

Evaluation of Agricultural Projects and Extension Services of the Bayelsa State Agricultural Development Programme (ADP)

ABSTRACT

The study evaluated the agricultural projects and extension services of the Bayelsa State Agricultural Development Programme. Three specific objectives and hypotheses were developed to guide the study. A descriptive survey design was employed to observe a cross-section of the population of the farmers in the three ADP zones, in Bayelsa State. Both purposive and proportionate sampling techniques were used to select two hundred and fifty – four (254) registered farmers for the study. Descriptive statistics such as percentage, arithmetic and weighted mean scores were used, while inferential statistics - Analysis of variance (ANOVA) was used to test the hypotheses at 0.05% level of probability. The findings showed that agricultural projects carried out in Bayelsa State within the past five years were: Fish farming (GM = 3.18), cropping practices of most crops (GM = 2.97), poultry production (GM = 2.71), seed multiplication/Yam miniset technology (GM = 2.70) and snail farming (GM = 2.59), among others. The findings also cataloged the agro projects that have not been carried out in the area to include: Yam bag technology (GM = 1.83), Goat/sheep farming (GM = 1.94), Grass cutter/Rabbit farming (GM = 1.80), processing of tubers/grains/plantains into flour and farmers' cooperative formation with equal grand mean (GM = 2.32), among others. The result indicated that only: Fish farming (GM = 2.89), organic farming (GM = 2.76), poultry production (GM = 2.70), cropping practices of few crops and snail farming with marching grand mean (GM = 2.66) had high adoption rate in the study area. Finally, the findings showed that: Lack of insurance practices by farmers (GM = 3.68), when the farmers are not involved in the planning of the project (GM = 3.50), weak government policies / leap services in agriculture (GM = 3.30), when the projects are not guided by the needs of farmers (GM = 3.23), inadequate agricultural credits (GM = 3.14), lack of incentives for farmers (GM = 3.13) and when projects are gender specific (GM = 3.10), among many other factors add up to the most serious challenges in adopting agricultural projects in Bayelsa State. All the ANOVA results in this study showed that the views of the registered farmers on the agricultural projects carried out by ADP in the past five years did not differ significantly among the three ADP zones in Bayelsa State at $P > 0.05$ significant level. The study therefore recommended among others that: Agricultural Development Project (ADP) should beef up their extension package and extend worthwhile services to the farmers in their zones; Engagement of qualified Extension Agents into the Ministry of Agriculture with a clear mandate to assist the farm families grow should be emphasized in Bayelsa State, and Registered farmers should be formed into cooperative groups and be involved in planning agricultural programmes that concern them.

Keywords: Evaluation, Agricultural Projects, Extension Services, ADP

INTRODUCTION

Evaluation is a systematic process of collecting and analyzing data in order to determine whether and to what extent progress were made or to be made. It is a process of value judgment by which one can judge whether a programme is good or acceptable and the factors responsible for the outcome. According to Ani (2013), evaluation is used to convey the meaning of value of something. It could be used as a systematic determination of the value of a certain development

programme or project. It equally could as well be used to assess as objectively as possible, how a programme or project is going and what effect it is having on the intended beneficiaries. Broadly speaking, evaluation has to do with assessment of results which aims at determining whether the relevant programme objectives set in terms of expected outputs, effects and impacts are being or have been met (Kaur and Kaur, 2019).

Agricultural project is a planned and a more specific or directional undertaken which is a set of interrelated and co-ordinated farming operations intended to achieve certain specific objectives within the given budget and a specified period of time. Examples include borehole construction, setting up model farm, building of youth farm centre, setting up piggery, poultry or fish farm units, seed multiplication centres, formation of farmers' cooperatives, etc. Agricultural project is a short time effort because the nature of attaining set goals is more directional and easily targeted. Put differently, a project is the use of one or more scarce resources during a specific time period for the purpose of producing some economic return or output at a later time (Adesope, 2017). An agricultural project is an investment activity or venture in which financial resources are spent to create capital assets that produce benefits over an extended period of time. Agricultural project, as an activity, is a subset of a larger, less precisely identified programme. The whole programme may possibly be analyzed as a single activity or project, but by and large it is better to keep agro activities rather small, close to the minimum size, that is, economically, technically and administratively feasible (Adesope, 2017). Agricultural Development Programme (ADP) of the Ministry of Agriculture and Natural Resources is carried out in bits as projects or activities for easy actualization of set goals.

ADPs are the State institutions with the mandate to carry out extension projects or services to raise agricultural production and improve rural living conditions since agriculture cannot be displaced from being the mainstay of rural and national economy of Nigeria (Inusa, Daniel, Dauagal and Chiya, 2018). ADP is the extension arm of the State Ministry of Agriculture and Rural Development. The decree that established ADPs in all the thirty-six states (36) of the Federal Republic of Nigeria specifies that they should have major responsibilities for delivering extension services to farmers in their localities (World Bank, 2014). From history, the journey of ADPs commenced as pilot projects in Funtua, Gombe and Gusau in 1974. The ADP extension system was based on the principle that a combination of essential factors comprising the right

technology, effective extension, access to physical production-enhancing inputs, adequate market and other infrastructural facilities are essential to get agriculture moving.

According to Adegbola and Akinbode (1986), in 1972, the Federal Government Negotiated a World Bank Loan to establish three pilot enclave Agricultural Development Projects in Funtua and other parts of the country such as; Kaduna, Sokoto, Gombe and Bauchi States. It was stated that the relative success achieved by this projects inspired the federal government to establish enclave ADP's in six more States in Ayangba, Benue State, Lafia in Plateau State, Bida in Niger State, Ilorin in Kwara State, Shaki in Oyo State and Ekiti-Akoko in Ondo State in the late 70s (Johnson, 2013).

The central theme of these programmes was to reassign the already developed agricultural technologies to the majority of the farmers in the rural areas through the Village Extension Agents (VEA). The search for permanent universal remedy to the problems relating to technology generation, transfer and diffusion brought about the idea of Agricultural Development Programmes (ADPs) in 1975. The success story recorded in the first and second generations of ADPs led to the full implementation of ADPs in all the States of Nigeria (Unamma, *et al.*, 2013) including Bayelsa State in 1996.

Bayelsa State was created in 1996 and on creation all the government ministries including the Ministry of Agriculture and Natural Resources were established in the State with the same mandate of delivering extension services to farmers in their localities across the State.

It was explained that the ADPs had employed the Training and Visit (T&V) system of managing the extension services. At first, concentration was limited to the crop-sector. It was buttressed that the experiment was adjudged very successful and upheld that consequently the use of T&V was applied to all other subsectors under a unified approach. Under the Unified Agricultural Extension System (UAES), an Extension Agent (EA) was assigned the responsibility of informing, advising and teaching farmers new and improved agricultural practices as well as providing feedback to research and other input agencies. An Extension Agent is expected to visit each of his 6-8 Representative Contact Farmer (RCF) groups every fortnight on a fixed day of the week with a view to disseminating production recommendations to them. He/she attends the

fortnight Training Meetings (FNT) where he reviews farmers' reactions to previous recommendations and is taught specific recommendations of technological innovations.

From 1996 to date, ADP has operated for twenty-five years in Bayelsa State shuddering the responsibilities of extending handy education to rural people, with emphasis on helping rural farmers to help themselves in improving their desired living conditions. But how well and how much has the extension activities of the ADP achieve this purpose in Bayelsa States? Seventy-five percent (75%) of the food stuff from crops and livestock consumed in Bayelsa State is still imported from neighbouring States; the living conditions of the rural dwellers are not better off; and the migration of the youths out of the rural communities to urban centres are on the increase. This is where appraisal or evaluation of Bayelsa State ADP projects/services comes in, so as to examine whether the prescribed objectives of the programme have been reached or abandoned. Therefore, the study seeks to satisfy the following three specific objectives, to:

- i. identify the agricultural projects/services carried out by the Bayelsa State ADP in the past five years in the study area, and
- ii. investigate the level at which the agricultural projects/services carried out by the ADP were adopted by the farmers, and
- iii. examine the challenges associated with the adoption of such agricultural projects/services by the farmers in the study area.

Three hypotheses were also devised to pilot the study

H₀₁: The views of the farmers on the agricultural projects/services carried out by ADP in the past five years do not differ significantly among the three ADP zones in Bayelsa State.

H₀₂: The agricultural projects/services carried out were not equally adopted by the farmers in the three ADP zones in Bayelsa State.

H₀₃: The challenges associated with the adoption of agricultural projects by the farmers in Bayelsa State do not differ significantly among the three ADP zones in Bayelsa State.

METHODOLOGY

This study was conducted in Bayelsa State, Nigeria. It is located in southern Nigeria in the heart of the Niger Delta. Bayelsa State is on the coast and bounded by Delta State on the North and Rivers State on the east and the Atlantic Ocean on the west and southern part of the country. It has a total land area of 9,415.8km². About three-quarters of its total area lie under water. (Bayelsa Development and Investment Corporation, 2012). The State has a population of 1,704,515 (NPC, 2006), whose primary occupation is farming, fishing, petty trading as well as forestry activities such as: hunting and timbering (lumbering) and gathering of wild snails and raffia palm tapping. The State also has an Agricultural Development Programme (ADP) which is divided into three zones; the Central zone with Yenagao, as the zonal headquarter; the Eastern zone with Brass as the zonal headquarter and the Western zone with Sagbama as the zonal headquarter.

The study adopted a descriptive survey design to observe a cross-section of the population of the registered farmers in the three ADP zones in Bayelsa State for possible policy generation and economic intervention in the areas. Purposive sampling method was adopted to select one LGA each from the three ADP zones of Bayelsa State. The reason was to select LGAs that were very active in agricultural activities, which Ladele and Chah (2014) also recognized as a fast technique employed when one wishes to gain a quick insight into a social incident. Simple random sampling method was used to select 3 ADP Blocks from each of the 3 ADP zones, making a total of 9 ADP Blocks for the study. Simple random sampling method was also engaged to select 2 ADP Cells from each of the zones, making a total of 18 ADP cells. Finally, proportionate sampling technique which permits the same sample fraction from each stratum – ADP zone (Odinwa, Isife and Nlerum, 2019) was employed to select two hundred and fifty – four (254) registered farmers, which gave the representative sample size for the study. Structured questionnaire and interview schedule were used to elicit information from the respondents. The questionnaire was designed using a four point Likert type rating scales which gave 2.50 as the critical mean used for final judgment of findings. Both descriptive and inferential statistics were used to evaluate the data. Descriptive statistics such as percentage, arithmetic means and weighted mean scores derived from the rating scales were used. The inferential statistics used was the Analysis of Variance (ANOVA) to test the hypotheses at 0.05% alpha level of significance. Where f-calculated was greater than the alpha level (0.05), the null hypothesis was rejected; otherwise, the results were accepted.

RESULTS AND DISCUSSION

Agricultural Projects carried out by ADP in the past five years in Bayelsa State

The findings on the agricultural projects carried out in Bayelsa State within the past five years (Table 1) showed that: Fish farming (GM = 3.18); Cropping practices of crops (GM = 2.97); Poultry production (GM = 2.71); Seed multiplication/Yam miniset technology (GM = 2.70); Snail farming (GM = 2.59); Linkage to fertilizer / application and Organic farming with equal grand mean (GM = 2.57); Introduction of new varieties of crops; and Integrated farming with similar Grand Means (GM 2.55) have been carried out in Bayelsa State by ADP within the past five years from 2016 for the purpose of increased productivity of crops and animals. These projects have not created the expected impact in agro production in these zones, implying that the farmers may have relaxed the adoption of these agricultural projects delivered to them. This claim agreed with IITA (2014) which reported that many agro production practices including the miniset technique using 25-50g sette to produce seed yam had been introduced to farmers in Nigeria but the rate of adoption was generally low.

However, the findings cataloged the following: Yam bag technology (GM = 1.83); Processing of tubers/grains/plantains into flour (GM = 2.32); Goat/Sheep farming (GM = 1.94); Feed milling (GM = 1.95); Grass cutter/Rabbit farming (GM = 1.80); Mushroom production (GM = 1.35); Farmers' cooperative formation (GM = 2.32); Linkage to agro credits (GM = 2.12); Linkage to markets (GM = 2.07); Processing of livestock products (GM = 1.59) and Packaging and storage practices (GM = 1.48) as agro projects that have not been carried out in the area for the past five years. These agro extension projects that have not been carried out in this State are vital to increasing agricultural production in these ADP zones, hence demands for effort in this direction. For instance, forming farmers into cooperative groups would increase access to information, opportunities, markets and access to credits, which would in turn have effect on the willingness of the farmers to participate in agricultural programmes. This finding agreed with Odinwa, Isife and Nlerum (2019) who stressed that membership of farmers group influences participation in agricultural projects due to the fact that there is increasing interest in farmers' organization as an effective approach to farmer participatory research (FPR).

Table 1: Mean Distribution of the Farmers on the Agricultural Projects carried out by Bayelsa State ADP within the past five years

Agro Projects	Central Zone Weighted Scores n = 92	Mean	Eastern Zone Weighted Scores n = 95	Mean	Western Zone Weighted Scores n = 67	Mean	Grand Total scores N= 254	Grand Mean	Remark
Cropping practices	303	3.29	289	3.04	162	2.42	754	2.97	Carried out
Introduction of new varieties of crops	225	2.45	277	2.92	146	2.18	648	2.55	Carried out
Seed multiplication/Yam minisette technology	256	2.78	243	2.56	188	2.81	462	2.70	Carried out
Yam bag technology (Yam bagnology)	166	1.80	193	2.03	107	1.60	466	1.83	Not carried out
Linkage to fertilizer / application	216	2.35	266	2.80	172	2.57	654	2.57	Carried out
Organic farming	297	3.23	284	2.99	192	2.87	654	2.57	Carried out
Integrated farming	249	2.71	248	2.61	150	2.24	647	2.55	Carried out
Processing of tubers/grains/plantains into flour	253	2.75	203	2.14	133	1.99	589	2.32	Not carried out
Goat/Sheep farming	158	1.72	204	2.15	131	1.96	493	1.94	Not carried out
Feed milling	152	1.65	232	2.44	112	1.67	496	1.95	Not carried out
Poultry production	281	3.05	279	2.94	180	2.69	740	2.91	Carried out
Hatchery	137	1.49	240	2.53	102	1.52	479	1.89	Not carried out
Fish farming	314	3.41	281	2.96	213	3.18	808	3.18	Carried out
Spawning	118	1.28	142	1.49	98	1.46	358	1.41	Not carried out
Piggery/pig farming	158	1.72	166	1.75	108	1.61	432	1.70	Not carried out
Snail farming	277	3.01	263	2.77	117	2.64	657	2.59	Carried out
Grass cutter/Rabbit farming	197	2.14	136	1.43	124	1.85	457	1.80	Not carried out
Mushroom production	120	1.30	139	1.46	85	1.27	344	1.35	Not carried out
Farmers' cooperative formation	234	2.54	205	2.16	151	2.25	590	2.32	Not carried out
Linkage to agro credits	205	2.23	186	1.96	147	2.19	538	2.12	Not carried

Linkage to markets	224	2.43	147	1.55	156	2.33	527	2.07	out Not carried out
Processing of livestock products	125	1.36	179	1.88	101	1.51	405	1.59	Not carried out
Packaging and storage practices	125	1.36	173	1.82	77	1.15	375	1.48	Not carried out
Cumulative Mean		2.22		2.25		2.03		2.15	

Source: Field Survey, 2021

Critical Mean = 2.50

The test of significance (Table 2) showed f – calculated as 0.72 and f – tabulated as 3.14 at $P > 0.05$ significant level, leading to the acceptance of the null hypothesis, which states that ‘The views of the rural farmers on the Agricultural projects carried out by ADP in the past five years do not differ significantly among the three ADP zones in Bayelsa State’. This means that the views of the rural farmers concerning the agro projects introduced by ADP did not differ significantly among the three ADP zones in Bayelsa State. The implication of this finding is that the Agricultural Development Project is operating at the same sluggish pace in the three zones in the State, which demands an overhaul in the operation of ADP in Bayelsa State.

Table 2: Summary of ANOVA Result on the Agricultural Projects carried out by Bayelsa State ADP within the past five years

Source of Variance	SS	Df	MS	f-cal	f-tab	Remarks
B/W Group variance	0.49	2	0.25			
W/Group variance	21.58	251	0.34			
Total	22.07	253		0.72	3.14	NS

Source: Field Survey Data, 2021

NS – Not Significant at $P > 0.05$

Level at which the Agricultural Projects carried out were Adopted by the Farmers in Bayelsa State

The findings in Table 3 indicated in the order of adoption that only: Fish farming with grand mean (GM = 2.89); Organic farming (GM = 2.76); Poultry production (GM = 2.70); Cropping practices of crops and Snail farming with equal grand mean (GM = 2.66) had high adoption rate in the study area. Although, the result showed that these agro projects scored high in adoption by the farmers in these zones, but the impact of their adoption has not reflected positively in the

agricultural productivity of the State, implying that their adoption was not extensive above the subsistence level of the farmers.

The result also showed that among the agricultural projects carried out in the area that: Linkage to fertilizer and its application (GM = 2.32); Integrated farming (GM = 2.29); Use of new varieties of crops (GM = 2.22) and Seed multiplication/Yam minisette technology (GM = 1.71) had low adoption by the farmers in the study area and had no reflection on the agricultural productivity of the State. This finding agreed with IITA (2014) which reported that many agro production practices in crops had been introduced to farmers in Nigeria but the rate of adoption was generally low, leading to low crop productivity especially in the Niger Delta.

Table 3: Mean Distribution of the Farmers on the extent to which they have adopted the Agricultural Projects carried out by Bayelsa State ADP within the past five years

Agro Projects	Central Zone Weighted Scores n = 92	Mean	Eastern Zone Weighted Scores n = 95	Mean	Western Zone Weighted Scores n = 67	Mean	Grand Total scores N= 254	Grand Mean	Remark
Cropping practices of crops	281	3.05	255	2.68	139	2.07	675	2.66	High adoption
Use of new varieties of crops	196	2.13	243	2.56	126	1.88	565	2.22	Low adoption
Seed multiplication/Yam minisette technology	160	1.74	177	1.86	98	1.46	435	1.71	Low adoption
Yam bag technology (Yam bagnology)	157	1.71	172	1.81	95	1.42	424	1.67	Low adoption
Linkage to fertilizer / application	216	2.35	234	2.46	139	2.07	589	2.32	Low adoption
Organic farming	291	3.16	244	2.57	167	2.49	702	2.76	High adoption
Integrated farming	246	2.67	196	2.06	141	2.10	583	2.29	High adoption
Processing of tubers/grains/plantains into flour	246	2.67	168	1.77	118	1.76	532	2.09	Low adoption
Goat/Sheep farming	169	1.84	160	1.68	114	1.70	443	1.74	Low adoption

Feed milling	128	1.39	193	2.03	98	1.46	419	1.65	Low adoption
Poultry production	275	2.99	236	2.48	174	2.60	685	2.70	High adoption
Hatchery	131	1.42	207	2.18	125	1.87	463	1.82	Low adoption
Fish farming	293	3.18	264	2.78	176	2.63	733	2.89	High adoption
Spawning	125	1.36	138	1.45	99	1.48	362	1.43	Low adoption
Piggery/pig farming	145	1.58	141	1.48	121	1.81	407	1.60	Low adoption
Snail farming	277	3.01	249	2.62	150	2.24	676	2.66	High adoption
Grass cutter/Rabbit farming	185	2.01	131	1.38	113	1.69	429	1.69	Low adoption
Mushroom production	135	1.47	110	1.16	89	1.33	334	1.31	Low adoption
Farmers' cooperative formation	273	2.97	182	1.92	148	2.21	603	2.37	Low adoption
Linkage to agro credits	208	2.26	168	1.77	153	2.28	529	2.08	Low adoption
Linkage to markets	205	2.23	141	1.48	141	2.10	487	1.92	Low adoption
Processing of livestock products	137	1.49	176	1.85	104	1.55	417	1.64	Low adoption
Packaging and storage practices	134	1.46	170	1.79	80	1.19	384	1.51	Low adoption

Source: Field Survey Data, 2021

Critical Mean = 2.50

Test of significance on the extent to which farmers have adopted the agricultural projects carried out in Bayelsa State within the past five years (Table 4) showed an f – calculated as 1.49 and an f – tabulated as 3.14 at $P > 0.05$ probability level. The null hypothesis, which states that ‘The agricultural projects carried out were not equally adopted by the rural farmers in the three ADP zones in Bayelsa State’, was accepted. This implies that the low rate of adoption of agro projects introduced by ADP did not differ significantly among the three ADP zones studied in Bayelsa

State, hence would call for motivation of farmers and ADP Extension Agents to improve the situation in the State.

Table 4: Summary of ANOVA result on the extent to which Farmers have adopted the Agricultural Projects carried out by Bayelsa State ADP within the past five years

Source of Variance	SS	Df	MS	f-cal	f-tab	Remarks
B/W Group variance	0.79	2	0.40			
W/Group variance	16.74	251	0.27			
Total	17.53	253		1.49	3.14	NS
Source: Field Survey Data, 2021				NS – Not Significant at P > 0.05		

Challenges Associated with the Adoption of Agricultural Projects by the Farmers in Bayelsa State

Findings on the challenges associated with the adoption of agricultural projects by Farmers in Bayelsa State (Table 5) showed in the order of seriousness that: Lack of insurance practices by farmers (GM = 3.68); When the farmers are not involved in the planning of the project (GM = 3.50); Fear of taking risk by the farmers (GM = 3.39); Weak government policies / leap services in agriculture (GM = 3.30); When the projects are not guided by the needs of farmers (GM = 3.23); When projects are too technical/complex to operate (GM = 3.17); Inadequate agricultural credits (GM = 3.14); Lack of incentives for farmers (GM = 3.13); and When projects are gender specific (GM = 3.10) add up to the most serious challenges in adopting agricultural projects in Bayelsa State. These factors uncovered by this study were severe and may have adverse effects on improving agricultural production, hence the consequential low agro productivity in the study ADP zones in Bayelsa State. For instance inadequate access to credit facilities, Fear of taking risk; when the projects are not guided by the needs of farmers; and when projects are too technical/complex to operate will limit a poor farmer from adopting high-risk agro-ventures, no matter how profitable the ventures are. This claim was supported by Mendola (2007) who posited that asset-poor households cannot enter into high-risk activities because they do not own enough (and do not have access to credit) to deal with hitch risks.

Similarly, when these influential variables are positive in a friendly and political atmosphere, Nnadi, and Akwiwu (2008) noted that rural farmers would be encouraged to access or participate in any agricultural innovation introduced to them and once that is achieved and sustained, the multiplier effects would be experienced in increased agricultural production and improved productivity, value chain addition through processing of farm outputs, increased income for expansion and extension of farm enterprises, etc, they said.

Other serious challenges pinpointed by the study include: Attitudes of government towards agriculture (GM = 2.84); Low perception of farming projects by the people (GM = 2.78); Low price for the products of the agro project (GM = 2.73); Inadequate extension agents (GM = 2.65); Not belonging to functional co-operative organizations (GM = 2.63); Cost of adoption (GM = 2.61); Inadequate awareness of agricultural projects (GM = 2.58); and Insecurity of the agro projects. These other enumerated challenges are also grievous in adopting agricultural innovations of any standard. These findings were supported by Odinwa, Nlerum and Odinwa (2020) who reported that inadequate access to credit and technical facilities, lack of required inputs at the right time, limited access to land, governments' leap services to farmer's needs, inadequate extension agents, poor/no incentive and reward to farmers by service providers and not belonging to functional co-operative organizations constitute serious challenges in satisfying the extension needs of yam farmers in Rivers and Imo States.

Table 5: Mean Distribution of the Farmers on the Challenges Associated with the of Adoption of Agricultural Projects by farmers in Bayelsa State

Challenges	Central Zone Weighte d Scores n = 92	Mea n	Eastern Zone Weighte d Scores n = 95	Mea n	Western Zone Weighte d Scores n = 67	Mea n	Gran d Total scores N= 254	Gran d Mean	Remar k
Inadequate	227	2.47	259	2.73	170	2.54	656	2.58	Serious

awareness of agricultural projects									
Cost of adoption	238	2.57	256	2.69	168	2.51	662	2.61	Serious
When the projects are not guided by the needs of farmers.	312	3.39	327	3.44	181	2.70	820	3.23	Serious
Fear of taking risk by the farmers.	341	3.71	334	3.52	185	2.76	860	3.39	Serious
When projects are gender specific	277	3.01	328	3.45	183	2.73	788	3.10	Serious
When projects are too technical/comple x to operate	277	3.01	336	3.54	191	2.85	804	3.17	Serious
Illiteracy of rural farmers	234	2.54	191	2.01	123	1.84	548	2.16	Not serious
Inadequate agricultural credits	236	2.57	338	3.56	224	3.34	798	3.14	Serious
Insecurity of the project.	296	3.22	347	3.65	243	3.63	639	2.52	Serious
Low prices for the products of the agro projects.	252	2.74	237	2.49	204	3.04	693	2.73	Serious
Lack of insurance practices by farmers	353	3.84	360	3.79	222	3.31	935	3.68	Serious
Poor extension services.	225	2.45	215	2.26	158	2.36	598	2.35	Not serious
Inadequate labour for agricultural projects	228	2.48	185	1.95	154	2.30	567	2.23	Not serious
Attitudes of government towards agriculture.	232	2.52	290	3.05	199	2.97	721	2.84	Serious
Low perception of farming projects by the people	246	2.67	272	2.86	189	2.82	707	2.78	Serious
Not belonging to functional co-operative organizations.	240	2.61	259	2.73	170	2.54	669	2.63	Serious
Inadequate extension agents	236	2.57	229	2.41	207	3.09	672	2.65	Serious
When the farmers are not involved in the planning of the	312	3.39	344	3.62	234	3.49	890	3.50	Serious

project Lack of incentives for farmers	263	2.86	322	3.39	210	3.13	795	3.13	Serious
Weak government policies / leap services in agriculture	290	3.15	336	3.54	213	3.18	839	3.30	Serious

Source: Field Survey Data, 2021

Critical Mean = 2.50

ANOVA result on the challenges associated with the adoption of agricultural projects by the farmers in Bayelsa State (Table 6) showed an f – calculated as 0.52 and an f – tabulated as 3.17 at $P > 0.05$ significant level. This led to the acceptance of the null hypothesis, which states that ‘The challenges associated with the adoption of agricultural projects by the farmers in Bayelsa State do not differ significantly among the three ADP zones in Bayelsa State’. This means that the challenges of adopting agro projects introduced by ADP to farmers in the State are similar in the three ADP zones. The implication of these findings is that the ADP extension structure and operations in these zones are the same and weak throughout the State. It requires stringent measures by the State government to administer real extension principles and operations if sustainable increase in agricultural productivity is to be achieved in Bayelsa State.

Table 6: Summary of ANOVA result on the Challenges of Adopting Agricultural Projects by Farmers in Bayelsa State

Source of Variance	SS	Df	MS	f-cal	f-tab	Remarks
B/W Group variance	0.28	2	0.14			
W/Group variance	14.65	251	0.27			
Total	14.93	253		0.52	3.17	NS

Source: Field Survey Data, 2021

NS – Not Significant at $P > 0.05$

CONCLUSION

From the findings, it showed that: Fish farming, cropping practices of most crops, poultry production, seed multiplication/yam miniset technology, snail farming, linkage to fertilizer /

application and integrated farming, which are not enough to effect a substantial increase in productivity of crops and animals in the area, have been carried out in Bayelsa State within the past five years. Yet, the few introduced agro projects have not been fully adopted by the farmers, so as to increase productivity in these zones of the State.

It also revealed that: Lack of insurance practices by farmers, when the farmers are not involved in the planning of the projects; fear of taking risk by the farmers, weak government policies / leap services in agriculture, when the projects are not guided by the needs of farmers, when projects are too technical/complex to operate, inadequate agricultural credits, lack of incentives for farmers and when projects are gender specific add up to the most serious challenges in adopting agricultural projects/services in Bayelsa State. It also indicated that the views of the registered farmers on all the tested hypotheses did not differ significantly among the three ADP zones in Bayelsa State.

RECOMMENDATIONS

Based on the findings, the study recommended the following:

1. The Bayelsa State Agricultural Development Programme (ADP) should beef up their extension packages and extend worthwhile services to the farmers in their zones.
2. Engagement of qualified Extension Agents into the Bayelsa State Agriculture Development Programme with a clear mandate to assist the farm families grow should be emphasized in Bayelsa State.
3. Registered farmers should be formed into cooperative groups and be involved in planning agricultural programmes that concern them.
4. Giving incentives and grants by the State Government to encourage farmers' adoption of new agro projects introduced to them is necessary in Bayelsa State.

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