

## **Future of biotechnology and innovation of agriculture - Europe has to take a clear decision -**

**This year the IV International Meeting “Biotechnology and Agriculture: the Future is Now”, included in the 51<sup>o</sup> National Fair of Agriculture, gathered seven national and international speakers to think over the use of Agrobiotechnology in Portugal and in Europe. Government support, farmer’s education, a more supportive media and public opinion, and the “yes” from Europe were considered essential steps for the adoption of Agrobiotechnology on this side of the Atlantic.**

The IV International Meeting “Biotechnology and Agriculture: The Future is Now” was organized by the Centre for Biotechnology Information (CiB Portugal) and took place on the 11<sup>th</sup> of June 2014 in Santarém during the 51<sup>o</sup> National Fair of Agriculture. 170 participants among farmers, decision makers, agriculture technicians, researchers, professors and university students, technicians of Regional Department of Agriculture and Fisheries of Lisbon and Vale do Tejo attended the event. The President of CAP – Confederation of Farmers of Portugal and the president of Anpromis – National Association of Maize and Sorghum Producers opened the meeting that was closed by the Secretary of State of Food and Agri-food Research.



Opening Session with Anpromis, CiB Portugal and CAP

The European resistance on adopting Agrobiotechnology continues to raise doubts and generating reflections and debates. In this context CiB Portugal invited seven speakers – form Portugal, Brazil, Spain and South Africa – to share and discuss their experience on this theme. The supporters of Agrobiotechnology advocate the use of Genetically Modified Organisms (OGM) to improve the quality and yields of plants and in sequence, agriculture productivity and sustainability. They call attention on the world population growth and on the need to increase the production in 50% until 2050. The farmers and the researchers on this event were unanimous by saying that this will only be possible with the adoption of Agrobiotechnology and other modern agrotechnologies.

If this is true what makes Europe to be so reluctant (if a large amount of transgenic are approved for feed) and to authorize the cultivation of BT Maize MON 810 only? On his presentation Pedro Fevereiro, president of CiB Portugal and Professor and researcher on plant biotechnology said that the new varieties for cultivation approval have been restricted by “socioeconomic reasons, because there are no scientific reasons, having hitherto been fought at the political level”. On the opening session, João Machado, president of the Confederation of Farmers of Portugal (CAP) (CAP), referred that we live moments that often “Politics and the designs of technology do not go together and this is one of those moments, which are being too much extended”. The President of the of Anpromis – Nacional Association of Maize and Sorghum p Producers (Anpromis), Luís Vasconcelos e Souza, recognized that there has been no evolution and that “public opinion and European institutional powers continue without sensibility to this issue.”

Biotechnology is being applied for tree improvement also. In the case of forests, the National Institute for Agrarian and Veterinarian Research (INIAV) is working on the production of “chestnut clones adaptable for specific edafo-climatic conditions”, said Rita Lourenço Costa, researcher of INIAV. The biotechnology can improve the characteristics of forest trees and increase they productivity too.

In the case of the agriculture, barriers appear to be larger. For those that face the lack of options every day, there is a feeling of being behind other countries and behind the potential that could be reached with this technology. José Maria Rasquilha, one of the first Portuguese farmers to use genetically modified maize and one of the speakers of the event, considers that “the BT Maize MON 810 is gone” and, so, “it is impossible to compete with Brazil and the United States, because we are in different championships”.



José Maria Rasquilha

Last year on global level, 90% of the farmers that used the Agrobiotechnology as one of production process were small and family farmers. In Portugal, the family agriculture “is seen as a subsistence agriculture, from a poor background, as a guarantee of tradition, but few of these is true and makes sense”, says Pedro Fevereiro (CiB Portugal) for whom the maintenance of the family business implies the capability to use as much technology as possible to reduce production costs and maximize productivity.

See the Brazilian example, the second biggest Agrobiotech country. Flavio Finardi Filho, former president of the National Technical Commission for Biosecurity of Brazil (CTNbio), remarks that the advantage of using this technology is higher productivities on the Brazilian’s agropecuary. Professor Flavio emphasized the advantage of using this technology to increase the productivity in Brazilian agriculture and remember that there are more products that will soon be launched in the market (beans, rice, sugarcane, eucalyptus, orange, salad or passion fruit).

Also from South Africa arrived one example of success, where farmers achieved the greatest levels of productivity using Agrobiotechnology. Eve Ntseoane, a family farmer, recognized that there are always risks and benefits for what is new in the market, but the genetically modified crops are necessary to “increase the quality and quantity of food, the profits, the financial stability and they set an end in the hunger in our life time”. Another important point of view for this success is the government help. In the case of South Africa, Eve Ntseoane remarks that besides of seed companies, the farmers are backed up “by the government and by the department of science and technology that developed a strategy on biotechnology to inform the farmers and do the disseminate the information”. In the view of the farmer, “European problem is to make the governments understand the benefits of this technology”.



Eve Ntseoane

One of the causes for this lack of understanding, in the opinion of the Secretary of State of Food and Agri-food Research, Nuno Vieira e Brito, research in Portugal is being "somewhat assertive in what are the interests of the various debates". The ruling ensures that "a more applied research could be a source of decision support to governments."

A controversy that leaves the public standing behind is that the seed sector is controlled by private companies. Pere Puigdomènech, biologist and researcher of the Superior Council of Scientific Research (CSIC) of Spain, recognizes that this is a concern, but “it is like it is, the great companies have the money for this kind of studies. Differences are easy to be seen. Because of the resources limitation, the process of getting a product to the market developed by a public institution is always slower. As, has been the path to the approval of use of transgenic in Europe”.

Jaime Piçarra, executive secretary of the Portuguese Association of Feed Compounders (IACA), spoke about the “via crucis” for the approval of the transgenic varieties in Europe, defended faster approval processes and “a global harmony vision of these processes, at the same time on the European Union and the exporting countries in the world scale”.

The meeting resulted in several conclusions, all supporting the adoption of Agrobiotechnology. It seems to be no doubts, as Pere Puigdomènech defended that "we are in the era of the genome" and the technologies derived from them shall be used for the benefit of sustainable agriculture. All speakers were unanimous in stating that agricultural biotechnology can provide better environmental management, but may also allow for greater economic and social balance for farmers. They require faster decisions from the European Union that would provide the freedom of choice for the farmers and would promote consumers and producers trust on the regulatory system.

## **Conclusions of the IV International Meeting “Biotechnology and Agriculture: The Future is Now”**

Agrobiotechnology allows to accelerate and increase crop breeding procedures and is also applied to the breeding of forest trees. This technology enables the development of crop varieties usable in all forms of agriculture: family and small farmers, large farmers and agricultural enterprises as well. Agrobiotechnology is an indispensable component for costs reducing in the culture account and an essential theme in the negotiations of TTIP (Transatlantic Trade and Investment Partnership). Agrobiotechnology allows to further enhance the sustainability of farms having a positive impact on the overall level of the three pillars of sustainability: social, economic and environmental.

The newly industrialized countries are using Agrobiotechnology as a base to increase their productivity and wealth and are approving the use of better varieties improved by this technology for food production. A recent example is the approval of varieties of beans resistant to the golden mosaic virus in Brazil.

The European Union shows to be unable to make a clear decision on the adoption of Agrobiotechnology, promoting increasing costs and the lack of competitive edge within the agri food chain. This inability to decide induces a loss of trust on the regulatory system that should be based on scientific evidences.

This indecision prevents the Portuguese farmers to access this technology and the right to freely choose the crop varieties better appropriate to their production conditions, placing them on a disadvantage position comparing to the agroproducts global market.

The existent delay on the approval of these events generates constraints on the feedstock supply that Europe and Portugal are still lacking. This situation is particularly worrying regarding the provision of protein feedstock that Europe is in deficit by 70%.

It is necessary an international synchronization of the approval processes on the new events, to avoid market disruptions.

The Portuguese government should maintain the availability to support farmers willing to use crop varieties originating from the application of Agrobiotechnology.

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