Soil Science Simplified: Fun on the Horizon

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Abstract

The Crop, Soil and Environmental Science Club at the University of Tennessee strives to continually promote soil's importance through education and outreach. This year we expanded that goal through our creation of a newly developed University of Tennessee Soil Outreach Program (SOP). This outlet became an ever expanding forum to teach the local Knoxville area youth about soil and its environmental and agricultural importance. The SOP developed a number of activities tailored for kids grades K-12 meant to inform and stimulate creativity. These include exercises such as soil texturing and trivia games for those attending local farmers markets along with visiting a children's museum and Montessori school to discuss soil formation and proper land use The members also assisted with a soil judging competition for FFA and 4H students in Clay County, TN, and developed an erosional control demonstration model for UT's Ag Day celebration. Along with education, our club is active in our local farming community. Our members volunteer at outdoor organizations such as Beardsley Community Farm, a CAC AmeriCorp foundation, and UT's Organic Farm. Through our involvement with schools, farms, and the local community we have raised awareness of soil and its significant role as one of our most valuable natural resources.

Fig 5. Core sample used for soil structure, color and texture demonstrations.

Objectives

- Teach K-12 students about soil use, health, and conservation
- Promote soil science and healthy soil practices in Knoxville and throughout East Tennessee
- Continue our role as an active volunteer organization and resource within the community

Fig 1. Club members assisting students as they describe practice soil pits.

Fig 2. High school FFA and 4H land judging competition Clay County, Tennessee.

Fig 3. Soil cover and erosion display created by the Crop, Soil, and Environmental Science Club.

Materials and Methods

- Developed presentations on soil conservation for local events, ag days, and farmer's markets
- Traveled to present soil awareness programs in schools and summer camps around Knoxville, Tennessee
- Organized and monitored a high school soil judging event within Clay County, TN in which seven counties were represented
- Directed hands-on soil exercises to enhance students understanding of soil physical properties
- Created soil erosion and filtration models to be used for current and future soil best management practice demonstrations

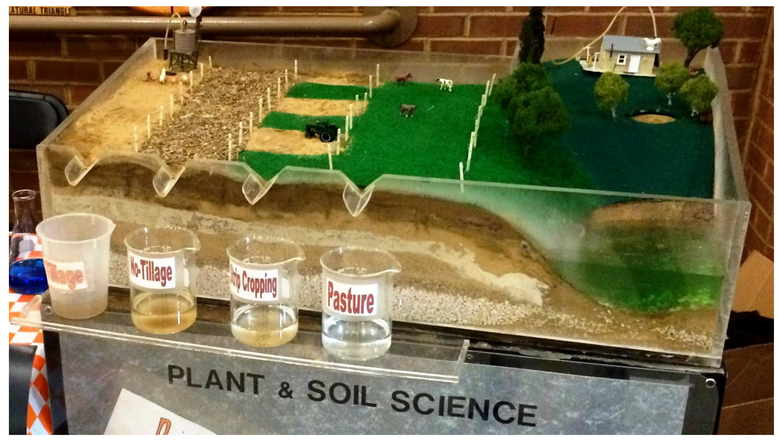

Fig 6. Best management practice model built as a teaching aid for various outreach events.

Discussion

Fig 4. Comparing soil from a construction site and a local organic farm at the UT Farmer's Market.

Our club met with hundreds of students, many of whom had no experience with soil science and agriculture. Through our interactions we were able to peak the children's interest and get them excited for the first time about soil science and environmental awareness. At the soil judging competition we talked to high school students from seven rural farming counties about soil's importance to agriculture and how they can play a part in soil conservation. From children in urban areas to young adults in farming communities, we have planted a seed for soil science in the minds of our youth.

Conclusion

- The past 6 months we reached out to nearly 350 K-12 students across East Tennessee through a newly developed UT Soil Outreach Program.
- Our club not only increased awareness about soil and environmentally related issues but also received positive feedback from students and educators.

Fig 7. Conducting an erosion demonstration at the Oak Ridge , TN Children's Museum.

Fig 8. Teaching children soil texture using the textural triangle.