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INTEGRATING SOCIAL SCIENCE RESEARCH INTO COTTON REFORM IMPLEMENTATION LINED WITH THE INTERNATIONAL OUTLOOK

Program: **Integrating and strengthening the European Research Area**

Instrument : **Specific Support Action**

Minute of the Cotton stakeholders' seminar in Spain (Deliverable 6)

Sevilla, 10 October 2007

Project Partner:

Dr. Manuel Arriaza

MINUTE OF THE NATIONAL SEMINAR ON THE IMPACT OF THE COTTON REFORM ON THE SPANISH COTTON SECTOR

The National Seminar was held in Cordoba in September the 7th with the following structure:

- Brief presentation of the impact of the reform on each stakeholder.
- Round table to discuss the impact of the reform and to analyse the future of the crop in Andalusia. The discussion among the speakers and the selected 65 attendants proved to be highly interactive.

The speakers were selected to include the main actors of the cotton sector, namely:

A. Regional Government

- **Pilar San Miguel Tabernero** (Chief of the CAP Monitoring Service of the Regional Ministry of Agriculture).
- **José Manuel Durán Álvaro** (Technical staff of the Crop Protection Service of the Regional Ministry of Agriculture).

B. Research Institutions

- **Pedro Ruiz Avilés** (Researcher of the Research and Training Institute of Agriculture and Fishery, IFAPA, Regional Ministry of Innovation, Science and Enterprise).
- **Blanca Landa del Castillo** (Researcher of Spanish National Research Council, CSIC).
- **Manuel Gómez Barbero** (European Commission, JRC-IPTS).

C. Farmers' organizations

- **Paula Triviño Tarradas** (Technical staff on the cotton sector, ASAJA).
- **Manuel Izquierdo García** (County delegate of Seville, COAG).
- **Francisco Javier Fernández Martín (**Technical staff, UPA).

D. Ginning industry and agrochemical suppliers

- **Elena Sáenz García-Baquero** (President of the Spanish Association of Cotton Ginners).
- **Juan Gallardo Merinas** (Manager of the ginning cooperative Coesagro).
- **Luis Padilla Romero** (Regional delegate of Fercampo).

A brief summary of the main topics covered during the seminar follows:

Impact of the reform and governmental proposal for the coupled subsidy

Pilar San Miguel Tabernero

Consejería de Agricultura y Pesca
Junta de Andalucía

The reform of the cotton support scheme has produced the following results:

- According to the official figures, the reform has reduced the cotton area from an average of some 89,000 ha in Spain to 62,000 ha.
- It has been a reduction in production of 60% due to the combined effect of the reform and the drought during 2006.
- A reduction of yields of 46% and 20% less cotton growers.
- A reduction of direct employment of 43%.
- In Andalusia 5 out 25 factories have shutdown, in Murcia, all 4 factories have shutdown.
- Quality of the cotton: 5.6% exceeded 12% humidity and 5% of impurities.
- 38% reduction in the industry employment.

In order to ensure the continuation of the cotton production in Spain, the new scheme should include the following aspects:

Maximum decoupled subsidy of 20%.
Modulation of the 80% area payment according to the cotton production system (increasing area payment):

- Semi-abandonment system (approximately 0.5 of the area payment).
- Rainfed cotton production.
- Irrigated low input production with reduced variable costs.
- Irrigated cotton production with medium yields (approximately 1.5 of the area payment).

A EU fund should be implemented to allow producers to adapt to the new production system plus the restructuring of part of the industry.

Some resources should be devoted to environmental programs to reduce the impact of the cotton production: continuation of the environmental area payment plus the promotion of the organic cotton production.

Integrated production: towards a more environmentally friendly production system

José Manuel Durán Álvaro

Consejería de Agricultura y Pesca
Junta de Andalucía

The area of integrated production in the cotton sector has increased from 11% in 2004 to 80% in 2006 due to the implementation of an specific area payment of 350 euros/ha. This production system implies:

- Sowing. Without plastic. Reduction of the seed dosage from 28,2 kg/ha to 22,8 kg/ha.
- Fertilizers. Due to the reform has been a reduction of nitrogen of 66%, from 220 UF/ha to 75 UF/ha.
- Irrigation. In 2005 and 2006 have been a reduction of the water allowance due to the drought from 4200 m^3/ha to 2700 m^3/ha on average. The number of irrigations has been reduced from 7 to 3.2.
- Agrochemicals. The monitoring of the number of treatments and the chemicals used is carried out by the ATRIAs. In 2006 the number of treatments was on the average, 6. In 2007, due to the farmers' strategy of cost reduction, this number will be probably reduced to half of it.

The EU cotton production in the world context and its future

Pedro Ruiz Avilés

Instituto de Investigación y Formación Agraria y Pesquera (IFAPA)
Junta de Andalucía

After the implementation of cotton reform some conclusions can be drawn:

1. If the new proposal of the Commission does not change the current system the future of the cotton sector in the UE is at stake.
2. The new support system should ensure the production of a EU cotton based on its quality and allow the continuation of a sizeable part of the ginning industry.
3. Some effort should be placed on the research and innovation side to find new varieties better adapted to the Andalusia climate and with better fibre. In this strategy, the introduction of the Bt cotton is a key issue.
4. The future of a sustainable cotton production in the UE is conditioned by the social legitimacy of this crop, based on the minimal impact of the UE production on the world cotton trade.

Low input production systems and its influence of the cotton diseases

Blanca B. Landa del Castillo

Instituto de Agricultura Sostenible.
Consejo Superior de Investigaciones Científicas (CSIC)

There are several factors that affect the control of cotton diseases. Some of these have been influenced by the cotton reform implemented in 2006, namely:

- Land plot and rotational practices. Since most of the farms that keep on producing have less than 10 hectares they are not obliged to change the crop every year after the reform, hence there is no reduction of the risk of *V. dahliae*.
- Varieties. Vicky, Celia, Ideal, Alexandros, Juncal and Flora with 16, 12, 9, 8, 8 and 6%, respectively (Junta de Andalucía, 2007). They are relatively tolerant to *verticilium*.
- Sowing plastic. The reform has made the farmers to abandon the sowing plastic in order to receive the environmental payment. The delay in plant growing will result in higher rate of plant fall due to *R. solani*.
- Crop irrigation. The reduction of water availability, from 6-7 rounds to 3-4, implies lower risk of *verticilium.* The presence of *V. Dahliae* in the ground water may have a negativa effect in the cotton crop.
- Weeds control. The adoption of the integrated production implies a reduction in the amount and type of pesticides available to the farmers. This will reduce the efficiency of the treatments and will make more difficult to fight weeds.

Adoption and socio-economic impact of GM cotton worldwide

Manuel GÓMEZ-BARBERO and Emilio RODRÍGUEZ-CEREZO

European Commission
Joint Research Centre-IPTS
Agriculture and Life Sciences in the Economy Unit

The importance of cotton in terms of land cultivated and the economic turnover it generates has made this crop one of the main targets of biotechnology-related R&D. In 2006, 13.4 millions hectares were cultivated under GM cotton, accounting for 38% of total cotton area in the world. GM cotton is currently cultivated in 9 countries worldwide, namely the US, Argentina, Brazil, India, China, South Africa, Australia, Mexico and Colombia. Since 1996, the only two agronomic traits introduced by genetic modification in cotton – and approved for commercial cultivation – are herbicide tolerance and insect resistance (a combination of the two traits is also occurring).

The body of scientific evidence accumulated during the last decade has grown to the point where a picture of the effects of GM cotton worldwide can now reasonably be obtained. Published research analysing the *ex post* impacts of GM cotton adoption at farm level includes studies in China, India, South Africa, Argentina, Mexico, US and Australia. Cultivation of Bt cotton can have a positive agronomic and economic impact at the farm level, where on-farm benefits (up to 73%) are derived from reduced production costs (lower pest control costs of up to 33%) and yield increases (of up to 87%). At the level of society, the welfare gain due to the production of Bt cotton is so far mostly appropriated by Bt cotton farmers, and, to a lesser extent, the companies involved in the production and sales of Bt cottonseeds; consumers may also benefit from lower cotton prices, while non-adopting cotton farmers suffer a welfare loss.

The EU has not authorised the cultivation of any of the different types of GM cotton but a potential adoption could have economic implications for the EU cotton sector. A first ex ante approach could be an estimate of the potential pest control cost savings through reducing the number of insecticide treatments by adopting *Bt* cotton in Andalusia. Taking the worst-case scenario, an Andalusian representative farm could save of € 148.2 per hectare. To complete this analysis, other sources of profitability such as price differences between GM and conventional seeds, output prices, variation in yields or coexistence costs should also be considered.

Farmers' organizations: ASAJA, COAG and UPA

The three farmers' organization agreed that the current support system do not guaranteed the cotton production in Spain. Although the three of them favoured the production-linked support system, in case the current decoupled system prevails, two of them (ASAJA and UPA) would prefer a 100% decoupled scheme, whereas COAG would favour a 80% coupled area payment (instead of the current 35%) as well as a differentiated area payment based on cotton yields.

Ginning industry

Elena Sáenz García-Baquero and Juan Gallardo Merinas

The main impact of the reform on the industry can be summarized as follows:

- Economic losses. 24.5 Euro millions in 2006.
- Fibre production: 60% reduction.
- Employment: 42% reduction
- Cotton quality: lower quality (higher content of impurities).
- Ginning costs: increase by 60%

The industry proposes the following measures:

- Increase of the Cotton National Area from 70.000 ha to 85.000 ha.
- A maximum decoupled subsidy of 20%. The coupled area payment of 80% would imply the harvest and delivery of cotton with a minimum quality threshold.
- Complementary measures:
    - A EU fund to restructure the industry.
    - Support and promotion of EU quality fibre.
    - Support to more environmentally production systems.
    - Use of GM cotton.
- EU compensating funds for the 2006 and 2007 industry losses.

Impact of the reform on the agrochemical suppliers

Luis Padilla Romero
Delegate of Fercampo

Clear losers of the reform have been the agrochemical suppliers. In 2006 it has been a reduction in the amount of fertilizers, pesticides and seeds used in the cotton production, especially in the provinces of Cordoba and Jaen. In 2007 the results are expected even worse. In particular, the reduction in 2006 can be summarized as follows:

- Fertilizers. A reduction of 75%
- Pesticides. The number of treatments has been reduced by 2-3 applications. Since 30 June of 2007 it is forbidden to use endosulfan.
- Seeds. The implementation of the reform has resulted in:
    - Use of seed of lower quality.
    - Use of 23 kg/ha, this is, a 15% lower density compared to 2005.
    - Since it is forbidden the use of plastic in the sowing, the use of short cycle varieties has reduced the yields from 3.6 t/ha to 2.2.
- Lower quality of cotton due to limited pesticide treatments.

FREE DISCUSSION

Two rounds took place in the seminar. The first one was focused on the governmental delegates. Most technical staff showed their doubts about the effectiveness of the integrated production to combat pests (less treatments and lesser number of pesticides available). In addition the EU regulation progressively reduces the number of weedkillers available so farmers expect to find weed resistance especially in the cotton production.

The officials from the Agricultural Regional Government expressed their concern about the social perception of the EU cotton production. Some information about the minimum impact of the European cotton production in the world market should be published.

The second round after lunch focused on the impact on the cotton industry depending on the type of legal status of the company. According to the president of the ginners, the negative impact has been equal for LTD and Cooperatives. Although the cooperatives could stand longer than the LTD companies their associates in the medium term would opt for more profitable crops.

Although some farmers declared themselves in favour of an 80% coupled subsidy others doubted that even that amount of coupled area payment would guarantee the continuation of the cotton production in Spain.

The President of the Spanish Association of Ginners affirmed the European Commission has the obligation to maintain the production of cotton in Spain and Greece, as the Treaty states. Therefore the new proposal should take into account the special status of this crop and to ensure that the support scheme guaranteed not only the sowing of cotton but the production and delivery of cotton to the industry. Moreover, the EU must create a restructuring fund to allow some part of the industry to leave the cotton production.