties agricultural development was relegated to the background which has now resulted to an increase level of poverty and food insecurity that leads to a low level of capacity to satisfy the food and fiber needs of the country's production (Obayelu *et al.*, 2021). One of the most effective means of transforming Nigerians agricultural resources to sustained agricultural development is through an effective extension system. Improved agricultural extension management system is recognized as a central mechanism to achieving increase food production through technology transfer (Kouadio *et al.*, 2016).

Training is the systematic development of the attitude, knowledge, skill, and behavioral pattern required for the adequate performance of a given job or task. The weakness or absence of training agricultural extension workers after employment planning and instructional program gave a negative effect on the success of the extension work (Khazraji, 2011). Agricultural extension remains one of the prime movers of agricultural development. An extension agent represents a core labor force in the activities and programmes of agricultural



extension. The effectiveness of extension services is highly dependent on the preparedness and professional competencies of extension workers. Wider barriers reduced the effectiveness of extension efforts included farmer resistance to change and complex land tenure arrangements that do not allow investment (Philip and Lindsay, 2021).

Today, educational programmes delivered by extension workers in Nigeria, the Agricultural Development Program are channeled to meet the needs of the people they serve. Radhakrishna and Thompson (2006) also stated that extension agent particularly requires experiential learning that provides them with opportunities to relate with rural people in an interactive process that combines scientific technical knowledge with local indigenous knowledge in client – centered problem-solving activities. To satisfy this requirement, there is a need to regularly analyze the technical competence and job performance of extension staff in the organization. Youdeowei and Kwarteng (2006) defined training need as the differences between the required level of individual competence and his present level of competence.

Allo (2001) pointed out that one of the main factors limiting the development of effective training programmes for agricultural professionals in developing countries is the inadequacy of information on their training need. In this regard, there is also the need to rationalize training to minimize repetition of the same message, more exposure to relevant technology and communication techniques, more avenues for personal career development and frequent contact between various categories of extension personnel. Agbamu (2006) opined that training of extension personnel is one of the essential developmental paths to trail to facilitate effective agricultural extension service delivery and a thriving extension service in the 21<sup>st</sup> century. Areas of training needs for extension personnel include skills to use new communication technology, interpret research findings, develop leadership skills, nurture leadership skills among others. It is thus important to determine the type of professional development activities extension professionals need for effective extension service delivery in the ever-changing agricultural production context, for improved and sustainable agricultural productivity. The broad objective of the study was to examine the training needs of extension workers in Bauchi State, Nigeria. The specific objectives include: describe the socio-economic characteristics of the extension workers, examine the training needs of extension workers and identify the constraints associated with the training needs of extension workers.

## **MATERIALS AND METHODS**

### **The Study Area**

The study was conducted in Bauchi State Agricultural development programme. The State took its name from a hunter known as Baushe who settled in the region before the arrival of Yakubu the first traditional ruler of Bauchi Emirates. The State is located between Latitudes 9° 3' and 10° 48' North of the equator, and between Longitudes 8° 45' and 15° East of the green-which Meridian. The area has a total land area of 49,259<sub>sq</sub> kilometers. The study area has a projection population of 598,000 million people (National Population Commission [NPC], 2020). The State has 20 Local Government Areas (LGAs) and is bordered by seven States Kano and Jigawa to the North, Taraba and Plateau to the south, Gombe and Yobe to the east and Kaduna to the west. Predominantly, farming is the occupation of the people of Bauchi state due to its vast fertile soil which is an added advantage to agricultural production of both crop cultivations and livestock production other occupations includes fishing, hunting, blacksmith, craft and trading. The administrative zones of Bauchi ADP are divided into three (3) Zones, these include West, Central and North. Western zone is made up of seven (7) LGA namely: Bauchi, Alkaleri, Dass, Kirfi, Bogoro, Tafawa Balewa and Toro with it headquarter in Nabordo. The Central zone is made up of Four (4) LGA's namely Ningi, Ganjuwa, Darazau



and Warji with headquarter in Miya. Northern Zone is made of Nine (9) LGA's namely Dambam, Gamawa, Jama'are, Misau, Giade, Shira, Itas/Gadau, Zaki with headquarter in Azare. The target population of the study consists of all categories of extension personnel's (Administrators, Subject Matter specialist (SMS), block Extension Supervisors (BESs) and village Extension Workers (VEAs) in all the twenty Local Government Areas of Bauchi State.

### Sampling Procedure

A simple random sampling technique was used to proportionally (70%) select 145 extension staffs in the study area as indicated in Table 1. Primary data were used for the study and were collected with the aid of structured questionnaire and analyzed using Simple descriptive statistics such as frequency, table and percentage to achieve the research objectives.

**Table 1:** Population and sample procedure

Agricultural zone	Western zone		Central zone		Northern zone	
	Pop.	sample	pop	sample	pop	sample
Directors/Administrators	6	2	6	2	6	2
Subject matter specialist	7	21	7	21	7	7
Block extension supervisors	42	14	42	14	42	14
Village Ext workers	75	25	75	25	75	25
<b>Total</b>	<b>145</b>	<b>48</b>	<b>145</b>	<b>48</b>	<b>145</b>	<b>48</b>

Source: Field Survey, 2020

## RESULTS AND DISCUSSION

The socio- economic characteristics of the extension workers in the study area are presented in Table 2. The results show that 48.3% of the respondents were within their active age of 31-40 years. This implies that most of the extension workers were within their active ages and were ready to accept any form of duty assigned to them. These results concur with the work of Malgorzata (2017) asserted that ability to work differs among individuals and is therefore difficult to ascertain when performance declines with age due to mental and physical changes. The findings agree with Olorunfemi *et al.* (2019) who reported that officers in the age of 25-45 years were more active to their services. The results from Table 2 also shows that majority (81.4%) of the respondents were male and 18.6% of the respondents were females. The finding indicates that most extension services is dominated by male with small population of females in the state. Table 2 indicates that majority (84.8%) of the respondents were married. marriage has little to play in effective delivery of job by the extension workers. The result reveals that large proportion (58.5%) of the respondents had 10-15 persons per household. The result further indicates that 26.5% of the respondents had HND and 25.0% had National Diploma in the study area. The finding indicates that majority of extension workers did not received university training.

The findings also show that 58.5% (Table 2) of the respondents had 30-40 years of working experience and 33.5% of the respondents had 21-30 years of working experience, respectively. The result shows that majority (80%) of the respondents lived in close proximity to their job location, making the extension workers in the studied area have easy access to the working place and only 20% were far away from their primary assignment. This implies that majority of the respondent job satisfaction may not be affected by the distance to their various destination and transportation.



**Table 2:** Respondents' Socio-economic characteristics (n = 145)

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
20-30	31	21.5
31-40	33	22.5
41-50	70	48.5
51 and above	11	7.5
<b>Sex</b>		
Male	118	81.4
Female	27	18.6
<b>Marital Status</b>		
Single	5	3.4
Married	123	84.8
Widowed	14	9.7
Divorce	3	2.1
<b>Educational Level</b>		
Secondary	6	4.1
ND	36	25.0
NCE	20	13.5
HND	38	26.5
BSc	20	13.5
MSc	18	12.5
PhD	7	4.9
<b>Household Size</b>		
1-5	5	3.5
5-10	9	5.5
10-15	84	58.5
15 and above	47	32.5
<b>Working Experience</b>		
1-20	5	3.5
21-30	49	33.5
31-40	84	58.5
41 and above	7	4.5
<b>Proximity to place of work</b>		
Yes	116	80.0
No	29	

Source: Field Survey, 2020

The result in Table 3 reveals that majority (58.6%) of the respondents received in-service training from their organization and 15.2% of the respondents received pre-service training from the their organization, however 13.8% of the respondents indicated not to have received any type of training from their organization while 12.4% of the respondents received induction training in the study area.



**Table 3:** Training Needs of Extension Workers (n = 145)

Nature of training received	Frequency	Percentage
Pre-service training	22	15.2
In-service training	85	58.6
Induction training	18	12.4
None	20	13.8

Source; Field Survey, 2020

Results of Table 3 indicate that the extension workers still need to have other types of training. Because like the long-term courses are formal education which would provide and may establish excellent foundation to be effective as facilitators, requires more training for them to be able to help the different categories of clientele in the rural community. This implies that the extension workers need to have consistent and regular training.

#### **Areas of Training Needs**

The result in Table 4 reveals that majority (51.5%) of the respondents needs training on animal production (56.5%) of the respondents needs medium level of training on crop protection (60%) of the respondents needs training on value addition (51.5%) of the respondents need training on fertilizer applications.



**Table 4:** Respondents' Areas of Training Needs (n = 145)

<b>Areas of extension training needs</b>	<b>Frequency</b>	
<b>Percentage</b>		
<b>Animal Production</b>		
High	74	51.5
Medium	65	44.5
Low	6	4.0
<b>Crop Protection</b>		
High	34	23.5
Medium	81	56.5
Low	30	20.0
<b>Value Addition</b>		
High	87	60.0
Medium	40	27.5
Low	18	12.5
<b>Fertilizer application</b>		
High	75	51.5
Medium	48	33.5
Low	22	15.0
<b>Conflict Resolution</b>		
High	70	48.5
Medium	45	31.0
Low	30	20.5
<b>Climate change</b>		
High	77	53.0
Medium	49	34.0
Low	19	13.0
<b>Planning demonstration</b>		
High	69	48.0
Medium	52	35.5
Low	24	16.5
<b>Communication skills</b>		
High	70	49.0
Medium	67	46.5
Low	8	4.5
<b>Agronomics practices</b>		
High	55	37.5
Medium	77	53.5
Low	13	9.0

Source: Field Survey, 2020

The results in Table 4 further show that (48.5%) of the respondents needs training on conflict resolution (53%) needs training on climate change (48%) of the respondents needs training on planning demonstration (49%) needs training on communications skills and (53.5%) needs medium level of training on agronomics practices, respectively, in the study area. This indicated that the extension workers still need to have other types of training. Because like the long-term courses are formal education which would provide and may establish excellent foundation to be effective as facilitators, requires more training for them to be able to help the different categories of clientele in the rural community. This implies that the extension workers need to have consistent and regular training.





The result from Table 5 shows the constraints faced by the respondents in the study area which were ranked. The result indicated that inadequate funding, lack of incentives for extension specialist, inadequate extension staffs were rank 1st, 2nd, and 3<sup>rd</sup>, respectively, the findings also reveal that inadequate training equipment's, injustice, admin bottle neck and long distance to training centers were ranked 4th, 5th, 6th and 7th respectively. The result concurs with findings of Solomon Johnson (2010) who reported that poor funding was are a major constraint that makes most of the extension workers to leave their job and seek for another one for the betterment of their life.

**Table 5:** Constraints Associated with the Training Needs of Extension Workers (n = 145)

Constraints	Frequency	Percentage	Rank
<b>Inadequate funding</b>			
Yes	140	96.6	1st
No	5	3.4	
Total	145	100.0	
<b>Lack of incentives for Extension specialist</b>			
Yes	136	93.8	2nd
No	9	6.2	
Total	145	100.0	
<b>Inadequate extension staffs</b>			
Yes	131	90.3	3rd
No	14	9.7	
Total	145	100.0	
<b>Inadequate training equipment</b>			
Yes	110	75.9	4th
No	35	24.1	
Total	145	100.0	
<b>Injustice in the selection of extension personnel</b>			
Yes	45	31.0	5th
No	100	69.0	
Total	145	100.0	
<b>Lack distance to training centers</b>			
Yes	43	29.7	6th
No	102	70.3	
Total	145	100.0	
<b>Administrative bottle neck</b>			
Yes	30	20.7	7th
No	115	79.3	
Total	145	100	

Source: Field Survey, 2020

## CONCLUSION AND RECOMMENDATIONS

The study concluded that extension workers in the study area requires training in some important areas to improve their productivity. In addition, extension services were dominated by male with small proportion of female extension workers and most of the extension workers were either HND or ND holders having 30-40 years of working experience. Based on the findings the study recommended that there should be adequate funding of extension services by the various actors and extension should be incentivized.



## REFERENCES

- Agbamu, J. U. (2006). *Essentials of agricultural communication in Nigeria*. Ibadan.
- Ahmed, I., Socci, C. and Severini, F. (2018). The structures of production, final demand and agricultural output: a Macro Multipliers analysis of the Nigerian economy. *Econ Polit*, **35**: 691–739.
- Allo, A. V. (2001). *Professional requirements of the extension worker in training Farmers' perception of Public and Private Extension Services in South Western Nigeria*.
- Khazraji, Thunder Muslim Ismail (2011). Planning cognitive needs of those in charge indicative planning process in the corporate bodies and public agricultural research publication *Journal of Agricultural Science*, **42**(1): 2.
- Kouadio, K. Y., Ta, S., Ali, K. E., Toualy, E., Aman, A. and Yoroba, F. (2016). "West Africa Extreme Rainfall Events and Large-Scale Ocean Surface and Atmospheric Conditions in the Tropical Atlantic", *Advances in Meteorology*, article ID 1940456, 14Pp.
- Malgorzata, R. (2017). *Impact of employee age on the safe performance of production tasks*. MATEC web of Conferences 94. Retrieved March 23, 2020 from creative commons database.
- National Population Commission [NPC] (2020). *Projection census in Nigeria*.
- Obayelu, A. E., Obayelu, O. A. and Bolarinwa, K. K. (2021). Assessment of the Immediate and Potential Long-Term Effects of COVID-19 Outbreak on Socioeconomics, Agriculture, Security of Food and Dietary Intake in Nigeria. *Food Ethics*, 6, 5 <https://doi.org/10.1007/s41055-021-00085-w>.
- Olorunfemi, T. O., Ololufemi, O. D. and Oladele, O. I. (2019). Determinants of the involvement of extension workers in disseminating climate smart agricultural initiatives: implications for scaling up. *Journal of Saudi Society of Agricultural Sciences*. (In press) *Sciencedirectassests.com*, 3-4.
- Philip Antwi-Agyei and Lindsay C. Stringer (2021). *Improving the effectiveness of agricultural extension services in supporting farmers to adapt to climate change: Insights from northeastern Ghana*. *Climate Risk Management*, **3** 2100304, ISSN 2212-0963, <https://doi.org/10.1016/j.crm.2021.100304>.
- Radhakrishna, R. B. and Thompson, J. S. (2006). Extension workers' use of information sources. *Journal of Extension*, **34**(1): 12-17.
- Solomon, J. F. (2010). *Assessment of emerging roles and training needs of extension personnel in Kogi State, ADP*. Retrieved 10 February 2019. From [www.http://...fao.org.KASV.2112](http://...fao.org.KASV.2112).
- Youdeowei, A. and Kwarteng, J. (2006). *Tool kit for the production of agricultural extension materials*. Guide book. CTA Wageningen, The Netherlands, 50Pp.