

Chapter 10 Farming

Food and the production of food are two fundamental concepts in the study of environmental science. Basic to all agricultural production is soil—soil formation, properties, and soil profiles. The nature of flora and fauna, as well as the role of each in the recycling of soil nutrients, is important to understand. Nutrient cycling, soil fertility, and agriculture are interconnected to each other as well as to other concepts from previous chapters.

Modern, mechanized, monoculture agriculture brings with it a multitude of environmental issues. Beginning with soil, the processes that result in the loss of topsoil are key concepts. It is important to understand both wind and water erosion of soil. Desertification occurs as a result of poor farming techniques, using marginal land for crop production, or overgrazing. Soil fertility, or lack of it, presents farmers with a significant problem. The use of inorganic fertilizers causes problems when they run-off into local waterways. Eutrophication results in algal blooms. In addition to fertilizer use, monoculture agriculture requires the use of pesticides. It is important to know the different types of pesticides, the environmental effects of these pesticides, the alternatives to pesticides, and integrated pest management.

You must be able to explain not only the soil-conservation techniques used by farmers to decrease or prevent the loss of topsoil, but also how these methods do this.

Organic farming is becoming more prevalent in today's world. The marketplace has an abundance of organically grown foods. The term *organic* is probably familiar to you, but you must also know what standards are necessary in order for a food to be labeled organic. Sustainability of all resources is an essential concept.