

AID-FOR-TRADE: CASE STORY

BRAZIL

Brazilian Cooperation Agency of the Ministry of External Relations (ABC/MRE) / Project Cotton-4

Date of Submission: 2011

Region: Latin America

Country: Brazil

Type: Program to provide Support to the Development of the Cotton Industry in C-4 Countries (Benin, Burkina Faso, Chad and Mali)

Author: Brazilian Cooperation Agency of the Ministry of External Relations (ABC/MRE)

Contact Details:

Brazilian Cooperation Agency

SAF/Sul Quadra 02, Lote 02, Bloco B – Ed. Via Office – 4^o Andar

70070-080

Brasilia, DF, Brazil

Phone: +55 61 3411 6812 or +55 6 3411 6879

Fax: +55 61 3411 6894

cotton-4@abc.gov.br

ISSUES ADDRESSED

South – South Cooperation / Agricultural Dispute/ Sustainable Economic Development

OBJECTIVES PURSUED

- To contribute to enhance the development of the cotton industry in C4 countries by providing conditions for country governments to resolve matters related to sustainable cotton farming autonomously. To do so, nine Brazilian cotton varieties developed by *EMBRAPA (Empresa Brasileira de Pesquisa Agropecuária/Brazilian Agricultural Research Corporation)* over the last twenty years are expected to be tested and adapted at the Sotuba Station in Mali. The objective is to organize a supply chain that is more profitable and uniform in terms of planting and crop management.
- To transfer Brazilian technology to increase profitability of the cotton supply chain in Benin, Burkina Faso, Chad and Mali. Current profitability in these countries is considered low according to international trade standards. Increasing both profitability and quality will generate both more income to farmers and jobs in C4 countries.
- To improve the quality of life and food security levels in beneficiary countries. In the long term – after rural extension is fully implemented and techniques are widely used – farmers are expected to use material resulting from crossings with the Brazilian material that will be best adapted to local conditions, making it possible to supply consumer markets with better quality produce. In addition, integrated crop management techniques are to be transferred so that other crops can be associated to cotton

DESIGN AND IMPLEMENTATION

The program *Support to the Development of the Cotton Industry in C-4 Countries (Benin, Burkina Faso, Chad and Mali)*, also known as “Cotton 4 Project”, was created in 2008 with the official support of the Brazilian Government to WTO’s *Cotton Initiative*, brought forward by C4 countries as a result of their losses due to subsidy policies used in the international cotton market.

The Cotton 4 Project proposed the provision of agricultural technical assistance with regional scope, based on South-South cooperation principles, by the Brazilian Government to C4 countries; given the similarity between their soil and climate conditions and those of Brazil.

Project actions aim to refurbish an experimental station in Mali and implement an evaluation/ demonstration unit and technology showcases in C4 countries as tools to support adaptation research. In addition, the project contemplates capacity building and field practice to validate transferred knowledge. Finally, a manual of good cotton farming practices will be prepared with small-scale farmers in mind. All technical activities are conducted and assessed by the Brazilian Agricultural Research Corporation (*Empresa Brasileira de Pesquisa Agropecuária – EMBRAPA*), the project’s implementing institution, recognized worldwide for its excellence in agricultural research.

The national agricultural reference centers in C4 countries are the project’s local partner institutions. Their activities are coordinated by ABC/MRE with logistic and operational support from UNDP.

PROBLEMS ENCOUNTERED

- Poor communication systems in all four countries, making it difficult to integrate the institutions involved in the project and implement activities that depend on agricultural cycles simultaneously.
- High employee turnover in C4 institutions, hindering continuity and replication of generated/ transferred knowledge.
- The technology available locally is limited and expensive, unaffordable to local technicians and farmers.
- Inappropriate crop management, particularly: inappropriate use of chemicals (time between applications not followed, inadequate dosage); lack of soil samples for analyses, use of farming techniques that erode the soil, loss of soil potential and use of low quality seeds.

FACTORS FOR SUCCESS / FAILURE

- Researchers in charge of the project and directors of C4 institutions are effectively committed to implementing project activities and discussing its goals and results. The President of Mali and the Brazilian Minister of External Relations, Ambassador Celso Amorim, visited the Sotuba station in October 2009. During the visit, they had the opportunity to see the high quality of the Brazilian varieties planted in Mali and the success of the colored cotton developed by *Embrapa* and planted in sub-Saharan conditions. Afterwards, in order to give continuity to the project and keep professionals who were being trained, the Malian Government allocated more resources to refurbish and maintain their research institutions and purchase equipment, besides raising the salaries of researchers involved in the project.
- Promising farming results have been achieved, with positive impact on C4 cotton yields. The Brazilian Government has introduced nine Brazilian varieties developed by *Embrapa* over the last twenty years at the Sotuba station in Mali (more specifically: varieties BRS286, BRS293, BRS Araçá, BRS Aroeira, BRS Buriti, BRS Cedro, BRS Jatobá, BRS Safira and BRS Serido). At 3,000 kg/ha, the yield of BRS286 in the 2009 harvest was particularly remarkable, compared to an average 1,000 kg/ha of local varieties also tested at the Sotuba demonstration unit. A 10% increase is expected for the 2010 BRS286 harvest, as well as for the other varieties currently being tried at the Malian station. The positive results achieved so far are highly motivating to technicians and governments involved in the

project.

- Consolidation of the project's coordination unit in Sotuba, Mali, to facilitate administrative/ financial management and regional articulation among C4 and Brazilian parties. *Embrapa* has appointed a senior researcher, Mr. José Geraldo di Stefano, to reside in Mali and coordinate adaptation research in C4 countries. Mr. Di Stefano is also in charge of activities to refurbish the experimental station in Mali, and is particularly involved in building two laboratories – one for biotechnology and the other for biological control – that will integrated plague management in cotton crops.
- To deal with the communication problem among the parties, the Brazilian Embassies have implemented a telecommunications system between Mali and the other C4 countries. The objective was to improve the coordination of efforts, implement demonstration units in Benin, Burkina Faso and Chad and facilitate capacity building in entomology, breeding, soil and direct planting systems. Seven capacity-building sessions have been conducted so far to a total 69 African technicians.

RESULTS ACHIEVED

- International recognition of the C4 Project as a model of South – South cooperation and structuring project. Increased interest in partnerships and support from other countries already expressed by WTO. On December 9th, 2010, WTO's 14th Consultation Mechanism Meeting of the General Director on cotton was held in Geneva, during which the program developed by ABC/ *Embrapa* in C4 countries was on the spotlight, more particularly its bilateral partnership nature (development of a model adapted to the local reality) and its economic and technological impacts on the local cotton industry. In this context, besides the relevance of the cooperation effort itself, the political effects of WTO's multilateral plan have changed positively Brazil's image in the scope of South – South cooperation.
- Expansion and strengthening of the Brazilian cooperation. Given the great social and economic relevance of the cotton industry for many African countries and that the respective productivity levels, at about 1,000 kg/ha, are still low in the continent as a result of inappropriate crop management and limited good quality genetic material, countries such as Ghana and Uganda have formally requested their inclusion in the C4 Program.
- Perspective to expand the C4 Program to areas related to the cotton supply chain and industrial/commercial strengthening of cotton as a commodity. Two harvests have already taken place at the Sotuba station (2009 and 2010). In 2009, some Brazilian varieties yielded three times the country's average. A 10% increase is estimated for the 2010 harvest. In order to validate the exploitation of the Brazilian material internally, it is necessary to plant varieties for three consecutive years so that there is sufficient data to develop technical recommendations to start large scale production. Considering the results already achieved, another successful harvest is expected to conclude the test and adaptation phase, allowing for the phases of propagation, extension and large scale production.
- Favorable scenario to develop new projects for agriculture, considering the results of adaptation studies under C4 soil and climate conditions.
- Brazil's greater credibility as a provider of South – South cooperation to African nations, contributing to create new projects in Africa. Cotton 4 is one of the most important projects of the Brazilian South – South cooperation, and its successful experience over the last two years has projected Brazil's image in Africa and increased from 22 to 38 the number of countries in the continent benefiting from Brazilian cooperation. In 2010, Brazil continued to implement or started implementing approximately 300 cooperation initiatives, involving a budget of more than 60 million US dollars for the next few years.

LESSONS LEARNED

- The importance of activities that allow frequent dialogue and consultation among the parties as a tool to integrate beneficiary institutions and encourage knowledge analysis and validation, resulting

in participatory cooperation.

- A strategy to value researchers and their continuous qualification to facilitate the implementation of knowledge and improvements to the cotton supply chain to the benefit of local societies.
- Integrated management with focus on sustainable soil use and biological plague control. This is a strategic factor to raise awareness of beneficiary parties to guarantee durable successful results.
- Relevant articulation of an agenda shared by institutions at the regional level regarding adaptation research in the four countries, with focus on shared results applicable to small-scale farmers in C4 countries.
- Successful shared management of the implementation of an international technical cooperation project involving different institutions and governments.

CONCLUSION (applicability to other programs)

Considering the structuring nature of the project, the commitment of C4 agricultural institutions and governments to the work already implemented is clear. This is reflected in the perspective – already expressed by the countries involved – of expanding the C4 Project to other areas related to the cotton supply chain, integrating new possibilities to encourage related activities in livestock, cereals and handicraft.

The program therefore aims to employ the acquired knowledge and technology to integrate the different components of an agro-ecosystem to promote rational utilization of natural resources, thus allowing for studies on integration with shorter-cycle crops so farmers can have a quicker return for their investment. For instance, research on rotating systems combining agriculture and livestock could be conducted.

In addition, the program aims to provide tools to eliminate the need for external input, reducing cost and permitting the introduction of food crops that would enhance food security levels in C4 countries.

It is important to highlight that integration among teams involved and effective participation of beneficiary parties in all aspects of the program, from its creation to implementation, make C4 project results and successful outcomes absolutely adherent to the principles of South – South cooperation. These principles are based on transferring knowledge and technology while recognizing the value added by local knowledge of beneficiary nations.

Finally, the Brazilian Government is clearly motivated as it considers the C4 project immensely relevant due to the project's dynamic actions and commitment of all partners involved. In addition, the structuring nature of the C4 project, as well as its capacity to embody the concepts of South – South cooperation, make it an innovative initiative among other international cooperation efforts in the field of agriculture.