

1-2 C4 C5 Spore and Vegetative

January 12, 2023 10:02 AM

Science 9 – Bio Topic 1.2 – Concept 4&5: Types of Asexual Reproduction Part 2: Spore and Vegetative Propagation

Types of Asexual Reproduction Part 2

Spore Formation (Concept 4 in textbook)

- Spores are cells with thick cell walls similar to seeds that can survive diverse conditions.
- Spores are released into the air from a specialized structure called a "Sporangium".
- When a spore lands in a favourable environment (warm, moist), it grows and divides by mitosis and cytokinesis.

Example Organisms:

Fungi, Algae, Non-flowering plants, moulds

Advantages?

- Spores are lightweight and can travel very far to spread species.
- Can survive harsh conditions without damage.

Interesting facts

- Many organisms that produce spores also reproduce sexually.
- The Visible part of the moulds on your bread/food is just the reproductive organ, the main part of the mould is buried deep inside the food already. There on clean part of the bread! Get Rid of the WHOLE THING NOW ~

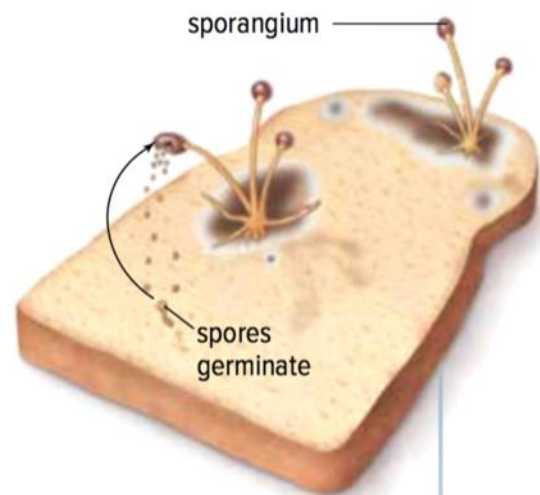


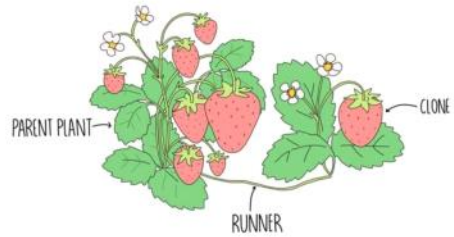
Figure 1.12: Moulds reproduce using spores.

Vegetative Propagation (Concept 5 in textbook)

- When plants reproduce asexually using special cells in stems, roots or leaves
- New plants are Clones (copies) of the parent plant

Some Natural Examples:

1. **Runner** - stem that grows horizontally along the surface of the soil. ie Strawberry plants



2. **Shoots** - growths from base of a trunk or underground stem.

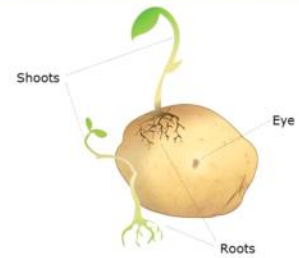
3. **Cutting** - fragments of plant that can grow own roots & develop into full plant



4. **Bulbs** : - roots grow out of the bottom of the bulb, and other bulbs grow from them. ex) Tulip and onion



5. **Tubers** :
- Tubers are enlarged underground stems
 - ex) New roots and shoots grow from the eyes of a potato. If you plant a potato with this new growth, a potato plant will develop



Advantages?

- Grow quickly in areas with ideal nutrients & moisture levels.

Interesting facts

- Many plants that reproduce vegetatively also have flowers and reproduce sexually

Practice:

Match the following picture with the correct Vegetative Propagation method (ie. Runner, shoots... etc.)

② Tubers

⑤ Bulbs

③ Cutting

① Runner

④ Shoots

The practice section contains five numbered boxes, each with a different image of a vegetative propagation method. Box 1 shows a strawberry plant with a runner. Box 2 shows a potato tuber. Box 3 shows a cutting of a stem with leaves. Box 4 shows a potato tuber with a shoot growing from it. Box 5 shows two tulip bulbs.

HW: WB P. 16

- Topic 1.2 Quiz on Monday.

"Mitosis and Methods of Asexual Reproduction"

Interphase - Mitosis - Cytokinesis

① Binary Fission

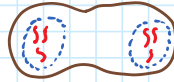
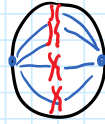
Interphase - Mitosis - Cytokinesis

① Prophase

② Metaphase

③ Anaphase

④ Telophase



① Binary Fission

② Budding

③ Spore

④ Vegetative Propagation

- Runner
- Shoots
- Cutting
- Bulbs
- Tubers
- Grafting