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SIU Local Organic Garden Initiative of Carbondale

L. May
*Southern Illinois University Carbondale*

M. Brandt
*Southern Illinois University Carbondale*

R. Tally
*Southern Illinois University Carbondale*

P. Connolly
*Southern Illinois University Carbondale*

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**Introduction**

In Carbondale, off of Pleasant Hill Rd. at the Vermi-composting facility is a small plot of land approximately one-third acre in area that will become the site for the student organic garden. The site itself is a quadrangle in which crops will take up a 25m x 25m section in the front of the Vermi-composting facility. There will be four raised beds that are 18 ft. tall, 4x20 ft. in area. This land shares the same beautiful soil and moderate climate the makes southern Illinois so productive and lush. This land has been fallow for years, serving only as a “front lawn” for the Vermi-composting facility. However, this plot has had soil testing done and shows potential because it is a nutrient rich, which is expected from this area. This land is owned by SIU, and there have been many discussions between university representatives, members of the Student Environmental Center (SEC), and a 20 student strong RSO, with the goal of transforming the land into a sustainable and beautiful organic campus garden. The yield of the garden will be served in the campus dining halls. This food will decrease our food miles at SIU, supporting the local community, and, ultimately, helping to create a culture of “locavores.” Working with us is Chef Bill Connors, chef at Lentz Hall, who has been an integral part in deciding which crops should be planted to fill his menu at the halls.

**Water Needs Analysis**

Water is an obvious and crucial input to a successful garden. The Vermi-composting Center has offered to allow the student garden to use water from the facility for irrigation during the first year of planting. In the future, the Center has offered to investigate installation of gutters and a system to capture rainwater runoff from the building’s roof for use for the garden. Rainwater is usually free of salts, and using rainwater also reduces energy consumption associated with providing potable water for non-potable purposes. A general irrigation recommendation for vegetable gardens is to supply one inch of water a week using irrigation to make up for shortfalls in precipitation (Univ. of Ill. Extension). We may also wish to induce slightly acidic soil conditions to improve micronutrient availability (such as ferric iron and manganese) and to improve soil waterholding capacity. Irrigation may be considered. Since nitrogen levels are relatively low, blood meal, canola meal or fish powder could also be applied (Organic Gardening Guru). Phosphorous levels in the first horizon are adequate, but this nutrient may need to be supplemented if the second horizon is also used. Sources of phosphorus include bone meal, rock phosphate or rock flour (Organic Gardening Guru). We also wish to induce slightly acidic soil conditions to improve soil test results. Examination of our soil tests show that the soil is alkaline (pH 8.0 or more). Soil tests will be conducted every year to assess soil conditions for each proposed crop (such as potatoes). This soil analysis provides a basis for initial garden planning and further research.

**Garden Site and Design Elements**

Water samples were collected from the upper and lower horizons from the side of a 2 foot hole in the center of the site. The samples were then transported in plastic bags, dried, and analyzed using the LaMotte Soil Analysis Kit. A Jackson County Extension Officer performed basic pH, organic matter, and nutrient tests on soil from the first horizon. A summary of results from our own analysis and the extension office analysis are given respectively in Tables 1 & 2. This land has been fallow for years, serving only as a “front lawn” for the Vermi-composting facility. However, this plot has had soil testing done and shows potential because it is a nutrient rich, which is expected from this area. This land is owned by SIU, and there have been many discussions between university representatives, members of the Student Environmental Center (SEC), and a 20 student strong RSO, with the goal of transforming the land into a sustainable and beautiful organic campus garden. The yield of the garden will be served in the campus dining halls. This food will decrease our food miles at SIU, supporting the local community, and, ultimately, helping to create a culture of “locavores.” Working with us is Chef Bill Connors, chef at Lentz Hall, who has been an integral part in deciding which crops should be planted to fill his menu at the halls.

**Soil Testing Results**

Examination of our soil test results allow us to consider several actions to improve our soil. While the organic matter content of the soil is moderate (3.5 %), we will try to build the organic matter content in the soil to further improve the soil structure and provide nutrients. The addition of compost is planned, and other additions may also be considered. In particular, a priori matter to improve nitrogen availability may be considered. Since nitrogen levels are relatively low, blood meal, canola meal or fish powder could also be applied (Organic Gardening Guru). Phosphorous levels in the first horizon are adequate, but this nutrient may need to be supplemented if the second horizon is also used. Sources of phosphorus include bone meal, rock phosphate or rock flour (Organic Gardening Guru). We also wish to induce slightly acidic soil conditions to improve soil test results. Examination of our soil tests show that the soil is alkaline (pH 8.0 or more). Soil tests will be conducted every year to assess soil conditions for each proposed crop (such as potatoes). This soil analysis provides a basis for initial garden planning and further research.

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