



“If we work together and have a common goal, we can move mountains.”

An Interview With Dr. Quirine Ketterings

By Melanie Soberon
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“2008 was a year full of major challenges for me but there was a clear highlight: our move to Morrison Hall,” said Quirine Ketterings, Associate Professor. “My hope is that this move will allow us to work even closer with the students, staff and faculty in Animal Science to develop truly interdisciplinary teams and solutions to challenges in agricultural environmental management.”

The following interview with Ketterings provided the perfect venue to not only gain perspective of the path that led to her current position at Cornell University, but also to the statewide contributions her research has made in nutrient management, and the future goals and challenges she embraces with the upcoming year.

From the Netherlands to Ohio State to Ithaca, NY. What led you on this journey, not only across the world, but in academic disciplines?

I grew up in the province of North Brabant, southern Netherlands. Although surrounded by farmland, I did not grow up on a farm. I got interested in world food production, being exposed to farming in my direct surroundings and learning about other cultures in school. After graduating from high school, I left home to pursue a BS degree in Tropical Agriculture at the International Agricultural College in Deventer, the Netherlands. During my summers in Deventer, I worked as an intern on Dutch farms in dairy and vegetable production. We all had to do an international internship as well and that gave me a chance to live and work in Sri Lanka for a year. I worked in the agricultural sectors of a school for underprivileged youth, which was an enormously enriching experience. I got a chance to do a senior thesis research project on nitrogen management for sweet corn that last year, and that project gave me my first exposure to independent research.

After graduation, I went back to Sri Lanka to work as a translator for the Red Cross for four months and then flew to Switzerland to join three friends with whom I was to run a “summer alp” that year, managing a 135 cow Brown Swiss herd and making Swiss alp cheese and butter.

My senior thesis project and experiences in Sri Lanka and Switzerland convinced me to pursue a graduate degree, so after it started snowing in Switzerland and we all went home (cows included), I enrolled in Wageningen Agricultural University’s MS degree program in Soil and Water Management.

My MS degree included two thesis projects, one in the Ivory Coast, and the second one at the Ohio State University. I really enjoyed the applied research, combination of work in the field and in the lab, and working on projects with farmers that had direct implications

for the farmers, so when I was offered a scholarship to pursue a PhD degree at OSU, I grabbed it with both hands. My dissertation research took place in Indonesia, where I studied the effects of fire intensity on soil properties in slash and burn agriculture. While in Indonesia, my advisor sent me the job advertisement for my current position at Cornell and urged me to apply.

My current position allows me to integrate a passion for extension, research and teaching and to dedicate my energy to improvement of agricultural environmental management of dairy and cash grain farms in the state. It has provided me with contact to outstanding colleagues both at Cornell and among stakeholders in the state. I really enjoy working with our field crops extension educators, farmers and their consultants on projects that cover the state's diversity in soils and weather. This state is really fortunate to have a tremendously dedicated group of extension educators out in the counties. We developed a collaborative network that has been very productive and tremendously rewarding to all of us. And...it has contributed to changes in nutrient management, including 165 million pounds of P₂O₅ fertilizer savings since 2000.

I understand you and your research group do quite a bit in regards to helping production agriculturists reduce their environmental footprint in terms of soil quality and crop production. What might you say is the major goal(s) for your group regarding this endeavor?

I don't work alone. Karl Czymmek with the PRO-DAIRY program is a key collaborator to our program. Our core staff consists of Greg Godwin, Patty Ristow, Caroline Rasmussen and Sheryl Swink. We currently have one graduate student in the program, Anne Place, and just expanded our team with two postdocs, Sanjay Gami and Kulbhushan Grover. Our extended team includes many of the field crops extension educators in the counties as well as consultants and producers that host and help with our numerous on-farm research projects.



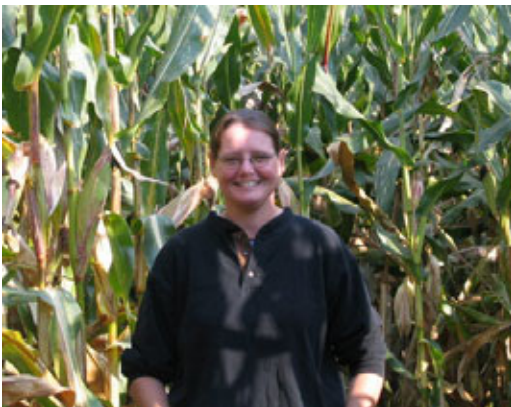
Back row – Sheryl Swink, Quirine Ketterings, Patty Ristow, Kevin Dietzel, Karl Czymmek, Sanjay Gami, Kulbhushan Grover
Front row – Chie Miyamoto, Anne Place, Caroline Rasmussen, Greg Godwin
Not pictured – Undergrads Sarah Moss (An. Sci.), Chang Lian (Ag Sci.), Emma Long (Ag Sci.), Kate Orloski (Sociology)

Our mission is to assess current knowledge, identify research and educational needs, conduct applied, field- and laboratory-based research, facilitate 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 profitability and competitiveness of New York State farms while protecting the environment.

As a crop and soil scientist today, what are some of your main concerns with regards to modern agricultural practices?

There are many environmental and regulatory indicators suggesting that we cannot continue to overload fields with excess nutrients; tactical management changes are needed to address this issue. Our whole farm balance project shows several examples of farms that have greatly reduced imbalances over time and our challenge is to do the research and develop the extension tools and programming necessary to help the entire industry move towards a more sustainable production system, while enhancing profitability.

My greatest concern is the long-term support for our university-based extension mission. I strongly believe that extension, research and teaching missions should be integrated within the university. Several countries have eliminated extension and several states surrounding us are moving in the same direction. My observation in other countries is that there was little objection to the elimination of extension at the time, but that it is truly missed in the field after the pipeline of knowledge is emptied and people begin to notice that there are many pieces that just will not be picked up by the private sector. It is my hope that Cornell University will truly remain the Land Grant University of New York State, supported by the State, by University leadership, and by stakeholders.



What are the basic recommendations/suggestions you would most like to communicate to other researchers as well as producers in the field?

Teamwork! If we work together and have a common goal, we can move mountains. Alone, we kick little stones at most. We contributed to a greatly improved P balance for New York State by working with the industry, with extension, with consultants, with agencies, as true partners in the projects. If everyone feels ownership for the projects and if we can combine our research and extension missions, while keeping our eye on farm economics, we can have impact in a couple of years.

As for producers, one of my hopes for my career is that, by the end, I will have convinced at least 100 producers to get involved in on-farm testing of management decisions and each convince a few more to do the same. If 100 producers would put out test strips on their fields for whatever aspect of management they are interested in (e.g. fertilizer rate, source, placement and timing, manure use, etc.), and if they get us and their farm advisors

involved so we can build a solid database, we can find much quicker answers to questions related to manure use, cover crop use, reduced tillage alternatives, etc. as well as facilitate quicker implementation.

You've mentioned some of the goals of your research group - what projects or programs are underway to address those and what new ones are you planning in the near future?

Kettering's group has over 10 ongoing applied research/extension projects addressing current nutrient management issues, which can be read about in more detail at <http://nmsp.css.cornell.edu>. She welcomes any student with an interest in applied research and extension, and the drive to learn and explore to “check us out and join us for a semester (or longer)!”

