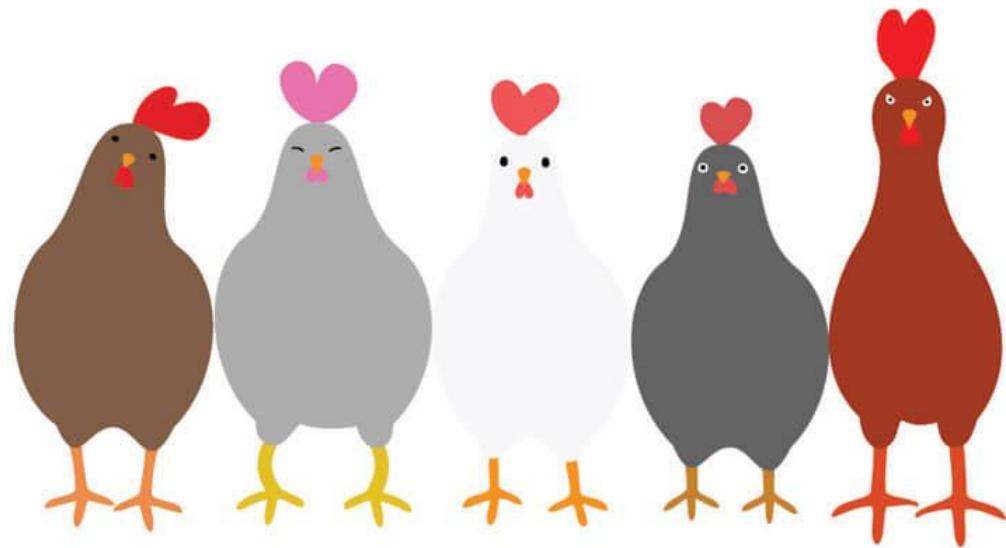


TIPS ON POULTRY RAISING

AFA1E : Introduction to Agri-Fishery Arts



GUIDE IN SELECTING THE STOCK TO RAISE



- Stock should only be purchased from a reliable hatchery or franchised dealer where the parent stocks are well-housed and well-managed.
- The kind of stock to buy depends upon the purpose for which it is going to be raised.
- Chicks should be free from diseases and deformities.
- Chicks should have uniform size and color and in the case of broiler chicks should not be less than 33 grams at day-old.
- For a start, a popular strain raised in the community can be selected as it is an indication of the bird's good performance under existing farm conditions.
- For broilers, choose those that have high livability and are fast growers.
- For layers, choose those that have good egg size, high egg production and long productive life.

STRAINS OF DAY-OLD CHICKS THAT ARE NOW COMMERCIALLY AVAILABLE:

Egg Type& Meat Type	Sources of Stock
1. Arbor Acres	San Miguel Foods Inc. Population Centre Building Nichols Interchange, Makati City Tel. No.: 878-4042
2. Babcock	Sarmiento Agricultural Devt. Corporation Sarmiento Bldg. II, Pasong Tamo Ext. Makati City Tel. No.: 816-7461
3. Lohman Console Farms	Batuhan, San Miguel, Bulacan 2 Samat St., Quezon City Tel. No.: 731-1842
4. Starbro	Universal Robina Farms CFC Bldg. Bo. Ugong, Pasig Metro Manila Tel. No.: 671 -8303

STRAINS OF DAY-OLD CHICKS THAT ARE NOW COMMERCIALLY AVAILABLE:

Egg Type& Meat Type	Sources of Stock
5. Avian	JAKA 211 Pasong Tamo Makati City Tel. Nos.: 844-7209/845-0236
6. Avian Swift (RFM)	2nd Floor RFM Bldg. Pioneer St., Mandaluyong Tel. No.: 631-8101
7. Pilch -Dekalb	General Milling Corporation E. Rodriguez Avenue Pasig, Metro Manila Tel. Nos.: 8195451/671-9943
8. Avian/Hubbard	Tyson Agro Ventures 179 Mariano Ponce Kaloocan City Tel. No.: 366-5213

LEGHORN STRAINS



DEKALB



LOHMANN



BABCOCK



Hy-Line



SHAVER



DEKALB VARIETIES



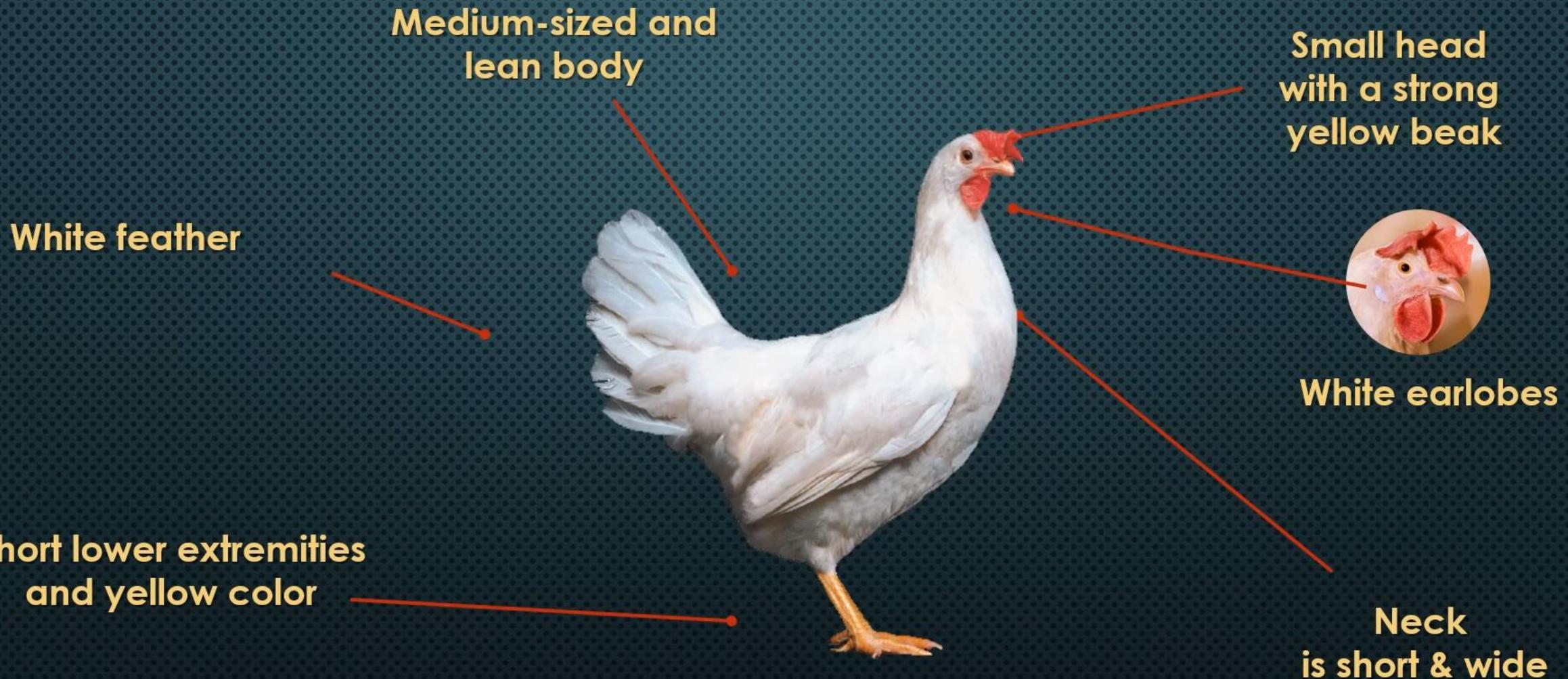
DEKALB WHITE



DEKALB BROWN



APPEARANCE AND PHYSIQUE



LOHmann VARIETIES



SILVER

SANDY

LSL - CLASSIC

BROWN – CLASSIC **TRADITION**



LOHmann VARIETIES

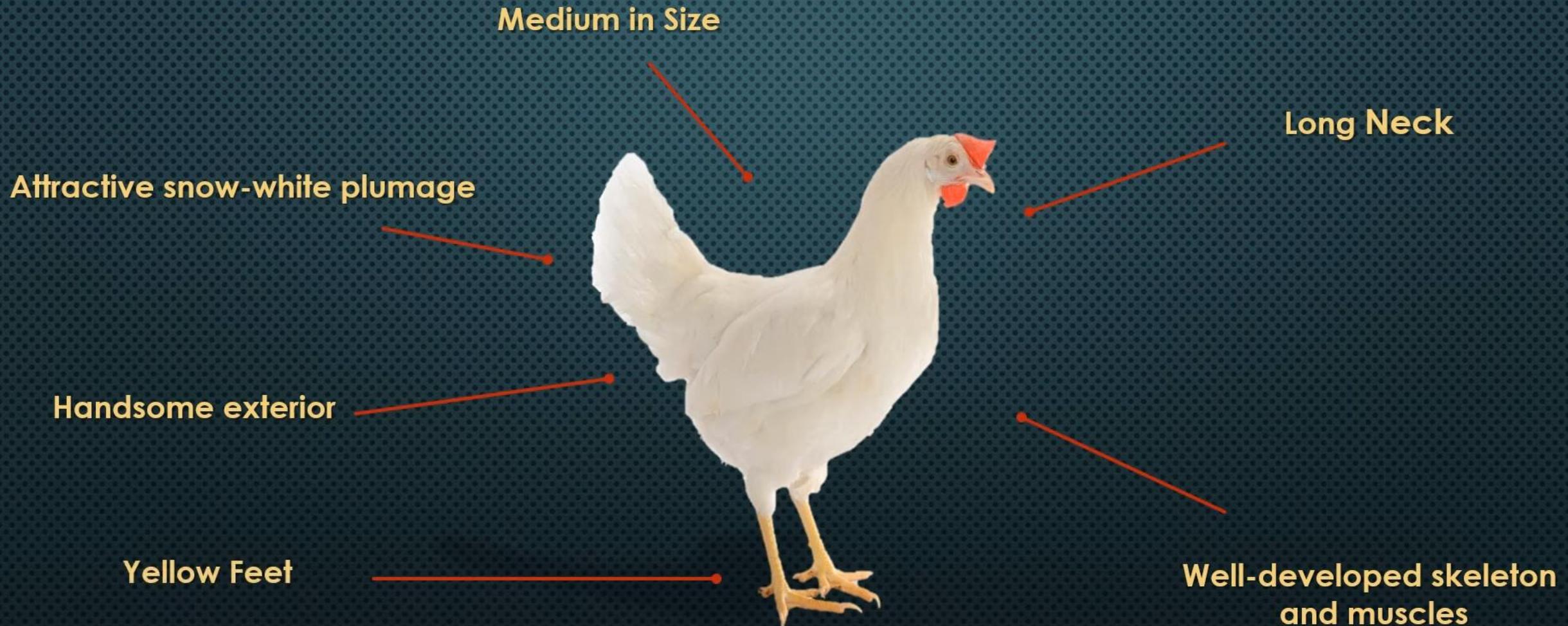


LSL - CLASSIC

BROWN – CLASSIC



APPEARANCE AND PHYSIQUE



DEKALB WHITE HEAD-TO-HEAD LOHmann WHITE

Php 350 – Php 450

141 days

1.72 kg

5% - 10%

108 g/day

2.04 kg / egg kg

94 %

98 %

Price

Age of Production (50%)

Body Weight

Mortality Rate

Avg. Feed Intake

Feed Consumption (FCR)

Livability (Laying)

Livability (Rearing)

Php 350 – Php 450

140 – 150 days

1.70 kg – 1.90 kg

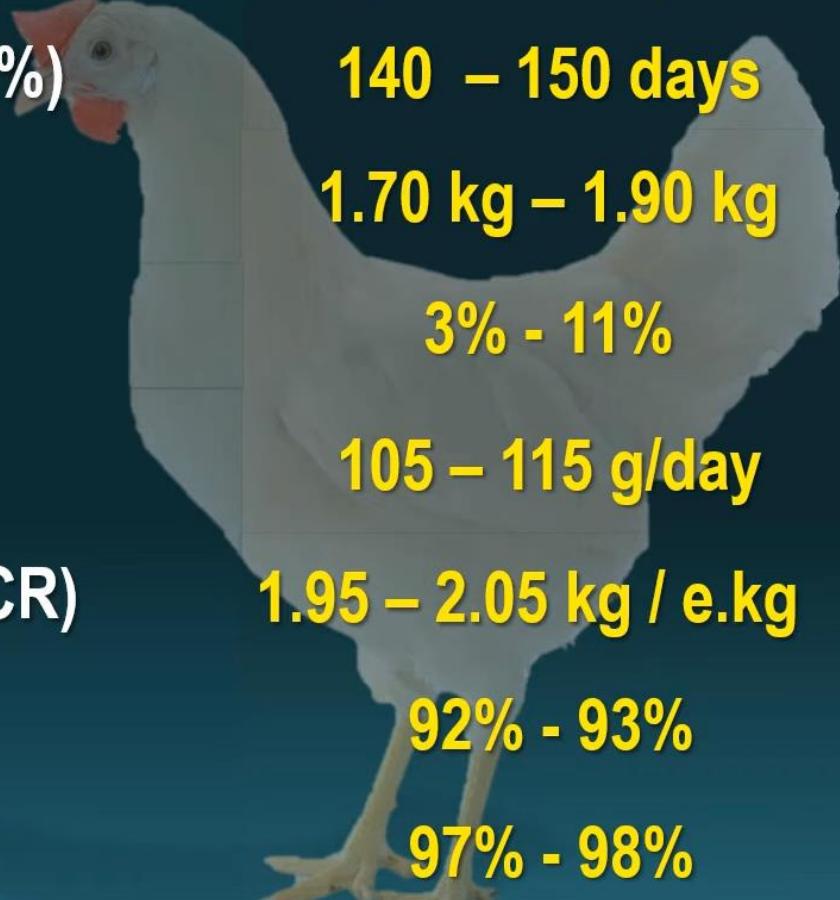
3% - 11%

105 – 115 g/day

1.95 – 2.05 kg / e.kg

92% - 93%

97% - 98%



DEKALB WHITE

321 - 330

96 %

63 g

41. 18 Newton



EGG PRODUCTION LOHMANN WHITE

Avg. Egg Per Year (72 Weeks)

323 – 328

Peak of Production

94 % – 96 %

Average Egg Weight

62 g - 63 g

Shell Strength

40 Newton



DEKALB WHITE FEED CONVERSTION RATIO LOHMAN WHITE

**2.04 KG OF FEEDS
PER KG
OF EGGS PRODUCED
(16 EGGS)**



$$1000 \text{ g} = 1 \text{ kg}$$
$$1000 \text{ g} / \text{avg. } 62 \text{ g} = \underline{\text{16 eggs}}$$

*avg. 62 g egg

**1.95 KG OF FEEDS
PER KG
OF EGGS PRODUCED
(16 EGGS)**



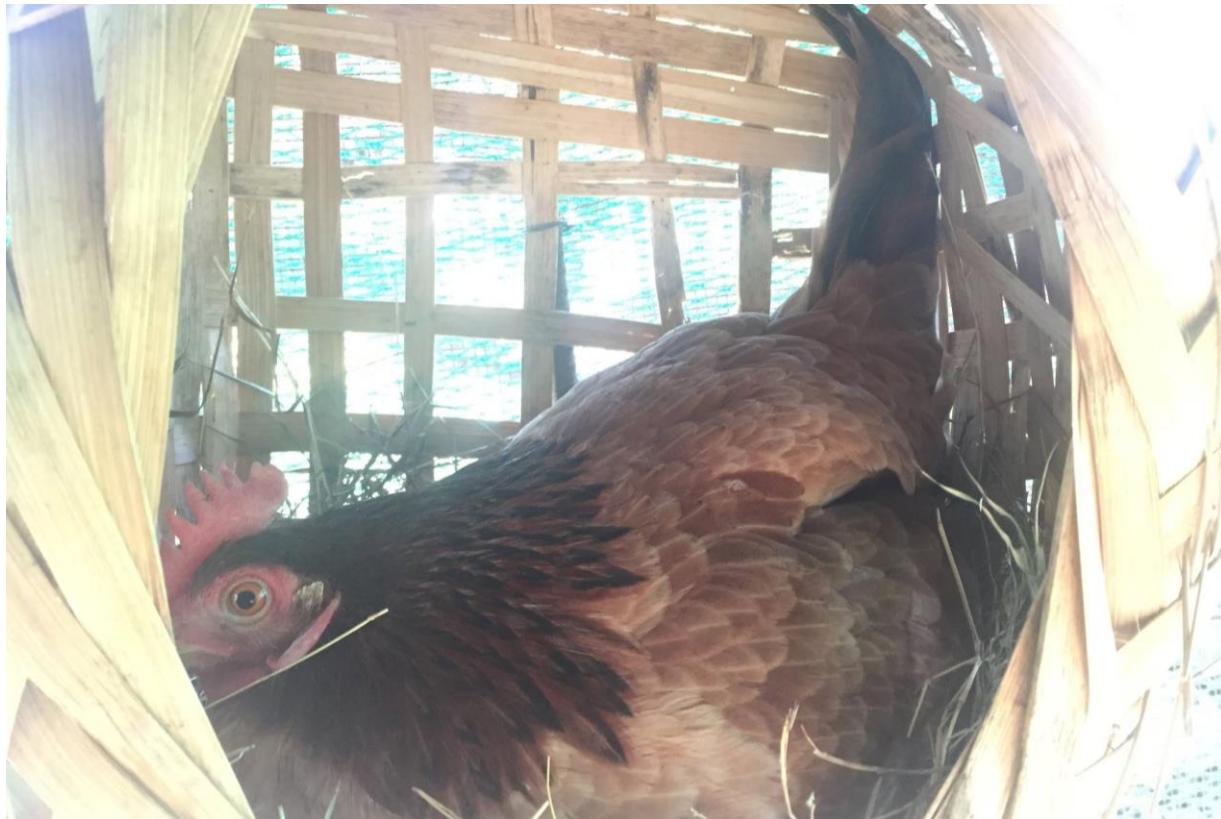


BANABA FROM BATANGAS

ChT777

BOLINAO FROM PANGASINAN

Bolinao Native Chicken Project



DARAG FROM ILOILO

La Esperanza Nature Farms



JOLOANO FROM BASILAN

- Joloano-Aseel breed



PARAOAKAN FROM PALAWAN

REYNO FARM



SPACE REQUIREMENTS

Layers

- | | |
|-----------------------------|-------------------|
| a. Day-old to four weeks | 15 sq.in./chick |
| b. Four to eight weeks | 30 sq.in./chick |
| c. Nine weeks to laying age | 50-60 sq.cm./bird |

Broilers

- | | |
|---------------------------|------------------|
| a. Day-old to three weeks | 0.3 sq.ft./chick |
| b. 3 weeks to 4 weeks | 0.5 sq.ft./chick |
| c. 5 weeks to market age | 1.0 sq.ft./bird |

RECOMMENDED MINIMUM FEEDING SPACE REQUIREMENTS:

- a. Day-old to 4 weeks 2.5 to 5 cm./bird
- b. 4 weeks to 8 weeks 5 to 6.5 cm./bird
- c. 9 weeks to near laying age 7.5 to 9 cm./bird
- d. Layers 10 cm./bird

RECOMMENDED MINIMUM WATERING SPACE REQUIREMENTS

Day-old to 4 weeks	0.5 cm./bird or two 1-gal. drinking fountains/100 birds
4 weeks to 8 weeks	0.6 to 1 cm./bird or two 2-gal drinking fountains/100 birds
9 weeks to near laying age	1 to 2 cm./bird or four 2-gal drinking fountains/100 birds
layers	2 to 2.5 cm/bird or six 2-gal drinking fountains/ 100 birds

ENVIRONMENTAL FACTORS

- Birds must be protected from poor ventilation and extremes in temperature.
- poultry houses should be constructed with their length parallel to the wind direction.

SANITARY PROVISIONS IN THE POULTRY HOUSE

- in the case of brooders, the floors, sides and partitions should be detachable.
- There should have good water drainage from the house site.
- When there is ample land area, the breeding, growing and laying houses should be reasonably spaced from one another as a health safety measure.

PROVISION FOR EASY EXPANSION

- Consider future expansion plans.
- The buildings that are to be constructed should consider the setting up of additional new houses that may be needed later.

ECONOMY OF CONSTRUCTION

- Poultry houses need not be very expensive to construct.
- There are many locally available cheap materials that are very common to poultry raisers like bamboo, coconut trunks, cogon, nipa and rattan. The rule is to use local materials that are readily available.

HOUSING EQUIPMENT

FEEDERS

NESTS

CAGES

INCUBATOR

BROODERS

WASTE DISPOSAL SYSTEM

WATERERS

VENTILATION SYSTEMS

COOPS

PERCHES

LIGHTING SYSTEM

FEEDERS:

This is a device you use for supplying feeds to the birds

WATERERS:

You use this device for supplying water to the birds

NESTS:

This is a well-prepared place where chickens lay eggs.

VENTILATION SYSTEM:

Odour vents, perforated walls etc. can serve this purpose

CAGES:

These are boxes you provide especially for keeping birds

COOPS:

Just like cages, a chicken coop provides housing for the birds.

INCUBATORS:

A device to keep eggs warm for hatching.

PERCHES:

These are logs you place a little above the floor of the chicken house for the birds to rest.

BROODERS OR HEATERS:

This device provides heat for raising young chicks.

LIGHTING INSTRUMENTS:

This provides light in the poultry house

WASTE DISPOSAL SYSTEM:

This helps for proper disposal of the waste you produce in your poultry farm.

EGG TRAY:

For handling of chicken eggs.



POULTRY MANAGEMENT

REARING OF THE DAY-OLD CHICKS

BROODING

- is essential for the chicks.
- is the process of supplying artificial heat to the chicks from the time they are taken out from the incubators up to the time their bodies can control their heat requirements and they are covered with feathers.

BASIC REQUIREMENTS FOR BROODING DAY-OLD CHICKS

1. Sufficient Heat
2. Adequate Light and Ventilation
3. Ample space to avoid overcrowding
4. Healthy stocks
5. Correct Feeding
6. Proper Sanitation
7. Regularity of Care and Management
8. Environmental Control

SUFFICIENT HEAT

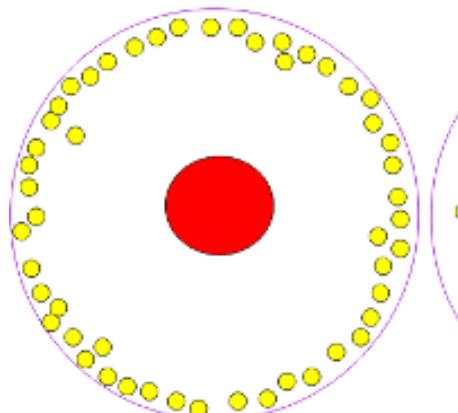
- Provide sufficient artificial heat to keep chicks comfortably warm during the day or night. Avoid abrupt changes in brooder temperature during the first-two weeks of life.

IDEAL TEMPERATURES FOR BROODING UNDER PHILIPPINE CONDITIONS

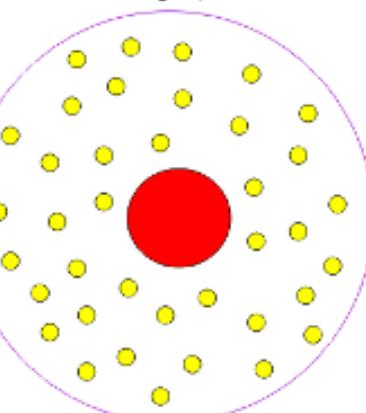
AGE OF CHICKS	BROODING TEMPERATURE
(weeks)	(°C)
0-1	32.2 – 35.0 (90-95 F)
1-2	29.4 – 32.2 (85-90 F)
2-4	26.7 – 29.4 (85-90 F)
Above 4 weeks	Remove the supply of heat

BEHAVIOR OF THE DAY-OLD CHICKS IN THE BROODER

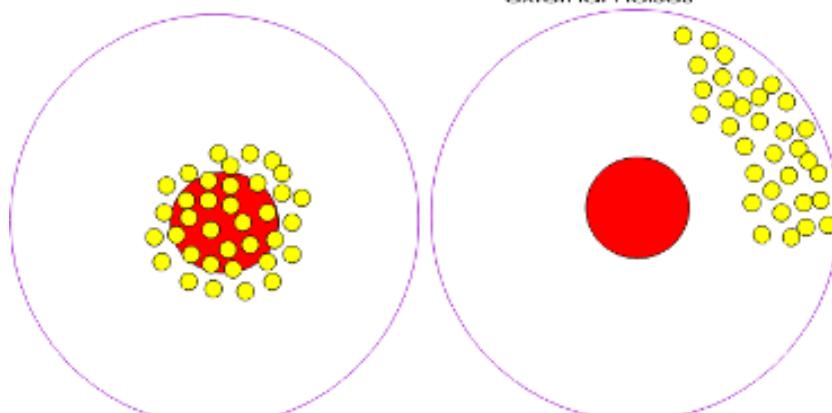
TEMPERATURE TOO HIGH
Chicks make no noise
Chicks pant, head and wings droop



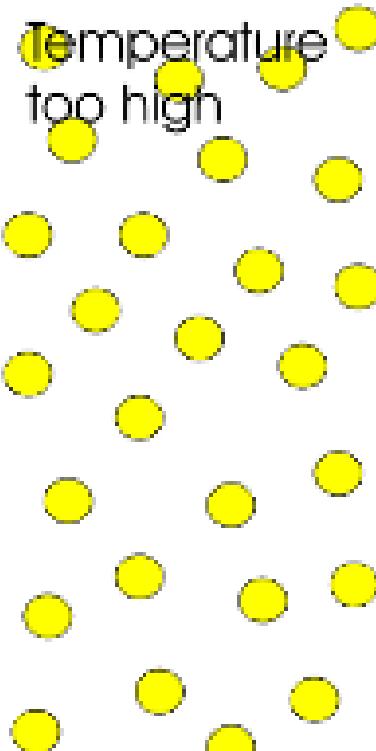
TEMPERATURE CORRECT
Chicks evenly spread
Noise level signify contentment



TEMPERATURE TOO LOW
Chicks crowd to brooder
Chicks noisy, distress calling



DRAFT
This distribution requires investigation. Influenced by draft, uneven light distribution, external noises

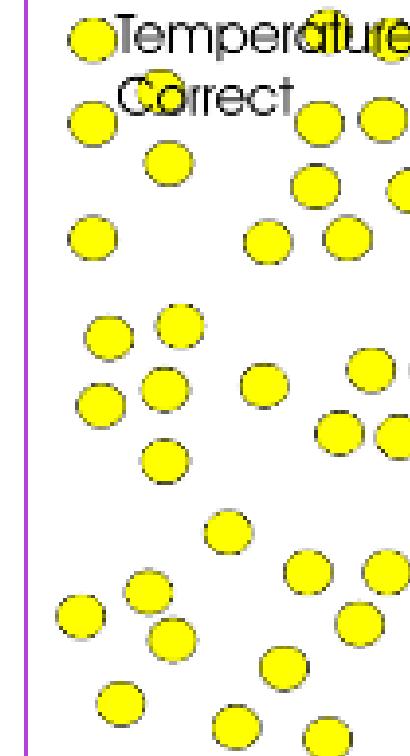


SPOT BROODING

Temperature
too high

Temperature
Correct

Temperature
too low



WHOLE-HOUSE BROODING

ADEQUATE LIGHT AND VENTILATION

- A well-lighted brooder attracts and encourages the chicks to start feeding.
- Provide sufficient ventilation to supply plenty of oxygen and facilitate the removal of carbon dioxide and excess moisture.

AMPLE SPACE TO AVOID OVERCROWDING

- Provide the brooder with enough space to avoid overcrowding which leads to poorly developed chicks, high mortality as well as harmful vices like toe picking, feather picking or cannibalism.

HEALTHY STOCKS

- Select only healthy chicks, which can be easily recognized by their dry, fluffy feathers, bright eyes and alert active appearance. Avoid chicks with wet vents and dull eyes.

CORRECT FEEDING

- Provide the chicks with good quality feeds either home grown or commercially sourced.
- Feed the chicks intermittently rather than continuously. Research studies have shown that when using intermittent feeding chicks utilize nutrients better.
- Do not allow feed troughs to go empty longer than one to two hours.

PROPER SANITATION

- Cleanliness and dryness of the brooding quarters will prevent contamination of the chicks from parasites and diseases which may be carried by previous brooded chicks.

REGULARITY OF CARE AND MANAGEMENT

- Environment should be kept as uniform as possible. Sudden changes in surroundings cause a certain degree of stress or insecurity.
- It is advisable that a regular caretaker feed the chickens following a definite schedule during the first 3 weeks of the chick's life.

ENVIRONMENTAL CONTROL

- Optimum house temperature for laying birds is between 18°C-29°C.
- In environmentally controlled houses be sure to provide for adequate air movement especially during hot weather.
- Evaporative cooling may be used to lower the house temperature.

ENVIRONMENTAL CONTROL

- Make sure that feeds and fresh water are always available. Vitamins, minerals and antibiotic supplements may be added to the drinking water during the first few days. Consult your feed dealer.
- Always check the chicks at night before going to sleep.
- After 7 to 10 days the brooder floor mats can be removed.
- More feeders and waterers should be made available as the chicks grow.
- Vaccination against avian pest is a good measure to prevent the outbreak of the disease.
- All weak, deformed and sickly chicks should be culled right away and properly disposed of.
- The immediate burning or burying of dead birds is an important part of a good sanitation program. Use an incinerator if dealing with large numbers or bury them in the ground right away. Do not expose to flies or rats.

REARING OF THE GROWING STOCK

- Broilers are marketed when they reach 45-60 days of age depending on strain.
- For the egg type, chicks are transferred to the growing houses or pens at 6-8 weeks old. They are kept in these quarters until they are 16-18 weeks old at which time then they are transferred to the laying house.
- Birds are given anti-stress drugs, either in the feed or in the drinking water 2-5 days before and after they are transferred to the growing houses.

- Thoroughly clean and disinfect the growing houses prior to the transfer of the growing stock. Transfer birds only during good weather.
- During hot summer days, the appetite of the birds diminishes but this may be sufficiently restored by wet mash feeding or by taking appropriate measures to lower house temperature like spraying, misting or sprinkling the roofing with water.
- Provide clean fresh drinking water at all times.

MANAGEMENT OF THE LAYER FLOCK

- Pullets are transferred to the laying house at the age of 16-18 weeks or at least 3 weeks before the onset of egg production.
- A few days before and after the transfer, the bird's ration should be fortified with antibiotics and vitamins to minimize or counteract the effects of stress.
- Cull those birds that show little or no promise of becoming potential layers.
- Birds will start laying when they are 20-22 weeks old. Generally, pullets reach maximum egg production when they are between 30-36 weeks old, after which egg production tends to decline and then levels off.

- After the first year of laying, the layers undergo a physiological process called molting. Early molters are poor layers while late molters are good ones.
- During the second year of production, the layers usually average about 10 to 20 percent fewer eggs as compared to the first year but the eggs are bigger.
- Provide layers with calcium supplements like limestone and ground oyster shell and insoluble grit.

VENTILATION

- Air movement around birds at floor level has a beneficial cooling effect. In shade houses, take full advantage of natural breezes using paddles or circulating fans in periods of still weather and particularly during the heat of the day. In controlled environment houses, use inlets with moveable louvres that can direct moving air directly on to the birds at floor level.
- In controlled environment houses, over-ventilate during the cool part of the day in order to cool down the whole house. Birds experiencing a cool period each day are better able to withstand hotter-periods with no adverse effects on performance

FLOOR SPACE

- Provide birds with up to 100% (depending on severity of conditions) more floor space than is recommended for temperate climates. Three birds per square meter is an absolute maximum. In controlled environment houses, rearing males with females makes the most economic use of expensive floor space.

LITTER MANAGEMENT

- Maintain only a very shallow layer of litter on concrete floors. This will maximize any cooling effect that the concrete floor may have on the birds through absorption of body heat.
- Dry, dusty litter can cause severe irritation and damage to the eyes of chickens. Avoid dustiness by sprinkling water generously on litter at regular intervals.

WATER SUPPLIES

- Whenever possible, use water supply such as well which provides cool water. Water consumption can double in very hot weather.
- Bury or insulate water pipes to maintain the original coolness.
- Supply troughs in which breeders may dip their combs and wattles so that evaporation of water cool the blood supply in the combs and wattles.

LIGHTING

- In shade houses, natural daylight must be supplemented with artificial lighting in order to obtain desirable lighting patterns that are necessary to adequately control sexual maturity. A constant or decreasing lighting pattern during rearing is essential to prevent too early sexual maturity. An increasing or constant light pattern is necessary after 22-24 weeks of age.

EGG HANDLING

- Supply at least one nest per four females. Ensure free circulation of air around the nest areas to discourage broodiness.
- Collect eggs more regularly than in temperate areas and transfer immediately to the egg cooling room which should be located on the farm site. Transport eggs to the hatchery in an insulated van.
- Practice daily fumigation of eggs.

NUTRITION

- In hot climates, poor production, small egg size, and thin shells are generally the result of an inadequate daily intake of the required nutrients.
- Where feed consumption is lowered merely by depression of the appetite and because of high temperatures during the period of bird activity, there will be an inadequate intake of ALL nutrients. This can be corrected by allowing the feeding activity to occur during the cool part of the day, when appetite is stimulated.
- Generally, in hot climates, the energy requirements of the hen are much reduced; because she eats to meet only her energy requirements, this results in an inadequate daily intake of protein, vitamins and minerals. In this situation, the correct daily intake of nutrients can only be achieved by correct feed formulation based upon a denser ration in which particular attention should be given to increasing vitamin levels well above temperate climate levels.

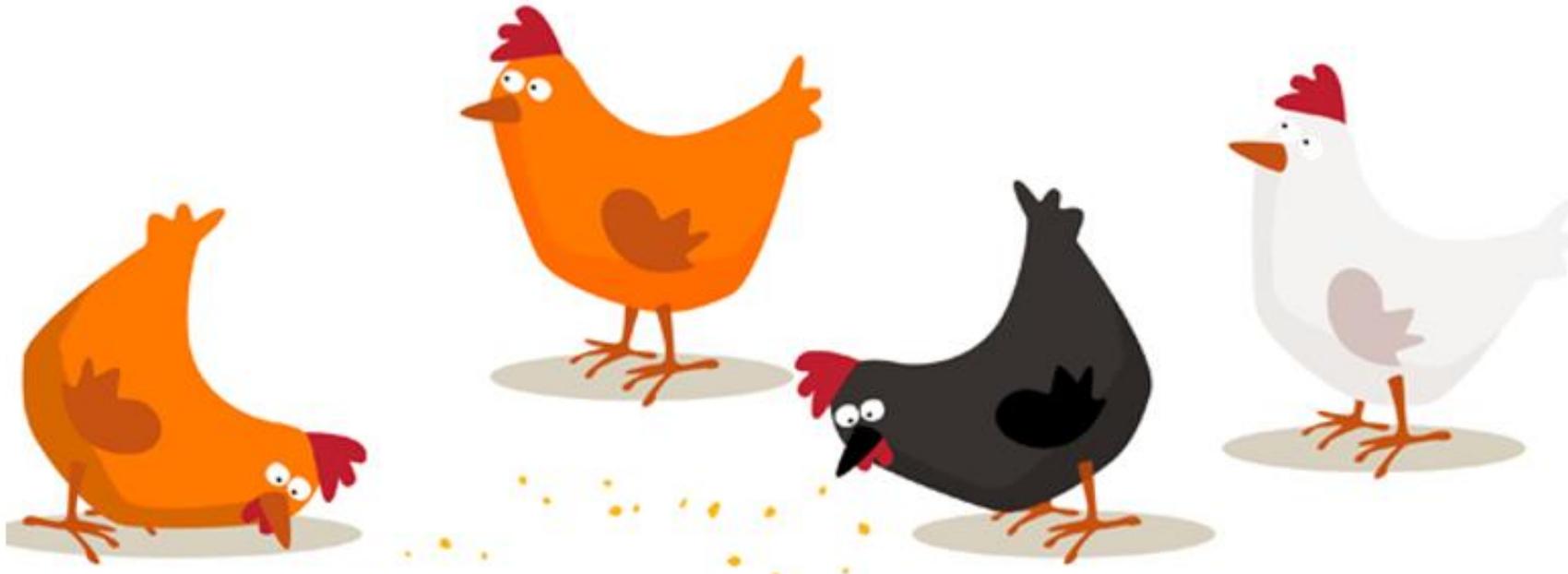
NUTRITION

- correct formulation of feed
- Feed intake is the main method of controlling sexual maturity in open houses and very careful attention must be given to controlling quantities very often to levels much below those used in temperate areas.
- Where intake levels are severely controlled, checking weight of the birds is vital. It is also essential to ensure proper ration formulation particularly in respect of any drug inclusions such as coccidiostats.

CULLING POOR LAYERS

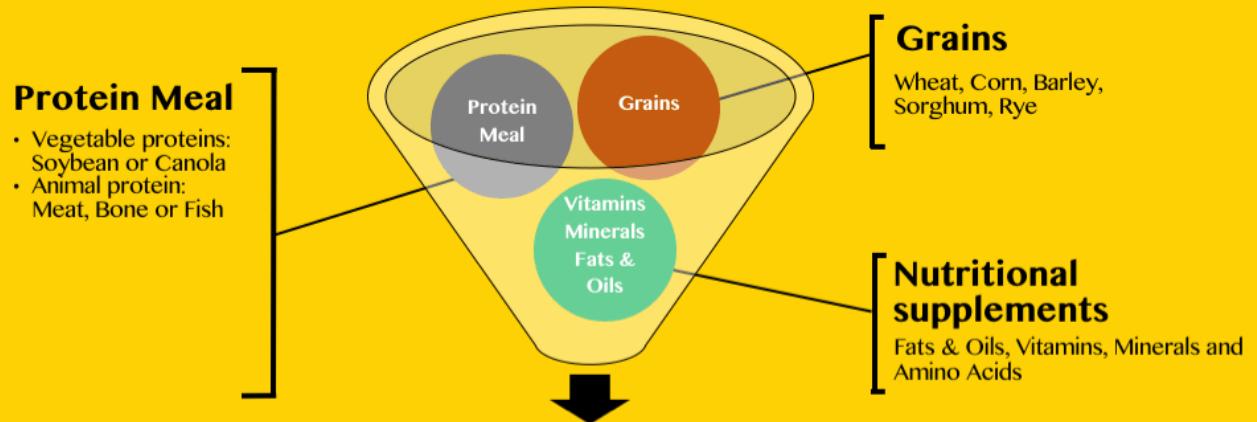
Consider the following pointers in culling poor layers:

CHARACTERISTICS	DESCRIPTION
Comb, wattle, earlobes	Small pale, cold, shrunken and dry.
Pubic bones (2 small bones extending along the sides of the vent)	Close together, only one finger can be placed between them, thick and hard.
Vent	Small, dry puckered and round.
Abdomen	Hard with thick skin, contracted.
Span (distance between end of breastbone and ends of pubic bones)	About 1-2 fingers in width.
Pigmentation (yellow beak and shanks)	Remains yellow even after months in laying pen



| FEED AND HEALTH MANAGEMENT

GUIDE TO CHICKEN FEED FOR LAYERS



CHICK

STARTER
(Crumble / Mash)



Protein: ~20%
Calcium: 1%
Can be Medicated
(Coccidiosis)



PULLET

GROWER
(crumble)



Protein: 16-18%
Calcium: 1%
Can be Medicated
(Coccidiosis)



LAYING

LAYER

Protein: 15-18%
Calcium: ~3.5%
Non-Medicated



Grains (Scratch)
Supplement feed



Mash
Complete feed



Pellets (Whole)
Complete feed



Pellets (Crumble)
Complete feed



Micro Pellet & Grain
Complete feed



Hatching

6-8 weeks

18 weeks

Point of Lay

www.PatchtoTable.com



BROILER / MEAT TYPE

- Broiler commercial rations are fed to the birds during the first 5 weeks and from then on are replaced by the broiler-finisher ration.
- All purpose of straight broiler ration is fed from the start to the marketing age of eight weeks.
- Commercial broiler feeds contain additives considered to be growth promoting substances. Feed additives make the production of broiler profitable and help broiler farmers control diseases.

LAYER / EGG TYPE

- Starter mash is given to chicks from day old to 8-10 weeks old.
- Growing mash is given to birds aged 8-10 weeks until they are 5 months old or when the egg production reaches 10 percent. This mash promotes pullet growth at a rate that is just right to allow the bird to develop its body and internal organs so that it will start to lay at the right time.
- The bird should not be allowed to get fat during the growing period because this causes poor egg production and high mortality among layers. A good way of preventing fatness among the pullets is to restrict their feed to 85 percent of normal consumption when they are 18-16 weeks old then full fed them at 17-20 weeks of age.

- Laying mash is given to pullets when they are about to lay (10 percent or until the layers are replaced) or when they reach 19 weeks of age.
- Wetting the mash or instituting wet mash-feeding at noon during hot days will increase appetite of the birds.
- Adopt a regular system of feeding because chickens resent abrupt changes in feeding habits that gets reflected in their performance, especially on egg production.

NUTRITION AND FEEDING

- Daily feed requirements of layers (White Leghorn) according to size of bird and number of eggs laid.

Numbers of eggs Per 100 Hens/Day	Body Weight, kg.				Water Requirement
	1.4	1.8	2.3	2.7	
	Feed required/100 birds/day ¹				gal/100 birds
0	5.9	7.2	8.4	9.6	Moderate temperature =5-7
10	6.3	7.6	8.9	10.0	
20	6.7	8.0	9.3	10.4	
30	7.1	8.4	9.7	10.9	
40	7.5	8.8	10.1	11.2	High temperature =7.9
50	8.0	9.2	10.5	11.6	
60	8.4	9.6	10.9	12.0	
70	8.8	10.0	11.7	12.5	
80	9.2	10.4	11.7	12.8	
90	9.6	10.8	12.1	13.3	
100	10.0	11.2	12.5	13.7	

- Minimum nutrient requirements of chicken under Philippine condition.

NUTRIENT	BROILER			EGG TYPE CHICKEN					
	0-2 Chick booster (CB)	2-5 Broiler starter (BS)	5-8 Broiler finisher (BF)	0-2 Chick booster (CB)	2-6 Chick starter (CS)	6-12 Chick grower (CG)	12-20 Pullet developer (PD)	20-42 Laying mash I (LM)	42 Laying mash II (LMII)
Crude protein, %	21.0	20.0	18.0	21.0	18.0	16.0	16.0	16.5-17.0	16.0
Metabolizable Energy, (ME), Kcal/kg	2900.0	2800.0	2750.0	2900.0	2750.0	2700.0	2700.0	2750-2800	2700.0
Lysine. %	1.20	1.00	0.90	1.20	1.00	0.80	0.80	0.70	0.60

- Minimum nutrient requirements of chicken under Philippine condition.

Methionine, %	0.45	0.40	0.35	0.45	0.40	0.30	0.30	0.32	0.30
Math + Cyat, %	0.80	0.85	0.72	0.80	0.70	0.70	0.60	0.55	0.50
Calcium, %	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.50	3.50
Phosphorus, total %	0.70	0.70	0.65	0.70	0.70	0.70	0.65	0.70	0.55
avail., %	0.50	0.45	0.45	0.50	0.50	0.50	0.50	0.50	0.45
Credit fiber, %	<4	<4	<5	<4	<5	<5	<5	<4	<5
Bost/bag 50 kg.	391.00	350.00	329.00	391.00	331.00	307.00	292.00	319.00	

CRITICAL NUTRIENTS IN FEED FORMULATION

1. CARBOHYDRATES

WHAT DOES IT DO?

- Provides energy
- The body's main source of fuel



2. FATS OR LIPIDS

WHAT DOES IT DO?

- The most concentrated energy source;
- Transport, absorb and digest fat soluble nutrients like Vit A, D, K, E



3. MINERALS

WHAT DOES IT DO?

- Plays major role in the development and maintenance of the skeletal system



4. VITAMINS

WHAT DOES IT DO?

- Keeps the animals healthy and disease resistant Required in limited amounts
- Required in limited amounts

FFJ

FAA

FPJ



EFFECTIVE MICROORGANISMS

- Improves the animal's immune and digestive system;
- Prolong the shelf life of food (Food preservation);
- Increases food nutrients;
- Improves the taste and quality of meat;



PRE-STARTER FEED FORMULATION FOR BROODING STAGE : 1-21 DAYS

22.5 kg D1 Rice Bran

22.5 kg Corn Bran
(Carbohydrates)



2 liters
FAA/FFJ/FPJ
(Vitamins)



8 kg Copra
meat/meal
(Fats/Lipids)



40 kg soya meal/fish
meal/duckweed/moring
a (**Protein**)



3 kg
Carbonized
Rice Hull
(Minerals)



2kg Rock
Salt/Sea Salt



200 ml EMAS
200 ml
Molasses
(Pro-biotic)



20 liters Water
(No Chlorine)



- Ad libitum Feeding
- 15g of feeds per head per day

STARTER FEED FORMULATION FOR HARDENING STAGE : 22-32 DAYS

- 25-50g consumption of feeds per head per day
- 50% in the morning
- 50% in the afternoon
- Silage during noon time

25 kg D1 Rice Bran
25 kg Corn Bran
(Carbohydrates)



2 liters
FAA/FFJ/FPJ
(Vitamins)



8 kg Copra
meat/meal
(Fats/Lipids)



3 kg
Carbonized
Rice Hull
(Minerals)



35 kg soya meal/fish
meal/duckweed/moring
a **(Protein)**



2kg Rock
Salt/Sea Salt



200 ml EMAS
200 ml
Molasses
(Pro-biotic)



20 liters Water
(No Chlorine)



FINISHER FEED FORMULATION FOR RANGING STAGE : 33 DAYS TILL MARKET

- 50-100g consumption of feeds per head per day
- 50% in the morning
- 50% in the afternoon
- Silage in the morning and afternoon

30 kg D1 Rice Bran
30 kg Corn Bran
(Carbohydrates)



2 liters
FAA/FFJ/FPJ
(Vitamins)



8 kg Copra
meat/meal
(Fats/Lipids)



3 kg
Carbonized
Rice Hull
(Minerals)



25 kg soya meal/fish
meal/duckweed/moring
a **(Protein)**



2kg Rock
Salt/Sea Salt



200 ml EMAS
200 ml
Molasses
(Pro-biotic)



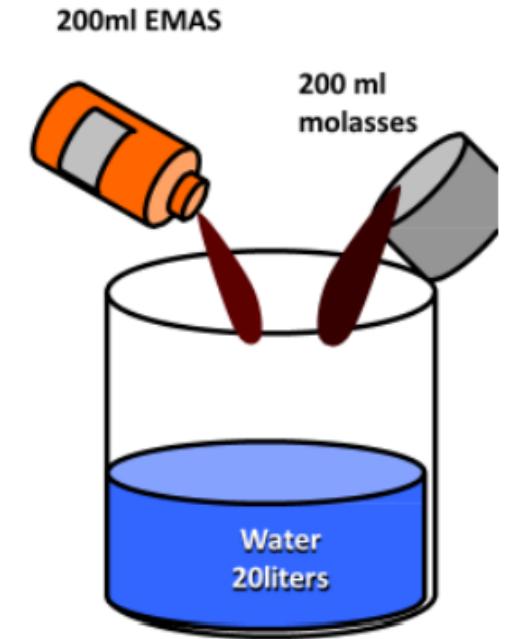
20 liters Water
(No Chlorine)



STEPS IN FERMENTATION

STEP 1

- Mix EM1/EMAS(200ml), molasses(200ml) and water (20L)
- NOTE: Liquid part is 20-30% total weight of solid ingredients(depending on water content of materials)



STEPS IN FERMENTATION

STEP 2

- Mix all the solid ingredients and EM solution. Final moisture content is 30 to 40%



STEPS IN FERMENTATION

STEP 3

- Check for Moisture Content (30-40%)



STEPS IN FERMENTATION

FERMENTED FEED IS READY FOR USE AFTER 2 WEEKS. IT HAS A SWEET-SOUR SMELL.

STEP 4

- Ferment anaerobically (no air) for two (2) weeks



TYPES OF FEEDING

- Forced Feeding
- Separate-Sex Feeding
- Restricted Feeding

FORCED FEEDING

- Applied in poultry if feed and water are denied for more than 36 hours to prevent dehydration and save life.
- Mash water mixture, skim milk, hydrolysable protein, medicine etc. can be used.

SEPARATE SEX FEEDING

- Feeding separate male and female birds, a practice called separate-sex feeding.
- Since male broiler chickens grow faster, they often are reared separately from the females until they are moved into the breeder house.
- There will be more uniformity among males and among females in the flock.
- Separation of the birds also allows producers to feed diets that more closely meet the nutritional needs of the male and female birds.

RESTRICTED FEEDING

- Method of feeding where time, duration and amount of feed are limited.
- Adolescent birds, when given the opportunity, will eat until they become obese.
- Restricted feeding is necessary if the birds are going to be used as breeder stock.
- The obesity severely limits the numbers of eggs laid and the fertility of eggs.

- **QUANTITATIVE:** Limiting the amount of feed daily given to the animals
- **QUALITATIVE:** Related to nutrient dilution in the diet
 - During the growing period (8-20 wk)
 - 20-30% restriction of feed
 - Not practiced during disease

HEALTH MANAGEMENT

- The most economical and ideal method to control disease is through prevention, which could be achieved by proper management, good sanitation and having an effective vaccination program.

Disease outbreak can be prevented by instituting the following vaccination program:

Age of Bird	Type of Vaccine to Use	Route of Administration	Remarks
8-10 days	New Castle Disease (NC) or Avian Pest Vaccine	Intranasal	Chicks from unvaccinated parents may be vaccinated as early as 3 days of age.
21-24 days	Fowl Pox Vaccine	Wing web	May not be given in areas where the disease is not common.
26-28 days	NCD	Intranasal or Intramuscular	Check protection to 10-14 days after vaccination. Revaccinate if protection is low.

AVIAN PEST (NEWCASTLE DISEASE)

Avian Pest (Newcastle Disease)	
Cause	*Virus
Transmission	<ul style="list-style-type: none">*Direct contact with the nasal and mouth discharges of infected birds* Airborne transmission* Through mechanical means such as being carried by sparrows (maya), predators, or other birds.* Human beings transmit the disease through infected clothes and shoes.
Signs	<ul style="list-style-type: none">*In young birds, gasping, coughing, rattling of the windpipe, hoarse chirping, paralysis, walking backward and circling.*In adults, coughing, occasional paralysis, abrupt drop in egg production, soft- shelled eggs, greenish watery diarrhea.
Prevention	<ul style="list-style-type: none">*Vaccination. Consult your veterinarian for a program suited to your operation.
Treatment	<ul style="list-style-type: none">*There is no treatment for the disease.

AVIAN PEST (NEWCASTLE DISEASE)



High mortality in a flock.

Forte mortalité dans une bande.



Oedematus swellings of the head.

Gonflement oedémateux de la tête.



Tracheitis congestion and haemorrhages.

Hémorragies et congestions trachéales.



Conjunctivitis.

Conjonctivite.

USDA **Symptoms:** Virulent Newcastle Disease
Signos de infección: Enfermedad Virulenta de Newcastle **Cdfa**

Edema de la Cresta y las Barbas
Párpados hinchados ó caídos

Torción del Cuello
Alas/piernas paralizadas también son síntomas

Dificultad Respiratoria
Exceso de fluidos de los orificios nasales y por el pico

Comb and Wattle Edema
Swelling/drooping eyelids

Neck Twisting (torticollis)
Paralyzed wings/legs are also symptoms

Respiratory Distress
Excessive discharge of fluids

CHRONIC RESPIRATORY DISEASE (CRD)

Chronic Respiratory Disease (CRD)	
Cause	Mycoplasma organism or pleuropneumonia-like organism (PPLO)
Transmission	<ul style="list-style-type: none">* CRD organism is egg-borne; contracted exposure with infected flock* Airborne transmission.
Signs	<ul style="list-style-type: none">*Tracheal rales, sneezing, coughing watery or sticky discharged from the nostrils.* Foamy exudates in the eyes.* Feed consumption is reduced, and the birds lose weight.
Treatment	Broad spectrum antibiotics, either by injection or mixed with the feeds or drinking water.



Figure 1 Gross pathological lesions of CRD.

- (A) Native chicken breeds subjected for necropsy
- (B) Trachea lumen with yellow cheesy material
- (C) Air sacculitis with yellowish cheesy material in thoracic air sac

COCCIDIOSIS

Coccidiosis	
Cause	*Microscopic organisms called Coccidia (Eimeria species) usually occurs in flocks below two months of age.
Transmission	*When birds pick up or swallow the coccidial organisms. * Contaminated feed and water. * Indirect contact thru files, human beings and other mechanical means.
Signs	*Tendency to huddle together in a corner. * Decreased feed and water intake and poor weight gain.
Prevention	*Incorporation of coccidiostat in the feeds or drinking water. Use of sulfa drugs. Most feed companies incorporate this in the feed mixture as indicated in the feed tags.

MAREKS DISEASE

Mareks Disease	
Cause	*Virus
Transmission	*Exposure to infected birds or to environment with existing virus, poultry nests and feeders.
Signs	<ul style="list-style-type: none">*Initial symptoms are leg weakness and paralysis of one or both legs.* Birds tend to rest on their breast with one leg extended forward and the other backward* They could hardly reach the feeders and waterers resulting in dehydration and emaciation which finally causes death.
Prevention	*Vaccination with MD vaccine, the most commonly used is the so-called Herpes Virus of Turkey (HVT).
Treatment	There is no known treatment for the disease.

AVIAN MALARIA

Avian Malaria	
Cause	*Microscopic protozoan parasite
Transmission	*Bites of mosquitoes, mechanically by blood transfer as in mass vaccination, caponization and injection.
Signs	<ul style="list-style-type: none">*Severe anemia (paleness), extreme leg weakness, emaciation and nervous signs like twisting of the head.* The shanks and toes are dry and birds have ruffled feathers.* Greenish-yellow or greenish-white diarrhea.
Prevention	*Control of mosquitoes within the premises and houses with effective insecticides, include spraying the breeding places of mosquitoes. Proper drainage of stagnant water.
Treatment	Anti-malarial drops like plasmochin, quininehydrochloride and pyrimethamine combinations were found effective. Confer with the veterinarians.

FOWL POX

Fowl Pox	
Cause	*Virus
Transmission	*Spread by mosquitoes that feed on poxinfected birds; direct contact, mechanically transmitted by visitors, wild birds and predators.
Signs	<p>*There are two forms:</p> <ol style="list-style-type: none">1. Dry form - characterized by the formation of black wart-like nodules on the skin of the face, in the region of the comb, wattles and around the eyes, causing the latter to swell and close. There is usually profuse eye discharge.2. Wet form - characterized by the presence of whitish-yellow growth of the pharynx, larynx and windpipe. Because of the growth, there is difficulty in breathing which will result in death due to suffocation.
Prevention	*Vaccination with fowl pox vaccines. Control the mosquitoes by spraying with insecticides.
Treatment	There is no effective treatment against the disease.

INFECTIOUS CORYZA (COLDS OR 'SIPON")

Infectious Coryza (colds or 'sipon")	
Cause	*Bacterial organism
Transmission	*Through the air, direct contact or through contamination of the feed, water equipment.
Signs	*Swelling of the face and wattles and discharge from the nostrils, which at first is watery, but becomes sticky and with foul odor as the disease progresses. * In laying flock, egg production decreases.
Prevention	*Strict sanitation of the farm. Isolate sick birds immediately.
Treatment	Broad spectrum antibiotics applied in feed and water and sulfa preparation are recommended.

GUMBORO DISEASE (IBD)

Gumboro Disease (IBD)	
Cause	*Virus Gumboro disease is called "catastrophe disease" because it is the principal cause of catastrophe in flock. The latter is a term applied to flocks with high losses from variable disease conditions.
Transmission	*By contact from bird to bird, contaminated persons or clothing of caretaker.
Signs	*Slight tremors of the neck and the body, depression, ruffled feathers, wet-droppings, loss of appetite, severe prostrations and few deaths are clinical manifestations.
Prevention	*Vaccination using IBD vaccine (Bursa- Vac-Sterwin).
Control	Immediately isolate the flock in affected houses and control tile entry of caretakers, egg collectors, supervisory personnel and vehicles. Remove and destroy affected birds immediately. Incinerate dead birds.
Treatment	There is no effective treatment against the disease.