ADOPTION OF AGRICULTURAL INNOVATIONS BY CHILDREN-IN-AGRICULTURE PROGRAMME (CIAP) MEMBERS IN ENUGU STATE OF NIGERIA

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ABSTRACT

A major research question is how best to increase the adoption of innovations by Nigerian farmers. This study investigated the adoption of innovations by Children-In-Agriculture Programme (CIAP) participants in Enugu State of Nigeria. A structured interview schedule was designed, validated, and used to collect information from the one hundred registered CIAP members in Enugu State. An agricultural science test was also administered to all the 100 CIAP members (50 boys and 50 girls). One hypothesis was tested to the effect that there was statistically significant difference in the mean scores of male and female CIAP members on agricultural science knowledge test. The study also showed that the respondents adopted five innovations – sweet potato, mulching, line/row planting, dry season vegetable production, and fertiliser. Measures suggested by the subjects to promote interest of youths in agriculture include: formation of youth clubs in schools; award of scholarships to University students of agriculture; grant of interest – free loans to youths willing to embark on viable agricultural projects, ensuring that every primary school has a garden while every post-primary institution should have a modest farm; and the offer of automatic employment to a good number of agricultural graduates.

INTRODUCTION:

The importance of agriculture in the socio-economic development of Nigeria has come to be recognized increasingly in recent times. According to Akubuilo (1998) a number of reasons can be adduced to account for this change. First, rapid population growth has created awareness of the need to expand food production. Secondly, the fluctuating price of petroleum in the world market has signaled a danger on the problem of a mono-economy. Thirdly, recent achievements in agricultural technology have demonstrated that investments in the agricultural sector are economically justifiable. Fourthly, attempts by various governments of the Federation at industrialisation have not been quite successful. Disillusionment is still rife since poverty and unemployment are still rife in many places.

In trying to boost agricultural productivity in Nigeria and elsewhere, the role of agricultural extension must be properly recognized. Nigeria practices the Unified Extension

Service System with the Agricultural Development Programmes (the State ADPs) as the supervisory agencies. Even though a comprehensive evaluation of the performance of the ADPs in Nigeria has not been undertaken, it may however be safe to conclude that the findings of Akubuilo (1982) on the issue may still be valid today to the effect that extension in Nigeria has played an insignificant role in the promotion of adoption of agricultural innovations in the study area.

THE PROBLEM:

Successive Nigerian governments had at one time or the other seen the need for greater mobilisation of resources in the agricultural and rural sectors through the following programmes – Operation Feed the Nation Programme (OFN, 1976); the National Accelerated Food Production Programme (NAFDPP, 1972); First Generation Integrated Agricultural Development Authorities, River Basin Development Authority (RBDAs, 1976); National Committee on Green Revolution (NCGR, 1979); the World Bank Assisted Agricultural Development Projects (2^{nd} Generation ADPs, 1986); National Agricultural Land Development Authority (NALDA, 1991); Family Support Programme (FSP, 1995); Better Life Programme (BLP, 1989) and Family Economic Advancement Programme (FEAP, 1997). All the above efforts do not appear to have solved in any significant way, the food problems of this country as well as the stubborn issues of the rural poor. At best, some of then have remained avenues of siphoning away public funds. Apart from food shortages (which are essentially culmination of other factors), critical issues in the Nigerian food arena today according to Olaitan (1993) are:

- disinterest and poor attitude of youths to farming;
- an abundant supply of graduates of agriculture who are neither able to find paid employment nor employ themselves, and
- an obvious situation where about 90% of the food supply is produced by aged illiterate peasants.

Based on the foregoing, there is now an urgent need to get our youths properly interested in farming as future farmers of Nigeria.

METHODS:

The study was carried out in Enugu State in Southeastern Nigeria. There are 17 Local Government Areas in Enugu State, each headed by a Chairman. Situated on much of the highlands of Awgu, Udi, Nsukka hills and the rolling low lands of the Idodo River Basin to the East and Oji River Basin to the West, the State is bounded by five other States with which it shares common boundaries. It spreads southwards to the borders with Abia and northwards to the Benue State. Apart from a chain of low hills, running through Abakaliki in neighbouring Ebonyi State in the East to Nsukka in the West and then southwards through Enugu and Awgu, the rest of the State is made up of low land, criss-crossed by numerous streams and rivulets, of which major ones are Adada, Oji, Ekulu and Ajalli rivers.

Enugu State has a population of 2,453,091. Its people are Igbo by tribe. The State has rich agricultural land as a result of its location within the tropical forest and savannah belts. Consequently, almost every tropical crop thrives in the State. About 70% of the population are farmers, growing food crops such as rice, cassava, maize, yams, banana and a variety of fruits and vegetables. Cash crops such as palm produce and cashew are also produced in large quantities.

The Population of the Study:

The population consisted of 50 males and 50 females – all members of the Children-In-Agriculture Programme in the State.

The Instrument:

The study utilized a structured interview schedule. The interview-schedule was designed in such a way as to elicit information on such matters as general background of the respondents, their participation in crop production activities, their adoption behaviour as well as measures to promote the interest of youths in agriculture. The instrument was validated and later tested for test – retest reliability in the Enugu Agricultural Zone, using thirty agricultural science students. The reliability coefficients obtained ranged between r = 0.66 to r = 0.78.

Secondly, the respondents were taught certain aspects of practical agriculture for a period of three months after which written examination was conducted for them (the boys and the girls). All copies of the interview schedule (100%) were retrieved and found analysable giving a response ratio of 100%.

The Hypothesis:

H_0: There is no statistically significant difference in the mean scores of male and female Children – In-Agriculture Programme members on agricultural science knowledge test.

H_a: There is statistically significant difference in the mean scores of male and female Children-In-Agriculture Programme members on agricultural science knowledge test.

PRESENTATION AND DISCUSSION OF FINDINGS:

TABLE 1: Distribution of Subjects by age:

	SUBJECTS	
Age in Years	Number	Percentage
10 – 14	40	40.00
15 – 19	50	50.00
20 – 24	10	10.00
25 – 29	0	0.00
Total	100	100.00

Table 1 shows the age distribution of the subjects. The table shows that 40 percent of the subjects were between 10 and 14 years of age. Half of the subjects (50%) were aged between 15 and 19 years while 10 percent of the subjects were between 20 and 24 years of age. Every effort should be made to teach the youth improved agricultural practices since there is a correlation between age and adoption, (Lionberger 1960 and Akubuilo 1982).

TABLE 2: Educational qualification of Subjects:

EDUCATION	SUBJECTS	
	Number	Percentage
No schooling at all	0	0.00
Primary Complete	20	20.00
Secondary Incomplete	75	75.00
Secondary Complete	15	15.00
Total	100	100.00

The educational qualifications of the subjects are shown in table 2 above. A large percentage of the subjects (75.00 percent) were still in the secondary school, 20 percent had completed their primary education, while 15.00 percent had completed their secondary education. With adequate teaching, the subjects could benefit from extension education since according to Lionberger (1960) and Akubuilo (1982) at least eight years of formal schooling is required for the successful adoption of innovations

TABLE 3.3: Adoption behaviour of Subjects:

ACTIVITY/INNOVATION	NOT AWARE	AWARENESS	INTEREST	EVALUATION	TRIAL	ADOPTION	REJECTION	DISCONTINUANCE
Sweet Potato	0 0	5 0	10 0	15 0	20 0	50 0	0 0	0 0
Mulching	0 0	10	15	20	05	50	0 0	0 0
Line/Row Planting	0 0	0 0	0 0	15 0	5 0	80 0	0 0	0 0
Dry Season vegetable production	0 0	0 0	0 0	20 0	20 0	60 0	0 0	0 0
Fertilizer	0 0	0 0	0 0	5 0	5 0	90 0	0 0	0 0

Table 3 shows the distribution of the subjects by stages in adoption. Adoption was very good for fertilizer (90.0%), Line/row planting (80.0%), and dry season vegetable production (60.0%). Adoption was fairly good for sweet potato (50.0%) as well as for

mulching (50.0%). The seven – stage adoption process which, in addition to the traditional five stages, included rejection and discontinuance, was used for this study.

The implication of this adoption behaviour of the CIAP members is that with proper motivation and a favourable enabling environment, youths could be made to cultivate a favourable attitude towards farming as an occupation.

TABLE 4: Measures to promote the Interest of Youths in Agriculture:

S/N	SUGGESTED MEASURES	SUBJECT	
		Number	%
1	Formation of youth clubs in primary and post-primary institutions.	80	80.0
2	Award of scholarships to University students of agriculture.	92	92.0
3	Grant of interest free loans to youths wishing to embark on viable agricultural projects.	100	100.0
4	Ensuring that every primary school has a garden while very post – primary institution should have a modest farm.	88	88.0
5	Offer of automatic employment to a good number of agricultural graduates.	100	100.0

Table 4 shows the suggested measures by the respondents to promote the interest of youths in agriculture. The table shows that the subjects suggested five measures. These include: the formation of youth clubs in primary and post-primary institutions (80%); award of scholarships to University students of agriculture (92%); grant of interest – free loans to youths wishing to embark on viable agricultural projects (100%); ensuring that every primary school has a garden while every post-primary institution should have a modest farm (88%); and the offer of automatic employment to a good number of agricultural graduates (100%).

It is evident that if the above measures are implemented, agriculture is likely to move forward in Nigeria as a whole, and in the study area in particular.

TABLE 5: Performance of Respondents on Agricultural Science Knowledge Test:

S/N	SEX (MALES) SCORES (%)	S/N	SEX (FEMALES) SCORES (%)
1	65	1	70
2	55	2	74
3	48	3	76
4	66	4	48
5	75	5	58
6	70	6	68
7	60	7	69
8	40	8	70
9	45	9	74
10	56	10	66
11	70	11	54
12	66	12	45
13	54	13	48
14	55	14	90
15	63	15	83
16	66	16	75
17	62	17	70
18	60	18	74
19	70	19	65
20	85	20	60
21	46	21	55
22	48	22	75
23	52	23	70
24	51	24	95
25	62	25	80
26	64	26	70
27	66	27	68
28	55	28	60
29	53	29	50
30	46	30	56
31	66	31	65
32	72	32	68
33	74	33	70
34	63	34	75
35	60	35	70
36	44	36	65
37	42	37	66
38	48	38	82
39	36	39	66
40	38	40	85
41	43	41	86
42	57	42	77
43	62	43	88
44	61	44	92
45	58	45	61
46	49	46	56
47	51	47	53
48	66	48	52
49	62	49	57
50	50	50	80
Mean	57.42		68.60

Table 5 shows the performance of respondents in the agricultural knowledge test administered to them by the researcher. The mean score for the girls was 68.60. On face value it would appear that the girls, on the average, performed better than the boys.

TABLE 6: T – Test for paired samples

Variable	No. of Pairs	Correlation	2 – tail Sign.	Mean	SD	SE of Mean	df	T - value
Males				57.42	10.535	1.490		
	50	- . 200	.163				49	4.51
Females				68.60	12.076	1.708		

t=4.51, is significant at 95% confidence interval.

Table 6 shows the T-Test for Paired Samples. It tested the null hypothesis of the study that there was no statistically significant difference in the mean scores of male and female Children-In-Agriculture Programme members on agricultural science knowledge test. The table showed a t-value of 4.51 which was significant at the 95% confidence interval. The null hypothesis, H_0 was thereby rejected while the alternate hypothesis, H_a was accepted which, in essence, meant that there was statistically significant difference in the mean scores of male and female Children-In-Agriculture Programme members on agricultural science knowledge test.

The result of this study showed that the more emphasis should be placed on the role of females in agricultural production. The involvement of women in farming may not be surprising. Maunder (1978) noted that agriculture is a family enterprise in most areas of the world, and women and youths not only perform much of the job but help to decide what shall be grown and how. The important roles of women in agricultural production had also been highlighted by many authors including Williams (1978), Okoye (1990), Ijere (1989) and Boserup (1970).

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