

FAO Technical Consultation on (GMOs) in internationally traded food crops

Sudan country presentation

Prepared by :

Agr. Engineer

Ula Abdelaziz makkawi

Federal Ministry of Agriculture

Quality control & export development Unit

Sudan National GMO Policy

- **SUDAN** fully recognizes the great potential of modern biotechnology and strives to make full use of it ,but that should be under controlled conditions which aim of reaping the fruits of this technology without incurring any harm to biological diversity or to the human health.
- **SUDAN** has acceded to the Cartagena protocol on Biosafety which regulates movement of genetically modified organism across borders with aim of protecting the environment, the biodiversity and also human health from possible adverse effects of the products of modern biotechnology
- **SUDAN** is party of the convention on biological diversity (CBD) which recognizes modern biotechnology as having a great potential from the promotion of human well being in meeting critical needs for food, agriculture and health care.
- **SUDAN** is member of the African union and therefore on safety in biotechnology.

Sudan has set in place its National Policy on Biosafety application of modern biotechnology, in accordance with its national, regional and international obligations.

The policy covers the following:

- Laboratory research and other contained uses of GMOs.
- Modern biotechnology applications in industry.
- Modern biotechnology applications in agriculture including confined trials and field releases.
- Trade in and Trans boundary movement of GMOs and their products.
- Food and feed containing GMOs, including relief and aid materials.

The policy aims at:

- ☐ promoting the application of biotechnology as a tool in the sustainable development of the country to benefit the people of the Sudan.
- ☐ Ensuring the judicious and wise use of modern biotechnology in order not to jeopardize the environment and human health.
- ☐ Protecting Sudan's biological diversity by preventing possible genetic contamination.
- ☐ regulating the transboundary movement of GMOs and products thereof in accordance with the provisions of the Cartagena Protocol.

National Biosafety Law 2010

The objective of this Act is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health.

The National Biosafety Law has been passed by the National Assembly in June 2010 however; implementing mechanisms are not fully in place. The process is under way by the government to draft a comprehensive directive for the biosafety law and to establish the implementing mechanism. To fill the gap an interim arrangement is in place.

Regulation of the contained use is very simplified and facilitative. Art 16 of the National Biosafety law 2010 encourages testing and evaluation of LM crops to enhance the agricultural productivity but this should be performed in accordance to the law and guidelines.

Status of Agriculture Biotechnology

- Sudan is one of the developing countries with limited resources to meet the huge investment to maintain and run biotechnology research. Nevertheless, a number of research institutes have initiated efforts to establish biotechnology laboratories to support agriculture research. The
- number of labs increased while the number of trained staff in biotechnology increased from less than 15 at the year 2003 to over 100. Production of major crops in Sudan is below the world average. This is mainly attributed to limited funding capability of farmers, reduced inputs, shortage in labors, and losses due to biotic and abiotic stresses. Biotechnology can play a major role in addressing these constraints and Improving agricultural production in Sudan particularly in irrigated and mechanized rain fed areas.
- The National Council for Biosafety and its technical committees has been established recently according to the National Biosafety Law and is now working .

Legislations and regulations

As part of the Sudan commitment to the principles of consumer protection, environment and national economy with its commitment to encourage scientific research and take advantage of technologies to provide the needs of humans and animals, and as a return to Sudan's commitment to international agreements and enforcement of national laws it has been developed regulations and requirements regulating the import and trading of genetically modified products basically according to the following EU regulations and Legislations

- Regulation EC No. 1829-1830 on genetically modified food and feed
- Regulation EC No. 1830-2003 concerning traceability and labeling of GM organisms, food and feed products produced from genetically modified organisms
- Regulation EC No. 1946 -2003 on transboundary movements of genetically modified organisms

Genetically modified cotton Introduced in Sudan

- Introduction of Bt cotton in 2013 was for contained use to reduce the cost and side effects of pesticides and herbicides used on cotton cultivation and mainly for resistance of the American boll worm.
- Recently wide areas of the same variety has been cultivated for commercial use.

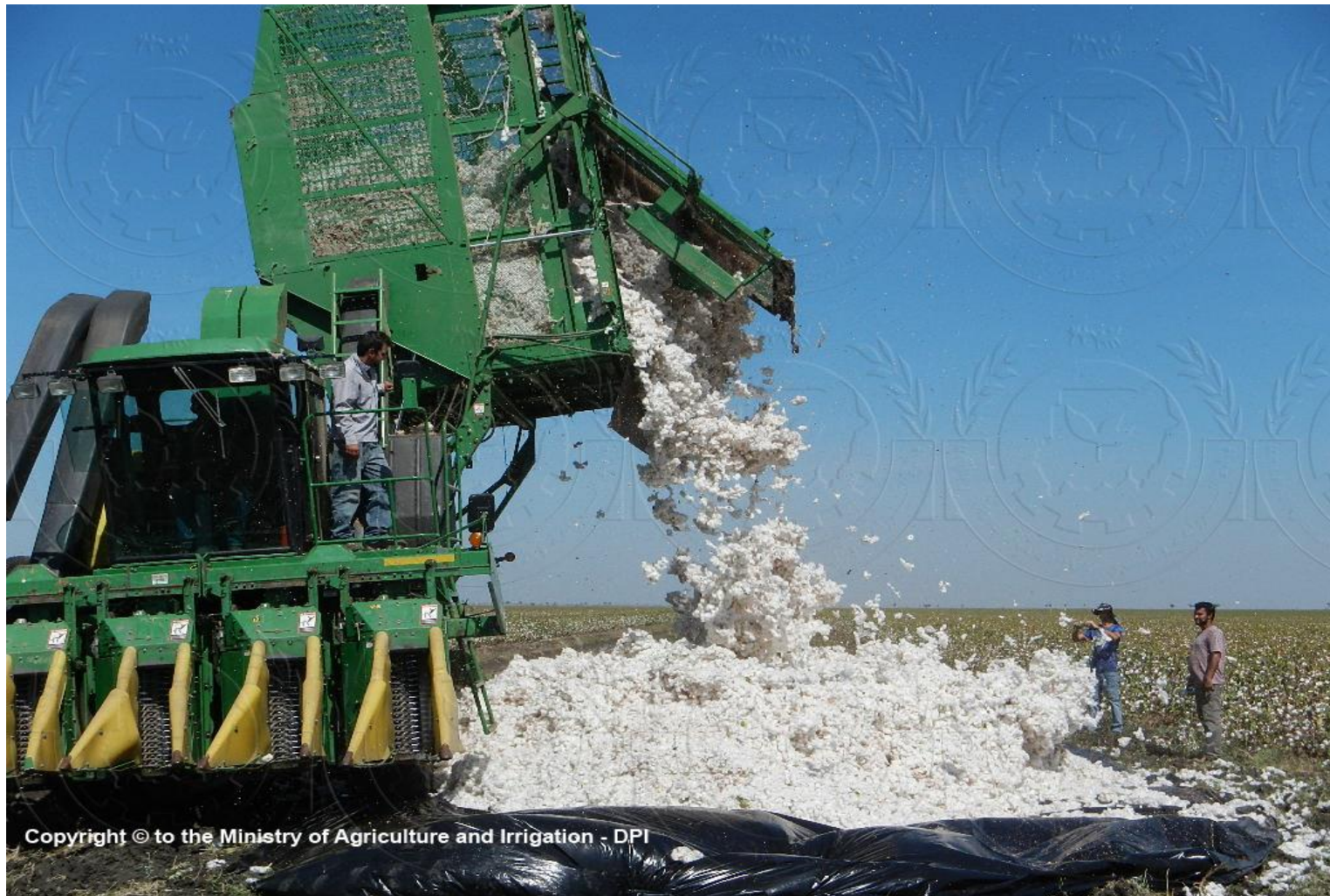




Deterioration of cotton production and its cultivation in Sudan, led to the reluctance of farmers for its production.

The most prominent obstacles was the increase of the cost of production per acre, compared with the cost of other crops, .

The introduction of genetically modified Cotton named Chinese Class 1 (Cry A) has been cultivated for commercial uses. Although the relative increase in the field yield productivity .Some problems faced marketing of the Bt cotton in the International market.



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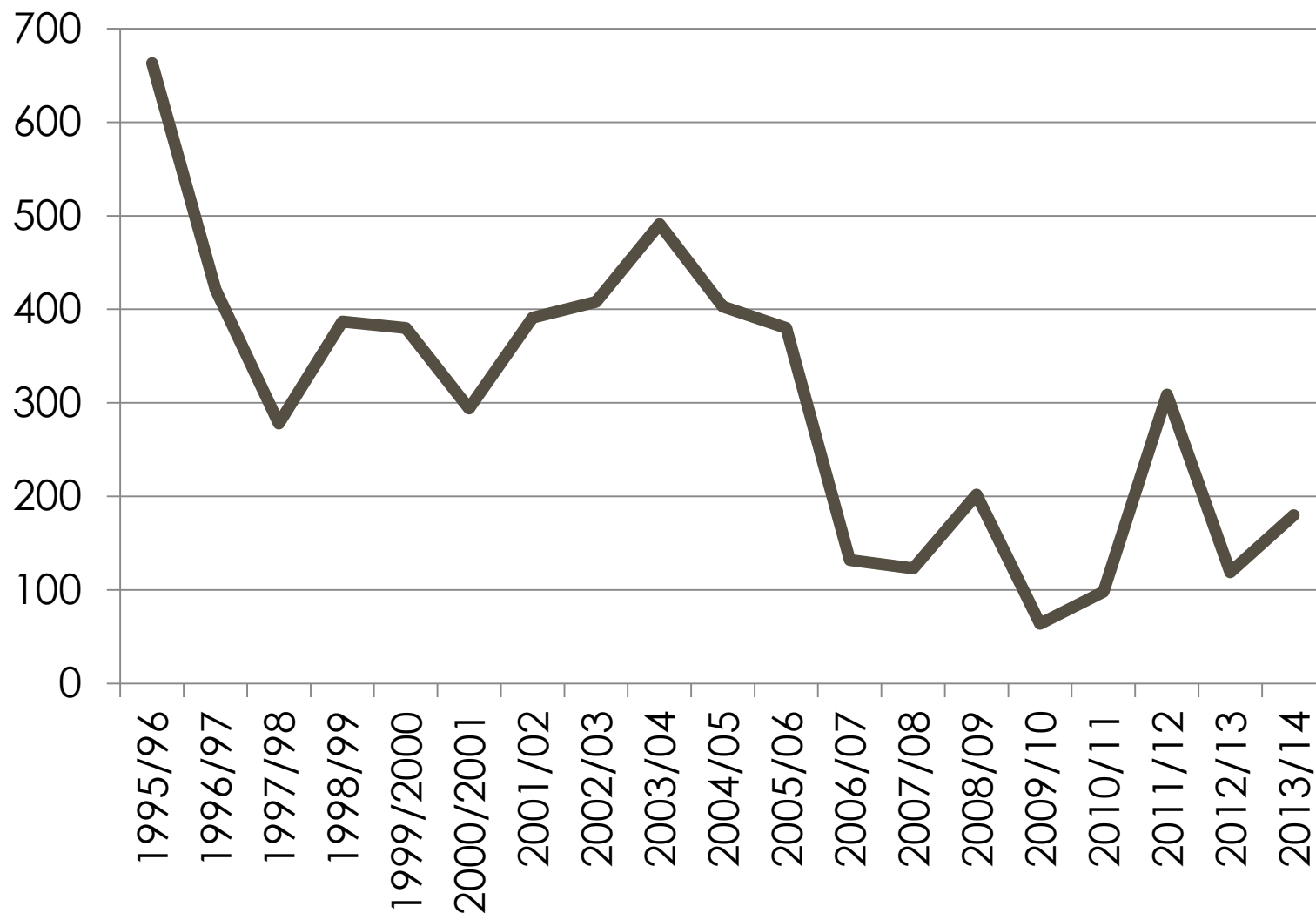
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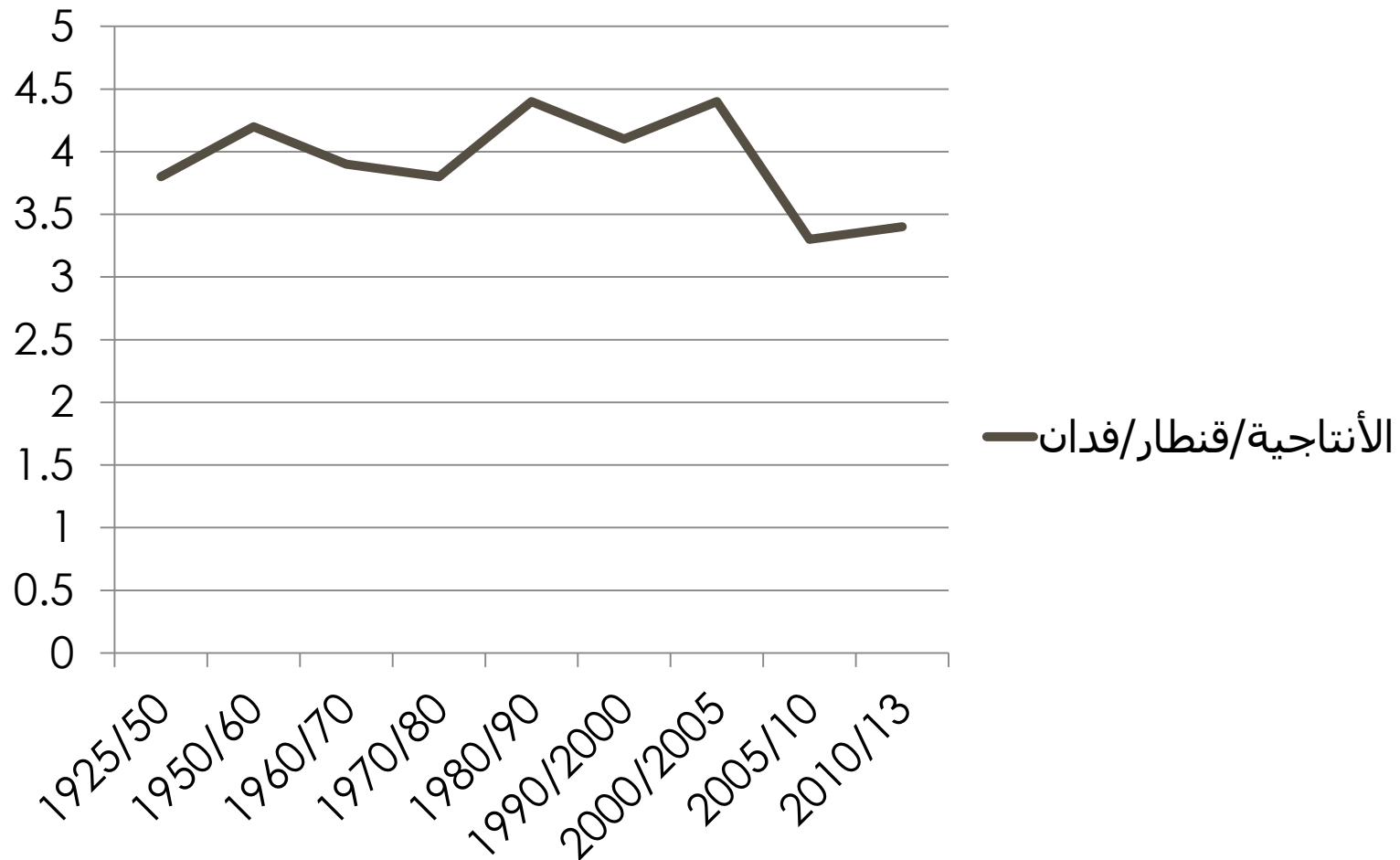
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LLP/AP incidents and management in Sudan

- Early at the year 2000/2003 Sudan scored a reservation to genetically modified food when he use to receive external relief from organizations to support the displaced and affected people and refugees in conflict zones . Allowance of grind grain and cereals which was acknowledged as genetically modified was permitted for entrance as so as for the maintenance of its genetic resources and to protect the environment.
- Recently commercialize crops for animal feed may be introduced according to safety regulations permitted by related authorities.

Country perspective on future Situation

Biotechnology can play a significant role in addressing the different challenges and constraints that face agricultural research in Sudan. Sudan has some basic facilities and capacities for biotechnology at present, which need to be strengthened and improved. Tissue culture and molecular markers are the predominant agricultural biotech in Sudan and production of transgenic crops is initiated through regional collaboration. It can be concluded that Sudan is taking serious steps to utilize biotechnology in improving agricultural production in both plant and animal sector. Yet these efforts are faced challenged with a number of constraints, which include among others:

- o Unclear National strategy and action plan on Agricultural Biotechnology
- o Lack of functioning Biosafety and IPR system
- o Inadequately equipped laboratories
- o Lack of containment/and confinement facilities
- o Shortage in adequately trained staff
- o Inefficient seed production industry to the technology
- o Limited accessibility funds to research in general and Biotech in particular

Thank you

