Dear Mr. Ilagan, October 10, 2013

As you might imagine, quite a few of us in Puna, Hawai’i—which district you represent—are showing disappointment in you for not supporting [Bill 113](http://records.co.hawaii.hi.us/Weblink8/0/doc/797966/Page1.aspx), which would prohibit further entrance of GMO crops to the island. In good spirit, we wonder: why are you not supporting Bill 113? If it is for GMO Papaya growers, they are largely exempt from the bill and the small registration fee they are subject to is not justification for not passing the crucial important heart of the bill for keeping out further intrusion of GMO to the island.

If you need a synopsis of this letter, view all the hyperlinks embedded.

I understand it is not your job, per se, to be highly informed about GMOs. As a physician, and one specializing in digestive and immune health, it is, however, one of my jobs. It took me many months of diligent research to understand the GMO industry, and a couple years to deeply understand its science and collateral implications.

Therefore, as an educated GMO “expert” of sorts, I invite you to sit down with me, and anyone else you wish to invite, to discuss this issue with aloha and genuine good faith to learn from one another. I make myself available to you to discuss any questions or concerns you have, and for what I, and others in Puna who oppose GMOs, can learn from you. Here is an excellent [video by Dr. Thieery Vrain,](http://www.youtube.com/watch?v=iXLCJLrZv8w) who used to be a GMO lab scientist and was so appalled by the truth, he set out to tell the truth about it.

I have researched the science and social issue of GMO for years. I have written dozens of articles on GMO. I have debated extensively with pro-GMO scientists. I have a Master’s in Science degree and a proclivity for critical, reasonable thinking. I am also outraged and sad about GMOs devastating track record around the world. It is altogether reasonable to be emotional as well as intelligent about the GMO issue, contrary to what one pro-GMO testifier claimed: that anti-GMO sentiment is just emotional. This is a red herring argument, mischaracterizing those who are rightfully disturbed about GMO damage. In fact, the more intelligently and reasonably one pursues earnest inquiry into the GMO industry, the more upset one becomes. Personally I have reviewed the actual studies many cite in their arguments for and against the industry.

For your initial consideration, I provide for you here several crucial GMO topics and links so you can review the good science behind the serious threats posed by GMO in context of the even greater issue of climate change (please watch this [interview with expert scientist Dr. Michael Mann](http://www.youtube.com/watch?v=XygKbidDD0I)), which is fueled by large, unsustainable industries such GMO farming and distribution of GMO products—all heavy on petroleum-based products and fossil fuel burning. Please review the links provided in this letter; they are all scientifically reputable sources. I think they cut through any political posturing and paint a real and dire situation for which we need to stop futzing around and get serious. If you have anything, any science or statistics for me to read on the subject of GMO which support your view, please do share so I can see where you are coming from and so we can discuss it.

With our world on a fast-track path to climate collapse, in truth we should not even be having the debate over whether to allow GMO farming on Hawai'i, or fracking, or geothermal, or any other unsustainable practice. The times of economic advantage at the expense of environmental degradation are over; they must be over for our world to pull itself out of the deep mire it is in. We should not be burning more fossil fuels driving to Hilo and to Kona to testify on issues that we need to put quickly behind us so that we can focus on the real issues at hand: reducing our toxification of the environment with chemicals of all kinds, and in particular, the addition of more CO2 into the atmosphere. Unless we act fast to address the bigger picture of climate change, we are being foolhardy. Many [leading scientists](link) say we have a couple years only to change our patterns to offset runaway climate change (the point after which we cannot reverse environmental collapse); others say it might already be too late.

Indeed, every economic decision and policy we make at any level of government and personal choice should be made in light of climate change—evaluated as part of the solution or as part of the problem. This is because climate change is the single largest and most critical issue to ever face humanity. According to some, if we do not severely curtail our CO2 emissions by 2015, life as we know it will perish in the next 15 to 30 or so years. This not a joke or conspiracy theory. It is proposed by leading scientists.

I have testified numerous times previously and cited examples from my medical practice. Placing patients on strict non-GMO diets has resulted in cessation of chronic and insidious medical conditions. My own view, therefore, and that of growing millions in Hawaii and around the world, is that GMO food-stuffs and the glyphosate-based RoundUp and other pesticides used on GMO crops, are unsafe. The American Academy of Environmental Medicine “AAEM”) [advises against GMO](http://www.aaemonline.org/gmopressrelease.html) consumption, saying, "GM foods pose a serious health risk" and calls for a moratorium on GM foods. Citing several animal studies, the AAEM concludes "there is more than a casual association between GM foods and adverse health effects" and that "GM foods pose a serious health risk in the areas of toxicology, allergy and immune function, reproductive health, and metabolic, physiologic and genetic health." [Kaiser Permanente advises against GMO foods](http://www.examiner.com/article/kaiser-permanente-advises-members-against-gmos). It states:

*In a recent Fall 2012 newsletter edition, Kaiser suggested membership limit exposure to genetically modified organisms.*

*“GMOs have been added to our food supply since 1994, but most people don’t know it because the United States does not require labeling of GMOs,” according to the newsletter.*

*Sounding more like an organic health proponent, the corporate giant continued, “Despite what the biotech industry might say, there is little research on the long-term effects of GMOs on human health.”*

GMOs have indeed been proven toxic, per [the peer-reviewed literature](http://www.greenmedinfo.com/sites/default/files/free_downloads/gpub_78151_toxic_ingredient_glyphosate_formulations.pdf)—not unlike DDT, PCBs, aspartame, and dioxins (all manufactured by Monsanto and some by other biotech companies). Future pesticide use on GMO crops will be increasing, and is already increasing, not only in quantity, but in type, as the toxic treadmill of continued stacked trait GMO varieties must be engineered to deal with the constant resistance formed by [superweeds and](http://www.panna.org/blog/monsantos-superweeds-superbugs) [superbugs.](http://www.panna.org/blog/monsantos-superweeds-superbugs) These weeds and bugs mutate according to the same principles as resistant bacterial strains do against antibiotics. All are serious health threats, as evidenced, for example, by [MRSA](http://www.medicalnewstoday.com/articles/10634.php) and penicillin-resistant bacteria.

One of the assertions made by pro-GMO testifiers at the hearing yesterday (10/ 15/13) is that RoundUp replaces many more dangerous pesticides. This is a highly suspect assertion because it seems each month a new discovery is made about RoundUp. Here is a link (scroll down to see studies listed) to the [clinical research on RoundUp](http://www.greenmedinfo.com/toxic-ingredient/roundup-herbicide); you can just read the titles of the studies to get an idea of the danger. Another crucial point is that RoundUp is actually, ironically, leading to the spraying of more toxic pesticides it was supposed to replace. It is discussed in [this article](http://www.reuters.com/article/2012/10/02/us-usa-study-pesticides-idUSBRE89100X20121002), which I quote here:

*"In order to deal with rapidly spreading resistant weeds, farmers are being forced to expand use of older, higher-risk herbicides. To stop corn and cotton insects from developing resistance to Bt, farmers planting Bt crops are being asked to spray the insecticides that Bt-corn and cotton were designed to displace."*

The existing evidence, as exemplified by the [Cytochrome P-450 issue](http://www.mdpi.com/1099-4300/15/4/1416), in addition to the certain near-future more toxic and uncertain pesticide applications (no testing has been done for multiple pesticides such as RoundUp and 2,4-D on one plant type, such as corn, per my research) are linked to severe illness, the killing of bees and monarch butterflies, small farmer suicides on a massive scale in India, poisoning of waterways, residential air, and generalized degradation of the natural environment. We cannot risk such injury to the 'aina (land) here on Hawaii Island, the last bastion for a life largely free of the menace and chaos currently being experienced on the other islands by GMO industry, [most notably on Kauai](http://www.reuters.com/article/2013/10/16/us-hawaii-kauai-gmcrops-idUSBRE99F0MD20131016), which several testifies mentioned.

The organic papaya market is expanding and in great demand, while that of the GMO Papaya industry is shrinking, especially as a massive movement around the world awakens to the grim realities of GMOs. Given that now you have gone on record as supporting the GMO industry in Hawaii, I encourage you to learn about organic papaya farming and educate farmers on future transitions to organic. Local sustainable agriculture is the way of the future; as [this article in *The Atlantic*](http://www.theatlantic.com/health/archive/2011/12/organic-can-feed-the-world/249348/) spells out, if we are lucky enough to have one as a human species.

Even though Monsanto and other companies are spending millions to maintain their present control and influence in the marketplace as well as in government, the rest of the world is refusing to import US GMO products, as are more and more local communities in the US. Mexico just announced a [ban on GMO corn](http://ecowatch.com/living/mexico-bans-gmo-corn-effective-immediately/), with the presiding judge citing the Precautionary Principle, on which our Bill 113 is predicated. From the article:

*“According to*[*Environmental Food and Justice*](http://ejfood.blogspot.com/2013/10/geo-watch-mexico-bans-transgenic-corn.html)*, Judge Jaime Eduardo Verdugo J. of the Twelfth Federal District Court for Civil Matters of Mexico City wrote that the genetically engineered corn posed ”the risk of imminent harm to the environment.”*

This ban was bolstered in part due to [a petition I created last year that has garnered over 46,000 signatures](https://secure.avaaz.org/en/petition/Stop_Monsanto_in_Mexico/?fSLKJbb&pv=1), was delivered in-person by affiliates in Mexico, and which helped to postpone massive plantings of GMO corn on Mexico soil. I created it single-handedly, wrote about it, publicized it, had articles published about it, and it grew almost effortlessly. Imagine the attention and renown we could garner on Hawai’i Island by becoming a non-GMO paradise! This would far outweigh any pro-GMO presence and incentive at the risk of our health.

Hawai'i island could well be in the forefront of a transition that would be not only economically viable, but also create a more robust and sustainable environment. And as a bonus, confer the honor of doing what is right. With [millions all over the world waking up](http://www.organicconsumers.org/monsanto/) to the insanity of GMOs, places where GMOs are banned are becoming a haven for people who want to live without being poisoned. Hawai’i Island stands to gain economically, morally, and most importantly, healthfully, from being a GMO-free zone. Becoming another GMO wasteland does not confer such benefits.

Regardless, no amount financial benefit justifies knowingly poisoning the populace and environment. GMO farmers can find another way and we can help them. I will personally donate my time and money to doing so, and I bet I can gather a coalition of organic farmers willing to educate and instruct and help conventional and GMO farmers.

After researching the points of this letter, I hope you have a better understanding of the gravity of the GMO issue and the passing of this bill to bring Hawai'i island one step closer to becoming a shining example of intelligence and moral and environmental sustainability, not just another part of the problem outlined in this letter. I encourage you to take heartfelt concern in weighing the short-term economic viability of our community versus the longer-term welfare for all. Nowadays we all have to be part of the solution to reduce carbon emissions and fossil fuel burning, which [GMO farming and commerce exacerbates as compared to local, organic farming.](http://www.foei.org/en/media/archive/2010/gm-crops-failing-to-tackle-climate-change)

In one sense, to discuss the issue of GMO in this context is almost absurd, given that [the newly-released IPCC Report](http://www.realclimate.org/index.php/archives/2013/09/the-new-ipcc-climate-report/comment-page-3/) (International Panel on Climate Control) clearly says that our entire planet, including the survival of the human species, is on a fast track to [climate change collapse](http://www.newscientist.com/article/dn24261-world-wont-cool-without-geoengineering-warns-report.html#.Uk8zD-BOj0C). GMO farming—with its heavy petroleum-based, non-local import-export model, and chemical reliance—make it a part of the problem, not the solution. GMO farming makes no sense in the small or the bigger picture. I encourage you to act and to vote wisely and to continue to educate yourself on the seriousness of the issues at hand, to represent the needs and wishes of the *majority of the people* you represent, not only with regard GMO policy, but with climate change generally.

In sum, we desperately need a local-based, organic food system that does not significantly contribute to [global warming and climate change.](http://www.davidsuzuki.org/blogs/science-matters/2013/10/ipcc-report-shows-action-on-climate-change-is-critical/?mkt_tok=3RkMMJWWfF9wsRoku67OZKXonjHpfsX56uwuWq62lMI%2F0ER3fOvrPUfGjI4DTctlI%2BSLDwEYGJlv6SgFS7jNMbZkz7gOXRE%3D) Small, organic farms have actually been shown to answer our most pressing needs, such as climate change, *and* provide increased economic return. Here is a description of [one study](http://news.yahoo.com/organic-farming-key-solving-hunger-climate-change-161854544.html) of many, and another is [here](http://www.cornucopia.org/2011/11/research-proves-equal-yields-higher-profits-from-organic-farming/). This is our best bet for future security, not the myth and damages created by the GMO industry and their pesticides. Human beings can actually create more biomass and [more carbon-sequestering using organic and permaculture designs](http://www.strauscom.com/rodale-whitepaper/). This is our hope for real security and tempering the already occurring chaos from global warming.

Thank you for your attention and continued efforts to act for the long-term of our health. Please check out the links provided throughout this letter. I am curious what your thoughts are after studying this information. I look forward to hearing back from you and for a time when we can sit down and discuss this matter in earnest and with genuine aloha, and learn more from one another.

Sincerely,

Jack Adam Weber, L.Ac., Dipl. C.H.