No signs of resistance to GMO Bt corn in Europe after 16 years of use

The majority of Bt maize production in the European Union (EU) is concentrated in northeast Spain, which is Europe’s only hotspot where resistance might evolve, and the main target pest, Sesamia nonagrioides, has been exposed to Cry1Ab maize continuously since 1998.

The cropping system in northeast Spain has some similar characteristics to those that probably led to rapid resistance failures in two other target noctuid maize pests.

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Available data reveal no evidence of resistance in S. nonagrioides after 16 years of use.

We explore the possible reasons for this resistance management success using evolutionary models to consider factors expected to accelerate resistance, and those expected to delay resistance.

Low initial adoption rates and the EU policy decision to replace Event 176 with MON 810 Bt maize were key to delaying resistance evolution.

Model results suggest that if refuge compliance continues at the present 90%, Bt maize might be used sustainably in northeast Spain for at least 20 more years before resistance might occur.

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Although some may consider this a long time, it is important to confirm these key assumptions and to implement strategies that postpone resistance further into the future.

The GLP aggregated and excerpted this article to reflect the diversity of news, opinion and analysis. Read full, original post: Sixteen Years of Bt Maize in the EU Hotspot: Why Has Resistance Not Evolved?