

Biotech In focus

January 2015



Cooperative Extension Service
Biotechnology Outreach Program
College of Tropical Agriculture and Human Resources
University of Hawai'i at Manoa

Coexistence: Are Different Farming Practices Compatible?

Steve Marsh and Mick Baxter were once friendly neighbors in Kojonup, a small town in Western Australia. But in 2011, Marsh sued Baxter after more than 70% of Marsh's land lost its organic certification. In 2010, Baxter grew Roundup Ready® canola, and the wind blew drying canola onto the farm where Marsh raises organic cereals and sheep, not canola.

Cereal grasses and canola aren't close relatives, so engineered genes from Baxter's canola couldn't breed into Marsh's grain. Stray canola plants did not appear in Marsh's harvested crops. Eight canola plants sprouted on Marsh's farm and were weeded out. But because Baxter's organic certifier, the National Association for Sustainable Agriculture, Australia (NASAA), prohibits the presence of any GM material, the land where canola had blown was decertified for three years.



In court, Marsh sought compensation (\$A85,000) for the diminished value of the crops that he couldn't sell as organic. He also asked that Baxter be permanently banned from planting genetically modified (GM) canola in the future. Baxter received no financial assistance from Monsanto and Monsanto declared it would take no legal action against Marsh. Marsh was represented by a prominent lawyer working for a large multi-national law firm while Baxter was represented by a smaller Western Australian law firm. In May 2014, the Western Australian Supreme Court ruled in Baxter's favor, concluding that Baxter had not harmed Marsh and that Marsh's losses had been caused by NASAA and its zero-tolerance policy. Marsh has appealed the ruling that will be heard in March 2015. Marsh as the plaintiff in this case is liable for all costs estimated at \$A804,000, that includes taxes and Baxter's solicitor's fees.

The case highlights how difficult it is to design a regulatory framework that accommodates all forms of farming, and where coexistence and collaboration were suppressed. These difficulties increase when potential conflicts are framed in absolute terms and unreasonable interpretations of the standards are applied. This case should not have gone to court.



Ania Wieczorek, PhD

Associate Professor
Department of Tropical Plant
and Soil Sciences
College of Tropical Agriculture
and Human Resources
University of Hawai'i at Manoa
Honolulu, HI 96822
ania@hawaii.edu

Thank you to Carol Oshiro for
web design, Jessica Radovich for
graphics and Kathleen Vickers
for text editing.

CREATING EFFECTIVE POLICIES

In living systems like farms, it is effectively impossible to prevent low levels of movement of pollen, seeds, insects or pathogen. For example, by experimenting we can determine for different crops how much distance is needed to make cross pollination very unlikely, but unusual weather can change those odds. Human errors in processing and supply-chain management can be made less common, but won't be eliminated entirely. If Marsh had won this case, a potential outcome could have been that the "diminished value", "common law negligence" and "private nuisance" claims could apply to cases such as one grower's failure to control insects in his field and thereby reduces the value of his neighbor's field because of insect damage.

Australia is unusual in its policies regarding GM crop materials in organic crops. In the European Union, for example, the threshold amount of unavoidable and accidental GM content allowed in organic products is the same as for all non-GM-labeled products, 0.9%. The government of Western Australia has asked the Organic Industry Standards and Certification Council (OISCC) to adopt a 0.9% threshold for GM content. OISCC rejected this request in December 2014. Since then, one of Australia's six organic certifiers and the Western Australian Department of Agriculture and Food has asked OISCC to consider allowing minimal adventitious GM exposure of 0.9% the same as the EU, so long as the GM material isn't detectable in the final product. This request has been rejected by OISCC.

US Farming Practices

The United States does not have a defined threshold for GM content in organic crops. Instead, the U.S. Department of Agriculture's National Organic Program bars GM crops as an excluded farming process. If an organic producer follows an organic system plan that has been approved by a USDA-accredited certifying agency, the presence of a detectable amount of GM material in the resulting crops does not violate the organic program's rules. The same grower can produce both organic and GM crops on the same farm, so long as approved practices are in place to prevent cross-pollination or mixing.



Zero-Tolerance



Australia's organic certifiers argue that their zero-tolerance policy gives organic food shoppers what they want: 100% non-GM food. Likewise, even if their organic certification isn't jeopardized by the detection of GM DNA in their products, some organic growers cannot in good conscience sell those products as organic. Supporters of organic agriculture have questioned why organic farmers should be required to bear the costs of keeping their produce free of GM content.

Right to Farm

This begs the question, as the organic farmer has agreed to follow the organic standards and it is their responsibilities and not their neighbors to meet those organic standards. GM and conventional producers have noted that their crops are legal and that restricting where those crops can be grown would infringe on their right to farm.



Each of the farming practices we've discussed in this series—non-GM conventional, organic, genetic engineering, and integrated pest management—offers tangible benefits, such as higher yields per acre, or greater soil biodiversity, or fewer pesticide applications. Using these methods to their fullest potential will require communication and cooperation among growers with different approaches and philosophies.