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France **Biotechnology Exploring Coexistence** 2005

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Report Highlights:

The second international conference on coexistence between GM and non-GM based agricultural supply chains took place in Montpellier, France, in mid November 2005. It was coorganized by the French National Institute of Agronomy (INRA) and the European Commission Directorate General Joint Research Center (JRC). The Commissioner for Agriculture emphasized the high priority of the coexistence legislative framework on her agenda, and the JRC announced that their research program will be finalized in December 2005. A large number of papers were presented on gene flow modeling, national implementation, organization and costs of coexistence. France's coexistence legislation is still pending.

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Introduction and Summary

On November 14-15, 2005, the second international conference on coexistence between GM and non-GM based agricultural supply chains (GMCC-05) was held in Montpellier, France. The event was co-organized by the French National Institute of Research in Agriculture (INRA) and the European Commission Directorate General Joint Research Center (JRC). The first GM/non-GM coexistence conference (GMCC-03) was held in Denmark in 2003. The EC, in conjunction with the Austrian Presidency of the European Union, will organize the next coexistence conference in Vienna (Austria) in April 2006.

This conference focused on both European and non-European coexistence situations and consequent agronomic and economic research findings. There were no policy statements made apart from opening remarks by EU agricultural Commissioner Mariann Fischer-Boel. There were no demonstrations of anti-biotech lobbyists, although some were present.

At the Montpellier meeting, EU Agriculture Commissioner Fischer-Boel, in her opening remarks, made clear that biotech coexistence is high on her agenda. She insisted that the legislative framework on biotech coexistence at the EU and Member State levels continue to be developed. Fischer-Boel declared that the EU Commission (EC) is currently working on a report to consolidate actions among Member States on coexistence, to be presented to the European Council in early 2006. She stressed the importance for the EC of mutual exchanges and information sharing among the Member States. She said that this would help establish a scientific basis to allow for the development of a coexistence framework that would provide choices for farmers and guarantees for consumers. In addition, the Commissioner underlined the political importance of resolving the liability issue.

Experiences of Coexistence Outside of the EU: U.S., Brazil, Canada and Australia

U.S. and Brazil: Successful Coexistence Experiences with IP Soybean Products

Nicholas Kalaitzandonakes, (Professor of Economics and Management of Agrobiotechnology Center, University of Missouri-Columbia - http://emac.missouri.edu/), discussed world markets for U.S. IP soybeans and corn. He focused on the technical and economic aspects of Indentity Preserved (IP) supply chains under the conditions of coexistence in the United States, using the PRESIP modeling platform.

His main conclusion was that coexistence can only be viable under technically and economically reasonable adventitious presence thresholds, as is the case for IP soybean products for the Japanese market. A large part of the audience of the GMCC-05 conference had read the speaker's former publications and welcomed his presentation.

The situation in Brazil was presented by Roseli Rocha Dos Santos, Unibrasil Integrated Faculties. She illustrated the coexistence between GM and non-GM soybeans in Brazil with 7 companies using Identity Preservation in processing soybeans and exporting to Japan and EU markets under certified non-GM requirements.

France was specifically identified as a target for Brazilian non-GM soybean products. First, Brazilian soybean meal is reportedly certified non-GM by the certifying company, ECOCERT, when exported to French cooperatives. Another Brazilian company is reportedly supplying the French supermarket chain Carrefour and the food company Nestle with non-GM soybean products. A third company is reportedly certified by the European company SGS for non-GM soybean products, and endorsed by Genescan, a German inspection and auditing company, for IP lecithin exported to Europe.

Canada: Coexistence Experience with Canola

Rene Van Acker (University of Manitoba) presented the Canadian perspective. He discussed the problem of "gene escape" encountered in Canada on GM canola, which is now ubiquitous. The speaker discussed the Canadian government's approach to this issue.

Australia: Coexistence Experience - Cotton and Canola

Keith Alcock, Department of Agriculture, Government of Western Australia, presented the Australian experience. He discussed the success of GM cotton production in Australia, for which coexistence has not been an issue. GM cotton now represents the bulk of cotton production in Australia, as is the case in the United States. He explained this was due to the benefits of GM cotton as a result of the sharp reduction in insecticide use. On the other hand, he presented the current moratorium on GM canola, as a result of coexistence concerns from the industry of cross-contamination, as is the case in Europe.

These presentations on problems experienced by countries with canola coexistence had a significant resonance among the French audience. Rapeseed is a major crop grown in France, and a number of research projects are conducted on the feasibility of GM rapeseed production through the modeling of gene flow.

Coexistence Experience and Studies in the EU

Spain: the Only Large Scale Experience of Coexistence in Europe

A representative of the Spanish Ministry of Agriculture (Jose Ignacio Ortega Molina) discussed the situation in his country (for more information, see PO5022). In Spain, production of GM corn started in 1998. In 2004, there were 58,200 ha of GM corn planted, mainly in Aragon and Cataluna regions, where they represented 35 and 28 percent of corn acreage, respectively. Corn faces a strong attack from the corn borer in these two regions, and farmers therefore need to grow Bt corn to maintain their yields. The Spanish MinAg representative explained Bt corn is mainly grown for the feed market, while corn grown for starch entering the food chain is grown in dedicated non-GM areas, and sold to buyers willing to pay a premium for non-GM products.

Finally, the Spanish MinAg representative described the Spanish draft regulation on coexistence, expected to enter into force in early 2006. He said the regulation will include a chapter on farmers obligations (measures to apply during production, transportation and storage process), a chapter on monitoring and control (national plan of supervision, registration of plots, fines for non-compliance), and an annex with technical indications (50 meters distances of isolation around GM plots, buffer zones of 4 conventional rows around GM plots, refuge zones of a minimum of 20 percent of the total acreage), and good farm practices.

Coexistence Research

Joint Research Center (http://www.jrc.es)

There was a presentation of the European Commission's (EC) Directorate General Joint Research Center (JRC), whose mission is to support EC policy makers with the best scientific background. The JRC is involved in research relevant to coexistence mainly through the work of its Institute for Prospective Technological Studies (IPTS), a number of whose representatives were speakers at the Montpellier conference.

JRC-IPTS provided scientific support to the EC for the publication of its recommended guidelines on coexistence in 2003. JRC-IPTS worked with the French National Institute of Research in Agronomy (INRA, co-organizer of the Montpellier conference) and other European research centers on **a report finalized in December 2005 on biotech coexistence**. Thee report identified agronomic measures for coexistence, introduced landscape scale for estimating gene flow and adventitious presence levels, identified coexistence measures for planting seeds, studied the effects of long time periods, and reviewd existing models on gene flow.

EC Directorate General for Research

(http://europa.eu.int/comm/research/index_en.cfm)

The Biotechnology, Food and Agriculture section of the DG RTD presentation focused on the biotech coexistence research projects SIGMEA and COEXTRA. These projects involve 23 countries inside and outside of the EU, such as Russia, Argentina and Brazil. These research projects study gene flow containment, changes in farm practices to reduce gene flow, socioeconomics and environmental impacts of GM and non-GM coexistence, and Member States regulatory projects on coexistence.

French Action in European Research Programs

COEXTRA: (http://www.coextra.org/)

COEXistence and TRAceability of GM and non-GM supply chains is a four-year European research project launched in June 2005 and funded with 13.5 million euros by the EU. France is highly involved in COEXTRA as its scientific coordinator is the French researcher in the National Institute of Research in Agronomy (INRA) Yves Bertheau. Apart from INRA, other French organizations involved in the COEXTRA program include:

- ARVALIS-Institut du Vegetal (technical research institute on grains, potato, forage, corn, and pulses http://www.arvalisinstitutduvegetal.fr),
- CETIOM (technical research institute on Oilseeds http://www.cetiom.fr/CTMsite/index.html),
- GIP-GEVES (French official organization in charge of plant variety and seed testing for the registration of new varieties http://www.geves.fr),

- the laboratory of the Fraud Control Office (DGCCRF) of the French Ministry of Economy, Finance and Industry (http://www.minefi.gouv.fr/dgccrf),
- the research Center on science legal rights in the University of Paris I (http://panjuris.univ-paris1.fr/pages/txtcrdst.html) and
- the private company Adriant, involved in consumer research on food products (http://www.adriant.com).

SIGMEA: (http://sigmea.dyndns.org/)

Under the EC Sixth Framework Programme, Sustainable Introduction of GM crops into European Agriculture (SIGMEA) started in May 2004 and runs for three years. Again, France is significantly involved in this research program, with a French person as the scientific coordinator (Antoine Messean, INRA researcher), and several French organizations involved including INRA, CETIOM, ARVALIS-Institut du Vegetal, and the University of Paris 11.

A French research program: POECB (http://www.agpm.com//iso_album/poecb_1.pdf)

The French research program named Operational Program for GM Crop Evaluation (POECB) was conducted from 2002 to 2004 in France. On 7 sites across France, POECB studied coexistence of Bt corn with conventional corn and traceability from the field to the silo. French corn growers, INRA, ARVALIS-Institut du Vegetal, planting seed organizations (GNIS, FNPSMS and SEPROMA), the Research Institute on Grain Food Technologies (IRTAC), and the biotech organization DEBA jointly worked on this program.

POECB findings were presented at the GMCC-05 conference. They covered distances between Bt corn plots and conventional plots to reduce cross-pollination levels, depending on wind intensities and field size, and explored several scenarios for organizing coexistence at different phases of the production process (farm, dryer, and silos). Finally, POECB explored good farming practice guidelines to ensure that the GM adventitious presence in non-GM corn remains below the EU labeling threshold of 0.9 percent.

French Biotech Bill Still Pending

Approximately one year ago the French announced legislation (biotech bill) to transpose EU Directive 2001/18, which established coexistence rules for biotech products, into French law. The law would change the organization of the French committees that assess biotech products and set national rules on coexistence (see FR5061 for more details). The legislation is still pending, however, for several reasons. The French Minister of Agriculture announced his preference for EU coexistence rules rather than national regulations (see FR5054) last July. In addition, the French have not resolved the issues of coexistence liability, as in, who bears responsibility for gene flow and how insurance companies can cover the risk, and technical standards, including buffer zones, cultural practices, transportation and storage segregation.

Strong lobbying by ecological groups may have also affected the pace of France's impetus to finalize the biotech bill. Such groups resist the implementation of coexistence because it infers a legitimacy of biotech plantings alongside conventional plantings. If France does not transpose the 2001/18 Directive into French law by October 2006 it must pay high penalties set by the European Court of Justice.