



Poultry Breeds



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POULTRY BREEDS-HISTORY OF EVOLUTION

Cold blooded (poikilotherms) reptiles are the ancestors of birds
The birds are *warm blooded, (homeotherms)* feathered and flying
reptiles, adapted for hot and dry climate of their terrestrial
habitat

birds are classified into the class **Aves**, Subclass **Neornithes**,
super order **Ratitae** (flat breast bone- Ostrich, Emu and Kiwi) and
Carinatae (Keel breast bone- all flying birds)

Red jungle fowl - closely resembles chicken - main ancestor.

• **Class** - Used to designate a group of birds - developed in certain regions or **geographical areas**.

- American, Asiatic, Mediterranean and English.

• **Breed** - refers to an established group of birds within a species which have same general body shape, morphological characteristics, similar body weight at specific ages and egg production and some other characteristics.

- Ex. Rhode Island Red, Leghorn, Cornish, etc.

Variety - used to sub-classify breeds. There may be many varieties within a breed differentiated by plumage colour, pattern and comb type

Ex. White Leghorn, Barred Plymouth Rock etc

Strain - Any bird of a particular breed developed by a breeder by introducing certain economic traits – Egg size, EW, growth rate, laying ability, mortality, FCR.

1. Common egg-type strains

- BV-300, ISA, Babcock, Bovans, Euribrid, Hyline, HH-260, Dekalb, Keystone, Lohmann and H & N Nick chick.

2. Common Meat-type strain

- Cobb, Ross, Steggles, Arbor acres, Hub chicks, Hybro, Hubbard, Lohmann, Pilch, Starbro, Tegel, Anak-2000, Marshall, Peterson, Samrat-2000 and Avian-34.

Types of Variations

- Leg and feet variations
 - Silkie, Salmon Favorelle, etc
- Size
 - Bantam, standard

Breeds and Varieties



Types of Variations

- Feather color
 - Solid coloring
 - Barring, penciled, mottled



Types of Variations

- Feather type
 - Silkies, frizzles, long tails



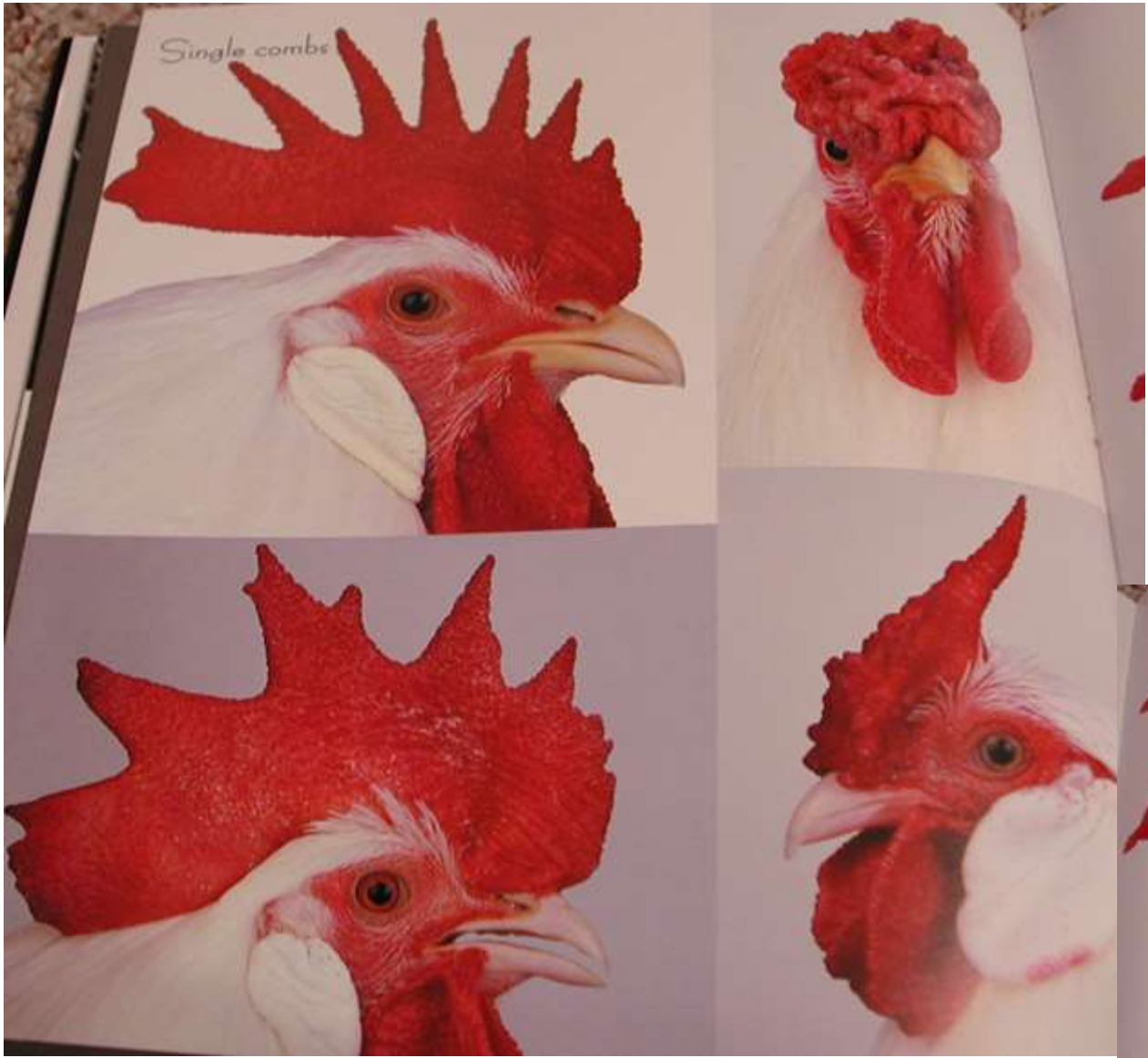
Types of Variations

- Feather distribution
 - Polish, cochins, naked neck



Types of Variations

- Comb type
 - Single, rose, pea, v-shape, etc

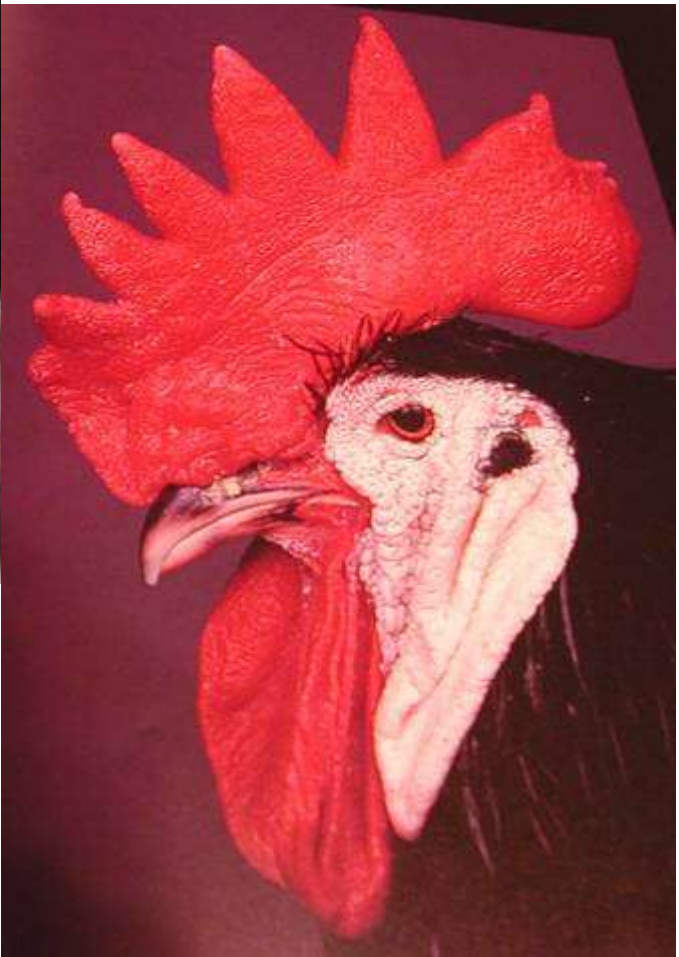


Comb Types

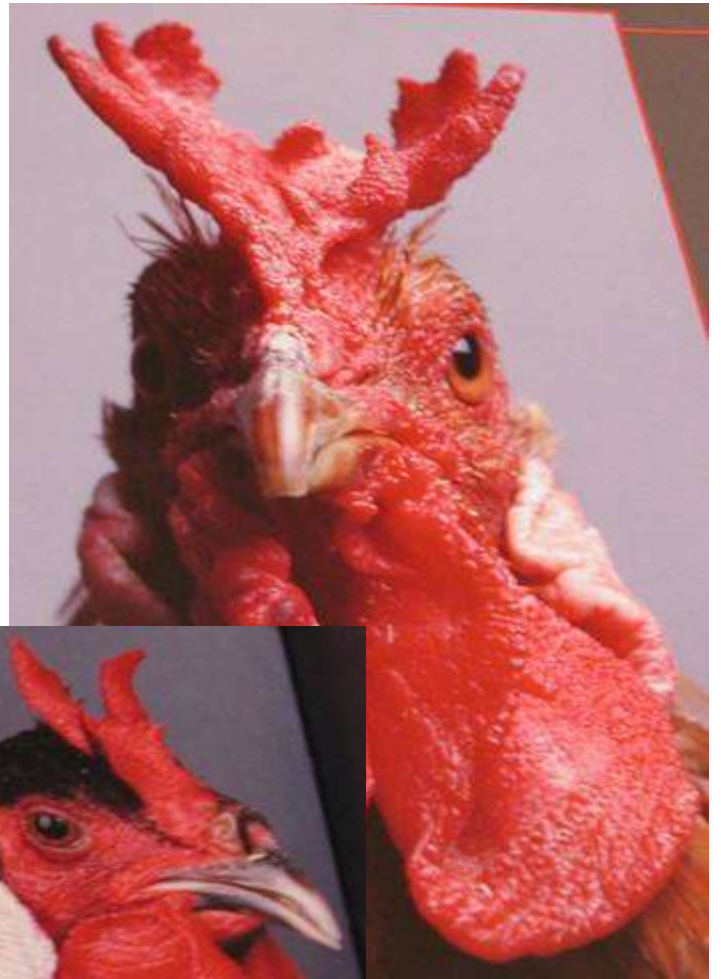


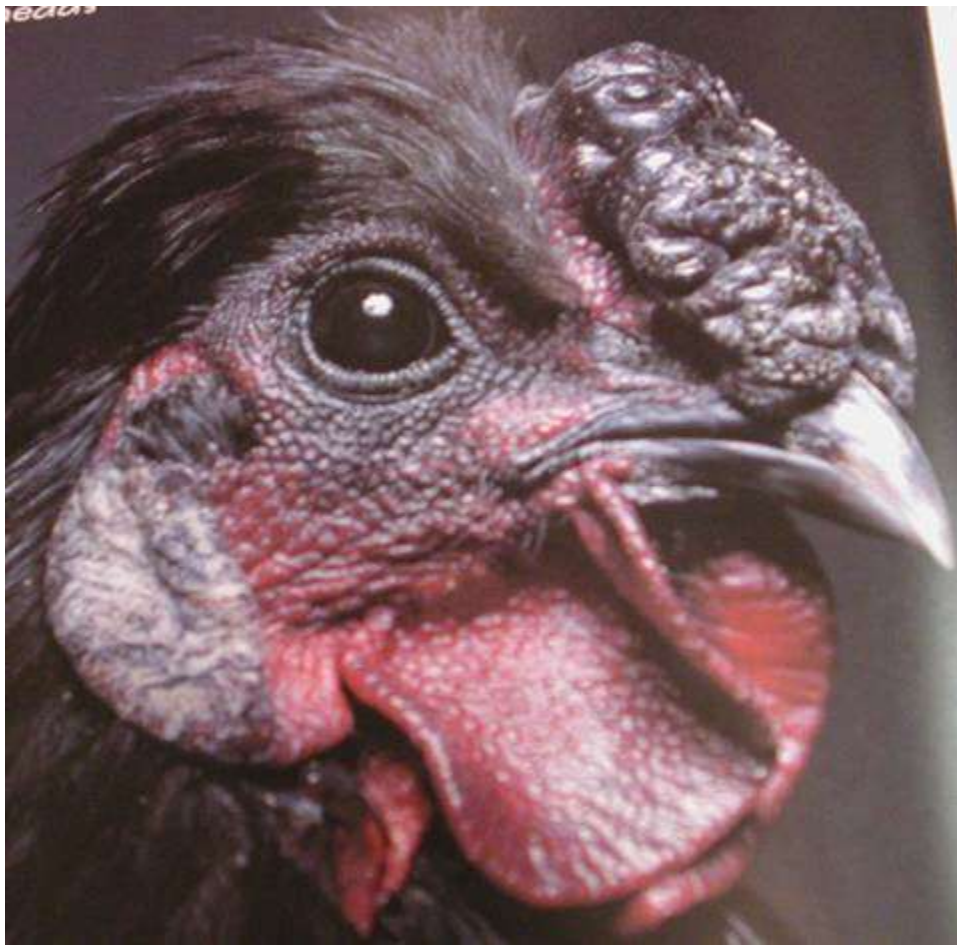


Comb Types



Comb Types





Comb Types



Zoological names of domesticated fowls with Chromosome number

Sl. No.	Common Name	Zoological Name and Chromosome number (2n)
1.	Chicken	<i>Gallus gallus domesticus</i> - 78
2.	Duck	<i>Anas platyrhynchos</i> - 80
3.	Turkey	<i>Meleagris gallopavo</i> - 80
4.	Goose	<i>Anser anser</i> - 80
5.	Japanese quail	<i>Coturnix coturnix japonica</i> - 78
6.	Bobwhite quail	<i>Colinus virginianus</i> -78

7.	Guinea fowl	<i>Numida meleagris</i> - 78
8.	Partridge	<i>Perdix perdix</i> - 80
9.	Pheasant	<i>Phasianus colchicus</i> - 82
10.	Pea fowl	<i>Pavo cristatus</i> – 80
11.	Ostrich	<i>Struthio camelus</i> – 80
12.	Pigeon	<i>Columba livia</i> – 80
13.	Dove	<i>Columba oenas</i> -80
14.	Muscovy Duck	<i>Cairina moschata</i> – 80
15.	Emu	<i>Dromaius novaehollandiae</i> -80

CLASSIFICATION OF CHICKEN

- .Based on the place of origin (Standard or official classification)
- .Based on utility, economics or commercial value

BASED ON THE PLACE OF ORIGIN

American Class: Plymouth Rocks, Dominique, Wyandotte, Java, Rhode Island Reds, Rhode Island Whites, Buckeyes, Chanteclers, Jersey Giants, Lamonas, New Hampshire, Hollands and Delawares.

Asiatic Class: Cochin, Langshan, Brahma

English Class: Dorkings, Redcaps, Cornish, Orpingtons, Sussex, Australorp

Mediterranean Class: White Leghorn, Minorca, Spanish, Andalusian, Ancona, Sicilian Buttercup, Catalanas

- *Continental* - Eg. Houdans, Hamburg, Polish, Campines, Lackvelders
- *Oriental* - Eg. Malaya, Yokohama, Sumatra, Cubalayas
- *French, South American (or) Latin American* - Eg. Araucana
- *African* - Eg. Negro, Jago

BASED ON UTILITY, ECONOMICS OR COMMERCIAL VALUE

- *Egg-type*: Eg. White Leghorn
- *Meat-type*: Eg. Cornish, Plymouth Rock
- *Dual purpose*: Eg. Rhode Island Red, New Hampshire
- *Game type*: Eg. Aseel
- *Fancy variety or Exhibition - type*: Eg. Silky, Frizzled, Bantams
- *Desi type*: Eg. Kadaknath, Naked neck, Chittagong

GENERAL CHARACTERISTICS OF VARIOUS STANDARD CLASSES OF CHICKEN

- **American Class**

- ❖ Body size - Medium to heavy
- ❖ Egg shell colour -Brown
- ❖ Shanks - Clean and yellow
Skin - yellow (except Jersey Black giant, where the shanks are black)
- ❖ Ear lobes-Red
- ❖ Comb Shape- Rose or Single
- ❖ Eg. Plymouth rock, Wyandotte, Rhode Island Red, Jersey Black giant, New Hampshire

Plymouth Rock



Standard Weights: Cock-4.5kg
Hen-3.5 Kg

Use: Excellent fleshing property
used for broiler production.

Origin: America

Variety- 7 (Barred & White)

Characteristics:

- They possess long deep body .
- Single comb
- Grayish-white plumage-black bars.
- Auto sexing
- Brown-eggs

Rhode Island Red

- Standard Weights: Cock-3.8kg
Hen-2.9 Kg
- Varieties: Single Comb, and Rose Comb
- Egg Shell Color: Brown
- Use: Egg production.
- Origin: Massachusetts and Rhode Island.
- Characteristics:

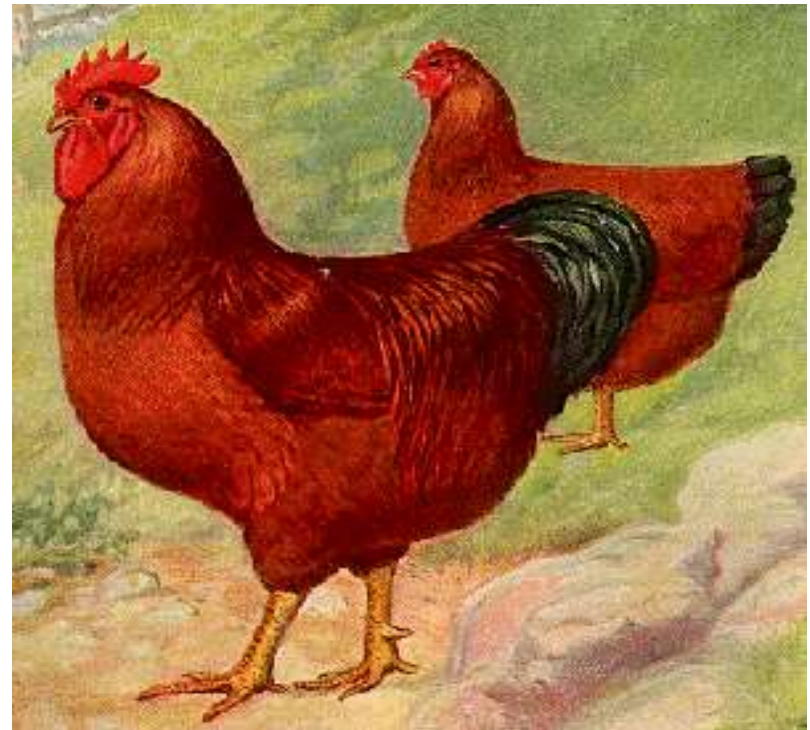
Long rectangular body, golden brown plumage

- Relatively hardy.
- The best egg layers of the dual purpose breeds.
- handle marginal diets and poor housing conditions.



New Hampshire

- Standard Weights: Cock-3.8kg
Hen-2.9 Kg
- Use: broiler production, large egg size, early maturity.
- Origin: Massachusetts and New Hampshire (developed from RIR).
- Characteristics:
 - They possess a deep, broad body, grow feathers rapidly.
 - Single comb
 - The color is chestnut red .
 - Brown-eggs



Mediterranean Class

- Body size -Small
- Egg-type, non-broody
- Egg shell color - White
- Ear lobes -White
- Shanks - Clean and yellow/slate coloured
- Skin -Yellow or White
- Eg: Leghorn, Minorca, Ancona, Andalusian

Leghorn

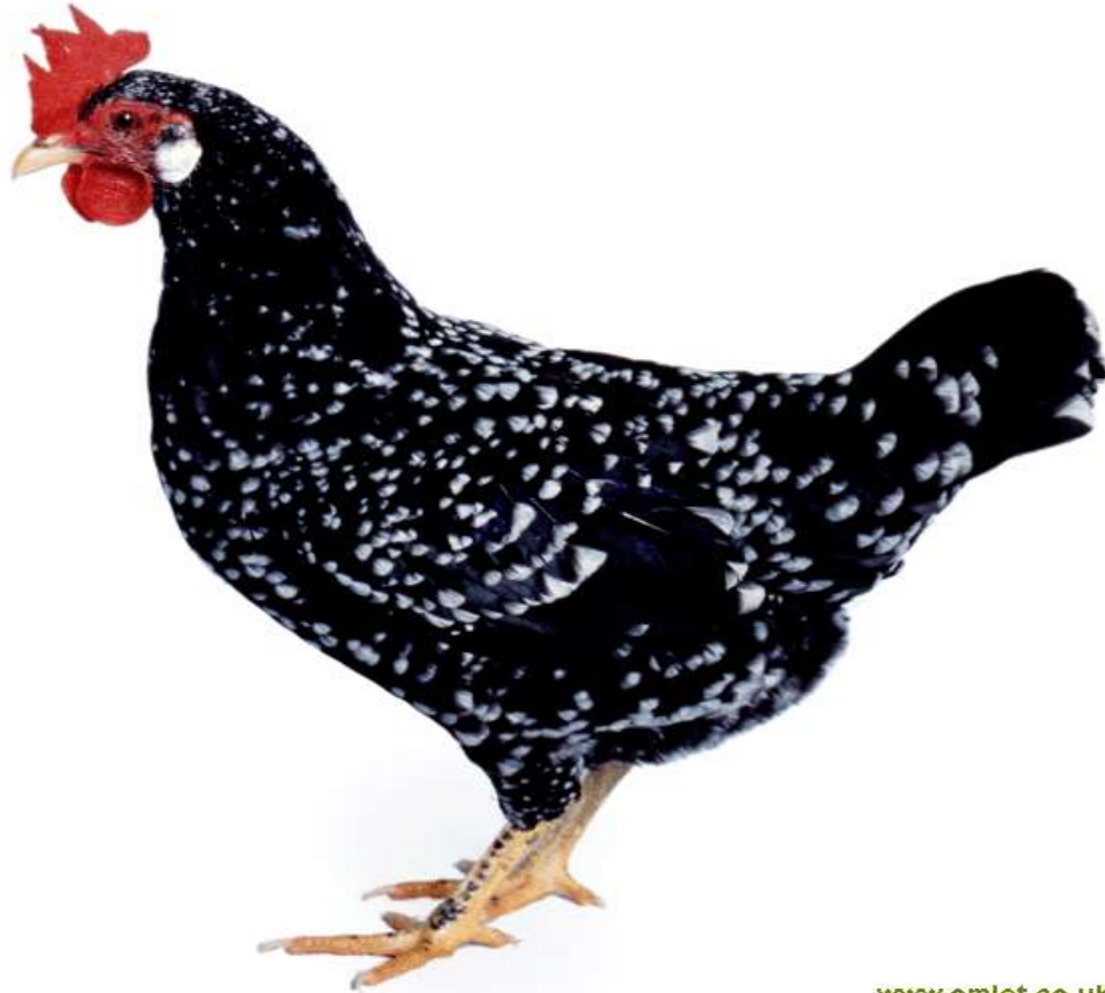
- Weights: cock-2.7kg, hen-2.0kg.
- Egg Shell Color: White.
- Varieties-16
- Use: An egg-type chicken, excellent laying.
- E.P-300 eggs/year
- Origin: city of Leghorn, Italy.
- Characteristics: A small, compact and light body, active.
- Small head with well set comb
- Neatest of all birds



Leghorn-Chickens



Ancona



Minorca



Asiatic Class

- Body size -Heavy
- Egg shell colour-Brown,
- Broody with motherly instinct
- Ear lobes -Red, mostly
- Shank - feathered and yellow
- Skin - Yellow (except Langshan)
- Eg: Brahma, Cochin, Langshan

Brahma



Cochin

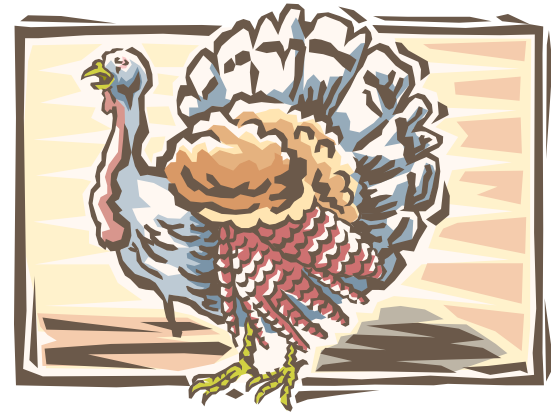


English Class

- Body size - Medium to large
- Egg shell colour - Brown
- Ear lobes - Red
- Shank - Clean and White
- Skin -White
- Comb shape -Single (except Cornish with pea comb)
- Eg: Australorp, Cornish, Dorking, Orpington and Sussex

CORNISH

- Standard Weights: Cock-5kg
Hen-3.5Kg
- Use: broiler production, rapid growth.
- Origin: England.
- Characteristics:
 - Close compact feathering and heavy flesh
 - Breast is very deep and broad at shoulder.
 - pea comb
 - Varieties- 4



Turkey Varieties







Domestic turkeys at 1 ½ months old



Male turkey **1 ½ months**



Female turkey **1 ½ months**



2 ½ months





3 ½ months



6 months







Common varieties of turkeys

- Broad Breasted Bronze
- Broad Breasted White
- Beltsville White
- White Holland
- Narragansett

Hybrid turkey: Nicholas Turkey (BBB and Beltsville White)

Broad Breasted White.

- Cross between Bronze and White Holland.
- Noted for large meaty breast.



Provided by Lynn Magedson

Broad Breasted Bronze



Broad Breasted Bronze

- Most popular and heaviest variety of turkey
- having a broad and prominent chest region and bronze coloured feathers
- The males 15-18 kg and female 12-13 kg,
- Most of the present day hybrid turkeys are crosses of different strains of Broad Breasted Bronze or Beltsville White
- *Nicholas Turkey* – popular in North America. It is the cross of the Broad Breasted Bronze and Beltsville white

BELTSVILLE SMALL WHITE TURKEY

- medium sized turkey having white feathers
- They produce more eggs compared to Broad Breasted Bronze
- The toms weigh 10-12 kg at maturity and hens 7-8 kg
- Produces more eggs compared to BBB therefore included in breeding programmes



Narragansett

- Reared in germany and italy
- Used to cross local breeds in European countries



White holland

- Developed in Holland
- Used cross with the local basic turkey to improve their growth rate and reproductive ability.

Classification of DUCKS

- 1).EGG type. Ex: Khaki Campbell ,
Indian Runner
- 2).MEAT type. Ex: MUSCOVY, Aylesbury,
Pekins, Rouen
- 3). Ornamental: Crested white
Black East india

Khaki Campbell



Khaki Campbell

- It was developed in England crossing Rouen and white Indian Runner and mallard.
- Plumage color: khaki
- Light body weight
- Size of head of male is larger than female
- Bills and shank - black in color
- Egg production : 300 eggs per year per bird
- Duck: 2.0-2.2 kg
- Drake: 2.2-2.4 kg

Indian Runner



Indian runner

- Origin: Indonesia
- Second good layer next to khaki campbell
- 3 varieties
 - white
 - white pencilled
 - fawn
- Body is broader in front and slightly tapering at back
- Lean appearance and wedge shaped bill
- 250-280 eggs per year
- Duck: 1.5-2.1 kg, Drake :2.0-2.6 kg

pekin



White Pekin

- Origin: China
- Most popular for meat purpose
- Has creamy white plumage, yellow flesh, long, broad and deep body.
- Bills and legs – deep orange color
- Attains 2.2 to 2.5 kg body weight in 7 weeks of age with a FCR 1:2.6-3.0 kg
- 160 eggs
- Duck: 3.3-3.6 kg
- Drake – 3.8-4.2 kg

Muscovy-Duck

- **Originated in South America.**
- **Tree nesting duck**
- **Curly feathers on face.**
- **Still doubt whether it is duck or goose**



Provided by Robert Hockey

- Grazes like goose. Like goose, male have no such curled feathers in the tail
- No feathers on the face
- Skin is bright red in color with caruncles around the eye.
- Drake has a knob on head which gives crest appearance
- Voice is not characteristic of sex

- Incubation period-35 days (other ducks 28 days)
- Duck -2.2 to 3.1kg. Drake: 4.5-6.4 kg
- Hardy, good foragers, disease resistant.
- When Crossed with other breeds produces sterile ducks called 'Mule ducks'

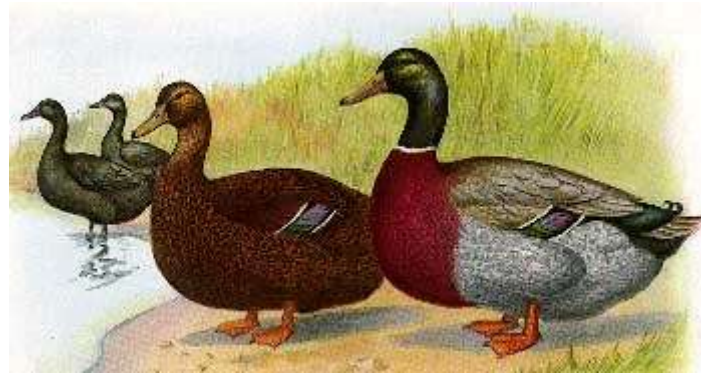
Aylesbury



Aylesbury

- Origin: England
- Plumage color: white
- Legs and feet are bright orange and bill is yellow
- It is regarded as deluxe table bird because of its light bone and high percentage of creamy white flesh
- Duck: 4.0-4.2 kg
- Drake: 4.3-4.6 kg

Rouen



Rouen

- Origin: France
- Good for roasting
- Eggs are light blue in color
- Duck: 4 kg
- Drake: 4.5 kg

Hybrid ducks

- Hytop and legarth (Meat type)
- Cherry vally (Egg type)

Indigenous duck breeds

- Chara and chempalli (Kuttanad ducks) of Kerala
- Sythemet and nageswari (North Eastern states)
- Aarani ducks of tamilnadu
- Pati, Deo, Cinahanh and Rajhanh varieties of Assam

QUAILS

- 1974, Central Avian Research Institute imported Japanese quail from California.
- very suitable for commercial production of both meat and eggs.
- Suitable for indian conditions

Varieties quails developed in India

- CARI Uttam
- CARI Ujjawal
- CARI Sweta
- CARI Pearl
- CARI Brown
- CARI Sunheri
- Nandanam Quail

Licence requirement for quail farming

- A government license is required
- quail considering the jungle variety of the bird, which is a protected species
- **Ministry of environment and forests**

- Females (150-180 g) are heavier than the males(120-130 g)
- Marketing age - 5 weeks
- Age at sexual maturity - starts laying eggs 6-7 weeks of age
- Produces 280 eggs per year
- Egg weight 9-10 g

Male



Female quail







Male and female identification

- The breast of the male quail is usually narrow and covered with equally distributed brown and white feathers.
- But the female quail has a broad breast covered with brown feathers with black dots.

Guinea Fowl

- Three domestic varieties
- Pearl
- White
- Lavender