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Youths' Adoption of Improved Rabbitry Technology in Umuahia South L.G.A. of Abia State, Nigeria

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Abstract: The study was carried out to investigate youth's adoption of improved rabbitry technology in Umuahia South L.G.A. It investigated youths' socio-economic characteristics, level of adoption of improved rabbitry technology, major problems encountered in rabbitry and the major source of information on rabbitry. The study area was Umuahia South L.G.A. Youth rabbit farmers were selected randomly using the simple random sampling technique. Sixty-three respondents were used in the study. Data were collected through the use of questionnaires and direct observation. The result showed that the ages of farmers' 16-25 years had the highest number of respondents 40% and were mostly males 76% who were still single (67). Most 50.76% of the respondents made monthly income of less than ₦5,000 from sales of rabbits and its manure. Housing was the technology that had the highest adoption 73%. Information from fellow young farmers was the major source of information on rabbitry 44%. Regression analysis showed that age and educational level were the two variables that positively affected adoption of the technology.

Key words: Technology, improvement, adoption, Nigeria

INTRODUCTION

Agriculture as at the moment provides the major source of income for the majority of rural population. Agriculture is therefore a key factor in the development of rural communities and greatly determines the strength of economic life of both the urban and rural communities, inspite of oil production and the growing pace of industrialization[1].

In rural communities, the bulk of food crop, cash crop and livestock production takes place under traditional system without the use of mechanical power. Usually, farm holdings are small and production as well is low due to use of local farm equipment for production. These characteristics and other farm practices have been passed down from one generation to another and they pose a formidable obstacle in the way of agricultural modernization.

Rural youth account of around 55% of the world population and youth constitutes a potent for both rural and Agriculture development. Youths according to United Nation's definitions are the young in the age bracket of 15 to 24 years. For the purpose of this study, youths are those young adults who are in the age bracket of 14 to 30 years. Many organisations attempt to involve youth in their programmes. This is due to the fact that they are seen as having an impact on the future as a result of working with young people.

The extent to which farming has been developed and its capacity to grow in rural areas depends directly on the types of technologies applied and result achieved. The Agricultural Development Programme (ADP) is perhaps the boldest attempt by the federal government of Nigeria to pursue integrated rural development on relatively long-term basis. The ADP system is designed to improve systems of production and raise productivity, income and standard of living of the small scale farmers who provide over 90% of gross domestic food supplies[2].

The main purpose for the application of technology to traditional peasant practice is the need to achieve greater efficiency in farm production, not only in terms of increased yield but also in the reduction of both input cost and drudgery associated with traditional farming[1].

Today, animal protein source is very expensive, only the high income earners can afford them whereas the resource poor are looking malnourished and predisposed to disease such as Kwashiorkor, Rickets and Goiter etc.

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The adoption of improved livestock production technologies by farmers will help boost livestock production and reduce cot of animal protein to much affordable prices.

Despite the importance of livestock in the economy and the large numbers of the different species, Nigeria has not been able to provide animal protein sufficient in quantity to meet the per capita animal protein requirement of the citizenry[3]. The average Nigerian consumes only about 7g of annual protein daily as against the represents a gross shortfall of 75%[4].

With the continued rise in the cost of production of beef, sheep and chicken, which are primary sources of animal protein in Nigeria and the non-availability of year round foodstuffs to sustain production of these traditional livestock. It has become very expedient for livestock experts and nutritionists to explore other less common but potential sources of animal protein for economic viability, at resonantly affordable price and a shortest possible time.

Large animals because of slow production cycle cannot meet such increases easily. Short cycle animals such as rabbits poultry and pigs constitute better technology in this task. Poultry and pigs requires similar food sources as Man. They are therefore in serious competition with man for those food sources. Rabbits can be produced on forge alone and do not compete with man for feed-stuff[5]. Rabbitry is the most appropriate type of production system for subsistence meat[3].

Rabbitry is a practice that has not been given attention over the years. Obviously, the improvement of the rabbit industry, in Nigeria will to a large extent check the shortage in the country. The Rabbit is the perfect system for subsistence meat, compare with the meat of other small species, rabbit meat is richer in protein, low in cholesterol and rich in certain vitamins and minerals.

In an effort to redress the protein shortages especially in south Eastern states where the problem of tsetse fly could not permit the production of cattle and other large livestock species. The federal ministry of Science and Technology in collaboration with the then Directorate of food, road and Rural Infrastructure (DIFFRI) embarked on a National rabbits multiplication with a target of producing 2.8 million rabbits nation-wide by 1992[6].

The ADP against this backdrop introduced the promotion of improved rabbit production technology under unified Agricultural Extension System (UAES) for meat in various state extension programmes. They promoted it for adoption among farmers in their farming system especially among the Southeastern States, where climatic factors, population pressure and presence of tsetse fly pose serious limitation to livestock production[3].

The ADP has been one of the sources of rabbitry technology extension to farmers. The following are the improved rabbitry technologies extended to farmers.

Housing-feeding/watering equipment feeding: sexing: fostering: breeding: stocking: disease management and control:, marketing and record keeping is to investigate the adoption of improved rabbitry technology by farmers in Umuahia South L.G.A.

- Determine the socio-economic characteristics of young rabbit farmers;
- Ascertain the major sources of information on improved rabbitry technology to young farmers;
- Find out the socio-economic factors that affect adoption of technology;
- Determine the level of adoption of improved rabbitry technology;
- Find out the major problems encountered in rabbitry;
- Make recommendations based on findings.

MATERIALS AND METHODS

The study area was Umuahia South L.G.A. of Abia State made up of seven autonomous communities namely Nsirimo, Ubakala, Olokoro, Ohiya, Amachara, Umuopara and Ekeneobizi. The study areas consists of two extension blocks i.e., Olokoro Ubakala block and Ohuhu South Block. These blocks contain sixteen circles. Four youth rabbit farmers were selected form each circle using a simple random sampling technique. Sixty-three respondents were chosen and used for this study.

Data were collected using a pre-tested structured questionnaire and direct observations. Descriptive statistics (frequency and percentages), mean adoption score and regression analysis were used to analyse the data. The implicit function of the regression model is specified as:

$$Y = F (AG, OC, EL, MS, SX, IC, HS, ei)$$

Where Y = Adoption of technology, AG = Age of farmer, OC = Occupation, EL = Educational level, MS = Marital Status, IC = Income of farmer, HS -= Household size, SX = Sex, ei = Error Term.

Four functional forms namely: Linear, semi-log, double-log and exponential functions were tried and the best fitted model chosen as the leas equation. Level of adoption was assessed base on the following:

0.00-1.00 = very low adoption
1.01-2.00 = low adoption
2.01-3.00 = fair adoption
3.01-4.00 = high adoption
4.01-5.00 = very high adoption

RESULTS AND DISCUSSION

Socio-economic characteristics

Age: The age distribution shows that majority 44% of respondents were in the age range of 16-25. agricultural extension programme can therefore be directed towards such people especially through the formation of children/youth in Agriculture programme (CIAP), young farmers club or livestock clubs in secondary schools where agricultural technologies can be taught.

Marital status: Finding shows that 67% of respondents were single and participated in rabbitry than the married 33%. This could be because single youth farmers have less home responsibilities than the married and they would be quick to be involved in any innovation of interest to them. The single youth farmers usually are more enthusiastic about new technologies. They can always risks practicing a new technology in their farm than the married ones. The married ones should be encouraged to embark on rabbitry to increase their family income.

Sex: Majority 78% of the respondents were male while 24% of them were females. With the percentage of females, they could be encouraged to embark in rabbitry in other to increase the number through formation of women rabbit groups. Introduction of rabbitry technology as a sub-programme in Women in Agriculture (WIA), will go a long way to improve their household income.

Occupation: More of the respondents were involved in farming 55%. This group comprises of respondents who are still young and take farming as a major source of income. Some respondents 44% combined farming with teaching 5% trading 11% civil services 8% and other 21%, all these are in a bid to increase their income. Those that are involved mainly in farming 55% are more likely to accept new innovations to enhance production then those that combine farming with other occupation.

Educational level: Forty one percent of respondents had secondary education. This is followed by 27% of the respondents with primary education. This shows that the respondents will be quick to engage in any innovation, which will help them improve their income.

Household size: Findings also show the 57% of respondents have household size of 1-5 and 41% have household size of 6-10. This shows that there is adequate household labour, which can be employed in rabbitry to enhance production. Similarly, farmers will engage in any productive venture that will help them feed more of the number of their household.

Monthly income: Table 1 shows that rabbitry made some contributions to household income, 50% of respondent earn below ₦5,000 per month this could be due to subsistence scale of rabbit production. Those who produce rabbits in commercial scale 12% earn above ₦10,000. This implies that subsistence production is mainly for household consumption and little income from sales whereas in commercial production, it is profit oriented, the target is to maximize output to increase income. Commercial producers are more likely to adopt new and improved rabbitry technologies so as to increase production at the least possible cost.

Socio-economic characteristics that affect farmers adoption of technology: Table 2 shows regression analysis using linear function that shows age and educational level as variable that are significant to adoption t technology. They have a positive influence on adoption of rabbitry technology.

Age as a significant factor implies that the younger the farmers, the more enthusiastic and desirous they will be in adopting improved technology i.e., the younger the age of the farmer, the higher the adoption of improved rabbitry technology. Okwoche[7] observed that young people are often more prepared to take risk of adopting innovation than the older ones. While the older the age the higher the adherence to old technique of farming and the lower the adoption of improved technology.

Educational level as a significant factor or variable implies that the higher the educational level, the higher the adoption of improved technology, on the other hand, the lower the educational level, the lower the adoption of improved technology. This fining is in agreement that educational attainment facilitates the adoption of new technologies.

Table 1: Shows the distribution of respondents according to monthly income in Umuahia South L.G.A

Monthly incomes (N)	No. of respondents	% of total
<5,000	32	50
5000-10,000	23	36
10,000-15,000	7	12
>15,000	1	2
Total	63	100

Table 2: Shows the regression analysis table-showing determinants of adoption of technology

Variables	Linear	Semi log	Double log	Exponential
Age	0.05458*	1.282***	0.368	0.02538*
	(0.013)	(0.624)	(0.342)	(0.006)
Marital status	0.337	-(0.140)	-	0.02217
				0.067
Sex	-0.055	-	-	0.014
	(0.255)			(0.121)
Occupation	0.08452	2.743	0.233	0.04001
	(0.067)	(0.854)	(0.468)	(0.032)
Household size	0.01912	0.368	0.130	0.008063
	(0.042)	(0.337)	(0.185)	(0.020)
Educational Level	0.07553*	1.556**	0.789***	0.03530
	(0.024)	(0.679)	(0.372)	(0.012)
Monthly Income	0.00001018	0.573	0.157	0.000003650
	(0.000)	(0.415)	(0.228)	(0.000)
R^2	0.460	0.75	0.642	0.440
F – stal	6.704	6.048	3.584	6.176
Sig.f	0.000	0.008	0.041	0.000

* = Significant at 1%, ** = Significant at 5%, *** = Significant at 10%

Table 3: shows the distribution f respondents by stages in adoption process of rabbit technologies in Umuahia South L.G.A

Technology	UA	AW	IN	EV	TR	AD	DD	TL	AS
Housing	-	-	12.7	-	14.3	73.0	-	100	3.65
Fostering	55.6	-	-	-	9.52	26.9	-	100	1.35
Feeding/watering	25.4	15.9	-	-	22.2	12.7	23.8	100	0.67
Breeding	25.4	12.7	-	11.1	28.6	22.2	-	100	1.11
Sex determination	30.2	31.7	-	-	14.3	23.8	-	100	1.19
Stocking	23.8	19.0	7.9	-	19.1	30.2	-	100	1.51
Disease mgt/control	39.7	33.3	-	-	-	26.9	-	100	1.35
Marketing	46.0	-	-	31.7	4.8	12.7	-	100	0.64
Record keeping	42.9	9.5	-	-	22.2	15.9	-	100	0.80

Mean adoption score = 1.36, UA = Unaware, AW = Aware, IN = Interest, EV = Evaluation, TR = Trial, AD = Adoption, DD = Discontinued, TL = Total, AS = Adoption score

Level of adoption of improved rabbit technology: In Table 3, findings show that housing 73% had the highest adoption percentage probably due to the need for adequate provision of hutches in order to protect rabbits form adverse weather conditions, predators and to maintain good and sanitized environment. This prevents the outbreak of pest and diseases.

Stocking is the next technology that had high adoption. This implies that stocking density to a large extent determines the rate of growth of rabbits. Overstocking can lead to cannibalism, struggle for food and stampeded growth of the animals, which eventually man lead to disease attach and subsequently, death of animal. Under stocking creates under space and waste of available space. Stoking at moderate level enhances productivity and growth of animals. The importance of stocking cannot be overemphasized as it determines the success or failure of rabbitry enterprise.

Feeding and marketing had the least adoption percentage 12.7%. Farmers have not yet been convinced that use of improved feeding technology can activate weight gain, as they believe that forage and kitchen waste can serve the required purpose.

Marketing as rabbitry technology has low adoption percentage, as farmers prefer selling only kindling and slaughtering mature and unproductive stock for home consumption. They are afraid of making rabbit farming a commercial venture because they are not convinced that the marketing technology is reliable enough. In other words, they have a myopic view of the prospects of making rabbitry a commercial venture.

The mean adoption score of improved rabbitry technology is 1.36, which implies that the level of adoption is low. This is therefore a clear evidence that the disseminated technologies investigated have not be fully adopted by farmers. The implication of this is that, rabbitry would hardly be undertaken as a commercial venture and people will continually depend on other source of animal protein available. There is need for increased mobilization and information dissemination on rabbitry by the ADP, NGO's and private organisation.

CONCLUSION

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

- Youths should be encouraged to participate in rabbit production on commercial scale to increase/supplement their income. This could be achieved by adopting improved rabbitry technology.

Youths should be incorporated into rapid rabbit production and encouraged to join Children in Agriculture programme (CIAP) to acquire knowledge, skills and attitude, this will help increase the level of adoption of improved rabbitry technology.

- Government should endeavour to provide inputs such as loans, hybrid rabbits, improved feed, medicines and even hutches through Agricultural Development Banks and ADP to enable interested youth farmers acquire Loan and input so as to increase production.

REFERENCES

1. Onokerhoraye, A.G., 1995. Patterns of development in urhobo land Nigeria. The Benin Social Science series for Africa, pp: 288-294.
2. Ayichi, O., 1995. Agricultural Technology Transfer for Sustainable Rural Development. In Eboh, E.C., C. Okoye and D. Ayichi (Eds.) Rural Development in Nigeria concept, Process and Prospects. Auto-century Publishing Company Enugu, pp: 22-24.
3. Onuekwusi, G.C., 2001. Adoption of Improved Rabbit Technologies by Farmers in Akwa-Ibom State Nigeria Implications for Extension. Proceedings of 36th Annual Conference, Agric. Society of Nigeria F.U.T. Owerri Oct. 20-24, pp: 368-371.
4. Ibe, S.N., 1999. Livestock production in the South-east zone prospects and strategies in the new millennium. An invites paper presented a the 14th Annual South East Zonal Farming System Research and Extension Workshop held at the Michael Okpara Auditorium, Umuahia Abia State Nov. 9- 12 1999, pp: 3.
5. Onwudike, 1995. Use of the legume tree crops gliricidia sepium and leucocepha as green feed for growing rabbit. Animal Feed Sci. Technol., 51: 153-163.
6. Abalu, G.O. and B.A. Kalu, 1988. (Eds.) Proceedings of the National Farming System Research Network Workshop held in Jos Plateau State, Nigeria, may 10-13, 1988, p p: 8.
7. Okwoche, V.A., J.P. Voh and S.A. Ogunwale, 1988. Socio-economic characteristics influencing Adoption Behaviour of women cooperators in Oju, L.G.A. of Benue Stae. J. Agric. Extension, 2: 31-38.