



Marguerite Bolt

“There’s a lot we don’t know about hemp. That allows us to do basic research and ask questions that were researched for other crops 30 to 40 years ago.”

— Marguerite Bolt, MS, plant-insect interactions and chemical ecology, Department of Entomology

THE STUDENT: When Marguerite Bolt was 10, a Michigan State University entomologist visiting a summer home down the road from her family’s farm in Charlevoix, Michigan, stopped over to buy some produce. The farm’s specialty crops were in high demand, so such visitors weren’t unusual. But the entomology professor’s interaction with Marguerite was; he followed up with collection equipment and field guides that sparked her interest in insects. When Bolt chose to major in entomology at MSU, her mentor was still on the faculty. She worked for MSU Extension over three summers, primarily with fruit trees. Her supervisor there not only encouraged her to pursue graduate study but also distributed Bolt’s information on a fruit growers’ LISTSERV. A Purdue recipient passed it along to John Couture, assistant professor of entomology and of forestry and natural resources. Couture works primarily with forage and field crops as well as in forest system research, but he contacted Bolt and invited her to visit Purdue. “I had a good connection with the faculty and students, and I liked the research John was interested in doing,” she says. She decided to give up working in fruit and began her master’s degree in June 2015. She graduated this spring.

THE RESEARCH: Bolt’s research focused on industrial hemp. She studied how different cultivars and fertilizer amounts affect plant chemistry and how manipulating the growing environment impacts insects. “When you think of hemp as a field crop, which is what we’re going to grow, you don’t think about not using insecticides

— we spray corn and soybeans, and we don’t think twice about it,” she says. But because hemp cultivation was largely banned from the 1930s to the 2014 Farm Bill, industry hasn’t developed pest management products for it. “It’s a novel crop,” she says. “Not a lot of research has taken place on it.”

A FASCINATING PLANT: Bolt finds the tall, pretty hemp plant appealing and likes the smell of the aromatic compounds it produces. “I love going out in the field,” she says. In 2017, she and Couture presented at a national conference on the research outcomes they were projecting. “That allowed me to meet other students from other universities who were also researching hemp,” Bolt says. “That opened a ton of opportunities to meet a broad group of faculty researchers from across the country.”

FUTURE PLANS: Bolt has accepted a position in Purdue’s Department of Agronomy as Indiana’s first hemp Extension specialist. The job involves conducting workshops and connecting with growers at Purdue Agricultural Centers field days and Extension workshops. “A lot of farmers are looking at hemp as a potential option for crop rotations, but more research is needed in this area,” she says. “A big part of the position is reaching out to growers who are planning to grow hemp in Indiana in the next couple of years and to connect them with processing facilities.” In her spare time, Bolt enjoys hiking, scuba diving and adventures with her puppy Midge.