Healthy Soil for a Healthy Garden: Organic Approaches to Soil Care

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Sustainability Fellow, Summer 2012

Composition of Soil

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>25%</td>
</tr>
<tr>
<td>Minerals</td>
<td>4%</td>
</tr>
<tr>
<td>Organic Matter</td>
<td>25%</td>
</tr>
<tr>
<td>Air</td>
<td>46%</td>
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</tbody>
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Soil contains many nutrients with the three essential ones aiding a variety of functions:
- Nitrogen (N): healthy plant growth, seed and fruit production, quality of leaf crops
- Phosphorous (P): proper root growth, brighter flower colors
- Potassium (K): strong stems, disease resistance, fruit formation and quality, reduction of moisture requirements

Although nutrients can become depleted over time, the continued incorporation of organic matter into the soil will remedy their loss. The best kind of organic matter to use is compost.

All About Compost

Compost is a mixture of decomposed organic material, air, and water which contains necessary nutrients for healthy plant growth. When composting, it is important to maintain the proper ratio of carbon (browns) to nitrogen (greens).

Tips for speeding up the composting process
- Keep a 50/50 mix of browns and greens
- Keep the pile moist but not saturated
- Turn frequently to increase the rate of compost formation

High nitrogen (green) materials
- Grass clippings
- Vegetable scraps
- Manure

High carbon (brown) materials
- Dried, shredded leaves
- Straw
- Hay
- Woodchips

Soil Care in the Gardens

For the gardens we used an organic approach to soil care and nutrient enrichment:
- Raised beds filled with at least 50% compost
- Leaflan compost added to most beds in Porter Ave. Garden
- Leaflan compost and composted horse manure added to beds in Nelson Ave Garden

Merrill Neighborhood Gardens

Community Action Inc., along with the help of college volunteers, interns, and neighbors, maintains the Merrill Neighborhood Gardens which consist of two organic gardens on five city lots.

Porter Avenue Sharing Garden
- Wide variety of crops
- Attractive, public green space
- All produce available for neighbors to harvest

Nelson Avenue Production Garden
- Crops will be used for garden events and to support local, non-profit food projects
  - 5,000 sq. feet of corn
  - 100 tomato plants
  - 50 pepper plants
  - 90 pumpkins plants

Source for compost and soil information: The Wisconsin Garden Guide by Jerry Minnich. This book covers every aspect of organic gardening in Wisconsin from soil care to garden planning, to crop and pest information. Check it out at the Beloit College Library.

Feel like getting involved?
Be on the lookout for announcements on stuboard or from the CCoC about when the next volunteer event will be.

Acknowledgments: I would like to thank John Ramstad and Carly Helman of Community Action Inc. for their support and guidance of my work in the garden. I would also like to thank Yaffa Grossman, my faculty mentor and Director of the Beloit College Sustainability Program, for the advice, direction, and opportunity she has given me concerning my work this summer.