

## Did You Know?



Scientist Donna Marshall-Shaw, left, explains to students the genetic engineering behind the apple varieties that we have today.

If you're a ninth-grader in the Poplarville, MS, school system, you're lucky to have an ARS lab in your town so you can learn about science first hand.

Students in the Poplarville High School STEM (science, technology, engineering, and mathematics) class who are studying plants and food visited the ARS Thad Cochran Southern Horticultural Laboratory in Poplarville on May 19, 2014. The students got to experience research up close, with working scientists doing the explaining.

Take the apple, for example. Scientist **Donna Marshall-Shaw** explained that the apples we buy in the grocery store are not the original apple. The apples we eat are actually the result of years of breeding to get just the right flavor, texture, and other desired qualities.

Along with plant breeding, the students learned about plant pathology—the fungi and other organisms that can cause apples and other fruits to spoil. Plant Pathology Technician **Melinda Butler** showed the students how these diseases damage plants. She grows fungal samples in the lab on oatmeal and V-8 juice so she can study them.

And speaking of pests, insects do more than their fair share of damage. Entomology Technician **Chris Werle** explained that many insects are not only useful but necessary. He displayed his insect collection so the students could identify insects that they had seen. Some pests were introduced accidentally from other countries. The reason that they are overpopulated here is that they have no natural enemies to keep their populations low.

Finally, the students heard from Scientist **Anthony Witcher** about blueberries, which are studied extensively at Poplarville. Blueberries only grow in certain types of soils, so scientists are developing new blueberries that can be grown across a wider variety of soils and climates.

The tour of the Poplarville lab gave the students a better understanding of the value of research, as well as the years of studies that go into developing the potatoes, grapes, tomatoes, and blueberries that they pick up in the store.

Written by **Donna Marshall-Shaw**, ARS Southern Horticultural Laboratory, and **Sean Adams**, ARS Information Staff.

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