

DR. CARY RIVARD: Rooted at CEFS, Trained for National Impact



Dr. Cary Rivard Photo: Becky Kirkland/NC State Ag Communications

Dr. Cary Rivard has always enjoyed eating tomatoes, but he also has a unique perspective on what it takes to grow them. A 2010 doctoral graduate of NC State University's Department of Plant Pathology, Rivard's research with Dr. Frank Louws helped popularize the use of tomato grafting as a propagation method in the United States. Grafting, which has been used for centuries in apples and other fruits, involves joining the shoot of one plant to the roots of another to create a new plant which combines the best traits of both "parent" plants. The technique offers important disease-resistance benefits for growers, especially organic growers who do not have chemical options to control plant disease outbreaks in their fields and high tunnels.

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- Dr. Cary Rivard



NC A&T's Dr. Keith Baldwin (retired) and Grace Summers examining tomato foliage as part of a workshop on high tunnel tomato production at CEFS' Small Farm Unit. Photo: Lisa Forehand/CEFS

Cary first came to CEFS as a Summer Sustainable Agriculture Program Intern in 2002. "It was a great experience," he says. "Coming out of the Midwest, I didn't have a lot of experience in commercial vegetable production, and I had some experience of sustainable agriculture, but not much. For me, the benefit of my experiences at CEFS was in understanding the application of science to the practice [of sustainable agriculture]." Cary immersed himself in the range of internship activities, from hands-on farm work to assisting university researchers to engaging in food systems projects with the Goldsboro community.

As an undergraduate, Cary knew that he wanted to go to graduate school but admits that he "had no idea what that would look like." The summer spent at CEFS gave him "a really detailed overall understanding of what was going on in sustainable agriculture, and sustainable agriculture research. It was eye-opening – it gave me a much better sense of the interaction that occurs between a research institution and growers, and how I could contribute as a graduate student."



Tomato plants in high tunnels at CEFS' Small Farm Unit. Photo: Lisa Forehand/CEFS

Two years later, when Rivard was applying to graduate schools, he found himself returning to NC State. "It was really the opportunity to work with CEFS that drove me to come back," he says. Rivard began working with Dr. Frank Louws in Plant Pathology, earning first his master's degree and then his Ph.D. His research on tomato grafting earned him top honors in the university's Graduate Research Symposium in 2009.

The high tunnels – unheated greenhouses that allow for season extension in fruit and vegetable production – that Cary helped build at CEFS' Small Farm Unit are still used for important horticultural research. Dr. Sanjun Gu, an extension horticulture specialist with the Cooperative Extension Program at North Carolina Agricultural and Technical State University (NC A&T), has begun a three-year study to create a high tunnel vegetable calendar to help advise producers on what, and perhaps more importantly, when, to plant in their high tunnels. When completed, it will be a valuable resource for growers across the state who are increasingly looking at high tunnels as a way to help meet year-round demand for local produce.

As for Dr. Rivard, he is now the Fruit and Vegetable Extension Specialist at Kansas State University's Department of Horticulture, Forestry, and Recreation Resources. He credits CEFS with laying the groundwork for his success in building sustainable agriculture programs in Kansas. "The experiences I had with multi-disciplinary teams and groups of researchers helped prepare me for my career in academics. I also learned a lot about sustainable agriculture and how to effectively use sustainable practices in production, which has been important for helping our growers."

When asked what CEFS' greatest asset is, he doesn't hesitate. "The people who make [CEFS] up, at all the different levels – the researchers, graduate students, NC Department of Agriculture folks, faculty – for me that's what it was all about."



Tomatoes ripening on the vine at CEFS' Small Farm Unit.

Photo: Lisa Forehand/CEFS