Growing the McMaster Carbon Sink Forest

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Participant planting a white pine tree at the McMaster Carbon Sink Forest.
Photo credit: Peter Rukavina

Overview

McMaster Centre for Climate Change in collaboration with Nature at McMaster, the Academic Sustainability Programs Office, and Trees for Hamilton, are working to develop a model forest. This Carbon Sink Forest will facilitate carbon sequestration through planting trees to help mitigate climate change.[1] Trees are a fundamental part of life, responsible for supplying and maintaining a habitat for over 80% of the world's terrestrial biodiversity.[2] Trees also sequester harmful emissions and provide cleaner air.[3] Approximately 46% of trees have been removed globally and Canada ranks first among nations with the most greenhouse gas emissions per capita.[4]

The McMaster Carbon Sink Forest has planted over 500 trees in the past two years to help alleviate some of the devastating impacts of climate change. The goal of our project was to grow the McMaster Carbon Sink Forest, a forest that absorbs more carbon than it releases, by planting 300 trees.

Objectives

1. Educate about and engage community in McMaster's Carbon Sink Forest
2. Facilitate a community tree-planting event
3. Share recommendations for continuous improvement

Reporting

To achieve our first objective, we created informative and engaging Instagram posts and stories on the importance of carbon sink forests and promoting the tree planting event. Leading up to the event we shared reminder posts with pictures and videos. Emails were sent with graphics and additional information on carbon sinks. On the day of the event, we hosted an Instagram takeover providing directions to the event, tree planting procedures, and key facts about carbon sink forests. We also interviewed participants highlighting community members' experiences engaging in the tree-planting event. In total, the posts reached over 7,500 accounts and were shared 132 times*.

To achieve our second objective, we worked with several collaborators to facilitate the tree-planting event. Prior to the event day, we helped transport 300 native trees and flag their planting location at the site. On the day of the event, we provided local food, set-up planting supplies, and welcomed the 125 participants. Our partner from Trees for Hamilton provided a demonstration and answered questions on how to effectively plant trees, use mulch for weed prevention, and apply tree wraps to deter pests. Following the event, we thanked collaborators, shared photos, and contributed to a Daily News story.

To achieve our third objective, we facilitated a participant feedback survey and debrief meeting with event partners. During the debrief meeting, we shared our survey results and personal reflections to highlight what was successful, and what can be implemented in the future. We also selected and communicated the next community tree planting event, thereby planting the proverbial seeds to further achieving our goal of growing the McMaster Carbon Sink Forest.

Collaborators

We would like to give a special thanks to our Community Project Champions, Abbie Little and Lejla Latifovic, for providing us with the resources and guidance to reach our objectives as well as landowners, Bill Walker and Mark Tamminga for making the Carbon Sink Forest possible. We also thank supporters from Trees for Hamilton, Trees for Life, Nature at McMaster, McMaster's Centre for Climate Change, Office of Alumni Engagement, the President's Office, Faculty of Science, and Academic Sustainability Programs Office. We also thank the SUSTAIN 3S03 instructional team for their continuous support and guidance. Finally, this would not have been possible without the community members for their participation and engagement.

See a full list of references here.

*As of November 15, 2022