MARION COUNTY SWCD'S CONSIDERING CONSERVATION SERIES

What to do about .....

Improving Soils for Urban Gardeners

For gardeners, soil is their most valuable possession or their worst nemesis. We either reap the benefits of our garden soil or fight against its limitations. Most people, not realizing its importance, pay little, to no attention to the soil. It is the Rodney Dangerfield of the natural resource world – it gets no respect! But if you study your soil, understand its good qualities and intelligently improve on its limitations, you will eventually gain a great harvest of benefits from the work you put into it.

There are 32 soil mapping units in Marion County representing 15 main soil types. Each soil type is unique in its composition and by knowing which soil types are in your neighborhood you will have a good start to knowing what to expect. A general description of the soil types in your neighborhood can be found by using the Marion County Soil Survey. Go online to http://websoilsurvey.nrcs.usda.gov/app/ to access the online version. Once you've determined your soil type, more useful information can be found by visiting the Marion County Soil & Water Conservation District's (SWCD) website soils page at http://marionswcd.org/soil/soil-types-and-drainage/ . Here you will find help including what to do if you have poorly drained or erosive soil types. The SWCD staff can also give you additional help with these issues.

Most Marion County soils have been eroded, have areas of cut and fill from construction or have had their topsoil removed before homes and buildings were constructed. This leaves gardeners in urban areas with soils which are often compacted, soil structure destroyed, and minimal amounts of nutrients for growing plants. You will also sometimes find areas that were used for dumping areas during construction where extreme caution and extra effort will need to be used to avoid being injured while working in the soil.

Step one for every gardener should always be to take soil samples to be tested to see what condition your soil is presently in and what recommendations are for amendments. Basic soil tests will check for pH, nitrogen, phosphorus and potassium levels. Other more extensive tests will help you determine needs for other micro and macronutrients, but those can be improved on later after you've conquered your soil's major limitations. Soil tests should be run every year so that you can apply just what your plants need and not over-apply (which can also cause problems). For information on how to take soil samples and a listing of soil labs visit http://marionswcd.org/soil/nutrient-management-and-soil-testing/

Step two for urban gardeners is to acquire compost and start your own compost pile. Compost will help your soil in many ways. Compost will help build soil fertility and bring in and sustain a variety of important, beneficial microbes. It will also increase your worm population and improve soil structure, helping with water and air level balance in the soil. Help with how to build healthy compost can be obtained from the Marion County Cooperative Extension office at http://www3.ag.purdue.edu/counties/marion/Pages/HomeYardGarden.aspx and from the SWCD website at http://marionswcd.org/going-green/lawn-and-garden/

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For More Information Contact the Marion County Soil & Water Conservation District

(317)786-1776 www.marionswcd.org

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Step three will most likely have to be tilling in urban areas. Most urban lots have a large proportion of clay in their soils and major compaction problems and will need to be tilled several times over the first few years. After soil structure is improved you may be able to go to No-till or "Lasagna Gardening" if that is your preference.

Step four is adding amendments as recommended by your soil test. Check the pH needs of the plants you will be planting and work to get your soil into the acceptable range. Proper pH will also help in releasing the phosphorus some other nutrients already in your soil.

Step five, after harvesting plan to plant a cover crop to protect your soil from erosion, add nutrients to the soil and improve soil structure with the great root systems found in many cover crops.

The Marion County Purdue Cooperative Extension is a great resource for all of your gardening questions. Contact them at

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