OHIO STATE / FOOD SCIENCE

Dispelling myths

Researchers work to break down barriers with public

By Marion Renault The Columbus Dispatch

Horticulture graduate student Michael Dzakovich is president of Citation Needed, a group at Ohio State that focuses on teaching scientists to communicate research better to the public, particularly when it comes to food and agricultural issues. [KYLE ROBERTSON/DISPATCH]
When Katie Williamson told a woman sitting next to her in the airplane that she was a food scientist, her seatmate soured.

"Oh, don’t like all that stuff that’s added to my food," Williamson recalled the woman saying. "There’s not even a question; it’s a judgment: You’re bad. I didn’t think it was a debate worth fighting."

But maybe it is. To deal with frustrating online and in-person debates over the evils of food additives and genetically modified organisms, an Ohio State University student group called Citation Needed is training scientists to share research with both the curious and the skeptical.

At monthly coffee hours, the group’s 30 or so members discuss how they might approach testy subjects such as organic farming or transgenic animals with nonscientists.

“We’re operating in two completely different spheres: food science and the way people feel about it,” graduate student Haley Chatelaine said at a recent meeting.

Raw milk, locally sourced ice cream and fresh produce appeal to consumers because people have always associated health with nature, Chatelaine said. But it’s harder to convince someone that E.Coli and listeria outbreaks sometimes can make those items more unsafe to eat than packaged pepperoni, she said.

Productive conversations between researchers and citizens sometimes feel out of reach, said food-science graduate student Alex Pierce. It can seem like her colleagues are accused of sneaking carcinogens and unnecessary chemicals into grocery baskets, she said.

"Before we all got together, I would just get red in the face," Pierce said. "We’re trying to figure out a way to organize ourselves so that when we come into contact with those types of people, we actually have something to say and ways to deal with it."

Collaborative research published this month found that skeptics are as educated and interested in science as anyone else. They just cherry-pick facts that help them reach the conclusions they want to be true — especially when it comes to societal issues such as climate change, nuclear-power safety or gun-control laws.

Scientists need better communication training, but public-relations specialists for universities and private companies also need to start advocating for science, said Troy Campbell, marketing assistant professor at the University of Oregon.

Changing someone’s beliefs is a difficult task, Campbell’s research shows, and isn’t really about getting them to accept new evidence.

"At the end of the day, just because someone learns a fact doesn’t mean they will change their behavior," he said.

Instead, Campbell encourages scientists-in-training to educate the public by working with their gut feelings about natural foods. Tap into health-conscious communities instead of trying to correct them.
"You always fear what you can’t understand," he said. "You have to make people feel as though they already know what you want them to know."

University science programs meticulously train students in organic chemistry, molecular biology and food engineering. But people skills rarely make the syllabus, said Kelly Elasar, a Citation Needed adviser.

“These students are very technical and science-oriented,” said Elasar, also a communications liaison for the food science and technology department at Ohio State. “And they don’t have a lot of wiggle room in their courses.”

Citation Needed emerged about a year ago as a resource for budding food scientists to prepare for those encounters.

The mix of professors and students also discusses what other strategies — infographics or social campaigns — might help them accurately and clearly share their work.

“How do you communicate your research in 140 characters or less? Can you put your thesis in a five-minute TED talk?” said Annie Specht, group adviser and agricultural communication assistant professor. “We always put our research in the hands of someone else and trust them to know what they’re doing.”

Scientists communicate in data charts and tables; lay people often make decisions based on emotion. It can be challenging to speak both languages, said Michael Dzakovich, a horticulture graduate student and Citation Needed’s president.

“I’m a bench scientist. I’m one of the most awkward people you’ll meet,” he said. “But I’ve learned that in order to get things done, you’ve got to get out of your comfort zone and interact with people.”

The group also spends time debating emerging ethical issues facing food science.

If consumers feel uncomfortable with scientific-sounding ingredients, should food scientists reformulate common food items? Should they re-label chemical compounds such as citric acid and sodium chloride as lemon and salt to reduce ingredient list unease?

Or, as some group members pointed out, does catering to the public’s fears miss the point entirely: that additives are there for a reason — to ensure food safety, alleviate disease or extend shelf life.

As social media connects consumers with research and food myths alike, it’s more important than ever for food scientists and citizens to maintain a healthy relationship, Dzakovich said.

After all, researchers are trained to decipher studies and see red flags in an experiment’s design or the phrasing of its conclusion.

“When bad science pops up, it's fairly obvious to us,” Dzakovich said. “But it’s becoming harder and harder for non-scientists to differentiate ... How do we make this a conversation, and not a lecture?”

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