



Biotech

In focus



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What is the Future of GM Crops in Hawaii?

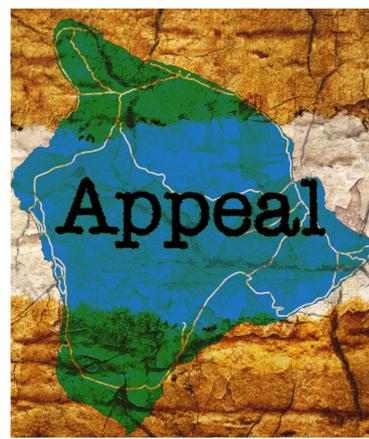
During the past three months, *Biotechnology in Focus* has delved into legislative and legal actions that have placed our state at the forefront of nationwide efforts to locally regulate or ban genetically modified (GM) crops. Here, we summarize current court cases and consider some potential consequences.

A 2011 lawsuit filed by residents in the Kauai town of Waimea against Pioneer Hi-Bred International Inc. (DuPont) was recently heard at trial. In May 2015, a federal jury in Honolulu awarded 15 of the residents over \$500,000 in property damages after finding that between December 2009 and December 2011, Pioneer did not follow generally accepted agricultural practices to limit dust. At this time no appeals have been filed.



Two appeals are currently before the United States Court of Appeals for the Ninth Circuit, challenging U.S. District Court Judge Barry M. Kurren's August 2014 decision to overturn Kauai County's Ordinance 960. Ordinance 960 regulates pesticide and GM crop use on Kauai. Judge Kurren ruled that state law preempted the county ordinance. Lawyers from Earthjustice (San Francisco – Local Office) and Center for Food Safety (Washington DC – Local representative) are arguing the first appeal on behalf of Surfrider Foundation (San Clemente CA- Local Chapters, Center for Food Safety, Pesticide Action Network North America (Oakland, CA), and Ka Makani Hoopono. The second appeal is being pursued by Kauai County. The suit to block Ordinance 960 was brought by the four seed companies that operate on Kauai—Syngenta Seeds Inc., Pioneer Hi-Bred International Inc., Agrigenetics Inc. (Dow Chemical Co.), and BASF Plant Science LP.

Judge Kurren's decision overturning Hawaii County's Ordinance 13-121 in November 2014 was likewise based on preemption by state law. That decision, too, has been appealed to the Ninth Circuit Court. Plaintiffs in the lawsuit opposing the county's ban on new GM crops included local industry groups, farmers, ranchers, and the Biotechnology Industry Organization, while Earthjustice, Center for Food Safety, and several farmers joined Hawaii County in supporting the measure. The large seed companies do not operate in Hawaii County, and are not impacted by the regulation. In February 2015, the Hawaii County Council voted to allow Earthjustice and Center for Food Safety to litigate the county's appeal before the Ninth Circuit Court.



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Prior to Judge Kurren's invalidation of Hawaii's Ordinance 13-121 and in response to a suit by two papaya farmers, State Circuit Court Judge Greg Nakamura ruled in July 2014 that Big Island farmers who grow GM crops under the limited ban could be required to register those crops with Hawaii County. However, the farmers' names and locations must be kept confidential.



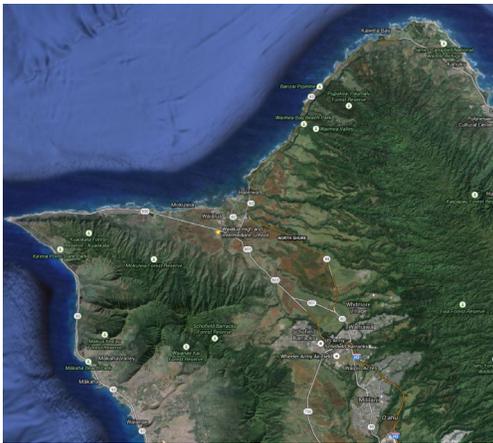
Court Reassignments

A lawsuit challenging Maui County's GM crop ban, legislation passed by voter initiative, has been filed by the two seed companies active in Maui County—Monsanto and Dow Agrosciences—as well as farming and business associations. Maui County is taking no position on the lawsuit. Instead, the SHAKA Movement (Sustainable Hawaiian Agriculture for the Keiki and the Aina) will defend the ban in court. After SHAKA opposed Judge Kurren's participation in the lawsuit, it was reassigned to U.S. District Court Judge Susan Oki Mollway. An injunction against the GM crop ban, extended until June 2015 by Judge Mollway, has been appealed by SHAKA to the Ninth Circuit Court.

Shortly after voters passed the Maui County GM crop ban, the citizens named on the voter initiative and SHAKA filed suit in Hawaii State Court against Maui County, Monsanto, and Dow AgroSciences, seeking a broader role in the prompt implementation of the new law. The case was subsequently removed to federal district court and has not been remanded back to state court by Judge Mollway.



Will Land Lie Fallow?



What will happen if efforts to curb production of GM crops in Hawaii succeed? Already, more than 100,000 acres of Hawaii farmland lie fallow. In 2011, 1.9 million Hawaii acres were zoned for agriculture, and farming and ranching operations covered 1.1 million acres total.

Crops Grown Now

A small fraction of that land, 85,000 acres, grew crop plants, including between 5,000 and 6,000 acres in seed crops and 2,000 acres in papaya. Roughly half of those seeds and more than three-quarters of the papaya are GM. Hawaii-produced parent seed (primarily corn) are worth more than the next seven crops combined in terms of product sold.



What Happens Next?



If the seed companies relocated, would the land they now use grow food for local consumption? Or would owners find a better return on investment by developing their land to uses other than agriculture instead? Would papaya be farmed on the Big Island, home to more than 90 percent of the state's papaya acreage, if most of the crop weren't genetically engineered to resist the ringspot virus?

A broad community impact would be the loss of good paying agricultural jobs with full benefits on Kauai, Maui and Molokai. In addition, papaya farmer families would lose a major source of their income.

In upcoming bulletins, we plan to feature the writing of students studying the social and environmental implications of agricultural biotechnology at the University of Hawaii at Manoa.

