

**INSIDE GRUNDY COUNTY**  
**By Bill Arndorfer**  
**Butler-Grundy Extension Educator**  
**July 6, 2011**

**Rain Garden Benefits**

Rain gardens are a great way for homeowners to help improve the quality of water that comes from their property. Rain that runs off rooftops, driveways, streets and lawns ends up in storm drains and can carry with it sediment, grass clippings, floatable litter, nutrients and other debris that can end up in rivers, streams, ponds, wetlands and lakes. By installing a rain garden, a homeowner creates an area that will filter rainwater from a rain event before it ends up in surface waters.

A rain garden is simply a shallow depression that water flows to that allows the water to pond for a few hours so that it can infiltrate into the soil rather than runoff into storm drains. This infiltration process allows the water that ends up in our surface waters to be free or almost free of pollutants. In order for a rain garden to work well, it requires good soil percolation rates. In addition to the benefit of providing a sustainable way to improve water quality, construction of a rain garden can improve the beauty of the landscape, provide wildlife habitat and create additional interest in the yard.

It is difficult to visualize the amount of water that a lot may receive in a year. Rainfall in Iowa ranges from twenty eight to thirty six inches per year. That means that an acre of land will receive anywhere from 760,000 to 977,500 gallons of rain in a typical year. That would mean that a half acre lot would receive around 434,500 gallons or a quarter acre lot 217,250 gallons of water. To visualize this, a half acre lot would receive enough water to fill a four mile row of fifty gallon barrels. From this example, it is easy to see how installing a rain garden can impact a significant amount of water. Rain gardens can capture and infiltrate much of this water thus reducing the property's contribution to water quality degradation.

Location of the rain garden is important to how well it will work. When it is raining, you will need to spend some time out in the rain (one of those times when it is ok not to "know when to come in out of the rain") walking around your property observing where the water runoff occurs. The rain garden must be located so that water moves towards it. A low area where water stands may be a good location as long as the water percolates through the soil profile easily. In other words, if the water stands long enough in the spot so grass does not survive, then that location will not be suitable for the rain garden. A well suited location will result in water percolating through the soil in a twelve hour period. For example, if it rains in the afternoon then the water should be gone the next morning.

To learn more about rain gardens, consult *Rain Gardens-Iowa Rain Garden Design and Installation Manual* created by the Iowa Stormwater Partnership or contact the Grundy office of ISU Extension at 319-824-6979.