

Pesticides

Name: _____

Read Section 2.2. pg 52 – 58; Answer the following questions

1. What are pesticides?
2. What is a pest?
3. Give three examples of pests.
4. List three possible short-term benefits of using pesticides?
 - (i)
 - (ii)
 - (iii)
5. Why might chemicals taken from plants create a much lower risk for humans and ecosystems?
6. What are second generation pesticides?

7. Complete the following chart.

Type of Pesticide	Target	Examples	Persistence
1.			
2.			
3.			
4.			

8. What is bioamplification (bioconcentration)?
9. Why is the fact that other countries have not banned DDT of concern to Canadians?
10. Breast milk contains fat. Speculate about how breast-feeding might affect the concentration of DDT in a mother and in her baby.

11. Why are the new pesticides less harmful to ecosystems than DDT and related compounds used in the 1950 and 1960's?
12. List some of the problems of these newer insecticides.
- (i)
 - (ii)
 - (iii)
13. Explain how pests such as insects might become resistant to a pesticide.
14. Speculate about why the spruce budworm hasn't been eliminated after 40 years of spraying in New Brunswick?
15. Why wouldn't biologists just use extremely high concentrations of insecticides to kill all of the spruce budworms?
16. Explain why insecticides such as DDT would pose a greater threat to freshwater ecosystems than the newer, water-soluble pesticides.
17. Why would female eagles have slightly lower levels of toxins than male eagles.
18. Suggest two ways the eagle population would be harmed by pesticides.
- (i)
 - (ii)
19. **Construct a pyramid of numbers with the following organisms and determine how much pesticide would be found in the organisms at each trophic level:**
- a. 12 grasshoppers each received 1 units of a fat soluble pesticide from the grass, 3 shrews ate an equal amount of grasshoppers and in turn all three shrews were eaten by one owl.
 - b. In a food chain, 24 grasshoppers each received 2 units of a fat soluble pesticide from the grass, 3 shrews ate an equal amount of grasshoppers and in turn all three shrews were eaten by one hawk.
 - c. 1000 algae were eaten by 100 small fish, each small fish received an equal amount of the fat soluble pesticide. The small fish were eaten by 10 large fish, each of the large fish eating an equal amount of the small fish. All the 10 fish were eaten by a heron.