

# GRADUATE AG RESEARCH SPOTLIGHT



## Fatemeh Sheibani

*"Specialty crops are intensively cultivated and have high intrinsic value. Our department is deeply involved in research to improve the productivity, commercial profitability, and sustainability of specialty crops for human-health applications."*

*Fatemeh Sheibani, MS, Horticulture*

**THE STUDENT:** Fatemeh Sheibani loves the variety and abundance of fruit trees in her home country of Iran: "Although I miss the citrus blossoms that my city of Shiraz is famous for, the apple blossoms on campus are compensation," she says. Sheibani studied horticulture — specifically pomology, the science of growing fruit — in the Agricultural College at Shiraz University and then worked for a couple of years with an extension group. She came to Indiana in November 2013 with her husband Aziz Ebrahim, a research scholar at Purdue. She decided to take advantage of her new home by seeking work in the Horticulture department and secured a position in the lab of Peter Hirst, professor of horticulture, the following March. "I had no specific projects for myself at the beginning," she says. "I was just supposed to help others and learn how things work. After one month I got an email suggesting I have my own experiment and offering two topics. I was so excited, I wanted both of them!" Her positive experience led Sheibani to complete a master's degree this spring with Hirst as her advisor.

**THE RESEARCH:** Sheibani's research has focused on apples. "My project was in collaboration with the Department of Computer Graphic Technology to develop a computer-based model for apple tree growth and development," she explains. Such a simulation model could prove an important educational tool for instructors, students, scientists,

and growers. "The main point is that this model is based on tree physiology plus how the tree interacts with the environment and management inputs," she says. "The model is a user interface, and the user can change any factor." Sheibani found the different perspectives and "languages" the two teams brought to the project especially intriguing.

**NEXT STEPS:** Sheibani plans to begin doctoral research under the guidance of Professor Cary Mitchell. Her emphasis will change from apples to smaller plants like lettuce in controlled environments as she studies the effects of LED lighting on plant development. Although she doesn't switch labs until this fall, Sheibani meets with her new advisor regularly, attends lab meetings, and is getting to know her new colleagues. "I'm very excited about my future," she says.

**CULTURAL EXCHANGE:** Sheibani points to her department's facilities, knowledgeable faculty, and friendly environment as strengths, as well as its respect for students' backgrounds and experiences. "One thing that I like about Purdue is the diversity," she says. "I have friends from different countries who speak different languages. All of us come here together and speak English and talk about our cultures. Along with reading, my favorite hobbies are cooking and baking, so if I'm invited to friends' places, I like to bring Iranian food."