Central Valley Fiber, Forage and Nut Digest
From the San Joaquin Sustainable Farming Project
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Tools for Farming Success

Everyday, the headlines remind you about the enormous political, economic and environmental challenges facing California farmers. “Governor wants water bond vote postponed.” “Lygus emerging as cotton’s big trouble.” “Central Valley ag braces for new water regulations.” “Almond price dip favors snack makers.”

While there are no easy answers, there are resources available for local farmers to help them address these issues and maintain a successful operation well into the future. It is vital to find positive, useful tools to help increase awareness of farming’s positive benefits to our economy and communities is vital.

One tool is the University of California Agricultural Issues Center, which offers a series of 15 research papers on its Web site (http://aic.ucdavis.edu). It provides objective information on critical and emerging issues facing growers.

Often growers don’t know where to turn for the latest technical advice and production tips. With budget cuts and higher input costs, finding good information is key to grower survival.

If you want access to tips and advice directly from some of the state’s leading agricultural experts, then turn to the San Joaquin Sustainable Farming Systems Project. Under this program, farmers participate in education and demonstration projects, which implement integrated pest management (IPM) tools and best management practices (BMPs). It offers an opportunity for farmers to meet and talk with experts as well as share their ideas.

Implemented by the Sustainable Cotton Project and funded through the State Water Resources Control Board’s 319h (non point source pollution) program, the project raises grower awareness of water quality issues, including agricultural run off of chlorpyrifos and diazinon to the Lower San Joaquin River Watershed. Water quality impairments in the river are attributed to crop production in the region. Alfalfa, almonds and cotton have traditionally been heavy users of chlorpyrifos and diazinon and this project helps growers implement measures to reduce the use and run off of chemicals from these crops.

Operating in Merced, Madera and Fresno counties, the project provides information, resources and on-farm assistance to growers about reducing their environmental risk, including direct support from the University of California IPM and UC Cooperative Extension.

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San Joaquin Sustainable Farming Project
Cotton Field Day

April rains and unseasonably mild spring temperatures are making it another challenging year for San Joaquin Valley cotton growers.

The valley recorded the second-coolest spring in two decades, creating a shortened growing season and the potential for reduced cotton yields this fall, according to University of California agricultural experts. For growers, it means adapting traditional farming practices to these new conditions.

“We’re going to have a compressed year for fruiting, for flowering (and) for making yield. That is going to guide our decisions this year,” said Dan Munk, UC Cooperative Extension farm advisor in Fresno County. Everything from plant nutrient uptake to water use will be affected.

“The concern is are we abbreviating the fruiting period in such a way that you’re compromising yield,” Munk said.

Munk gave an early season cotton crop progress report to a dozen farmers attending a June 23 field day at the Crivelli Farm in Dos Palos. In addition, Dr. Pete Goodell, a UC Statewide Integrated Pest Management advisor, offered tips about dealing with lygus.

Coming off a disappointing 2009 season, valley growers are poised for a comeback this year. Munk and other cotton experts earlier this year projected up to a 50 percent increase in acreage over last year.

A wet, cool spring delayed planting for many growers, some waiting until the last-minute to move ahead with cotton this season. As a result, plant development is behind schedule for this time of year as the hot summer months approach.

“Yes, we are way behind in our crop water use,” Munk said. “We would love to have this cool spring translate into a cooler than normal summer for optimal conditions, even though that might not make a perfect growing season (with) high yield potential.”

The usual long summer days coupled by hot temperatures could put undue heat and water stress on the crop this season. A cooler summer would lessen the plant stress, Munk said.

The wet spring also heightened the pest threats this year. Plants that are winter hosts for bugs such as lygus grew well into the spring, allowing for an extra generation of cotton-damaging pests to develop. “A wet spring leads to increase lygus problems,” Goodell said. “We have to really watch this plant this year.”

To protect their crop, growers need to do a combination of field sweeps to collect bugs and square counts to observe plant development. Goodell said many PCAs are relying on just bug counts.

By following both practices, Goodell said growers can understand fruit retention on the plant, how the crop is developing and whether lygus is a real threat to the crop. These practices will help guide treatment decision. Overall, Goodell offers this advice: “Watch your plants, but count your bugs.”
What are BMPs and Why Should Farms Adopt Them?

Everyone agrees that taking care of our land and water are important issues. As farmers, you know you are already playing an important role in preserving ag land, providing quality food and fiber, and implementing farming practices that will keep the land in farming for future generations. So, what are Best Management Practices (BMPs) and why do they help you?

BMPs are activities or practices that when used alone or in combination, prevent or reduce the release of pollutants to the water and air of the region. Their primary function is to reduce pollutant loads and discharges that can make their way to our watersheds or cause air quality impacts.

The San Joaquin Sustainable Farming project is working with Fresno, Madera and Merced growers of alfalfa, almonds and cotton to implement these practices. Working with University of California Cooperative Extension advisors and University of California Integrated Pest Management experts, growers receive technical assistance and program field scouts perform weekly field and orchard monitoring to help growers make informed decisions and understand the alternatives.

For each of the three crops in the project, BMPs are suggested which can help reduce the impacts on water and air quality, demonstrate good stewardship and in some cases, improve profitability.

**Almonds**
- Remove and destroy mummy nuts in fall or winter to control navel orangeworm
- Consider using a Bt spray at bloom to preserve natural enemies
- Avoid broad-spectrum crop protection materials
- Reduce orchard dust and minimize water stress
- Make use of early harvest
- Monitor at least weekly and utilize UC IPM treatment thresholds and UC IPM year round plans

**Cotton**
- Plant annual hedgerows of corn, sunflowers, black eyed peas, sorghum or other annuals to serve as trap crops, provide food source for beneficial insects and reduce dust
- Strip cut adjacent alfalfa
- Interplant alfalfa strips to help control lygus
- Avoid over fertilization that can increase mites in late season
- Release predatory mites, lacewings, lady beetles to help control pest outbreaks
- Avoid use of early season broad-spectrum crop protection materials
- Monitor at least weekly and utilize UC IPM treatment thresholds and UC IPM year round plans

**Alfalfa**
- Choose resistant varieties
- Begin scouting for cowpea aphid in February
- Use border or strip cutting to help maintain natural enemies
- Plant in blocks with other crops as buffers
- Avoid broad-spectrum sprays to preserve natural enemies
- Monitor at least weekly and utilize UC IPM treatment thresholds and UC IPM year round plans

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**Munk’s tips for managing a tighter cotton growing season**

Growers are seeing the first flower 10 to 16 days beyond the average for a normal year.

UCCE Farm Advisor Dan Munk offers a few tips to manage this year’s crop:

* Delayed canopy growth directly corresponds to lower early season water and nutrient use, making delayed applications of both generally appropriate.
* Water savings gained early season where pressurized irrigation systems such as sprinkler and drip are used to apply precise water amounts.
* Monitor the crop growth and pay special attention to square loss this year. Early square loss in a compressed fruiting season further reduces plant compensation opportunities.
* Use controlled, but increased plant water stress if necessary to improve early square retention on problem fields or facilitate plant cutout to limit boll production of late fruit that has little chance to mature.
* Plan and respond early to changing field and plant conditions.
Extension. It also generates positive benefits to local farms, communities and watersheds. Growers complete a whole farm self-assessment and strategy for implementing UC IPM Year Round plans and BMPs on enrolled acreage. The project provides free weekly field scouting, targeted field days with experts speaking on current issues, BMP implementation planning, and annual hedgerow seed and beneficial insects when needed.

The resulting positive benefits to local communities and watersheds enhance the image of agriculture and bring much needed support to California farmers. These benefits include:

- Alfalfa production that reduces erosion, increases water penetration and improves soil quality.
- Alfalfa strip cutting to encourage biological control of lygus in cotton and reduce the need to spray harmful chemicals.
- Planting annual habitat strips along field margins to provide food and nectar sources for beneficial insects and habitat for wildlife.
- Production of local food and fiber products that provide jobs and needed income for local economies.
- Better water and air quality in local and regional communities.

For more information, please contact Marcia Gibbs at (530) 370-5325 or Marcia@sustainablecotton.org

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