



FACT SHEET 4.8

NUTRIENT AND SOIL AMENDMENT APPLICATION

Hobby farmers growing crops may find the need to add nutrients and amendments to the soil. Fertilizers directly affect plant growth by adding nutrients to the soil, while soil amendments improve the physical condition of soil.

Fertilizers and soil amendments are available in both organic and synthetic varieties and include manure and composted garden material. Depending on the source, some of these materials can provide both nutrients and improved soil structure when applied. No matter what type of crops you are growing, the addition of fertilizers and soil amendments may be necessary for healthy plants and a successful harvest.

SURFACE WATER PROTECTION

Fertilizers and soil amendments are valuable to your plants and soil, but if applied improperly can become a source of significant water pollution. If transported to nearby wetlands and waterways, these materials can become a source of water contamination.



REGULATORY CHECK

Many communities and some state agencies now have regulations limiting nutrient application near surface waters. Contact your local Conservation Commission for additional information.



STAY ON TRACK

Annual soil testing is essential in determining what your soil and crops need for a successful harvest.



Consider the following when applying a nutrient source or soil amendment to your garden or fields:

Quantity

Hobby farmers are encouraged to complete a soil test prior to the application of any nutrient source or soil amendment regardless if it's for your vegetable garden or forage crops. Soil test results will specify what type of nutrient or soil amendment is needed for your crop or field and how much you need. Over-application of these products can harm plants, reduce good microorganisms in the soil that help fight pests and disease, and lead to nutrient and pathogen transport into nearby water bodies. Read product labels and carefully apply quantities according to recommended amounts in your soils testing report.

Weather Conditions

Timing your application is important since current and future weather conditions can dramatically influence the chances of erosion and runoff. Do not apply fertilizer or soil amendments prior to or during significant rain events. Similarly, avoid heavy winds where odor and material can be blown off-site.

Time of Year

The application of nutrients and soil amendments should not be done during the winter months when the ground is frozen or snow covered. These conditions can increase the risk of contamination in stormwater runoff and prevent the incorporation of applied material into the soil.

Slopes

Steeply sloping areas are particularly vulnerable to erosion and runoff, so be sensitive to the quantity of fertilizers and soil amendments you're applying to these areas. Consider planting vegetative buffers between slopes and water resources.

Buffers

Vegetated land between your area of nutrient application and surface water can help intercept stormwater runoff. These buffers become particularly important in sloped areas. The closer fertilizer and soil amendments are applied to water resources, the higher the risk of contamination. Maintaining vegetated buffers between these areas is essential to protecting nearby water quality.

Avoid nutrient and soil amendment over-application by following these tips:

- Conduct an annual soil test and follow the recommendations
- Carefully read fertilizer and soil amendment labels
- Calibrate and test application equipment settings
- Discard excess fertilizers and soil amendments according to label instructions – avoid the temptation to use what's leftover unless needed
- Develop a comprehensive and realistic management plan for manure (if you have animals)

NEVER DUMP EXTRA FERTILIZER OR SOIL AMENDMENTS ON YOUR FIELDS, IN A STORM DRAIN OR WATERBODY!





DID YOU KNOW?

Fertilizers add nutrients to the soil while soil amendments improve the physical condition of the soil.

COMPOSTED VS. UNCOMPOSTED (FRESH AND AGED) MANURE

Using manure as a fertilizer source is a great way to recycle nutrients back into the earth and improve soil structure. Composted, fresh, and aged manure can achieve this and all are often readily available to hobby farmers. There are a number of advantages and disadvantages that should be considered when deciding which is right for your hobby farm. Notably, most composted manure has been through the carefully controlled process of decomposing fresh manure at high enough temperatures to kill harmful pathogens. Since fresh and aged manure typically have not been brought to temperatures high enough to eliminate harmful pathogens, it is not recommended that they be applied to areas in edible plant gardens. In contrast, the above forms of manure in most cases can be safely used on hayfields as long as the recommendations regarding quantity, weather, time of year, buffers and slopes are considered.

FRESH OR AGED (UNCOMPOSTED) MANURES SHOULD NOT BE USED NEAR EDIBLE CROPS.

HELPFUL LINKS

www.extension.unh.edu/resources/representation/Resource002114_Rep3119.pdf

www.ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/prioritizing-fields-for-manure-application

