PERSONEL DEVELOPMENT NEEDS OF AGRICULTURAL SCIENCE TEACHERS IN SENIOR SECONDARY SCHOOLS IN NORTHERN SENATORIAL DISTRICT OF CROSS RIVER STATE

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Abstract: This study was designed to determine the personnel development needs of agricultural science teachers in senior secondary schools in Northern Senatorial District of Cross River State. The specific objectives were: to determine the caliber of agricultural science teachers teaching at senior secondary school level and to determine the perceived importance of technical competencies of animal husbandry by agricultural science teachers. Other objectives included to determine the technical competencies in animal husbandry which the agricultural science teachers feel they possess for teaching animal husbandry at senior secondary school level and to determine in-service programmes preferred for retraining to acquire technical competencies in animal husbandry by agricultural science teachers. Four research questions were formulated to guide the study. Descriptive survey design was used. One hundred randomly selected agricultural science teachers were the respondents for the study. Percentage and mean were the statistical tools used to analyze the data. The principal findings of the study were that: - the agricultural science teachers teaching agricultural science at the senior secondary school level were holders of first degree in agriculture and all the 46 identified technical competencies were rated as important for animal husbandry teaching at this level of education. The respondents agreed that they possess all the identified technical competencies in animal husbandry. Also, they expressed desire to go for in-service retraining in animal husbandry and that their retraining should be through study leave with pay and they should be made to participate in regular relevant conferences and seminars. Based on these results, it was recommended that the institutions responsible for training agriculture teachers for senior secondary schools in the State should consider revising their curriculum to incorporate the identified technical competencies in animal husbandry to enable animal husbandry to be taught in the schools. The Cross River State government should mandate all senior secondary schools to include the teaching of animal husbandry as prescribed by the Nigerian Government and agricultural science teachers who had accepted possessing technical competencies should be coopted to teach the subject to the students. Agricultural science teachers should be allowed to go for

retraining programme through study leave with pay and to participate in regular relevant conferences and seminars.

Keywords: Personnel development needs, Agricultural science teachers, Senior secondary school animal husbandry, Animal husbandry competency needs, Animal husbandry competencies possessed, Teachers' in-service needs.

Introduction

Before the advent of 'oil boom' in Nigeria, agriculture was the main stay of nation's economy. Everybody depended on agriculture for a livelihood, including people employed in other jobs, also maintained farms in their villages. Government derived more than 80 percent of her revenue through exportation of agricultural produce and earned her foreign exchange for overall development of the country from this process. Food security, raw materials for agro-allied industries and employment opportunities were guaranteed through agricultural production. However, with the advent of oil exploitation, people's values changed as government interest became focused on crude oil exploitation and production that yielded more revenue than agriculture. Agricultural production began to decline as there was lack of incentives to farmers, declining soil fertility, increasing population and increasing rural to urban migration. Also low level of agricultural education became a widely conceived factor for decline in the nation's agricultural production.

Nigerian educationists and policy makers recognized that adopting educational strategy could bring a proactive transformation of the nation's agricultural development. Consequent upon this, agricultural education was introduced into the Nigerian school system (Ben, 2003). The Nigerian Curriculum Conference of 1969 which fashioned a new National Policy on Education for the country recommended the inclusion and adoption of agricultural education as one of the vocational education subjects to be taught in Nigerian school system. At the senior secondary school level, agricultural science was meant to be taught with curricular emphasis on general agriculture, crop production, animal husbandry, soil science, agricultural engineering, agricultural economics and extension (Ben, 2003). The generalist scope of agricultural science with attendant poor teaching facilities present in the senior secondary school system in the country, resulted in the production of unskilled school leavers who could not be utilized in the farms. This category of the nation's population helped perennially to bloat the banks of unemployed youths and deepen the poverty level in the country. Students who offered agricultural science in West African School Certificate Examinations did so as a mean to making good grades in these examinations.

The Federal Government in her bid to laying a solid foundation for sustainable poverty reduction, employment generation, wealth creation and value reorientation in the country launched the National Economic Empowerment and Development Strategy (NEEDS) in 2004 (Federal Government of Nigeria, 2004).In attempt to use education to empower the citizenry, a new *trades curriculum* was designed to meet the objectives of NEEDS and the *Senior School Trades Curriculum in Animal Husbandry* was developed and its implementation started in the year 2011 for Nigerian Senior Secondary School system. The major aim of this pragmatic education is that students having successfully passed through the senior secondary education, should have acquired the skills and attitudes in animal husbandry to enable them create jobs and generate wealth (FGN, 2012).

Knowing the imperative of this subject in the life of the students and the overall socio-economic development of the nation, all senior secondary schools in the country are to provide their students opportunity to offer the subject by including it in the schools' list of optional compulsory subjects. It is disheartening noticing that senior secondary schools in Northern Cross River State do not offer this

important subject and students are denied opportunity of acquiring productive skills and attitudes in animal husbandry, thus negating the achievement of the goal of NEEDS in animal husbandry for the citizenry in the zone. All the schools in the zone are offering agricultural science to the Senior School Certificate level in which agriculture teachers are teaching animal production component to their students.

Could it be the authorities of these schools are conceiving animal husbandry to be a more specialized subject than agricultural science which they might not have competent and qualified resource personnel to meet the pedagogical needs? This fear can be easily overcome by adopting some proactive strategies in identifying the serving teachers' needs and arranging for a retraining programme that can make them effective in the discharge of their professional responsibilities. Improvement involves enhancing the capability of agriculture teachers in imparting appropriate knowledge, skills and attitudes to students in animal husbandry i.e. a special retraining in technical competencies in animal husbandry given to agricultural science teachers to make them perform better in the teaching of animal husbandry. Identifying competency needs of the teacherswould also reveal their deficient areas and appropriate improvement approaches recommended for the production of competent and qualified teachers. Competencies in the submission of Encarta (2009) is the ability to do something well, measured against a standard, especially ability acquired through training or experience. Also International Labour Organization (ILO) Report (2003) posited competency as the skills, knowledge, capabilities and behavior which someone exhibits in doing his job and which are factors in achieving the objectives pertinent to the teaching strategies. Technical competency in the context of this study is the subject-matter knowledge, skills and attitudes which the teachers of agriculture need for effective teaching of animal husbandry in senior secondary schools.

In the view of Cooper (2012) specialized employment requires specialized training, and teaching of animal husbandry as a trade subject in senior secondary schools in Nigeria falls under specializedemployment. In a situation where serving agriculture teachers are to be improved for effective teaching of animal husbandry, Usen (2009) suggested that in-service training programme becomes most appropriate for retraining of teachers for improvement in their technical competencies. An in-service training programme is a training programme offered to teachers while they are in service to enhance or upgrade their teaching skills.

It is on the basis of this that this study was undertaken to determine the technical competency needs of agriculture teachers in Northern Cross River State for effective teaching of animal husbandry and in-service needs that can be determined by the course curriculum.

Purpose of the study

The main purpose of this study was to determine the technical competency needs of agricultural science teachers in Northern Cross River State for effective teaching of animal husbandry and their in-service needs.

Objectives of the study

The specific objectives of the study were to:
1. Determine the caliber of agricultural science teachers teaching at senior secondary school level.
2. Determine the perceived importance of technical competencies of animal husbandry by agricultural science teachers.
3. Determine the technical competencies in animal husbandry which the agricultural science teachers feel they possess for teaching animal husbandry at senior secondary school level.
4. Determine in-service programmes preferred for retraining to acquire technical competencies in animal husbandry by agricultural science teachers.

Research questions

The following research questions were formulated to guide the study:

1. What educational qualifications do agricultural science teachers possess?
2. What technical competencies are important for the teaching of animal husbandry as perceived by agricultural science teachers?
3. Which technical competencies in animal husbandry do agricultural science teachers feel they possess for teaching animal husbandry at senior secondary school level?
4. Which in-service programmes do agricultural science teachers prefer for retraining to acquire proficiency in animal husbandry?

Assumptions of the study

The following basic assumptions were made:

1. Respondents are graduates of agricultural education who studied animal production during training programme in the university.
2. Respondents evaluated the competencies in terms of a "realistic" rather than "idealistic" conception of needs of agricultural science teacher,
3. Accurate, objective and unbiased answers were provided by the respondents to the questionnaire items.
4. The random sample of the schools and respondents were representative of the population.

Significance of the study

The significance of this study arises from the fact that the teaching of animal husbandry in senior secondary schools is a strategy for the realization of government's desire to lay solid foundation for sustainable poverty reduction, employment generation, wealth creation and value reorientation in the country. The findings of the study will be beneficial to the Cross River State Government on how to utilize the abundant agricultural science teachers on her employment role to teach animal husbandry in schools for the development of her economy and students.

The findings of the study will also benefit the curriculum designers for agricultural education to incorporate the identified technical competencies in the training and retraining programmes in senior school agricultural education in teachers training institutions in the country.

The findings of the study will enable Cross River State Government to arrange for in-service retraining programmes for serving teachers who will be used for the teaching of animal husbandry when introduced in the senior secondary schools.

Furthermore, the findings when uploaded in the internet will provide reference source for future researchers in the area.

Methodology

Survey research design was used for the study. The study was conducted in senior secondary schools in Northern Senatorial District of Cross River State which comprised five Local Government Areas: Obudu, Obanliku, Bekwarra, Ogoja and Yala. The schools are supervised by the Ogoja Zonal Secondary School Board with its office at Ogoja. The available statistics from the Zonal Office indicated that there were 112 Senior Secondary Schools and 226 agricultural science teachers in the Zone. Simple random sampling method was employed to select 100 agricultural science teachers and 50 State owned senior secondary

schools from the Zone for the study. This meant that 10 schools were randomly selected from each of the five Local Government Areas and two agricultural science teachers from the sampled schools.

A56-items structured questionnaire was used for the study. The questionnaire was divided into three parts: Part 1, 11 and 111. Part 1 sought general information concerning the respondent's name of school, local Government Area and their highest educational qualifications. Part 11 contained list of 45 animal husbandry technical competencies adapted from the approved Senior Secondary School Curriculum designed by the Nigerian Educational Research and Development Council (NERDC) and developed intoeight broad sections: Principles of animal production; Animal anatomy and physiology; Animal nutrition; Animal health; Animal improvement; Animal production; Range land and pasture management and Record keeping in farm animal. These technical competencies were set in questionnaire format, to solicit from the respondents an evaluation of the degree of the competency importance and their possession by the agricultural science teachers. A five-point Likert rating scale was used to determine the teachers' degree of the competency importance while a four-point rating scale was used to ascertain their level of possession of the competencies.

Part 111 carried six items on teachers' needs for retraining and "Yes" or "No" rating scale was employed.

The instrument was face and content validated by two specialists in Instructional Strategy in Agricultural Education in the Department of Vocational Teachers' Education, University of Nigeria, Nsukka.

Data analysis procedure

The data collected from the sample were checked, summarized and analyzed using percentage and mean. Percentage statistic was used to answer research questions one and four while mean statistic was used for answering research questions two and three.

Findings

Research question one: *What educational qualifications do agricultural science teachers possess?*

The agricultural science teachers were asked to indicate their highest educational qualifications. Table 1 below shows their responses.

Table 1Highest qualifications possessed by agricultural science teachers at senior secondary schoolsN=100

S/N	Item	Number of response	Percentage response (%)
i	NCE in Agricultural Education	26	26
ii	B. Sc. (Ed.)/B. Ed. Agricultural Education	68	68
iii	B. Sc. Agriculture	5	5
iv	M. Ed. Agricultural Education	1	1
v	M. Sc. Agriculture	0	0
vi	PhD. Agriculture	0	0

Sixty-eight percent of the teachers agreed they were first degree holders in Agricultural Education, 26% were NCE holders in Agricultural Education,5% possessed first degree in technical agriculture, 1% was a Master degree holder in Agricultural Education whereas no M. Sc. or PhD holder was found.

Research question two: *What technical competencies are important for teaching of animal husbandry as perceived by agricultural science teachers?*

Table 2:Mean and Standard Deviation for level of Importance on Animal Husbandry Technical Competencies N=100

Competency	Mean M	Standard Deviation SD
Discuss importance of animal husbandry	4.60	0.62
Keep production records of various farm animals	4.54	0.65
Discuss factors that pre-dispose farm animals to diseases	4.53	0,63
Keep fish in the school farm	4.53	0.63
Discuss problems in animal production	4.52	0.63
Explain circulatory system of various farm animals	4.52	0.63
Discuss functions of endocrine glands	4.51	0.68
Explain principles of animal improvement	4.51	0.68
Keep feed consumption records of farm animals	4.48	0.60
Manage cattle in the school farm	4.48	0.60
Identify parts of the central nervous system and autonomic nervous system	4.48	0.60
Identify major producers and suppliers of feedstuffs in the country	4.46	0.75
Discuss zoonotic diseases and their prevention	4.38	0.78
Explain anatomy of the reproductive system of various farm animals	4.38	0.78
Manage pigs in the school farm	4.36	0.74
Discuss factors affecting farm animal distribution in the country	4.36	0.74
Keep breeding records of farm animals	4.35	0.74
Discuss nutritional requirements of various farm animals	4.35	0.74
Explain respiratory system of various farm animals	4.34	0.74
Discuss animal nutrition	4.29	0.69
Identify signs of heat of various farm animals	4.29	0.69
Manage goat and sheep in the school farm	4.29	0.69
Classify farm animals based on digestive system	4.27	0.82
Discuss effects of climate on farm animals	4.27	0.82
Identify signs of good and ill-health in various farm animals	4.26	0.64
Preserve forage crops for animal feeding	4.22	0.90
Discuss methods of animal improvement	4.22	0.90
Keep farm diary and labour summary	4.14	0.69
Describe excretory system of various farm animals	4.14	0.69
Manage poultry in the school farm	4.11	0.82
Keep expenditure and sales records	4.11	0.82
Discuss various classes of pathogens of farm animal diseases	4.09	0.77
Explain economic importance of pathogenic diseases in animal production	4.07	0.78
Describe reproductive processes of various farm animals	4.07	0.88
Describe artificial insemination technique and name of tools and equipment used in the process.	4.03	0.84

Formulate and prepare feeds of various farm animals	4.03	0.84
Ability to use prophylactics to control farm animal diseases	4.02	0.79
Discuss digestion processes in various classes of farm animals	4.01	0.86
Discuss modes of feeding various fame animals	4.01	0.86
Keep feed records and estimate the cost of preparation	4.00	0.74
Group feedstuffs according to the major nutrients they supply	4.00	0.74
Discuss integumentary, skeletal and muscular systems	4.00	0.74
Establish pasture in the school farm	3.91	0.85
Discuss range and pasture management	3.78	0.77
Identify pasture crops	3.78	0.77
Identify ectoparasites and endoparasites of various farm animals	3.51	0.82

Agricultural science teachers were asked to rate 46 identified animal husbandry technical competencies using the following scale: Not Important (NI =1), Little Important (LI =2), Somewhat Important (SWI =3), Important (IM-=4) and Very Important (VI =5). As reported in table 2 above, the respondents rated all the identified technical competencies above mean of 3.50, meaning that the competencies were all "important".

Research question three: *Which technical competencies in animal husbandry do agricultural science teachers feel they possess for teaching animal husbandry at senior secondary school level?*

Table 3 Mean for Level of Competence Possessed by Agricultural Science Teachers in the Area of Animal Husbandry N=100

Competency	SD 1	DA 2	A 3	SA 4	MEAN M
Discuss importance of animal husbandry	-	-	40	60	3.60
Keep production records of various farm animals	12	10	38	40	3.06
Discuss factors that pre-dispose farm animals to diseases	4	6	44	46	3.32
Keep fish in the school farm	-	-	20	80	3.80
Discuss problems in animal production	-	-	10	90	3.90
Explain circulatory system of various farm animals	3	12	34	51	3.33
Discuss functions of endocrine glands	-	-	20	80	3.80
Explain principles of animal improvement	-	10	40	50	3.40
Keep feed consumption records of farm animals	7	20	33	40	3.06
Manage cattle in the school farm	4	20	40	36	3.08
Identify parts of the central nervous system and autonomic nervous system	5	10	35	50	3.30
Identify major producers and suppliers of feedstuffs in the country	20	10	30	40	2.90
Discuss zoonotic diseases and their prevention	10	20	30	40	3.00
Explain anatomy of the reproductive system of various farm animals	-	-	20	80	3.80
Manage pigs in the school farm	14	18	26	42	2.96
Discuss factors affecting farm animal distribution in the country	11	19	32	38	2.87
Keep breeding records of farm animals	10	20	30	40	3.00
Discuss nutritional requirements of various farm animals	10	20	30	40	3.00

Explain respiratory system of various farm animals	10	20	30	40	3.00
Discuss animal nutrition	3	12	34	51	3.33
Identify signs of heat of various farm animals	4	3	30	63	3.54
Manage goat and sheep in the school farm	11	9	30	50	3.19
Classify farm animals based on digestive system	-	-	10	90	3.90
Discuss effects of climate on farm animals	4	6	44	46	3.32
Identify signs of good and ill-health in various farm animals	-	-	20	80	3.80
Preserve forage crops for animal feeding	12	10	38	40	3.06
Discuss methods of animal improvement	6	4	40	50	3.34
Keep farm diary and labour summary	7	13	40	40	3.13
Describe excretory system of various farm animals	4	6	44	46	3.32
Manage poultry in the school farm	12	3	51	34	3.07
Keep expenditure and sales records	19	11	40	30	2.81
Discuss various classes of pathogens of farm animal diseases	-	10	40	50	3.40
Explain economic importance of pathogenic diseases in animal production	7	20	33	40	3.06
Describe reproductive processes of various farm animals	4	20	40	36	3.08
Describe artificial insemination technique and name of tools and equipment used in the process.	5	10	35	50	3.30
Formulate and prepare feeds of various farm animals	5	25	30	40	3.65
Ability to use prophylactics to control farm animal diseases	20	10	30	40	2,90
Discuss digestion processes in various classes of farm animals	5	25	50	20	2.85
Discuss modes of feeding various fame animals	40	30	10	20	2.90
Keep feed records and estimate the cost of preparation	4	6	44	46	3.32
Group feedstuffs according to the major nutrients they supply	-	-	60	40	3.40
Discuss integumentary, skeletal and muscular systems	4	3	30	63	3.54
Establish pasture in the school farm	10	10	40	40	3.10
Discuss range and pasture management	15	15	50	20	2.75
Identify pasture crops	14	26	30	30	2.76
Identify ectoparasites and endoparasites of various farm animals	-	-	20	80	3.80

Agricultural science teachers sampled were asked to rate 46 identified animal husbandry competencies based on their feeling to possess the competencies to teach them at senior secondary school level using the following scale: Strongly Disagree (SD =1), Disagree (DA =2), Agree (A =3) and Strongly Agree (SA =4). Table 3 above indicates that the respondents agreed to possessing all the identified competencies in animal husbandry at senior school level by rating the items above 2.50 mean scores.

Research question Four: *What in-service programmes do agricultural science teachers prefer for retraining to acquire proficiency in animal husbandry?*

The sampled agricultural science teachers were asked to rate five items bordering on their need for retraining to acquire proficiency in the teaching of animal husbandry and the result is presented in table 4 below.

Table 4Percentage response of Agricultural Science Teachers Needs for Retraining for Proficiency in Animal Husbandry N=100

Item	Yes %	No %
Do you need retraining for effective teaching of animal husbandry?	95	5
Do you prefer retraining under Sandwich Programme in the department of Animal Science in a recognized University?	20	80
Do you want retraining through Study Leave with Pay in the department of Animal Science in a recognized University?	90	10
Do you want retraining through Study Leave without Pay in the department of Animal Science in a recognized University?	4	96
Do you want retraining through participation in Conferences and Seminars?	63	37

Table 4 above reveals that 95% of the agricultural science teachers expressed need for retraining for proficiency in the teaching of animal husbandry but rejected their retraining under Sandwich Programme in the University (20%). 90 percent of them preferred their retraining through Study Leave with Pay, 96 percent resented retraining through Study Leave without Pay while 63 percent preferred retraining through participation in conferences and seminars.

Discussion

The study found out that the caliber of agricultural science teachers teaching at senior secondary school level in Northern Cross River State regarding their educational qualifications include holders of first degree in agricultural education (68%), NCE in agricultural education (26), first degree in technical agriculture (5%) and master degree (1%). This result is in consonance with the directive of education policy makers in Nigeria that holders of first degree in agriculture should teach at the senior secondary school level in the country while those of NCE should be reserved for junior secondary school level. By this development, the government of Cross River State is showing a commendable commitment to quality assurance in personnel provision in the teaching of agriculture in senior secondary schools in the area studied.

The agricultural science teachers' perception of all the identified technical competencies in animal husbandry above the mean rating of 3.50 (important) showed that the serving teachers of agricultural science demonstrated good orientation and knowledge and skill background of the content of animal husbandry necessary for this level of education. The finding is also in conformity with the findings of Aguolu (2004) that Supervisors of teachers of agriculture rated all the identified competencies important in FCT, Abuja. The result of this study is also similar to the findings of Fabian (2014) who used 126 agricultural science teachers in senior secondary schools in Akwa Ibom State to determine the importance of technical competencies in fish farming as a necessary vocational subject option to be taught at this level of education. The respondents rated all 77 (100%) identified competencies as being of greater in importance for the fish farming and the subject is presently being offered at senior secondary school level in the state.

The mean score of the 46 identified technical competencies were above 2.50 mean scores. This finding agreed with the findings of Okoye (2009) in the study that was to determine the in-service needs of secondary school agricultural science teachers in Anambra State based on Animal Science. The respondents perceived that they possessed the ability to teach all the identified competencies. As the respondents of this study perceived possessing the competencies, they could be trusted and allowed to introduce the teaching of animal husbandry in senior secondary schools.

On retraining need, the respondents expressed overwhelming need for retraining for proficiency in the teaching of animal husbandry (95%) but frowned at undertaking the retraining through Sandwich programme in the University (20%). This finding agrees with Ugonabo (2000) who asserted that serving technical teachers in Anambra State expressed need for retraining but disagreed by preferring retraining through Sandwich programme. The agricultural science teachers who hadbeenexposed to animal science teaching of agricultural science curriculum probably need some in-depth bushing in animal husbandry to make them experts in the area. Probably, this justified their acceptance to participate in conferences and seminars that could refresh and concretize competence. Also the acceptance of retraining under Study Leave with Pay (90%),presupposed that as adults they would be burdened with financial pressures and payment of salaries while on retraining programme would help in making them concentrate in their studies.Since there is need to introduce the teaching of animal husbandry as a vocational subject optional for senior secondary school students and to increase the quality and quantity of animal husbandry teachers, the government of Cross River State should consider retraining of agricultural science teachers who are willing to switch over to animal husbandry to do so for the interest of students and exploitation of the state economy agriculturally.

Recommendations

The following recommendations were made in line with the findings of this study:
1. The government of Cross River State should recruit graduates (first degree holders) in agriculture to teach all agricultural education programmes in senior secondary schools as recommended by the national education policy makers in the country.
2. Institutions responsible for training agriculture teachers for senior secondary schools in the State should consider revising their curriculum to incorporate the identified technical competencies in animal husbandry.
3. Cross River State Government should mandate all senior secondary schools to include the teaching of animal husbandry as a vocational subject optional as approved by the Federal Government of Nigeriaas agricultural science teachers used for the study agreed possessing the identified technical competencies in animal husbandry.
4. .The government of Cross River State should arrange for in-service training with pay for training of all holders of NCE in agricultural education teaching agriculture at senior school level to up-grade their knowledge and skills in animal science so that they could be used for effective teaching of animal husbandry in schools.
6. The Ogoja Zonal Secondary Education Board should make adequate arrangement for regular sponsorship of agricultural science teachers in the area to attend relevant conferences and seminars to up-date their competence in the teaching of the would-be introduced animal husbandry in the schools.

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SURVEY OF AGRICULTURAL SCIENCE TEACHERS' NEEDS
Agricultural Education Dept.,
Federal College of Education,Obudu.

Dear Sir/Madam,

RESEARCH ON PERSONNEL DEVELOPMENT NEEDS OF AGRICULTURAL SCIENCE TEACHERS IN SENOIR SECONDARY SCHOOLS IN NORTHERN SENATORIAL DISTRICT OF CROSS RIVER STATE

We are carrying on research on the above topic to see how agricultural science teachers can have their professional needs addressed for effective teaching of Animal Husbandry in senior secondary schools.

We therefore solicit your cooperation in this regard by completing the accompanying questionnaire. All information supplied will be treated confidentially and used for research purpose only.

Thanks.

Yours sincerely,

Dr. Umoh Mac   **Dr. Ingwu, I. A.**

AGRICULTURAL SCIENCE TEACHERS' NEEDS QUESTIONNAIRE

PART 1: PERSONAL DATA

Name of Your School:……………………………………………………………………

Local Govt.Located:………………………………………………………………

Please indicate the ones that are most applicable to you:

i)   NCE Agricultural Education…………………………………………………….

ii)   B. Sc. (Ed.)/B. Ed. Agricultural Education. ………………………………………

iii)   B. Sc. Agriculture……………………………………………………………

iv)   M. Ed. Agricultural Education………………………………………………..

v)   M. Sc. Agriculture………………………………………………………………

vi)   PhD Agriculture………………………………………………………………..

PART 11

INSTRUCTION:

After reading each item, mark (X) against the number under the heading "Importance" which reflects the degree of importance that you place on each unit of instruction in Animal Husbandry. Then turn to the right and mark (X) against the number under the heading "Possessed" which reflects your level of possession of the unit for effective teaching.

S/N	Importance					Competencies	Possessed			
	NI 1	LI 2	SWI 3	IM 4	VI 5		SD 1	DA 2	A 3	SA 4
						PRINCIPLES OF ANIMAL HUSBANDRY				
1						Discuss importance of animal husbandry				
2.						Discuss factors affecting farm animal distribution in the country				
3.						Discuss problems in animal production				
4						**ANIMAL ANATOMY AND PHISIOLOGY** Classify farm animals based on digestive system				
5						Discuss digestion processes in various classes of farm animals				
6						Identify parts of the central nervous system and autonomic nervous system				
7						Discuss functions of endocrine glands				
8						Discuss integumentary, skeletal and muscular systems				

9						Explain anatomy of the reproductive system of various farm animals				
10						Discuss reproductive processes of various farm animals				
11						Explain circulatory system of various farm animals				
12						Explain respiratory system of various farm animals				
13						Describe excretory system of various farm animals				
						ANIMAL NUTRITION				
14						Discuss animals nutrition				
15						Discuss modes of feeding various farm animals				
16						Discuss nutritional requirements of various farm animals				
17						Group feedstuffs according to the major nutrients they supply				
18						Identify major producers and suppliers of feedstuffs in the country				
19						Formulate and prepare feeds of various farm animals				
20						Keep feed records and estimate the cost of preparation				
21						**ANIMAL HEALTH** Identify signs of good and ill-health in various farm animals				
22						Discuss factors that pre-dispose farm animals to diseases				
23						Discuss zoonotic diseases and their prevention				
24						Discuss various classes of pathogens of farm animal diseases				
25						Explain economic importance of pathogenic diseases in animal production				
26						Ability to use prophylactics to control farm animal diseases				
27						Identify ectoparasites and endoparasites of various farm animals				
						ANIMAL IMPROVEMENT				

28						Explain principles and animal improvement				
29						Discuss methods of animal improvement				
30						Describe artificial insemination technique and name of tools and equipment used in the process				
31						Identify signs of heat of various farm animals				
32						Discuss effects of climate on farm animals				
						ANIMAL PRODUCTION				
33						Manage poultry in the school farms				
34						Manage pigs in the school farm				
35						Manage cattle in the school farm				
36						Manage goat and sheep in the school farm				
37						Keep fish in the school farm				
						RANGE LAND AND PASTURE MANAGEMENT				
38						Establish pasture in the school farm				
39						Discuss range and pasture management				
40						Identify pasture crops				
41						Preserve forage crops for animal feeding				
						RECORD KEEPING IN FARM ANIMAL				
42						Keep farm diary and labour summary records				
43						Keep production records of various farm animals				
44						Keep breeding records of farm animals				
45						Keep feed consumption records of farm animals				
46						Keep expenditure and sales records				

PART 111: TEACHERS' NEED FOR RETRAINING

S/N	ITEM	YES	NO
1.	Do you need retraining for effective teaching of animal husbandry?		

2.	Do you prefer retraining under Sandwich Programme in the Department of Animal Science in a recognized University?		
3.	Do you want retraining through Study Leave with Pay in the Department of Animal Science in a recognized University?		
4.	Do you want retraining through Study Leave without Pay in the Department of Animal Science in a recognized University?		

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