

# **The Three Stages of GM Policy Change in China**

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## **Introduction**

China is the first country to plant commercial GM (genetically modified) crops in world: China began to plant GM tobacco of cucumber Mosaic virus resistance genes and tobacco mosaic virus genes in 1992, which is two years earlier than America's first commercial crops--genetically modified tomatoes. In 1997, China began to plant Insect-resistant transgenic cotton from the United States Company Monsanto. With the support of the national "863" plan, China researched the insect-resistance transgenic cotton independently and started large-scale cultivation during its "8<sup>th</sup> five year" period. Before 2011, the GM cotton planting area had arrived 3.9 million hectares, which account for 71.5% of the area planted to cotton.

However, considering the potential risks of GM food and the influence of consumer attitudes, the government's attitude and policies, especially the subject of GM staple food, changed in recent years. In particular, the direction of government's policies can be divided into three stages.

### **Strict control stage of the genetically modified food import**

Since the 20<sup>th</sup> century, considering that the United States was on the top of the transgenic technology in the world, the rest of the developed countries, from the perspective of trade protection, limited GM crops into their domestic market. For China, on the one hand the government strengthened the research of transgenic crops. On the other hand, China formulated a series of policies, which are similar to the European Union countries, to regulate the development of GM crops.

In 2001, the state council formulated the 《Regulation of the agricultural GMO safety》, regulating that agricultural genetically modified organisms shall build a system of safety evaluation, production license, product identification and import approval. Article 28 of the regulations states clear a regulation: the permissible agricultural genetically modified organisms sold in the People's Republic of China should have obvious identification.

In 2002, the department of agriculture formulated the 《Measures for the administration of agricultural genetically modified organisms safety evaluation》, 《Import safety measures for administration of agricultural genetically modified organisms》and《Identification measures of the administration of agricultural genetically modified organisms 》.The ministry of health

also formulated 《Genetically modified food hygiene management approach》 and 《Genetically modified food import safety regulations》. These regulations strengthen the administration of genetically modified food. AQSIQ issued the 《Inbound and outbound means of inspection and quarantine measures for the management of genetically modified products》, so the examination and approval and identification requirements are given.

### **The commercial stage of domestic genetically modified (gm) crops**

From the point of implementation effect, the strict control of the GM food, before 2004 years, did not achieve the purpose of trade protection. For consumers not paying much attention on the health risks of GM products, it's hard, to some degree, to protect domestic GM crops market (mainly for soybeans) by changing consumer behavior. The serious shortage of arable land and the grant pressure from the international trade also made the government to open markets. In 2004, Monsanto's "herbicide resistant transgenic soybean GTS40-3-2" became the first GMO to enter the Chinese market which passed the examination of the ministry of agriculture. In the same year, 17 GM products also got safety certification. Since then, China's soybean market quickly occupied the category of importing soybeans.

At the same time, China accelerated the pace of GM crops research. The ministry of agriculture accepted the application for safety assessment of transgenic rice in 1991 and transgenic corn in 2004. At the end of November, 2004, the ministry of agriculture held a meeting demonstrating the feasibility of transgenic rice commercialization. As the media aired the meeting in public, it triggered a serious social public argument. The government departments have to put aside the commercialization of GM rice first, but not totally giving it up.

In 2006, the development of new GM crops is one of the 16 major projects listed under China's plan for scientific and technological development (2006-2020). Some non-staple food, such as transgenic insect resistant cotton, storable tomato and antiviral pepper, had been certificated as safe product by the ministry of agriculture in 2006.

China wants to push forward with the large-scale planting of genetically modified crops, according to its first policy document in 2008. It was said that the government want to accelerate the breeding of GMO and promote the GMO industrialization from the first policy document in 2009.

The commercialization of GM staple crops was put on the agenda again for the support of the national strategy. So the ministry of agriculture granted two biosafety certificates approving rice "HuiHua1" and phytic enzyme maize "BVLA430101" in November 2009. Some scholars believe that China will soon realize commercialization of GM staple foods.

### **The cautious stage of the commercialization of GM staple crops**

The public's attitude towards genetically modified food had been a huge shift because the media paid close attention to the potential risks of transgenic crops. More cognitive to GM foods from consumers and the great endeavor from Greenpeace are also critical factors. In

2009, the agriculture department tried once more to promote the commercialization of genetically modified staple foods, but quickly suffered attack by social forces. "The health risks of genetically modified food" and the "the commercialization of genetically modified staple foods" quickly became a hot topic in society coupled with the influence of a series of food safety events.

In response, the government department emphasized the industrialization of new GMO varieties needing scientific assessment and management in its first policy document, though it continued to promote the GMO projects. At the same time, some research began to pay more attention to the potential risks of genetically modified foods and the circulation problem of genetically modified crops.

By 2011, the news from the ministry of agriculture showed that the pace of commercialization of GM staple crops such as rice had slowed down. China did not mention the industrialization of new GMO varieties in its first policy document in 2012, but instead focused on the basic theory and method of research. This means that the government's attitude towards genetically modified foods, under the pressure of the social public, changed from optimistic to cautious.

## **CONCLUSION**

The Chinese government's has a cautious attitude towards the issue of GMO. Technically speaking, GM technology is neutral. However, since GM foods is the transfer of an exogenous gene into an organism, there may be potential danger. Hence it's needed to strengthen its area of supervision and approval.

*Reference: Fengtian ZHENG. "Chinese social supervision mechanism for food safety: Take the changing attitudes to GM foods as a Case"*

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