SOCIO – ECONOMIC ANALYSIS AS A DETERMINING FACTOR OF INCOME AMONG SMALL RUMINANT FARMERS IN BAUCHI STATE: A STRATEGIC WAY OF EFFECTIVE LIVESTOCK PRODUCTION IN NIGERIA

***[1]Yakubu, S., [2]Yakubu, S. A., [1]Atman, F.M., [1]Sani, M.H., [1]Fagam, A.S**

[1]Department of Agricultural Economics and Extension, Faculty of Agriculture and Agricultural Technology, Abubakar Tafawa Balewa University, Bauchi, Nigeria.

[2]Department of Agricultural Economics and Extension, Faculty of Agriculture and Agricultural Technology, Kano University of Science and Technology, Wudil, Kano State, Nigeria.

Corresponding Author: E-mail: suleimanyakubu2003@gmail.com**Tel.:** 08069097919

ABSTRACT

This paper examines some of the socio-economic factor determining an income of small ruminant farmers in Bauchi State. Data were collected with the aid of 500 structured questionnaires and the collected data were analysed using simple descriptive statistics and regression analysis. The result revealed that majority of sheep and goat farmers falls within the age bracket of 31-60 years (72.4%) while distribution of respondents by marital status reveals that more than half are married (53.8 percent). Educational distribution of respondents indicates that only about one-third (32.4 percent) are educated up to the tertiary level. While about 45.8 percent did not receive formal education, the rest received either primary or secondary education. However, age,educationalstatus($P<0.01$),householdsize($P<0.00$),povertystatus($P<0.01$)extensioncontact,membership ofcooperatives($P<0.10$)andsizeofflock($P<0.00$)areimportantdeterminants of income realized from small ruminants farming. The coefficient of educational level, extension contact, membership of cooperatives and flock size are positively related to income realised from small ruminants farming. On the other hand, the coefficients of age of household size and poverty status are negatively related to it. In conclusion, the importance of small of small ruminants in meeting social and economic need of rural farmers in Bauchi Statecannotbeoverempha- sised. This has to do with the different roles that these animals played in providing a sigh of relief in production shortfalls and unexpected ill health. Based on the findings from the study, it is recommended that government should intensify efforts at building capacity of small ruminant farmer in Bauchi State through education which can enhance their productivity as education is empowerment which can translate to better adoption of technology that will invariably enhance output and increase revenue.

Keywords: Analysis, Descriptive, Ruminant, Status, Structured

INTRODUCTION

Small ruminants have a number of advantages for being an integral component of the pastoral production system. Sheep and goats are kept for a variety of economic reasons including savings and investment, security and insurance, stability, and social functions. Sheep and goats appear to withstand drought better than cattle, and their short reproductive cycle allows them to quickly recover from rapid resumption of breeding following drought or devastating disease infestation. The small size of sheep and goats has distinct economic, managerial, and biological advantages. Economically, low individual values mean a small initial investment and correspondingly small risk of loss by individual deaths. The role of sheep and goats as a continuous source of protein during and immediately following a period of drought is one major reason for making them the most important component of livestock in pastoral and agro-pastoral production system (Wilson, 1991). Managerially, they are conveniently cared for by women and children, occupy little housing space, lower feed requirements, and supply both meat and milk in quantities suitable for immediate family consumption.

In contrast to large ruminants like cattle which are normally concentrated and remain in the hands of a restricted number of producers (high income rural households), small ruminants are dominant in almost every low income rural household. In the dry areas of Northern Nigeria, fewer than 20 percent of farmers own cattle (ILCA, 1980). In Côte d’Ivoire, Barry (1985) reported that, on average, fewer than four cattle are found on farms where there are ten sheep/goats. Small ruminants are a source of food and financial security for the rural poor. According to FAO (1983), more than 50 percent of milk produced for human consumption is from sheep and goats in Niger and Somalia. This ownership pattern characterises the legacy of sub-Saharan Africa's rural economy as capital constraints limit access to cattle among poor households whilst small ruminants are well suited for their financial and labor resource capabilities. It is generally more suitable to slaughter a sheep or a goat than a large animal such as a cow to feed community members en- gaged in communally private fieldwork. Small ruminants also provide cultural and economic benefits for households. In the same vein, while a 10 to 15 kg small ruminant carcass is easily handled by a rural household for either home consumption or sale without means of preservation, slaughtering even a steer (when it is available) for the same purposes is generally impracticable and uneconomical and is therefore a rare event.

The study was carried out in Bauchi State in which 500 small ruminants farmers were randomly selected in the 20 Local Government Areas of the State.
Descriptive statistics and regression analysis were used to analysed the data collected from the structured questionnaires.

RESULT AND DISCUSSION

Socioeconomic Characteristics of Respondents

Table 1 revealed that majority of sheep and goat farmers falls within the age bracket of 31-60 years (72.4%) and had an average age of respondents in the study area is 46 years old, implying that they are young and able to work. Distribution of respondents by marital status reveals that more than half are married (53.8 percent), while only about 21.6 percent are single. The rest are either divorced or widowed (24.6 percent). Educational distribution of respondents indicates that only about one-third (32.4 percent) are educated up to the tertiary level. While about 45.8 percent did not receive formal education, the rest received either primary or secondary education. Average household size of respondents is six, and this large household size decreases respondents' per capita income, further lowering their poverty status. Respondents distribution by membership of social group/association (especially cooperative societies) indicates that over three-quarter (74.4 percent) belong to one association or another. Such association is very important in creating a platform to showcase what they have to sell thereby enhancing the ease of converting small ruminants into credit facility or ready - made cash. Occupational distribution of respondents shows the relatively high importance of farming (agriculture–crop/animal husbandry) compared to other occupations available in the study area. Thus, while about 57.8 percent of the respondents indicate armingastheirmainsourceoflivelihood,overtwo-thirdsindicatefarmingasanalternativesourceofincome. Next to this are artisans (18 percent). Only about 12.2 percent are engaged as civil servants in the government parastatals or ministries.

Table 1: Distribution of respondents by socioeconomic characteristics

Variable	Frequency	Percentage
Age		
< 30	75	15
31 – 40	92	18.4
41 – 50	166	33.2
51 – 60	104	20.8
> 61	63	12.6
Total	500	100
Marital Status		
Married	269	53.8
Single	108	21.6
Widowed	57	11.4
Divorced	66	13.2
Total	500	100
Educational status		
No formal education	229	45.8
Primary	62	12.4
Secondary	47	9.4
Tertiary	162	32.4
Total	500	100
Household size		
1-3	86	17.2
4-6	107	21.4
7-9	181	36.2
10-12	86	17.2
13 and >	40	8.0
Total	500	100
Membership of social group		
Yes	372	74.4
No	128	25.6
Total	500	100
Primary occupation		
Farming	289	57.8
Trading	33	6.6
Civil Service	61	12.2
Artisans	90	18
Private salaried job	27	5.4
Total	**450**	**100.0**

Source: Field Survey, 2019

Determinants of Income from Small Ruminants Farmers in Bauchi State

In explaining the determinants of income realized from small ruminants' rearing (Table 5) among women in the study area, the ordinary least squares regression model was employed and the result shows that:

Table 2 revealed that age, educational status ($P<0.01$), household size ($P<0.00$), poverty status ($P<0.01$) extension contact, membership of cooperatives ($P<0.10$) and size of flock ($P<0.00$) are important determinants of income realized from small ruminants farming. The coefficients of educational level, extension contact, membership of cooperatives and flock size are positively related to income realized from small ruminants farming. On the other hand, the coefficients of age, household size and poverty status are negatively related to it. For example, the higher the educational status and the higher the flock size of respondents, the higher the income to be realized from small ruminants farming. This is because education enhances adoption of better management practices that can boost productivity and sales of farm produce especially among farmers. Thus, increased/enhanced income is assumed to be a determining factor of being able to meet household financial obligations.

Table 2: Regression result showing how small ruminants assisted respondents in meeting financial obligations

Variable	Coefficient	Standard Error
Age (X_1)	0.0132	(0.836)
Mstat (X_2)	-0.0082	(0.074)
Eduyrs (X_3)	0.260**	(0.126)
Povstat (X_4)	-0.011**	(0.005)
Hsize (X_5)	-0.124***	(0.022)
Extcont (X_6)	4.521	(3.157)
Coopmem (X_7)	0.054*	(0.034)
Flock size (X_8)	0 .821***	(0.171)
Experience (X_9)	0.0205	(0.047)
Other asset (X_{10})	0.203	(0.472)
Constant	0.947***	(0.072)

*Coefficients significant at 10%; **Coefficients significant at 5%;

***Coefficients significant at 1%; Source: Computed from survey data

CONCLUSION

The importance of small ruminants in meeting social and economic needs of rural farmers in Bauchi State cannot be over emphasized. This has to do with the different roles that these animals played in providing a sigh of relief in production shortfalls and unexpected ill health.

RECOMMENDATIONS

Based on the findings from the study, it is recommended that:

1. Government should intensify efforts at building capacity of small ruminant farmer in Bauchi State through education which can enhance their productivity as education is empowerment which can translate to better adoption of technology that will invariably enhance output and

increase revenue.

2. Governments should intervene to encourage small ruminant farmers to engage in cooperative activities by providing the initial take-off capital needed and fostering an enabling environment for cooperative activities to thrive.
3. Householdsizeofrespondentsinthestudyareashouldbeputundercheckthroughsensitisationtofamilyplanningtechniques as increased household size reduces income per head (per-capita income) which invariably leads to increased poverty.

REFERENCES

Barry,M.B.(1985).AstrategyfortheintensificationofproductionsystemsusingsmallruminantsinCôted'Ivoire.In:R.T.WilsonandD.Bourzat (eds). Small ruminants in African Agriculture. Proceedings of a conference held at ILCA, Addis Ababa,Ethiopia.

ILCA (1980). Economic trends. Small Ruminants. Bulletin 7. International Livestock Centre for

Africa,Addis Ababa, Ethiopia.

Wilson,R.T.(1991)Husbandry,nutritionandproductivityofgoatsandsheepintropicalAfrica.In:GatenbyR.M.andT.railJ.C.M.(eds).Small ruminant breed productivity in Africa. Proceedings of a seminar held at ILCA, Addis Ababa,Ethiopia.