

TRAINING GUIDE FOR HUSBANDRY PRACTICES

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CARE INTERNATIONAL IN GHANA

WOMEN REAR PROJECT

TRAINING GUIDE ON BASIC HUSBANDRY PRACTICES FOR CHICKEN AND GOATS PRODUCTION

DEVELOPED IN COLLABORATION WITH

DISTRICT DEPARTMENT OF AGRICULTURE, BAWKU WEST & PUSIGA DISTRICTS

**OUTLINE OF THE TRAINING FOR PROJECT FACILITATORS& AGRICULTURE/VETERINARY
EXTENSION AGENTS**

Day	Activity
Day :1	Registration
	Opening prayer
	Introduction
	Welcome/purpose of the training
	Brief overview of LVIF Women Rear Project
	Snack break
	Presentation of training outline
	Introduction to housing <ul style="list-style-type: none"> • What is goat/chicken housing? • Why the need to house goat or chicken • Types of goat Pen and chicken coop • Appropriate site for pen and coop construction
	Lunch break
	Practical session <ol style="list-style-type: none"> 1. How to construct appropriate pen for goat 2. How to construct an appropriate coop for local chicken? 3. Questions and discussions
Closing	
Day 2	Registration
	Opening prayer
	Recap of Day 1 activities
	Introduction to breed selection <ul style="list-style-type: none"> • What is breed selection • Why the need for breed selection? • Types of goat and chicken breeds in the locality
	Snack break
	<ul style="list-style-type: none"> • When to select new goat/chicken breeds for your pen or coop • Signs of good goat and chicken breeds • Questions and discussions
	Lunch break
	Practical session <ul style="list-style-type: none"> • How to introduce new chicken and goat breed to your existing pen/coop
	Questions and answers
	Closing
Day 3	Registration
	Opening prayer
	Recap of Day 2 activities
	Introduction to Feeding <ul style="list-style-type: none"> • What is animal feeding • Why the need to provide feed to your chicken and goat

	<ul style="list-style-type: none"> • When to provide complimentary and supplementary feeding to your animals. • Questions and discussions
	Snack break
	<ul style="list-style-type: none"> • Components of good feed for chicken and goats • How to formulate good feed for goats during dry season • Discussions
	Lunch break
	Practical session Howe to formulate good feed for goats and chicken Questions and discussions
	Other discussions and closing
Day4	Opening prayer
	Recap of Day 3 activities
	Introduction to pest and diseases <ul style="list-style-type: none"> • What is meant by a disease • Different between signs and symptoms of diseases in farm animals? • General signs and symptoms of diseases in farm animals
	Questions and discussions
	Snack break
	Routine Health management <ul style="list-style-type: none"> • Dipping • Dosing/Drenching • Vaccination • Hoof trimming • Debeaking
	Questions and discussions
	Lunch break
	Introduction to record keeping <ul style="list-style-type: none"> • What is record keeping • Why the need to keep records • Types of records for livestock • When to start keeping records
	Other matters and closing
Day 5	Opening prayer
	Recap of the previous sessions
	Snack Break
	Plans for step down activities
	Lunch break
	Other issues and closing

Background

Chicken and Goat production is an income generating source in Ghana because they produce meat, eggs and manure. They also contribute to improved human nutrition and food security by being a source of protein in form of eggs and meat. Animal production acts as a key supplement to revenue from crops and other enterprises, thus avoiding over dependency on traditional commodities with inconsistent prices. Both chicken and goats have potential to generate foreign exchange earnings through export of their products to neighboring countries. Local chicken is highly prized in many socio-cultural functions such as dowry and festivities. In spite of these benefits, local chicken and goat productivity is low in Ghana. This is due to various factors including high mortality and lack of good husbandry practices. Most of the livestock keepers do not have housing facilities for their animals, the few who have some form housing facilities are usually not in good condition. As a result, most of the animals sleep outside their homes mostly on the streets and tree branches. Besides housing, majority of the livestock keepers do not provide feed for their animals so the animals browse/scavenge for their own feed which eventually makes them stray into homes and farms destroying crops and household consumables. These practices make them susceptible to predators and bad weather conditions resulting in injuries and high mortality and then high economic losses.

In view of the above challenges, the Women Rear Project, which is being implemented in Bawku West and Pusiga District, seeks to reach out to 4000 smallholder women livestock farmers. One of the project's activities is to train the Women Rear project Facilitators and Agriculture Extension Agents (AEAs) in Bawku West and Pusiga districts on Basic Husbandry Practices including routine health management for chicken and goats. These trained field officers will then carry out step down trainings on these practices for women livestock keepers and other farmers at the community level in the two districts.

District Livestock/ Veterinary Officers will serve as lead facilitators of the training have made significant inputs into the development of this training guide. The training will be conducted at the district level involving project Facilitators and Agriculture/Veterinary Extension Agents. The process will involve both presentations and practical sessions by visiting existing pens/coops and determining the proportions of feeding components for both chicken and goats.

The objectives of the training;

1. Build capacity of project facilitators to educate women livestock keepers in the project communities on improved husbandry practices for chicken and goat.
2. Enhance the capacity of government Agriculture Extension Agents in the two project districts to scale up capacity building on husbandry practices beyond the project participants and communities.
3. To strengthen the relationship between the project team and the department of agriculture to ensure sustainability of project interventions

The content of this guide include;

- Breed selection
- Housing
- Feeding
- Pest/disease and Routine health management
- Record keeping

HOUSING

It is the act of creating an enabling environment for the animal for its comfort living. Animals should be housed to protect them from bad weather for example rain, sun and wind. Each adult goat should be allowed a floor space of 1.5 square metres and that chicken should 0.06 sqm.

Importance of housing

- Housing helps keep the animal in good health,
- Protect animals from predators
- Protect the animals from bad weather
- Help farmer to be able to handle animals well
- Enhance feeding and medication

Types of housing

There are various kinds of housing for goats but the most common ones are;

- Walled-roofed
- Raised floor with wooden walls and roofed.

The walled and roofed house is usually upto 1 meter high. The roof can thatch grass or aluminium sheet. This kind of housing is well ventilated. It also protects the animal from wetness during the rainy season and is easy to clean.

Raised floor with wooden walls and roofed is warm and easy to clean. The animals can fed in the pen because the floor is well drained resulting in reduced foot rot incidence.

Constructing a pen/coop and its routine management

- Select good site (topography, Soil type, source of water, direction of wind, availability of market)
- Position of the pen (East to west to prevent direction of sunrise and sunset and rain)
- Materials (blocks, welded mesh, roofing sheets, wood, iron rods, grass, cement, sand, bricks/mud and stones)

- Space requirement (average of 1.1- 1.8 sqm for both sheep and goat and 0.06 sqm for one fowl)
- Hight can be 4-8ft above the ground
- Roof should not be leaking when rainfall
- Clean house or pen at least every three days to keep it neat
- Create holes on pen to enhance good ventilation
- Fumigate pen / coop with e.g Omicides

BREED SELECTION

Breed selection is the process of choosing animals with desirable characteristics to be parents of the next generation. There are many breeds of local chicken and goats in Ghana but the most common ones are the indigenous breeds. The most common goat breed in Ghana is West African Dwarf goat. They are prolific, precious and trypanotolerant and resistant to other disease such as pneumonia.

There are wide range of chicken which are from cross breeds of leghorn, Rhode Island Red and Wyandotte. Local chicken are self-sustaining i.e. can raise their own replacement stock, they are hardy birds that can survive hard conditions, management requirements are not critical as those of commercial exotic breeds, they are immune to some diseases and parasites and their products fetch more money than those from exotic birds.

Breeding is an important aspect in animal production in terms of prolificacy, meat and milk. It has a significant influence on immediate and long-term flock productivity.

The most common characteristics to consider in selecting goats and chicken include;

- Have good height and body weight
- Resistant to some diseases
- Good coloration (market)
- Produces strong and fast growing offspring
- Good mothering abilities, well developed udder and good body conformation (Does).
- Well-developed scrotum and can mate regularly (Buck)

FEEDING

Feed is food given to Domestic animals, especially Livestock. Goats and poultry needs a very balanced diet comprising of water, carbohydrates, protein, vitamins, and minerals for their better growth and development. Good nutrition ensures that the animal grows faster and ready for

mating or market. It also increases fertility and litter size. Goats are natural browsers but they do also graze. They are however selective in their feeding behaviour and they do well where they feed on a variety of feeds. goats main feed is shrubs, bushes (and wild fruit/pods) and grass.

The quantity of feed consumed by a goat depends on; age; breed; sex, size and physiological status (pregnant /lactating.). Goats will consume about 3-5% of their own body weight in dry matter daily. Young goats will consume relatively more than mature goat. Pregnant and lactating animals will need more feed to produce milk and to enable the foetus to grow. Clean and nutritious feed/water should be given to animals. Feed should be made available for animals during dry season where there are scares. Feed animals very well for better growth and production. Always provide saltlick to your animals.

Goats need a balanced diet comprising of water, carbohydrates, protein, vitamins, minerals and fibre.

Goat can obtain its protein from leguminous plants such as soya bean, cowpea, and groundnut leaves/straw. However, feeding leguminous feeds which are high in nitrogen content causes bloat, which is the accumulation of gases in the stomach. If animals are not attended to in time, they may die.

Carbohydrate can be obtained from cereals such as maize, sorghum and millet leaves and straws. Vitamins can be obtained from vegetables such cabbage leaves and green forage.

Main Feed for Chickens include Alfalfa, corn, field peas, wheat bran and sorghum. Other ingredients such as limestone, oyster shell, fish meal and yeast can also be added to the poultry feed.

Types of feed

1. Compound feed E.g formulated feed (layer mash, broiler mash, starter mash, magic feed
2. Straight feed –E.g maize, bran and millet, grass and forage

The major constraint to livestock production is the unavailability of sufficient feed, especially in the dry season. Therefore it is necessary to produce fodder crops or gather and store farm residues maize, sorghum, millet, cowpea, soybean straws as soon as after harvesting as for supplementary feeding during the dry season. You can also treat rice straw with urea which is a good source of protein for animals especially during the dry season.

Rice straw treatment with urea

Materials
Rice straw

Ureae,
Black Polythene
Water

The steps involved;

- Dig a pit to about 2 ft and 2m X 3m
- Use thick polythene to cover inside the pit to prevent water from seeping through
- Fill the pit with one cocoa sack of dried rice straws.
- Mix two-milo tin of Urea with 34-size bucket of water.
- Sprinkle the mixture on the rice straw and turn it continuously until it is uniformly mixed.
- Compress the straw to remove air from the dried straw.
- Cover the pit with thick polythene to make it airtight.
- Allow the mixture in pit for three weeks.
- Remove the mixture after three weeks and dry it under shade for 24 hours
- Sprinkle salt on the mixture and give to the animals or mix it with feed the animals are conversant with and feed them.

Larvae preparation of local chicken

Materials

1. Cow dung/ animals droppings/ waste from slaughterhouse
2. Water
3. Container
4. Soft net such as window net/ mosquito
5. Polythene preferably black

Steps

- Get your container
- Moisten the materials with water
- Put the materials into the container
- Use the polythene to tie the opening of the container
- Keep the container in a safe place for 3 days
- Open the container on the 4th day and allow it for house fly to lay their eggs in the material (the container should be kept at a place where there a lot of house flies)
- Use the net to close the opening after the one day been left opened
- Allow the container with the net for 3 days
- Finally, open the container and you will see your larvae to ready for poultry to feed

PEST/DISEASE AND ROUTINE HEALTH MANAGEMENT

Animal disease is an impairment of the normal state of an animal that interrupts or modifies its vital functions or any harmful deviation from the normal structural or functional state of an organ/organism or in simpler terms an illness/sickness manifested by signs and symptoms.

Diseases of animals remain a concern principally because of the economic losses they cause and the possible transmission of the causative.

Pest is destructive insect or other animals that attacks crops, food, livestock etc Eg. Ticks, munge, etc

Basic general signs and symptoms of diseases in farm animals.

- Fever
- Vomiting
- Abdominal pain
- Diarrhea
- Refusal to eat
- Severe weakness and depression
- Stiffness
- Swollen
- Severe muscle pain
- Breathing rate
- Color of urine/milk
- Discharges from the natural orifices

General disease prevention and control.

- Prevention of environmental contamination.
- Control of intermediate host, vectors and reservoirs.
- Control of internal parasites.
- Control of anthropod pest.
- Control and reducing the infection as soon as an outbreak occurs.
- Isolation of sick animals.
- Vaccination of farm animals
- Quarantine of new animals for at least one week

CCPP and PPR

- CCPP Is a disease of goat not sheep characterized by fever, difficulty breathing and coughing.
- PPR is also called goats and sheep plague, is a highly contagious animal disease affecting domestic and wild small ruminants. It is very severe and more common in goats than sheep.
- Newcastle disease (NCD) in village poultry is a highly contagious fatal viral disease of poultry such as chicken, turkey, Guinea fowls etc.

Common signs and symptoms of PPR?

- Sudden onset of depression.
- Fever.
- Discharges from the eyes and nose.
- Sores in the mouth.
- Cough and difficulty breathing
- Foul-smelling diarrhea
- Death.

Prevent and Control PPR disease

- Vaccination
- Isolation of infected animals.
- Proper disposal dead animals.
- Awareness creation.
- Bio-security measures

Common signs and symptoms of NCD

- Loss of appetite
- Coughing
- Difficulty breathing
- Watery eyes
- Nasal discharge
- Bright green diarrhea
- Torticollis
- Comb and wattles may swell and discolored blue.

Control and preventive measures of NCD

- Vaccination (using either I2 or Newcavac vaccines).
- Adaptation of strict-bio-security
- Quarantine measures
- Proper disposal of disease dead birds

Routine Health Management Practices

The routine health management practices include dipping, dosing, vaccination and hoof trimming.

Dipping

There are quite a number of diseases that are caused by external parasites such as, ticks. The most effective way to prevent these diseases is to control these parasites using acaricides. There are different methods of dipping that can be applied to goats but the most is spraying using acaricide in a knapsack.

Dosing/Drenching

This is making the goat take liquid medicine orally. This is usually done to control internal parasites. Mostly a bottle with a long neck is used for drenching. It is important to exercise caution when drenching your animal.

Hoof trimming

When animals walk on hard rough ground hooves become overgrown and need regular trimming to prevent injury.

- A sharp curved knife is used or a pair of foot shears.
- Cut away the overgrown part of the hoof. If the heels are overgrown cut them as well
- Be careful not to cut too much hoof and expose the live tissue.
- Dip the hooves in copper sulphate solution to make them hard and prevent cracking and foot rot. This can be done once a year before the onset of the rains.

Debeaking

It is the process where part of the upper and sometimes the lower beak of the **chicken** is removed with electrically heated blades and more recently with infrared lasers. **Debeaking** implies complete removal of the beak.

RECORD KEEPING

Farm Record is a document that is used to keep account of different activities, events, materials regarding the farm operations.

Keeping good records is a key to the success of goat farming. It helps you keep track on top of production, feeding and profitability. Most importantly, good farm record is a great tool for continuous improvement of your herd and your farm. It help check on feed utilization and when your animals were vaccinated, dipped or given any medication.

Farm records can be used;

- In determining profitability of various techniques used at the farm
- To keep your memory on what you did and/or what happened
- In decision making
- To compare the efficiency of use of inputs, such as land, labour and capital, for example when implementing a new / alternative systems
- Help the farmer / investor in improving the efficiency of farm's operations

Importance of farm record keeping

- To keep track of all animals (Identification records)
- Evaluation of livestock for selection (breeding records; financial records; production records)
- Control of inbreeding and aid in breeding planning (breeding records)
- Aid in selecting animals with the right characteristics for breeding (production, health, feed efficiency) to improve the herd or flock
- Aids in feed planning and management
- Aids in disease management; keeping track about treatment (disease records)
- Aids in finding the effective treatments for your animals

Types of farm records

There are different kind of farm records but most relevant ones are below:

- Identification records: Help to track of your animals
- Breeding records: helps to measure productive efficiency of the herd and to enable selection.
- Production records: it useful in measuring the performance of the animals and the herd.
- Feeding records: gives information about, type and quality of feed.

- Disease and treatment records: it helps to keep track of the disease events in which animal is involved during its lifetime.
- Health records: including morbidity, mortality, signs and symptoms, diagnosis, treatments and vaccinations, etc.
- Lambing/kidding records: which include identity, dam ID, birth weight, date of birth, type of birth and sex.
- Inventory: Inventory of available animals on the farm and other assets.

Health records

No.	Animal Id	Date observed	Major sign	Suspected disease	Treatment given			Response
					Medication	Duration	Dosage	

Vaccination Records

No.	Animal Id	Date vaccinated	Type of vaccination	Response

Mortality record

No.	Animal Id	Breed	Animal Age	Sex	Date animal died	Animal value (GHc)

Inventory record

No.	Date	Animal Id	Breed	Age	Sex	Animal value (GHc)
