

MON 863

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MON 863 is a genetically engineered variety of maize produced by Monsanto.

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History

In 2004, Monsanto sought approval in Europe to introduce MON 863. Approval was granted in 2005 for use in feed^[1] and in 2006 for use in food.^[2] There was controversy over acceptance by regulatory bodies of industry-funded toxicity studies and over the design of those studies led by Pr Gilles-Éric Séralini, who was on the committee that reviewed MON863 for the French government,^[3]

See Genetically modified food controversies for details of this controversy, which extended beyond MON 863.

Following legal action by parties including the Swedish Board of Agriculture and Greenpeace, a Münster appeals court ruled that Monsanto would be forced to publicly reveal its research data.^[4]

Modified mechanisms

MON 863 is genetically altered to express a modified version of Cry3Bb1, a delta endotoxin which originates from *Bacillus thuringiensis*.^{[5][6]} This protects the plant from corn rootworm.^{[6][7]} Unlike MON 810, Bt 11, and Bt 176 which each produce a modified Cry1Ab, MON 863 instead produces a modified Cry3Bb1 toxin and contains nptII, a marker gene for antibiotic resistance.^{[5][8]}

Legal status

MON 863 is approved for use in Australia, Canada, China, the European Union, Japan, Mexico, New Zealand, the Philippines, Russia, Singapore, South Korea, Taiwan, and the United States.^[9]

See also

- MON 810

References

- ↑ Staff (8 August 2005) concerning the placing on the market, in accordance with Directive 2001/18/EC of the European Parliament and of the Council, of a maize product (*Zea mays* L., line MON 863) genetically modified for resistance to corn rootworm (http://www.gmo-compass.org/pdf/regulation/maize/MON863_maize_decision_feed.pdf) Commission of the European Communities, Official Journal, Retrieved 17 November 2012
- ↑ Staff (13 January 2006) concerning the placing on the market, in accordance with Directive 2001/18/EC of the European Parliament and of the Council, of a maize product (*Zea mays* L., line MON 863) genetically modified for resistance to corn rootworm and in 2006 in food (http://www.gmo-compass.org/pdf/regulation/maize/MON863_maize_decision_food.pdf) Commission of the European Communities, Official Journal, Retrieved 17 November 2012
- ↑ Seralini bio on CRIIGEN (http://www.criigen.org/SiteEn/index.php?option=com_content&task=view&id=57&Itemid=105)
- ↑ Reilly, Michael (2010-01-23). "Is Genetically Modified Corn Toxic?" (<http://news.discovery.com/earth/is-genetically-modified-corn-toxic.html>). *Discovery News*. Retrieved 2010-07-21.
- ↑ ^{*a*} ^{*b*} "The MON863 case - a chronicle of systematic deception" (http://www.greenpeace.org/international/Global/international/planet-2/report/2007/3/mon863_chronicle_of_deception.pdf) (PDF). Greenpeace. Retrieved 2010-07-22. "MON863 is a genetically modified corn that expresses a Bt-toxin. This toxin is a modified version of the delta endotoxin

Cry3Bb1 which originates from the microorganism *Bacillus thuringiensis*. The genetic manipulation is aimed at protecting maize plants against a pest called corn rootworm (*Diabrotica* spp.). MON863 differs from other Bt-corns already placed on the market (MON810, BT11, Bt176), which produce a modified Cry1Ab toxin conferring resistance to a pest called European corn borer (*Ostrinia nubilalis*), in that it produces an artificial Cry3Bb1 toxin. In addition to the modified Cry3Bb1 toxin gene MON863 contains an antibiotic resistance marker gene."

6. ^a ^b Doull, J.; Gaylor, D.; Greim, H.A.; Lovell, D.P.; Lynch, B.; Munro, I.C. (2007). "Report of an Expert Panel on the reanalysis by of a 90-day study conducted by Monsanto in support of the safety of a genetically modified corn variety (MON 863)". *Food and Chemical Toxicology* **45** (11): 2073–85. doi:10.1016/j.fct.2007.08.033 (<http://dx.doi.org/10.1016%2Fj.fct.2007.08.033>). PMID 17900781 (<http://www.ncbi.nlm.nih.gov/pubmed/17900781>).
7. [^] Coghlan, Andy (2010-01-22). "Engineered maize toxicity claims roundly rebuffed" (<http://www.newscientist.com/article/mg20527444.000-engineered-maize-toxicity-claims-roundly-rebuffed.html>). *New Scientist*. Retrieved 2010-07-21.
8. [^] Lorch, Antje (2005-09-30). "EFSA's Opinion on MON863 hybrids" (http://www.ifrik.org/files-ifrik/0509_greenpeace_mon863_hybrids.pdf) (PDF). *ifrik*. Greenpeace. Retrieved 2010-07-22. "MON863 contains an GM antibiotic resistance gene (nptII) against kanamycin and neomycin."
9. [^] Staff, ISAAA. Last updated November 8, 2012 Event Name: MON863 (<http://www.isaaa.org/gmapprovaldatabase/event/default.asp?EventID=87&Event=MON863>) See Authorizations tab. Accessed August 29, 2013

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