

Reproduction in Poultry

Different from mammals

- young are not carried in the hens body
- develop inside a fertilized egg outside the hens body

Process

- begins with male placing the sperm into oviduct of the female
- male papillae deposits sperm in cloacal wall of female

Process

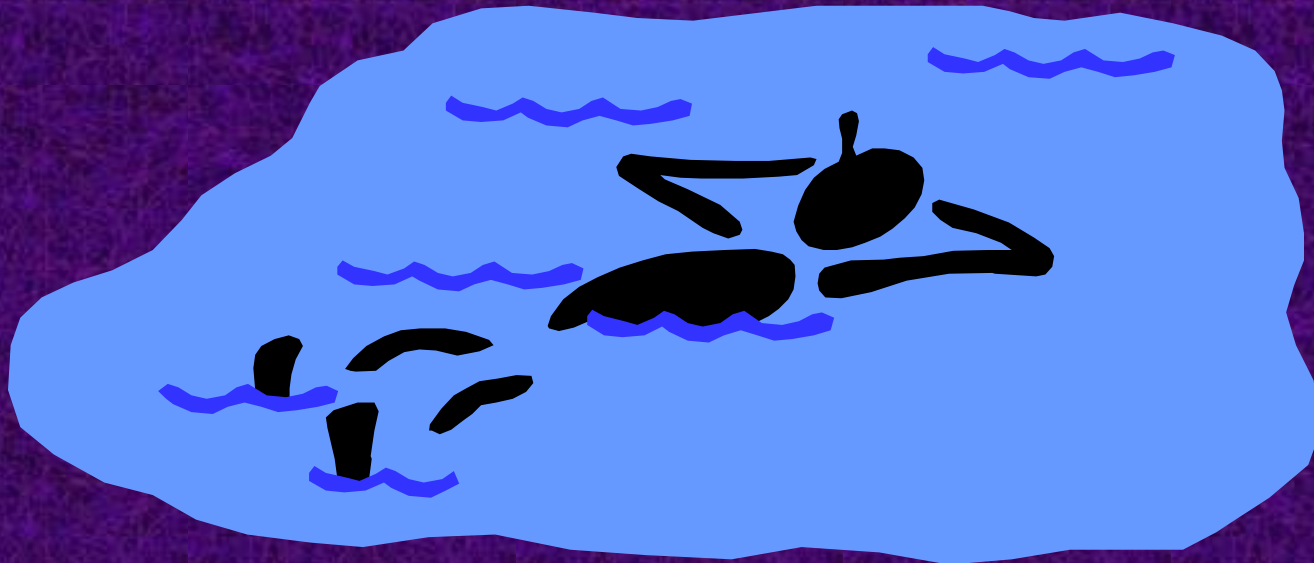
- sperm move up the oviduct to the funnel where the egg is fertilized
- sperm cells remain in oviduct 2-3 weeks after mating

Process

- sperm have full fertilizing ability for about 6 days
- after then - ability of sperm to fertilize egg is decreased

Sperm viability

- 10th day - 50% ability
- 19th day - 15% ability



Process

- after yolk is fertilized it moves through the tract where the rest of the egg is added
- egg is laid - embryo grows inside the shell



Incubation

- keeping eggs at the right temperature and humidity for hatching
- hen does this by sitting on the eggs

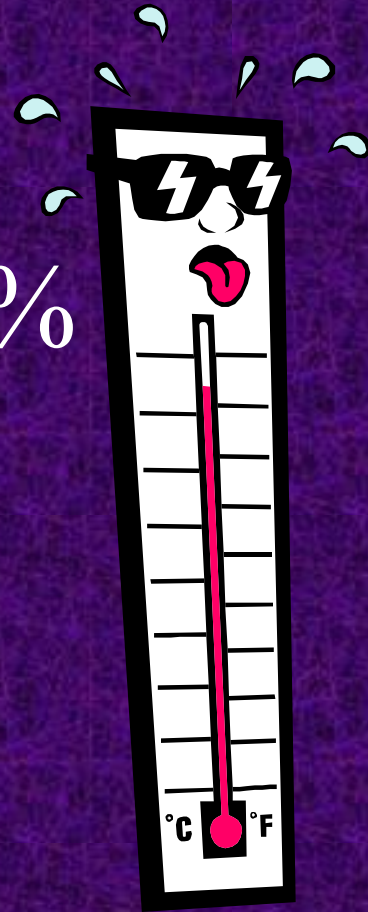
Incubation

- commercial hatcheries use mechanical incubators
- incubation of chickens is 21 days



Incubation

- temperature 102 - 103 F.
- RH - (relative humidity) 60%
for the first 18 days
- RH 70% for the last 3 days



Incubation

- eggs are turned twice daily for the first 15 days
- keeps the embryo from sticking to the inside of the shell
- Provide a small amount of oxygen

Oviduct

- has five parts
- Funnel - receives the yolk from the ovary
- sperm cells received from the rooster are stored here

Magnum

- secretes the thick white of the egg
- It takes three hours for the thick white to be placed around the yolk in the magnum

Isthmus

- the yolk and thick white then moves to the Isthmus
- 2 shell membranes are added
- It takes 1 1/4 hours

Uterus

- thin white and outer shell are added to the egg in the uterus
- egg remains in the uterus about 20 hours

Vagina

- after the egg is completed it moves to the vagina
- stays in the vagina for a short time and is then expelled from the hens body

One egg

- It takes 25-27 hours for a chicken to produce one egg



Ovary

- In the chicken only the left ovary and oviduct function
- the ova produced in the ovary develop into egg yolks

Reproductive Failures

- general physical condition of animal
- has an effect on the ability to reproduce

Reproductive Failures

- too fat or too thin may not become pregnant
- proper nutrition and exercise can help prevent this

Reproductive Failures

- animals in poor physical condition can have trouble giving birth

Infections

- affect reproductive organs
- some may prevent pregnancy
- others may cause a spontaneous abortion - miscarriage

Infections

- if animal does become pregnant it may deliver a weak animal which may not live

Infection

- of uterus
- almost always fatal to embryo or fetus

Hormones

- sexual behavior of animals is regulated by the secretion of hormones
- when not properly secreted the animal may not be able to reproduce

Hormones

- sometimes animals are treated with injected hormones

Cyst

- swelling containing fluid or semi solid substance
- may cause reproduction or breeding problems
- may be surgically removed depending on the value of the animal