

Effectiveness of the use of Indigenous Knowledge in Livestock Production in Oriire Local Government Area of Oyo State

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ABSTRACT

This study, focused effectiveness of the use of indigenous knowledge in livestock production in Oriire Local Government Area of Oyo State. A multistage sampling technique was employed for the study. Data were collected with the aid of well-structured interview schedule while frequency, percentage, mean and weighted mean score were used to present results. Chi square test was used in testing the hypothesis of the study. The results of the findings revealed that majority (71.1%) of the respondents were married, with the mean age of 41.66 years. Observing good hygiene practices was ranked first with the WMS of 2.61 while the use of herbs was ranked second with the WMS of 2.34 as the

indigenous method utilized by the respondent's Indigenous knowledge products are cheap and in most cases cost free in monetary terms was the highest benefits of all (100%) the respondents. The results of Chi square test revealed a significant between age($r = 0.437^{**}$, $p = 0.000$), years spent in school ($r = 0.273^{**}$, $p = 0.009$) and the level of use of indigenous knowledge system. The study concludes that the most effective indigenous knowledge method was observation good hygienic practices. Therefore, it was recommended that relevant agencies of government like NAFDAC should encouraged provision of good hygienic environment among participants of indigenous knowledge.

Keywords-Indigenous, diagnosis, feeds and livestock.

I INTRODUCTION

The agricultural sector plays an important role in Nigeria's economy, contributing 37 percent of the Gross Domestic Product (GDP) and employing 65% of the adult labour force. Over 90% of Nigeria's agricultural output is by small-scale (less than 5 ha) resource-poor farmers who have, for centuries,

sustained the national food supply through a considerable wealth of IK about how to harness both natural and socio-economic factors of production (Chimaraokeet *al.*, 2003). Despite the introduction of agro-chemicals, many farmers continued to rely on indigenous farm practices, either on their own or in combination with modern technologies. Small-scale, resource-poor farmers have good reasons for sticking to their local knowledge and farming practices attendant thereto, and that modern technologies can only be successful and sustainable if the interplay of local knowledge of cultural, social and ecological systems are taken into consideration. In so stating, it is suggested that, given the pervasive scenario of rapid population growth (2-3% per annum) and the attendant domestic food demand deficits, there is the emergent need to balance the sustaining IK of the production system with modern technology, through a systematic hybridization strategy.

Livestock contribute enormously to food security and livelihoods at the global, national and community levels. Globally, livestock provide a source of livelihood for 800 million poor people and account for 30% of agricultural GDP

in developing countries (Gupta, 1990). In Nigeria, the livestock sector which is dominated by small ruminants contributes about 7% of agricultural Gross Domestic Product (GDP) and serves a major source of income and employment for the growing populations, especially rural people. Nearly 95% of livestock keepers in Nigeria are rural small-scale farmers who provide the bulk of the national output (Federal Ministry of Agriculture (Goswamiet *al.*, 2006).

The indigenous knowledge method commonly used to control diseases includes constant and low costs but at most times are curative. The emphasis throughout the world is prevention as found in modern medical care such as the use of vaccines, although where these are available, they are supplied irregularly, sometimes in insufficient quantities and very expensive. Therefore it becomes difficult for the peasant farmer to get it.

The objectives are to;

- Examine the socio-economic characteristics of livestock farmers in the study area.

- Ascertain the effectiveness of the indigenous knowledge's being employed by the respondents in the study area.
- Evaluate factors influencing the effectiveness of the indigenous knowledge's being employed by the respondents in the study area.

Hypothesis of the study:

H₀₁: There is no significant relationship between the socioeconomic characteristics of the respondents and the effectiveness of the use of indigenous knowledge in livestock production.

II. METHODOLOGY

The study was conducted in Oriire local Government Area of Oyo State. It is located around latitude $8^{\circ}3^{\prime}0''$ N of the equator and longitude $3^{\circ}54^{\prime}$ S of the Greenwich meridian. It has a population of about 150,628 (NPC, 2006). The headquarters are in the town of Ikoyi. The land area is 2,116 km². The mean temperature is 26.2°C, lowest temperature of 24.30°C while highest temperature is 28.70°C.

Oriire Local Government Area is in derived savanna climatic zone where agricultural products such as yam, melon, cashew, mango, shea-butter, cocoa, kola nut, palm-oil etc can be found. Most of the inhabitants engaged in farming as their major occupation while some are hunters, traders, fish farmers, etc. (Jeliliet *al.*, 2015). It is inhabited by over 100 communities such as Tewure, Iluju, Apiko, Saamo, Igbori, Odun-Ifa and Olokoto among many others. The Local Government Area has 10 wards.

The population of the study consists of all livestock farmers at Oriire Local Government of Oyo State of Nigeria. A multistage sampling technique was employed for the study. The first stage involved the purposive selection of Ogbomoso agricultural zone out of the four agricultural zones in Oyo State and those zones are; Ibadan/Ibarapa, Ogbomoso, Oyo, and Saki. The second stage involved selection of Oriire Local Government Area. The third stage involved purposive selection of two blocks from the LGA rural areas. The fourth stage involved snow ball sampling of livestock farmers: and a total of 90 livestock farmers were sampled.

The tools and procedure that were employed elucidated the objectives of the study: this includes the following.

Descriptive statistics:

They are the mean, percentages and frequency distribution. These were used as tools to describe the socioeconomic characteristics of respondents and effectiveness of the indigenous knowledge's being employed by the respondents.

Chi square test:

Chi square test was used to evaluate the factors influencing the effectiveness of the indigenous knowledge's being employed by the respondents in the study area and the test of hypothesis.

III. RESULTS AND DISCUSSION

The distribution of the respondents by age revealed that 21.1% of the respondents were less than equal to 30 years of age, 22.2% were between 31 and 40years of age,33.33% were between 41 and 50years of age, 17.77% were between 51 and 60 years of age while 5.6% of the respondents were above 60years of age. The mean age of the respondents was 41.66years this means that the respondents are of average age, still strong and agile for agricultural production and will be expected to know and have access to various indigenous knowledge system

The distribution of the respondents by sex revealed that 60% of the respondents were male while 40% were female. The result shows that there were more male among the respondents than female.

The distribution of the respondents by religion revealed that 54.4% of the respondents were Christians while 45% of the respondents were Muslims. The result indicates that both Islamic and Christian religion were being

practiced by the respondents though the Christians were a little more than the Muslims.

The distribution of the respondents by marital status revealed that 71.1% of the respondents were married while 28.9% of the respondents were single. This results shows that most of the respondents were married. Being married shows that there will be availability of family labour supply to the respondents for their farming activities.

The distribution of the respondents by level of education revealed that 20% of the respondents had non-formal education,10% completed primary school,17.7% did not complete primary school,22.2% completed secondary school,12.2%did not complete primary school while 20% of the respondents had tertiary education.

The distribution of the respondents by household size revealed that 10% of the respondents had household size of between 1 and 3 members,40% had between 4 and 6 members, 40% had between 7 and 9 members while

10% of the respondents had household above 10. The mean household size was 6 members. This shows a relatively large family size which will be a source of family labour to the respondents.

Table 1: Socioeconomic Characteristics of the Respondents

Variable	Frequency	Percentage	Mean
Age			
<=30	19	21.10	
31-40	20	22.22	
41-50	30	33.33	41.66
51-60	16	17.77	
Above 60	5	5.6	
Sex			
Male	54	60	
Female	36	40	
Religion			
Christian	49	54.4	
Muslim	41	45.6	
Marital Status			
Married	64	71.1	

Single	26	28.9	
Level of Education			
No formal education	18	20.00	
Primary education completed	9	10.00	
Primary education uncompleted	16	17.70	
Secondary education completed	20	22.20	
Secondary education uncompleted	11	12.20	
Tertiary education	18	20	
Years spent in School			
0	18	20.00	
1-5	9	10.00	
6-10	15	16.6	9.67
11-15	38	42.2	
16-20	10	11.2	
Household Size			
1-3	9	10	6.00
4-6	36	40	
7-9	36	40	
Above 10	9	10	

Source: Field Survey, 2018

Effectiveness of various Indigenous Knowledge Methods of controlling Livestock Diseases

The distribution of the respondents by the effectiveness of indigenous knowledge system of controlling livestock diseases that was measured on 3-point scale of very effective, effective and not effective, while weighted mean score (WMS) was used in ranking of the items. Observing good hygiene practices was ranked first with the WMS of 2.61, the use of herbs was ranked second with the WMS of 2.34, movement away from the infested area ranked third with the WMS of 2.25, self diagnosis, bounding and hand removal of tick, lice and worms had a joint ranking of fourth with WMS of 1.98. Furthermore, burning of infested pasture and herd sharing had a joint ranking of seventh with the WMS of 1.71, the use of holy books and left over egg mixed with feeds ranked 9th with the WMS of 1.53. the use of cow urine to wash affected part ranked thirteen with WMS of 1.26 while the use of honey mixed with monkey droppings had the least ranking of fourteen with WMS OF 1.24.

Table 2: Effectiveness of Various Indigenous Knowledge Methods of Controlling Livestock Diseases

Indigenous Knowledge Method	Very Effective	Effective	Not Effective	WMS	Rank
Observing good hygienic practices	81(90)	9(10)	-	2.61	1 st
The use of Herbs	54(60)	36(40)	-	2.34	2 nd
Movement away from the infested area	63(70)	18(20)	9(10)	2.25	3 rd
Self-Diagnosis	45(50)	18(20)	27(30)	1.98	4 th
Bush Burning of infested pasture	-	81(90)	9(10)	1.71	7 th
Herd Sharing	27(30)	27(30)	36(40)	1.71	7 th
Boundering	27(30)	54(60)	9(10)	1.98	4 th
Hand Removal of ticks, lice and worms	36(40)	36(40)	18(20)	1.98	4 th
Incantation	-	40(44.4)	50(55.6)	1.3	11 th
Isolating infected animals	9(10)	36(40)	45(50)	1.4	11 th
Use of Holy books	9(10)	45(50)	36(40)	1.53	9 th

Left over egg (un-hatch egg), mix with feeds	18(20)	27(30)	45(50)	1.53	9 th
Cow urine use to wash affected parts	-	36(40)	54(60)	1.26	13 th
Honey mix with monkey droppings apply to parts	9(10)	18(20)	63(70)	1.24	14 th

Source: Field Survey, 2018

Factors influencing the effectiveness of the indigenous knowledge’s being employed by the respondents

The results of Chi square analysis showing the relationship between some selected socioeconomic characteristics and the level of use of indigenous knowledge methods revealed a significant relationship between Sex (Chi value = 42.00, p = 0.000), marital status (Chi value = 56.27, p= 0.000), educational status (Chi value = 75.20, p = 0.000) and membership of social organization (Chi value = 86.97, p = 0.000). The results revealed that sex,

marital status, educational status and membership of social organization significantly influenced the level of use of indigenous knowledge system.

The null hypothesis there is no significant relationship between the socioeconomic characteristics of the respondents and the effectiveness of the use of indigenous knowledge in livestock production. Since, sex, marital status, educational status and membership of social organization were significant at 1 percentage level, the null hypothesis that there is no significant relationship between the socioeconomic characteristics of the respondents and the effectiveness of the use of indigenous knowledge in livestock production was rejected.

Table 3: Factors influencing the effectiveness of the indigenous knowledge's being employed by the respondents

Variable	Chi-value	P – value	Remarks
Sex	42.00	0.000	Significant
Religion	4.113	0.129	Not Significant

Marital status	56.27	0.000	Significant
Educational status	75.20	0.000	Significant
Membership of social Organization	86.97	0.000	Significant

Source: Field Survey, 2018

IV. CONCLUSIONS AND RECOMMENDATIONS

The study concludes that the most effective indigenous knowledge method was observation good hygienic practices. Also, educational status and membership of social organization significantly increased the level of use of indigenous knowledge system.

Therefore, it was recommended that relevant agencies of government like NAFDAC (National Agency for Food and Drug Administration and Control) should ensure that provision of good hygienic environment should be practiced among participants of indigenous knowledge. Educated individuals should be encouraged to participate in good indigenous knowledge methods.

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