Vimala Nair is both a Fellow of the American Society of Agronomy and Soil Science Society of America, a respected teacher and adviser at the University of Florida, and an accomplished scientist whose studies have taken her around the globe. In other words, she’s clearly made great choices in her career—only don’t expect a prescriptive answer if you ask her for career advice. An insightful mentor once told her that imagination is the key to achieving, and to this Nair has added her own words of wisdom: Be open, get started, keep working, and things will fall into place.

Soil Horizons: You earned bachelor’s and master’s degrees in chemistry at the University of Kerala in India. How did you get interested in science?

Nair: When I was a young child, I was involved in many scientific activities. My dad was a rubber technologist and a chemist at the Rubber Research Institute in Kuala Lumpur, Malaysia, where I completed my school education. I used to accompany him to these rubber plantations, watch them tap the latex, and so on. Then at the rubber-processing laboratories at the institute’s field station, I was fascinated by the whole process of converting the latex to rubber products. Added to that, my maternal grandfather was a soil chemist. So I suppose science is in my blood. (laughs)

Soil Horizons: Was it unusual for a woman to be majoring in chemistry at the time you did (the early 1970s) in India?

Nair: When I was a young child, I was involved in many scientific activities. My dad was a rubber technologist and a chemist at the Rubber Research Institute in Kuala Lumpur, Malaysia, where I completed my school education. I used to accompany him to these rubber plantations, watch them tap the latex, and so on. Then at the rubber-processing laboratories at the institute’s field station, I was fascinated by the whole process of converting the latex to rubber products. Added to that, my maternal grandfather was a soil chemist. So I suppose science is in my blood. (laughs)

Nair: It was not. For my bachelor’s degree, ours was a small class of about 15 students. It was what is known as a Special Bachelor of Science (B.Sc.) program. We were handpicked, and in my class, we had about five girls and six or seven boys, something like that. So it was not really unusual.

Soil Horizons: Then, how did you get interested in soil science?

Nair: My interest in soil science I should say is because of my doctoral supervisor, Dr. Bernhard Ulrich, who was a famous soil scientist at Göttingen University in Germany in the late 1970s. When I started my Ph.D., with my background in physical chemistry and absolutely no training in soil science, he said something to the effect that “knowledge is important, but imagination is more important.” I’m trying to figure out how he really said it. “If you go by what you already know, there’s a limit to what you can achieve. But if you imagine what you can achieve in soil science, the possibilities are enormous.” He put me at ease in moving into a topic that I was not really familiar with.

Soil Horizons: You’ve since worked and studied all over the world. Is there a particular experience that stands out in your mind or that really changed your perspective?

Nair: Perhaps my field research and interactions with colleagues at the University of Santiago de Compostela in Spain stand out.

Soil Horizons: You corresponded with a colleague from the University of Santiago de Compostela, Spain, Dr. Rosa Mosquera-Losada, along with University of Florida graduate student David Howlett.

So many of the countries where I have lived and worked, other than perhaps Germany and the U.S., were tropical. The landscape and vegetation was something I could relate to or something that I took for granted. It didn’t surprise me. A rubber plantation in Malaysia or a bamboo production site in China wouldn’t have surprised me.

Trekking through a bamboo plantation in China, Vimala Nair (front) with other participants of the 2007 Sino-German Workshop.

But while I could relate to the castles and the historic buildings in Spain, I was totally taken aback by the dehesa system. The dehesa system is a vast and unique ecosystem, consisting of oak, cork oak—trees—and unimproved native pastures.
They often farm these areas for pigs and beef cattle management. In general terms, it is what’s called a silvopastoral system.

That is something you have to see to believe, at least for me. I couldn’t imagine that sort of ecosystem in a European setting. Castles, yes! But this was something very different for me.

Soil Horizons: You also teach scientific writing, and recently co-authored a book on scientific writing. Why have you chosen to focus on this?

Nair: You see, I have always encouraged students and postdocs under my supervision to publish in reputable journals and to present their work at national and international meetings. And over the years, I noticed they all had the same problems, be it in writing or in presenting their results. So I found myself repeating the same message over and over again.

Finally, I decided to work with groups of students rather than individuals, and hence my scientific writing class. I wanted to get people together, talk about writing, explain a few things, and make them feel at ease because many of the students just couldn’t take the first step. They didn’t want to write anything. Or they were not sure where to start with the writing. So it was more for the encouragement of students. Added to that, my six-year tenure as an associate editor with the *Journal of Environmental Quality* helped me identify problems associated with poor writing skills, even when the research was excellent.

Soil Horizons: So it wasn’t a decision you just made one day.

Nair: No, it all added together. It was not one thing. It built up over time.

Soil Horizons: What’s the most important piece of advice you have for students who want to become better writers or who are learning to write?

Nair: I would tell them communication is crucial to the development of science. So keep working on your manuscripts and presentations and never give up revising your work, no matter how tedious the task may seem. It’s that simple. You have to keep working on it to achieve what you want and get the best out of it.

Soil Horizons: Just like in science, right? Learning to do science…

Nair: Yes, it’s the same. But the thing is, with science, everybody grew up with it, and they see their fellow students doing it, and it goes on and on. But writing is something that most students have to embark on for the first time. They have to begin the process of scientific writing, and they’re terrified.

So I try to give them a little bit of encouragement, and interestingly, this also gives them an idea of interdisciplinary research. All those nitpicky things that they’ve been doing in the lab, I’ll make them say it, give these three minute talks and so on. And there are a number of students sitting there, some from totally different backgrounds. But at the end of the day they can relate to each other. They express their scientific research in simple words that a layman can understand, and they begin to realize it can be done: They can take their research to a wider audience.

So I hope that sort of thing will encourage them to think in terms of how to interact with others, how to do interdisciplinary work, and how to move things forward in science instead of being glued to one small sector of their work and one small group of people. This is one reason why you send them to all these international meetings: so they can interact with others and explain things. That’s what it is.

Soil Horizons: In looking at all these teaching and research activities you’ve engaged in, what outcomes do you see from your work for society?

Nair: I hope I have made some contributions to the development of the next generation of soil and environmental scientists, both from the research and communication points of view. Because I really like working with the youngsters, the students, so I would consider that as something I’ve contributed to society.

Soil Horizons: If you could go back and do something differently in your career, what would change?

Nair: Oh...you’ve caught me there. What I would say is perhaps I would have double-majored in the physical and biological sciences so as to make a greater impact on soil science. How is that? (laughs)

Most of the time, things just happen, right? You don’t plan a whole lot of things, especially in this type of career where I’ve been to different places. They just fall into place. But, yes, I would have liked to have a stronger background in different areas of science.

Soil Horizons: The message that things will fall into place must also be a comforting and supportive thing for your students to hear.

Nair: Yes. Although my class is a scientific writing class, I also go through the whole nine yards of it, from writing a manuscript to reviewing a manuscript: how to be a good reviewer, what to say...
about a manuscript, and how to respond to reviewer comments. Nobody teaches them these things. I also encourage them to write extension publications, just to know the different paths that are available to them. Because as we just said, the path doesn’t take the same direction as you plan. Something different happens. So I try to give them an idea of where else they can succeed in life, what else they can do, given the circumstances they are in.

Soil Horizons: It sounds like they’re lucky to have you as a mentor.

Nair: Oh, well, I hope so. I haven’t heard anyone blaming me so far. (laughs)