



Ag Science Student Anne Mills Experiences Field Research with Collaborative Internship

By Lisa Fields

Anne Mills, 2015 Cornell graduate in Agricultural Sciences, never dreamed she would be presented with such diverse opportunities. Mills transferred to Cornell after completing her freshman year at SUNY Cobleskill in her hometown. She commented, "My family didn't farm, but my neighbors did, and I grew up with an appreciation for farming and a love of hands-on outdoors activities."

Before she went to college she spent a year in Ecuador as a Rotary Foreign Exchange student. Mills explained, "The experience developed my desire to make a positive impact on the world. My time there expanded my world view and inspired me to study agriculture, to be involved with increased food availability and improved nutrition. I also discovered how much I loved learning about other cultures, especially the food!"

At Cornell, Mills spent her sophomore year summer in Chiapas, Mexico, through Cornell's "Experience Latin America" course, sponsored by the non-profit AMEXTRA. She helped rural families in their home gardens and helped to establish pilot backyard poultry programs. The experience deeply affected her. "I realized how important it is to me to be involved in the learning process very directly with people as individuals, and how satisfying it is to be immersed in their culture."

Mills looked for a way to merge her interests with a potential career. That opportunity arrived in the summer of 2014 when she was accepted into a unique, collaborative Cornell Cooperative Extension (CCE) internship program funded by the College of Agriculture and Life Sciences (CALs). Mills' hands-on experience was supervised by Bill Verbeten (Field Crops Specialist), Mike Stanyard (Team Leader and Field Crops Specialist) and Nancy Glazier (Small Farms Specialist) of CCE Northwest New York (NWNy) Dairy, Livestock and Field Crops Team.

"My internship in Western NY was my first exposure to research fieldwork," Mills said.

"Bill taught me the procedures and provided continual guidance. After my initial introduction to the work, I was responsible for weekly monitoring of Western Bean Cutworm moth traps in corn fields in four counties. It was always interesting to see what was there and it was exciting to be the one collecting the data and helping relay the results to local growers."

Mills described additional field crop activities. "I scouted soybean, corn and malting barley fields for plant diseases to assess patterns of occurrence and provide data along with samples to Dr. Bergstrom and the Pathology Lab. The team contacted growers with the results of routine field scouting for insect pests and I later developed graphs of populations and changes over time. I worked with Bill to use Google maps as a way of communicating the scouting locations and results, correlating corn growth stage along with insect life cycle. It's a great way for growers to be alert to potential insect problems in their region."



Anne Mills at a Western Bean Cutworm trap in Monroe County during her CCE internship with the Northwest New York (NWNy) Dairy, Livestock and Field Crops Team of Cornell Cooperative Extension.

Mills' internship included experiences completely new to her in the realm of dairy production, too. She noted, "I got to see an udder dissection with Libby Eilholzer as part of a milker training session presented in English and Spanish at a dairy farm, learned about management intensive grazing at pasture meetings with Nancy Glazier, and attended Extension Field Days. The best part was listening and talking to the farmers. The insight I gained into their daily lives and concerns connected the work I was doing with the purpose and gave me an understanding of the whole farming process."

"During her internship, Anne eagerly engaged in numerous learning opportunities with all of the Team staff that covered many aspects of agriculture," Verbeten noted. "She completed assigned tasks and cheerfully dealt with the summer heat along with long hours in the field and on the road. Anne also applied knowledge she gained to her fall coursework."

Mills return to campus brought a focus on written communication skills for an extension audience. "The factsheet writing course of Dr. Ketterings was highly beneficial," she said. "The topic I chose was [Malting Barley](#). It's a relatively new crop for New York that I worked with in the field, and more information seemed to be needed. I researched what was already available to producers and focused on two aspects of production that were lacking: harvest and storage. Writing as a several week course gave me a perspective I don't get when I'm writing along with other coursework and compose it in a day or two. The process caused me to make changes I would not have otherwise seen were needed. We started with an outline, which helps create a well-organized written piece. With each step of the writing process we met as a class and completed reviews of each other's work. After a full text draft was done, our work went to an extension review team of three people. Their input generated several more rounds of editing."

Mills never felt intimidated by the editing process, noting that all the steps involved were very manageable. "Quirine provided very good

guidance along the way. This was a really cool project, and quite rewarding, because the factsheet will be read by famers who can use the information. This course also helped improve my writing skills."

Ketterings added, "The factsheet writing course is a good follow-up for the CCE intern program as the students learn to write for an audience rather than for a grade. In the review process, I connect students with Extension Educators so the students get feedback on the outline and the full drafts by folks that will actually be using the factsheets. It is a win-win situation for everyone involved."

The culmination of Mills 2014 internship was the CCE Internship poster and oral presentation session where students talked about their experiences. She noted, "Preparing my poster and talk tied together what I learned, and I enjoyed presenting it."

Diverse hands-on experiences gave Mills a solid foundation to venture into agriculture as a professional. "Learning in such a direct way about agriculture from my CCE internship in my home state integrated well with experiences I had in Ecuador and Mexico," Mills summarized. "I highly recommend this internship to others as I learned skills last summer that are valuable for any job. How important it is as a professional to be on time and to have solid communication skills, to be outgoing and to ask questions. The NWNY Dairy, Livestock and Field Crops Team staff members are very skilled and were so generous with their time. It was a very valuable experience to learn from each of them. I do plan to go to Grad school, but I recognize that I need to get a year or two of work experience under my belt before I can choose my graduate study focus. Ultimately, I want to pursue a career that's my true passion, not just a job."

(February 6, 2015)



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The **Nutrient Management Spear Program** (NMSP) is an applied research, teaching and extension program for field crop fertilizer and manure management on dairy and livestock farms. It is a collaboration among faculty, staff and students in the Department of Animal Science, Cornell Cooperative Extension, and PRO-DAIRY. Our vision is to assess current knowledge, identify research and educational needs, facilitate new research, technology and knowledge transfer, and aid in the on-farm implementation of strategies for field crop nutrient management including timely application of organic and inorganic nutrient sources to improve farm profitability while protecting the environment. An integrated network approach is used to address research, extension and teaching priorities in nutrient management in New York State. For more information on NMSP projects and extension/teaching activities, visit the program website (<http://nmsp.cals.cornell.edu>) or contact Quirine Ketterings at qmk2@cornell.edu or (607) 255-3061.