Early Career Members

The Rewards of Being an Industry Soil Scientist

by Eric B. Sucre

It seems like yesterday when I finally realized that all of my field and lab work was complete. The only thing remaining to complete my Ph.D. was the arduous task of coherently writing a compelling story of my research findings, so that they could be published in the peer-reviewed literature. This realization also sparked the excitement and nervousness associated with finally applying for jobs. As a general rule of thumb, I think it is prudent to keep all career paths open when trying to land your first Ph.D. level job and minimize geographic limitations. Consequently, I applied for academic, government, and industry positions across the country, each with their own set of pros and cons. Ultimately, I selected an industry position as a sustainability scientist with Weyerhaeuser Company, which has 110+ year legacy of forest management. Over the last 75 years, land stewardship and environmental responsibility have become major objectives of Weyerhaeuser, and its research program has helped make the company a global leader in sustainable forest management.

I have now been working for Weyerhaeuser for more than five years and have gained experience in an array of areas, specifically: (i) implementing short- and long-term strategic field research experiments across our 4.5 million acre southern ownership, (ii) providing operational support to our Timberlands business, (iii) conducting fertilizer development research, (iv) collaborating with multiple universities on long-term soil sustainability associated with managing plantations intercropped with a dedicated energy crop (e.g., switchgrass) and intensive biomass removal (e.g., harvest residues), (v) refining/developing carbon-based life-cycle analysis (LCA) models, (vi) providing policy support to federal and state agencies, and (vii) participating in international research in Brazil mapping soils.

Weyerhaeuser’s research and development program is structured in two ways: (1) external research that focuses on proactive environmental science, providing a science base for sustainability goals and (2) internal research that focuses on new technology development and operational support (Fig. 1). I have had an opportunity to conduct research in each of the two research buckets and will provide some perspective and examples in the next two sections.

External Research—Proactive Environmental Science

Whether we work in agriculture or forestry, understanding how our management affects the long-term sustainability of these systems is imperative. My work with Weyerhaeuser focused on co-developing our Weyerhaeuser Biomass Sustainability Platform (Fig. 2, next page). This research platform was initially in response to a Chevron-Weyerhaeuser joint venture, Catchlight Energy, LLC. The focus was to determine if any changes in our forest management necessary to generate energy biomass caused any environmentally detrimental effects to water quality and quantity, soils, wildlife, and plant biodiversity. We also used the research sites to collect data for parameterizing our LCA model so that we could better...