Lecture 8

INDIGENOUS POULTRY BREEDS OF NIGERIA

INDIGENOUS CHICKEN; ***Source: Adebambo 1994***

COMPARISON OF EXOTIC AND INDIGENOUS CHICKEN
Source: Adebambo 2003

NAKED NECK INDIGENOUS CHICKEN
Source: Adeleke and Adebambo 2009

FRIZZLE FEATHERED INDIGENOUS CHICKEN
Source: Adeleke and Adebambo 2009

NORNAL FEATHERED INDIGENOUS CHICKEN
Source: Adebambo and Adeleke 2009

TAKING CHICKS WEIGHT
Source: Adenowo and Adebambo 2002

NAKED NECK INDIGENOUS COCK
Source: Adebambo and Adeleke 2009

YAFFA COCK

EXOTIC HENS—MARSHALL BREED
Source: Adebambo and Adeleke 2009

DIHYBRID FRIZZLE X MARSHALL COCK
Source: Adebambo and Adeleke2009

DIHYBRID INDIGENOUS CROSSES (NoM) FEMALES

TRIHYBRID CROSSBREDS (AFzM)

TRIHYBRID AFzM FEMALES
Source: Adebambo and Adeleke 2009

SHADES OF HENS' EGGS DUE TO CROSSING
Source: Adebambo and Adeleke 2009

COCK SELECTION FOR SEMEN PRODUCTION
Source: Adeleke and Adebambo 2010

RHODE ISLAND COCK
Source: Adeleke 2009

GIRIRAJA COCK
Source: Adebambo and Adebambo 2001

INDIGENOUS DUCKS
Source: Adebambo 2007

INDIGENOUS MALE TURKEY (TOM)
Source: Peters et.al., 2010

CROSSBRED INDIGENOUS TURKEYS
Source: Peters et.al., 2010

THE DOMESTICATED TURKEY

The **domesticated turkey** is a large poultry bird. The modern domesticated turkey descends from the wild turkey (*Meleagris gallopavo*), one of the two species of turkey (genus *Meleagris*); in the past the ocellated turkey (*Meleagris ocellata*) was also domesticated.
The turkey is raised throughout temperate parts of the world and is a popular form of poultry, partially because industrialized farming has made it very cheap for the amount of meat it produces. The female domesticated turkey is referred to as a *hen* and the chick as a *poult*. In the United States, the male is referred to as a *tom*, while in Europe, the male is a *stag*. The average lifespan for a domesticated turkey is ten years.
The great majority of domesticated turkeys are bred to have white feathers because their pin feathers are less visible when the carcass is dressed, although brown or bronze-feathered varieties are also raised. The fleshy protuberance atop the beak is the snood and the one attached to the underside of the beak is known as a wattle.
Despite the name, turkeys have no direct relation to the country of Turkey and are native to North America

Easy to manage bird—THE GUINEA FOWL

Compared to chickens, guinea fowl are not difficult to raise, says an official in the livestock department, adding that these wildlife birds are resistant to common poultry diseases such as Gumboro, Newcastle and salmonella, and also require less labour and management. In Botswana the off-take rate and mortality for guinea fowl is only 3.4% and 2.2%, respectively, whereas chicken have scores of 10.6% and 6.8%. This gives guinea fowl, considering the local conditions, a better chance of becoming a favourite in future.

THE ANIMAL KINGDOM

KINGDOM ----------ANIMALIA

PHYLUM ----------CHORDATA

SUB-PHYLUM----------VERTEBRATA

GENERA	**ORDER**	**FAMILY**	**GENUS**	**SPECIE**	**COMMON NAME**
MAMMALIA	CARNIVORA	CANIDAE	CANIS	Canis familiaris	DOG
	PERISSODACTYLA	EQUIDAE	EQUUS	Equus asinus	Ass/donkey
	ARTIODACTYLA	CAMELIDAE	CAMELLUS	Camellus dromedarius	CAMEL
	« «	BOVIDAE	BOS	Bos indicus	Humped cattle
	“ “	BOVIDAE	BOS	Bos taurus	Humpless cattle
	“ “	CAPRINAE	OVIS	Ovis aries	Sheep
	“ “	CAPRINAE	CAPRA	Capra hircus	Domestic goat
	“ ‘	SUIDAE	SUS	Sus scrofa	Pigs
AVIS	ANSERIFORMIS	ANATIDAE	ANSER	Anser anser	Goose

GALLIFORMIS	PHASIANIDAE	GALLUS	Gallus gallus	Chicken	
" "	" "	PAVO	Pavo cristanus	Pea fowl	
GALLIFORMIS	PHASIANIDAE	MELEAGRIS	Meliagris gallopavo	Turkey	
" "	" "	CAIRINA	Cairina moschata	Muscovy duck	
" "	" "	ANAS	Anas platyrhycus	Common duck	
COLUMBIFORMIS	COLUMBIDAE	COLUMBIA	Columbia livia	Pigeon	
" "	NUMIDIDAE	NUMIDA	Numida numida	Guinea fowl	

TYPICAL TRAIT/GOALS FOR SELECTION

Major traits of economic importance radiate around:

- Growth
- Reproduction
- Feed efficiency and
- Colour identification for specifically selected breeds by breeders

Table 3:Traits of economic importance in different animal breeds

BREED	CATTLE	SHEEP	GOATS	PIGS	POULTRY	RABBITS	
No born/annum	1-2	2-6	2-10	6-33	60-205 220-320	8-30	
Prolificacy	1/birth	1-3/birth	1-5/birth	3-16/birth	50-150	4-8/birth	
Gestation length--days	270-290	145-147	145-148	113-117	21-38days incubation	28-33	
Generation Interval--days	400-488	380-400	320-327	300-360	140-175	170-250	
Birth weight	12-17 kg	3-4kg	2-4 kg	0.8-3.0 kg	25-37g	0.2-0.6	
Daily gain							
Birth - weaning	0.2-0.6 kg	20-35g	18-30g	0.3-0.5kg	80-118g	30-120g	
Post weaning	0.3-1-0kg	20-90g	20-80g	0.4-0.9kg	80-270g	120-180g	

Live weight at slaughter	112-450kg	20-65kg 20-45kg 15-35kg	20-63kg 19-37kg 18-25kg	45-90kg	1.2-2.5kg	1.5-4.5kg	
Back fat	-----	-----	-----	0.1-3.0cm	-------	------	
Edible meat %	45	48	45	60	58	50	
% Carcass yield	55	60	60	75	65	65	
Milk Production kg	490-5000 5000-10000	--------	25-288 38-288 75-300 150-250	--------	---------	---------	
Lactation Length days	260-305	--------	100-290 100-126 180-252	--------	---------	---------	
Daily yield kg	1.5-2.8	--------	0.2-1.6	---------	---------	---------	
Butter fat	200-350kg	----------	0.2-1.6	---------	---------	--------	
Milk Proteins	180-250kg	---------	0.5 -1.6	---------	---------	--------	
Egg Production	---------	--------	--------	----------	220-320 60-205	----------	
Clutch size (IND)					6-10/ann		
Pause Length					1-3 days		
Eggs/week					2-6		
Fertility					60-90%		
Hatchability					65-85%		

TYPICAL FARM RECORDS

- Date of animal purchase
- Age of animals purchased
- Possible weight of the animals prior to purchase and subsequently after
- Identification of parents
- Health records e.g. vaccination, deworming, disease to which the breed/ animal is susceptible, records of treatment etc.
- Financial records e.g. cost of purchase, feed cost, cost of veterinary services, sales and disposals
- Daily feed inventory

Table 4: Farm records in a ruminant farm

	DAIRY/ BEEF	**SMALL RUMINANTS**
Animal Number	Opening stock/week/month/ann	Opening Stock/week/month/ann
	Closing stock/week/month/ann	Closing Stock/week/month/ann
Weights	Birth	Birth
	Pre weaning	Pre weaning
	Weaning wt	Weaning wt
Post Weaning	Monthly	Monthly
Maturity	Age	Age
Parturition	Age at first calving	Age at lambing/kidding/kindling etc
	Generation Interval	Generation Interval
	Calving Interval	Lambing/Kidding/Kindling etc. Interval
Production	Morning Milk	
	Afternoon Milk	
	Total Milk /day	
	Fat %	
	Protein %	
	Lactose yield	
	Calving %	
	Weaning weight	
	Live weight gained	
	Lactation Length	
Efficiency of Milk Production	Zero grazing	
	Concentrate Feeding	
Feed Intake	Creep	Creep
	Starter	Weaners
		Growers
	Flushing	Ditto
	Lactation ration	Ditto
		Fattening
Carcass Quality	Live weight @ slaughter	Ditto
	Age at slaughter	Ditto
	Weight Gained	Ditto
	Carcass Weight	Ditto
	% carcass yield	Ditto
	% Rump	Ditto

	% Thigh	Ditto
	% Shoulder	Ditto
	% Lean	Ditto
	Not always	%Fat
	----------	Back fat Thickness (pigs)
	Meat Colour	Ditto
Products		
Meat	Cooking loss	
	Tensile strength	
Milk		
	Colour	
	Bacterial Count	
	% Lactose	
	% Fat	
	% Protein	

Table 5: Farm records in a poultry farm

	BREEDERS	LAYERS	BROILERS/DUCKS/TURKEYS	
Birds Number	Opening	Opening	Opening	
	Closing/week/mon/yr	Ditto	Ditto	
Weights	Day old	Ditto	Ditto	
	At first Egg	Ditto	Ditto	
	Wt of 1st Egg	Ditto	Ditto	
	Average pause length	Ditto	Ditto	
	Hen Day Production	Ditto	---------	
	Hen Housed Production	Ditto	---------	
	Average egg weight	Ditto	--------	
	Average Weekly Production	Ditto	---------	
	Mating Ratio	--------	---------	
	% Fertility	--------	--------	
	% Hatchability	-------	--------	
	Chick Viability	---------	--------	
Feed	Chicks	Ditto	Starter	

	Growers	Ditto	Finisher	
	Layer	Ditto	--------	
	Cock	-------	--------	
Feeding	Feed /doz eggs	Ditto	Ditto	
	Feed / Kg eggs	Ditto	Ditto	
	Feed / chicks hatched	----------	---------	
	Feed Conversion Efficiency	Ditto	Ditto	
Carcass Quality	---------	----------	Live weight at slaughter	
	--------	----------	Weight Gained	
	--------	---------	Feed Intake	
	---------	---------	Feed Conversion Ratio	
	---------	---------	Carcass yield	
	---------	---------	% Breast	
	---------	---------	% Shank	
	---------	---------	% Leg	
	---------	---------	%Thigh	
	--------	---------	Gizzard weight	
			% Boneless meat	
Egg Quality	Sampled Egg weight	Ditto	--------	
	% Albumin	Ditto	--------	
	% Yolk	Ditto	--------	
	Shell strength	Ditto	-------	
	Yolk Colour	Ditto	-------	
	Albumin Height	Ditto	-------	
	Yolk Height	Ditto	-------	
	Haugh Unit	Ditto	-------	

- Quarantine new and sick animals,
- Separate sick from the healthy ones.
- Keep all records of morbidity and mortality, drugs used, dosage, duration of treatment, and period of withdrawal.

PROBLEMS OF LIVESTOCK BREEDING IN NIGERIA

The greatest and major problem of livestock breeding and breeds development in Nigeria emanates from:

- lack of breeding policy

- lack of literate livestock keepers
- Non descript Animal breeds
- Lack of professionally trained breeders
- Inadequate training in the art.
- Lack of data collection collation and analyses over several generations
- requires generational studies
- The capital intensive nature.
- requires adequate funding, continuous funding, total commitment
- Need to create registries and breed societies.