



#### SECTION FOUR

## NUTRIENT MANAGEMENT FOR WATER QUALITY

Many hobby farmers measure success by the abundance of their harvest of fruits and vegetables or their forage crops. This achievement can often be traced back to healthy soil and nutrient management practices.

**SOME HOBBY FARMERS ARE FORTUNATE TO HAVE SITES WITH A THICK LAYER OF FERTILE SOIL RICH IN MICROORGANISMS. HOWEVER, EVEN GOOD SOILS CAN BECOME NUTRIENT DEPLETED OR ERODE OVER TIME. REGARDLESS OF WHAT YOU ARE GROWING, SOILS WILL GENERALLY NEED TO BE MANAGED TO RETURN NUTRIENTS INTO THE SOIL TO SUPPORT HEALTHY PLANT GROWTH.**

### **THE HOBBY FARMER SHOULD CONSIDER THE FOLLOWING QUESTIONS IN DEVELOPING A HEALTHY SOILS MANAGEMENT PLAN:**

- Why does annual soil testing help save time and money?
- What nutrients are needed for plant health? (Hint: It's not just about nitrogen, phosphorus, and potassium)
- What's the difference between fertilizers and soil amendments? Organic and synthetic?
- How can you improve nutrient retention in your soil through crop rotation, succession planting, intercropping, and companion planting?
- What are the best techniques to compost and to recycle and reuse materials you likely already have?
- How should you apply fertilizers, manure, and soil amendments for best results?

While nutrients are an essential component of many natural environments, an overabundance in our surface water can cause a reduction in water quality.



Phosphorus and nitrogen from fertilizers can result in:

- excessive aquatic plant growth choking waterways and making them impassable;
- depletion of dissolved oxygen which is essential for fish; and
- creating an ideal environment for toxic algal blooms that can be a health threat to people and pets, often causing recreational areas to close.

Section 4 contains the following Fact Sheets on how to manage nutrients on your hobby farm and how to keep them out of nearby waterways to protect surface water quality.

- FACT SHEET 4-1      Understanding Your Soil
- FACT SHEET 4-2      The Importance of Annual Soil Testing
- FACT SHEET 4-3      Essential Plant Nutrients
- FACT SHEET 4-4      Understanding Fertilizer Types
- FACT SHEET 4-5      Fertilizer: What's in the Bag
- FACT SHEET 4-6      Keeping Nutrients in Your Soil
- FACT SHEET 4-7      Plant Material Composting
- FACT SHEET 4-8      Nutrient and Soil Application
- CHECKLIST 4A        Nutrient Management for Water Quality

By following the above fact sheet recommendations, not only can you improve your soil and overall harvest, but you'll be helping to prevent stormwater runoff containing fertilizer, nutrients, and bacteria from entering nearby water resources.

