



Turkish Professor Draws Inspiration from NMSP's Extension and Research

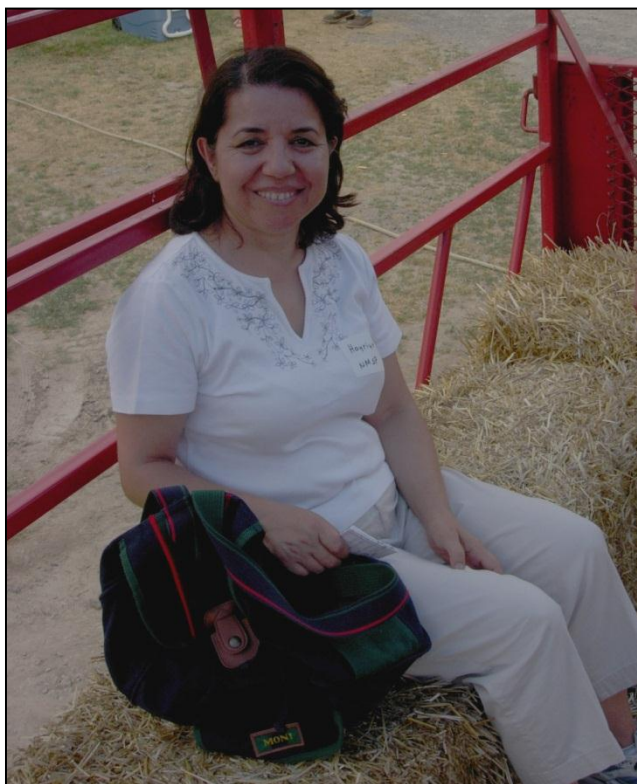
By Lisa Fields

In the summer of 2012, Cornell's Nutrient Management Spear program (NMSP) directed by Associate Professor Dr. Quirine Ketterings hosted a visiting scholar from Turkey. Dr. Hayriye Ibrikçi, a Professor from the Soil Science and Plant Nutrition Department of Cukurova University in Adana connected with Ketterings through the Higher Education Council of Turkey's visiting scholar fellowship program. Ibrikçi explained, "I have been involved in many N, P and K research projects in field plots, greenhouses and growth chambers. I have also done many modeling approaches, but have not had much opportunity to concentrate on delivery methods of the information to educate the farmers. I have often felt this lack as my appointment is both research and teaching. When the visiting scholar opportunity was announced, I searched for a suitable experience to meet that interest and enrich my research. That's how I connected with Quirine."

Ibrikçi was the fourth international visitor hosted by the NMSP. Ketterings explained: "Hayriye emailed me in October of 2011. She indicated a keen interest in learning more about our integrated extension and research activities and sharing her experiences in Turkey with me, my staff and our students. We had hosted other international visitors from China and from Turkey, in addition to five students from the Netherlands. It is not always possible for us to give staff and students, or even myself, the exposure to agricultural research and extension work in other countries. Travel is expensive, so whenever I have the opportunity, I welcome professionals from other countries to our program. Hayriye's interest in our extension and applied research approach made her a very good fit with our program so I invited her to join us."

Travel to US universities as a visiting scholar was a familiar experience for Ibrikçi. She was in the US for several years during the span of 1985 to 1993, earning graduate

degrees in the warmest and coldest parts of the country. Ibrikçi's second Master's degree was earned at North Dakota State University at Fargo in 1988. Her PhD degree in Soil Science was from the University of Florida, Gainesville, in 1993. Since that time she has been a faculty member at Cukurova University in Adana.



Dr. Hayriye Ibrikçi, a Professor from the Soil Science and Plant Nutrition Department of Cukurova University in Adana, Turkey, at the Aurora Research Farm field day.

Located in South Central Anatolia, Adana is a large city in a fertile irrigated agricultural region producing a significant amount of Turkey's grain crops as well as vegetables and fruits. Ibrikçi described her current research emphasis. "I basically concentrate on soil fertility and plant nutrition of field crops and the impacts of nitrogen fertilizers on soil and water resources in the region. Dairy production

is not common in our area, so inorganic N is surface applied or applied as starter fertilizer to wheat and corn, which are grown on almost 75% of the agricultural land from early December to mid-October. Due to directives from the national authorities and the European Union, nitrogen management has become a crucial issue for us. Two nitrogen fertilization approaches I've arrived at have become very significant to our region. First is to consider the pre-plant mineral N at the crop's rooting depth to determine if applications can be decreased. The second is to use the quick-N tissue test (colorimetric) to observe wheat nitrate levels when it's at tillering stage to reduce the surface applications of ammonium nitrate or ammonium sulfate if feasible."

Ketterings added, "Hayriye's experiences with field crops in Turkey and her previous work in the US were great for us to learn about. She did not hesitate to share her knowledge and experience with our students and staff. She joined in discussions and participated in trips to farms to collect data for our field trials. There is no better way to learn from each other!"

Ibrikçi commented on farmer adoption of research generated recommendations. "In Turkey, the Ministry of Agriculture operates something akin to the US Extension System. Timely transfer of university generated information to the farmers has been a challenge, as there isn't a well-defined system to relay research work through the ministry personnel and out into the rural communities. We do some research directly on the farms, but mostly it's done at our research stations. Often the data go directly into journal articles or presentations at scientific symposiums."

In spite of the differences in the Extension systems, climate and soils of Turkey and New York State, Ibrikçi came away from her visit inspired by her experience. The combination of applying sound research procedures with field experiments on real, working farms left Ibrikçi enthused to apply the essence of NMSP's research approach to her work at home.

"Viewing the research conducted at the level of the farmers' fields broadened my perspective. Quirine's research objectives come from the farmers and advisors' needs at the local level. This creates direct communication with the farmers and has them involved with the process and outcome of the projects. I took this concept for my plant nutrition and fertilization field trial that a colleague and I have just started. It's a joint project with Japan about water and nitrogen budgets in a large irrigation district. We are trying to place the observation points in the farmers' fields rather than working with unknown or undescribed points as we would have in the past. By having the farmers directly involved, we hope to achieve greater cooperation in improving irrigation and fertilization practices in wheat, corn, citrus and other local crops."

Elaborating on her experiences of last summer, Ibrikçi commented, "Attending the National Trifolium Conference and the Musgrave Research Farm Field Day were important opportunities for me to interact with scientists and local extension specialists. I had the chance to join in the field work research on alfalfa conducted in several locations in NYS and became familiar with the Illinois Soil Nitrogen Test and other lab procedures. I truly believe that Quirine's collaborative approach in a joint research and extension program has been important for New York State agriculture, but is also important internationally. Beyond being knowledgeable with strong scientific abilities, Quirine's warm, friendly and modest personality greatly impacts NMSP's success. The entire team provided warm hospitality from my arrival to when I departed. I was very glad to be part of the program for the short time I had to visit and hope to maintain collaboration with NMSP into the future."

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Cornell University
Cooperative Extension



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.