

CASE

*Curriculum for Agricultural
Science Education*

Principles of Agricultural Science – Animal

What Is a Disease?

Unit 8 – Lesson 8.1 Popular Pathogens

Pathogens

- Anything capable of causing disease.
- A living, microscopic, disease-producing agent, such as a bacteria or virus.



Disease

- Any deviation from a normal state of health in plants, animals, or people, which temporarily impairs vital functions.
- Disease Categories
 - Infectious
 - Contagious
 - Non-infectious

Infectious Disease

- A disease caused by bacteria, protozoa, viruses, prions, or fungi entering the body.
- Not necessarily contagious or spread by contact.
- Can be ingested, inhaled, or absorbed



Infectious Disease



Example: “Mad Cow Disease”

Bovine Spongiform Encephalopathy

- Degenerative disease of brain and spinal cord
- Caused by feeding meat and bone meal to cattle

Contagious Disease

- A disease transmitted or spread from animal to animal by direct or indirect contact with a diseased animal.
- Common colds and the flu are contagious diseases.



Contagious Disease



Example: Foot-and-Mouth Disease

- Virus found in cloven-hoofed animals
- Spreads easily from cattle to sheep to pigs to goats to deer
- Destruction, decontamination, and quarantine only methods to control

Non-Infectious Disease

- A disease that is not caused by microorganisms or transmitted from one animal to another.
- Examples:
 - Nutritional disorders
 - Poisoning
 - Genetic disorders

Non-Infectious Disease



Example: Spider Lamb Syndrome

- Genetic disorder
- Causes skeletal deformities, such as bent legs, crooked spine, long neck and flattened ribs

How Diseases Spread

- Direct contact
 - Animal to animal or person to person contact
 - Shaking hands
- Indirect contact
 - Vectors
 - Fomites



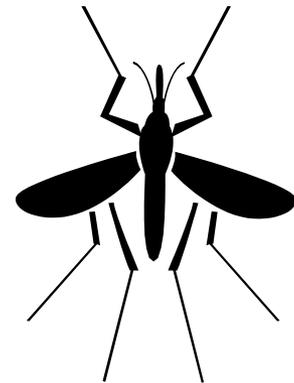
How Diseases Spread

- Vector

- Any agent, such as an insect or animal that transmits, carries, or spreads a disease from one plant or animal to another.

- Example:

- Mosquito carrying malaria



How Diseases Spread

- Fomites

- Contaminated inanimate objects
- Substance other than food that may harbor or transmit a disease
- Example:
 - Sharing straws or water troughs



References

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