The changing face of Agriculture Education

by Ken Doyle

She’s never driven a tractor, milked a cow, or tilled a field. But that lack of farming experience hasn’t stood in the way of Jarai Carter’s relentless determination to make the most of her education. Carter, a James Scholar Program honors student in the University of Illinois Department of Crop Sciences, admits it hasn’t always been easy.

Her first semester proved to be an eye-opener. “I knew some basic information about agriculture,” says the ASA, CSSA, and SSSA student member, “but I really didn’t know much at all, unlike many of these students who knew the ins and outs of it.” However, Carter leveled the playing field once she started taking research classes that fit her concentration in plant biotechnology. The research program played to her strengths and interests in the laboratory, with an emphasis on molecular biology. Carter gained hands-on experience with techniques such as DNA isolation, cloning, and polymerase chain reaction (PCR)—all essential tools in research and commercial laboratories across the world.

Carter credits her success at University of Illinois to a comprehensive program that exposed her to all aspects of research. She says, “I had to write a proposal, do the research, write a report, create a poster, and finally present the poster at the University of Illinois’s Undergraduate Research Symposium.” Her research project focused on recombinant protein expression as part of a genetic mapping experiment in corn, and the experience sparked Carter’s interest in an agriculture research career. She plans to pursue her interest by attending graduate school in a field within crop sciences and agriculture.

Carter is one of a growing number of nontraditional students—those without a farming or agriculture background—who have enrolled in agriculture and agronomy programs nationwide, even as overall enrollment has declined. A study conducted at the University of Nebraska–Lincoln found a decrease of more than 30% in the number of students receiving bachelor’s degrees in agronomy and crop science from 1984–1985 to 2002–2003. This trend has been confirmed in many agriculture-related programs at colleges and universities throughout the U.S.

Although this decline in enrollment is attributed to multiple factors, the changing demographic of the student population is widely regarded as playing a significant role. According to ASA member Amy Asmus, past chair of the Certified Crop Adviser (CCA) National Board and International Council, there are fewer family farms today than in decades past. This translates into fewer students entering agronomy and related fields with strong farming experience. As a result, many universities are changing their tactics to attract—additional students in their programs.

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