

THERE ARE NO ZEROS

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Crops developed using biotechnology (so-called genetically modified or GM crops) are the focus of heated scientific and political discussions on an international and local scale. For example, on a global scale 141 countries are parties to the Cartagena Protocol on Biosafety (CPB), a supplementary agreement to the Convention on Biodiversity that aims to set the minimum standards for international movement of biotech crops (CPB, 2007). On a local scale, four local jurisdictions (counties) in California, USA, have passed bans on growing biotech crops while 12 others have passed resolutions in favor of growing biotech crops (Lemaux and Alonso, 2007). In the EU, though lacking legal sanction, more than 230 local regions claim to restrict the production of biotech crops (GENET, 2006). Although 25 countries have allowed commercial production of biotech crops (ISAAA, 2006), some groups question whether different agricultural production systems (e.g., biotech, conventional, organic) can coexist and deliver products with the high degree of purity demanded by various markets (Mellon and Rissler, 2004). Such concerns persist despite well-established protocols for the successful co-existence and production of diverse agricultural products on a commercial scale (ANR, 2007; CropLife, 2006; Fernandez and Polansky, 2006; SCIMAC, 2006) and the simultaneous expansion of both biotech and organic crop production. Disagreements have been elevated now to the Federal courts, with alfalfa being the first case. The impact of these disagreements is substantial and has already had long-term effects. A discussion of these topics and perhaps solutions will be discussed.

References

- ANR. 2007. Coexistence Fact Sheets. Agricultural Biotechnology in California (ABC) Series. [Online]. Available by University of California Agriculture and Natural Resources [http://sbc.ucdavis.edu/Publications/Agricultural_Biotechnology_in_California_\(ABC\)_Series.htm](http://sbc.ucdavis.edu/Publications/Agricultural_Biotechnology_in_California_(ABC)_Series.htm) (verified June).
- CPB. 2007. Cartagena Protocol on Biodiversity [Online] <http://www.cbd.int> (verified June 2007).
- CropLife. 2006. Cultivating Coexistence: A Best Management Practices Guide, pp. 4. http://www.croplife.ca/english/pdf/stewardship/CLCCoexistenceBMP_EN.pdf.
- Fernandez, M., and A. Polansky. 2006. Peaceful coexistence summary of a multi-stakeholder workshop among growers of: genetically engineered, conventional, and organic crops, *In* P. I. o. F. a. Biotechnology, (ed.). Pew Initiative on Food and Biotechnology, Boulder, CO. <http://pewagbiotech.org/events/0301/WorkshopReport.pdf>.
- GENET. 2006. European conference on GMO-free regions, biodiversity and rural development [Online] <http://www.gmo-free-regions.org/>.
- ISAAA. 2006. International Service for the Acquisition of Agri-biotech Applications. Global Status of Commercialized Biotech/GM Crops: [Online] <http://www.isaaa.org/>.
- Lemaux, P.G., and B. Alonso. 2007. University of California Division of Natural Resources Workgroup [Online] <http://www.ucbiotech.org>.

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Mellon, M., and J. Rissler. 2004. Gone to Seed. Transgenic contaminants in the traditional seed supply. Union of Concerned Scientists.

http://www.ucsusa.org/assets/documents/food_and_environment/seedreport_fullreport.pdf.

SCIMAC. 2006. Supply chain initiative on modified agricultural crops. GM crop co-existence in perspective., pp. 4.

http://www.scimac.org.uk/files/GM_crop_%20coexistence_perspective.pdf.