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Maintaining Insect Colonies

While working at the United States Department of Agriculture- Agricultural Research Services in the Southern Insects Management Research Unit under Dr. Clint Allen, I have learned many things, both in the field and in the lab. One of the most important things I have learned is how to maintain insect colonies so that the scientist can perform tests. There are several types of colonies that we maintain: tarnished plant bug, bollworm, looper, and sometimes stink bug colonies.

These colonies are maintained by feeding them and pulling their eggs every Monday, Wednesday, and Friday. We keep our colonies alive by making them diet, which is their food. Each type of insect has a different type of diet and each are made with different ingredients. The diet is made every week to insure best quality. After making the diet, we place the correct insects on it and let them go through all of their life stages, eventually becoming adults laying their own eggs. The eggs are pulled and placed in the appropriate place to hatch. Then, the whole cycle is repeated.

Maintaining these colonies is very important because of access. During the winter, you cannot find these types of insects out in the field, so by keeping these colonies alive, it gives the scientist the chance to run tests year round. In our lab, we perform several different tests. The tests we run on loopers include, topical test, cold tolerance test, different food hosts test, and leg color test. The test we run on tarnished plant bugs include vial assay test, which test the insect's insecticide susceptibility (Snodgrass), cold tolerance test, and different food hosts test.

Running these tests are very important because they help farmers improve their crops by getting them solutions to insect problems they may be having with their crops, which increases crop

production. The Mississippi Delta is a major crop production area for the world. If we were not able to run these test there could be major insect problems with crops.

Working here has been a great experience. I would most definitely recommend working here to others interested in working in the agricultural field. I am a recent graduate of Delta State University with a Bachelors Degree in Environmental Science, and working here has given me experience I need for the future. I have learned how to use several lab machines, how to conduct field work, and how to input data.

Works Cited

Snodgrass, Gordon L., Craig Abel, Ryan Jackson, and Jeff Gore. "Bioassay for Determining Resistance Levels in Tarnished Plant Bug Populations to Neonicotinoid Insecticides." *Southwestern Entomologist* 3rd ser. 33 (2008): 173-80. Print.