

CASE

*Curriculum for Agricultural
Science Education*

Principles of Agricultural Science – Plant

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Microscopic Pests

Unit 8 – Surviving a Harsh Environment
Lesson 8.2 Diving into Diseases

Disease-Causing Agents

Plant diseases are caused by:

- Bacteria
-  Fungi
-  Viruses

Bacteria



- Single-celled organisms
- Cell membranes
- Reproduce through division
- Often spread between plants by insect vectors
- Can multiply very quickly

Bacteria

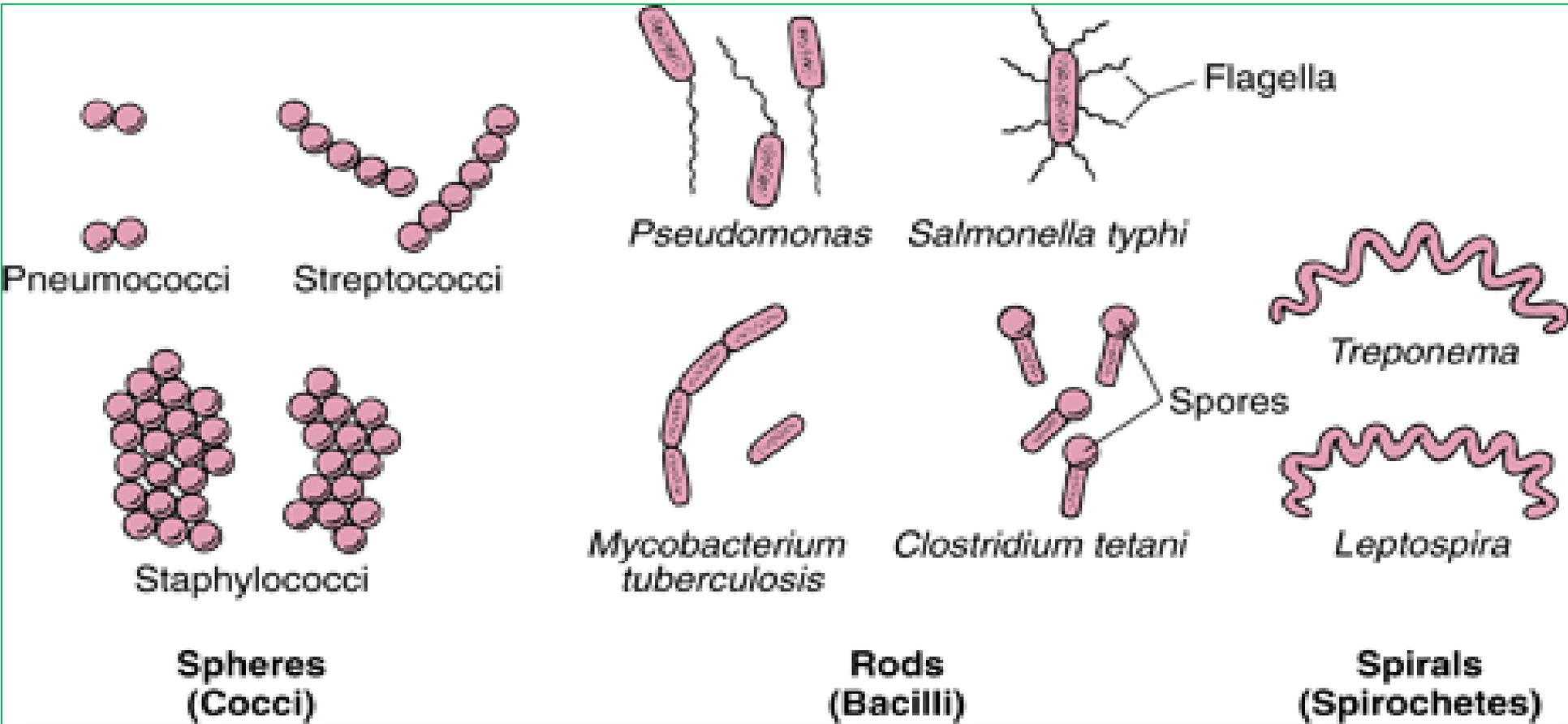


Image: Merck Manual.

Fungi

- 🍄 Reproduces via spores
- 🍄 Examples are mushrooms, yeast, and mold
- 🍄 Spread from plant to plant through the transfer of spores

Viruses

- ☀ Extremely small
- ☀ Submicroscopic and Sub cellular
- ☀ A particle containing RNA or DNA
- ☀ Require a host cell
- ☀ Carried by insects, nematodes, and air

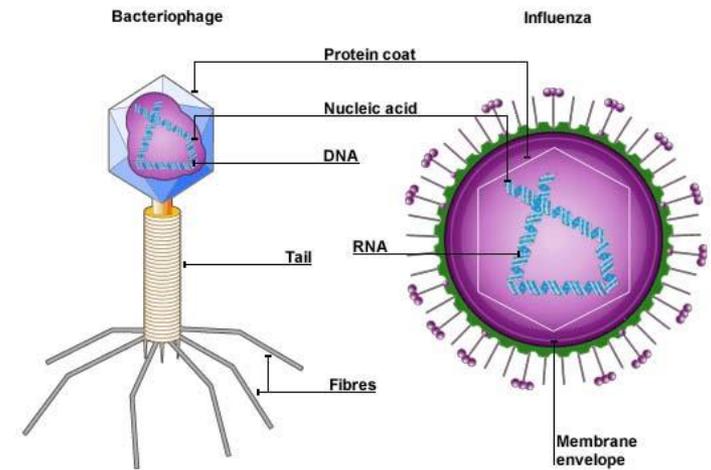


Image: BBC

Symptoms of Infection



Bacteria

- Cause gall, spots, and scabs in plants

Fungi

- Cause rust, smut, mildew, and rot in plants

Viruses

- Cause plant stunting, flower break, and yellowing

Disease Control



Prevention

- To take measures to keep diseases from occurring or invading

Treatment

- To perform a practice or add a substance to eliminate a disease agent or reverse the effects of a disease

Methods of Prevention



- Clean growing conditions
- Quarantine new plant material
- Regular preventative chemical applications
- Keep plants healthy and stress free
- Manage insects and animals
- Crop rotation

Types of Treatments

- Chemicals
- Environmental conditions



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