

Name:

Date:

Class:

Lesson 5.2: Biotechnology in Agriculture

Know and Understand

Answer the following questions using the information provided in this lesson.

1. Which of the following is an example of humans using organisms to produce a product? (5.2.1)
 - A. Putting water on crops.
 - B. Using yeast to make bread rise.
 - C. Adding flour to a dough.
 - D. Giving cattle a dewormer.

Answer:

2. *True or False?* Artificial selection is responsible for the drastic differences in domesticated animals and their wild counterparts. (5.2.1)

Answer:

3. *True or False?* Genetic engineering is the process of removing, modifying, or adding genes to an organism's DNA to alter the information it contains. (5.2.2)

Answer:

4. *True or False?* Heterozygous means the genes an organism has from both parents are the same for a specific trait. (5.2.3)

Answer:

5. Which of the following is not a benefit of genetically engineered crops? (5.2.3)
 - A. Resistance to drought or frost.
 - B. Extended shelf life.
 - C. Ability to kill pests.
 - D. Resistance to pesticides.

Answer:

6. Which of the following is a concern about using genetically modified crops? (5.2.3)
- A. Increasing yields in crops beyond the current level.
 - B. Developing brands that control too much of the market.
 - C. Creating weeds and insects that are resistant to pesticides and herbicides.
 - D. Growing crops on land that previously was not able to grow crops.

Answer:

7. What do opponents of genetic engineering call weeds that develop resistance to pesticides? (5.2.3)
- A. Superweeds
 - B. Strain R weeds
 - C. Regulated weeds
 - D. Transgenic weeds

Answer:

8. *True or False?* The use of GMOs is highly regulated. (5.2.3)

Answer:

9. If a dairy farmer wanted to artificially inseminate his cows and have as many female calves as possible, which reproductive biotechnology would he most likely use? (5.2.4)
- A. Cloning
 - B. Natural breeding
 - C. Embryo transfer
 - D. Sexed semen

Answer:

10. Which of the following allows an animal to give birth to an animal that is genetically not their own? (5.2.4)
- A. Artificial insemination
 - B. Cloning

- C. Embryo transfer
- D. Natural breeding

Answer:

11. *True or False?* AI leads to higher conception rates, reduces the spread of disease among breeding animals, and lowers the risk of injury to either animal. (5.2.4)

Answer:

12. *True or False?* There is no federal requirement in the United States to label transgenic products. (5.2.5)

Answer: