Broiler Production
Production segments involved in the production and processing of broilers

1. Broiler breeders
2. Hatchery
3. Grow-out farms
4. Processing plant
5. Feed mill
6. Animal health
Production segments involved in the production and processing of broilers

1. Broiler breeders
   a) Male (rooster) and female (hen) chickens that are of reproductive age
   b) Lay fertile eggs that develop to produce broilers

2. Hatchery

3. Grow-out farms

4. Processing plant

5. Feed mill

6. Animal health
Production segments involved in the production and processing of broilers

1. Broiler breeders

2. Hatchery
   a) The hatchery is responsible for the incubation and hatching of chicks from fertile eggs obtained from broiler breeders.
   b) The hatchery consists of incubation equipment responsible for maintaining ideal environmental conditions for embryo development.
      1) Setter/Incubator
      2) Hatcher
Broiler Breeders
Broiler Breeders
Setter/Incubator

- Fertile eggs are incubated in the setter for 18 days.
- The setter provides ideal temperature and humidity conditions for embryo development.
- The eggs are stored on trays that are secured to incubator racks.
- The setter also rotates eggs to ensure proper orientation of the developing embryo in the egg.
After 18 days in the setter, eggs are transferred from trays to hatching baskets and are moved to the hatcher. The hatcher provides ideal temperature and humidity for late-stage embryo development and hatching. Unlike the setter, the hatcher does not rotate eggs. The chicks hatch after 3 days in the hatcher, resulting in a total incubation period of 21 days. While in the egg, chicks use their beak to break out of the shell, a process referred to as pipping. Chicks are damp when the exit the shell, or hatch, and the warm temperature in the hatcher plays an important role in drying the chick and maintaining their body temperature.
Production segments involved in the production and processing of broilers

1. Broiler breeders

2. Hatchery
   a) The hatchery is responsible for the incubation and hatching of chicks from fertile eggs obtained from broiler breeders.
   b) The hatchery consists of incubation equipment responsible for maintaining ideal environmental conditions for embryo development.
   c) Certain vaccinations may be administered “in ovo”, injected through the shell.
   d) Once hatched, chicks are removed from the hatching baskets and egg shell debris is discarded.
   e) Chicks are inspected and are serviced (vaccinated, loaded into boxes, etc.) prior to delivery to a grow-out farm.
   f) Chicks are counted into trays that are used for delivery to grow-out farms.
The chick trays are loaded into an environmentally controlled delivery vehicle and are transported to the farm where they will be raised to market weight.
Grow-out farm
Production segments involved in the production and processing of broilers

1. Broiler breeders

2. Hatchery

3. Grow-out farms
   a) Grow-out farms are where broiler chickens are raised.
   b) Grow-out houses are specialized buildings that allow age-appropriate control of temperature, humidity, food delivery, water delivery, and lighting for the broilers.
   c) The grow-out house provides birds the freedom to move throughout the house as they want.
Production segments involved in the production and processing of broilers

1. Broiler breeders

2. Hatchery

3. Grow-out farms continued
   d) Grow-out houses are either curtain-sided or tunnel-ventilated.
      1) Curtain-sided
         a) These houses contain a curtain that runs along both sides of the house that can be raised or lowered depending upon external temperatures to maintain desired environmental conditions in the house.
Production segments involved in the production and processing of broilers

1. Broiler breeders
2. Hatchery
3. Grow-out farms continued
d) Grow-out houses are either curtain-sided or tunnel-ventilated.
   1) Curtain-sided
   2) Tunnel-ventilated
      a) These houses contain solid walls on all sides of the house.
      b) One end of the house contains large exhaust fans while the other end of the house contains large cool cells.
The exhaust fans function to exchange air within house.
The cool cells function to cool air that enters the house.
Production segments involved in the production and processing of broilers

1. Broiler breeders

2. Hatchery

3. Grow-out farms continued
   d) Grow-out houses are either curtain-sided or tunnel-ventilated.
   e) Grow-out houses contain automated feed lines that provide birds with access to feed at all times.
   f) Grow-out houses also contain water lines that provide birds with access to water at all times.
Production segments involved in the production and processing of broilers

1. Broiler breeders
2. Hatchery
3. Grow-out
4. Processing plant
   a) The processing plant is the location where market weight broilers are transported for harvesting.
Production segments involved in the production and processing of broilers

1. Broiler breeders
2. Hatchery
3. Grow-out
4. Processing plant
5. Feed mill
   a) The feed mill is responsible for preparing finished feed. Different feed rations are used for newly hatched chicks (starter), birds in the development phase (developer) and mature birds (grower).
Production segments involved in the production and processing of broilers

1. Broiler breeders
2. Hatchery
3. Grow-out
4. Processing plant
5. Feed mill
6. Animal health
   a) Many commercial broiler producing companies employ veterinarians to develop, maintain, and implement an animal health plan.