

Dustin Pickelmann

The Agriculture Research Service extension does research to solve problems that affect Americans on a daily basis. This is important because everyone has to eat and have clothes on their back. The research that is done provides farmers with critical information needed to successfully give us these things. Without this research farmers would be lost because of new threats and problems that arise when planting row crops. This is why the research we do here at Stoneville is so important.

The location of the research station is also very important. The Delta soil was once flooded which gave the soil the nutrients to grow crops. This is the reason for many of the research stations that you see around the Delta.

My name is Dustin Pickelmann and I am Biological Science Aid at the Stoneville, Mississippi USDA-ARS Southern Insect Management Research Unit. I have worked in the SIMRU unit for about six years. Over these six years I have learned a great deal about agriculture that I never knew existed. Before I worked at Stoneville I didn't even know how to drive a tractor and now I can do it with ease. Over the six years I have worked here I have gained great knowledge agriculture and have learned to value the research we conduct. I acquired this value after my first year of working here, when I learned that the plots I sampled gave my supervisor data that would later end up in a paper he was publishing. Then later he would present this data and paper at an important conference.

Dr. Randy Luttrell is the research leader of the SIMRU unit. My supervisor is Dr. Ryan Jackson would I think is a great leader for his employees. I also work with Michelle Mullin who oversees the entire laboratory portion of our work. I have had the pleasure to learn many things that she does daily in the lab. Many of these things I can do because I asked questions as she was doing them and presented myself as wanting to learn. Another technician that works under Dr. Jackson is Donny Adams. As I have worked beside Donny in the field he has taught me many things about row crops. Donny has been in agriculture for his entire life so he has a great deal of knowledge to offer all you have to do is ask him. In the years of working here I have adapted the practice of always asking questions about something I'm unsure of or don't have the knowledge about it.

One study that we are currently researching is determining if plant bugs are primarily being reared on wild host plants or if they are being reared on row crops. We have many locations around the Delta and in the Hills that we collect these plant bugs from. This consists of going into cotton fields sweeping plant bugs and collecting them for analysis. When the plant bugs are returned to the lab they are analyzed to determine what host plant they fed on. This data lets us know if the plant bugs are being reared on pigweed or corn. This data is important because it could let us know if the pigweed growing on turn roads and roadsides is providing the farmers with a higher population of plant bugs than there should be.

Another study we are have been conducting over the past couple years is the susceptibility of bollworm moths to pyrethroids. A pyrethroid is an insecticide that is used to control bollworms in crops. We collect these moths from 10 counties around the Mississippi Delta. On a weekly basis we count the number of moths in each trap and bring any live moths back to the lab for further testing. The trap

numbers are important because they are published weekly in a newsletter to inform farmers of possible high numbers of bollworms. When they make it back to the lab they are placed into vials that have been treated with a pyrethroid. This test allows us to determine if bollworms are gaining a resistance to pyrethroids. This is important because if bollworms have a resistance to pyrethroids then it would be very hard to kill them, therefore leaving them to cause possible damage to crops.

Another study we are conducting is the evaluation of Bt cotton and non-Bt cotton on off-station locations. We are trying to determine if it is cost efficient to plant non-Bt cotton and spray a pyrethroid to control bollworm populations versus planting Bt cotton and still having to spray for bollworms. Bt cotton provides complete control of tobacco budworms but isn't always the case for bollworms. This study is important because it could show that in some cases it may be cheaper to plant non-Bt cotton and spray a pyrethroid instead of planting Bt cotton and having to pay for the Bt technology.

I feel that this past year was a very informative to me. I learned many things that I didn't know before this summer. This knowledge came from the studies we conducted throughout the summer. One good thing about working for SIMRU is that you have the ability to learn new things on a daily basis, you just have to be willing to ask questions.