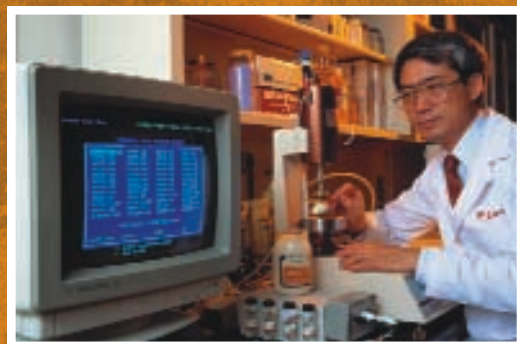


The Cotton Foundation Report to Members 2002



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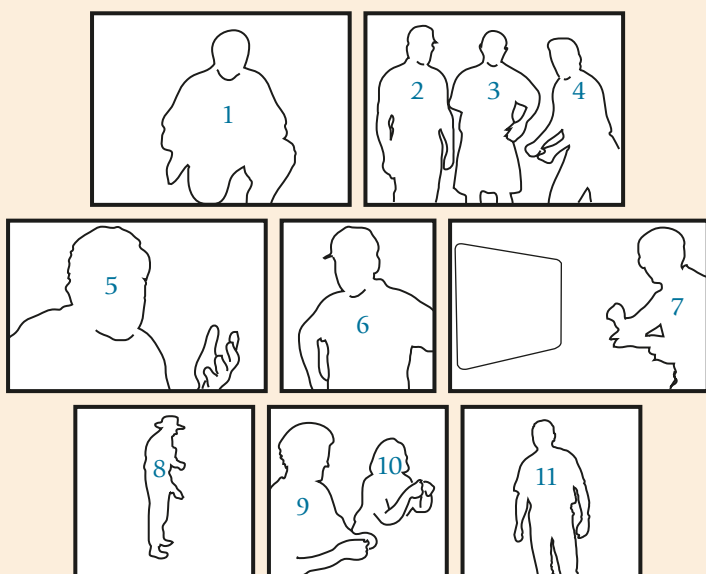
The Cotton Foundation

Agribusiness' support of U.S. cotton comes from more than new products and services. Many firms choose to support the industry through membership in The Cotton Foundation, a 501(C)3 organization created in 1955 that facilitates, encourages and conducts research and education.

These allied firms' dues and special grants enable the Foundation to pursue several goals on behalf of U.S. cotton:

- ✓ support present Foundation leadership and member education programs;
- ✓ provide educational programs that improve safety, productivity and environmental stewardship of the industry workforce;
- ✓ identify short and longer term issues facing the cotton industry and then develop and implement projects to address issues or needs;
- ✓ develop and provide funding for programs to help influence industry and government research;
- ✓ identify long term, industrywide strategic issues that will impact the cotton industry; and
- ✓ identify in a timely manner and assess the impact of proposed regulations.

Working toward these goals, the Foundation lends vision and leadership to the National Cotton Council, which is ever-striving to ensure U.S. cotton can compete profitably in the global marketplace.



On the cover: The Cotton Foundation supports a variety of research efforts from the Carolinas to California. Among the many outstanding researchers involved in that work are:

1. Dr. John Gannaway, Texas A&M University
2. Dr. Dan Krieg, Texas Tech University
3. Dr. Robert Lascano, Texas A&M University
4. Dr. Stephen Maas, Texas Tech University
5. Dr. Peter Cotty, USDA Agricultural Research Service
6. Dr. Derrick Oosterhuis, University of Arkansas
7. Dr. Peter Wan, USDA Agricultural Research Service
8. Dr. Bill Weir, University of California
9. Tricia Yates, New Mexico State University
10. Dr. Jane Pierce, New Mexico State University
11. Dr. Chris Tingle, University of Arkansas

President's Message



The Cotton Foundation's vitality has never been more important as the U.S. cotton industry has been buffeted by low farm prices and cheap textile and apparel imports.

Foundation fiscal support – backed by strong allied industry membership – is helping the National Cotton Council brighten the industry's future. This is being achieved primarily by supporting the development of new technology and techniques that enable the industry to gain greater efficiencies and avoid unnecessary regulation.

Dues and special grants to the Foundation from its member firms coupled with investment income enabled the Foundation to underwrite 35 general cotton research and education projects for 2001-02 with \$474,950. That increase from the previous year funded market development, profitability and regulatory projects ranging from cottonseed quality improvement to validation of remote sensing data.

A large portion of Foundation-supported work is driven by recommendations from the NCC's Profitability Initiative. In looking for ways to reduce production and processing costs, the initiative pointed to the potential of precision agriculture, genetics, biotechnology, conservation tillage and narrow row cotton. Among the study's conclusions was that from four to seven cents per pound in savings could be achieved from precision agriculture but further refinements of that technology are necessary. That study has led to major on-farm projects using remote sensing and variable rate technology in Georgia, Mississippi, Louisiana and California. Tests thus far have shown significant efficiencies in the application of plant protectants, fertilizer, water and other inputs.

Further information on Cotton Foundation-funded profitability projects can be found on the NCC's web site at <http://www.cotton.org/cf/projects/general-profitability.cfm>.

Foundation special projects, which are funded by member firms over and above their regular dues, continued at a high level of nearly \$1.2 million. Multiple NCC-developed educational endeavors were launched this past year.

Cotton Counts, for example, is aimed at improving consumer attitudes toward U.S. cotton. Carried out primarily by National Cotton Women's Committee volunteers, the campaign's objective is helping America's students and the general public better understand and appreciate cotton and the U.S. cotton industry's contributions to the nation.

The industry also is gaining public recognition, especially from lawmakers and regulatory officials, through the World of Cotton. Located on the NCC's home page, this database provides comprehensive statewide data on U.S. cotton's economic significance.

Ongoing educational efforts were bolstered, too.

NCC's on-line *Journal of Cotton Science*, a peer-reviewed, refereed publication, received special project grant support to help it strengthen its reputation as a leading source for new scientific discoveries and studies.

Cotton Council International's COTTON USA Advantage program received additional funding, too. This is helping in the challenge to get overseas consumers to distinguish the unique qualities and services of U.S. cotton and U.S. cotton products.

The Foundation's involvement in helping the NCC achieve its mission is growing as special project support is being sought for more of NCC's core activities such as the *Cotton's Week* newsletter, the daily Cotton eNews and the *Cotton's Week* broadcast on AgDay. All special projects have been scrutinized to ensure they are helping NCC carry out its priorities.

By describing Foundation-supported research and educational activities, this annual report offers optimism. That progress coupled with the Foundation's recent strong membership growth and overall track record are reasons for believing this institution can help the NCC in its quest to restore U.S. cotton's viability.

A handwritten signature in blue ink, which appears to read "James F. Dodson". The signature is fluid and cursive, with a large, stylized initial "J".

James F. Dodson, President
The Cotton Foundation

GENERAL PROJECTS – 2001-2002

The Cotton Foundation funded three **market** development projects, 24 **profitability** projects and eight **regulatory** projects – all with the overall goal of helping the National Cotton Council carry out its mission of ensuring the ability of all industry segments to compete effectively and profitably in the raw cotton, oilseed and value-added product markets at home and abroad.

Market Development Projects:

Industrial and Value-Added Uses of Cottonseed Products

Cottonseed Quality Improvement

Detection of Seed Cotton Contamination by Ion Mobility

Texas A&M University scientists are collaborating with USDA Agricultural Research Service scientists in New Orleans and College Station on an effort to improve cottonseed oil's marketability and develop alternative value-added uses.

They found that standard techniques were unable to detect gossypol in refined-bleached-deodorized (RBD) cottonseed oil. Because gossypol and the RBD oil of glanded cottonseed have been shown to inhibit cancer cell lines, they believe some potentially beneficial trace amounts of gossypol may exist in RBD oil.

Their objectives are: 1) to improve the detection limit of gossypol and confirm if gossypol exists in RBD cottonseed oil and, if so, in what form and 2) explore various formulations and processes of cottonseed oil for application as a concrete mold releasing agent and as an alternative fuel for automobiles to improve combustion efficiency and reduce pollutants.

Cottonseed germplasm was screened for oil and protein quantity along with other traits under the direction of Dr. John Gannaway at the Texas A&M Agricultural Experiment Station in Lubbock. Because a two percent increase in oil content, for example, would mean an increase in seed value of \$10 per ton, the work focused on improving traits, releasing germplasm and developing cotton cultivars exhibiting enhanced levels of oil and protein.

Despite policing of fields at harvest, plastic contaminants are costing the U.S. cotton industry as much as \$5 million annually and need to be detected well before the textile manufacturing process.

A miniature ion mobility spectrometer device was tested in a cotton gin as a means to detect even the smallest of plastic fiber contaminants in seed cotton during gin drying. Researchers at USDA-ARS and New Mexico State University identified the important volatile organic chemicals emitted by contaminating plastics during the drying stage and determined the appropriate detection limits.



Dr. Peter Wan, a scientist at the USDA Agricultural Research Service's Southern Research Center in New Orleans, was part of a team of scientists that sought to determine if gossypol is present in refined-bleached-deodorized cottonseed oil.



Profitability Projects:

A Look at Row Spacing to Reduce Cotton Production Costs

Management of Ultra Narrow Row Cotton Production

Cotton Management Systems Utilizing Subsurface Drip Irrigation and Conservation Tillage on the Texas Rolling Plains

Replicated tests from 1998-2001 in California's northern San Joaquin Valley showed that double rows of cotton planted on beds and spindle picked outyielded conventional cotton by eight percent. Additional savings were accrued from less cultivation/ditch work and lower weed control costs. Other benefits included: 1) the use of existing equipment such as furrow irrigation set ups and conventional spindle pickers; 2) less labor and fewer chemical inputs resulted in additional cost reductions of \$45-\$80; and 3) yield increases were realized even in the difficult 1998 and 1999 growing seasons.

Results from a Texas A&M University study on how best to manage an ultra narrow row cotton (UNR) crop have shown that 7.5" rows do not require lower nitrogen fertilizer levels than 15" or 30" rows. Also, the 7.5" and 15" rows were slightly earlier than the 30" row spacing. No significant difference in yields was found among the three spacings.

An A&M doctoral student is measuring the in-season physiological responses of UNR and conventionally-spaced cotton to four nitrogen levels.

One finding from a study of in-season physiological responses of cotton to four nitrogen levels found that 7.5-inch rows do not require lower nitrogen levels than 15-inch or 30-inch rows.



Diminishing water resources in the Texas Rolling Plains prompted scientists at Texas A&M University to escalate research on subsurface drip irrigation (SDI) – a practice they strongly believe will be embraced by that region's cotton producers within the next decade.

A 30-acre SDI site that complements conservation tillage research was engineered and installed in 2001, and data collection began during the 2002 growing season. Studies will include water use, insect and weed populations and dynamics, crop responses and yields.



Replicated tests from 1998-2001 in California's northern San Joaquin Valley showed that double row, 30-inch cotton planted on beds and spindle picked outyielded conventional cotton by eight percent.

Hyperspectral Remote Sensing for Early Detection of Crop Damage

Reducing Production Costs with Remote Sensing and Spatially Variable Insecticide/Defoliation

Remote Sensing Support of Precision Farming in the Texas High Plains

Remote Sensing Technologies to Improve Cotton Production Efficiencies

Hyperspectral remote sensing has been used successfully to improve irrigation efficiency by determining variations in cotton plant canopy water and chlorophyll content.

In 2001, University of California-Davis researchers compared ground measurements of Ted Sheely's San Joaquin Valley farm with measurements from NASA's Advanced Visible/Infrared Imaging Spectrometer. The water content maps were returned to Sheely within 48 hours of image acquisition for use in irrigation decisions.

In addition, a field and image analysis study was conducted to improve mapping of soil salinity and inorganic carbon - factors affected by irrigation practices. Significant progress was made in predicting within-field crop yield using chlorophyll derived image data as inputs into the COTONS model. This information will allow the grower to evaluate the cost-effectiveness of management decisions based on predicted yield outcome.

Remote sensing images taken of test fields in Louisiana the past two years were used to base precision applications of insecticides and defoliants in areas of fields with high insect density and minimal premature defoliation of plants. In 2001, a multi-discipline team that included researchers from Louisiana State University and Mississippi State University verified that spatial variable insecticide applications resulted in decreased insecticide use.

They continued to work with Louisiana cotton producer Jay Hardwick in 2002 to: 1) correlate cotton insect pest densities and defoliation timing with variations in plant growth as recorded with remote sensing technologies and 2) compare the efficacy and value of spatially variable insecticide and spatially variable defoliation applications against whole field applications.

A number of Texas High Plains cotton producers are adopting precision agriculture techniques, so Texas Tech University and Texas Agricultural Experiment Station researchers are escalating their study of remote sensing applications for that unique region.

Preliminary analysis from testing done on the Lexie Fennell and Jerry Brightbill farms indicates that mid-season remote sensing imagery may be useful in delineating portions of fields with high and low yields at harvest. The imagery also was used in the latter part of the 2001 growing season to guide the variable-rate application of growth regulator (Pix) in selected fields in the study. Operationally, such information might be used by a farmer to allocate limited irrigation resources within a field during the last half of the growing season to protect the yield potential of parts of the field that appear to be destined for higher yields.

In 2001, seed cotton samples also were analyzed for fiber quality at the International Textile Center in Lubbock. Data were used to produce detailed maps of fiber quality for these fields, and may be used to suggest possible methods for managing boll maturity. In 2002, researchers acquired airborne multispectral imagery of study fields about every 10 days during most of the growing season.

Believing that input use efficiencies of up to 20 percent can be achieved, University of Georgia researchers are developing and expediting the use of sensing technologies. Their goal is to make them part of a cotton production system that incorporates new irrigation tools, with sensing and application technologies, to improve crop productivity and quality and input use efficiencies, especially water.

In 2001, researchers developed an Internet site (<http://nespal.cpes.peachnet.edu/fsa>) to test the value of using Farm Service Agency images for management and began development of an aerial image acquisition system. By switching to all-digital acquisition of aerial imagery, researchers substantially improved the data quality. For 2002 a focus group of farmers interested in aerial monitoring of their cropland were supplied with imagery throughout the season. An end-of-season workshop was to be held to analyze their respective data and evaluate the data's impact on their management decisions.

An ongoing outreach program featured the 2001 Southeastern Precision Farming Trade Show and Forum where attendees were exposed to a variety of new technologies including variable rate irrigation systems. Four grower meetings also were organized in both 2001 and 2002 to discuss with farmers the technologies and potentials of remote sensing.



A GPS backpack and laptop computer are used to document field data in remote sensing research being conducted in Georgia; bare soil images of this 135-acre field in Georgia are useful in highlighting soil variability.



Cotton Engineering, Ginning and Mechanization Endowed Chair
Gin Management & Technology (GMT) Program Enhancements
Identification of Trash Component in Ginned Lint by Instrumental Methods and Their Impact on Cotton Utilization
Quantifying the Value of Cotton Gin Byproducts as a Soil Amendment for Low Yielding Soils
Solar Sterilization of Gin Byproducts
Transferring Information to Cotton Ginners and Producers on Gin Waste Utilization Alternatives
Detection of Cotton Smoke by Ion Mobility Spectrometry

Position criteria have been developed for recruiting candidates for a Cotton Engineering, Ginning and Mechanization Endowed Chair at Texas A&M University. The university matched a half million dollars that was raised over the past four years to fund the chair, which will help ensure continued efforts in research and education, and outreach programs in Cotton Engineering for the industry's benefit.

Additional equipment, including a refurbished feed control, burner, cut-down drier, press and additional piping enhanced a micro-gin at the Mississippi State University's Pace Seed Technology Laboratory. This gin, which now meets the requirements of a modern cotton gin, is helping extend the learning opportunities for students in the university's Gin Management & Technology program.

A multi-discipline effort between investigators at Clemson University and USDA-ARS researchers in Georgia sought to demonstrate the acceptability of replacing small trash with larger pieces of trash in the USDA grading standard boxes.

The size, composition and source of ginned lint trash was identified and experiments conducted to evaluate textile processing performance. Investigators then were able to study the trash as it related to processing difficulties and develop innovative methods of identifying problematic trash.

The potential exists for new markets with gin byproducts – turning a gin cost and potential liability into a revenue source.

From two years of testing, researchers at the University of Arkansas Northeast Research and Extension Center have validated cotton gin byproducts as effective – but less expensive to use - than chicken litter as a soil amendment. Data taken from rice fields where the gin byproducts were compared to chicken litter and an untreated check showed no statistical difference in final yield and plant nutrient content.



An infrared instrument and a laptop computer are used to identify cotton trash particles based on unique wavelength signatures.

Use of black plastic as a covering for piles of gin trash has proven to be effective at helping to generate internal heat to kill weed seed and disease organisms in the outermost six-inch layer of the compost pile. The plastic cover solar sterilization supplements a practice of wetting the gin trash, which sterilizes the innermost compost pile. Results from this University of Arkansas project will help make gin trash more acceptable among farmers wanting to use this byproduct as a soil amendment.

An update of the *Gin Waste Utilization Alternatives* publication is being coordinated by a University of Arkansas researcher. The pamphlet summarizes the latest research and ginner's experiences with gin waste handling. Among project objectives is to stimulate ginner's to look at waste utilization alternative niches available in their locale in order to reduce their waste disposal costs.

USDA-ARS and New Mexico State University researchers have used advances made in ion mobility spectrometry selectivity to greatly improve the ability to pick out cotton smoke from other combustion products – and minimize bale fire risk at warehouses. They are: 1) setting up a fire bale detection system outside warehouses and 2) zone deluge systems, where fire sprinklers are activated by a smoke detector that recognizes the unique “smell” of burning cotton. Early detection of fires is critical as the industry moves to plastic bale ties because the plastic ties may pop at temperatures lower than those that activate current sprinkler systems.

Cotton Insect Hotline

Development of Economic Model for Cotton Insect Management After First Flower

Survey of Cotton's Losses to Pests

Management Impacts on Crop Microclimate and Arthropod Populations in Arid/Semi-Arid Environments

The Cotton Insect Hotline has been highly effective in allowing greater access to busy state cotton entomologists. The toll-free hotline is a recorded message changed as necessary and reachable 24 hours a day.

Cotton insect situation reports and notification of field days and other meetings are placed on the hotline by cooperators in California, Mississippi, Arkansas and Alabama – with the latter two states also disseminating collected insect data on budworm and resistance information.

University of Arkansas and Arkansas State University scientists are completing the development of an economic injury level model for boll weight and boll loading development after first flower – to help in crop management. This involves defining the stress resistance and establishing the research base for the synthesis of the factors of plant stand density, fruit retention, boll distribution in the plant, temperature-humidity, sunlight and turgor pressure.

In a comparison of environments and yield in 2001, it was determined that Arkansas and Greece had similar maximum temperatures but contrasting night temperatures during August. Tests confirmed that high night temperatures are one of the major causes of lowered, more variable yields in the Mississippi Delta. This model has been installed and will be used in 2002 with the researchers' boll weight data incorporated for field testing.

Annual estimates of cotton losses due to specific disease, insect and weed pests are made broadly available to public and private sectors. The Cotton Belt data, gathered at the Coordination Center at Mississippi State University, are useful for analyzing the market potential for new plant protection products, in establishing the importance of currently registered products that are threatened by cancellation or use restrictions and for setting research and educational priorities.

This loss data also is extremely important with regard to planning, funding and directing research by the public and private sectors.

High temperatures and low relative humidity typical of arid and semi-arid environments can have a dramatic impact on insect populations. A New Mexico State University researcher is attempting to determine the extent and nature of management practices' impact on crop microclimate, such as shading and canopy air, and on arthropod populations.

A preliminary analysis show that rows oriented east and west were hotter and drier than those oriented north and south. Rows oriented east and west had lower hatch rates of bollworm but the rates were variable. Rows 38 inches apart were hotter and drier than rows 14 inches apart and seven inches apart. Bollworm hatch rates were highest in the seven-inch rows and successively lower in 14-inch and 38-inch rows.



New Mexico State University researcher Dr. Jane Pierce (right) and assistant, Tricia Yates, check bollworm traps as part of an effort to study the microclimate's impact on arthropod populations in arid environments.

Electronically Publishing the *Journal of Cotton Science*

Enhancing Cotton Industry Education and Information through the Development of a Cotton Web Portal

The quarterly, on-line *Journal of Cotton Science* (JCS), available at www.jcotsci.org, offers ready access to multidisciplinary cotton research in areas ranging from genetics to economics. More than 250 manuscripts have been received and placed in peer review by JCS editors. Published manuscripts contain an interpretive summary that explains the value of the research in layman's terms.

JCS, which is copyrighted, is now published as Adobe Acrobat (PDF) files for optimum versatility and ease of publication. JCS was the first all-electronic journal to be indexed in AGRICOLA, the database of the National Agricultural Library.

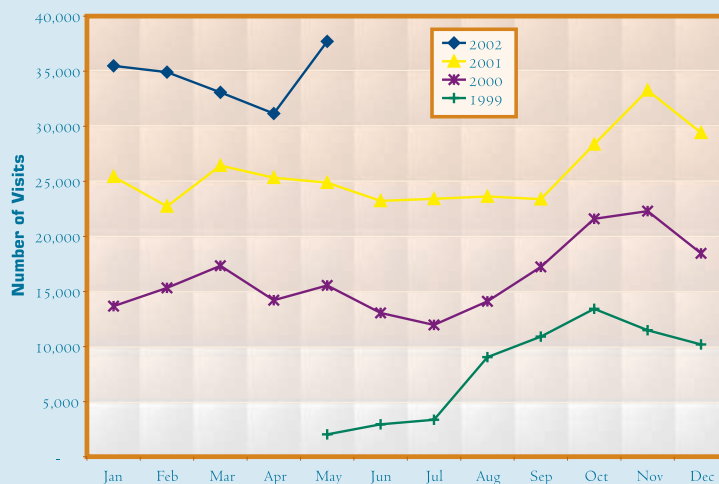
The NCC's web site, www.cotton.org, is a cost-effective method of communicating, and is becoming increasingly popular. Visitor traffic increased 52 percent from 2000 to 2001, and from the end of 2001 to mid-2002 had increased another 38 percent.

Some recent additions were the Cotton Counts and World of Cotton information sites. The implementation of content management software allows NCC staff

timely updating of the site and distribution of information electronically.

The NCC's World Wide Web Project Team continue to guide the site's development as a central online information source about the U.S. cotton industry. Future plans call for integrating the site with the NCC's membership database to allow for personalized information.

NCC Web Site Traffic Year by Year Comparison



National Cotton Council web site traffic increased steadily from May of 1999 through May of 2002.

Evaluation of the Cotton Genotypes for Tolerance or Resistance to Early Season Thrips Injury

Screening Converted Race Stocks (CRS) for Cotton Seedling Drought-Tolerance

A University of Arkansas multi-disciplined team conducted three years of field tests and a year of greenhouse tests to evaluate available cultivars and advanced breeding lines for resistance to thrips injury. If resistance sources can be identified, producers would have a crop able to overcome thrips' early season stress and achieve early maturity along with the reduction or elimination of early-season insecticide use.

During the research, it was found that *Frankliniella occidentalis* – a thrips species believed harder to control than *Frankliniella fusca*, was becoming more prevalent in central Arkansas – a concern for northern Cotton Belt production.

Texas A&M University researchers are seeking to verify the differences in seedling drought-tolerance among

converted cotton race stocks. They also are studying the genetics of seedling drought-tolerance and working to transfer such genes to germplines. They hope to provide information to breeders on how to design breeding schemes to capture additional drought tolerance in commercial cultivars.

Thus far, they have identified 10 converted race stocks that exhibited 60 percent or better seedling recovery following three cycles of drought stress under greenhouse conditions. The seedling drought-tolerance of at least two converted race stocks was verified. They are exploring additional screening methods to identify seedling drought-tolerance, including germination under high salt and chlorophyll fluorescence under drought conditions.

Regulatory Projects:

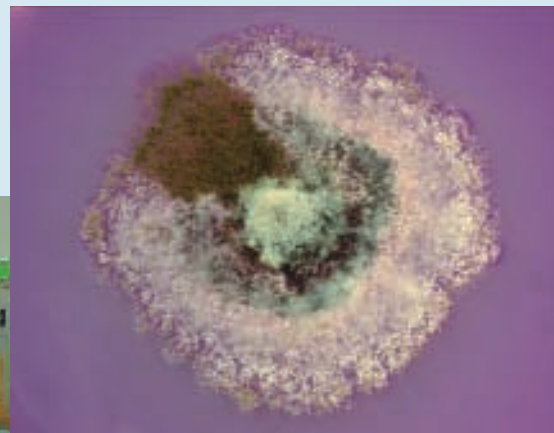
Development and Commercial Evaluation of the Use of Atoxigenic Strains to Prevent Aflatoxin Contamination Preliminary Assessment to Establish Parameters for Reduction of Aflatoxin Contamination in South Texas

In Arizona aflatoxin contamination of cottonseed costs farmers \$30-\$50 per acre, but no reliable prevention methods exist. In 2001, data was submitted to EPA to support the agency requirements for expanded registration of *Aspergillus flavus* AF36, an atoxigenic strain of *Aspergillus flavus* that out competes aflatoxin producers in cotton fields and, in so doing, reduces aflatoxin contamination.

Under the direction of USDA Agricultural Research Service, environmental conditions under which atoxigenic strains perform best were defined and an assay to assess product survival in non-sterile soil was developed. This assay is being applied to improving the quality of atoxigenic strain product produced in the prototype commercial scale manufacturing process under development in Arizona. Commercial field tests that included treatment of 20,000 acres in 2001 continued to demonstrate the ability of atoxigenic strain applications to reduce the aflatoxin-producing potential of fungal communities in agricultural fields.

Research also continues on determining the incidence and distribution of various types of *Aspergillus flavus* in South Texas in order to better understand the perennial contamination in that area. The potential value of atoxigenic strains in South Texas is being examined.

As in Arizona, atoxigenic strain colonized sterile wheat seed is being applied to the soil under crop canopies. Research will assess the potential for crop colonization and long-term influences of applications in irrigated and non-irrigated fields. Testing in 2001 provided insights on atoxigenic strains with the greatest competitive potential in South Texas. Selection of strains optimal for South Texas is a key goal, and observations suggest potential value of atoxigenic strains in that region. Observations include excellent movement of soil applied fungus to the crop and survival of applied strains between seasons.



Workers at the Arizona Cotton Research and Protection Council lab assist with the analysis of *Aspergillus flavus* populations needed to determine the extent to which *A. flavus* atoxigenic strain applications are effective against aflatoxin producing strains such as the S strain, the white fungus (inset photo) shown here growing out of a cotton seed on isolation medium.

Survey and Research on Potential Consumer, Environmental and Workplace Hazards

Use of Particle Size Distributions for Measurement and Modeling of Emissions from Agricultural Operations

Emissions Factors for 1st and 2nd Pick Pima Cotton

Evaluation of FRM PM2.5 Samplers Using the Coulter Counter Multisizer

Modification of the Fritz/Zwicke Dispersion Model for Agricultural Sources

Cyclone Research

For the past 20 years, The Cotton Foundation, along with some textile and fiber groups, has contributed to the gathering of burn incidence data from Consumer Products Safety Commission in-depth studies. This information has been very useful in helping to retain beneficial amendments to the Children's Sleepwear Flammability Standard and prevent unnecessary new standards.

Other data compilations are useful in preventing unnecessary regulations ranging from cotton textile processing and gin and cottonseed oil mill operations to the production of mattresses/bedding and upholstered furniture.

To ensure that cotton gins are regulated fairly by EPA, Texas A&M University engineers are developing a method for determining the particle size distribution of agricultural emissions of particulate matter, such as cotton gin dust.

The expanded study includes the aerodynamic particle sizer (APS) as another means to determine particle sizing – joining the Coulter Counter Multisizer and Cascade Impactor. The APS has limitations but can provide previously unattainable information regarding changes in particle size and concentration with time in downwind sampling.

The work has demonstrated to EPA the errors in sampling agricultural dusts with EPA approved samplers. There is a window of opportunity to affect the air pollution regulatory process in the near future to insure that agricultural operations are regulated appropriately.

Researchers continue laboratory experiments with particulate matter PM2.5 samplers to determine their accuracy in the presence of agricultural dusts versus urban dusts. If these samplers do not monitor agricultural dusts accurately, the PM2.5 being emitted from cotton gins or from agricultural field operations could suggest that a large mass of PM2.5 is being emitted, when, in fact, it is very small.

EPA is concerned that second pick Pima cotton in Arizona and California may have significantly increased gin particulate emissions. A USDA-ARS

researcher is cooperating with the California Cotton Ginners Association in a study to determine if there is any difference between first and second pick Pima cotton gin emissions.

Texas A&M University researchers showed that some dispersion models over-predict downwind concentrations of particulate by three to 10 times when applied to low-level point sources, such as cotton gins, feed mills or grain elevators. Their recent work has demonstrated to EPA that the Fritz/Zwicke dispersion model, though, more accurately predicts downwind concentrations for agricultural concentrations.

This occurred due to improvements to the model, which accounted for short-term changes in wind direction. Researchers plan to use inputs required by the state air pollution regulatory agencies in the model to obtain the agencies' approval for regulatory use for low-level agricultural air pollution sources.

Texas A&M University engineers are developing a sound science description of the cyclone operation to facilitate engineering design of the most efficient gin pollution abatement system. Several cyclone models have been examined in this multi-year study, which has revealed useful information about how a cyclone's dimensions affect its performance.

The engineers also developed a new process for calculating pressure drop across different cyclone designs, and made progress with a new method for calculating fractional efficiency curves for various cyclone designs.

Some Cotton Foundation general funds are retained to support high priority research or education needs that were not anticipated during project planning. In 2001-2002, contingency funds supported: 1) an undergraduate research internship at the University of Georgia in cotton genetics, 2) the University of California - Davis cotton genome center's evaluation of lygus bug resistant cotton germplasm and 3) sticky cotton research and education.

COTTON FOUNDATION MEMBERS 2001-2002

Ag Leader Technology Ag Leader Technology manufactures a full line of precision farming tools, including yield monitors for cotton pickers and grain combines. The PF3000 monitor/controller with add-on GPS 3000, 3050 or 3100, or the ruggedized PF3000 Pro with built-in GPS; SMS Basic desktop PC software; and the parallel-swathing Lightbar; provide tools for year-round precision farming from soil sampling through fertilizing, planting, spraying and harvesting.

ag-chem Ag-Chem manufactures and markets the pre-emerge Terra-Gator high flotation applicator and the post-emerge RoGator high clearance sprayer. Ag-Chem also offers a line of high-tech, site-specific computer systems, software, data management and related support systems. Products are sold and serviced by a direct sales force to both dealers and farmers.

agdia Agdia produces and distributes Hel-ID, the diagnostic test kit which identifies both the bollworm and the budworm in the egg stage. Agdia also markets GMO tests, including Bt-Cry1Ac/Ab (Bollgard), Cry2A, CP4 (Roundup Ready), Cry9C (Starlink), and the genetic marker NPTII, which detect genetically modified cotton and other crops for U.S. cotton producers. The tests are available in the stick and ELISA plate format. Agdia also develops test kits and lab testing services to detect pathogens in plants and other insect diagnostics.

AGRIplan AGRIPLAN is dedicated to bringing technological innovation to cotton growers and ginners. For the grower, AGRIPLAN delivers Cotton Yield Monitor for pickers and strippers, GPS receivers, swath guidance systems and PC mapping software. These products enable the grower to apply site specific (precision farming) techniques on their farms. In a gin, AGRIPLAN cotton FLOW SENSORS and CONTROLS are used to monitor cotton and lint flow and adjust gin operating conditions. AGRIPLAN helps enhance lint quality and increase gin throughput. Visit our web site: www.agriplaninc.com or call (978) 562-5000.

AMVAC AMVAC Chemical corporation develops and markets the following crop protection products for cotton growers in the United States: Insecticides: BIDRIN® and DIBROM® 8 EMULSIVE; Fungicides: PCNB 2-E and PCNB 10% granules, the Soil Fumigant: VAPAM® and the defoliant: FOLEX®. The plant is located at 4100 E. Washington Blvd., Los Angeles, CA 90023-4406 Customer Service Tel No. 888/462-6822 (GO-AMVAC).

BASF BASF Agricultural Products strives to be the provider of knowledge and innovative solutions for cotton growers. Researching innovative crop management tools, such as Pix® Plus and Pix® Ultra plant regulators and developing the knowledge to implement profitable production techniques such as Ultra-Narrow-Row-Cotton® are a part of the commitment. Prowl® herbicide contributes to an earlier and more profitable cotton crop by effective weed control and superior crop safety. More information about BASF, Pix® Plus, Pix® Ultra, and Pix® plant regulators and Prowl® herbicide is available at www.agproducts.basf.com.

Bayer CropScience BAYTHROID®, DI-SYSTON®, GUTHION®, LEVERAGE™ 2.7, ADMIRE®, PROVADO®, TRIMAX™, DECIS™, SCOUT X-TRA® and PHASER® insecticides; LARVIN® insecticide-ovicide; TEMIK® insecticide-nematicide; NEMACUR® nematicide; ROVRAL™ fungicide; BUCTRIL™ 4EC herbicide; DEF® defoliant; PREP™ cotton boll opener; FINISH™ cotton boll opener-defoliant-regrowth inhibitor; DROPP® cotton defoliant and re-growth inhibitor; GINSTAR® cotton defoliant and re-growth inhibitor; and FiberMax™ cotton seed.

BEELINE NAVIGATOR BEELINE Technologies, Inc. is setting the standard for GPS guidance. The survey grade GPS equipment enables the tractor to know its position within ¾" accuracy "Hands-Free". BEELINE provides 24-hour support. The bottom line is extremely straight rows and reduced overlap. www.BEELINEnavigator.com

CPCSD California Planting Cotton Seed Distributors CPCSD is California's oldest and largest producer of high quality cotton planting seed. A 100% grower-owned organization, CPCSD develops and markets conventional and transgenic Acala, Pima and upland cotton varieties in California's San Joaquin Valley and many other regions of the world.

CASE IH Case IH is a leading worldwide manufacturer and marketer of Case IH agricultural equipment including tractors; COTTON EXPRESS pickers; AXIAL-FLOW combines; tillage, planting and seeding, hay and forage, and material handling products.

THE CATALYST PRODUCT GROUP The Catalyst Product Group (TCPG) is a manufacturer of Humates (Humic and Fulvic Acid extracts), foliar fertilizers, natural fungicides and nematicides, and organic based fertilizers. TCPG has developed and successfully marketed the use of these sustainable materials to enhance the production of farmers, landscapers, homeowners and golf courses.

CHEMINOVA Cheminova A/S is the basic producer of time proven plant protection chemicals for cotton and the other crops. These products include METHYL parathion, ETHYL parathion, DIMETHOATE, FYFANON brand of malathion, NUFOS brand of chlorpyrifos and GLYFOS brand of glyphosate. Cheminova, Inc. is the distributor of Cheminova A/S products in the U.S.

FARMSCAN Computronics Corporation's Farmscan division - market leaders in the design and manufacture of electronics for agriculture. In 2000, Farmscan was awarded the AE50 Award for 'Innovation in Systems Technology' for their 'Canlink 3000 Yield Monitor'. The 'Canlink 3000' is a complete precision farming system with yield mapping, soil sampling and variable rate capabilities. www.farmscan.com

CONTINENTAL EAGLE CORPORATION Complete Cotton Ginning Systems including gin stands, feeders, lint cleaners, pre-cleaning equipment, module feeders, suction unloading systems and a wide variety of baling presses; Acid Cottonseed Delinting Systems - IMPCO seed cleaning, mechanical cottonseed delinting and decorticator separator systems. - Textile Bale Presses - Repair and Service.

Crompton Finding better solutions. Crompton Corporation produces and markets quality Uniroyal Chemical crop protection products around the world for cotton producers. From planting to harvest, Uniroyal Chemical products help producers grow top quality cotton. Terraclor® and Terraclor Super X® fungicides, Comite® miticide, Dimilin® insect growth regulator, Harvade® cotton defoliant and herbicide. www.cromptoncorp.com

DTN NEWS...NOT HISTORY Data Transmission Network Corporation DTN provides cotton producers with time-sensitive market information 24 hours a day. From futures and LDP rates to weather and news, DTN keeps the cotton industry informed. DTN Cotton Network provides an efficient electronic marketing tool for sellers and buyers as well as gin and warehouse software.

D&PL Delta and Pine Land Company Delta and Pine Land Company is committed to the success of its customers and employees. D&PL breeds, produces and markets cotton planting seed, as well as soybean seed in the Cotton Belt. For more than 85 years, D&PL has used extensive plant breeding programs, drawing from a diverse germplasm base, to develop varieties sold in the Deltapine, Paymaster and Sure-Grow product lines.

Dixie Wick The Dixie Wick Company manufactures the only row wick applicator which can be calibrated for applying mepiquat chloride to the growing cotton plant. This process facilitates earliness of fruiting and harvest and uniformity without reducing canopy fill-in. The applicator is convenient to piggyback with other operations and eliminates spot spraying. Check our website: www.skantek.net/dixiewick/index.html.

Dow AgroSciences Dow AgroSciences is a global leader in providing pest management and biotechnology products that improve the quality and quantity of the earth's food supply and contribute to the safety, health and quality of life of the world's growing population. Cotton products include Tracer* Naturalyte* insect control, Trellan* herbicide, Lorsban* 4E insecticide, Telone* soil fumigant, Glyphomax* Plus herbicide, Pendimax* 3.3 herbicide, PhytoGen™ cottonseed, Delta Goal* herbicide, Kelthane* miticide, and Intrepid* 2F insecticide. Dow AgroSciences is an indirect wholly-owned subsidiary of The Dow Chemical Company. For more information about Dow AgroSciences, visit www.dowagro.com. *Trademark of Dow AgroSciences LLC ™Trademark of Phytogen Seed Company, LLC

DUPONT *The miracles of science* Asana® XL, Lannate®, Steward™ and Vydate® CLV insecticides; Assure® II, Harmony Extra®, Staple™ and Staple® PLUS herbicides. For more information, visit www.cropprotection.dupont.com.

ecotton E-Cotton.com - online commodity and information exchange for the U.S. cotton industry, www.ecotton.com.

EDEN BIOSCIENCE EDEN® Bioscience Corporation develops new protein-based crop protection products for cotton and other crops. Messenger® is the first of these products available for cotton production. Through a novel mode of action, this class of protein-based biopesticides reduces loss from nematodes, boll rot and hard lock; and improves yield potential. For information, call 1-888-879-2420 or visit us at edenbio.com.

FARM PRESS Sunbelt producers turn to the Farm Press publications for the timeliest, most thorough coverage of crops and issues important to them. Since Delta Farm Press started more than a half-century ago, the company's publications have become "the bible" in the areas they serve. The Farm Press division of PRIMEDIA Business Magazine & Media includes Southeast Farm Press, Delta Farm Press, Southwest Farm Press, Western Farm Press, Delta Agricultural Digest and Southeast Agricultural Digest. Delta Farm Press is co-sponsor of the Mid-South Farm & Gin Show, the South's largest indoor farm show, and produces the official program. Farm Press also produces or co-sponsors several other shows and conferences around the Sunbelt, as well as special publishing projects, electronic media and list rentals.

FARM PROGRESS COMPANIES Farm Progress covers the U.S. with 35 state and regional publications making it the nation's largest agricultural information provider. In addition, the company is a leader in database marketing and produces nine farm shows, including the Farm Progress Show, the Carolina Farm Show and the Mid South Ag Expo.

FARMSAVER FarmSaver.com LLC was founded by agricultural veterans dedicated to providing U.S. growers high quality agricultural inputs at considerable savings. From manufacturer to farm, FarmSaver.com provides the cotton industry with Acephate 75/90 S and Mepiquat Chloride. Check us out and save at farmsaver.com.

FMC Supporting cotton growers by providing these cotton protection products - Ammo®, Fury®, Mustang™, Pounce®, Thiodan®-Cottonseed Oil, and Methyl Parathion-Thiodan insecticides; Capture insecticide/miticide*; Command® herbicide; Furadan® insecticide/nematicide.

Griffin Griffin Agricultural Chemicals Group provides Cotton Producers with quality cotton products including Boa®, Cotoran®, CottonQuik®, Cotton-Pro®, Direx®80 DE, Early Harvest® TST, Early Harvest® PGR, Freefall®, Karmex®, Mepex®, Super Boll®, Trilin® and Trilin®5. For more information, contact Griffin Corporation, P.O. 1847, Valdosta, GA 31603, (229) 242-8635.

Gustafson Gustafson LLC is North America's leading developer and supplier of proprietary seed amendment and seedling protection products. For cotton, these products include Gaucho® insecticide; Baytan®, Vitavax®, Thiram® and Allegiance™ fungicides; and Kodiak® biological fungicide. The Gustafson product line also includes seed coatings, seed treatment equipment, treatment applicators, automatic sampling equipment and stored grain protectants.

HELENA The most trusted, innovative and respected distributor of agricultural inputs in the Cotton Belt, Helena offers cotton producers a complete line of production inputs and services. Our expanding line of useful specialty products include high quality inputs in many categories: Spray Adjuvants, Seed Treatments, Nutritionals, BioScience and Value-Added Products.

IFP International Fiber Packaging is the world's leading bale packaging supplier. Manufacturers of: Car-Lok® and Herculite® bale ties; bagging including polypropylene, polyethylene, and burlap; Cotton Topper® module covers; Car-Loker® semi-automatic chute and door systems, Ultra Twist® automatic bale tying systems, and Ultra Rebander® bale repairing equipment. For more information call 1-800-851-4026 or visit us at www.ifpco.com.

JOHN DEERE One of the world's oldest and most respected enterprises, John Deere (www.JohnDeere.com) creates smart and innovative solutions, in the form of advanced machines, services and concepts, for customers on the farmsite, worksite and homesite worldwide.

KBH CORPORATION THE KBH CORPORATION is the national leader in cotton handling equipment, manufacturing the "Cotton House" module builder, the "Mule Boy" cotton cart and liquid and dry fertilizer equipment.

KEITH WALKING FLOOR The Keith Walking Floor module feeder is the safest, most versatile system available to provide steady metered flow to your dispersal head. No gear, rollers or chains to create safety hazards and maintenance problems. For the only module feeder you can walk and drive on, call Keith Sales Company today at 800-547-6161.

KINCAID INC. Kincaid Inc., is the only manufacturer of chloroneb, the active ingredient in its Demosan® seed treating fungicide products. Demosan® consistently delivers 92-99% healthy stands with first-rate control of both Rhizoctonia and Pythium. Demosan® is available in flowable and wettable powder formulations. Demosan® stands for cotton. Call 800-951-3377.

LUMMUS CORPORATION Lummus Corporation is a worldwide leader in the manufacturing and marketing of a complete line of cotton ginning machinery and replacement parts, including gin stands, feeders, lint cleaners, precleaning and baling equipment.

CottonGrower The great cotton industry is well-served by a host of Meister Publishing Company specialized agricultural offerings, including the largest-circulation vertical, COTTON GROWER PLUS, targeted to the business needs of 250+ acre growers. Meister is the world's largest publisher of cotton information, yearly producing COTTON INTERNATIONAL, the world's foremost annual publication summarizing global cotton production and marketing, as well as COTTON INTERNATIONAL'S "Global Meeting Preview", a mid-year edition covering issues facing the important international cotton gatherings. Other Meister offerings involved heavily in the production of cotton include AG CONSULTANT, FARM CHEMICALS, FARM CHEMICALS HANDBOOK, WEED CONTROL MANUAL and the INSECT AND DISEASE CONTROL GUIDE.



MICRO-TRAK[®]
SYSTEMS, INC.
An Electronics Company

Micro-Trak Systems, Inc., based in Eagle Lake, MN, is a manufacturing company that is committed to the development of electronic monitoring and control systems that help promote economic growth while preserving environmental quality. Products include acre counters, flow monitors, sprayer monitors and automatic rate controllers for liquid, dry and anhydrous. Also included are "On-The-Go" yield monitors for grain and cotton, DGPS receivers and guidance/lightbars.



The DNA Lab at Mid-West Seed Services provides DNA/PCR testing services for cotton seed producers and breeders. DNA/PCR detects presence of GMOs in cotton seeds and derived products. Quantitative real-time PCR quantifies the GMO amount present. Event specific DNA markers can be used to identify individual transgenic traits. DNA markers are available to identify all current commercialized transgenic traits. Visit us at www.mwseed.com.



A manufacturer of agricultural and industrial chemicals which produces and markets all three primary crop nutrients. Nitrogen products are manufactured in Yazoo City, MS; Donaldsonville, LA; and the company's joint venture in The Republic of Trinidad and Tobago. These products include anhydrous ammonia, UAN solutions, nitric acid, urea and Amtrate. Potash is produced at Carlsbad, NM, and diammonium phosphate at Pascagoula, MS.

MONSANTO



Monsanto develops and brings exciting new plant technologies to the cotton market. Now commercially available are the Bollgard gene for season-long in-plant budworm and bollworm protection,

and Roundup Ready cotton which allows in-crop treatments of Roundup Ultra herbicide for dependable, broad spectrum weed control in any cotton production system and all soil types. Both technologies are available in leading cotton varieties from multiple seed company partners.



National Bank of Commerce, Memphis: Financing cotton requires a lender with knowledge and experience. NBC has proven capabilities servicing the financial needs of companies involved in all phases of agri-business from producer to the mill.



The world leader in micro irrigation technology for more than 30 years, Netafim USA offers micro irrigation systems for cotton and other crops. Netafim USA systems include dripperline, valves, filters and air relief, and deliver precise amounts of water and nutrients to every plant in a variety of terrains and environments.



New York Board of Trade
New York Cotton Exchange

The New York Board of Trade (NYBOT) is the parent company of the Coffee, Sugar & Cocoa Exchange, Inc. (CSCE) and the New York Cotton Exchange (NYCE). Through its two exchanges and their subsidiaries and divisions, including the New York Futures Exchange (NYFE), FINEX and Citrus Associates, NYBOT offers a wide variety of agricultural, currency and index products. The New York Cotton Exchange, the world's premier cotton futures and options marketplace, has provided the cotton industry with reliable price discovery and risk management capabilities since 1870.

Nichino America, Inc.

Nichino America, Inc., a wholly owned subsidiary of Nihon Nohyaku Company, Ltd., is a basic researcher and manufacturer of plant protection products, including Courier, an insect growth regulator for control of whiteflies.



OmniSTAR, Inc. provides high quality Differential GPS correction services over most of the world's major landmasses, including North, Central and South America. OmniSTAR capability is now built into a growing number of DGPS receivers designed specifically for agricultural applications. OmniSTAR is recommended for critical operations, such as equipment guidance and chemical application operations, where maximum accuracy and reliability are required.



Plato Industries Ltd. supplies the Boll Weevil Eradication Programs and Cotton Producers with Boll Weevil Traps, their corresponding pheromone and insecticide dispensers and Boll Weevil Attract and Control Tubes.



PROGRESSIVE FARMER concentrates its editorial focus on the South and Midwest regions. Subject matter is localized to regional and state editions. More than 90% of editorial content is devoted to farm production, farm management, machinery, crops, livestock and other information applicable to Southern and Midwest agriculture. The PROGRESSIVE FARMER COTTON REPORT is a news-formatted publication emphasizing marketing, policy, economics and production. It is mailed to 100+ acre cotton producers. www.progressivefarmer.com



"QuickFarm is a farmer-based company that provides input procurement services for professional row-crop farmers. It also designs software applications such as financial management tools, online customer account access and Web development to help automate gin operations and reduce their costs."



The crop insurance industry leader
www.rainhail.com

Rain and Hail L.L.C. provides cotton growers with insurance products to manage their downside production and quality risks. The same products can be used to backstop forward pricing and hedges that can result in improved prices and profits. We currently service more than 200,000 policyholders throughout the U.S.



Manufacturer of spray equipment designed to apply crop protection products safely and accurately. Since 1984, Redball has strived to develop innovative products that are both cost effective and farmer friendly. Our current offerings include: hooded sprayers side and front mount tractor tanks, planter pump kits, three-point mounted sprayers and high clearance pull-type sprayers. Tank sizes range from 25 to 1600 gallons and boom sizes range from 5 to 100 feet.



A worldwide leader in the manufacture, sales and servicing of completely Automatic Bale Tying Systems for cotton baling using textile industry preferred polyester bands specifically engineered for use in these system applications. Samuel's systems are adaptable to any new or existing baling press. For more information, please give us an opportunity to discuss your operation, 1-800-359-9222.



World's leading manufacturer of fully automatic strapping equipment for bale packaging developed the High Strength Tenax plastic strap to provide a reliable, cost effective and safe bale tie system for the cotton industry.



Southern Cotton Ginners Foundation

The Southern Cotton Ginners Foundation is a non-profit organization composed primarily of Southern Cotton Ginners Association members in Mississippi, Arkansas, Louisiana, Tennessee and Missouri, and all other individuals interested in funding scientific, educational and charitable endeavors for the advancement and betterment of the cotton ginning industry.



Stoneville
Pedigreed Seed Company

Stoneville Pedigreed Seed Company is recognized across the Cotton Belt as a leader in developing, producing and marketing quality cotton seed for planting. Breeding cotton since 1922, Stoneville has perhaps one of the largest cotton germplasm collections in the world. Stoneville constantly strives to develop conventional and transgenic cotton varieties with improved fiber quality, yield and performance stability that are proven in growers' fields and university cotton variety trials. Innovations in seed germplasm and technology ... it's what you'd expect from a leader.



Strategic Diagnostics Inc. (SDI) is the world leader in developing and manufacturing diagnostic test kits for detecting genetic modification in crops and seeds using immunoassay technology. SDI is the primary supplier to the cottonseed industry of quick tests used for determining

genetic purity of both commercial and research cottonseeds, and has developed both rapid and quantitative test kits for most commercial genetic traits in cotton, corn, soybeans and canola. The tests are used for plant breeding, quality assurance and for Identity Preservation in seed and grain distribution systems. SDI also has developed test kits for more than 40 different pesticides, and recently has commercialized tests for detecting mycotoxins in grains.



Syngenta is a world-leading agribusiness ranking first in crop protection and third in the high-value commercial seeds market. The cotton product portfolio includes Dual MAGNUM®, Touchdown® with IQ Technology, Karate® with Zeon Technology, Centric®, Quadris®, Caparol®, Gramoxone® MAX, Fusion®, and Ridomil® Gold. Sales in 2001 were approximately \$6.3 billion. The company is committed to sustainable agriculture through innovative Research and Technology. Syngenta is listed on the Swiss stock exchange and in London, New York and Stockholm. Further information is available at www.syngenta.com



The Seam is an online grower-to-business and business-to-business marketplace for cotton. As a neutral enterprise, The Seam provides users access to the largest community of buyers and sellers in the industry. The Seam's operating platform allows buyers and sellers to negotiate on the website and complete transactions online.



T-Systems International is the world leader in the drip irrigation tape industry. T-TAPE® TSX® is made with an advanced manufacturing technology. T-TAPE® TSX®2 is the latest generation of T-TAPE and includes an improved turbulent flow track design that allows for a Coefficient of Manufacturing Variation of just 2% and a .45 Emitter Discharge Exponent.



U. S. Borax Inc. provides the cotton producer with four high quality boron products - Solubor® DF and Solubor® for foliar application, Granubor® for bulk blended fertilizers and Fertibor® for fertilizer suspensions. Boron is an essential nutrient for all stages of cotton development, especially for pollination and fruiting. For more information visit www.borax.com.



United Agri Products Inc. is recognized throughout the country as a leading crop protection distributor and manufacturer of cotton pesticides as well as crop inputs. Producers have a variety of products to choose from including insecticides, herbicides, adjuvants, seeds and seed treatments. In addition to these items, UAP offers the latest in crop technology, mPower™, acknowledge-based system that enhances productivity and profits.



Valent U.S.A. Corporation develops and markets products that treat your cotton right: Orthene, Select 2 EC, Cobra, Knack IGR, Danitol 2.4 EC Spray, Monitor 4 Spray, DiPel and Ryzup PGR. Valent also offers new Valor and Regiment plus Resource, Phoenix, Bolero and Release to help solve problems and create value for our customers. Please visit www.valent.com visit for more information.



Vance Publishing Corporation is the nation's leading publisher of crop vertical and dealer publications. COTTON FARMING, THE GROWER, THE PEANUT GROWER, RICE FARMING, DEALER & APPLICATOR and CITRUS & VEGETABLE MAGAZINE provide profitable production and business management strategies to help the reader increase his bottom line. Vance also co-sponsors several trade shows and events in support of the agriculture industry.



WAG Corporation manufactures an array of differential GPS equipment for precision agriculture systems, www.wagcorp.com/.



WILBUR-ELLIS is a privately held company headquartered in San Francisco, California. The company is a large domestic distributor and formulator of agricultural products and an international trading company with offices in 42 countries around the world. Seed Protectant Products Commercial Fungicides: NuFlow® ND, Nu-Grow® Captan 4000, Nu-Grow® Color Coat Red, Nu-Gro® Color Coat Red WSP, Nu-Gro® Dyes and Nu-Gro® Color Film. Commercial Insecticides: Lorsban® 30F, Hopper Box: Nu-Coat.



Zellweger Uster Inc. is the world's leading supplier of high-tech electronics for the textile industry, including instruments for fiber and yarn testing, on-line quality management and data systems. Recent innovations include the USTER® INTELLIGIN for real-time gin process control and on-line classing at the gins. This newest product helps bridge the gap between cotton producers and cotton spinning mills, facilitating more direct relationships between mills and gins. Zellweger Uster publishes USTER® STATISTICS, the world benchmark in yarn and fiber quality. As manufacturers of USTER® SPECTRUM, USTER® AFIS, USTER® QUANTUM CLEARER, USTER® FABRISCAN and USTER® TESTER 4, Zellweger Uster provides a high level of technical support and textile training to its customers worldwide.

These firms were members of The Cotton Foundation as of the end of the Foundation's 2001-2002 fiscal year, June 30, 2002. Some mergers were in the process and may have been accomplished after this booklet's production deadline.

SPECIAL PROJECTS 2001-2002

Cotton Leadership Program

DuPont Agricultural Products Grant: \$125,000

This program, initiated in 1983, is training men and women who have demonstrated the potential to provide leadership to the U.S. cotton industry.

Each year's 10-member class is equipped with training and provided experiences that help these individuals better face the challenges of leadership they assume in state, regional and national interest organizations, including the National Cotton Council (NCC).

Included in the six, week-long sessions are: policy and issue discussions with current and former industry leaders; observation of production and processing and key research across the Cotton Belt; visits with lawmakers and government and regulatory officials; and communications training. Class members are selected by an industrywide selection committee.



Parkdale Mills' Dan Huntley, who was a member of the 2000-2001 Cotton Leadership Class, guides members of the 2001-2002 class through one of Parkdale's cotton opening rooms during their tour of the North Carolina yarn manufacturing firm.

Congressional Staff Education/Orientation Program

Monsanto Grant: \$110,000

This program provides House, Senate and committee staffers firsthand experiences with U.S. cotton. In April 2002, a group of Washington, DC-based professionals viewed America's cotton production and processing infrastructure and interacted with industry leaders during a visit to West Texas and Arizona. The group also was shown public and private cotton research and new product development and adoption of leading edge technology.

The project's overall aim is to raise urban lawmakers' awareness of an efficient U.S. cotton sector and its contributions to this nation. Another message conveyed during the tours is the U.S. cotton industry's need to compete profitably in the global marketplace.



Bruno Alesii (holding notebook) discusses research being conducted at the Monsanto Center of Excellence in Buckeye, AZ, with Congressional staffers who toured Arizona cotton and research operations in 2002.

Cotton Counts

Bayer CropScience Grant: \$100,000

Improving consumers' understanding of U.S. cotton and the industry's economic contributions is the goal of this NCC educational campaign.

With a particular focus on students, the campaign is targeting the growing number of Americans who reside in urban centers and have lost their direct ties to production agriculture. Armed with facts such as U.S. cotton's value-added retail impact of \$120 billion to the U.S. economy, National Cotton Women's Committee volunteers are carrying cotton's message from the schoolhouse to the state fair. They also helped secure several applicants for the new Cotton Town U.S.A. community improvement grants and the "Grow Smart" college scholarships.



Cotton Counts educational materials describe the U.S. cotton industry's contributions to this nation's economic health.

Producer Information Exchange

FMC Corporation Grant: \$95,000

More than 600 cotton producers have participated in this program – one that encourages its participants to maximize production efficiency and speed the adoption of proven technology and farming practices.

Producers from one Cotton Belt region are provided face-to-face interaction with their peers while observing production techniques and technology in other production regions. This enables the participants to get new ideas and perspectives in such areas as land preparation, variety selection, planting, tillage, fertilization, pest control, irrigation and harvesting.



As participants in the 2001 Producer Information Exchange program, cotton producers from Oklahoma, Texas and New Mexico saw cotton and other agricultural operations in Arizona and California.

Cotton Council International (CCI) COTTON USA Advantage Program

Stoneville Pedigreed Seed Company Grant: \$75,000

Educating overseas customers U.S. cotton's advantages is vital - because the U.S. cotton industry's profitability hinges on increased exports.

This program enables CCI to leverage funds from USDA through the Market Access Program and from other global partners to carry out retail promotion, advertising and trade servicing activities under CCI's supply-push/demand-pull strategy. Included is the new "Cotton Gold Alliance" program in which CCI is partnering with Cotton Incorporated to stimulate demand for U.S. cotton and cotton products in countries where traditionally healthy manufacturer and consumer cotton consumption has been blunted by man-made fibers.



A newsletter, a buyer's guide and a calendar are among the information pieces produced for Cotton Council International's COTTON USA Advantage Program.

Uniform Harvest Aid Performance Evaluation

Bayer CropScience, FMC, Helena, Nichino America Grant: \$75,000

Researchers continue to evaluate standard defoliation and desiccation treatments and newer practices and products. The goal is to use findings to develop effective, contemporary harvest aid recommendations that contribute to harvest efficiency.

Initial findings are included in COTTON HARVEST MANAGEMENT: Use and Influence of Harvest Aids.

Policy Education Program

Syngenta Grant: \$60,000

Since this orientation program was initiated four years ago, 56 NCC producer members have been given the opportunity to learn more about the NCC's policy development and implementation process. As a result, many of those participants are actively involved in U.S. cotton's central organization today.

Up to four producers from each major Cotton Belt region are chosen to attend the NCC's annual meeting, see the NCC's Washington, DC, operations and meet with key lawmakers.



Participating in the 2002 Policy Education Program were: (front row, l to r), Syngenta Crop Protection's Neil Strong and cotton producers Jimmy Miller, Larry Williams, John Saylor and Levin Lynch; (back row, l to r) cotton producers John Currie, Jr., Mark Korn, Jeff Peracchi, Ronnie Lee, Michael Brooks, Scott Wiggers, Jr., J.D Underwood, and NCC Member Services Director John Gibson.

Cotton Nematode Survey and Education Program

Bayer CropScience Grant: \$50,000

Cotton Belt nematologists and plant pathologists meet annually to discuss their research and report on their nematode population surveys by species and county. The aim is to address Beltwide nematode losses, which for 2001 were estimated at \$381 million.

A special panel discussion on nematodes was featured in the 2002 Beltwide Cotton Production Conference. Information on nematodes, their distribution and control methods also can be found in the updated booklet, "Cotton Nematodes: Your Hidden Enemies" and at www.cotton.org/cf/nematodes/index.cfm.



A component of the Cotton Nematode Survey and Education Program is "Cotton Nematodes: Your Hidden Enemies," a pamphlet that includes information on nematodes species, their distribution and control methods.

Cotton Seedling Disease Survey/Education Program

Bayer CropScience Grant: \$50,000

In addition to helping determine seedling disease losses, which in 2001 exceeded \$275 million, this program is identifying the basic disease spectrum in each locale and offering fungicide use and application methods in each state.

More information is available to producers, consultants and others through the brochure, "Know Your Seedling Diseases," and at www.cotton.org/cf/seedlings/index.cfm. The NCC also is planning a major focus on this pest complex for the 2003 Beltwide Cotton Conferences.

Journal of Cotton Science

Bayer CropScience Grant: \$50,000

This on-line journal has evolved into a premier database for multidisciplinary cotton research, and includes an interpretive summary that explains the research's value in layman's terms.

Volumes from 1997 to date are archived on CD and the JCS was the first all-electronic journal to be indexed in AGRICOLA, the database of the National Agricultural Library. The JCS is published quarterly at www.jcotsi.org in HTML and as an Adobe Acrobat file.

Cotton Coalition

BASF Corporation Grant: \$40,000

Unless agriculture communicates, it could become “media roadkill” as one journalist stated at a National Ag Day seminar.

This program provides cotton producers with professional training in media relations and presentation skills and insight into government affairs. This enables them to better communicate, often through the news media, about issues, policies and regulations that affect U.S. cotton industry profitability. Coalition members also are asked by the NCC to communicate with or testify before lawmakers on the industry’s behalf.

Technology Transfer Through News Media

Monsanto Grant: \$17,000

This program provides journalists’ with a well-equipped newsroom to enhance their information gathering and dissemination at the Beltwide Cotton Conferences.

The large contingent of writers and broadcasters who cover this forum help transfer needed information to industry members. Rapid adoption of proven technology and cultural practices is critical for U.S. cotton producers to maintain optimum efficiency.



Cotton Council International Chairman Hans Kretschmer is interviewed about CCI's COTTON USA program by radio broadcaster Theresa Orecchia during the 2002 Beltwide Cotton Conferences.

Funding For The Future

Vance Publications Grant: Varies

The National Cotton Women’s Committee gained additional resources for carrying out the NCC’s Cotton Counts consumer awareness campaign. More than \$10,000 raised at *Cotton Farming* magazine’s Benefit Auction at the 2002 Beltwide Cotton Conferences was provided for these activities.

Beltwide Cotton Conferences Internet Center

Syngenta Grant: \$7,750

Industry members and others are able to learn about useful Internet sites and navigate those sites in this Center. NCC staff guide users in this process and answer questions about browsing the World Wide Web and the information available. NCC also is able to provide public area kiosks with computers for Web access and checking email.

Miscellaneous Projects

Several special projects are still making contributions to the U.S. cotton industry even though their annual grants have ceased.

The NCC continues to distribute volumes in its Cotton Reference Book Series, and periodically disseminates Worker Protection Standard Education newsletters and information sheets on topics ranging from product labels to recordkeeping. A special project also made possible the creation of World of Cotton, a permanent area on the NCC home page, www.cotton.org. The site garners public recognition for the industry's economic significance to this nation.

A number of other Foundation activities are considered special projects and supported by specific member firms. In the Chemical Evaluation Project, for example, USDA Agricultural Research Service scientists at the Southern Insect Management Lab in Stoneville, MS, are analyzing insecticides and application methods with the goal of helping producers lower their insect control costs.

Some other efforts helpful to cotton's overall research and education effort include: the artificial rearing of southern crop insects and the cotton insect rearing and distribution programs; the ginning lab fiber analysis and the periodic development and distribution of various NCC-produced educational videotapes.

AWARDS AND ENDOWMENTS

Harry S. Baker Distinguished Service Award For Cotton

W. D. "Bill" Lawson, III, a North Carolina cotton merchant and dedicated industry leader, received the 2002 Harry S. Baker Distinguished Service Award for Cotton. The award is presented annually to a U.S. cotton industry member who has provided extraordinary service, leadership and dedication to the industry.

Lawson, who served as the NCC's president in 1976, has been called on time and again by industry and government to provide his leadership to a number of important initiatives. That includes his participation in cotton trade missions to both Europe and the Far East. He also served as vice chairman of the National Cotton Marketing Study Committee and was a member of the National Advisory Committee on Cotton.



W. D. "Bill" Lawson, III, a North Carolina merchant, received the 2002 Harry S. Baker Distinguished Service Award for Cotton.

Oscar Johnston Lifetime Achievement Award

The 2002 Oscar Johnston Lifetime Achievement Award went to the late Sykes Martin, an Alabama cotton producer and ginner who provided exemplary service to the U.S. cotton industry. The award is presented to an individual, now deceased, who served the industry through the NCC, and who demonstrated character and integrity as well as perseverance and maturation during that service.

Martin served as a NCC director for four years, was chairman of the American Cotton Producers and president of The Cotton Foundation. At the time of his death in 1993, he was treasurer of Cotton Incorporated.

In addition to being an inventive cotton producer, Martin was founder and chairman of Servico Gin Company, which has grown into one of the largest cotton operations in the Southeast.



The 2002 Oscar Johnston Lifetime Achievement Award was bestowed to the late Sykes Martin, an innovative Alabama cotton producer and ginner.

High Cotton Awards

Farm Press Publications Grant: \$15,000

Six farmers who make stewardship of the land an integral part of their farming operations were recipients of The Cotton Foundation/Farm Press High Cotton awards for 2002.

The recipients, who make conservation practices a priority despite today's difficult economic times, are: John S. Williams, Jr., Dooly County, GA; Jackie Burris and his brothers, Terrie and Rickie, Wellman, TX; George Franklin, Jr., Holly Ridge, LA; and Daniel Burns, Dos Palos, CA.



2002 High Cotton Award recipients, from left, are Daniel Burns, Dos Palos, CA; George Franklin, Jr., Holly Ridge, LA; Jackie Burris, Wellman, TX; and John S. Williams Jr., Dooly County, GA.

Robert and Lois Coker Trustees Chair in Molecular Genetics

Endowment: \$1,000,000

This endowment supplements support provided by Clemson University's Division of Public Service & Agriculture and the College of Agriculture, Forestry and Life Sciences for molecular genetics research. The University's Robert and Lois Coker Endowed Chair of Plant Molecular Genetics was held by Dr. Rod A. Wing until his departure to the University of Arizona in May 2002. The Clemson University Genomics Institute (CUGI), which was founded by Dr. Wing in 1996, continues under the direction of principal scientist, Dr. Jeff Tomkins, and department chair, Dr. Richard Hilderman.

CUGI's lab continues, and is a service provider of BAC (Bacterial Artificial Chromosome) libraries to laboratories around the world. In August 2002, researchers from CUGI and some other research scientists at Clemson will move into the \$27 million Science and Technology Center on the Clemson University campus. Structural and functional genomics and bio-processing will be the two major programmatic themes housed in this laboratory and greenhouse complex. The structural and functional genomics of cotton will continue to be a major research focus in the new building.

Cotton Incorporated currently is providing research funds to create and to analyze BAC libraries of cotton. CUGI's intention is to be an international resource for the structural and functional genomics of cotton. The Coker Chair will be filled in the near future after a nationwide search.

The C. Everette Salyer Fellowship in Cotton Research

Endowment: \$300,000

This fellowship was inaugurated to honor the late California producer-ginner and former Cotton Foundation president, C. Everette Salyer. Doctoral and post-doctoral level students are able to study and conduct research geared to the sciences of producing and marketing cotton.

Ernest Clawson is in the final year of research on his Ph.D. program in agronomy at Texas A&M University. His research interest is in crop physiology, specifically with ultra-narrow row cotton (UNRC) technology and nitrogen fertility studies.

Paul Ragsdale is pursuing a Ph.D. in cotton breeding at Texas A&M University. His research involves classical breeding with quantitative genetic analyses to improve heat tolerance in cotton and to improve fiber quality in an elite line.

Cottonseed Oil Clinic

Endowment: \$60,000

Proceeds from a Mississippi Valley Oilseed Processors Association endowment support the Annual Conference of the Oilseed Processing Clinic. The clinic is jointly sponsored with the USDA Agricultural Research Service's Southern Regional Research Center and the National Cottonseed Products Association.

George A. Slater Memorial Scholarship Fund

A scholarship fund at Texas A&M University-Kingsville supports a student in a cotton-focused discipline. The fund was created from memorial scholarship funds commemorating the service of the late Foundation executive director, George Slater.

Cotton Millennium Scholarship

Meister Publications Grant: \$2,500

Kyrene White, an Arizona State University junior from Mesa, AZ, was awarded the third annual *Cotton Grower* Millennium Grant. The agribusiness major plans to pursue a Master's degree in plant genetics.

The \$2,500 scholarship goes to a college student majoring in agriculture and planning a career in the cotton industry.

Kyrene White, an Arizona State University junior from Mesa, AZ, was awarded the third annual *Cotton Grower* Millennium Grant from Foundation Chairman Talmage Carihfield, right, and *Cotton Grower* Publisher Frank Maxcy.



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