Building Partnerships: Connecting Communities, Master Gardener Volunteers, Industry, and Extension Through Tree Surveys

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Abstract: *Extension, Master Gardener volunteers, and industry professionals can partner in order to provide a significant benefit to a community. The result of this partnership and subsequent tree inventory provides communities with an essential street tree management tool at a substantial cost savings. In addition, there is a greater awareness among the partners regarding their assets and abilities that can lead to a positive impact on a community.*

Introduction

Ohio State University Extension's (OSUE) signature program, Why Trees Matter, is designed to raise the awareness and demonstrate the social, economic and environmental benefits of urban and community forests. One component of the program is using volunteers to conduct community street tree inventories. Master Gardener volunteers (MGV) and others have been used for this purpose (Prochaska & Hoffman, 2010) with minimal training. Individuals are motivated to participate in this type of project when they learn new skills and have an interest in helping the environment and promoting community betterment (Cleveland & Thompson, 2007). Today's emphasis on environmental issues, such as storm water management and retention, as well as sustainability efforts, make it even more essential to inform and educate clients and public officials regarding the benefits of trees. Bringing volunteers, industry professionals, and municipal staff together for a common cause strengthens these relationships with Extension.

The common bid price for a professional company conducting an inventory can be somewhere around $3.00 per tree (Sydnor, Subburayalu, & Bennett, 2011). Many small to medium-sized communities do not have arborists, the capacity, or the funding to conduct tree inventories. With Extension's leadership and community partners, an inventory can be completed that can lead to stronger relationships among the organizations as well as a significant cost-savings.

Method for Inventory

Extension provides leadership to this effort by organizing the partners and identifying skill sets. Typically the industry, along with Extension, provides the knowledge and skills to teach species identification and measurement techniques. Extension also brings organizational skills and volunteer training capabilities to the table. Municipal staff helps to identify areas to survey and ensure that community officials are aware of the project.

Volunteers conducting the inventory are trained by Extension staff and industry partners on tree identification (to the genus) and on how to use the Biltmore stick and diameter tape to measure diameter. They learn to measure a tree at diameter at breast height (dbh). Prior to conducting an inventory, a practice run is recommended. Inventory a small population of trees (e.g., located in a park or cemetery) to gain experience needed for a larger project.

Extension pairs volunteers and industry professionals ahead of time in teams of two and assigns a geographical area to be measured. Extension staff serves as floaters and are available via cell phone for questions. Each team is provided with measuring tools, spreadsheet, clipboard, pencils, and any tree identification resources that might be helpful. In addition, bottled water, and breaks are provided as needed.

Data analysis begins after measurement is completed. The inventory and measurements are entered into the i-Tree software analysis program, a research-based tree analysis program. The i-Tree software is freely accessible and can be found at <http://www.itreetools.org>. This peer-reviewed software provides a better understanding of the economic and environmental benefits and services urban trees provide.

Benefits

The benefits of this partnership are numerous. The effort leads to a raised awareness in industry professionals and community leaders regarding the passion and commitment of the MGVs to their community and the environment. Many are introduced to the MGV program for the first time.

The street tree survey and the economic and environmental data provided by the i-Tree software can be used by public officials to guide them in their tree maintenance and planting decisions. The survey is valuable in determining if there is a lack of diversity in tree species as well as bringing to light potential problem areas. For instance, in communities affected by emerald ash borer, managers will learn the number of ash trees that will need to be addressed (Bennett & Chatfield, 2010).

Industry representatives can use the data to promote and market trees and the need for tree planting programs in the community. They can also work with Extension to host tree-planting events and educational programs throughout the year.

MGVs gain a better understanding of the green industry by working side by side with professionals as well as an understanding of the challenges faced by community leaders in tree planting and maintenance issues during tough economic times. In addition, MGVs, and in some cases, municipal staff, gain new skills by learning tree species and measuring techniques.

Finally, there can be great benefits to all parties involved if time is given to publicize and raise public awareness during the process. Using the data obtained by the software, the participants can raise the awareness in the community as to the value of the public trees and the importance in maintaining them as well as the overall Extension MGV program.

Drawbacks

Volunteers may not be able to identify all of the trees. Industry professionals can be a great resource. If the team is not able to identify a tree at the time of the inventory, they can make note of this, and a professional can go back and confirm the identification.

Volunteers may be inconsistent in measuring dbh. Thorough training and stressing the importance of accurate measurement helps to prevent this. In addition, during the practice run, professionals should monitor the volunteers to make sure they are doing it correctly.

Staff should stress that volunteers are not to analyze a tree for its structural integrity. They do not have the skills for this. Therefore, if they see a tree that might be a suspected hazard tree, they make note of this on the spreadsheet. The professionals follow up on this and make a determination.

Conclusion

Conducting a public street tree inventory is an excellent way to bring together entities that normally wouldn't work together for a common cause. Extension obtains recognition and increased awareness by providing leadership to this effort. The likelihood of a small to medium community having the economic means to hire someone to conduct an inventory is slim. Therefore, the MGVs and industry professionals help to fill this void. The benefits of having a

completed tree inventory and report of the environmental and economic value of the public trees directly affect the community in which all of the partners reside and far outweigh the time necessary.

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