Cotton in 2012

By Gilbert Mohtes-Chan, Sustainable Cotton Project

Cotton growers have wrapped up the spring growing season and are now headed into the summer with a lot on their plate. July is particularly important for keeping an eye out for pests and fruit development. It’s crucial from now until the fall for growers to get out regularly into their fields and monitor what is taking place with the cotton plants.

This year, growers planted fewer acres of Acala and Pima varieties across the state, primarily due to weak commodity prices and tighter water availability. Acala acreage is down 18 percent to 150,000 acres while Pima is off 8 percent to 250,000 acres, according to the National Agricultural Statistics Service.

“San Joaquin Valley growers continue to be plagued by water deficit problems,” says Fresno County University of California Cooperative Extension cotton specialist Dan Munk. That prompted growers to forego cotton planting in various fields around the valley.

While rainfall and the Sierra snowpack numbers were down, Munk said there was enough wet weather to manage the salt conditions in the soil. Pre-irrigation left the fields with “good soil profiles going into 2012.” Overall, “most of our cotton fields will receive adequate water supplies.”

With the season in full swing, growers need to focus on crop development with an eye toward the fall harvest. “You want to watch that crop. Keep a close eye on your fruit – fruit squares, fruit retention and fruit set. You want to set those squares into flowers and then into bolls,” says Dr. Pete Goodell, an entomologist and Cooperative Extension Advisor with UC Statewide Integrated Pest Management.

The first 10 fruiting branches are important in setting up the crop for the fall season and harvest. Because of the cool weather and rains in late spring, growers got a late start with their planting. Once in the ground, however, the weather conditions turned favorable and allowed the crop to catch up by the end of spring.

“It has been a tight planting season, which means all the cotton will be about the same age in development,” Goodell says. From an IPM and entomology standpoint, Goodell says, “June is lygus month. Don’t let your lygus get too out of hand.”

Indeed, lygus will threaten your crop through cutout and final boll set. These bugs can penetrate squares and damage the tissue and cause them to drop, which can lead to vegetative growth and reduce yields. Damage to young bolls can impact maturity. In July and August lygus will become less of a threat when bolls are 10 days or older.

To avoid infestations, Goodell reminds growers who cultivate alfalfa adjacent their cotton fields to avoid wholesale alfalfa cutting. Work with your neighbors if they are growing alfalfa. “It is really important to strip cut alfalfa fields through July.” This will help keep lygus in the alfalfa – which they actually like as a home – from migrating into cotton.

Goodell credits growers with following best management practices and leaving uncut strips of alfalfa as a cost-effective and environmentally friendly way to manage pests impacting nearby cotton fields. “As you drive around the San Joaquin Valley, you see people are making it a regular practice in June and July.”

As the summer progresses, growers also need to be vigilant about whiteflies and aphids. “We cannot allow for any sticky cotton to develop. Watch for these pests in August and particularly in September when bolls start opening up and cotton becomes susceptible to these pests,” Goodell says. (continued on next page)
Sustainable Farming Community

By Gilbert Mohtes-Chan, Sustainable Cotton Project

While they say it takes a village to raise a child, the same may be true for growing a sustainable farming community.

Over the years, a literal village of San Joaquin Valley growers has come together to raise agricultural best management practices to a new level. The emerging trend is going a long way to protect the water, air, soil and public health in their community.

Studies show that lots of growers in the past 10 to 20 years have adopted Integrated Pest Management practices for their individual fields. Through efforts by the San Joaquin Sustainable Farming Project, UC IPM and others, growers are stepping up to advance BMPs over multiple farms. They are looking at the landscape ecology as a whole.

“Neighbors are working closer together than they were 10 years ago,” says Dr. Pete Goodell, UC IPM entomologist. “They are saying ‘I realize my fields may be a source of bugs for your field. What can I do to manage it?’” In addition, community-based crop mapping is helping to visualize the complex mosaic of crops and natural areas which surround individual fields.

Goodell points to a farmer growing seed alfalfa who is working with a neighboring grower to mitigate any movement of pests from the alfalfa into the adjacent cotton field by leaving borders of preferred alfalfa habitat. “I know where neighbors are banding together to strategically place safflower to minimize the impact on cotton and to treat safflower in a uniform fashion to prevent mass movement of lygus into cotton.”

This collaboration helps growers solve mutual problems and issues affecting the farming community as well as share innovative practices. Goodell points to a grower who found a way to put an IPM practice to use in a “waste corner” of his field – a sharp, tight edge where it is difficult to cultivate cotton. He planted alfalfa to help harbor lygus. “He has diversified his environment and increased the biodiversity so that lygus can stay there.”

Fusarium Wilt in Cotton

By Gilbert Mohtes-Chan, Sustainable Cotton Project

More and more, cotton growers are discovering the presence of Fusarium wilt in their fields.

“We continue to see some new fields that have wilt problems. It is expanding in acreage, which will affect the cotton crop in the future,” says Dan Munk, cotton specialist with the University of California Cooperative Extension for Fresno County.

Fusarium wilt in cotton is caused by a soil-borne fungus and moves within fields through soil and water. It infects the roots and the inside of the vascular tissue. Seedlings and young plants will display symptoms of the disease. In more severe cases, the plants will die.

The fungus spreads and increases when infected plants are plowed down. Certain Pima and Acala varieties are susceptible to the disease.

In the past, Fusarium wilt was found in the southern end of the San Joaquin Valley. But in recent years, the disease has spread to the north.

“We are seeing an increase, particularly in the northern end of the San Joaquin Valley, where it had not been present,” Munk says.

Here are some prevention tips:

- Plant tolerant cotton varieties
- Use Fusarium-free seeds
- Clean all equipment, including shoes, used in infected fields
- Don’t move soil from one field to another

UC Ag and Natural Resources offers more information about Fusarium wilt online at: http://www.ipm.ucdavis.edu/PMG/r114100311.html and www.cottoninfo.ucdavis.edu

Aphids and whiteflies will secrete sugars on the cotton plant, which can contaminate the fibers and create sticky cotton. Sticky cotton is costly to mills because it slows the spinning process.

When treating your fields, Goodell advises growers to watch their practices to avoid pesticide resistance. “Rotate your products and rotate your mode of practices. We need to remind ourselves to follow good pesticide resistance practices.”

Walt Bentley (above) spoke to a community of almond growers at an SJSFP field day on April 19th.
Field Scout Profiles  
*By Gilbert Mohtes-Chan, Sustainable Cotton Project*

For the past three years, the San Joaquin Sustainable Farming Project (SJSFP) has provided growers an extra set of eyes watching for crop-damaging pests in their fields and orchards. Like farmers, project field scouts rise early in the morning and head out for another day of monitoring cotton and alfalfa fields and almond orchards across the northern San Joaquin Valley. They check traps and catch bugs in sweep nets. The scouts collect data and compile weekly notes for growers, supplementing information from their own pest control advisors. They also release beneficial insects. And they work with growers to plant natural habitats.

Working closely with University of California Statewide IPM specialists, SJSFP field scouts Luis Gallegos and Jenna Horine play an integral part in the project’s efforts to help growers adopt best management practices and implement Integrated Pest Management strategies. For more than eight years, Gallegos has been the field scout for the Sustainable Cotton Project and SJSFP, concentrating on cotton and alfalfa. Horine started this year as the almond field scout.

What is it like to be a field scout? What is their job? Here are some insights from our scouts.

**Jenna Horine**

Our almond field scout, Jenna Horine, is new to our program. But she’s no stranger to the local area or Valley agriculture. A graduate of Dos Palos High School, Jenna studied horticulture at Cabrillo College in Santa Cruz County before returning to Firebaugh last year to work on her family’s organic farm. “I’m very excited to start this growing season working with the San Joaquin Sustainable Farming Project. Becoming a pest control advisor is something I’m considering,” she says.

Typically I start out around 9 a.m., earlier if it’s going to be 100 degrees that day. I usually don’t finish until around 5 p.m. I have been able to break up the orchards into two routes: the east side on Mondays and the west side on Tuesdays. When I’m home at night, I work on the numbers and go over the leaves I pulled earlier in the day.

I might have questions on what I’m finding so I check with Walt Bentley, veteran entomologist and UC IPM almond expert, and occasionally David Doll, a Merced County UCCE farm advisor and author of the Almond Doctor blog. Walt is a great resource for me to learn all I need to know about pretty much everything almonds. On Wednesday nights, I try to finish compiling my information and then send it to our main office.

We set up traps in areas of the orchards that have been known hot spots in past years. Every week, I check three separate locations in each orchard. I check the pest bait and count eggs on the navel orangeworm traps and count and remove the Peach Twig Borer (PTB) from the sticky pheromone traps. I inspect the ground for dropped fruit and the leaves, trunk and branches for stink bugs, leaf footed bugs and mites. I record all the counts and take notes on what I am seeing in the field such as recently mowed ground cover or standing water puddles so that if the numbers are drastically different the next week there’s documentation suggesting why that might have happened. For example, mowing the ground cover can push bugs up to the lower parts of the tree. I also take photos. Photo monitoring is good because you can see the progress and changes in the trees throughout the season.

**Luis Gallegos**

My typical day begins around 6 a.m. when I head out to the fields. I scout alfalfa and cotton fields all day and I write the reports out in the field.

I set my daily schedule according to the direction that I’m traveling for the day. For example, if I am going to Dos Palos I will scout the alfalfa and cotton field in that direction. Usually, I might scout about six fields a day. My field sweeps are planned by the stage the plant is in and University of California IPM guidelines.

Fridays are reserved for re-checking fields. That’s when I have more time to take another look. On occasion, a field may be too wet to check during my regularly scheduled day, so I will come back on Friday.

Working in the heat is hard, especially when temperatures hit the triple digits. However, I have learned to how to deal with the hot weather. I will scout early and drink lots of water.

I love working with the Sustainable Cotton Project and SJSFP because of the growers and the UC experts, including IPM advisor Dr. Pete Goodell and UCCE Farm Advisor Dan Munk. I am learning from the best UC agricultural specialists in the state.

One of the challenging parts of my job is getting growers to understand you can still farm without spraying a lot of chemicals. You have to earn their trust.

For me, I always have time for the farmers because they are the key to making this program work. It’s rewarding to take phone calls from growers and using my experience to answer their questions, knowing I am helping their farms become sustainable for years to come.
Letter from the Director, Marcia Gibbs, Sustainable Cotton Project, marcia@sustainablecotton.org

The San Joaquin Sustainable Farming Project is entering its third season, helping growers in the region to implement best management practices (BMPs) that help protect the water, air quality and health of our local communities. Another benefit has been to bring together a community of growers who can actively discuss what is going on in their fields and orchards with their neighbors or those in the next county.

As one project within with the San Joaquin Sustainable Farming Project, community-based mapping has been useful in helping farmers and PCAs visualize the ecological landscape within which they grow their crops. This approach has demonstrated the value of risk assessment of individual cotton fields from surrounding sources of Lygus (http://www.ipmcenters.org/ipmsymposium12/121_Goodell.pdf).

Attendance at our field days and meetings has been on the rise and growers and their PCAs have benefited from the quality information provided by experts from UC Cooperative Extension and UC IPM. The project has helped showcase some of the positive aspects of farming and the innovative ideas that growers are implementing.

We continue to improve our efforts to provide ongoing education to growers and the community. We have updated our website to enable us to post video clips from field days and other pertinent information. Our weekly blog received more than 1,000 views in May alone and while the majority of readers are from the U.S., 12 percent of the readers were from India and even a few from other growing regions of the world. It has been amazing to see how our web-based outreach has been able to reach out to the world.

We have plans for more field days this season. Look for our notices or check AgFax for the latest information. Feel free to contact us if you want more information about what the project is doing or want to get more involved. We wish you a wonderful season.

You can find us online at the following:
WEBSITE: www.sustainablecotton.org
FACEBOOK: https://www.facebook.com/sustainable.farmingproject

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