

Working Paper III

TOPIC OF THE 2009 TECHNICAL SEMINAR

Proposals from the Secretariat to the Committee on Cotton Production Research

INTERNATIONAL COTTON ADVISORY COMMITTEE

Ouagadougou, Burkina Faso

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The following themes are suggested as possible topics for the 2009 Technical Seminar:

Integrated Pest Management: Success Stories and New Developments

Integrated pest management (IPM) has been discussed for decades, but until recent years, its implementation has been dominated by extensive promotion of pesticide use. Consequently, cotton production has become insecticide-dependant. Not only have pesticides increased the cost of production to uneconomical levels in many countries, but they have also led to other problems like resistance and changes in the pest complex. Pesticide use has become a threat to the sustainability of cotton production and its environmental impacts are receiving greater attention. Effective alternatives to pesticides are not commonly available, other than the implementation of IPM approaches. However, several countries have successfully implemented IPM programs in concert with reduced pesticide use, while others have reverted back to IPM and reduced pesticide use. Papers could be invited on success stories and new approaches to IPM implementation.

Genetic Engineering as a Breeding Tool

Breeding for better varieties is the area of cotton production that has received the most attention. Breeding brings not only improved yields but also improvements in cotton quality, and tolerance to insect pests and other adverse growing conditions. The current conventional breeding methods have a limitation of transferring groups of genes together having desirable and undesirable characters. Natural chromosomal aberrations in the form of additions, deletions and duplications are usually deleterious and have the least commercial value. Biotechnology of cotton through genetic engineering has opened a new era of directed cotton breeding. If a specific desirable gene is identified in cotton, other crops or organisms, genetic engineering has provided a tool to isolate and induct those genes into cotton. In 2006/07, about 15 million hectares of cotton were planted to biotech varieties in the world. Burkina Faso approved biotech cotton in June 2008, and many other countries are evaluating the performance of such cottons. Bt is

one type of gene. Suitable genes can be identified anywhere for improvement of any character. This is a process toward development of genotypes of our own choice. It is not only an insertion procedure, but it might also be possible to ensure that undesirable genes could be made ineffective, a step toward picking and choosing genes for designing genotypes. How far we can go to insert or silence genes of our own preference and how breeding will look like in the future could be discussed in the 2009 Technical Seminar.

Producing Clean and High Quality Cotton

Cotton has the best spinning qualities soon after the boll opens. All processing starting from picking until the finished good affects quality. As cotton production practices have changed, the processing of cotton has also changed. Fiber quality testing has improved thanks to instrument testing, and all these changes have heightened the need for quality cotton. Cotton quality is now measured more accurately, meaning repeatability of the data under uniform conditions. Producing quality cotton without sacrificing yield is a challenge for producers. The same quantity of inputs through better management and on-time decisions can improve quality and thus bring higher return to growers. What kind of timely decisions could help to produce clean and quality cotton could be one of the topics for the 2009 Technical Seminar.