

Cotton Harvest Activity Increases

Friday, October 18, 2019

By Mary Jane Buerkle

Thanks to favorable weather, harvest activity on the Texas High Plains increased fairly significantly over the past week, with more defoliant being sprayed in places that did not get a hard enough freeze to completely prepare the plant for harvest.

Both the Lubbock and Lamesa cotton classing offices have issued their first reports, and early numbers indicate some light spot and shorter staple, which can be fairly common early in the season.

As of yesterday, the Lubbock office had classed 24,205 bales from 29 gins. Predominate color was 32. Average length was 33.81. The Lamesa office had classed 31,144 bales from 17 gins. Predominate color in Lamesa was 11, and average length was 33.6.

Clear skies forecasted for the next week all but guarantee that by this time next week, harvest will be in full swing and by the end of the month, all gins across the Texas High Plains likely will be running. Overall yield estimates will become more accurate over the next couple of weeks as more cotton is harvested, but growers continue to report mixed conditions and yields.

Markets rallied over the past week and at press time, December futures were at just over 65 cents. This is due partly to encouraging news on the trade front, increased sales, and potential weather issues in the Southeast that could impact harvest in that area.

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“Ag in the Bag” Program Teaches Elementary Students About Agriculture

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By Mary Jane Buerkle

More than 1,200 fourth-grade students, teachers, parents and volunteers from Lubbock and the surrounding areas watched Sondra the dairy cow being milked, saw how their jeans were made, and learned how agriculture impacts their daily lives at the annual “Ag in the Bag” program, held October 15-17 at the Texas Tech Livestock Arena in Lubbock.

Topics included dairy, corn, cotton, peanuts, sorghum, water, beef, sheep, meat science, food science, and various other agricultural concepts. A committee of volunteers plans the event, which is free to the schools because of financial support from sponsors. Students from Lubbock ISD and several area schools attended the program.

“It’s vital that we reach out to our kids to teach them where their food and fiber comes from,” spokesperson Ronda Alexander, Texas A&M AgriLife Extension-Lubbock County 4-H Agent said.

Program sponsors include FiberMax, the College of Agricultural Sciences and Natural Resources at Texas Tech, Texas A&M AgriLife Extension, South Plains Electric Cooperative, Lubbock Chamber of Commerce, PhytoGen, Plains Cotton Growers, AgTexas Farm Credit Services, Capital Farm Credit, City Bank, High Plains Water District, Hurst Farm Supply, Lubbock County Farm Bureau, Peoples Bank, ARMtech, Lubbock Electric, Lyntegar Electric Cooperative, Texas Corn Producers, Texas Department of Agriculture, Texas Peanut Producers Board, Wellington State Bank, Wylie Implement and Spray Centers, Cornerstone Group Inc., United Sorghum Checkoff Program, Southwest Dairy Farmers, Gandy’s, Taylor Insurance, Farmers Cooperative Compress, and DairyMax.

FDA Approves Ultra-Low Gossypol Cottonseed For Human, Animal Consumption

Monday, Oct. 14, 2019 By Kay Ledbetter, Texas A&M AgriLife

The U.S. Food and Drug Administration has given the green light to ultra-low gossypol cottonseed, ULGCS, to be utilized as human food and in animal feed, something Texas A&M AgriLife researchers have been working on for nearly 25 years.

Keerti Rathore, Ph.D., a Texas A&M AgriLife Research plant biotechnologist in the Texas A&M Institute for Plant Genomics and Biotechnology and Department of Soil and Crop Sciences, College Station, and his team have developed, tested and obtained deregulation for the transgenic cotton plant – TAM66274.

TAM66274 is a unique cotton plant with ultra-low gossypol levels in the seed, which makes the protein from the seeds safe to consume, Rathore said, but also maintains normal plant-protecting gossypol levels in the rest of the plant, making it ideal for the traditional cotton farmer.

Patrick Stover, Ph.D., vice-chancellor and dean for the College of Agriculture and Life Sciences and director of AgriLife Research, said this is research with a direct, positive impact on the world’s food supply.

“This demonstrates how we can make a difference in enhancing the nutritional quality of the food system for those in greatest need, while enhancing the profitability of agriculture production,” Stover said. “Our goal is to advance sustainable agriculture in Texas and around the world, and this new protein source is yet another step in that direction.”

Cottonseed as a food source

If adopted by the cotton growers worldwide, ULGCS has the potential to make a significant impact on nutrition security, especially in the poor, cotton-growing countries, Rathore said.

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“The amount of protein locked up in the annual output of cottonseed worldwide is about 10.8 trillion grams,” he said. “That is more than what is present in all the chicken eggs produced globally, and enough to meet the basic protein requirements of over 500 million people.”

This FDA approval is only the fifth for a university-developed, genetically engineered crop in the last 25-year history of genetically modified products in the U.S., and is the first for a Texas university, Rathore said.

Except for a few countries, most cotton producing countries, particularly in Asia and Africa, suffer from hunger and malnutrition, Rathore said. Up to now, the ability to utilize protein-rich cottonseed for food or even as feed for the non-ruminants was not possible because of the presence of a toxic terpenoid, gossypol.

With the development and approval of the ULGCS, gossypol is no longer a deterrent.

The human food ingredients from TAM66274 cottonseed can be roasted cottonseed kernels, raw cottonseed kernels, cottonseed kernels, partially defatted cottonseed flour, defatted cottonseed flour and cottonseed oil.

When used in animal food, the appropriate name for dehulled cottonseed derived from TAM66274 cotton is “low gossypol dehulled cottonseed,” and the appropriate name for dehulled cottonseed meal derived from TAM66274 cotton is “low gossypol dehulled cottonseed meal.”

Rathore said initially low-gossypol cottonseed protein can be used by two of the most efficient systems to convert feed protein into edible animal protein: aquaculture and the poultry industry.

“Both of these industries are experiencing high rates of growth and are likely to continue growing for the foreseeable future,” he said.

Steps to a new protein source

Getting to this point took approval from two areas of government. First, non-regulated status for TAM66274 was required by the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service. Then, FDA approval was needed.

“This approval from FDA enables cultivation and use of this promising new cottonseed product within the U.S.,” Rathore said.

The research was supported by funds from Cotton Incorporated and AgriLife Research.

Kater Hake, Ph.D., vice president of agricultural and environmental research at Cotton Inc., said gossypol suppression in cottonseed has been part of their funded research portfolio for over 30 years.

“It took time to tap the innate protein potential in the seed; time for the right technologies to develop; and time for the right research team to come along.”

Building a market

The next step, Hake said, is to get cotton farmers and the industry around the world to begin growing and marketing the special variety.

Tom Wedegaertner, director of cottonseed research and marketing at Cotton Inc., explained the dedication to this research project, saying gossypol in the leaves and stalks of the cotton plant serve as a pest deterrent, but its presence in the seed serves no purpose.

“The more widespread use of cottonseed as a livestock feed and even for human consumption has been stymied by the natural levels of gossypol in the seed,” Wedegaertner said. “Now we have the ability to utilize the protein.”

Hake said with the full deregulation approval in place, “We can now demonstrate the value of a novel food source to cottonseed processors and seed companies who are essential to purchasing and delivering the seed to cotton growers.”

More bang for the cotton buck

With expanded use of ULGCS for human nutrition either directly as food or indirectly as feed, the cotton plant can potentially become a dual-purpose crop that will be cultivated not only as a source of natural fiber, but just as much for its seed to be used as a source of oil as well as protein, Rathore said.

Importantly, he said, the ULGCS makes available a vast source of protein without bringing additional land under the plow or an increase in the input costs.

Another potential benefit, Rathore said, is that ULGCS, by serving as a substitute for fishmeal, will positively impact the environment by reducing pressure on the severely strained supply of small, wild-caught ocean fish used as a source of feed in fish farms.

Also, by serving as a source of protein, it could reduce agricultural land-clearing in the Amazon and other places to provide space to grow more soybeans to satisfy the rising demand for protein for the growing population.

“Thus, we believe ULGCS represents a unique biotech trait that will benefit farmers, the cottonseed processing industry, the environment and human health,” he said.

Reducing malnutrition

Ultimately, though, Rathore’s goal is for global adoption of TAM66274 to help address protein malnutrition in impoverished parts of the world that cultivate cotton.

Human nutrition trials conducted in some Central and South American countries, Western Africa, Asia and the U.S. in the 1960s through the 1980s show that with substantial reduction or complete elimination of gossypol, cottonseed protein can play a direct and significant role in alleviating protein-calorie malnutrition in a populace suffering as a result of inadequate nutrition.

“It is my hope, as we move forward in the commercialization process, that the protein derived from ULGCS remain affordable as a supplement in protein-poor diets,” Rathore said.

Editor’s Note:

“Cotton News”, a weekly service of Plains Cotton Growers to the cotton industry and news media in the 41-county High Plains area, is mailed from Lubbock each Friday. Its contents are confined to news items and comments pertaining to the High Plains cotton industry which is so vital to U.S. all. Anyone interested in making comments about the contents of this column can call 806-792-4904 or Email PCG at: editor@plainscotton.org