TURKEY PRODUCTION
U.S. TURKEY PRODUCTION

- Turkey Produced in 2008
  - 273 million turkeys
  - 7.9 billion pounds

- 2008 Top States by number produced
  - Minnesota 48 million
  - North Carolina 40 million
  - Arkansas 31 million
  - Missouri 21 million
  - Virginia 18 million
  - California 16 million
Turkey consumption in U.S.

- Turkey consumed
  - U.S. 17.6 lbs per person
  - 29% of turkeys produced consumed during holidays.

- Worldwide
  - Israel 28 lbs
  - US 17.6 lbs
  - Europe 8 lbs
  - Russia 1.5 lbs
USES FOR TURKEY

- **Meat**
  - Bacon, lunch meat, ground meat, hot dogs.
  - Whole birds

- **By Products**
  - Feathers ground into animal feed.
  - Quill fibers used in nylon and yarn.
  - Grow-out house litter used as fertilizer or fuel source in electric power plants.
SELECTING

• Male turkeys selected for meat traits:
  – Thicker thighs
  – Plumper breast
  – Meatier drumsticks
  – Faster rate of growth
  – Higher feed efficiency

• Female turkeys selected for:
  – Fertility
  – Hatchability
  – Egg size
  – Meat conformation
METHOD OF BREEDING

- Artificial Insemination
  + Due to the large breasts and mature size of toms, they cannot breed naturally.
  + Semen of 1 tom collected for every 10 hens.
An incubator is a box that holds and rotates eggs while maintaining appropriate temperature, humidity, and oxygen levels. Turkey eggs are incubated for 28 days.

<table>
<thead>
<tr>
<th>Specie</th>
<th>Days Incubated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>28</td>
</tr>
<tr>
<td>Chicken</td>
<td>21</td>
</tr>
<tr>
<td>Ostrich</td>
<td>42</td>
</tr>
<tr>
<td>Geese</td>
<td>22-30</td>
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</tbody>
</table>
6 KEYS TO INCUBATION

- Temperature (most critical)
  + 99.5°F to 100°F
  + Inadequate temperature will lead to deformed pullets and embryonic death.

- Humidity
  + 60% to 65%
  + Improper humidity effects the development of the shell and the chicks ability to break it.
6 KEYS TO INCUBATION

Position of eggs
- Extremely important, if placed incorrectly chick will not be able to beak the shell and hatch out.
- Large end of egg should be facing up or horizontal.
- Never with small end up, as chick will die.

Turning of eggs
- Eggs must be turned periodically or chicks will become stuck to shell membrane.
- Should be turned at least 5 times a day.
6 KEYS TO INCUBATION

- Oxygen and Carbon Dioxide Content
  - 21% oxygen
    - The closer to hatching, the more oxygen is needed.
  - .5% CO$_2$; once CO$_2$ reaches 2%, embryos begin to die.
- Sanitation
  - Must be kept disease free or new chicks will contract disease.
HATCHING

• Few days before hatching eggs are moved from incubator to hatcher unit.
• Hatcher has increased humidity to assist in hatching process.
• The tip of the chick's beak, known as the shell tooth, will peck away at the inside of the eggshell until the shell is broken enough to push the shell apart.
• Hatching usually lasts 10 to 20 hours.
Breeders

- Reach sexual maturity at 30 weeks old.
- Capable of 25 week laying cycle.
  - Lay 95 - 100 eggs, then they are “spent”.
  - Usually after laying cycle, hens are harvested for meat.
  - Hens can be molted and go through a second laying cycle.
    - Molting takes 3 months.
    - Hens can then have another 25 week laying cycle.
    - Produce fewer eggs in second cycle (75-80 eggs).

- Turkey eggs not used for human consumption as they are more expensive.
Breeder turkeys are generally reared in floor barns with litter as the flooring material.

- Clean nesting boxes are provided for hens to lay their eggs.

**Feeding**

- Must be limited as turkeys will eat until the food is gone.
- Turkeys given a specific amount each day or given food every other day.
MARKET BIRDS

- Toms marketed at 17 to 20 weeks of age
  - Weighing 26.4 to 32.3 pounds
- Hens marketed at 14 to 16 weeks of age
  - 14.7 to 17.5 pounds
- Free fed to allow faster weight gain.
- Fed high protein feed for muscle development.
Two Types of Housing

- Conventional (enclosed) housing
  - Windowless houses with environmental control.

- Pole barn
  - Long houses with open sides, can be closed off with curtains.

- Birds are provided 1 to 2 sq. ft. per bird.
- Feeding and water systems are computer controlled.