

Advantages and Disadvantages of Sexual and Asexual Reproduction

- Asexual reproduction results in many genetically identical offspring in a short amount of time.
- Sexual reproduction results in genetically varied offspring.



Advantages of Asexual Reproduction

- Only one parent is needed (no need to find a mate)
- Reproduction occurs quickly
- Offspring mature and start reproduction quickly
- Offspring are genetically identical to the parent
- Can live and interact with their environment with the same success as their parent



What happens if the environment changes?



Disadvantages of Asexual Reproduction

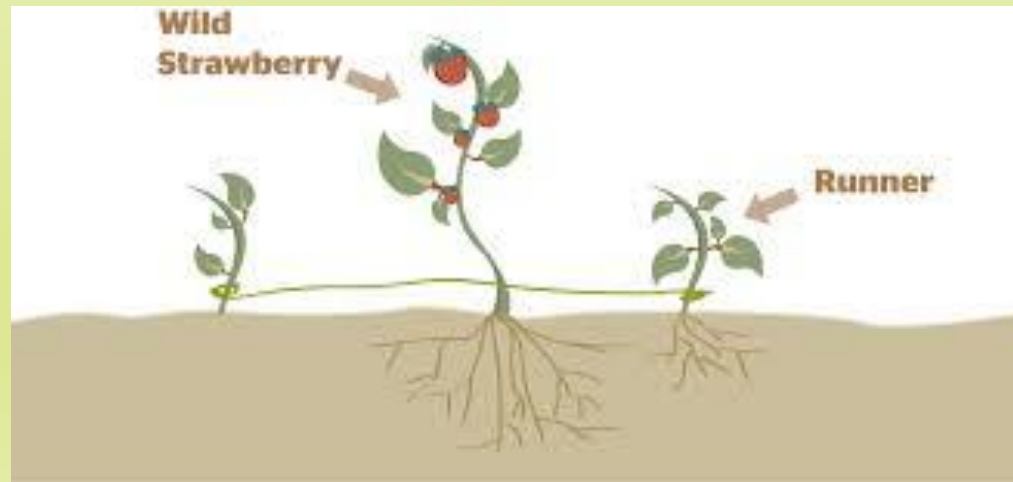
- Lack of genetic diversity
 - All individuals in a population are vulnerable to changes in their environment
 - example: drought, disease
 - Since all the individuals are genetically identical, they will all respond in the same way
 - example: die or become diseased



Figure 1.26: If the conditions change or a disease occurs, it may cause a crop to die or the yield of produce to be severely reduced.

Asexual Reproduction

1. Think of an organism that reproduces asexually
2. What is one advantage that organism has in its environment
3. What is one disadvantage that organism has in its environment



Sexual Reproduction Advantages.

Genetic variation:

- Variation in the DNA sequences of each individual in a species
- Variation in DNA results from sexual reproduction



Figure 1.27: Although members of this family share similar traits, their different genetic material makes them unique individuals.

Advantages of Sexual Reproduction

- Genetic variation/diversity
- Genetic diversity allows some individuals in a population to survive if the environment changes
 - Example: If the environment changes, some individuals will be less successful at living and reproducing
- Other individuals may have certain features (due to genetic differences) that allow them to live and reproduce in the new conditions more easily



1. Long time ago, there were giraffes with short and long neck. The ones with short neck couldn't eat, they were really hungry.

2. Only long-necked giraffes survived.

Disadvantages of Sexual Reproduction

- Searching for a mate takes time, and may expose individuals to predators, disease, or harsh environmental conditions
- Fewer offspring are produced (takes longer for a population to grow)
- Offspring take longer to reach maturity (and reproduce)
- Offspring require a lot of time and energy to raise until they are independent from their parents



Asexual Vs Sexual Reproduction

- Complete pg 38-41 in workbook
- Comparison Chart