Name: _____ Date: _____ Block: _____

Miller and Spoolman's Living in the Environment 16th ed.

Chapter 12 Reading Guide – Food, Soil, and Pest Management

Case Study – Golden Rice: Grains of Hope or an Illusion?

1. What is golden rice?
2. How can it be used to improve the health of the poor?

Section 12-1 – What Is Food Security and Why Is It Difficult to Attain?

3. Describe the serious health problems associated with lack of food and poor nutrition. How do these compare to overnutrition?
4. Describe some of the obstacles to food security.

Section 12-2 – How Is Food Produced?

5. Describe the fundamentals of traditional and industrialized agriculture methods that have increased crop production in the last half century.
6. What is the green revolution in agriculture?
7. Explain how crossbreeding and genetic engineering are being used to produce new crops.
8. Explain the effects industrial and traditional methods have had on meat, fish, and shellfish supplies.

Section 12-3 – What Environmental Problems Arise from Food Production?

9. List all of the environmental impacts that arise from food production. Describe what you feel are the three most signification environmental impacts.

Section 12-4 – How Can We Protect Crops from Pests More Sustainably?

10. Explain Rachel Carson's role in the modern environmental movement (Individuals Matter).
11. Explain the benefits and pitfalls of using Round-up at home or on crops (Science Focus).
12. Describe the laws and treaties in place for the use of pesticides.

13. How is IPM a more sustainable agriculture solution compared to other ways of protecting crops from pests?

Section 12-5 – How Can We Improve Food Security?

14. What are three important steps to improving food security?

Section 12-6 – How Can We Produce Food More Sustainably?

15. List the steps to sustainable food production. Describe the three you feel are most important.

16. Describe ways to restore soil fertility.

17. Explain how mixing mono- and poly-culture crops and decreasing the impacts of industrialized food production are both important for meeting future human needs.