FACILITIES AND TEACHING OF LIVESTOCK PRODUCTION SKILLS IN COLLEGES OF EDUCATION IN KADUNA STATE

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Abstract
This study evaluated the facilities for teaching livestock production skills in Colleges of Education in Kaduna state with the objectives to identify the available livestock production teaching facilities in the study area, determine the extent of utilization of the available facilities, skills available for the students in livestock production, and to ascertain problems associated with the teaching and learning of livestock production skills in colleges of education in Kaduna state. Descriptive survey research design was used for the study, and forty (40) respondents comprising of technologists and lecturers that are teaching animal husbandry courses constituted the population for this study. No sampling was done since the population was small and manageable. The instrument for data collection was checklist and questionnaire. Forty (40 copies of questionnaire were designed and administered to the respondents by the researcher for data collection. The data collected was analyzed using frequency, simple percentage, mean and standard deviation. The results revealed that only facilities for poultry production, ruminants, fishery, and rabbit production are available in the study area. All the available livestock training facilities are utilized. Also, the skills for poultry, fishery, rabbit and ruminant production are available for the students. Theft, Inadequate fund, feed shortage and large class size, were among the problems affecting the provision and utilization of facilities for teaching and learning of livestock production skills in the study area. It was therefore recommended that the Provision of adequate security, fund, supplying of adequate feed among others, will help to solve the identified problems for efficient service delivery in livestock unit in the study area.

Keywords: ***Teaching Facilities, Livestock production Skills and Colleges of Education,***

Introduction

Skills acquisition is an imperative tool for a productive life. It is a process of obtaining salable skills necessary for employment or self-employment especially for students in schools and colleges. Skills acquisition can be accomplished through work experience, education in the school farm, workshop and laboratories with the aim to developing a better way of integrating academic, skill training and work experience. The skills acquisition enables the recipients make use of the products of technology, better adoption and utilization of innovations and all these geared towards increased his productivity and earning capacity (FAO, 1990 and Adeyemi, 2002). It can also enable one consider entrepreneurship as an alternative to employment which will help to reduce unemployment among graduates in Nigeria. This statement is in line with Razika (2013) view that Vocational Education is a vehicle that encourages people to become their own bosses. This acquisition of basic production knowledge, skills, and attitudes to facilitate occupational efficiency needed for wealth creation and poverty reduction requires skills-oriented teaching and learning which Agricultural Education is capable of providing (Nsa, Ikot, and Udo, 2013). Some of the available areas of skills acquisition in agriculture include; crop production, forestry,

horticulture, fishery, poultry farming, livestock production/ animal husbandry, bee keeping, rabbit keeping, cane rat farming, compost making, food storage and processing (Ifeakor, 2016, Atukpa, 2006, and Adekojo, 1998).

Livestock production is among the Agricultural Education courses offered in Colleges of Education in Nigeria which was primarily designed to provide the basic knowledge, skills and attitudes required for a successful livestock production by the recipients. Barret (2008) defined livestock production as a science of breeding, feeding, and tending farm animals or the management and care of farm animals by man for profits. This assertion implies that livestock production is a business of managing and caring for farm animals for man's gains. According to Kaegon (2012) livestock production is a branch of agriculture concerned with the raising of animals for meat, eggs, milk, fibre and other products and by-products. It deals with the feeding, breeding, housing and health care of farm animals for getting maximum profits. Among the livestock kept by man for economic purposes include cattle, sheep, goat, rabbits and birds. The National Commission for Colleges of Education NCCE (2012) in her minimum standard recommended poultry, ruminants, fish, cane rat or bee keeping or snail farming among the livestock to be taught to students in Colleges of Education. Through livestock production this, skills will be imparted to the students for a better living after graduation and contribute meaningfully to nation's economic development.

The teaching and learning of livestock production skills in schools and colleges requires a lot of variables which include the instructional materials, facilities, tools and equipment, and other farm inputs. The National Commission for Colleges of Education NCCE (2012) recommended standard school farm which must contain mechanized tools, workshops, livestock unit, crop unit, and fish pond among the needed facilities for effective teaching and learning of livestock production skills in Colleges of Education in Nigeria. Olaitan and Mama (2001) noted that a good quality farm should have both crop and livestock enterprises with the necessary tools and farm structures allowing active practice of skills by students. The essence of this is to have link between classroom instruction and skill development and utilization by the students. Newcomb. Mc Craken, Warmbrod, and Whittington (2004) added that the utilization of acquired skills in agricultural production by the students afterward completes the teaching-learning cycle. This is the only way wealth can be created and poverty reduced. However, the problem of unemployment and lack of employability skills among graduates in Nigeria keeps persisting despite several efforts by the Federal Government to ensure that students acquire skills needed for self-employment or employment through vocational education inclusion in the school curriculum. In recent times, there had been significant short fall between the production and supply of livestock and livestock products to satisfy the animal protein need of ever-increasing population (Akpan, Wogar, Effiong, and Akpanenua, 2009). Akpan and Udo (2014) reported that many school leavers are not adequately prepared to fit into the production sector of the economy and cannot provide the service that can generate sustainable income. In the same vein, Igbom (2004) reported that only 3% of those who were trained in agriculture practiced agriculture as a means of survival after graduation. The inability of agricultural sector to motivate graduates into livestock production as a means of livelihood and provide the sufficient protein that supplies the essential amino acids which plant protein cannot provide will expose the populace to

malnutrition and its consequence effects. This short fall in production and supply of animal products can be linked to inadequate involvements of youths including NCE Agricultural Education graduates of Colleges in Nigeria. Ifeakor (2016) identified lack of starting up capital, high cost of feeding, lack of space, fear of competing with foreign agricultural products and lack of provision of social amenities in the rural areas where over 70% of agricultural activities concentrate among the reason for low participation of youth in livestock production.

To arrest this unacceptable trend, efforts had to be made to boost the livestock sector through studies and research as well as motivating the students in livestock production in schools and colleges. Since practical activities on livestock production are done in the school farm where a teacher demonstrates skills using the relevant facilities to teach and supervise student practice (Phipps and Osborne, 1988). This study therefore focusses on the assessment of facilities for teaching livestock production skills in Colleges of Education in Kaduna State.

Objectives of the study

The main objective of this study is to assess facilities for teaching livestock production skills in Colleges of Education in Kaduna State with the specific objectives to:

1. identify the available facilities for teaching livestock production skills in Colleges of Education in Kaduna State.
2. determine the extent of utilization of the available livestock production facilities by the lecturers and technologists in teaching, in the study area.
3. identify the available skills in livestock production for students in the study area,
4. ascertain the problems associated with the provision and utilization of livestock production facilities in teaching in the study area.

Research Questions

The following research questions were answered in the course of the study.

1. What are the available facilities for teaching livestock production skills in Colleges of Education in Kaduna State?
2. What is the extent of utilization of the available facilities for teaching livestock production skills in the study area?
3. What are the available livestock production skills for NCE agricultural education students in Colleges of Education in Kaduna State?
4. What are the problems associated with the provision and utilization of facilities for teaching livestock production skills in the study area?

Research Methodology

The study adopted a descriptive survey research design. According to Sambo (2008), a survey research design is appropriate for identifying facts, attitude and behavioral self-report from large sample size. The study was conducted in two Colleges of Education in Kaduna State which are Federal College of Education, Zaria and Kaduna State College of Education, Gidan Waya. The population for the study was forty (40) (comprised of 18 Agricultural Education lecturers in livestock production and 22 technologists in the livestock farm in Federal college of education, Zaria and Kaduna State College of Education, Gidan Waya. No sampling was done as the population is small and manageable. Structured questionnaire and checklist were developed and used by the researcher for data collection. The questionnaire was designed in line with four point rating scale of Highly Available (HA), Available(A), Not Available (NA), highly Not Available (HNA), Very Often Used (VOU), Often Used (OU), Rarely Used (RU), Not Used (NU) and Strongly Agree (SA), Agree(A), Disagree(D) and Strongly Disagree (SD), with corresponding numerical value of 4,3,2 and 1 respectively. The questionnaire was validated by three

experts: two in Agricultural Education and one in Animal Science. The equivalent form of reliability method was adopted in determining the internal consistency of the instrument after a trial. The reliability of the instrument was 0.78, which showed that the instrument is reliable (Best and Kahn, 2006). The instrument was administered to the respondents by the researcher and also retrieved same after duly filled on the spot. A total of 40 questionnaire representing 100% was successfully retrieved from the respondents and used for data analysis. Data were analyzed using descriptive statistics of Mean to answer the research questions. Where mean score less than 2.5 were rejected and mean greater than or equal to 2.5 were accepted. The results are presented below.

Results and Discussion

Table1. Bio-Data of the Respondents

Variable	Frequency	Percentage
Gender		
Male	37	92.5%
Female	03	7.5%
Total	40	100%
Status		
Lecturers	18	45%
Practical technologists	22	55%
Total	40	100%

The table 1 above revealed that there are more males than females in livestock unit with percentage of 92.5% and 7.5% respectively. It also revealed that there are more technologists than the lecturers with percentage values of 55% and 45%. This shows that the colleges of education have capable manpower to handle livestock production training skills effectively.

Table 2: Available Livestock Production Facilities in Colleges of Education in Kaduna state.

S/N	Facilities for	HA	A	NA	HNA	SD	Mean	Remark
1	Poultry farming	08	32	00	00	0.38	3.20	Accepted
2	Ruminant production	14	26	00	00	0.31	3.35	Accepted
3	Fish farming	29	11	00	00	0.34	3.73	Accepted
4	Rabbit production	20	10	02	08	0.19	3.05	Accepted
5	Bee keeping	02	05	20	13	0.20	1.90	Rejected

The result in Table 2 above showed five items on available facilities for teaching livestock production skill in the study area. Four items had mean rating ranging between 3.1 and 3.7 that were above 2.5 cut-off point on a four-point rating scale, indicating that facilities are available in the study area for teaching livestock production skill to the students. This will contribute to high level of skills development of the students in those aspects of livestock production that may lead to wealth creation and better living of students after graduation. Ezeani (2012) stated that skills acquisition does not depend solely upon a person's fundamental, innate capacities but is also developed through training practice and experience using the relevant equipment and facilities. This supported Ezenkwu (1996) statement that the level of skills acquisition by the students is determined by the available equipment and facilities provided and utilized during their formation in schools and colleges.

Table 3: Extent of Utilization of Available Livestock Production Facilities in the Colleges

S/N	Facilities for	VOU	OU	RU	NU	SD	Mean	Remark
1	Poultry farming	10	25	02	03	0.27	3.10	Accepted
2	Ruminant production	17	23	00	00	0.30	3.42	Accepted
3	Fish farming	10	30	00	00	0.35	3.25	Accepted
4	Rabbit production	05	25	10	00	0.27	2.87	Accepted
5	Bee keeping	00	00	00	40	0.50	1.00	Rejected

The result in Table 3 above revealed that 4 out of 5 facilities for livestock production training skills are highly utilized in teaching students in the study area as their mean values are between 2.8-3.4. This implies that Agricultural Education students in these colleges are graduating with varied skills needed in livestock production business for wealth creation and economic empowerment. This supported Kwenga (2005) report that the number and quality of materials and facilities provided and utilized in teaching in schools determines performance and accomplishment of its students.

Table 4. Available livestock Production Skills for Students in the Colleges

Skills for Ruminant Production

S/N	Skills to	HA	A	NA	HNA	SD	Mean	Remark
1	Identify breeds of ruminants	20	09	01	10	0.19	2.97	Accepted
2	Appropriate feed for ruminants	15	17	03	05	0.18	3.05	Accepted
3	Identify animal on heat	09	10	11	10	0.02	2.45	Accepted
4	Benefits of natural mating	04	26	06	04	0.27	2.75	Accepted
5	Management systems of ruminants	22	08	09	01	0.22	3.28	Accepted
6	Identify pests of ruminants	10	20	08	02	0.19	3.95	Accepted
7	Identify disease symptoms of ruminants	19	12	07	02	0.18	3.20	Accepted
8	Take control measure of pests of ruminant	25	05	10	00	0.27	3.37	Accepted
9	Forage conservation (Hay/Silage) techniques	00	05	10	25	0.27	1.50	Rejected
10	Take control measure of disease of ruminants	15	20	05	00	0.23	3.25	Accepted

The result in Table 4 above showed that the skills for ruminant production are highly available with the mean values above 2.5. The only skill that is lacking is forage conservation. This shows that the student with the option of going into ruminant production will face serious challenge of feed during the dry season. The consequences of this may lead to poor performance of the farm animals as well as the income of the farmer. This is in line with the finding of Adda and Ayantunde (2021) that the shortage of feed during dry season hinders the livestock from meeting their protein and energy needs from available low-quality herbage with consequence, marked with weight loss and low productivity.

S/N	Skills to	HA	A	NA	HNA	SD	Mean	Remark
1	Identify various kinds of bird	19	17	04	00	0.24	3.38	Accepted
2	Experience in poultry management system	20	15	04	01	0.22	3.35	Accepted
3	Nutrient component of feed& function	10	08	12	10	0.04	2.45	Accepted
4	Appropriate feeds at different stages of poultry birds	16	20	04	00	0.24	3.30	Accepted
5	Management of birds in brooding house	13	15	10	02	0.14	3.00	Accepted
6	Identify fertilized eggs	00	02	20	18	0.26	1.60	Rejected
7	Handling of eggs in hatchery	02	06	20	12	0.20	2.00	Rejected
8	Hatching of eggs	03	05	17	15	0.18	1.90	Rejected
9	Identify disease different symptoms of birds	10	10	15	05	0.10	2.63	Accepted
10	Take control/prevention measure of poultry diseases	08	20	10	02	0.19	2.85	Accepted
11	Effective farm record keeping	10	25	05	00	0.27	3.13	Accepted

The result in Table 5 revealed that skills for poultry production are highly available for students. The result also indicated that nine out of eleven items has mean values between 2.6 - 3.4. This implies that the students in these colleges lack some basic skills in poultry production. Students need those skills for proper handling of birds in the farm. This supported Ogundele, Oparinde and Moronfoye (2013) assertion that the acquisition of basic livestock skills will enable students solve many problems in the farm. Akpotowo and Amadi (2006) confirmed that the skills acquired through business related subjects promote training in entrepreneurship as well as equip students with the requisite skills to establish and run small businesses of their own.

Table 6 - Skills for Fish Farming

S/N	Skills for	HA	A	NA	HNA	SD	Mean	Remark
1	Identify different kinds of fish	20	15	05	00	0.23	3.38	Accepted
2	How to establish and manage fish pond	10	27	02	01	0.30	3.15	Accepted
3	Management and maintenance of hygiene of pond water	15	17	03	05	0.18	3.05	Accepted
4	Identify the right type of feed for fish at various stages	11	23	02	04	0.24	3.00	Accepted
5	Identify fishing tools and their used	23	17	00	00	0.300	3.58	Accepted
6	Identify danger situations in a pond	07	19	06	08	0.15	2.63	Accepted
7	Harvesting, preservation and storage of fish	10	14	12	04	0.11	2.75	Accepted

The result in Table 6 above shows that all the skills for fish production are available for the students as all the items in the table have mean values above 2.5. This in line with the report of Ndem and Akubue (2016) finding that some institutions have adequate teaching facilities for vocational courses.

Table 7: Skills for Rabbit Production

S/N	Skills to	HA	A	NA	HNA	SD	Mean	Remark
1	Identify breeds of rabbit	13	22	04	01	0.24	3.18	Accepted
2	Identify sources of acquiring breeding stock	13	15	10	02	0.14	**2.98**	Accepted
3	Appropriate feed for different stages of rabbit	20	10	08	02	0.19	3.20	Accepted
4	Management of rabbit in a hutch	15	25	00	00	0.31	3.30	Accepted
5	Identify pests and disease symptoms of rabbit	11	20	09	00	0.21	3.05	Accepted
6	Disease prevention and control measures	16	19	05	00	0.22	3.28	Accepted

The result in Table 7 showed six items on available skills for rabbit production in the study area. All the items had mean rating ranging between 2.5- 3.4. This implies that rabbit production skills are highly available in Colleges of Education in Kaduna State. Ndem and Akubue (2016) supported this finding that some institutions have adequate teaching facilities for vocational courses.

S/N	Skills to	HA	A	NA	HNA	SD	Mean	Decision
1	Identify methods of bee keeping	00	00	15	25	0.31	1.38	Rejected
2	Identify different species of bee	00	00	17	23	0.30	1.45	Rejected
3	Identification and uses of bee facilities	00	00	10	30	0.35	1.25	Rejected
4	Management practices of bee keeping	00	00	15	25	0.31	1.38	Rejected
5	Harvesting of bee products	00	02	8	30	0.34	1.30	Rejected
6	Identification of storage facilities for bee products	00	02	8	30	0.34	1.30	Rejected

Table 8 - Skills for Bee Keeping

The result in Table 8 revealed that none of the bee keeping skills are available in the Colleges of Education in Kaduna State. The mean values of all the items in the table are below 2.5. This implies that Agricultural Education students are not being motivated in that aspect of livestock production as a means of livelihood. This finding is in line with Onazi (2007) that many educational institutions lack materials, facilities, equipment and competent teachers for vocational training of students.

Table 9: Problems of Provision and Utilization of Livestock Production Facilities in the Colleges.

S/N	Items	SA	A	D	SD	SD	Mean	Remark
1	Inadequate funds to purchase the needed facilities	32	08	00	00	0.38	3.80	Accepted
2	Theft	20	05	05	10	0.18	2.88	Accepted
3	Feed shortage	29	11	00	00	0.34	3.73	Accepted
4	Large class size	06	31	00	03	0.36	3.00	Accepted
5	Lack of maintenance culture of available facilities	35	05	00	00	0.42	3.88	Accepted
6	Distance from department to the farm	00	00	30	10	0.35	1.75	Rejected
7	Insufficient time allotment on the time table	10	15	10	05	0.10	2.75	Accepted

The result in Table 9 highlighted seven problems associated with the provision and utilization of facilities for teaching livestock production skills in the study area. Six items had a mean rating ranging from 2-7 and 3.8 that were above the cut-off point of 2.5 indicating acceptance. These problems will hinder the effectiveness of imparting livestock production skills on the students as well as student's confidence in venturing into livestock production as a means of livelihood after graduation. This could also contribute to low rate of youth participation in livestock production. Igbom (2004) reported that only 3% of those who were trained in agriculture practiced agriculture as a means of survival after graduation.

Conclusion

The importance of skills acquisition in livestock production by the students in tertiary institutions including Colleges of Education cannot be over emphasized. The importation of livestock production skills to student cannot be possible without adequate provision and effective utilization of the relevant training facilities by the facilitators. The study concluded that livestock training facilities for skills acquisition in livestock production are highly available and utilized in teaching within Colleges of Education in Kaduna State and the skills needed for livestock production are available for the students towards wealth creation and economic empowerment.

Recommendations

The following recommendations were proffered based on the identified problems -

- College Managements should ensure that the needed funds in the livestock unit are timely provided for them.
- Adequate security should be provided in the livestock unit to ensure the safety of livestock in a pen and their facilities.
- Appropriate budget should be made at the on- set to guide against feed shortage.
- Students should be organized into smaller groups for easy management and control during practical classes while, some personnel can be attached to the facilitators to enhance their efficiency in service delivery by the Department.
- Regular facilities maintenance culture should be adopted by the College and Department to prolong their useful life.
- More time should be allotted for practicals by the time table planners.

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