

Complete each of the following questions in the space provided.

1. In your own words define the terms:

pest _____

pesticide _____

2. In the food web on page 52 (Figure 1), suppose that shrews are considered to be pests. Predict how the removal of shrews would affect each of the following in the food web, and why:

A. Hawks-	
B. Spiders	
C. Grasshoppers	

Why Use Pesticides

3. List two possible benefits of using pesticides.

A.

B.

First and Second Generation Pesticides

4. What is the difference between first-generation pesticides (developed around the 1700's) and second-generation pesticides (developed in the 1900's)? Give an example of each.

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Bioamplification

5. Explain the concept of bioamplification using Figure 4., page 54.

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6. Vultures and some species of beetles feed on the dead bodies of animals from several trophic levels. Predict how these animals might be affected by bioamplification.

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Effects on Humans

7. Canada has banned DDT use, but many other countries have not. Why is this a concern for Canada?

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Modern Chemical Pesticides

8. State two advantages of the newer pesticides and two disadvantages;

Advantages:

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Disadvantages:

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The Pests Fight Back

9. Using Figure 5, page 55, explain how pests can become resistant to a pesticide.

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Atlantic Canada and the Spruce Budworm

10. Why do you think the spruce budworm has not been eliminated after 40 years of spraying?

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11. Why wouldn't biologists just use extremely high concentrations of insecticides to kill all the spruce budworms?

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The Bald Eagle

12. State two features of bald eagles that make them susceptible to the effects of toxins in the environment.

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13. What do you think would be the economic effect of banning pesticide use for large-scale agriculture (farms)? Explain.

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14. What is a monoculture?

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15. Explain why there is such a problem with pests in a monoculture.

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16. State four problems associated with the use of pesticides to control pests in monocultures.

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17. Explain what is meant *by integrated pest management*.

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18. Give three examples of methods used to control pests, other than using insecticides.

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19. Give three examples of farming practices that can help control pests.

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20. A. Do you think a lawn is a monoculture? Why or why not?

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B. Do you think that pesticides should be banned for cosmetic purposes (lawns and gardens)? Explain.

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