

Title: Understand Poultry Farming

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i: DEDICATION .

This booklet is dedicated to every
prospective poultry farmers to serve
as a guide for a successful poultry
farming.

CHAPTER 1: INTRODUCTION

A viable poultry business is one of the most effective means to financial liberty. You are not entitled to get money from the market, if you don't have a tangible products, services or an idea to exchange. No matter your current working condition, education or age, understand that you can start your own poultry business today, the choice is yours. Poultry business/farming is the best of its kind, provided you have little knowledge and understanding about its modus operandi and the market, you will testify that "I was once blind, now I can see" because it's simple and requires low start up capital to operate.

Poultry business/farming simply entails the raising of birds domestically or commercially, primarily for meat and eggs and secondarily for feathers, renewable fuel such as methane (CH₄) and other feedstocks such as Ammonia (NH₃) and carbon dioxide (CO₂). Chicken, turkeys, ducks and geese are primary

importance.while, guinea fowl and squabs (young pigeons) and chiefly of local interest. This book serves as a guide for raising day old chicks to table size chicken, i.e brooding day-old broilers and layers chicks to table size chicken.

CHAPTER 2: HISTORY OF POULTRY FARMING

The poultry farming sector is one of most fastest growing and flexible of all livestock production consummated under strong demand. Globalized over the past 15years in countries of all income level. Livestock is fundamental to the livelihood of about one million of the world's poorest people. Rural poultry farming is particularly for livelihood of many resource-poor farmers often being the only asset they posses. It makes up about 80% of the poultry stocks in low-income food-deficit countries and significantly.

Poultry can be traced to the South-East Asia. Present day hens

come from the a wild species of fowl known as "Gallus Bankiva" which originated in a broad area of Asia, extended from India to the Philippines and which was first domesticated 7,000 years ago. Fowl are domestic animal has most often in written history. As a matter of fact, there were references to the them in Chinese documents as far back as 1,400BC. In 400 BC , Aristotle wrote that Egyptian practiced "artificial" incubation of hen eggs using dung heap. Greek writers such as Aristophanes also mentioned hens in 600BC and the Romans considered them to be an animal sacred to Mars, 'the god of war'. The first treatise in which there was a reference to the poultry farming practices was the one by Cato (200BC) which described the fattening of hens for meat production. During the 1880s, poultry production was by practiced by households with backyard flocks of dual-purpose chicken. These chicken supplied egg and seldomly meat for Sundays or holiday dinner. By the turn of the

century, entrepreneurial farmers began selling pullets during the summer for meat as a sideline activity on their family's farm. Year-round production was restricted because of vitamin D3 has not been discovered and the Importance of the sunlight 's impact on the production not fully understood.

In 1920s, there was surge in the production of broiler chicken for meat, previously a subsidiary of the egg industry had began with the development of the broiler production for meat. Broiler production started in locations such as Delmarva, Pennisula , Georgia, Arkansas and New England.

In 1923, a woman called Cecile Long Steele was credited as the pioneer of the poultry industry in Sussex County DE , she ordered for 50 chicks for egg production and received 500. She kept and raised the chicks, selling them for meat, within two years, she raised 10,000 meat type chickens.

In 1950s, the National Broiler Council

(NBC) was formed in United States, domiciled in Richmond, Virginia. The chief function of the organization was to stimulate consumer demand. From the outset, NBC represented all segments of the industry and decision making was shared by producers, hatcheries, feed companies and processors. Each member company was assessed due base on production. NBC moved quickly to launch national promotion programs like Western Ranch Dinner, 'Chicken is a Wise Buy.

In midst-1970s, the industry metamorphosed into modern state with the implementation of nutritional discoveries, disease eradication programs, genetic improvement through traditional breeding and mechanization and automation technologies. Consumers began to prefer cut-up part and further processed chicken to the conventional whole bird.

In 1980s, chicken consumption surpassed pork consumption, In

September, 1989, National Chicken Month was declared. The industry establishes September as the National Chicken Month to help extend grilling season and greater chicken consumption into the fall.

CHAPTER 3: POULTRY FARMING SYSTEMS

i: Extensive System

ii: Semi-intensive

iii: Intensive

Extensive System: This is also known as Free-range or Back-yard system which comprises half of the chicken population. Birds quantities are mostly 10-50birds. It is mainly for family consumption with low egg production. The birds are usually different species with varying age.

Semi-intensive System:

This is a family based subsistence and market oriented production system which comprises about one third of the total chicken population. The average birds quantity ranges from 50-2000 birds including

improved and indigenous breeds with low production of eggs.

Intensive System:

This intensive poultry system is a market-oriented production with high number of birds which ranges from 2000 and high productivity level.

Around 21% of chicken population operates in this system. It is bird raised for commercial purpose.

CHAPTER 4: COMMON POULTRY DISEASES AND CONTROL

1: Fowl pox

Symptoms:

Birds having wart-like lesion on the unfeathered body, mouth and eyes

Prevention:

separate affected bird, rub red oil or scratch and apply salt.

2: Coccidiosis

Symptoms:

Loose dropping, yellow brown poo which turns bloody poo, watery

diarrhea, weight loss, ruffled feathers

Prevention:

Keep food area wider, coops

clean and dry, using starter feed for

unvaccinated chicks, a probiotic such

as supplement to their feed. Treat

with embazin forte, Genndox, Tylox

extra, coccifor etc. or apply bitter leaf

and send leaf extract into their

drinking water.

3. Newcastle Diseases

Symptoms;

Breathing difficulties, nasal discharge,

murky eyes, twisting of neck and

paralysis of legs and wings.

Prevention:

Lasota and Gumboro

vaccination, avoid wild birds

and people entering your pen.

4: Marek's disease:

This is also known as Fowl paralysis.

Symptoms: chick developed tumors,

irregularly in shape of the eye pupils

(mostly result to blindness),

developed partial paralysis.

Prevention:

Marek vaccination, treat
with Viratop, Tylodox extra.

5: Infectious Bronchitis

Symptoms:

Cold, chicken rejects feed and water,
laboured breathing.

Prevention:

Give antibiotics drugs such
as Floricol, amoxicillin capsule,
lincomycin capsule e.t.c for 2-5 days.

6: CRD (chronic respiratory diseases)

Symptoms

Cough and catarrh

Prevention:

Avoid wild spreading dust in pen, treat
with tylosin, Tylodox extra.

CHAPTER 5: UNDERSTANDING YOUR CHICKEN'S DROPPINGS OR FAECES AND CONTROL

One of the secret of a successful
poultry farming is the ability of farmer

to monitor the chicken droppings and distinguish the normal and abnormal.

This is one way you can have early insight into potential health and wellness problem among chickens and it will also help you to be acquainted with what is normal and abnormal dropping looks like, so that you wouldn't overreact to small changes.

1: White milky running droppings:

This indicates worms, Gumboro disease (Infectious Bursal Disease IBD).

Treatment:

Mixed Viratop and Tylodox extra in overdose into their drinking water or separate affected ones give overdose mixture via their mouth using syringe.

Prevention:

Deworming, Gumboro vaccine and give a mixture of Viratop and Tylodox extra in small quantity into their drinking water twice a week.

2: Yellow & foaming dropping:

This is a sign of early stage of coccidiosis. Dropping with blood: this confirmed coccidiosis.

Treatment:

Using synthetic medicines such as Coccifor, Tylodox extra, intergenndox, embazin forte etc into their drinking water for 2-5days. Or using organic medication such as bitter leaf and sent leaf extract, pawpaw leaf extract etc into their drinking water for 2-5days.

Prevention:

Ensure adequate biosecurity.
Clean up litters or droppings at every 4days. Give anticoccidiosis drugs 2-3days a week especially in deep litter system.

3: Greenish droppings: This indicates late stage of worms, Newcastle disease, fowl cholera/typhoid. It could also be a sign of that the birds ate not well dried feed or a lot of green vegetables.

Treatment:

Add genndox or intergenndox and viratop into their drinking water for 2-5days, give antibiotics drugs such as chloramphenicol, lycomocilin, amoxicillin capsule 500mg, give Need leaf extract into their drinking water.

Prevention:

Ensure to administer Lasota vaccine, ensure clean drinking water.

4. Brown running droppings: This confirm E.Coli infection

Treatment:

add intergenndox and Vitamins into their drinking water for 2-5days.

Prevention:

Ensure adequate biosecurity.

5: Black droppings: This indicates internal bleeding or too much protein.

6: Clear or watering running droppings:

This is infections Bronchitis or stress.

Treatment:

add intergenndox and lycomocilin into
their drinking water.

Prevention:

Ensure adequate biosecurity. Give
enough vitamin.

CHAPTER 6: BROILERS PRODUCTION

MEDICATION AND VACCINATION

SCHEDULE.

Day1 : Vitamin or Glucose e.g

Glucomol

Day 2-5: Antibiotics + vitamin

Day6: Vitamin

Day7: First Gumboro vaccine

Day8: Vitamin

Day9: Vitamin

Day10: Vitamin

Day11-13: Cocidiostart drugs

Day14: Vitamin

Day15: First Lasota vaccine

Day16: Vitamin

Day17: Vitamin

Day18-22: Antibiotics + Vitamin

Day 23: Vitamin

Day24: Second Gumboro

Day25: Vitamin

Day26: Cocidiostart drugs e.g

totrazuri

Day27: Vitamin

Day28-30: Calcium drugs in water

Day31: Vitamin

Day32-35: Anti CRD drugs

Day36: Vitamin

Day37: second Lasota vaccine

Day38: Vitamin

Day 39- Vitamin

Day40-46: water + calcium drugs

Day47-49: water.

CHAPTER 7: LAYERS PRODUCTION

MEDICATION AND VACCINATION

SCHEDULE.

Day1: Glucose e.g Glucomol

Day2-4: Antibiotics+ Vitamin

Day5: Vitamins

Day6-9: Anti-coccidiocis

Day10: Vitamins

Day11: First Gumboro vaccine

Day12: Vitamin

Day13: Water

Day:14: Vitamins

Day15: First Lasota vaccine

Day16-19: Vitamins

Day20: Second Gumboro vaccine

Day20-22: Vitamins

Day24: Marek vaccine

Day25: Vitamins

Day24-26: Anti-coccidiocis

Day27: Vitamins

Day28: Second Lasota vaccine

Day28-29: Vitamins

Day30-32; Water

Day33-34: Vitamins

Week 5: Third Gumboro vaccine

Week6: Fowl pox vaccination

Week 7: First Deworming

Weak8: First NDV Kamorov vaccine

Week9: Infectious coryza vaccine

Week10: Fowl typhoid vaccination

Week 11: Second deworming

Week12 : Fowl cholera vaccination

Week13: De-beaking

Week14: Anti-coccidiocis

Week15: EDS/NDVK/IB

Week16: Antibiotics + Vitamins

Week18: Second Deworming

Week19: Water

Week20-30: Egg production.

CHAPTER 8: TURKEYS PRODUCTION

MEDICATION AND VACCINATION

SCHEDULE.

Day1:.. Glucose or Vitamins

Day2-3: Marek vaccine

Day4-5: Antibiotics + Vitamins

Day6-7: Anti-coccidiocis

Day8: Vitamins

Day9: First Lasota vaccine

Day10-13: Vitamins

Day12: First Gumboro vaccine

Day13-16: Vitamins

Day17-18: Water

Day18: Hemorrhage enteritis +

Vitamins

Day19: Second Lasota vaccine

Day20-23: Vitamins

Day24-28: Anticocidocis

Day30: Vitamins

Day 31: Fowl cholera+ Vitamins

Day32-34: Water

Day35: Deworming

Day36: Vitamins

Day37: Fowl pox vaccinations

Day38: Vitamins

Day39: Third Lasota vaccine

Day40-42: Vitamins

Day43-45: Water

Day46: Fowl pox vaccinations SC

Day47-50: Vitamins

Day51-54: Water

Day55: Vitamins

Day56: Maxiyield

Day:57: Gumboro vaccine

Day:58-60 Vitamins

Day60-61: Water

Day62: Deworming

Day63: Antibiotics+Vitamins

Day63-70: Water

CHAPTER 9: COCKERELS

PRODUCTION MEDICATION AND

VACCINATION SCHEDULE.

Day1: Glucose or Vitamins

Day2-5: Antibiotics + Vitamins

Day6-9: Anti-coccidiosis

Day10: Vitamins

Day11: First Gumboro vaccine

Day12: Vitamins

Day13: Vitamins

Day14: First Lasota Vaccine

Day15-16: Vitamins

Day17-18: Water

Day19-20: Vitamins

Day21: Second Gumboro vaccine

Day22-23: Vitamins

Day24--27: Anti-coccidiocis

Day28: Vitamins

Day29-31: Water

Day32: Deworming

Day33: Fowl pox vaccinations

Day34-35: Vitamins

Day36: Second Lasota vaccine

Day37-39: Vitamins

Day40-41: Water

Day43: Vitamins

Day44: NDV(Kamorov vaccine)

Day45-46: Vitamins

Day47-50: Anti-coccidiocis

Day51: Maxiyield

Day52-54: Water

Day55: Vitamins

Day56-58: De-beaking

Day59-60: Deworming

Day61-64: Antibiotics + Vitamins

Day65-68: Anti-coccidiocis

Day69-70: Vitamins

Days71-80: Water.

CHAPTER 10: GENERAL

VACCINATION PROGRAMMES.

Day1-4:. First dose of Newcastle

Day7: A dose of Marek's disease

Day14: first dose of Gumboro

Day35: Second dose of Gumboro
disease.

Day42: Second dose of (NCDV)

Lasota

Day112: Third dose of NCDV Komorov

Day126: Third dose of Gumboro

CHAPTER 11: GROWTH PROMOTERS/ BOOSTERS

There mainly two classes of growth promoters;

1: Organic growth promoters: This is the use of natural means to facilitate growth. They also serve as medication. They are mainly from plant roots, fibres, leaves, shrubs, flowers, bark, stem, buds etc. E.g. pawpaw leaf and its extracts, potato leaf, garlic, cayenne pepper, bitter kola, ginger, sassafras leaf, Neem leaf etc. Their leaf extracts serve as growth boosters and mostly act as anti-coccidiosis, anti-fowl typhoid, anti-diarrhea, anti-catarth/ cough and antibiotics.

2: Synthetic growth promoters: They are artificial or man-made medicines via series of laboratory tests and evaluation. E.g. Donnay, El-rox etc.

Benefits function of growth promoters:

1: Enhances pigmentation in animal

2: improves the function(synergetic)

of antibiotics and coccidiostat

3: Facilitates animal reach

marketable weight sooner thereby

reducing overall cost of feeding.

4: Eliminates undesired

bacteria(creates bacteria balance) in

the intestine

5: For optimum digestion and

absorption of feed nutrients.

6: it stimulates animal appetite for

feed, thereby make the animals have

rapid weight gain.

CHAPTER 12: GENERAL BIOSECURITY MEASURES.

Biosecurity has to do with employing

measures to prevent or protect your

birds from disease-causing

organisms.Biosecurity is the cheapest

and most effective means of disease

control. Hence the popular saying "

prevention is better than cure".

Here are some biosecurity measures

you should employ on your poultry

farm.

1: After visiting another farm, make

sure you always take a shower and change all your clothes before visiting your birds.

2: Avoid mixing up different species e.g rearing turkeys, broilers and layers the same place. Turkeys are rather prone to diseases.

3: Always keep your feed and drinking waters clean.

4: Limit any possible contact with wild animals as they can carry disease.

5: Regular cleaning helps you prevent the spread of diseases. At clean up litters 3-5 times a week.

CHAPTER 13: POULTRY HOUSE EQUIPMENT.

Poultry house equipment should be simple, easy to use and durable. They should minimize wastage and ensure efficiency in production process and ensure greater productivity in poultry enterprise. They should be available, affordable and easy to clean and disinfect.

Poultry equipment includes;

1: Feeders: used to supply feed to the birds, feeders are of different shapes and sizes. They are metallic, plastic or wood in nature.

2: Waterers or water trough: Used to supply birds are drinking water. They could be made up of metals, plastic or clay. They are of different shapes and sizes (volume e.g 2, 4, 8 liters etc)

3: De-beakers

4: Battery cage: Single or multiple tiers and different sizes

5: Egg candler

6: Incubator

7: Kerosene stove, charcoal pot

8: Electric bulbs

9: Records book and pen.

CHAPTER 14: BROODING TECHNICS

Brooding refers to the care and management of chicks during their early life, from day-old to week3. It involves the provision of warm temperature to keep the chicks comfortable during the early life.

Temperature appears to be the most important single factor in keeping the chicks alive during the first 3 weeks. Brooding is an important aspect in poultry production operation that any serious mis-management or careless mistake normally show up immediately or later as heavy financial loss through poor performance, disease outbreak and mortality.

14.1: BROODING SYSTEM

There are two types of brooding systems;

1: Natural brooding: Usually involves the use of mother hen.

2: Artificial brooding: This involves the use of artificial brooders or equipment. This may be sub-divided into two;

a: Hot room brooding: Here, the entire room is heated through a central heating system like circulating hot water in pipe or under floor heating or blowing hot air through the room. This system is best in very large commercial poultry farms.

b: Cold room brooding: This involves, heating only the area under the brooding canopy and to a limited extent beyond this area. This system is the one mostly used in Nigeria and other tropical countries both in broilers or layers type of chicks. Sources of heat in this system includes wood, oil, coal electricity and charcoal.

14.2: PREPARATION Of BROODING HOUSE TO RECEIVE DAY-OLD CHICKS.

a: Thoroughly clean and disinfect the equipment, windows and doors should be open to allow fresh air.

b: Thoroughly clean and disinfect the equipments and allow them to dry out (izar, dettol, hypo, formaldehyde or concentrated salt solution.

c: The litter material (wood shavings, chopped maize cob, ric shafts etc) should be spread on the dry floor 2-3days before the chicks arrive. It should be up to 5-6cm deep, dry and

fresh.

d: Feeders and drinkers (small ones) should be provided before the chicks arrive. In practice, at least for small number of birds (300-1000) old clean newspapers maybe used as feeders-spreading feed on them for the first 2-3days.

e: The temperature of the brooder box or room should be adjusted to about 35 鈉癢 at least a day to the chicks arrival by any of the sources of heat listed above.

14.3: ARRIVAL OF DAY-OLD CHICKS

a. Remove the chicks from the shipment boxes and place them on brooder hoover (that is already warm) immediately they arrive.

b: Provide sufficient water in slightly flat or short containers that the chicks can drink from.

c: In practice, some poultry farmers

adds some glucose-D and anti-stress preparations to the clean water served the chicks.

d: Supply feed to the chicks immediately on flat containers such as old newspapers, chicks transporting boxes teared flat for the first few days.

e: Watch the response of chicks to the temperature in the brooding room, if too high the chicks push themselves away from source of heat against the guard provided and huddle together close not the to source of heat is too. When they are comfortable they are evenly distributed throughout the brooder space.

f: Abnormal heat supply should corrected by adjusting the heat appropriately.

g: After 3-4weeks of age, artificial heat may no longer required except on cold

nights or days e.g after heavy rain.

h: Teach the chicks to eat and drink by dipping the beaks of some of them (especially the weak ones) in feed and water on the day of their arrival.

i: Supply the feed water ad-libs (continuously and in enough quantity).

k: Supply light on 24hours basis for the first 3-4weeks, as light encourages birds to eat (for at least first 3weeks).

l: Check sources of heat supply on daily basis and make alternative available in cases of fault or failures.

m: Feed and water trough or drinkers should be adequate and feed wastage should be avoided.

n: De-beaking the chicks at 3weeks old if not already De-beaked at day-old at the hatchery.

o: Restrict visitors from the premises of the brooder house and prepare foot

dip.

p: Make sure the birds receives appropriate vaccines at the appropriate time.

q: Always keep the litter damp-spot free by removing them and replacing them with dry ones or you change litter at every 4-5days.

r: Use appropriate feed for the appropriate type of poultry i.e broiler starter for broiler chicks and chick mash for pullets or cockerels.

s: Always observes the behavior of the birds, feed and water consumption, type and nature of droppings and report to the poultry specialist e.g veterinarian for any observed abnormalities

t: Maintain a suitable record book.

CHAPTER 15: How TO ESTIMATE THE NUMBER OF BAGS FEEDS REQUIRED FOR A GIVEN QUANTITY OF CHICKS.

The quantity of feeds or the number of bags required to raise up a particular quantity of birds rely

solemnly on the target weight gain of the birds and how long a farmer intends keeping them.

According to statistics, only 63% of the feed consumed by chicken are converted into useful nutrients and 37% are regarded as waste.

In Nigeria most chicken feed production company produces feed in 25kg and 50kg bags. But only 63% of the 25kg or 50kg are being absorbed as useful nutrients by birds. E.g the useful nutrient of 25kg : 63% of 25kg bag = 15.75kg while 9.25kg are regarded as waste. 63% of 50kg bag = 31.5kg while 18.5kg is regarded as waste. For instance, how many bags of feeds are required to raise up 200 chicks for 6-7week.

Solution:

If a bag of weight is 25kg

63% of 25kg = 15.75kg

15.75kg 每 200birds = 0.07875kg

OR

25 每 200birds = 0.125kg/bird

63% of 0.125kg/bird = 0.07875kg/bird

Desired or target weight gain of
chicken
can be 1kg, 2kg, 2.5kg, 3kg, 4kg etc

Let's say your target weight gain of
chicken is 3kg weight.

Therefore, the number of bags
required = $3\text{kg} \div 0.07875\text{kg} = 38 \text{ bags}$

So, 38bags is required to achieve a
probable weight gain of 3kg.

For 25kg bag-----38bags is
required.

For 50kg bag-----19 bags is
required.

FCT= feed conversion ratio.

$$\text{FCT} = \frac{\text{Total weight of bags}}{\text{number of birds} \times \text{target weight gain}}$$

$$\text{FCT} = \frac{38\text{kg} \times 25\text{kg}}{200 \times 3\text{kg}}$$

$$\text{FCT} = 1275\text{kg}/800 = 1.59$$

Therefore, this implies that for every
1.59kg weight gain, you need 1.59kg
of feed to be consumed by chicken.

So to achieve 1.59kg weight of each
bird, you need 20bags of 25kg bag of
feed. By statistics, a live chicken
loses 25-30% weight of dressings. A
live chicken of 3kg, may give you
2.19kg after being dressed.

For birds to attain your desired target weight gain and boosters or growth promoters should be incorporated into their feed from either day one or from 3-4 weeks.

CHAPTER 16: GENERAL

MANAGEMENT BITS IN POULTRY

PRODUCTION:

1: Poultry house should be properly oriented so that they do not face the direct sun rays and falling rain. It is best to place the house in an East-West direction along the long axis. Walls facing the East-West direction should be screened or build up to the top in order to prevent sunlight and heat prostration.

2: Medium thickness of litter for cooler surface. Thick litter stays warm due to bacteria action.

3: Feeding should be done during cooler hours of morning and evening.

4: The house should be located in an

area completely free of flood at any time or season.

5: A thumb rule which usually works well is to keep the length of poultry house 1.5-2 times more than the width. E.g A 6m wide house should have the pens of 6 × 9m or 6 × 12m respectively.

6: Adequate consideration should be given to floor space requirement per bird. This depends on the age, size and types of birds to housed.

7: Always ensure proper sanitation of the poultry house, its premises and equipment.

8: Feed the birds with good appropriate non-mouldy feeds and good drinking water.

CHAPTER 17: AVERAGE FEED REQUIREMENTS PER BIRDS PER DAY

Broilers feed consumption

Week1-2:	0.30kg
Week2-4:	0.75kg
Week4-6:	1.25kg
Week 6-8:	1.60kg

Week8-10: 1.90kg

Pullet/Cockerels feed consumption

Week1-2: 0.20kg

Week2-4: 0.40kg

Week4-6: 0.55kg

Week6-8: 0.80kg

Week8-10: 0.92kg

Week10-12: 1.10kg

Week12-14: 1.15kg

Week14-16: 1.20kg

Week16-18: 1.30kg

Week20-22: 1.40kg