7th Meeting of the Latin American Association for Cotton Research and Development

The 7th Meeting of the Latin American Association for Cotton Research and Development (ALIDA) was held in Santa Cruz, Bolivia, from November 23-26, 1999. The Association was instituted in 1986 and meetings have held every two years since. The 7th meeting was hosted by the National Association of Cotton Producers (Asociación Nacional de Productores de Algodón – ADEPA) of Bolivia and organized jointly by ADEPA and the Technical Information Section of ICAC. The meeting was sponsored by ICAC, the FAO Regional Office for Latin America and the Caribbean and ADEPA. Researchers from countries in the region, people from the private sectors of the cotton production chain and representatives of FAO, CIRAD-CA of France and ICAC attended the meeting. The list of participants is attached.

Bolivia is not a large producer of cotton but planted cotton on 50,000 hectares in 1995/96, 1996/97 and 1997/98, similar to the 1972-74 period. However, during the 1980s, cotton area in Bolivia never exceeded 14,000 hectares and it came down to almost nothing in 1988/89. During the early 1990s, cotton production in Bolivia expanded significantly. In 1998/99, cotton area decreased to about 35,000 hectares, and in 1999/00, it is expected that only about 10,000 hectares will be planted. The main reason for the decline in area is low prices at the international level, which have serious effects on domestic prices in Bolivia. At the current Cotlook A Index level of U.S. 44 cents per pound of lint (in the first week of January 2000), it is not economical to produce cotton in Bolivia. Once again, Bolivia seems to be heading toward a situation like the one in the late 1980s, when cotton almost disappeared.

ADEPA, based in the main cotton growing area of Bolivia, is a strong and organized association. ADEPA was able to revive cotton production in the 1990s but it has not been able to offset the current low international prices. In addition to low prices and weather calamities, Bolivia now is being threatened by the boll weevil. The Bolivian Committee for the Prevention and Elimination of Boll Weevil, ADEPA, the Chamber of Exporters of Santa Cruz (CADEX) and the National Association of Cotton Ginners reported on June 23, 1999, that the Bolivian Ministry of Agriculture had detected the boll weevil in the area close to the border with Brazil through a monitoring program that has been carried out for many years. The catches in the traps have indicated the presence of boll weevil inside the border of Bolivia. Although the area where the boll weevil has been detected is about 600-700 kilometers away from the actual cotton area, the pest can easily move and settle in the cotton area because a large number of fields are not cleaned after the final picking. Cotton plants remaining in the field coupled with non-harsh weather during winter could help to establish the pest on cotton. Looking at the history of this pest in other countries in the region, it seems that it carries a great threat to cotton production in Bolivia.

The Government of Bolivia, ADEPA, and the Committee for the Prevention and Elimination of Boll Weevil are working together in different phases to anticipate infestation in the field. Apparently, one of the limitations is the inexperience of Bolivian researchers to deal with this pest. The FAO Regional Office for Latin America and the Caribbean has already started a short-term project to help the Government of Bolivia in education programs and in the prevention of the spread of the boll weevil to the cotton area. FAO will provide expert advice through short-term consultancy services and will organize training courses for people directly involved in cotton production and extension activities.

Bolivia has the potential to grow cotton on a much larger area. Some government plans project cotton production to expand to 200,000 hectares. As the area under cotton increased, the ginning industry also expanded, and currently there are 15 gins in Bolivia. An 80% reduction in area in the last two years is a major set back to the ginning industry. If the cotton area is not revived in the next few years, the ginning industry will also shrink. Socioeconomic conditions in Bolivia strongly demand the revival and expansion of cotton production, thus, favorable climatic conditions, reasonable prices and the prevention of the boll weevil are critical.

Soil conditions in Bolivia are fit for cotton production, and large growers produce mostly cotton suitable for mechanical cultivation. However, Bolivia has not been able to start its own variety development program. All the varieties commercially grown have been adopted from other countries, including Argentina and the USA. During 1998/99, three varieties—Stoneville 132, Guazuncho II and Stoneville 373—were planted on more than 90% of the total area, and Stoneville 132 alone was grown on about 60% of the total area. About 75% of seed needs are met through imports from other countries. Cotton is generally planted at 40-inch row spacing. Lately, there has been a trend to adopt zero tillage, and it is estimated that about a 30% of total area during the last year was planted under zero tillage. Only 3-4% of total area is irrigated, and fertilizer is not commonly applied.

Insects are a major problem and require strict vigilance and plant protection measures. A number of sucking insects may require insecticide applications but *Alabama argillacea*, *Spodoptera* spp., *Heliothis* spp., and *Pectinophora gossypiella* are the most important to control. About 15% of total area receives up to four sprays per year. 25% of total area is sprayed up to six times, while about 60% is sprayed more than six times per season. As cotton is grown in large blocks, most of the insecticides are applied through tractor-mounted sprayers and aerial spraying. Diseases are not a problem in Bolivia.

Growth regulators and defoliants are used on about 35-50% of total area. About 85% of total production is hand picked. In Bolivia, cotton yields have varied drastically in different years mainly because of climatic conditions, particularly rains, which may also affect fiber maturity due to high humidity.

Conclusions and Recommendations

Participants included experts of various disciplines who, in order to draw conclusions and formulate recommendations, were divided into four groups: Fiber technology, transgenic cotton, insect pest control and agronomic management of cotton farming. The groups, comprised of 4-5 experts, met simultaneously. Based on the papers presented at the meeting, current trends in production research, and on their expertise, the groups made recommendations in four disciplines. Later, the recommendations were discussed in the general meeting and approved.

On the last day of the meeting, ALIDA's organizational set up was discussed to make it more effective. Again, certain recommendations were made, which are included under "general," in the conclusions and recommendations given below.

Agronomic Management of Cotton Farming

It was recommended that a system that is sustainable, profitable and results in a minimum of environmental disturbance for the production of cotton be found.

In accordance with the goals of the speakers who presented important needs regarding adequate cotton production management, the activities to be carried out that will lead to the next ALIDA meeting comprise the following areas:

- Soil conservation management with the purpose of maintaining and conserving organic matter.
- Identification of cotton varieties in their specific ecosystems.
- Adequate physiological management in order to make agricultural tasks efficient.

Fiber Technology

The importance of equipment such as high volume instruments (HVI) for the classing of cotton, according to measurable objective parameters, is evident.

There must be a transparent and fair system of classification at the Latin American region level for the entire cotton sector: producers, ginners, traders, and the cotton industry.

The use of a classification system similar to or equivalent to others in the rest of the world will directly benefit all members of the cotton sector.

To meet the current requirements of the textile industry, it is important to turn fiber technology into a major concern for producers and ginners as well as for traders.

Recommendations:

Request ALIDA coordinators and the International Cotton Advisory Committee (ICAC) to propose, on a priority basis, a process for the classification of cotton for the entire region (Latin America) in accordance with international standards.

It was also recommended that the starting point of said standardization process be one already known and proven, as is the case with the U.S. Department of Agriculture (USDA).

Plant Protection

It is important for different countries to carefully monitor the acceptance of transgenic varieties and their environmental impact at the international level, and take into account their long-term benefit/cost ratio.

Considering the limitations that have been faced in the application of integrated pest management (IPM) in cotton, it is convenient to adopt wider concepts for the management of agroecosystems, taking into account the generalized acceptance of IPM.

The countries and zones that are free of boll weevil should continue their cooperation in order to slow to the maximum boll weevil expansion in the area.

The small and medium cotton production sectors should set up test plots for the study and demonstration of diversified farming in strips of land under the supervision and validation of research and extension entities.

The Paraguayan program for cotton reactivation is interesting and its results should be kept under observation in the coming years; at the same time, it is necessary to generate and validate a technology for cohabitation with the boll weevil in the sector of small farms.

The tripartite project sponsored by CFC/ICAC is providing important information and should be given full support from member countries and sponsoring institutions. The participation of Bolivia in this project could be considered.

Genetic Selection for Transgenic Cotton

It is recommended:

To carry out comparative tests by regions in groups of countries, e.g., Central America and Andean countries. The results of the tests in each of the regions should be exchanged in future meetings of ALIDA.

Prior to the comparative tests, cotton germplasm and information should be exchanged. For example, Argentina has a database with 600 described entries, Bolivia has 1,200 lines that are not described—said material could serve as a base for the exchange.

ALIDA countries should carry out actions to elaborate an information catalog regarding lines with outstanding characteristics, coming from a program of public improvement.

ALIDA countries realize the significance of Internet use and propose to include an item on "Genetic Improvement" on various web pages. This initiative could be supported by the ICAC.

National institutions in ALIDA member countries should ask their governments to establish regulations or a national legal framework for activities with transgenic plants mainly their introduction into their territories. These regulations should establish parameters and legal techniques that allow the acceptance or rejection of activities based on risk/benefit and cost/benefit.

ALIDA member countries feel the need to participate in courses, workshops and other events regarding biotechnology and transgenic cotton farming, with emphasis on advantages and disadvantages, to educate cotton producers.

ICAC should expand the use of its email list on the cotton boll weevil to serve as an ALIDA forum for the exchange of information on cotton production and research, including biosafety aspects of transgenic cottons.

General

Participants in the meeting reiterated that there are almost no activities of the Association and minimum interaction among researchers during the two years between ALIDA meetings. Participants were informed that ICAC maintains an email list for communication on the boll weevil. The boll weevil electronic list is a free service of the ICAC Secretariat and should be used to enhance communication among researchers in the region. Any researcher having an email address can enroll in this list and send and receive messages. A message sent to the list is relayed to all subscribers from the ICAC server at the same time. ICAC agreed to enhance the scope of the list from a boll weevil information exchange to an ALIDA forum for discussions among researchers in the region.

Participants welcomed ICAC's offer to launch the ALIDA list and committed to participate actively in the list activities.

In order to maintain the communication among countries in the region between meetings, national coordinators were appointed in various countries.

It was observed that there is a need to bring a new generation of young researchers to the next ALIDA forum.

On behalf of the outgoing president of ALIDA, Ing. Juan Poisson of Argentina proposed to hold meetings of ALIDA every three years instead of every two. Participants discussed the advantages and disadvantages of extending the period to three years and deferred the decision until the next meeting, which will be held in two years.

Participants accepted an invitation from the Ministry of Agriculture of Paraguay to hold the next meeting of ALIDA in Paraguay. Representatives of the Paraguayan Ministry of Agriculture invited all countries in the region to the next ALIDA meeting.

The meeting elected Ing. Juan Campero of Bolivia as the new president of ALIDA. His complete address is as follows:

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