INTERNATIONAL COTTON ADVISORY COMMITTEE

1629 K Street NW, Suite 702, Washington DC 20006 USA

Telephone +1-202-463-6660 • Fax +1-202-463-6950 • email secretariat@icac.org

From the Secretariat **For Release September 22, 2010**

69TH PLENARY MEETING OF THE
INTERNATIONAL COTTON ADVISORY COMMITTEE
Lubbock, Texas, USA
September 20-25, 2010

Resource Constraints and Cotton Production: Sustaining Cotton's Place in the World

Sustaining cotton's place in the world requires taking steps to assure that the social, environmental, and economic aspects of cotton production are sustainable in each country. Mr. Wallace Darnielle, President and CEO of Plains Cotton Cooperative Association, presented a report on sustainability of cotton production. Cotton removes the equivalent of about 7 million cars' carbon dioxide emissions from the air each year through sequestration of carbon into the plant and its products, and it uses less than 3% of all agricultural water consumption globally. Contrary to claims made by some, cotton accounted for 6.8% of world pesticide use in 2008, and cotton production has reduced insecticide active ingredient use by 23% globally since 1996, leading to a 28% decrease in environmental impact.

U.S. cotton producers use 45% less water to grow a kilogram of cotton today than 25 years ago. Conservation tillage has greatly reduced soil erosion. Insecticide applications declined by 50% since 1996, helped by the use of biotechnology and other modern technologies. In Texas, the cotton industry sustains about 25,000 direct jobs, and many more in supporting industries and trades. All jobs comply with minimum wages and social benefits mandated by local laws. In order to support employment in rural areas globally, production of cotton and other natural fibers should be promoted rather than production of man-made fibers, which are produced in capital-intensive industries dependent on non-renewable resources.

Economic sustainability of cotton production is constrained by farm prices and the costs of production, and demand at the retail level. Biotechnology has improved yields and qualities, but advances in drought and salt tolerance varieties and in nutrient absorption will further improve the economic sustainability of cotton production. On the demand side, promotional efforts of cotton should be upscaled worldwide to improve the economic sustainability of cotton production.

Mr. Allan Williams, Chair of the Expert Panel on the Social, Environmental and Economic Performance of Cotton Production (SEEP), presented a report on pesticide use in Australia, Brazil, India, Turkey and the USA. SEEP commissioned Alterra, a research group from Wageningen University in the Netherlands, to conduct the analysis of pesticide use in the selected countries. SEEP has also prepared an interpretive summary of the study and four separate reports on the factors influencing the use of pesticides in cotton in Australia, Brazil, India and the U.S.A. All reports are freely available on the ICAC website at http://www.icac.org/seep/documents/english.html. The ICAC and the FAO Global IPM Facility provided the financial support to conduct the study. The study reports on changes in the use pattern regarding total volume applied, and the type of pesticide applied, and therefore on changes in the hazard profile of pesticides used in cotton over the period studied, with regard to human health and the environment. Each active ingredient (a.i.) was analyzed according to 5 different hazards: acute hazard to human health, chronic hazard to human health, potential to leach to groundwater, hazard to aquatic organisms, and hazard to bees. Hazard is the potential of a pesticide to cause adverse effects to an organism due to its inherent properties, and it does not represent the actual risk in the field (which depends on exposure, pesticide formulation, soil properties, conditions during application, etc.) Herbicides were not included in the study.

Findings are organized by (a) pesticide (physical properties, toxicity of all the active ingredients, identification of the highly and extremely hazardous pesticides used in each country, for each year); (b) by country (trends in the profile of pesticide use in cotton, total pesticide use, cotton area, and yield); (c) and, for Australia, by type of cotton seed (conventional and biotech). Analysis of the most recent information available for each country resulted in the following figures for pesticide use on cotton: 1 kg a.i./ha in Australia (2007); 4.9 kg a.i./ha in Brazil (2006); 0.9 kg a.i./ha in India (2006); 0.6 kg a.i./ha in Turkey (2006); 1.2 kg a.i./ha in the USA (2006). In Australia, the average amount of pesticides (kg a.i.) applied per hectare steadily declined after a peak reached in 1999. No clear trends in amounts used were distinguishable in India, Turkey and the USA, but this may be due to the limitations of the dataset. In Brazil, the use of pesticides increased during the years studied and by 2006 was 4-8 times higher than in the other countries. However, the use of both extremely and highly hazardous products has decreased significantly in Brazil. In Australia, pesticide use on Bt cotton is considerably lower than use on conventional cotton. However, depending on which hazard is analyzed from the profile of the pesticide used, conclusions might differ: there has been an overwhelming reduction in the use of moderately hazardous pesticides to human health on Bt cotton, but use of extremely hazardous products – while still very low – is almost the same in Bt and conventional cotton.

SEEP developed eight recommendations based on the results of the Study:

i) SEEP recommends that WHO Hazard Class I pesticides be eliminated in countries where adequate provisions for their management are not in place (see section 6 of the Study/Alterra Report for details on “adequate provision”).

ii) SEEP recommends that cotton-producing countries where the use of pesticides is higher than 1 kg of a.i. per ha should analyze and address the causes of such use.

iii) SEEP recommends that the use of active ingredients that account for the highest contribution to the environmental toxic load (listed under section 2.2 of the Summary) should be minimized to reduce the environmental hazards to aquatic organisms and bees.

iv) SEEP recommends that pesticides known to pose possible risk of harm to unborn or breast-fed children should be eliminated from the cotton production system.

v) SEEP recommends that governments, with the involvement of all concerned stakeholders in the cotton sector, make a strong effort to promote best management practices in plant protection and to reduce reliance on pesticides and subsequent risks to the environment and human health.

vi) SEEP recommends that governments consider both environmental and health risks while formulating clear policy statements relative to pesticide risk reduction.

vii) SEEP recommends that governments promote the collection of reliable crop-specific data related to pesticide use.

viii) SEEP recommends that follow-up risk assessment studies be conducted.

The discussion during the session indicated that biotechnology is a significant component of cotton sustainability in some countries, but some countries like Turkey have managed to achieve high yields with low pesticide loads using conventional cotton. Furthermore, management and technical communication is critical for the success of biotechnology. The season length of the varieties should be adapted to local agro-ecological characteristics. The need for accurate and detailed data availability was highlighted. There was a consensus that the SEEP study should be expanded to include more countries and it should move beyond the volumes of pesticide use.