



FACT SHEET 6.7

TREE PLANTING FOR WATER QUALITY

There are many runoff site management measures that can be used to help control stormwater runoff on hobby farms. These include vegetated buffers, treatment swales, filter strips and rain gardens to help both reduce stormwater volume and filter out potential pollutants such as excess fertilizer, sediment and manure.

Many of these techniques utilize natural materials and processes where vegetation is used to help in the retention and infiltration (or absorption) of precipitation and snowmelt into the soil or be taken up by plant roots. Trees are a large part of many of these stormwater management measures.

BUT WHAT IF THERE WAS A WAY TO SAFELY REDUCE WATER VOLUME EVEN BEFORE IT REACHES THE GROUND?

Recent studies have shown that tree roots are not the only part of the tree that assists with runoff reduction efforts. A leafy tree canopy itself can help intercept and retain precipitation, thereby reducing the overall volume of stormwater. Tree canopies located in Massachusetts have been shown to intercept on average about 15% of the precipitation that falls on them. When hobby farmers plant trees, they are directly reducing the amount of runoff they need to manage on their farms.

MATURE TREE BENEFITS:

- Erosion control
- Reduce heating and air conditioning costs
- Absorbption of carbon dioxide
- Oxygen production
- Stormwater management
- Increased property values
- Source of nutritious food (fruit trees)

While the benefits of trees are clear, and programs nationwide are being implemented to encourage tree planting, even in the most urban of areas, the addition of trees to hobby farms can have far greater long-lasting impacts.



DID YOU KNOW?

One large tree can reduce erosion and help manage stormwater by capturing, using or filtering up to 36,500 gallons of water per year.



In addition to the above benefits, trees planted on hobby farms can:

- **Shade livestock** – keeping them cool in the summer
- **Create windbreaks** – protecting both animals and crops from damaging winds
- **Humidify the air** – helping to maintain moisture for crops during dry periods
- **Improve air quality** – in addition to producing oxygen, trees can trap airborne particulates and other pollutants
- **Provide habitat for pollinators** – trees provide the shelter and thoroughfare for pollinating insects to move about
- **Odor control** – help dissipate and control odor that may reach your neighbors

Consider planting trees throughout your hobby farm to take advantage of one or more of the above tree benefits by following these easy steps:

Step 1

Consider how trees can work for you – which of the above benefits would you like to achieve and how can trees help? Need help with erosion control and shading your farm animals? Plant trees in and around your pasture to improve your buffer and increase animal shelter areas. Are your crops too exposed during inclement weather? Plant trees next to fields where they can provide protection from wind and serve as habitat for pollinators. Barn too hot during the summer? Plant trees around it to provide shade that helps lower summer temperatures, provides a windbreak to reduce heating needs in the winter, and to enhance the infiltration of roof runoff.

Step 2

Evaluate your site and location – trees come in all shapes, sizes, colors and hardiness. Make sure you consider the following to help in your tree selection process:

- Space constraints
- Climate/hardiness zone
- Proximity to structures and overhead utilities
- Maintenance and care needs
- Insect/disease susceptibility

Step 3

Utilize available resources for tree selection, installation and care

- Visit www.itreetools.org to customize your search and find the tree that's just right for you, AND see the benefits existing trees provide.
- Visit www.treesaregood.org for in depth information on tree benefits and values, selecting and purchasing a tree, how to plant a tree, and tree maintenance/care.
- Visit www.treecanopybmp.org for helpful resources on tree canopy use and stormwater management along with resources for tree selection, installation and care.

CHECK WITH YOUR LOCAL LANDSCAPE AND GARDEN CENTER FOR HELPFUL INFORMATION ON TREES AVAILABLE IN YOUR AREA, AS WELL AS TIPS FOR INSTALLATION AND ROUTINE TREE CARE.