

6th Asian Cotton Research and Development Network

CAB International statement by

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CABI -the organisation.

CAB International (CABI) is a not for profit, intergovernmental organization established by a United Nations treaty level agreement between our member countries (currently 48). We have been working for over 100 years to improve people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment. That is CABI's mission.

As a membership organization, CABI is very much demand-led responding to the scientific needs and demands of its stakeholders including our member countries. Our activities encompass scientific publishing, innovative research, communication and consultancies. We work to bridge the gap between the discovery of scientific knowledge and its application in solving real life problems.

CABI works with national and regional partners (both private and public) to ensure both impact and sensitivity to local practices and culture as well as responding to national and regional agendas. We have over 450 staff based in 16 countries including biologists, ecologists, social scientists, information specialists, project managers and publishers. The expertise at CABI allows us to both manage/coordinate funded national or regional projects as well as implement them. Besides generating knowledge, another key strength of CABI is the provision of information in different formats depending on the target audience whether this is book production for the academic market, electronic material such as compendia or the provision of messages for farmers increasingly delivered in Asia and Africa through mobile phones, to reach thousands of producers on a daily basis.

Within our scientific and development activities one of our global themes involves commodity crops such as cotton, coffee and cocoa. CABI aims to enhance the livelihoods of smallholder producers of these crops, by improving productivity and increasing their market access. With regard to CABI's involvement on cotton, several of our member countries are important producers of cotton including Bangladesh. Our member countries are also amongst the biggest users of cotton and as a membership organisation we need to be responsive to our members' demands and consequently, cotton is an important crop for CABI. For this reason, we are extremely happy to sponsor some of our member country scientists to attend the 6th Asian Cotton Research and Development Network meeting. This being the third time that we have sponsored the meeting so demonstrating our commitment to our member countries and our commitment to promote cotton research and development work in Asia.

CABI's experience of cotton:

Most of our cotton related work has been conducted in Asia where we have been working on cotton for over 30 years notably working in Pakistan, India and China but we also work in Africa and have worked in South and Central America. Much of our past work has involved Integrated Crop and Pest Management (ICPM), technology

transfer and building capacity in a wide range of stakeholders but we have also become increasingly involved in cotton supply chains to improve quality. We have previously worked on the management of cotton mealybug in Pakistan with funding from the Government of Pakistan. The excessive use of pesticides is thought to have contributed to the problem as the pests' natural enemies have been destroyed. Together with several local partners, CABI examined alternative methods of management. A local parasitoid was identified which caused more than 50% mortality of the mealybug. Farmers were encouraged to establish their own natural enemy field reservoirs (NEFRs) on their own land and they were delighted with the results. For example one producer wrote:-

"I am a traditional grower and cultivate cotton crop on about 55 acres. Previously, I used traditional methods of mealy bug control through application of insecticides but was not so successful. Neither I nor my farmers availed any training regarding identification of cotton insect pests and beneficial insects and its managements through biological control methods. Due to proper guidance, and help of CABI staff Mr. Badaruddin (Field Facilitator), I have established Natural Enemy Field Reservoir (NEFR) first time for controlling the cotton mealy bug at my field with the supervision of CABI staff. After establishment of NEFR, bio control agents i.e. beetles and kala jeet were mass produced in iron boxes under the shade through simple technology. The kala jeet and predators controlled the mealy bug which really surprised me and my farmers. We have not even sprayed any insecticide against mealy bug in cotton field after establishment of NEFR. I also saved money spent on insecticides and labour which increased the profit. Now, I become confident about importance of biological control. I am thankful to CABI staff for coming here and providing me proper knowledge and guidance."

CABI is now extending our work in Pakistan by working with the Better Cotton Initiative. CABI has been approved as BCI implementers for promoting BCI production principles in district Sanghar, the largest cotton growing area in Sindh province of Pakistan. CABI's ecological approaches coupled with our expertise in capacity building links well with the BCI principles and criteria on crop protection, integrated soil and water management and natural habitat management; reduction in pesticides is better for the producers and the environment.

Similarly, in China, the use of natural enemies is proving very effective. CABI and our partners conducted surveys for natural enemies against mirid bugs (*Apolygus spp*) in China and two parasitoids, *Peristenus* species, were identified and a mass rearing system initiated with a view to inundative mass releases as part of an IPM approach. Field release trials of *P. spretus* to control *A. lucorum* were conducted in Hebei, Henan and Shandong provinces from April to August 2013. The trials were a success with an average of 37 bugs being parasitized by a single female parasitoid. The research is being conducted as part of the Joint Laboratory for Biosafety in Beijing which is a joint initiative between the Chinese Ministry of Agriculture and CABI, with funding from the Chinese government and CABI's in-kind contributions. In 2014, further small scale field release trials are being planned for jujube orchards and for cotton fields.

In Africa, CABI has recently completed a project to improve cotton production efficiency in small scale farming systems in Kenya and Mozambique through better vertical integration of the supply chain. This project was conducted in collaboration with the Kenya Agricultural Research Institute (KARI), Cotton Development Authority (CODA) in Kenya and the Instituto do Algodao de Mocambique (IAM) in Mozambique and was co-funded by the EU and the CFC; the supervisory body was ICAC. The

project aimed to improve cotton production efficiency through formulation and promotion of ICM options in cotton production systems. This involved more sustainable linkages between private enterprises and public organisations in the target countries to ensure farmers have access to adequate inputs, technologies and information to enable them to produce cotton more competitively and with greater profitability. Farmer Field Schools were initiated in each country with demonstration blocks on farm to evaluate different management practices.

Conclusion:

CABI is a well established, not for profit, IGO, whose member countries are some of the most important cotton producers and users. CABI's expertise, staff and physical presence around the world puts us in an excellent position to respond to various constraints and opportunities in the cotton value chain. We have a long history of working in developing countries including on the research and development aspects of cotton in Asia. This is very much linked to our expertise in providing training/building capacity to various stakeholders. Much of our work is based on our ecological approaches to develop IPM regimes for producers but we are also broadening our involvement along the whole value chain, examining various constraints to improving cotton quality and improving productivity- working towards better cotton.