

NATIONAL BOARD FOR TECHNICAL EDUCATION

NATIONAL TECHNICAL CERTIFICATE

AND

ADVANCED NATIONAL TECHNICAL CERTIFICATE

PROGRAMMES

DRAFT CURRICULUM & COURSE SPECIFICATION FOR

IN

ANIMAL HUSDANRY

2008

General Information

AIM:

To give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant.

ENTRY QUALIFICATIONS

CRAFT PROGRAMME

Candidates must not be less than 14 years of age and should have successfully completed three years of junior secondary education or its equivalent. Special consideration may be given to sponsored candidates with lower academic qualifications who hold trade test certificates and are capable of benefiting from the programme.

ADVANCED CRAFT PROGRAMME

Candidates should possess the National Technical Certificate or its equivalent and should have had a minimum of two years post qualification cognate industrial experience.

THE CURRICULUM

The Curriculum of each programme is broadly divided into three components:

- a General Education, which accounts for 30% of the total hours required for the programme
- b Trade Theory, Trade Practice and Related Studies which account for 65% and
- c Supervised Industrial Training/Work Experience, which accounts for about 5% of the total hours required for the programme. This component of the course which may be taken in industry or in college production unit is compulsory for the full-time students.

Included in the curriculum, for the guidance of the teacher are the teacher's activity and learning resources required.

Unit Course/Module

A Course/Module is defined as a body of knowledge and skills capable of being utilized on its own or as a foundation or pre-requisite knowledge for more advanced work in the same or other fields of study. Each trade when successfully completed can be used for employment purposes.

BEHAVIOURAL OBJECTIVES

These are educational objectives which identify precisely the type of behaviour a student should exhibit at the end of a course/module or programme. Two types of behavioural objectives have been used in the curriculum. They are:

- a General Objectives
- b Specific learning outcomes

General Objectives are concise but general statements of the behaviour of the students on completion of a unit of work such as understanding the principles and application.

- a Orthographic projection in engineering/technical drawing
- b Loci in Mathematics
- c Basic concepts of politics and government in Political Science
- d Demand and Supply in Economics

Specific Learning outcomes are concise statements of the specific behaviour expressed in units of discrete practical tasks and related knowledge the students should demonstrate as a result of the educational process to ascertain that the general objectives or course/programme have been achieved. They are more discrete and quantitative expressions of the scope of the tasks contained in a teaching unit.

GENERAL EDUCATION IN TECHNICAL COLLEGES

The General Education component of the curriculum aims at providing the trainee with complete secondary education in critical subjects like English Language, Economics, Physics, Chemistry, Biology, Entrepreneurial Studies, Geography and Mathematics to enhance the understanding of machines, tools and materials of their trades and their application and as a foundation for post-secondary technical education for the above average trainee. Hence, it is hoped that trainees who successfully complete their trade and general education may be able to compete with their secondary school counterparts for direct entry into the polytechnics or colleges of education (Technical) for ND or NCE courses respectively. The Social Studies component is designed to broaden the trainee's social skills and his understanding his environment.

For purpose of certification, only the first three courses in Mathematics will be required. The remaining modules are optional and are designed for the above average students.

National Certificate

The NTC and ANTC programmes are run by Technical Colleges accredited by NBTE. NABTEB conducts the final national examination and awards certificates to successful candidates.

Trainees who successfully complete all the courses/modules specified in the curriculum table and passed the national examinations in the trade will be awarded one of the following certificates

S/NO	LEVEL	CERTIFICATE
	Technical Programme	
1	Craft Level	National Technical Certificate
2	Advanced Craft Level	Advanced National Technical Certificate

Guidance Notes for Teachers Teaching the Curriculum

The number of hours stated in the curriculum table may be increased or decreased to suit individual institution's timetable provided the entire course content is properly covered and the goals and objectives of each module are achieved at the end of the term.

The maximum duration of any module in the new scheme is 300 hours. This means that for a term of 15 weeks, the course should be offered for 20 hours a week. This can be scheduled in sessions of 4 hours in a day leaving the remaining hours for general education. However, (properly organised and if there are adequate resources), most of these courses can be offered in two sessions a day, one in the morning and the other one in the afternoon. In so doing, some of these programmes may be completed in lesser number of years than at present.

Each session of 4 hours include the trade theory and practice. It is left for the teacher to decide where the class should be held, in the workshop or in a lecture room.

INTEGRATED APPROACH IN THE TEACHING OF TRADE.

Theory, Trade Science and Trade Calculation

The traditional approach of teaching trade science and trade calculation as separate and distinct subjects in technical college programmes is not relevant to the new programme as it will amount to a duplication of the teaching of mathematics and the physical science subjects in the course. The basic concepts and principles in mathematics and physical science are the same as in the trade calculation and trade science. In the new scheme therefore, mathematics and the physical science will be taught by qualified persons in these fields and the instructors will apply the principles and concepts in solving trade

science and calculation problems in the trade theory classes. To this end, efforts have to be made to ensure that mathematics and science modules required to be able to solve technical problems were taken as pre-requisite to the trade module.

Evaluation of Programme/Module

For the programme to achieve its objectives, any course started at the beginning of a term must terminate at the end of the term.

Instructors should therefore device methods of accurately assessing the trainees to enable them give the student's final grades at the end of the term. A national examination will be taken by all students who have successfully completed their modules. The final award will be based on the aggregate of the scores attained in course work and the national examination.

CURRICULUM TABLE AND COURSE HOURS/WEEK

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY

Module Code	MODULE	YEAR I						YEAR 2						YEAR 3						TOTAL HOURS
		Term 1		Term 2		Term 3		Term 1		Term 2		Term 3		Term 1		Term 2		Term 3		
		T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	
CMA 12-15	MATHEMATICS	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216
CEN 11-17	ENGLISH	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216
CPH 10-12	PHYSIC	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288
CCH11-12	CHEMISTRY	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288
CEC 11-13	ECONOMICS	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216
ICT 11-15	COMPUTER	-	-	-	-	-	-	1	2	1	2	1	2	1	2	1	2	-	-	180
CRD 11-13	TECH.DRAWING	-	3	-	3	-	3	-	3	-	3	-	3	-	2	-	2	-	2	288

CBM 11	ENTERPRENUE SHIP	-	-	-	-	-	-	2	-	2	-	2	-	-	-	-	-	-	-	72
CAH11	INTRODUCTION TO PIG KEEPING IN NIGERIA	2	5	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168
CAH 12	POULTRY RAISING	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	80
CAH 13	CATTLE PRODUCTION I	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	216
CAH 14	RABBIT KEEPING	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288
CAH 15	GOATS AND SHEEP PRODUCTION	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288
CAH 16	POUTRY RAISING II	2	-	2	-	2	-	2	1	2	1	2	1	2	1	2	1	2	1	288
CAH 17	CATTLE PRODUCTION II																			
CAH 18	PIG KEEPING IN NIGERIA II																			
	TOTAL	20	-	20	8	18	3	23	11	20	10	21	10	19	9	19	9	18	7	3092

CURRICULUM TABLE AND COURSE HOURS/WEEK

PROGRAMME: ADVANCED NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY

Module Code	MODULE	YEAR I						TOTAL HOURS
		Term 1		Term 2		Term 3		
Module Code	MODULE	T	P	T	P	T	P	TOTAL HOURS
	MATHEMATICS	3	-	3	-	2	-	108
	ENGLISH LANGUAGE	1	-	1	-	1	-	36
	ECONOMIC	2	-	2	-	2	-	72
	ENTERPRENUESHIP	2	-	2	-	2	-	72
	AUTO CAD I	1	2	-	-	-	-	36
	AUTO CAD II	-	-	1	2	-	-	36
		3	-	3	-	3	-	216
		3	-	3	-	3	-	216
		3	-	3	-	3	-	216
		2	4	2	4	2	4	216
		2	4	2	4	2	4	216
		2	4	2	4	2	4	216
	TOTAL	24	14	24	14	22	12	1656

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY

MODULE: CAH11 INTRODUCTION TO PIG KEEPING IN NIGERIA

DURATION:

PRE-REQUISUTE

GOAL: This module is designed to expose the trainee to the basic knowledge and skills in pig keeping.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Understand the importance of raising pig.
2. Understand the system of pig management.
3. Understand the importance of pig housing.
4. Understand feeding in pigs.
5. Understand health/hygiene in piggery practice.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: INTRODUCTION TO PIG KEEPING IN NIGERIA I		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
	General Objective 1.0: Understand the Importance of Raising Pigs.		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 List the importance of pigs rising. 1.2 State the general characteristics of pigs 1.3 Outline the advantages and disadvantages of raising pigs.	<ul style="list-style-type: none"> ○ Discuss the reasons for raising pigs. ○ Locate areas in Nigeria where pigs are raised. 	
	General Objective 2.0: Understand the system of pig management.		
	2.1 Describe the following pig keeping practices - <ul style="list-style-type: none"> ◆ Free-range. ◆ Semi-intensive. ◆ Intensive. 2.2 Discuss the merits and demerits of each practice. 2.3 Explain why and where each practice in 2.1 above may be preferred.	<ul style="list-style-type: none"> ○ Explain pig management systems. 	<ul style="list-style-type: none"> ○ Visit to a pig farm.
	General Objective 3.0: Know the Importance of Pig Housing in the Tropics.		
	3.1 State the importance of housing pigs. 3.2 List the raw materials used in pig house construction. 3.3 Describe the different types of pig houses. 3.4 List the basic facilities expected in a pig house.	<ul style="list-style-type: none"> ○ Explain the advantages of good housing for pigs. ○ Explain conventional housing for pigs, e.g. backyard round huts, etc. 	Visit to a pig farm
	General Objective 4.0: Understand feeding requirements for Pigs.		
	4.1 List the nutrients required by pigs' eg carbohydrates, proteins, fat/oil, vitamins, minerals, water etc. 4.2 List the source of the nutrients in 4.1 above. 4.3 State the importance of the various nutrients in 4.1 above in the life of pigs.	<ul style="list-style-type: none"> ○ Highlight the importance of feeding in pigs. ○ Explain the nutrient requirement of pigs ○ Outline the sources of various nutrients. 	Charts/Pictures

General Objective 5.0: Understand pig feeding and requirements			
	<p>5.1 Explain the importance of clean environment in pig raising. e.g. clean beddings, feeders and water troughs.</p> <p>5.2 Explain the importance of vaccination in pigs.</p> <p>5.3 Describe the use of dips and disinfectants in pig raising.</p> <p>5.4 Explain the effects of parasites (endow and ectoparasites) in pigs.</p> <p>5.5 List the advantages pf dipping.</p> <p>5.6 Explain the importance of manure disposal in the piggery.</p>	<p>Discuss the need for a clean environment in pig raising.</p> <p>Explain the various ways of maintaining a hygienic environment in the piggery.</p> <p>Demonstrate dipping I n pigs.</p>	<p>Pictures/farm visit</p>

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 12 POULTRY RAISING I

DURATION:

PRE-REQUISUTE

GOAL: This module is designed to introduce the trainee to Poultry raising.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Understand the importance of Poultry keeping.
2. Understand various poultry species.
3. Know the management systems in poultry.
4. Know the importance of housing in poultry.
5. Understand the various nutrients required in poultry feeding.
6. Know the importance of hygiene in poultry keeping.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: POULTRY RAISING I		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Understand the importance of Poultry keeping.			
Specific Learning Outcome:		Teacher Activities:	Resources:
1.1 Enumerate the importance of poultry to the farmer and society.		List the importance of keeping poultry to the farmer.	Live bird.
General Objective 2.0: Understand various poultry species.			
2.1 Identify and show the features of a domestic fowl, turkey, guinea fowl duck, pigeon, ostrich, etc. 2.2 List and explain the general characteristics of poultry.		Identify the features of poultry farm visits for proper evaluation of the species in your environment. Describe procession of beaks, scaly legs, feathers egg laying etc.	Live bird.
General Objective 3.0: Know the management systems in poultry...			
3.1 Explain the following poultry raising systems. 3.2 Free range 3.3 Semi intensive 3.4 Intensive		Discuss the keeping/raising systems of poultry. State the various advantages and disadvantages of these systems	Visit to a standard poultry farm.
General Objective 4.0: Know the importance of housing in poultry.			
4.1 Explain types of housing for poultry in the tropics. 4.2 State importance of housing in poultry. 4.3 Identify raw materials use in building poultry houses. 4.4 Name some common facilities in a poultry farm and state their uses; e.g. wheel barrow, shovel, head pan, crates, nesting box, drinker feeder, weighing balance, etc.		Discuss the importance of good poultry housing. Explain conventional and non-conventional housing and show examples.	Visit to a standard poultry farm.

	General Objective 5.0: Understand the various nutrients required in poultry feeding.		
	<p>5.1 Explain the nutrients required by the various classes of poultry.</p> <p>Carbohydrate concentrate Protein – concentrate Fat/oil Vitamins Minerals Water Other additives (antibiotics; etc).</p>	<p>Explain the sources of these nutrients e.g. Carbohydrates maize, Sorghum, millet, cassava, yam; etc, protein, soya bean, groundnut, cotton seed and palm kernel cakes, fish meal; etc. Explain the importance of these nutrients to the overall performance of poultry.</p>	Visit
	General Objective 6.0: Know the importance of hygiene in poultry keeping.		
	<p>6.1 Discuss the importance of clean environment as a factor for proper development of birds. E.g. bedding materials (saw dust, straws; etc.) clean feeders, drinkers and water.</p>	<p>Discuss effects of parasites and endow-parasites in poultry. Explain the need for clean environment in poultry raising. Explain types and importance of vaccinations.</p>	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 13 CATTLE PRODUCTION I

DURATION:

PRE-REQUISUTE:

GOAL: This module is designed to introduce cattle production to students.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Know the importance of cattle keeping.
2. Know the various breeds of cattle in Nigeria.
3. Understand the terminologies in cattle production.
4. Know the equipment needed in cattle production.
5. Know the importance of housing in cattle production.
6. Know the importance of identification in cattle production.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: CATTLE PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Know the importance of cattle keeping.			
Specific Learning Outcome:		Teacher Activities:	Resources:
1.1 State the importance of cattle to the farmer and beef consumers.		Describe the uses of cattle and their economic importance, e.g. milk production work for transportation, meat.	Farm Visit
General Objective 2.0: Know the various breeds of cattle in Nigeria.			
2.1 Name the various breeds of cattle in Nigeria.		Discuss the various breeds in Nigeria and their features.	Pictures, Farm Visit;
General Objective 3.0: Know the terminologies equipment needed in cattle production			
3.1 Explain the common terminologies in cattle keeping e.g. culling in-cow, bull, calf, calling, heifer, yearling; etc.		Describe the various terminologies with note to students.	List of terms
3.2 List the items equipment required in cattle keeping and explain their uses. e.g., shovel, head pan, wheel barrow, feed and water troughs, fork, drum, rope, sprayer; etc.		Explain the importance and uses of the various items of equipment applicable in cattle farming.	Farm Visit
General Objective 4.0: Know the importance of housing in cattle production			
4.1 Sketch a typical housing suitable for cattle keeping.		Describe the importance of and materials to be used.	Farm Visit
General Objective 5.0: Know the importance of identification in cattle production.			
5.1 List the feeds suitable for cattle and identify their nutritional values.		Identify the various forages consumed by cattle, e.g. grasses, legumes, brow-plants and crop residues. Concentrates e.g. protein and energy.	Farm Visit

	General Objective 6.0: Know the diseases and pests in cattle and simple control of the conditions.		
	6.1 Identify the common diseases and pest in cattle. 6.2 Demonstrate treatment and care of affected animal.	Explain the causes of cattle diseases and pests such as render pest, trypanosomiases, ticks, etc, as it affects ecological zones in Nigeria,	Farm Visit
	General Objective 7.0: Know the importance of identification of cattle		
	7.1 State the importance of identification in cattle keeping. 7.2 Name the different methods of identification of cattle.	Using question and answer method, explain the likely ways of identifying cattle in the farm. E.g. ear tag, branding, etc.	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY

MODULE: CAH13 CATTLE PRODUCTION

COURSE SPECIFICATION: THEORETICAL CONTENT

- 1.0 Demonstrate ear tag and branding methods of cattle identification
- 2.0 Draw a known cattle breed and label its features
- 3.0 Sketch the common items of equipment used in cattle production
- 4.0 Sketch a typical type of housing suitable for cattle

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 14 RABBIT KEEPING I

DURATION:

PRE-REQUISUTE:

GOAL: This module is designed to introduce cattle production to students.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Know the importance of rabbit farming.
2. Know the importance of housing rabbits.
3. Understand the reproductive features of rabbits.
4. Know the common feeds for rabbits.
5. Understand the health of rabbits.
6. Understand the terminologies used for rabbit production.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: RABBIT KEEPING		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
	General Objective 1.0: Know the importance of rabbits keeping.		
	Specific Learning Outcome:	Teacher Activities:	Resources:
	1.1 State some reasons for keeping rabbits. 1.2 Explain the type of Rabbit breeds. 1.3 List the different types of rabbits.	Use question and answer techniques to discuss the importance of raising rabbits. Identify and draw the different types of rabbit breeds in your area. Explain local breeds, Exotic breeds and crosses.	Visit to a rabbit farm.
	General Objective 2.0: Know the importance of Housing rabbits.		
	2.1 Know the housing of rabbits. 2.2 State the conditions necessary for sitting rabbit housing. 2.3 Explain the importance of housing a rabbit. 2.4 List the materials use in constructing rabbit housing.	Identify a place in the area suitable for rabbit feed availability, water etc. List the reason for housing a rabbit e.g. avoid rain, sunshine, predators etc. Identify and list local materials us for construction of rabbit housing in your locality.	Visit farms
	General Objective 3.0: Understand the reproductive features of rabbits.		
	3.1 Reproductive feature of rabbit. 3.2 Explain the main features of male rabbit. 3.3 Female rabbits. 3.4 State the differences.	Identify and draw the male and female reproductive tract. Differentiate the male and female organs in rabbits.	Blue bird

General Objective 4.0: Know the common feeds for rabbits.		
4.1 List the common feeds for rabbits. 4.2 State the nutritional constitution of the foods in 4.1 above. 4.3 Classify the common food for rabbits into the various nutrients.	Identify and list the common food of rabbit. List the food for rabbit into the various classes of nutrients e.g. maize, Sorghum, yam for carbohydrate.	Visit to farm
General Objective 5.0: Understand the health of rabbits.		
5.1 Define disease and pest. 5.2 Enumerate the diseases and pests common to rabbits. 5.3 Explain each of the conditions in 5.1 above. 5.4 Explain the symptoms and signs of the diseases. 5.5 Explain the importance of good sanitary condition in rabbit house.	Identify and list the common pests in rabbits. Explain the signs of common rabbit diseases. Identify and list ecto-parasite of rabbits. List endo-parasites of rabbits. State ways of improving the prevention of disease and pest in rabbits.	
General Objective 6.0: Understand the terminologies use for rabbit production.		
6.1 List the common terminologies applicable in rabbit keeping. 6.2 Define and explain the terms listed in 6.1 above.	Explain the terms e.g. buck; doe, kitten, litter, meat, hutches, suckling, dam and sire.	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 15 GOATS AND SHEEP PRODUCTION

DURATION:

PRE-REQUISUTE:

GOAL: Expose trainees to sheep and goat production.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Know the importance of Goats and sheep.
2. Understand the breeds of Goats and sheep.
3. Understand the management systems of Goats and sheep.
4. Understand the different housing for goats and sheep.
5. Know the nutrition and feeding of Goats and sheep.
6. Understand health and hygiene in sheep and goats.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: GOATS AND SHEEP PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Know the importance of Goats and sheep.			
Specific Learning Outcome:		Teacher Activities:	Resources:
1.1 Explain the importance of goats and sheep to the farmer.		List the importance of sheep and Goats.	Note books, biro
General Objective 2.0: Understand the breeds of Goats and sheep.			
2.1 Identify the breeds of goats and sheep generally. 2.2 List the breeds of goats and sheep in Nigeria. 2.3 State the general characteristics of goats and sheep.		Identify and draw some goats and sheep breeds available within your area. Identify the different breeds of goats and sheep in Nigeria. Identify the differences between the breeds.	- Drawings; lesson note; chalk board Visits to nearby goat/sheep farms.
General Objective 3.0: Understand the management systems of Goats and sheep.			
3.1 Explain different types of goat/sheep farms management system. ◆ Free range system. ◆ Semi – Intensive system. ◆ Intensive system.		Identify the common management systems in your area. State the advantages and disadvantages of the systems of management.	Visits to nearby goat/sheep farms
General Objective 4.0: Understand the different housing for goats and sheep.			
4.1 Explain types of goats and sheep farms housing. 4.2 Describe the types of housing for goats and sheep e.g. conventional and non conventional housing. 4.3 State the importance of housing for goats and sheep. 4.4 Identifying local raw materials used for the		Discuss the features of a good housing for sheep and goats e.g. huts, bamboo and pen/paddocks. Construct a pen/paddock for goats and sheep using local materials e.g. wood,	Wood, grass, nails measuring tape bamboo, head pan, etc.

	construction of goats/sheep house.	Bamboo,	
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	<p>4.5 Identifying facilities in goats and sheep house e.g. drinkers, feeders, head pan; etc.</p> <p>4.6 Identifying the types of bedding materials used for goats and sheep.</p>	<p>grass etc. Sketch the facilities in goats and sheep house. Identify and prepare Good beddings for goats and sheep.</p>	<p>Buckets, feeders, plastic drum drinker, etc</p>
<p>General Objective 5.0: Know the nutrition and feeding of Goats and sheep.</p>			
	<p>5.1 Name the foods and feeding pattern of goats and sheep</p> <p>5.2 Explain the nutrient requirements of sheep and goats.</p> <ul style="list-style-type: none"> - Carbohydrate, - Protein - Fats & oil - Vitamins - Minerals - Water 	<p>Identify the source of nutrients in carbohydrate, protein, vitamins, mineral and water. State the importance of nutrients to sheep and goats.</p>	<p>GNC, soybean, yam, cassava, bone meal, premix, shell, salt, lick pastures</p>
<p>General Objective 6.0: Understand health and hygiene in sheep and goats.</p>			
	<p>6.1 Discuss the importance of clean environment for the growth of sheep and goats, e.g. ventilation, good be drinking water, clean troughs etc.</p> <p>6.2 State the importance of vaccination.</p> <p>6.3 List the various types of s the method and periods of administration</p>	<p>Identify different types of parasites in Goats and Sheep e.g. mites, tape worms etc. Show student how to de-worm sheep and goats. Demonstrate to the students the dip operation practice in sheep and goats. Explain the different types of sheep/goats vaccination and show how it could be administered.</p>	<p>Live sheep and goats, troughs, vaccination. Visits to nearby goat/sheep farms</p>

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 16 POULTRY RAISING II

DURATION:

PRE-REQUISUTE:

GOAL: This module is designed to further introduce students to poultry keeping.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Understand the terminologies in poultry production.
2. Know different classes of poultry.
3. Understand the classes of feed ingredients available for poultry.
4. Understand the various diseases and pests of poultry.
5. Understand the influence of climate in poultry keeping.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: POULTRY RAISING II		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
	General Objective 1.0: Understand the terminologies in Poultry Production.		
	Specific Learning Outcome:	Teacher Activities:	Resources:
	1.1 Explain Know the terminologies in poultry rising, Tom, ducklings chicks, growers, layers, brooding hen cock, cockerels, chuck mash layers mash, grower mash, broiler starter, broiler finisher etc.	Describe carry-out the various terminologies with students.	Visit to poultry farm
	General Objective 2.0: Know different classes of poultry.		
	2.1 Explain the different classes of poultry e.g. pullets for egg production, broiler for table meat; cockerel for table meat 2.2 State the characteristics of local or indigene birds; e.g. small in size, multi plumage, 2.3 State the characteristics of exotic birds e.g. fast growing, big in size, white, brown or black plumage.	Using question and answer method, describe the features of local chicken, duck, turkeys, ostriches, pigeon, guinea fowls, etc.	Live fowls, visit to poultry farm
	General Objective 3.0: Understand the classes of feed ingredients available for poultry.		
	3.1 Explain the digestive system of a known poultry breed e.g. domestic fowl. 3.2 Discuss the various sources of nutrients for poultry, e.g. carbohydrate (maize, sorghum, yam, cassava, protein, soybean, groundnut called) etc.	Discuss the various types of feed in the market. Discuss the various feed ingredients e.g. maize sorghum, cassava etc. Identify the various additives available for poultry feeds in e.g. vitamin, premix for ducks, growers, layers and broilers.	Visit to feed mill

	General Objective 4.0: Understand the various diseases and pests in poultry.	
4.1 Identify the various diseases and pests that affect poultry. 4.2 Identify the ectoparasites and endoparasites and state their differences. 4.3 Explain and the effective preventive and curative measures for poultry diseases. 4.4	Identify types of ectoparasits eg lice and their control measures eg dipping or dusting also the importance of going or contacting the vet around them. Identify types of endoparasites and their control measures.	
	General Objective 5.0: Understand the importance of Poultry keeping.	
5.1 Identify the prevailing climatic conditions in your locality. 5.2 Explain the effects of climate on poultry raising.	Identify the prevailing weather condition, its effects on growth and egg production.	Visit to farm

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY

MODULE: CAH 17CATTLE PRODUCTION II

DURATION:

PRE-REQUISUTE:

GOAL: Module is designed to acquaint trainees with terminologies in cattle production.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Understand the various breeds of cattle with their features.
2. Know the breeds of hybrids and their features.
3. Know the management systems in cattle production.
4. Know the feeds and feeding of cattle.
5. Understand hygiene and health care in cattle production.
6. Understand the different features of the sexes.
7. Know the products and by-products from cattle.
8. Understand the classes of feed ingredients available for poultry

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: CATTLE PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
	General Objective 1.0: Understand the various breeds of cattle with their features.		
	Specific Learning Outcome:	Teacher Activities:	Resources:
	1.1 List the various breed of cattle in Nigeria and their features.	Describe the breeds and their peculiar features that give them special adaptation e.g. Matura resistant to trypanosomiasis tsetse fly, Gudali with pronounced develop for heat stress.	Animal
	General Objective 2.0: Know the breeds of hybrids and their features.		
	2.1 List hybrid cattle you know.	Describe the various foreign breeds, whether damy or beet.	Pictures
	General Objective 3.0: Know the management systems in cattle production.		
	3.1 Explain the cattle management system in Nigeria. 3.2 List their advantages and disadvantages.	Discuss the various management systems, highlighting their merits and demerits as it affects cattle production.	Farm Visit.
	General Objective 4.0: Know the feeds and feeding of cattle.		
	4.1 List the common foods for cattle and explain the feeding pattern of cattle. 4.2 State the importance of these feed to the cattle.	Describe the quality and quantity of the feeds needed by us it affects on growth, meat and milk production.	Samples of cattle foods.
	General Objective 5.0: Understand hygiene and health care in cattle production.		
	5.1 Explain the hygiene and health requirement for cattle. 5.2 Explain appropriate ways of manure disposal as it affects general health of cattle. 5.3 Discuss causes of infection in cattle.	Describe the importance of manure disposal for hygienic environment. Also discuss vectors that cause ill health in cattle.	Farm visit

	5.4 Describe ways of disease and pest prevention.		
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	General Objective 6.0:		
	6.1 Explain the reproduction pattern in cattle.	Define reproduction. Draw the reproduction organs of male and female cattle.	Farm Visit
	General Objective 7.0: Know the breeds of hybrids and their features.		
	7.1 List the products and by products from cattle keeping. 7.2 Explain the various products and by products from cattle keeping.	Describe the importance of milk, beef. The use of hides.	Pictures
	General Objective 8.0: Understand the classes of feed ingredients available for poultry.		
	8.1 Explain the importance of good record keeping.	Describe record keeping as a means of keeping tract of the performance of each animal on the farm.	Pictures

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY

MODULE: CAH 18 PIG KEEPING IN NIGERIA II

DURATION:

PRE-REQUISUTE:

GOAL: This module is designed to further expose the trainee to pig keeping.

GENERAL OBJECTIVES:

On completion of this module, the trainee should be able to:

1. Know the terminologies in pig management.
2. Understand the different breeds of pig available.
3. Know the types of breeding systems in pig.
4. Know nutrition and feeding in pigs.
5. Understand the types of disease and pest in pigs.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: PIG KEEPING IN NIGERIA II		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Know the importance of cattle keeping.			
	Specific Learning Outcome:	Teacher Activities:	Resources:
	<p>Explain the following terminologies in pig rearing:-</p> <ul style="list-style-type: none"> - boar, sow, farrow, pig let, gilt, barrows, in sow, dry sow, weaners, fatterer, bacon lard, pork - 	Discuss the terminologies in pig rearing.	Visit to farm
General Objective 2.0: Understand the different breeds of pigs available.			
	<p>2.1 List the different breeds of pigs in the tropics.</p> <p>2.2 Describe the characteristics of the different breeds of pigs in the tropics.</p> <p>2.3 Outline the advantages of the some breeds systems in pigs.</p>	Explain the breeds of pigs and their specific features.	Visit to a piggery
General Objective 3.0: Know the types of breeding systems in pigs.			
	<p>3.1 Define breeding.</p> <p>3.2 List different types of mating system.</p> <p>3.3 State the merits and demerits of each breeding system.</p> <p>3.4 Define oestrus, oestrus cycle and signs of oestrus in sow, time of oestrous, length and time of evaluation in pigs.</p> <p>3.5 Define fertilization, gestation and parturition in pigs.</p> <p>3.6 Define artificial insemination.</p>	Explain mating systems.	

	General Objective 4.0: Know nutrition and feeding in pigs.		
	<p>4.1 Describe the digestive system of pigs as a Monogastric animal.</p> <p>4.2 List the classes of feeds e.g. Concentrates, energy Concentrates, forages and roughages, additives.</p> <p>4.3 Describe the digestion of food in the mouth,</p> <p>4.4 stomach, small intestine, large intestine and Absorption of foods.</p> <p>4.5 Explain the effects of climate on feed intake in pigs.</p>		
	General Objective 5.0: Understand the types of disease and pests in pigs.		
	<p>5.1 Describe the nutritional diseases in pigs.</p> <p>5.2 Explain causes of pig let mortality.</p> <p>5.3 List some endoparasites in pigs.</p> <p>5.4 Explain the direct and indirect effects of climate on pigs.</p>		

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY	
MODULE: CAH 19 GOATS AND SHEEP PRODUCTION II	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Acquaint trainees to the management systems of goat and sheep.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1. Know the terminologies and attractive properties of sheep and goats. 2. Understand the breeding methods in sheep and goat. 3. Understand breeding selection, and care and management of goats and sheep. 4. Understand nutrition and feeding of sheep and goats. 5. Known the common disease of goats and sheep. 6. Know the slaughter and processing of goats and sheep. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: GOATS AND SHEEP PRODUCTION II		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Know the terminologies and attractive properties of sheep and goats.			
Specific Learning Outcome:		Teacher Activities:	Resources:
1.1 Explain terminologies in Goats and Sheep. 1.2 Goats: Billy, Nanny, kid kidding, whether, flock chevron, servicing, suckling meat sheep ram, Ewe, Lamb, suckling and flock.		Practice the use of sheep and goats terminologies. Observe the various protective of goats and sheep e.g. horns, colour coat colour and odour.	Animals Note book.
General Objective 2.0: Know the terminologies and attractive properties of sheep and goats.			
2.1 Explain the goat and sheep breeding methods. 2.2 Identify and care for breeding sheep and goat. 2.3 State the age range of puberty in sheep and goats. 2.4 Explain how to care for a breeding billy-goat and ram. 2.5 Explain how to care for a breeding Nanny and give. 2.6 Define puberty, oestrus, ovulation fertilization, servicing, gestation and parturition.		Identify and draw Bill & nanny and Ram and give. Identify goat and sheep on puberty. Describe the feeding requirements of billy-goat and ram. Discuss the feeding requirements of breeding goat and sheep. Discuss the meaning and signs of oestrus or heat. Identify a breeding goat/sheep in the field.	Goat, Sheep
General Objective 3.0: Understand breeding selection, and care and management of goats and sheep.			
3.1 Explain the taints selection of goats and sheep. 3.2 Explain the qualities look for selection of goats and sheep for reproduction. 3.3 Explain the method of production of milk and		Describe the qualities of goats and sheep suitable for reproduction, milk production, meet	Goat and sheep

	<p>meat for cross breeding.</p> <p>3.4 Explain parturition process in goat and sheep.</p> <p>3.5 Explain on how the care of new born kids and lambs.</p> <p>3.6 State signs of difficult birth.</p> <p>3.7 Explain how to assist care for new born animals</p>	<p>production and for cross breeding.</p> <p>Discuss signs of parturition e.g. mucus discharge, restless, enlarges adder, etc.</p> <p>Describe care of kids and lamb by nanny and give, licking of young expulsion of after birth.</p> <p>Identify difficult birth in nanny and give (dystopia) observed appearance of new born and time of labour.</p> <p>State assistance of veterinarian, cleaning of the young, disinfectant of navel health etc.</p>	
General Objective 4.0: Understand nutrition and feeding of sheep and goats.			
	<p>4.1 Explain the feeding practice of goats and sheep.</p> <p>4.2 List the essential feed supplements.</p>	<p>Discuss the nutrient requirements for maintenance growth, pregnant and lactation sheep and goat.</p> <p>Identify lettering system, confined feeding and grazing and bowing in the field.</p> <p>Identifying various feed supplements e.g. Dry season and cropping season. Dry season e.g. hay silage, Groundnut hauling</p>	<p>Animals at various physiological statuses.</p> <p>Animals ropes field/pasture</p> <p>Crops Residue</p>

	6.6 Dung.		
	6.7 Explain the importance and uses of above items		

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE: RABBIT PRODUCTION II	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Acquaint trainees to the management systems of goat and sheep.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1. Understand of characteristic, types and problems of rabbits production 2. Know the materials use for rabbits housing. 3. Understand breeding techniques in rabbits. 4. Understand the feed and nutrient requirements for rabbits. 5. Understand common disease and pest of rabbits. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: RABBIT PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORETICAL CONTENT			
General Objective 1.0: Understand of characteristic, types and problems of rabbit production.			
	Specific Learning Outcome:	Teacher Activities:	Resources:
	1.1 Explain the general characteristic of different breeds of rabbits. 1.2 Describe the meat breed, for and fancy type of rabbits. 1.3 Explain some common difficulties in keeping rabbits.	Identify and list the coat colour, weight and length of the various breeds in your area. List the characteristic of meat, for and fancy types rabbits. Use question and answer to discuss the problems of rabbit keeping.	Animals visit to farm.
General Objective 2.0: Know the materials use for rabbits housing.			
	2.1 Name and explain important features of rabbits housing. 2.2 Explain materials use for constructing rabbit housing.	Describe the height, length and width of rabbit housing. List the importance of drainage and disposal of waste in rabbit housing.	
General Objective 3.0: Understand breeding techniques in rabbits.			
	3.1 Explain when a rabbit attains sexual maturity. 3.2 Explain the types and importance of breeding 3.3 Explain the mat using pattern in back and does. 3.4 State signs of pregnancy in Rabbits. 3.5 Explain signs of parturition or kindling on rabbit. 3.6 State the maturing ratio in rabbit.	Describe the age of sexual maturity in buck and doe. Explain outcross, cross breeding and in breeding & it merits. Carryout mating of buck and Doe in the pen. Explain signs of maturity of	Pictures

		<p>Buck and doe. Describe signs of pregnancy in doe through palpation, increase weight, test etc. Identify and state the signs etc removal of four and refusal to eat. Describe the maturing ratio in rabbit...</p>	
General Objective 4.0: Understand the feed and nutrient requirements for rabbits.			
	<p>4.1 Explain the feeds require by rabbit. 4.2 State the class of animal rabbit belongs.</p>	<p>Describe the different classes of feed for rabbit concentrates, (protein and energy). Roughages such as grasses e.g. Aspilla Africana (goat weed water leaf etc. Describes the nutrients need of rabbit e.g. carbohydrate, protein, fats, vitamins, minerals and water. State the energy value need for rabbits list the differences between monogastiric and polygastric animals. Identify common disease of rabbits e.g. mange, mites, lies etc.</p>	
General Objective 5.0: Understand common disease and pest of rabbits.			
	<p>5.1 Explain common Disable affect. 5.2 State causes f litter mortality in Rabbits. 5.3 State the control measures for prevention of young rabbit mortality</p>	<p>Explain the importance of good housing, sanitation vaccination/medication Good feeding.</p>	<p>Pictures</p>

	<p>5.4 Explain symptoms of disease in rabbit.</p> <p>5.5 Discuss the importance of hygiene and good building materials.</p>	<p>List symptoms of ill health in rabbit e.g. sitting with hocks, off feed, rough fun etc.</p> <p>List advantage of clean matches and ventilation in rabbit housing.</p>	
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PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE: PIG KEEPING IN NIGERIA III	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: This module is designed to expose students to routine management and processing of pigs.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know the breeding system in pigs 2.0 Know the nutritional requirements of pigs 3.0 Know the care and management of pigs. 4.0 Understand the routine management practices in pigs 5.0 Understand record keeping in pig management 6.0 Understand processing of pigs. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: PIG KEEPING IN NIGERIA		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the breeding systems in pigs.		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Define breeding. 1.2 Explain out breeding cross breeding and inbreeding 1.3 List the merits and demerits of breeding systems. 1.4 Explain problems of infertility in pigs. 1.5 List the male and female sex hormones 1.6 Describe the male and female reproductive tracts.	Discuss the merits and demerits of breeding. Explain the courses of infertility in pigs Discuss male and female sex hormones	
	General Objective 2.0: Know the nutritional requirement for pigs.		
	2.1 State the nutritional requirements of pigs (from day old to finishing) 2.2 State the feed requirements for piglets, grower, fattener, breeder and finisher		
	General Objective 3.0: Know the care and management of pigs.		
	3.1 Outline the care and management of the following classes of pigs:- Sow, Boars, gilt, Baby pigs, growers and finishing pigs.		

	General Objective 4.0: Understand the routine management practices in pigs.	
4.1 List the major routine management practices in pig rearing.	Discuss management practices in pig rearing	
4.2 Describe the following activities carried out in pig rearing:- i) identification ii) infant teeth chipping iii) castration iv) ear notching	Demonstrate routine management practices like - identification - teeth chipping - castration - ear notching	
General Objective 5.0 Understand record keeping in pig management		
5.1 Explain the importance of record keeping in pig Production	-	
5.2 Describe the different types of records in pig keeping, e.g. breeding record, sow litter record etc		
General Objective 6.0 Understand Processing of pigs		
6.1 State the importance of slaughtering and processing of Pigs	-	
6.2 List the different slaughtering equipment		
6.3 Outline the processes/procedures for slaughtering		
6.4 Describe the slaughtering process		
6.5 List the uses of slaughter by-products		
6.6 Differentiate offal and carcass		

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE: RABBIT PRODUCTION III	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Trainee should be able to source and manage any class of rabbit.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know husbandly and handling practices in rabbit production 2.0 Know Management of rabbit housing and equipments 3.0 Know the care and management of Young and Adult rabbits 4.0 Understand the feeding habit and ration formulation for Rabbit 5.0 Understand Digestion process in rabbits 6.0 Understand record keeping in rabbit 7.0 Know the processing procedures in rabbits. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: RABBIT PRODUCTION IIIA		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Husbandly and handling practices		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Explain the routine management practices in rabbit Keeping 1.2 Explain how to handle rabbit	Carry out identification of rabbit e.g. ear notching, tattooing tags etc. Schedule a vaccination programme for rabbits e.g. coccidiosis Describe the best methods to handle rabbits in the farm	
	General Objective 2.0: Features of a good housing.		
	2.1 Discuss the importance of hygiene and good building Materials 2.2 Name the equipments needed in Rabbit Farm and their Maintenance 2.3 Explain the difference between a maternity hutch and a nest box.	Carry out sanitation in a Rabbit farm and state the advantage and disadvantage of hygiene in rabbit keeping. List the best materials use for Rabbit hutch construction Identify and draw the equipments and state the size of hutches, kindling boxes in rabbit house state ways of maintaining rabbit equipments Describe the differences between nest box and maternity box	

General Objective 3.0: Know the kindling and care of rabbit		
<p>3.1 Define kindling 3.2 Describe the appearance of the young 3.3 State the care of Doe to kitten 3.4 State period of wearing 3.5 Explain precaution involve in handling kitten 3.6 State the predators of rabbits 3.7 State time of rebreeding rabbit 3.8 State cause of abortion in rabbit. 3.9 State cause of infertility in Rabbit</p>	<p>List the number of kitten litter per doe State the size, appearance e.g. blind and necked Observe bedding materials e.g. for or wool Explain the period of wearing rabbit List the effects of handling kitten by hand Describe predators of rabbits Explain the interval in which rabbit can be remated Describe cause of abortion in rabbit Discus of infertility in rabbit</p>	
General Objective 4.0: Know the importance of feeding rabbits		
<p>4.1 Explain symptoms of nutrients deficiencies in rabbits 4.2 Explain compare the feed conversion efficiency of rabbit and poultry 4.3 Describe how to compound rabbit ration 4.4 What is coprophagy in rabbit</p>	<p>List the symptoms of nutritional imbalance in rabbit feed. Explain how to compound ratio diets using Pearson square etc State the importance of coprophagy in rabbit nutrition</p>	

General Objective 5.0 Know the digestion of feed in Rabbit		
5.1 Define digestion, Assimilation, Absorption 5.2 Explain the digestive system of rabbit	Describe the digestive system of Rabbit State the importance of each stage to rabbit nutrition Outline the differences in digestive system of rabbit and Ruminant State the similarities in the digestive system of rabbit and ruminant e.g. caccum.	
General Objective 6.0 Know record keeping in rabbit		
6.1 State the importance of record keeping 6.2 Explain the different types of records keeping	List the different types of records e.g breeding, feed, live weight etc.	
General Objective 670 Know process of rabbits		
7.1 Explain the equipments use for processing rabbit 7.2 State the different processing methods in Rabbits 7.3 State the importance of slaughtering and processing rabbit 7.4 Explain the uses of rabbit products and by-products Blood, fur, faeces.	Identify and list the equipments use for processing rabbits Carryout processing of rabbits e.g. flaying (skinning). List the processing rabbits State the importance of the products by-products.	Visit to farms

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE: POULTRY PRODUCTION NTC III	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Students would be able to source and manage any class of poultry.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Understand the origin of the poultry species 2.0 Understand the importance and factors for choice of a site 3.0 Know the different types of equipments used in poultry keeping 4.0 Know the nutrient requirements of poultry 5.0 Understand routine management practices 6.0 Understand hygienic and health management practices 7.0 Understand the practice of hatching, brooding and sourcing for chicks 8.0 Know the products and processing of poultry 9.0 Know the importance of record keeping 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: POULTRY PRODUCTION III		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Understand the origin of the poultry species		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Differentiate between local and exotic breeds of poultry 1.2 Choose a class of poultry and state reasons for the choice e.g. pullets for eggs broiler for meat	Discuss the origin of poultry State the importance of each class of poultry as it concerns it raising and returns e.g. pullets eggs, all year round. Production Broiler swort period for meat	Visit on farm
	General Objective 2.0: Understand the importance and factors for choice of a site		
	2.1 Explain the importance of housing in poultry 2.2 State the factors that may influence the choice of Housing 2.1 Sketch a typical poultry house suitable for the climatic condition in your locality	Explain the importance of housing with die various designs suitable for the tropics Describe the importance of good housing as it affects poultry performance.	Visit

General Objective 3.0: Know the different types of equipments used in poultry keeping		
3.1 Describe the following poultry equipment and explain the use of each of them. E.g. drunker feeders perches, Neoting box, egg crates, Transportation Crate, rain boots, head pasns, shovels and wheelbarrows etc.	Identify the various equipments and designs meant for each stage of growth	Visit
General Objective 4.0 Know the nutrient requirements of poultry		
4.1 State the intake level of the following for poultry - energy requirements - protein requirements - Vitamin requirements - Mineral requirements 4.2 Explain some common feed compositions	Identify some commercial feeds in the market.	Visit to Feed mill
General Objective 5.0 Understand routine management practices		
5.1 State the various routine management practices in poultry raising debarking, despairing of cocks wind clipping, dubbing, daily supply of water, feeds, environmental hygiene	Describe some of these activities their importance and demonstrate same activities to students	
General Objective 6.0 Understand hygienic and health management practices		
6.1 Discuss general hygienic measures for poultry 6.2 Name common poultry diseases in the tropics 6.3 Explain possible causes of diseases 6.4 Common pestsand their control	Describe the effects of diseases and pests on general performance of poultry.	

	General Objective 7.0 Understand the practice of hatching, brooding and sourcing for chicks		
7.1 Explain the different types of -hatching - natural - artificial	7.2 Define brooding	7.3 Explain types of brooding - hen - artificial	7.4 Observe ways of raising the chicks from 0-8 weeks(brooding)
	Describe hatching procedures and brooding exercise	Discuss preparation for the arrival of chicks	
General Objective 8.0 Know the products and processing of poultry			
8.1 Mention the sources of chicks - pullet chicks - broiler chicks - cockerels etc	Identify good source of day old chicks	Visit hatchery	to
General Objective 9.0 Know the importance of record keeping			
9.1 Explain the importance of good record keeping of the various poultry products and bi-products, e.g. - Eggs, processing of products - Poultry meat - Slaughter waste or offal (blood, feathers etc) - By-product (Manure)	Describe the importance of these products to the farmer.	Farm visit	

General Objective 10.0 Farm record keeping		
10.1 Explain the essence proper recording of poultry performance e.g. <ul style="list-style-type: none"> - laying percentage - weight and size of eggs - number of eggs - feed consumption - record of medications/vaccination - record of cost of items Record of sells e.g. eggs, birds	State the importance of proper farm record keeping	Farm visit
General Objective 11.0 Know ways of improving local chickens		
11.1 Explain cock exchange programme 11.2 List the advantages of local chicken 11.3 List the advantages of hybrid chicken	Describe the effect of combining these qualities into one chickens as hybrid	Farm visit and hatchery.

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE :CATTLE PRODUCTION	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Trainee would be able select quality animal as either beef (bulls) and milk (heifers)</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know the best breed for a production purpose 2.0 Know the feed resources for cattle production 3.0 Understand health care and quarantine purposes 4.0 Understand the various management systems needed at various ages 5.0 Know reproductive activities in cattle production 6.0 Understand record keeping 7.0 Understand milking procedures in cattle production 8.0 Know how to select replacement stock. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: CATTLE PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the best breed for a production purpose		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Identify the breed best suited for your locality.	Describe the characteristics of the breads and reasons for their preference	Animal
	1.2 Explain the feeds and feeding requirements of cattle e.g. <ul style="list-style-type: none"> - Requirement for water - Requirement for protein - Requirement for energy - Requirement for vitamins - Requirement for minerals 1.3 Explain requirements for dry season feeding e.g. browse plants and crop residues, hay and silage production (forage consolation)	Describe and illustrate the digestive system of ruminants. Discuss the role of rumen in the cattle digestive systems	Feed ingredients Forages conservation units
	General Objective 3.0: Understand health care and quarantine purposes		
	3.1 Explain the importance of isolation of new or sick animal 3.2 Explain the basic principles of health control <ul style="list-style-type: none"> - Regular observation routine check - Disposal of dead animal 3.3 State the importance of health record 3.4 Define the term Vaccination 3.5 State the methods of worm prevention 3.6 Explain the methods of tick control 3.7 Mention some skin and hoof problems 3.8 Explain ways of control and prevention of the problems	Describe vectors and causative agents of siseases descube control/preventative measures Describe the control of hutments and how regular to safe-guard herds.	

	General Objective 4.0 Understand the various management systems needed at various ages		
	4.1 Explain some basic management systems of the following classes of cattle - Colt, heifers, in-cow, bull and dairy cow.	Describe the management of each class as it affects their growth stages, reproduction and general performance	
	General Objective 5.0 Know reproductive activities in cattle production		
	5.1 Define maturity in cattle 5.2 Explain the symptoms to show when cattle are on heat: 5.3 Explain the term abortion 5.4 State the likely causes of abortion in cattle 5.5 Discuss measures to preventing abortion in cattle.	With the aid of a diagram (picture) describe the reproductive organs of a bull and a cow. Explain the term abortion and the causes.	

	General Objective 6.0 Understand record keeping		
	6.1 State the importance of good records keeping 6.2 Keep proper record of farm activities 6.3 Explain cost-benefit analysis 6.4 Analyze the record book for evaluation or auditing		
	General Objective 7.0 Understand milking procedures in cattle production		
	7.1 Explain milking procedures in cow 7.2 Explain the use of the following products from cattle beef, blood, bones, hides, horns etc	Define milk, Describe various methods of milking (Hand/machine) Discuss hygiene during milking. Discuss milk handling and storage Describe the importance of this product to the farmer and country.	
	General Objective 8.0 Know how to select replacement stock.		
	8.1 List the features to look out for in selecting a good heifer or bulls 8.2 Explain the importance of and use of heifer or bulls.	Describe the important anatomical features to look out for in selecting heifer e.g., 4 teats, bulls strong legs etc.	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : GOAT AND SHEEP PRODUCTION III	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Trainee would be able select and manage sheep and goat under any management system.</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able:</p> <ol style="list-style-type: none"> 1.0 Know the reproduction organs of sheep and goats 2.0 Understand the care and management of kids and lambs 3.0 Understand pasture management and utilization by sheep and goats 4.0 Understand selection of housing site and effects of climate to sheep and goat 5.0 Know disease and pest of sheep and goats 6.0 Understand the breeding systems 7.0 Know the slaughtering and processing of sheep and goats 8.0 Understand sanitation of abattoir and slaughter slabs. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: GOATS AND SHEEP PRODUCTION III		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the reproduction organs of sheep and goats		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Discuss the male and female reproductive system of sheep and goats 1.2 List signs of oestrous	Identify and draw the male and female reproductive system Identify signs of estrus in goat and sheep e.g. reddening of vulva, swollen vulva, muans discharge etc.	Animal
	General Objective 2.0: Understand the care and management of kids and lambs		
	2.1 Discuss the process of weaning kids and lambs. 2.2 Describe how to care for breeding and lactation.	Carry out the care of young goat and sheep in the farm e.g. provision of feed, water, vaccination etc. i.e. bucket feeding etc. Identify the feeds ingredients use for weaning kid and lambs Identify feed requirement of lactating and breeding goats and sheep.	Animal Water Feed Drugs Veterinarian.
	General Objective 3.0: Understand pasture management and utilization by sheep and goats		
	3.1 State importance of pasture to sheep and goat 3.2 List the types of pasture materials in the area e.g. legumes (centrosema) grass, andropogon gayemens 3.3 List the type of grazing management applicable in Nigeria 3.3 Define hay and silage	Identify the types of pasture available in your area e.g. National or establish Identify the type of pasture materials interms of legumes and grass in your area.	

	<p>3.4 State the differences between the two</p> <p>3.5 State and silage to sheep and goat</p>	<p>Identify the kinds of grazil plans in Nigeria e.g. rotational strip grazing etc. Prepare a hay and silage folder conservation in your area</p> <p>Identify the different types of silage preparation in Nigeria</p>	
<p>General Objective 4.0 Understand selection of housing site and effects of climate to sheep and goat</p>			
	<p>4.1 Describe the common sheep and goat housing</p> <p>4.2 Draw a typical goat and sheep house</p> <p>4.3 State the dimension of the pen/padlock for sheep and goat</p> <p>4.4 State the effect of climate on type of housing</p> <p>4.5 List effect of climate on nutrition of sheep and goat</p>	<p>Identify and draw a common sheep and goat housing in your area</p> <p>Measure and erect a practical goat and sheep state space requirement</p> <p>Identify the effect of climate on type of housing in Nigeria</p> <p>Describe direct and indirect effect of climate on nutrition of sheep and goat</p>	<p>Visit nearby farms</p> <p>Wood, Zinc, Grass. Mud, etc</p> <p>Raing and dry season observation of animals and pasture farm</p>
<p>General Objective 5.0 Know disease and pest of sheep and goats</p>			
	<p>5.1 Explain disease and pest of sheep and goat</p> <p>5.2 Explain nutritional disorder</p>	<p>Discuss nutritional disorder disease e.g. hypo calcania, anemia etc.</p>	
<p>General Objective 6.0 Understand the breeding systems</p>			
	<p>6.1 Explain the breeding system in sheep and goat</p> <p>6.2 List the problems of infertility in sheep and goats</p> <p>6.3 Explain the productive hormones</p>	<p>Describe out breeding cross breeding and in breeding</p> <p>State the merits and demunits of the above</p> <p>Identify the sheep and goats</p>	

		crosses and pure breeds in your locality Describe poor nutrition, environmental stress, disease etc. Describe reproductive hormones , Latinizing hormones etc	
General Objective 7.0 Know the slaughtering and processing of sheep and goats			
	7.1 Explain the processes of slaughter and preservation of sheep and goat.	List the procedures in slaughtering Goat and Sheep.	
General Objective 8.0 Understand sanitation of Abattoir and slaughter slabs			
	8.1 Explain the level of sanitation required in the meat slaughtering house. 8.2 List the effects of dirty slaughter slay 8.3 Explain the importance of meat inspectors	Describe a slaughter slab/abattoir State importance of sanitation in slaughter slap/abattoir Identity the types micro organism and pest associated with slaughter slabs/abattoirs. Describe the attribute of meat inspectors to modern goat and sheep keeping in Nigeria.	

ADVANCED TECHNICAL CERTIFICATE PROGRAMME
IN
LIVESTOCK PRODUCTION

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : GOATS AND SHEEP PRODUCTION	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: Trainee should be able to source and raise goats and sheep</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know the economic importance and classification and management of goat and sheep 2.0 Know the methods of breeding sheep and goats 3.0 Understand selection and raising of goats and sheep for specific purpose 4.0 Know the nutrition and feeding of goats and sheep 5.0 Know and appreciate the importance of housing 6.0 Know the common disease and pest of Goats and Sheep 7.0 Appreciate goats and sheep production and by-products. 	

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY			
MODULE: GOATS AND SHEEP PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the economic importance and classification and management of goat and sheep		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Identify the economic importance of goats and sheep 1.2 State the alternative properties of goats and sheep 1.3 Explain the different types of goats and sheep breeds in Nigeria 1.4 Explain the origin of goats and sheep 1.5 Classify sheep and goats into meat type, milk type, dual purpose type 1.6 State the difference between exotic and local breeds in Nigeria 1.7 State the manage system of sheep and goats in Nigeria e.g. extensive, semi-intensive and intensive system.	State the economic importance of goats and sheep Identify and draw the breeds of sheep and goats in your area Trace the origin of modern goats and sheep State the difference between local and exotic breed in Nigeria Describe and state the merits and demerits of management systems of sheep and goats	
	General Objective 2.0: Know the methods of breeding sheep and goats		
	2.1 Identify the methods for breeding goats and sheep 2.2 Describe the disenable characteristics of male and female sheep and goats for breeding 2.3 Define servicing, puberty, gestation period 2.4 State the mating ratio of goats and sheep 2.5 Explain and breeding systems in goats and sheep	Identify the signs of heat with live goats and sheep Describe mating systems and breeding system in goats and sheep e.g. cross breeding Demonstrate signs of pregnancy in goats and	

	<p>2.6 Explain the breeding of goats and sheep 2.7 Explain signs of pregnancy in goats and sheep 2.8 Describe the both process of goats and sheep 2.9 Explain the care after birth process 2.10 Explain common difficult births 1.11 State ways of solving problem of difficult birth</p>	<p>sheep Demonstrate the actual process of kidding with life animal about kidding Describe difficult birth Describe the assistant of veterinarian in difficult birth of sheep and goats</p>	
General Objective 3.0: Understand selection and raising of goats and sheep for specific purpose			
	<p>3.1 Explain how to select and raise goats and sheep for specific purpose 3.6 Explain how to raise new born kids and lambs 3.7 Discuss the weaning process kids and lambs 3.8 Care for the young animals 3.9 Make appropriate selection of goats and sheep for: - Reproduction - Milk production - Meat production - Cross breeding</p>	<p>Describe the various manage practices for kids and lambs such as milk feeding, creep feeding, basic hygiene and de-worming Use of colostrums and foster mother Demonstrate the processes of castration and hoot trimming Identify male and female qualities for reproduction and explain the various selection methods for reproduction, milk production, meat production and cross breeding Identify good milkier, good feed converters and hybrids</p>	<p>Kids Lambs Feeding utensils (buckets, nipples) life animals</p>

	General Objective 4.0 Know the nutrition and feeding of goats and sheep		
	<p>4.1 Explain the nutrition and feeding of goats and sheep</p> <p>4.2 List the feed ingredient for goats and sheep</p> <p>4.3 List the essential nutritional requirements for goats and Sheep</p> <p>4.4 Explain the feeding practices of goats and sheep</p> <p>4.5 List the essential feed supplements</p> <p>4.5 Explain the process of hay and silage making</p>	<p>Describe the digestive system of goats and sheep</p> <p>List and illustrate various ingredients house plants and forages used in feeding goats and sheep</p> <p>Carry out silage and hay preservation</p>	A model farm
	General Objective 5.0 Know and appreciate the importance of housing		
	<p>5.1 State the importance of housing</p> <p>5.2 Sketch a typical goat house</p> <p>5.3 Describe the process of stall building</p> <p>5.4 State the requirements of the installation.</p>	<p>Show a typical goat and sheep house including the necessary features</p> <p>Relate the house to climatic conditions</p> <p>State the stocking rate of sheep and goats.</p>	
	General Objective 6.0 Know and appreciate the importance of housing		
	<p>6.1 Identify a healthy goat and sheep</p> <p>6.2 Diagnose and identify a sick Animal</p> <p>6.3 Identify and explain infections disease</p> <p>6.4 Explain disease due to feeding disorder</p> <p>6.6 Differentiate between</p> <ul style="list-style-type: none"> -Internal parasites -External parasites 	<p>Identify a healthy goat and sheep</p> <p>Describe disease transmission of goats and sheep</p> <p>Carry out a vaccination programme of sheep and goats</p> <p>Demonstrate the process of dipping and spraying</p>	

	General Objective 7.0 Appreciate goats and sheep production and by-products.		
	7.1 Identify the different goats and sheep products and explain their uses and importance. 7.2 Explain milk processing and production techniques 7.3 Give details of goat and sheep slaughtering process 7.4 Describe the following <ul style="list-style-type: none"> - Meat - Blood - Bones - Hide and skin - Manure 7.5 Explain the importance and uses of the items in 7.3	Identify various products and demonstrate their production processes Identify a typical Abattoir and slaughter slab within your location State the importance of by-products.	

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : POULTRY PRODUCTION	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: The trainee should be able to source and manage chicks, growers, layers and broilers to meet conventional standards</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Trainees would be conversant with the necessary skills or expertise for poultry production 2.0 Know classification according to purpose of production 3.0 Know the importance of good site and choice of housing design 4.0 Know the digestion processes in poultry 5.0 Understand regular routine management practices in poultry production. 	

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY			
MODULE: POULTRY PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Trainees would know the different methods of poultry production		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Explain the origin of poultry 1.2 Define breed, strains, hybrid 1.3 Classify and identify some common breeds and their major features 1.4 Identify local breeds and defer reinitiate them between hybridism modern day poultry production	Describe the various breeds and strains of poultry	Farm visit
	General Objective 2.0: Know classification according to purpose of production		
	2.1 Explain the factors to be considered when setting up a poultry house eg wind direction topography, market and water supply 2.2 Describe the various designs of poultry house 2.3 Explain the advantages of housing in poultry	Discuss the importance of housing as it affects poultry performance	Visit farms
	General Objective 3.0: Know the importance of good site and choice of housing design		
	3.1 Identify poultry equipments 3.2 Design model poultry equipments e.g. Feeders, drinkers etc from local materials	Discuss the digestive in the beak crop, gizzard etc of the domestic fowl	Life bird
	General Objective 4.0 Know the digestion processes in poultry		
	4.1 Describe the digestive system of any poultry specie eg domestic fowl 4.2 Dissect and display the digestive system 4.3 Indicate the importance of specific nutrients to poultry 4.4 Formulate a typical diet for poultry such as	Discuss the digestive in the beak, crop, gizzard etc of the domestic fowl Compound a know diet for a class of poultry Describe the use of water to poultry as it attests egg	Farm visit

General Objective 7.0 Principles of hatching and management of chicks, growers layers, broilers		
7.1 Describe the procedure for effective hatching of chicks using the local chicken, kerosene incubator, or and conventional electric incubator.	Discuss the operational mechanism of kerosene and electric incubators	Farm visit
7.2 Describe the preparations made to receiving “day old Chickens” and identify equipments for brooding and rearing of chicks	Describe the preparations required before the arrival of day old chicks. Also the routine management of growers, layers and broilers	Farm visit
7.3 Describe management of growers Describe management of layers Describe management of broilers		
General Objective 8.0 Handling poultry products and by-products		
8.1 Discuss, crack eggs and uncracked egg classification e.g. peewee, small, big, jumbo 8.2 Dressed broiler, turkey ducks etc 8.3 Explain the method of dressing poultry eg manual, wax, machine 8.5 Explain the appropriate way of handling of poultry manure 8.6 Identify preservation/processing methods of chicken.	Explain the importance of bleeding properly e.g. 24 hours starvation to reduce feed wastage and getting accurate dressing percentage Human processing and types of poultry processing	Farm visit
General Objective 9.0 Farm record keeping		
9.1 Explain proper record keeping of activities on the farm and performance of birds - Number of eggs/crates - Weight of eggs - Weight gain - Feed consumption - Mortality	State the importance of proper farm record keeping in poultry business	Eggs and life birds

	General Objective 10.0 Hot weather management of poultry		
	<p>10.1 State the effect of hot weather in the performance of layers</p> <p>10. 2 Explain ways of controlling the effect of hot weather on layers and other class of poultry for improved performance.</p>	Describe the effects of adverse weather condition on the performance of chicks, growers, layers and broiler production.	

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : PIG HUSBANDRY IN THE TROIPCS	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: The trainee should be able to source and manage chicks, growers, layers and broilers to meet conventional standards</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know the importance and management systems in pigs 2.0 Know the breeds and origin of pigs 3.0 Know the reproduction cycle of pig 4.0 Know the care and management of pig 5.0 Know the importance of housing a pig 6.0 Know the nutrition and feeding of pigs 7.0 Know the various disease and pest of pigs 8.0 Know the routine management practices in pigs 9.0 Know the importance of record keeping 10.0 Know the slaughtering and procedures and uses of products. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: PIG HUSBANDRY IN THE TROIPCS		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the importance and management systems in pigs		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 State the importance of pig raising 1.2 State the disadvantage of pig raising 1.3 Explain the different systems of pig management in Nigeria 1.4 State the merits and demerits of the systems in 1.3	State the economic importance of pig raising in Nigeria e.g. for port, tolerant to wide variety of food etc. State the disadvantages of pig raining e.g. scavenging attitude, disease etc. Identify the type of managements in your area and state the merits and demerits of the system compare and contrast the different systems.	Life animals
	General Objective 2.0: Know the breeds and origin of pigs		
	2.1 List the breeds of pigs in Nigeria 2.2 List the exotic breeds of pigs 2.3 State the characteristic features of the local and exotic breeds of pigs 2.4 Explain the history and origin of pig breeds	Identify and draw the breeds of pigs in your area. List the physical characteristics of pigs in your area. Describe the origin of pigs e.g. Lange white, hand race etc. Identify and draw male and female pigs.	Life animal visit farms

General Objective 3.0: Know the reproduction cycle of pig		
<p>3.1 Describe the boar and sow reproductive organs</p> <p>3.2 State the age of puberty, mating ratio, signs of heat in Pigs</p> <p>3.3 Explain the mating and breeding systems in pig Production</p> <p>3.4 Explain the criteria for selecting breeding pigs</p> <p>3.5 Explain the signs of pregnancy and farm wing in pigs</p>	<p>State the mating systems e.g. natural and artificial mating</p> <p>Explain out cross, inbreeding, etc in pigs</p> <p>Identify and state the signs of teat in pigs.</p> <p>State the signs of farrowing in pigs e.g. vulvae discharge, preparation of beddings etc.</p>	
General Objective 4.0 Know the care and management of pig		
<p>4.1 Explain the best way of care and management of the following:</p> <ul style="list-style-type: none"> - Lactating sow/gilt -Weaned piglets -Dry sow -Bulls -Grower hasher 	<p>State the systems of raising young piglets</p>	
General Objective 5.0 Know the importance of housing a pig		
<p>5.1 State the importance of good housing for pig</p> <p>5.2 State the local materials use in constructing a pig house</p> <p>5.3 State the factors necessary for siting a pig housing</p> <p>5.4 List the equipment in the pig housing and state the methods of maintaining the equipment</p> <p>5.5 State the length and size of a pig pen</p>	<p>State the importance of housing a pig</p> <p>Discuss the type of pig housing.</p> <p>Identify and draw the different types of pig housing in your area</p> <p>Construct a pig housing using local materials in your area</p> <p>Identify the facilities in a pig</p>	<p>Visit farms</p> <p>Wood, grass, zinc, bamboo</p> <p>Visit farms</p>

		house and draw the equipments. Carryout a measurement of standard pig housing in your area.	Visit farms
General Objective 6.0 Know the nutrition and feeding of pigs			
	6.1 List the various kinds of foods eaten by pigs 6.2 State the nutrients requirements for pig. 6.3 State the source of nutrients e.g. maize, GNC etc 6.4 State the importance of water to pigs 6.5 State the nutrient composition of creep feed, grower and fattener ration 6.6 State the effect of climate to the nutrition of food.	Identify and state the foods eaten by pigs State the nutrient requirements e.g. protein carbohydrate fat, vitamins, minerals and water Identify the value of water to pigs State the importance of addines in pig ration Observe the formulation/compounding of creep feed, grower and finisher diet State the effect of climate on pigs, e.g. sun burn, stress, etc.	Life animal Visit farms
General Objective 7.0 Know the various disease and pest of pigs			
	7.1 Define disease and pest 7.2 List and explain some common disease of pigs 7.3 List and explain the common pest of pigs 7.4 State the nutritional disorder disease in pigs 7.5 State the importance of vaccination schedule for pigs 7.6 Explain the advantages of a good sanitation in a pig House 7.7 State the control measures to control disease in	Identify and list common disease in pigs e.g. mange mite, etc State the common pest of pigs snake, rats etc State disease of pigs e.g. mastitis, boncellobis etc Describe nutritional disease e.g. anaemia, hypocalcaemia, rickets etc.	

	pigs	Carryout vaccination routine in piglets State the importance of sanitation to pigs Describe good sanitation, good feeds nutrition vaccination etc.	
General Objective 8.0 Know the routine management practices in pigs			
	8.1 Explain the meaning of <ul style="list-style-type: none"> - castration - identification - culling - quarantine - isolation 8.2 State the importance of 8.1 to pig husbandry	Carryout castration of pigs Identify the kinds of identification in pigs in your area State methods of identification in pigs.	Life animal Visit farm Visit farms
General Objective 9.0 Know the importance of record keeping			
	9.1 State the types of record keep 9.2 State the importance of record keeping	State the importance of record keeping Demonstrate the types of record keeping e.g. breeding record, etc.	Visit farms
General Objective 10.0 Know the slaughtering and procedures and uses of products.			
	10.1 State the equipments use for slaughter processing Pigs 10.2 State the sues of pig products and by-products such as: <ul style="list-style-type: none"> - Pork - Land - Bacon - Dung 	State the procedures for slaughtering pigs e.g., stunning, removal of heat, bleeding evisceration etc. Identity and draw the equipments use in processing pigs Describe the importance of the products in 10.2	Visit farms

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : CATTLE PRODUCTION	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: The trainee should be able manage cattle of various class</p> <p>GENERAL OBJECTIVES: On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Know the importance of cattle production 2.0 Understand the advantage and disadvantages of the rearing systems 3.0 Understand the nutrition of cattle 4.0 Understand the various classes of cattle production 5.0 Know health care routines 6.0 Understand reproductive cycle in cattle production 7.0 Know how to select replacement stocks. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: CATTLE PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Know the importance of cattle production		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Explain the different cattle rearing systems practiced in Nigeria 1.2 List the advantages and disadvantages of each system	Highlight economic aspects of cattle products and by-products Describe the cattle rearing systems Discuss the advantages and disadvantages of each system	Field visit
	General Objective 2.0: Understand the advantage and disadvantages of the rearing systems		
	2.1 List the grasses, legumes, browse, plants and crops consumed by cattle 2.2 List the methods of forage conservation: - Hay making - Silage making	Describe and illustrate the digestive systems in remnants stress the importance of rumen activity Describe the principles of hay and silage making	
	General Objective 3.0: Understand the nutrition of cattle		
	3.1 Classify cattle based on production purposes e.g. beef type or dairy type	Describe the features of a beef type and a dairy type	Field visit

	General Objective 4.0 Understand the various classes of cattle production	
4.1 Explain quarantine or isolation in cattle production e.g. new animals and sic	4.3 Explain carcass disposal	4.4 Explain various disease agents and the disease they cause.
4.5 Explain control and preventive methods	Draw up a herd health programme for cattle production	Explain carcass disposal systems in cattle production e.g. burying, burning etc
	Illustrate routes of vaccination and identify types of vaccines	Demonstrate spraying for ectoparasites and dipping
	General Objective 5.0 Know health care routines	
5.1 Explain the reproductive activities in cattle	Explain the reproductive organs of bull, and cow	Describe health period in cows/heifer. Signs of oestrus
	General Objective 6.0 Understand reproductive cycle in cattle production	
6.1 Explain the management routine for each age group in cattle	Describe management of calf, heifers, in-cow, bulls dry-cow and work bulls etc.	
	General Objective 7.0 Know how to select replacement stocks.	
7.1 Explain how to choose replacement stock	Describe the features that makes an animal good cow, heifer, 4 (four) feats, bull strong shoulder and legs.	
	General Objective 8.0.	
8.1 Explain how to keep good farm record.	Design various types of records, illustrate using a typical farm records	

PROGRAMME: ADVANCE NATIONAL TECHNICAL CERTIFICATE IN ANIMAL HUSBANDRY	
MODULE : RABBIT PRODUCTION	Course Code:
DURATION:	Contact Hours/Week:
PRE-REQUISUTE:	
<p>GOAL: The trainee should be able to source and manage chicks, growers, layers and broilers to meet conventional standards</p> <p>GENERAL OBJECTIVES:</p> <p>On completion of this module, the trainee should be able to:</p> <ol style="list-style-type: none"> 1.0 Appreciate the importance of rabbit production 2.0 Understand a suitable housing design relating to climatic condition 3.0 Know the reproductive activity of rabbit 4.0 Know the nutrition and feeding of rabbits 5.0 Know the disease and pest of rabbits. 	

PROGRAMME: NATIONAL TECHNICAL CERTIFICATE PROGRAMME IN ANIMAL HUSBANDRY			
MODULE: RABBIT PRODUCTION		CODE:	CONTACT HOURS:
COURSE SPECIFICATION: THEORITICAL/PRACTICAL CONTENT			
	General Objective 1.0: Appreciate the importance of rabbit production		
	Specific Learning Outcome:	Teacher Activities:	Resources:
WEEK 1 & 2	1.1 Describe the different breeds of rabbits 1.2 Describe the different characteristics of rabbits 1.3 Explain the factors to be consider before establishing a rabbit farm 1.4 State the problems of rabbit keeping 1.5 Differentiate the breeds of rabbit in your area - local - exotic - crosses 1.6 Describe the breeds of rabbits raised for: - fanas - fur - meat	Identify the various breeds of rabbits Describe the physical characteristics with emphasis on indigenous breeds Handle rabbits practically and draw a large labelled diagram of the breeds.	
	General Objective 2.0: Understand a suitable housing design relating to climatic condition		
	2.1 Explain the factors to be consider before sitting a rabbit house 2.2 Name and explain the important features of rabbit housing 2.3 State the need for a favourable climate 2.4 Explain the difference between a maternity hutch and a nest box	Describe the design of rabbit housing relating to climatic conditions State the space requirements for different classes of rabbits Identify materials locally use for building rabbits hutch Using a label diagram, illustrate the difference between a maternity hutch	

		and a nest box	
	General Objective 3.0: Know the reproductive activity of rabbit		
	<p>3.1 Define breeding, gestation, puberty, fertilization, cull etc</p> <p>3.2 State the gestation periods of rabbits</p> <p>3.3 Explain factors necessary for selection breeding stock</p> <p>3.4 Explain type of mating systems in rabbit and state mating ratio</p> <p>3.5 Explain out breeding, crossbreeding and cross breeding in rabbits</p> <p>3.6 State the advantages and disadvantages in 3.5</p> <p>3.7 Describe the male and female reproductive system in Rabbits</p> <p>3.8 State signs of oestrous and ovulation in rabbits</p> <p>3.9 Discuss the mating pattern of the buck and doe</p> <p>3.10 State when to mate the doe again</p> <p>3.11 Discuss on signs of pregnancy</p> <p>3.12 State causes of abortion in rabbits</p> <p>3.13 State problems of infertility in rabbit</p> <p>3.14 State the signs of kindling and preparations in rabbits</p> <p>3.15 Discuss kindling and mother care in rabbits</p> <p>3.16 Explain weaning and state age of weaning</p>	<p>Illustrate physical features and the productive tracts using well labelled diagram</p> <p>Carryout practical/mating of buck and doe</p> <p>Give note</p> <p>Carry out a test of pregnancy e.g. palpation, weight in crease in does</p> <p>Identify does on Pre-kindling stage e.g. removal of fur</p>	<p>Models</p> <p>Life animals</p> <p>rabbits</p>

	General Objective 4.0 Know the nutrition and feeding of rabbits		
<p>4.1 State the water requirement of rabbit</p> <p>4.2 State the feed and nutritional requirements of rabbit</p> <p>4.3 Discuss on the growth rates of rabbit</p> <p>4.4 Explain the digestive system of rabbits</p> <p>4.5 State the difference between rabbit and ruminant nutrition</p>	<p>Identify and name the common food for rabbit in your area</p> <p>Identify the sources of protein, carbohydrate, fats, mineral, vitamins and water to rabbits</p> <p>Carryout weighing of rabbits on weekly basis and report on the growth rate. Illustrate and draw the digestive system of rabbits</p> <p>List and identify the types of grasses and legumes commonly use in deeding rabbit</p> <p>State the daily water requirements for rabbits</p> <p>State the daily meal allowance rabbits</p>	<p>Foods stays</p> <p>Life Rabbits</p> <p>Various grasses and legume</p>	
	General Objective 5.0 Know the disease and pest of rabbits.		
<p>5.1 Define disease and pest</p> <p>5.2 Name the disease common to rabbits e.g. endoparasite and ectoparasite</p> <p>5.3 List other disease and health problems of rabbits</p> <p>5.4 Mention likely sources and causes of disease</p> <p>5.5 Explain ways to:</p> <ul style="list-style-type: none"> - prevent and control the disease - treat and care for animal during disease period - care for animals during pest period 	<p>Identify sign of ill health in rabbits</p> <p>List the common disease of rabbits</p> <p>Identify the symptoms and control of common disease of rabbit</p> <p>State the use of quarantine and sick bay</p>		

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RECOMMENDED TEXT BOOKS

1. Animal Husbandry in the Tropics *by C U Okorie*
2. Rabbit Production in the Tropics *by A O Aduku*
3. Pig Production in the Tropics *by J A Eusebio*
4. Comprehensive Agricultural Science for Senior Secondary Schools *by Ogieva Erebor*