



Certified Crop Advisor Course has Multiple Benefits for Cornell Ag Science Students

By Lisa Fields

The Agricultural Sciences major at Cornell University has a core curriculum and five concentrations: Sustainable Agriculture, Crop Production and Management, Animal Science, Business, and Education and Communication. Students in the Crop Production and Management concentration have the opportunity to study for the Certified Crop Advisor (CCA) accreditation program in their senior year. Nick Culver, Andrew Lefever, and Rachel Breslauer took advantage of that opportunity. All three will graduate this May with a degree in Agricultural Science and provisional CCA certification.

For Culver, there was never any doubt of his path through college. "I grew up in Salem, New Jersey, on about 300 tillable acres that my grandfather farmed," he explained. "It's been rented out for many years, but my ultimate goal is to produce vegetable, grain and forage crops on the home farm. I've chosen courses within the Crop Production and Management concentration that I felt would apply to that goal. I liked the flexibility of the curriculum, as I could pick up business and other courses that interested me from other concentrations, too."

The flexibility of course options along with hands-on research work helped Lefever, who starts work for Agri-King, Inc. as a dairy nutrition consultant after graduation, choose his career. "The opportunity I had for diverse, in-field learning experiences caused my interests to evolve over time, and the course options supported that. During my internship with the Nutrient Management Spear Program (NMSP), we measured carbon dioxide, methane and nitrous oxide emissions from corn and grass hay under different manure management regimens. That inspired my interest in the dynamic connection between forage production and animal nutrition, so I took Dairy Cattle Nutrition from the Animal Science concentration. Courses such as this one helped set my direction."

Breslauer, who will graduate with distinction in research (Honor's Program) started as a biology major. "I transitioned to Agricultural Sciences and the Crop Production and Management concentration during my freshman year," she said. Then I sought diverse experiences in the field along with research work to help me prepare for a meaningful career." Her Honors thesis, "Spatial Variability of the Corn Stalk Nitrate Test and Opportunities for Improved Sampling Strategies" reflects her soil and nutrient management coursework and internship with the NMSP. Breslauer also took plant breeding courses, leading to a summer job for Dow Agro-Science with corn crop protection, and her upcoming employment by Monsanto in trait discovery in vegetable crops.

Culver, Lefever and Breslauer took the 2-credit Certified Crop Advisor (CCA) course, designed to prepare students for professional certification using a non-traditional class format.



Rachel Breslauer (left), Nick Culver (middle) and Andrew Lefever (right), Agricultural Sciences seniors at Cornell University.

Professor Quirine Ketterings, who teaches the CCA course, leads the NMSP, and co-chairs the Northeast Region CCA (NRCCA) program, explained, "The course material is the same on-line material we provide to professionals, and

the course is mostly self-study. Students take the course in the fall semester, and then register for and take the certification exams the following February. Students who pass the certification exams earn provisional CCA status if they do not yet have the two years of experience required to be a fully certified CCA. Typically students can claim summer internships as work experience and earn up to a full year of experience toward their CCA certification. They would then only need to work for another 6-12 months (depending on the job) to gain the remaining experience and become fully certified professional CCAs. This credential assures clients and employers of a certain level of knowledge so it's an important stamp of professional knowledge and skills."

Ketterings described the CCA course's unique, self-study format. "There are four modules in the course that fit the CCA competency areas: Soil Fertility and Nutrient Management, Pest Management, Crop Management, and Soil and Water Management. Students access the NRCCA training manual and web-based learning modules and take exams as we go along."

A key part of the learning process is the assignment to create good quiz questions. "It is a great learning method for students to have to create exam questions. It makes them think about how to ask good questions and to recognize what is really important for CCAs to know. And to be able to ask the right questions, you have to understand the material," Ketterings explained.

"Preparing the quiz questions helped me learn the topics thoroughly, as I found myself reviewing the material intensively," Culver said, noting, "Although procrastination was a challenge, setting my own study schedule helped me learn how to manage my time. The three of us worked together as a team to develop the quiz questions and test each other."

Lefever concurred, "I read everything with a lot more intent to soak it all up than I might have in a course where I'd be taking notes from a teacher's presentation."

Breslauer added, "Understanding how to make a good exam with questions that test people's knowledge rather than their skills at interpreting the test writer's wording was really eye-opening. That skill could be very useful to me in the future."

The three students took both the international and regional CCA exams in February and passed them. They felt the CCA course, exams and certification integrated well with their Crop Production and Management courses. Breslauer said, "It's such a plus to be able to study for the exam while you're a student and in that mode of life. It also decreases barriers for agriculture graduates to enter industry with the CCA in hand. Employers look for it on your resume, and it affirms your level of knowledge."

Lefever described how the provisional CCA has already proven useful for him. "I was traveling with my Agri-King training supervisor, visiting dairy farms where I'll be working. A question came up about the efficacy of top-dress application of potassium fertilizer. I double-checked my response with Quirine to make sure what I had said was correct and to be better able to answer a similar question next time. It was great to confirm my knowledge and put what I learned in class to use."

The students all concurred that the CCA course was part of a robust Agricultural Sciences curriculum that prepared them well for employment and graduate school. "Having the internship and student work experiences along with the classes made my experience at Cornell well-rounded," said Culver, adding, "It's critical that the theoretical information from class can be applied to the real world of the farm. The CCA course was a summary that helped bridge those two worlds."

(May 3, 2016)



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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.