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The Biotechnology laboratory of the Friuli Venezia Giulia region started its activity of GMO detection in 2000. During over fifteen years of work, many thousands of seed lots of maize and soybean were assayed for monitoring, certification and official controls.

The main problem which affected the regional farmers at the beginning of the 2000s was the quality of certified seed lots with respect to GMO contamination. A survey done in 2003 on commercial seed lots demonstrated that more than 30% of the assayed samples were GMO-contaminated, even if at levels below the threshold of 0,9%. In most cases, the contamination was from GMO events not authorized in Europe, like Mon810 or T25.

During the summer of 2003, several thousands hectares of a maize variety cultivated in Italy and contaminated by the Bt11 event were destroyed and the productions retired from feed and food market. Since then the national procedures for official controls changed with the issuing of the Ministry Decree of 27th November 2003. The new regulation required the seed companies to certificate seed lots as non-GM by a quantitative PCR assay, with a technical acceptance threshold of 0,05% assumed as Limit of Quantification (LOQ) of the CaMV 35S promoter. The same parameters were also adopted for official controls.

The quality of the seeds lots improved greatly following the new procedures. From 2005 to 2014, the Phytopathology and biotechnology laboratory analyzed over 1100 seed lots imported in Italy from non-EU countries (mainly Turkey and Serbia) and less than 1 % of lots were GMO-contaminated at a level above the 0.05% threshold.

In 2014, over 4000 tons of maize and soybean seeds were imported in Italy through the Friuli Venezia Giulia region and all the lots were assayed for GMO detection. Only one maize seed lot of about 2 tons resulted GMO-contaminated above the 0,05% limit and was rejected.

Considering the results of the official controls made in the Friuli Venezia Giulia region we can conclude that the quality of seed lots cultivated in Italy is good and the relative risk of field GMO-contamination is very low.

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