

LATE

SB 590

Testimony

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LATE

February 11, 2013

**TESTIMONY OF GARY L. HOOSER
COUNCILMEMBER, KAUAI COUNTY COUNCIL
ON
S.B. NO. 590, RELATING TO AGRICULTURE
Committee on Agriculture
Tuesday, February 12, 2013
2:55 p.m.
Conference Room 229**

Aloha Chair Nishihara, Vice Chair Kouchi and Committee Members:

Thank you for this opportunity to submit testimony in strong opposition of S.B. No. 590, Relating to Agriculture. My testimony is submitted in my capacity as an individual member of the Kauai County Council.

S.B. No. 590 is intended to add language to existing Hawaii Revised Statutes (HRS) that states in part, "No law shall be enacted that abridges the right of farmers and ranchers to employ generally accepted agriculture technology..."

It is my understanding that this language would virtually prohibit County government from exercising any regulatory authority on any farm activity whatsoever as "generally accepted agricultural technology" though not defined, could be extended to include just about everything. This phrase could be construed to include everything from tractors and farm equipment, to pesticide and herbicide spraying, to the introduction and use of genetically modified organisms, to dust control and grading methodologies, to the approval of building permits and even to soil conservation plans.

As Chair of the Economic Development (Sustainability / Agriculture / Food / Energy) and Intergovernmental Relations Committee, I share the concerns of many small farmers and residents with regards to the extensive and intensive industrial use of agricultural lands for non-food production. Currently on Kauai, there are multiple law suits that have been filed by over two hundred (200) residents alleging negative health impacts resulting from improper use of what some might consider "generally accepted agriculture technology." Last year over fifty thousand (50,000) sea urchins mysteriously died in an area *makai* of these industrial farms that employ "generally accepted agricultural practices." Our coral reefs are under stress

Committee on Agriculture
February 11, 2013
Re: S.B. No. 590
Page 2

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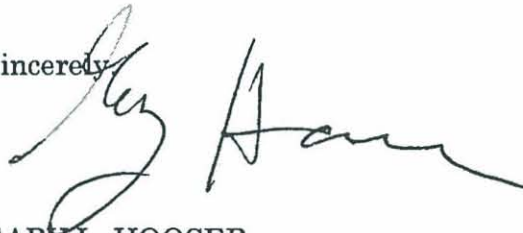
and University Scientists agree that "generally accepted agriculture technology" as it is employed by the over twelve thousand (12,000) acres of industrial farms is contributing to the serious degradation of near shore waters and adjacent streams.

Passage of S.B. No. 590 will take away the rights of Counties and local communities to exercise any oversight over these activities and as such, should not be passed into law.

Taking away the power of local residents to impact their own local community will be seen for what it is, a protectionist measure targeted at ensuring that large scale industrial agriculture can continue operating business as usual without any local oversight whatsoever.

For the reasons stated above, I strongly urge the members of this Committee not to support this measure. Again, thank you for this opportunity to submit testimony in strong opposition of S.B. No. 590.

Sincerely,



GARY L. HOOSER
Councilmember, Kaua'i County Council

AB:aa

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Cc: jimmygomes@hawaii.rr.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Monday, February 11, 2013 2:44:22 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jimmy Gomes		Support	No

Comments:

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Date: Monday, February 11, 2013 2:43:23 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Peter King	Individual	Oppose	No

Comments: This bill is simply protection for companies like Monsanto.

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
JW Nalda	Individual	Oppose	No

Comments:

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Cc: itrujill@hawaii.edu
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 2:24:07 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
james trujillo	Individual	Oppose	No

Comments: aloha members of the committee, mahalo for the opportunity to testify in opposition to sb590 as drafted. my primary concern with this bill is that it may undermine local authority or standards for agricultural activities. we must support agriculture in hawaii and sb 590 does have intent to do so but to allow industrial agriculture near schools, housing, hospitals with little or no buffer is asking for trouble with industrial accidents waiting to happen. we have had instances in the past where the proximity of pesticide application to school children has had harmful impacts. if farming practices are incompatible with neighboring developments, local policy based on local input should determine it's appropriateness in that location. we should strike the clause that renders local decision making in effective or defer the bill until further discussion is considered. mahalo for considering this testimony for sb590 i support agriculture for hawaii but do not want the industry to determine what is pono for hawaii. the land is cheif; the people are servants. let us serve with aloha in our hearts and minds. ua mau ka ea o ka aina i ka pono with respect and aloha, james g trujillo

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Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 2:22:42 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Halina M Zaleski	Individual	Support	No

Comments: It is only logical that the right to farm include the right to use generally accepted agricultural practices.

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HAWAII ORGANIC FARMING ASSOCIATION

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76-789 'Io Place, Kailua-Kona, HI 96740
hofa@hawaiiorganic.org www.hawaiiorganic.org
Toll Free: 1-877-ORG-ISLE (674-4753)

LATE

Monday, February 11, 2013

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- Dr. Hector Valenzuela
- Dr. Melissa Yee

Re: S.B. 590 Relating to Agriculture – “Right to Farm”

Committee Chair Nishihara, Vice Chair Kouchi, Committee Members,

HOFA (Hawaii Organic Farming Association) opposes the passage of S.B. 590.

HOFA, established in 1994 is an Association of Hawaii organic farmers, distributors, retailers, other organic industry members, and organic consumers. HOFA’s vision is to create a sustainable future for Hawaii and our mission is to further organic and sustainable agriculture, land care, and lifestyles in Hawaii, thus giving meaning and life to our state motto: *Ua mau ke ea o ka aina I ka pono* “The Life of the Land is Perpetuated in Righteousness”.

HOFA strongly advocates that the growing of organic foods is best for Hawaii, its’ land, the environment, and for the people, as it excludes the use of genetic engineering, irradiation, the use of toxic sludge, and the use of harmful chemical fertilizers, pesticides, herbicides, etc. We believe that farming in this way helps to provide food self-sufficiency and food security for the people of Hawaii in a way that is *pono* and in everybody’s best interests.

HOFA opposes passage of S.B. 590 for the following reasons:

1. The bill restricts the ability of local governments to pass laws that affect “agriculture technology”. Agriculture technology can refer to a host of potentially harmful farm practices, including the use of pesticides, herbicides, insecticides, and other toxic chemicals, and genetic engineering. These, and other, “technologies” can have significant impacts on local populations, their environment and their quality of life, and those local populations, and their local governments, are in the best position to determine what is in their best interests.
2. Each County of Hawaii has its own unique situation and circumstances; decisions concerning what are allowed agricultural practices and what constitutes a nuisance, etc. should be determined by the local inhabitants and their local governments.

Please vote against S.B. 590.

Respectfully submitted,

Mark Fergusson
President

Hawaii Organic Farming Association
Our Vision is to:
Create a sustainable future for Hawaii.
Our mission is to:

Further organic and sustainable agriculture, land care, and lifestyles in Hawaii, thus giving meaning and life to our state motto:
Ua mau ke ea o ka aina I ka pono “The Life of the Land is Perpetuated in Righteousness”.

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Cc: launahele@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 3:03:47 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Benton Pang	Individual	Oppose	No

Comments: Communities surrounding farms need protection too.

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Cc: bmurphy420@mail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 3:19:18 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brian murphy	Individual	Oppose	No

Comments: Its We The People! Not We the Corporation! GMO got to Go! Be Pono B

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Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 3:41:26 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
charles ice	Individual	Oppose	No

Comments: All agriculture is not the same. It is foolish to make write blanket statutes that impact the various sectors of agriculture so differently. It's an invitation to loopholing and massive abuse. There is a huge difference between riparian and kula agriculture; between organic food agriculture, commercial food agriculture, floriculture, biofuels, aquaculture, and export plantations. The scope and application of Bill SB590 is way too broad, the language is silly on its face, as if Hawaii people were ignorant about agriculture. Reading through this bill, one wonders "what the heck is the subject?" and "who is hiding behind these innocuous-sounding phrases, and what are they about to pounce on?" Let's be a little more thoughtful, prudent, focused, and respectful of citizen intelligence.

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Cc: lisa@windwardskies.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 3:58:40 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Hoang	Individual	Oppose	No

Comments: SB590 puts undue burden on small, local, and organic farmers. Our family supports local and organic farmers, and SB590 will make it more difficult for those farmers to keep growing healthy food and promotes abuses by large commercial farms who use pesticides and GMO plants that can cross-contaminate. Pesticides, herbicides, and insecticides and their application can harm both other farmers and residents living nearby, as well as contaminate groundwater. Removing these from the nuisance clause takes away vital protection from organic farmers and citizens.

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Malia Damon	Individual	Oppose	No

Comments:

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Cc: lydi_morgan@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 4:08:38 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Lydi Morgan Bernal	Individual	Oppose	No

Comments: Despite its seemingly pro-farmer facade, this bill is an insult and a threat to Hawaii's food sovereignty and safety. As a state we must retain our rights to protect our lands, waters, and people from farming practices that are clearly not pono. PLEASE SAY NO TO SB590. Mahalo!

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Cc: hunakai5@aol.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Monday, February 11, 2013 4:17:44 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Kelly Perry	Individual	Oppose	No

Comments:

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Cc: donylax@maui.net
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 4:24:22 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Don V. Lax	Individual	Comments Only	No

Comments: This is a Bad and Dangerous bill. Please protect the health and rights of Hawaiian citizens, and Do Not Pass SB590!

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COUNTY COUNCIL
COUNTY OF MAUI
200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.mauicounty.gov/council

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February 11, 2013

TO: Honorable Clarence K. Nishihara, Chair
Senate Committee on Agriculture

FROM: Gladys C. Baisa *GB*
Council Chair

SUBJECT: **HEARING OF FEBRUARY 12, 2013; TESTIMONY IN SUPPORT OF SB 590,
RELATING TO AGRICULTURE**

Thank you for the opportunity to testify in support of this important measure. The purpose of this measure is to clarify the State's policy to promote and foster an atmosphere of acceptance for agricultural practice and guarantees the rights of farmers and ranchers to engage in farming and ranching practices.

The Maui County Council has not had the opportunity to take a formal position on this measure. Therefore, I am providing this testimony in my capacity as an individual member of the Maui County Council.

I support this measure for the following reasons:

1. The agricultural industry is one of the State's most important economic sectors. The Hawai'i State Constitution mandates that "The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands."
2. Hawaii's agricultural industry has made great improvements over the years but decisions must be made to support the industry that provides the basis for sustainability and self-sufficiency. This measure will help establish a state policy to promote commercial farm operations as a vital economic activity along with providing a proper balance among the varied and sometimes conflicting interests of all lawful activities in the State.
3. This measure will provide assurance to farmers and ranchers that the State of Hawai'i understands what it takes to conduct an agricultural operation in the State and will stand by them to farm and ranch in manners that is generally recognized as legitimate farming practices across the country.

For the foregoing reasons, I support this measure.

GCB:amm

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: kalikoamona@hawaii.rr.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 4:48:02 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Kaliko Amona	Individual	Oppose	No

Comments: I oppose this bill. It is too broad, does not define what "generally acceptable practices" are, and does not consider whether these practices are good for our communities, economy, or health. I am particularly concerned with this line: "No law shall be enacted that abridges the right of farmers and ranchers to employ generally accepted agricultural technology, livestock production, and ranching practices." Why would you want to prevent yourselves (and future legislators) from enacting laws in the future that may very well contribute to the health of our people, land, water, and economy??? Please do not do this. This bill is a threat to food sovereignty and food safety. Please say NO to this bill.

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Date: Monday, February 11, 2013 4:52:55 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
James McCay	Individual	Oppose	No

Comments: Aloha, This is a well intended but I believe terrible bill that opens to the door to only increasing chemical use on Hawai'ian Aina. Farming practices all over the world - especially here - does not NEED chemicals! We need more organic fertilizers and composting systems created NOW not more chemicals, additives and poisons. So while this bill SEEMS like a good idea, it opens up potentially critical issues for our collective future: "Farming operation" includes but shall not be limited to: Agricultural-based commercial operations as described in section [§]205-2(d) (15) [-+]; ... Ground and aerial seeding and spraying; The application of chemical fertilizers, conditioners, insecticides, pesticides, and herbicides; and... NOTHING about ORGANIC MATTER..!!! Please consult the state motto and oppose this bill until all chemical and commercial interests are removed. Much Aloha, James McCay 2957 Kalakaua Ave, Honolulu HI 96815

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Submitted on: 2/11/2013

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Submitted By	Organization	Testifier Position	Present at Hearing
Herbert M "Tim" Richards III DVM	Kahua Ranch Ltd	Support	No

Comments:

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Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 5:00:00 PM

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Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Elizabeth Reeves	Individual	Oppose	No

Comments: This is just wrong, please don't pass this bill.

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Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Danae Bloise	Individual	Oppose	No

Comments:

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Cc: watsonblake8@gmail.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Monday, February 11, 2013 5:49:07 PM

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Submitted on: 2/11/2013

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Submitted By	Organization	Testifier Position	Present at Hearing
Blake Watson	Individual	Oppose	No

Comments:

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Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 6:00:28 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
K. Shishido	Individual	Oppose	No

Comments: I am a strong proponent of local farms. However I oppose the language of this bill which might normalize and guarantee the rights of GMO farmers and agribusiness to farm in the state of Hawaii. Whether GMO pesticides and farming practices and biotechnological manipulation are "generally accepted agricultural technology" (text of bill) is highly debatable, and difficult to prove otherwise. What's accepted practice and what is conducive to human and environmental health - as increasingly being illustrated in scientific literature - may NOT be one and the same. Thank you for the opportunity to offer these comments.

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Date: Monday, February 11, 2013 6:27:47 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Katrina Ahia	Individual	Oppose	No

Comments: I strongly oppose this bill because it would it would prevent the passage of future bills to control cane burning, GMOs, etc. Please DO NOT pass this bill.

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brad Parsons	Individual	Oppose	No

Comments: This is a GMO bill being planted in name only of "Right to Farm" policy. Hawaii needs to protect it's limited resources to grow real FOOD, to protect Hawaii and it's people first! In addition to poisoning the land and shorelines with excessive pesticides, GMO's, genetically modified organisms have the potential to threaten natural farms with the release of invasive species, do nothing to protect the environment, beyond the fact that non-food experimental GM crops utilize limited precious resources such as water. Committee members, say no to the false rhetoric of SB 590 and defer it, do not pass it out of committee. Mahalo, Brad Parsons

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To: [AGL Testimony](#)
Cc: marilynwick@pobox.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 6:51:42 PM

LATE

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Marilyn Mick	Individual	Oppose	No

Comments: This is a GMO bill being planted under the Right to Farm policy. We need to protect our limited resources to grow FOOD, to protect Hawaii first and its people!

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: foodsovereigntynow@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 7:09:00 PM

LATE

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Mitsuko Hayakawa	Individual	Oppose	No

Comments: I STRONGLY OPPOSE this bill. I am concerned about the language of this bill. It allows for no recourse to protect citizens from any damages from pesticide and chemical poisoning from chemical farms. How can ordinary citizens make claims and be compensated when their health has been affected by certain farmers? Please clarify what "atmosphere of acceptance for agricultural practices" means. Will citizens be forced to accept being poisoned from chemical farmers? How would you protect yourself and your family if you were the victim of GMO-related chemical use. I appreciate your concern and intent to protect farmers but our citizen's rights are at stake with this bill as it is. Please do not support it. Thank you.

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Cc: alohalways@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 7:20:32 PM

LATE

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tanja Miller	Individual	Oppose	No

Comments: This is a GMO bill being planted under the Right to Farm policy. We need to protect our limited resources to grow edible, healthy, non-GMO FOOD. Protect Hawaii first and its people!

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As a concerned mother, I, Jennifer Bonifacio, OPPOSE SB590 for my child, for your children, for the children of Hawai'i...for the children who are our future, our legacy. Hundreds of generations from now, the only legacy we can leave this earth is our children.

I understand that we want to protect our farmers but I'm very concerned is how this bill will also protect the GMO (biotech) companies that I am against, the companies that obviously have no real concern for our 'aina, for our home.

What are these GMO companies doing here in Hawai'i anyway? I know one is to grow the seeds that are sold to farmers on the mainland, the patented seeds that they force farmers to buy over and over again because they do not allow farmers to save seeds as farmers have done for thousands of years. The other reason these companies are here for are for research. I want to know what kind of research. The FDA just approved vaccine with GMO ingredients. Wasn't vaccine research being conducted in Waialua area? Do you not understand that the research they do is here in HAWAI'I because our state are islands? It is easier to contain an outbreak (mistaken or purposeful) on an island than on the mainland or in Africa and Asia.

I REFUSE to be an experiment. I REFUSE to be experimented on. I REFUSE that my family, friends, and neighbors be experimented on. I REFUSE that my children and the children of Hawai'i be experimented on.

These GMO companies' "farming" operations ARE NOT conducted in a manner consistent with generally accepted agricultural and management practices. I do NOT accept their forms of agricultural practices and operations. However, for some reason their practices and operations are accepted as legitimate and appropriate within our nation. Who actually accepts it as legitimate and appropriate? The courts? The USDA? The FDA? Who? Who accepts it as legitimate and appropriate who do NOT have former employees who used to work for one of the biotech companies? Definitely not the farming community who've been farming for the past how many generations.

I do NOT believe that GMO company "farm" operations are safe or the "safety" of their products. Yes, there are many "scientific" data out there that supports the safety but who paid for those reports? Why should I believe that when there are reports of HUMAN umbilical cord and placenta deformities. Robin Lim, also known as Mother Robin, named CNN Hero of the year in 2011 is an internationally known midwife. She reported an increase in the deformities in Indonesia (I incorrectly thought India in my first public testimony). She believes it is because of the GMO Soy products that the women in that country depend on. (http://www.naturalnews.com/034968_GMOs_umbilical_cords_midwives.html) They've been eating GMO products probably longer than in the United States. Mother Robin once read a study where pregnant mice were fed GM corn. The offspring had altered cells in all their organs. She started making the connections when she started seeing more and more deformities. What is this doing to our own children? What is happening to our future?

LATE

I read a testimonial from a farmer somewhere in the midwest. He claims his crops were infected by his neighbor's GM crops. He feeds some of his crops to his animals, to his goats. He said he has also seen deformities in his goats' umbilical cords as well. How many farmers are also witnessing these kinds of things but are too busy to report it? And how many more from India and Asia are witnesses these kinds of things but are not reporting it? Or maybe the question should be, how many of these reports are being suppressed?

The testing of GMO in our food supply has not been enough. How can it be safe if not even one generation has gone through eating GMO products and have children? We do NOT know what this is doing to us. In most cases, not even 10 years have passed with humans consuming a product so how is it even possible to say it's safe? Just because it's tested on rats and nothing happens, it's not safe. Oh wait, there is data that by the third generation, rats are sterile. (http://www.i-sis.org.uk/GM_Soya_Fed_Rats.php) Is that what GMO is doing to us? Is it part of a global eugenics program?

Again, I REFUSE to be an experiment. I REFUSE to be experimented on. I REFUSE that my family, friends, and neighbors be experimented on. I REFUSE that my children and the children of Hawai'i be experimented on.

You are suppose to be representing the people of Hawai'i, not the corporations who would come to destroy our land. Is money that important that you would sell out the people and the land that is here to sustain us, to sustain our families, our children, our children's children? I support the Hawai'i organic farmers. This bill will prevent them from declaring that the crap flying from the GMO companies' "farms" are contaminating their fields. This bill will prevent the families of students who attend schools (Waialua High and Waimea Elementary for example) who are next to GMO company "farms" from declaring that the POISON from the fields are affecting their children.

Please OPPOSE SB590.

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To: [AGL Testimony](#)
Cc: shannonkona@gmail.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Monday, February 11, 2013 8:15:12 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Oppose	No

Comments:

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Testimony regarding Hawaii SB 950

I strongly Oppose this bill. It is clear that the bill favors the profit making of a few corporations to the detriment of Hawaii citizens.

Please stand up for the citizens of Hawaii and Oppose this bill vehemently.

The citizens of Hawaii need your action to protect them from those that do harm and don't want to pay for it.

**Thank you
howie simon
kailua kona hi**

LATE

From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: natalie@nataliebrownphotography.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 9:16:36 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Natalie Brown	Individual	Oppose	No

Comments: This is a Pro GMO bill. Do not be fooled. Please protect our farmers, our children and our own future by opposing this bill and everything GMO. Read the fine print. Oppose this bill please!

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Cc: nikkiparlowevents@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 9:30:38 PM

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Nicole Parlow	Individual	Oppose	No

Comments: GMOs and pesticides cause harm to citizens!!! Please help us protect our aina!!

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jeri Di Pietro	Hawai`i SEED	Comments Only	No

Comments: Thank you for this opportunity to submit testimony opposing Senate Bill 590 relating to agriculture. We have serious concerns about the language of this bill and the preemption to a counties ability to protect the community from farming practices, even if they are a nuisance. The health and safety of our residents, visitors and environment should be not be negatively impacted by farming practices. Counties should always have "Home Rule" to determine what is appropriate agriculture. Mahalo for the opportunity to voice our concerns.

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Cc: hawaiianstyle@rocketmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Kealoha Domingo	Individual	Oppose	No

Comments: I strongly oppose SB 590. It is a wreck less endangerment to public health and safety to allow continued practices of chemical fertilizing, herbicide etc without regulation would be ultimately devastating to humankind, our 'aina, kai as well as our right to a safe living environment. Robert Kealoha Domingo

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Cc: gctonsbs@hawaiiintel.net
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 11:21:21 PM

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SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Smith	Individual	Oppose	No

Comments: I cannot believe that you would let a bill like this get so far. Basically, it is a green light for anything that could possibly come under the heading of farming. It is so obvious that it is a bill put forth by the seed companies to continue their destructive practices, without regard for the opposing view and the information that indicates GMO needs more research before more open field testing be allowed. I say, shame on you.

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Cc: profitworks@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:02:02 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
cora piliwale	Individual	Oppose	No

Comments: I oppose SB590

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Cc: jpappas60@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:10:07 AM

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SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Pappas	Individual	Oppose	No

Comments: Dear Senators: I OPPOSE SB590 as written. First of all, not all farming in Hawaii is equal when comparing levels of sustainability over the long term; conservation and care of land and water resources (runoff, dust, drift, monocultures); whether food is grown for local consumption or not; and the danger of contamination of nearby farming operations, whether from pesticides or, in the case of GMOs, possible invasive species. With a very small percentage of Hawaii's food supply grown in Hawaii, I believe it is the Dept. of Agriculture's role to encourage and support the types of farming that will do the best job of feeding Hawaii's people in a sustainable manner. Secondly, regulations and incentives need to be put in place to protect the farmers who ARE growing food for local consumption and who ARE using good soil management and water conservation techniques. Other agricultural practices--including any non-food production--should be considered only after Hawaii's basic needs for food are satisfied. SB590 makes it appear that Hawaii will allow ANY type of agriculture to be practiced when I believe that we should be making choices about the types of agriculture that are best suited for Hawaii over the long term. Thank you for the opportunity to testify. Sincerely, Jan Pappas Aiea, HI 96701

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Date: Tuesday, February 12, 2013 12:14:29 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tia Meer	Individual	Oppose	No

Comments: I oppose the bill because I don't feel like my rights as an individual will be upheld when it comes to being exposed to GMO and the resulting enviromental practices.

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Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:51:25 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Gach	Individual	Oppose	No

Comments: I am concerned that the WORDING of the bill will prevent the passing of laws controlling: Herbicide over spray, cane burning, humane treatment of food animals, pesticides and GMOs, which is why I am opposed to this bill.

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SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
claudia rice	Individual	Oppose	No

Comments:

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Cc: mary@maui.vortex.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 6:26:28 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Overbay	Individual	Oppose	No

Comments: Aloha Legislators, Since it is a declared policy of this State to "foster attitudes and activities conducive to maintaining agriculture as a major sector of Hawaii's economy," the legislature needs to consider the economic impact of GMO production on Hawaii's future agricultural industry. More and more counties ban GMO products. The skyrocketing prices of organic produce make emphasis on growing Hawaii's organic farming practices vital to Hawaii's agricultural future if we hope to compete in a global market. SB590 is a poorly written bill and is far too vague. Farmers have a right to farm without this bill, and the right to address issues in court is fundamental in America. Every law must be considered on its own merit. This bill seeks to place limits on laws that future Hawaii Legislatures can pass, which is un-American and unconstitutional. The courts are already capable of correctly processing "nuisance lawsuits" without oversight from the legislature.

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LATE

Howard Hurst
P.O. Box 1138
Kalaheo, HI. 96741
Maluia-wcms@hotmail.com

Hawaii State Capitol
415 South Beretania St.
Honolulu, HI 96813

Re: In opposition to SB590

Honorable members,

I'm writing to you in vehement opposition to proposed SB590. It is unconscionable for you to even consider. This is obviously once again a veiled effort by the GMO/Pesticide industry to seek indemnity for its actions. These same global national companies have a long well documented history of poisoning the environment and people with persistent organic pollutants in their maniacal pursuit of profit. It is an injustice that they so freely wield their influence in our State Legislature. To support this bill is to subjugate the people of Hawaii and generations to come. Please oppose SB590 and all other attempts by this industry to undermine the democratic process.

Altruistically,

Howard Hurst, M.S. Ed

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To: [AGL Testimony](#)
Cc: youconduit@gmail.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Tuesday, February 12, 2013 7:51:56 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Nomi Carmona	Individual	Oppose	No

Comments:

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Opposition to SB590

Doora Shin

UH Manoa Student

Aloha, I am a student at UH Manoa. It shocks me that I have to testify to oppose a bill like this. The passing of such legislation would be hurtful to the people, to the land, and to our future. The only benefits of this bill would be to those who profit from the sales of pesticides and genetically modified crops.

The use of the phrase "agricultural harmony" is a euphemism. This "harmony" would mean that we would sit back and accept the irresponsible, harmful practices of big agriculture. We will have a loss of biodiversity, a loss of yields, and an overall agricultural & ecological crisis as family farmers will no longer be able to compete with these large companies.

Hawaii is known to be a place for family farmers & small to medium sized farms and responsible, sustainable agriculture. It seems we have given in to big money. The companies like Monsanto, Syngenta, Dupont, and others are here to use our land and take the profit back to their big offices on the mainland. Their goal here is to monopolize the food system and will continue to be successful in doing so until we stand up and say no more.

Entire countries around the globe have banned these types of practices and these specific companies from obtaining and using land, and it is long overdue that we do the same in Hawaii. We must protect the land that can no longer protect itself. We must protect the farmers that are slowly losing their power to choose the responsible way.

It's time to demand something better. GMO food must be removed from Hawaii & it will happen. The people will put up a fight. As we get sicker and sicker from the chemicals being sprayed & injected into our food, more and more people will realize what is causing it.

I am 20 years old & plan to have kids and raise them in Hawaii. I want my children and grandchildren to experience the same beauty of nature I have been lucky to experience. I want them to see all the amazing animals and marine species that make our island so beautiful. I feel that this is in great danger and the more we ignore the long-term consequences to reap the short-term conveniences, the more we are threatening the future of our island home.

Mahalo.

LATE

I OPPOSE SB590 Bill. This bill would force us to put up with unlimited spraying, GMO's and cane burning in the name of "agricultural harmony" - there is NO co-existence with GMO's, they will contaminate EVERYTHING. Thank you,
Christine Walinch

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: oceanfrontfarm@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 8:44:53 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
marlene gilbert	Individual	Oppose	No

Comments: I oppose this bill because it does not provide the protection of GMO pollen drift. I am a Hawaii resident.

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Date: Tuesday, February 12, 2013 8:47:42 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Therese Argoud	Individual	Oppose	No

Comments: We don't need GMO. Hawaii does not need to be the testing ground for GMO at the expense of Hawaii's people and natural environment. Please don't let profits override what is in the best interest for all of us! Mahalo.

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Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Tuesday, February 12, 2013 9:12:03 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brady Townsend	Individual	Oppose	No

Comments:

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Date: Tuesday, February 12, 2013 9:12:07 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brilana Silva	Individual	Oppose	No

Comments:

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Cc: bionicdread@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 9:12:45 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tomasso Gambino	Individual	Oppose	No

Comments: Kauai does NOT need agricultural chemicals sprayed, GMO's, nor Cane burning! I'm for keeping Kauai CLEAN!!

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To: [AGL Testimony](#)
Cc: Kumukahi77@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 9:17:17 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Dea Rackley	Individual	Oppose	No

Comments: Stop working for the Death Corps!! Stand for the people and the Aina.

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: sam@smallwondervideoservices.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 9:22:08 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Sam Small	Individual	Oppose	No

Comments: Anything that gets sprayed on the land gets distributed widely and enters people's lives in unexpected ways. We should not give agricultural producers free rein to do whatever they want as time and time again they have proven that they will put their profits above the people's health and well being. There must be reasonable and public limits to ag spraying.

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To: [AGL Testimony](#)
Cc: terez_lindsey@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 9:29:22 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Terez Lindsey	Individual	Oppose	No

Comments: I oppose this bill. No bill should force us to sacrifice our health or our children's health for the sake of agriculture.

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Cc: suiteness@gmail.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Tuesday, February 12, 2013 9:41:52 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Annie Suite	Individual	Oppose	No

Comments:

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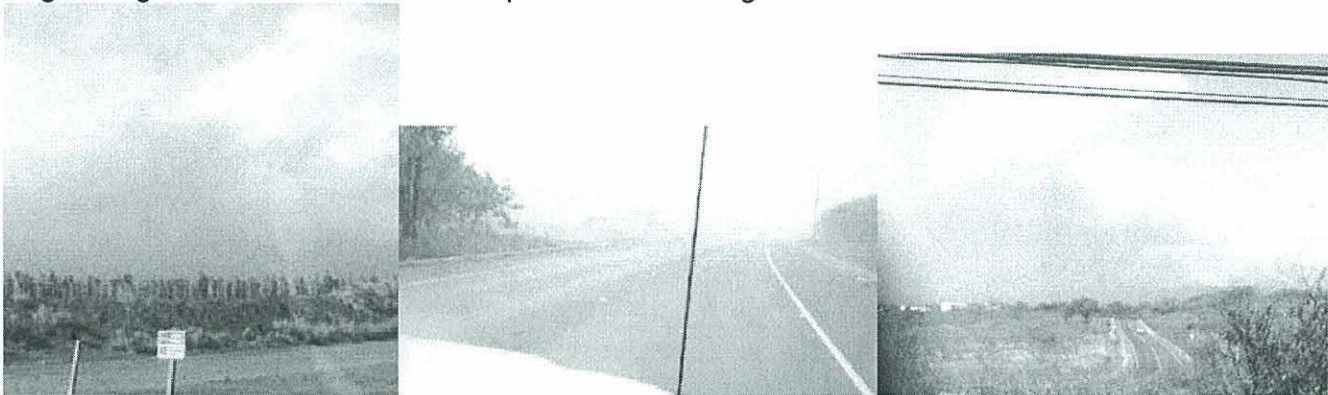
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My name is Lori Nakamura-Higa and I **oppose SB590: Agriculture; Right to Farm**

This bill will give rights to big GMO poison chemical companies like Monsanto and DuPont to regulate themselves and thereby holding them harmless of any collateral damages they create to our delicate ecosystem and to us as citizens of Hawaii, especially to those citizens who reside nearby companies like Monsanto's and DuPont's (Pioneer) experimental GMO farm fields. SB590 will grant them status to be above the law.

Presently there's a law suit filed against big poison chemical company Pioneer, subsidiary of DuPont Co. by Kauai residents that are denied full disclosure as to the chemicals Pioneers is using on their GMO experimental crops while dust-laden chemicals fill the air and make their way onto neighboring communities' "...homes, our cars, our streets and buildings, and most alarmingly, our children, who are forced to breathe dust-laden air as part of living."
([www.staradvateriser.com/news/20111216 Dust from GMO crops spurs residents suit.html?id=135721343](http://www.staradvateriser.com/news/20111216_Dust_from_GMO_crops_spurs_residents_suit.html?id=135721343)). Let our justice system decide, not these big poison chemical companies whether harm and damages are resulting from this pollution.

These polluting dust storms are a common occurrences on our other islands as well, in Kunia, Oahu and over in Molokai. Photos (3) taken on Molokai of GMO chemical dust storms originating from Monsanto GMO experimental testing farm fields.



We've seen the collateral damages of the products they've invented in the past that was deemed self-regulated safe by Monsanto reassuring everyone that their own studies validate so. Their tract record proves contrary to their reassuring words:

- 1) Monsanto in Vietnam, A: self-regulated that Agent Orange was only a defoliant and was safe. 20,000 villages sprayed and 5,000,000 (5 million) people affected. Today, descendants are still being plagued by the horrifying effects of Agent Orange. <http://digitaljournalist.org/issue0401/pjg01.html>
- 2) Monsanto in Vietnam, B: as we know there were hundred of thousands of American Vietnam Veterans that also were killed or poisoned by Agent Orange that still suffer from there exposure today. Descendents from our Vets also have suffered indirectly from Agent Orange and are still feeling its ill-effects today. Read what a second generation Agent Orange victim has to say:
<http://www.agentorangespeaker.com/blog/2011/03/30/The-children-of-Male-Vietnam-Veterans-have-officially-been-added-to-the-Deny-until-they-die-list.aspx>

LATE

- 3) Monsanto in Alabama: \$700 million settlement awarded to 20,000 Anniston, Alabama residents after years of fighting to hold Monsanto and its company, Solutia liable for the collateral damages to the Anniston's citizens as a result of Monsanto careless handling of their poison chemical PCB allowing it to cause irreparable damages to its residents. Actual total, "\$800 million." There were, "*nearly forty years, unfiltered and untreated PCB waste was discharged directly into streams or dumped in landfills around town.*"
<http://www.nytimes.com/2003/08/21/business/700-million-settlement-in-alabama-pcb-lawsuit.html>.
<http://www.chemicalindustryarchives.org/dirtysecrets/anniston/1.asp>. What's chemicals are allowed by these GMO poison chemical companies to blanket dust storms into our ecosystem and onto our residents?
- 4) Monsanto in India: There are numerous articles written over the years regarding Monsanto's hostile farming practices in India. The latest – "Monsanto, World's Largest Genetically Modified Food Producers To Be Charged With Biopiracy In India." http://www.huffingtonpost.ca/2011/10/03/monsanto-india-biopiracy-farmers_n_992259.html.
- 5) There are countries that have **banned** Monsanto's unpredictable **GMOs** inventions. As of recent – **Kenya, Peru, and Russia**.
http://www.youtube.com/watch?feature=player_embedded&v=2lgDDyHTTEo,
<http://www.youtube.com/watch?v=mRUxys7ELEU>,
<http://www.examiner.com/article/russia-bans-gmo-corn-after-french-study-shows-cancer-risks>.

Likewise there are numerous articles written about Monsanto's practices in other parts of the world, all which does not paint a pretty picture as the one they paint for themselves on their own website. RoundUp with its main ingredient Glyphosate was first labeled as biodegradable, so why was this label removed by its inventors? Does it no longer hold this distinction? It's all guessing game isn't it?

Please let us as citizens of Hawaii not become just another collateral damage statistic here after the damages have been done when you have the ultimate say to act on our behalf to safeguard our ecosystem and us as Hawaii citizens. Again, SB590 will grant these self-called farmers, status to be above the law and this should never be permitted.

So please help us and vote on the behalf of your citizens of your communities and help prevent any of these kinds of collateral damages from occurring by voting **NO** to **SB590: Agriculture; Right to Farm**. Thank you very much for your time.

Kind regards,
Lori Nakamura-Higa

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: sprngbrar@earthlink.net
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 9:47:53 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brian H. Sato	Individual	Oppose	No

Comments: You representatives are supposed to be intelligent or we wouldn't have elected you to represent us. But by passing this bill you are inoring the welfare of the people not to mention yourselves only to help monsters like GMOs to grow and cause more deadly destruction in the furture. Wake up, you live here, too.

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To: [AGL Testimony](#)
Cc: janinecalvert999@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 10:06:47 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Janine Biagi	Haiku Parent Teachers Assocoation	Oppose	No

Comments: Please note Maui's opposition to any activity associated with Monsanto or any of its subsidiaries. GMO's are banned most everywhere on the planet for a reason. We do not want our families and children's lives shortened by exposure to these toxic chemicals and the ensuing environmental pollution they are known to cause. As our elected officials, what in God's name are you thinking? Is the mere \$10,000.00 in campaign contributions you've received from Monsanto really worth the hell you are bringing down on the people who trusted you to protect them and our precious land?

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Hawaii Farm Bureau
F E D E R A T I O N

2343 Rose Street • Honolulu, Hawaii 96819
Phone: (808) 848-2074 • Neighbor-Islands: (800) 482-1272
Fax: (808) 848-1921 • Email: info@hfbf.org
www.hfbf.org

February 12, 2013

HEARING BEFORE THE
SENATE COMMITTEE ON AGRICULTURE

TESTIMONY ON SB 590
RELATING TO AGRICULTURE

Room 229
2:55 p.m.

Chair Nishihara, Vice Chair Kahele, and Members of the Committee:

I am Dean Okimoto, President of the Hawaii Farm Bureau Federation (HFBF). Organized since 1948, the HFBF is comprised of 1,950 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interest of our diverse agricultural community.

The Hawaii Farm Bureau supports SB 590 which clarifies the State's policy to promote and encourage Hawaii's agricultural industry. It also recognizes the importance of a uniform and consistent statewide agricultural policy that protects and enhances Hawaii's agricultural industry.

The purpose of the Hawaii Right to Farm Act is to protect bona fide farming operations from urban encroachment. As our population continues to grow, existing farmers and ranchers are faced with an increased amount of pressure from new homeowners living in an active farming community. Farmers are often forced to change their normal farming practices because of new homeowners that are not use to the everyday farming noises, odors, dust, and fumes that occur from sunrise to sunset. Farmers change their agricultural practices to be good neighbors even though it means additional expense and hardship. The intent of the Hawaii Right to Farm Act is to protect the bona fide farmer from these conflicts and allows them to continue their normal farming practices.

The State and Federal government agencies have the resources, knowledge and expertise to oversee all aspects of Hawaii's agricultural industry from generally accepted agricultural practices on the farm to the movement of product in and out of the state. This bill reassures the farmer that the State does recognize the importance of having a uniform and consistent statewide policy on agriculture.

Thank you for your support of this measure.

TESTIMONY

LATE

Jason M Blair
P.O. Box 1687
Kamuela, HI 96743

Bill Number: SB590
Hearing Date: 2-12-2013
Hearing Time: 2:55 pm

Dear Committee Members,

I strongly oppose Senate Bill 590. This bill is vague and misleading. It will allow large commercial farmers to pollute the land with pesticides and GMO's and pollute the land of organic farmers, leaving no recourse for the farms being polluted or for the community that does not want their land to be destroyed through "acceptance of all the various forms of agricultural practices and operations that are generally accepted as legitimate and appropriate within our nation." This is just another way to say massive amounts of chemicals and GMO's.

I strongly urge you to oppose Senate Bill 590 in its entirety.

Sincerely,
Jason M Blair

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: mark@marksheehan.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 11:35:10 AM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
mark SHEEHAN	Haiku Aina Permaculture Initiative	Oppose	No

Comments: Dear Chairman and Committee Members, Please kill this bill. It's another GMO favor that puts out entire ecosystem at risk. Only when you have studied genetic modification and the scientific studies of GMO impacts can you understand what a dangerous course we are being lured into by approving such radical experiments. Why have Russia, Hungary, France and China restricted GMO farm crops? You have to wonder and investigate. You will come to realize that these crops are a danger to animals and humans and the organic farms that are near these GMO crop areas. Please protect the aina and the people. No more Monsanto favors.

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To: [AGL Testimony](#)
Cc: sbutterfly444@aol.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:05:29 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
shelby hansen	Individual	Oppose	No

Comments: OPPOSE SB590 This bill would force us to put up with unlimited spraying, GMO's in the name of "agricultural harmony" - there is NO co-existence with GMO's, they will contaminate EVERYTHING. I am sure you want a healthy environment for your own children one not blanketed in chemicals and GMO genetic weaknesses. Please do the right thing for the future of all and Oppose SB590 Thank you, Shelby Hansen

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To: [AGL Testimony](#)
Cc: Jaymanmolokai@live.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:05:36 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jay	Individual	Oppose	No

Comments: The use of pesticides in this state are higher than any other in the country. These are substances, in some cases, are known carcinogens and they must be regulated in their entirety. GMO crops and the companies that grow them are a danger to our health, and the health of our children. If you would like to see first hand the damage these companies create look to Hoolehua Molokai where Monsanto has utterly failed at keeping their fields contained. Please vote no on SB590 and show the people of Hawaii that you truly have their best interests at heart. Mahalo.

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To: AGL Testimony
Cc: waioli2@hawaiiantel.net
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:16:46 PM

LATE

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
chris kobayashi	Individual	Oppose	No

Comments: we already have the right to farm. we don't need this particular bill to give gmo seed companies the ok to pour as much poison on our `aina and allow practices which are not "acceptable" to good stewardship and true sustainability.

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To: [AGL Testimony](#)
Cc: slwsurfing@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 12:36:04 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
sharon willeford	Individual	Oppose	No

Comments: Big Island - oppose - EVICT MONSANTO - don't poison or land!

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To: [AGL Testimony](#)
Cc: dougmgreg@yahoo.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 1:02:41 PM

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SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Douglas McGregor	Individual	Oppose	No

Comments: Subjecting the land and people to unlimited toxic spray (ANY carcinogenic spray) is insanity in this day and age when there are so many alternatives. Thank you for blocking this bad bill.

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Cc: mmaitino@gmail.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Tuesday, February 12, 2013 2:21:04 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Maria Maitino	Individual	Oppose	No

Comments:

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To: [AGL Testimony](#)
Cc: henry.lifeoftheland@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 2:28:53 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Henry Curtis	Life of the Land	Oppose	Yes

Comments: Aloha Senators, Legal forms of agriculture include using transgenetic crops(GMO) and the aerial spraying of pesticides with highly toxic and inadequately analyzed "inert" ingredients which are considered trade secrets. These practices should not receive a blanket "approval" under some alleged "balanced" approach Mahalo

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Cc: startalker@aol.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 2:44:57 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tim Rubald	Individual	Oppose	No

Comments: "The right of farmers and ranchers to engage in farming and ranching practices shall be guaranteed in this State. No law shall be enacted that abridges the right of farmers and ranchers to employ generally accepted agricultural technology, livestock production, and ranching practices." The problem is the "generally accepted . . ." bit. I've witnessed much agricultural work on Maui that seems to be generally accepted ON MAUI but that utilizes agricultural practices that contributed to the Dust Bowl, about ten years of agricultural disaster in the 1930s. While those 19th Century farming practices still in use on Maui (albeit with modern farm equipment) may be "generally accepted" they are not best practices that would preserve Maui's coral reefs, water, air, and soil. The intention of the bill is laudable (to prevent gentrification and development of agricultural land) but the wording needs to allow for legislation to move Maui in an ecologically safe, environmentally safe direction.

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To: [AGL Testimony](#)
Cc: saws123@myway.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 3:14:46 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Carl York	Individual	Oppose	No

Comments: GMO and their herbicides and pesticides are a disaster waiting to happen. Hawaii deserves better don't contaminate paradise to serve the greed of corporate interest !

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To: [AGL Testimony](#)
Cc: Alohalalasun@yahoo.com
Subject: *Submitted testimony for SB590 on Feb 12, 2013 14:55PM*
Date: Tuesday, February 12, 2013 5:16:27 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Leilea satori	Individual	Oppose	No

Comments:

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To: [AGL Testimony](#)
Cc: mariannealthalken@hotmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 6:39:03 PM

SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Marianne Thalken	Individual	Oppose	No

Comments: Please do not pass this bill. Instead create legislation for sustainable farming and ranching practices which enhance and preserve our environment, and nourish us with healthy, wholesome, natural food. Thank you

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: mariannealthalken@hotmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Tuesday, February 12, 2013 6:39:03 PM

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SB590

Submitted on: 2/12/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Marianne Thalken	Individual	Oppose	No

Comments: Please do not pass this bill. Instead create legislation for sustainable farming and ranching practices which enhance and preserve our environment, and nourish us with healthy, wholesome, natural food. Thank you

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From: mailinglist@capitol.hawaii.gov
To: [AGL Testimony](#)
Cc: michaelbroady@gmail.com
Subject: Submitted testimony for SB590 on Feb 12, 2013 14:55PM
Date: Monday, February 11, 2013 5:40:58 PM
Attachments: [PesticidesKauaiHV12.pdf](#)

SB590

Submitted on: 2/11/2013

Testimony for AGL on Feb 12, 2013 14:55PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Michael Broady Jr.	Individual	Oppose	Yes

Comments: Aloha, My name is Michael Broady Jr. I am a life long resident of O'ahu, a student of Leeward Community College, and a small organic farmer practicing permaculture on limited land. I oppose SB 590 as it is currently written. I do support the intention of protecting farmers engaged in acceptable farming practices, however I am concerned that the language of this bill may also protect those agriculture practices which are controversial; particularly the growth of GMO experimental crops, which comes hand in hand with heavy pesticide use. GMO experimentation and production may be acceptable to the political status quo, but it is unfair to exclude those who disagree from being able to voice their concerns. In particular, I find the addition of this line to Section 165-1, H.R.S., as unethical and even illogical: "and promoting and fostering an atmosphere of acceptance of all the various forms of agricultural practices and operations that are generally accepted as legitimate and appropriate within our nation." Why must we promote acceptance of practices if they are already accepted? The public must be free to decide what is acceptable, rather than "promoting and fostering" opinions for them. This bill, as written, would coerce the public definition of what is acceptable agriculture. I am not yet qualified to say from a scientific point of view whether GMO and industrial monocultures should be protected or banned, however Dr. Hector Valenzuela of UH CTAHR has stated in the film "Stop Monsanto From Poisoning Hawai'i: Genetic Engineering Chemical Warfare" that "If we take into account the social cost of fixing all the pollution and health aspects from plantation agriculture, plantation ag would not have been a profitable enterprise." This means the profit made from the industrial monoculture method of farming is actually value stolen from the health of the ecosystem and it's inhabitants. I have attached Dr. Valenzuela's report titled "Environmental and Health Risks of the Synthetic Chemicals used by the Biotechnology Seed Industry in Hawaii" which explores these environmental and health costs with local and global examples. This type of practice needs to be called into question, which would not be possible under such legislation as SB 590.

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Environmental and Health Risks of Synthetic Chemicals used by the Biotechnology Seed Industry in Hawaii

Héctor Valenzuela
University of Hawaii at Manoa
College of Tropical Agriculture and Human Resources
Dept. of Plant Environmental and Protection Sciences
contact: hector@hawaii.edu

DRAFT 2.0: February 24, 2012

Note: Feedback, comments, and notes from additional research on the particular chemical products listed on Section 5.0. would be appreciated. Please send comments or references to: hector@hawaii.edu

A pdf version of this document can be downloaded from:
<http://dl.dropbox.com/u/33544971/PesticidesKauaiHV12.pdf>

this doc can also be accessed from google docs at:
<https://docs.google.com/document/d/1FrgfwqSIAmxhUzb-2JvhWZwSwOZSOM7RKpxnY3NSgl0/edit>



GMO fields in Kauai, fallow fields exposed to erosion (l), and pristine and sensitive aquatic habitats (r), down slope and in close-proximity to the annual planting of GM Seed crops in Kauai. GM seed crops are sprayed with pesticides almost 7 out of every 10 days.

LATE

Environmental and Health Risks of Synthetic Chemicals used by the Biotechnology Seed Industry in Hawaii

Index

<u>1.0. Introduction</u>	pg. 3
<u>2.0. Previous Incidents of Pesticide Pollution in Agriculture</u>	pg. 3
<u>3.0. Environmental Issues raised by the lawsuit against DuPont/Pioneer Seed in Kauai</u>	pg. 5
<u>3.1. Erosion and fugitive dust</u>	pg. 5
<u>3.2. Pesticides intensive use and escape</u>	pg. 5
<u>3.3. Use of restricted-use pesticides</u>	pg. 5
<u>3.4. Pesticide Drift from fugitive dust</u>	pg. 6
<u>3.5. Failure to follow county and state pollution control laws</u>	pg. 6
<u>3.6. Hawaii Pesticide Law, Hawaii Revised Statute 149A-2</u>	pg. 6
<u>3.7. Fugitive dust and Hawaii Law</u>	pg. 7
<u>3.8. Trespass of chemicals and dust</u>	pg. 7
<u>4.0. Scientific studies have documented phenomena that leads to environmental pollution from the use of pesticides in agriculture</u>	pg. 7
<u>4.1. Wind Erosion</u>	pg. 7
<u>4.2. Mitigation of Wind Erosion or Fugitive Dust</u>	pg. 8
<u>4.3. Fugitive Dust</u>	pg. 8
<u>4.4. Health Risks from Fugitive Dust</u>	pg. 9
<u>4.5. Pesticide Drift to non-target areas</u>	pg. 9
<u>4.6. Pesticide residues in Aquatic Habitats</u>	pg. 10
<u>4.7. Atrazine herbicide Health effects</u>	pg. 12
<u>4.8. Lorsban (Chlorpyrifos) Health Effects</u>	pg. 14
<u>4.9. Roundup (Glyphosate) Health Risks</u>	pg. 15
<u>4.10. Suspected or documented Health or Environmental Impacts for other Pesticides used by the GM Seed Industry in Hawaii</u>	pg. 16
<u>5.0. Partial List of Pesticides used by the GM Seed Industry in Hawaii</u>	pg. 18
<u>6.0. References Cited</u>	pg. 19

1.0. Introduction

LATE

The recent lawsuit filed by community members in Kauai against Pioneer/DuPont (Civil Complaint No. 11-1-0356, Dec. 13, 2011) claiming pollution of the Waimea community from their Genetically Modified (GM) seed crop experimental fields raised an issue that has not been widely discussed when talking about the potential environmental and human health risks from the planting of experimental genetically modified (GM) seed crops in Hawaii.

Nevertheless the use of synthetic pesticides and fertilizers and potential runoff from fallow fields is an integral part of the production of GM Seed Crops in Hawaii, and should be included as part of the overall risk assessment in terms of potential social, environmental, or human health risks.

It should be noted that official government reports that assess the value of the industry, do not take into account actual or potential costs of the GM seed industry, from environmental pollution. For instance, a 50 page industry report on the economic value of the GM seed industry in Hawaii does not account for any potential short- or long-term costs of environmental pollution, or human health effects (Loudat and Kasturi, 2009). These economic reports, sponsored by the GM Seed Industry, are apparently taken at face value by the government to report the economic value of the GM seed industry in Hawaii.

Below (Section 3.0.), is a brief description of the issues raised by the lawsuit against Pioneer Seed/Dupont in Kauai, followed by a list of scientific studies (Section 4.0.) that have documented some of the phenomena that may lead to pollution of non-target areas from wind erosion and from the use of pesticides in agriculture.

References from the scientific literature are provided to show that there is a scientific basis for some of the key complaints raised by the Waimea Community in Kauai, concerning possible pollution of rural communities by pesticides, dust, and Bt pollen from neighboring GM agricultural operations.

2.0. Previous Incidents of Pesticide Pollution in Agriculture

One doesn't have to look too far to find previous cases of pesticide pollution, chemical-trespassing and contamination. A few cases are listed below, to illustrate that an extensive track record exists of pesticide and chemical contamination of non-target areas from the use of synthetic chemicals in industrial or conventional agricultural systems:

- **Dow Chemical Company** (major GM seed company in Hawaii). April 1977, accidental spill, 495 gallons of the soil fumigant EDB containing 0.25 percent DBCP, occurred about 60 feet of the Kunia Well in Oahu. From 1946 to 1980 the well supplied water to 700 residents of Kunia Village and irrigation water to Del Monte plantations. "The spill resulted from the failure of a hose connector on a bulk transport container owned by Dow Chemical Company during transfer operations to an above ground storage tank."

LATE

By 2003, 26 years later, the EPA reports that "a substantial threat of release to groundwater still exists" (EPA, 2003).

— **Heptachlor, Hawaii.** The entire population of Oahu (approx. 800,000) was exposed to heptachlor contaminated milk during the early 1980s, after dairy cows were fed greenchop containing heptachlor residues. It was estimated that dairy products contained 15 times the acceptable levels of pesticides for adults; and children may have been exposed to greater levels than adults. Heptachlor was also detected in mother's milk and in infant formula. According to an account from the University of California, "One of the more disturbing aspects of this episode is the evident hesitance of state authorities to disclose information before the public became aware of the possibility of contamination." In addition, "The state's Senate Committee on Health criticized the Department of Health for delaying the release of information to consumers" (Foster and Just, 1984). Contaminated agricultural soils continued to show unhealthy levels of heptachlor and heptachlor epoxide, 15 years after its use had been discontinued (Frazar/EPA, 2000).

— **DuPont (parent of Pioneer Seed, major GM seed company in Hawaii) and Benlate.**

During the 1990s hundreds of farmers and greenhouse operators from the United States, Hawaii, Asia, the Caribbean and Central America suffered substantial losses, and claimed several health side-effects, from the use and exposure to the fungicide Benlate (Benomyl), after it was apparently contaminated with a herbicide-like contaminant during the manufacturing process. According to a media account of the lawsuits, "During the course of the Benlate litigation, at least three judges took the company to task for withholding evidence from plaintiffs. One judge called the practice "willful, deliberate, conscious, purposeful, deceitful, and in bad faith," and DuPont was ordered to pay millions in court sanctions."

A separate court proceedings stated that "In addition, because the circuit court found that DuPont had engaged in serious discovery violations, it imposed sanctions of \$1.5 million payable to the State of Hawai'i." Furthermore, according to this document "the circuit court found, inter alia, that some of "DuPont's representations to this court . . . were false and misleading" and that "DuPont intentionally withheld . . . crucial information in an effort to prevent the disclosure to the [Kawamata Farms] plaintiffs and this [c]ourt of Benlate and soil contamination data [(i.e., the Alta test results)] disclosed in said documents which goes to the heart of this case." Moreover, the court amended several orders that it had previously entered because such orders "were based on misleading, incomplete, inaccurate and false information." The court then sanctioned DuPont by ordering it to pay for the Kawamata Farms plaintiffs' attorneys' fees and costs" (Matsura et al., 2007).

3.0. Environmental Issues raised by the lawsuit against DuPont/Pioneer Seed in Kauai

Note: This section (Section 3.0.) summarizes some of the complaints raised by the Waimea community against Pioneer Seed, as described in the 2011 lawsuit (Civil Complaint No. 11-1-0356, Dec. 13, 2011) . In the following section (Section 4.0.), scientific references are provided that document similar phenomena to those issues raised in the Kauai complaint, concerning dust or pesticide pollution, as documented from surveys conducted in other locations.

3.1. Erosion and fugitive dust

From the claim:

"Because of Waimea's persistent windy conditions and Pioneer's failure to control soil erosion, fugitive dust from Pioneer's GMO Test Fields routinely blows into the Waimea community and Waimea Residents' homes."

3.2. Pesticides intensive use and escape

From the claim:

"For example, Pioneer has applied pesticides individually and in combination to its GMO Test Fields roughly 67% of all days of the year for at least the past three years."

and:

"Pioneer's pesticides pose a recognized hazard to migrate into the adjacent Waimea community and environment by the widely recognized transport mechanisms of run-off, volatilization drift, and spray drift."

3.3. Use of restricted-use pesticides

From the claim:

"Restricted use pesticides are pesticides that may cause unreasonably adverse effects to human health and the environment even when used as directed by the product labeling."

3.4. Pesticide Drift from fugitive dust

From the claim:

“Pioneer's fugitive dust exacerbates the risks associated with Pioneer's use of inherently dangerous pesticides because fugitive dust acts as a transport mechanism to carry pesticides into Waimea.”

3.5. Failure to follow county and state pollution control laws

According to the complaint:

“Pioneer's failure to satisfy its obligations under Ordinance 808, failure to implement its 2002 Conservation Plan, and failure to undertake measures promised in response to the Waimea Petition in 2000 all demonstrate Pioneer's failure to follow generally accepted agricultural and management practices.”

And with regards to state law, according to the complaint:

“Pioneer's failure to satisfy its obligations under Kauai Ordinance 808, implement measures promised within its Conservation Plan, adequately respond to Waimea Residents' June 2000 petition, and otherwise prevent the ongoing creation and deposition of fugitive dust from its GMO operation for over a decade demonstrates Pioneer's failure to reasonably minimize fugitive dust and constitute violations of the Hawaii Air Pollution Control Act.”

3.6. Hawaii Pesticide Law, Hawaii Revised Statute 149A-2

According to this complaint:

“Hawaii Revised Statute 149A-2 prohibits the use of pesticides in any manner that presents an unreasonable adverse effect on the environment, which includes any unreasonable risk to humans or the environment with consideration for the economic, social and environmental costs and benefits of the pesticide's use.”

And thus according to the complaint, per Hawaii law:

“Pioneer's intentional use of inherently dangerous pesticides without consideration of the risks to Waimea Residents violates HRS 149A-2 and constitutes negligence per se under Hawaii law.”

3.7. Fugitive dust and Hawaii Law

According to the complaint:

“Under the Hawaii Air Pollution Control Act, fugitive dust is the “uncontrolled emission of solid airborne particulate matter from any source other than combustion.”

And, according to the complaint, in terms of prevention:

““Reasonable precautions” under HAC § 11-60.1-33 for agricultural operations requires operations to be conducted “in such a manner as to reasonably minimize fugitive dust.””

3.8. Trespass of chemicals and dust

According to the complaint,

“Pioneer is therefore liable for the trespass of its chemicals and fugitive dust into the Waimea community and onto Waimea Residents' property.”

4.0. Scientific studies have documented phenomena that leads to environmental pollution from the use of pesticides in agriculture

4.1. Wind Erosion

- Wind erosion is a well established phenomenon in agriculture, and thus “agricultural activities that disturb the soil can greatly increase the frequency and amount of airborne dust” (Norstrom and Hott, 2004). Scientific reviews indicate that wind erosion and dust emissions may be created by farm operations such as “plowing, leveling beds, planting, weeding, seeding, fertilizing, mowing, cutting, baling, spreading compost or herbicides and burning fields” (Norstrom and Hott, 2004; Kasumba et al., 2011).

4.2. Mitigation of Wind Erosion or Fugitive Dust

- It is well established that farmers need to practice best management practices, such as the use of vegetative buffer strips, to minimize the potential of pesticides reaching sensitive non-target habitats. Some countries have established strict regulations, to meet these guidelines (Bereswilla et al., 2012).
- Management programs that may reduce the incidence of erosion include “planting windbreaks and special crops to alter wind flow; retaining plant residue after harvesting; tilling soil to bury erodible particles, create aggregates that resist entrainment, and increase surface roughness; improving farm equipment; and stabilizing soil surfaces using water or commercial products” (Norstrom and Hott, 2004; Anon, 2008).
- Once the sources of fugitive dust have been identified, “Control techniques and PM mitigation practices can then be devised to protect the people highly exposed to such emissions, especially personnel operating agricultural machinery and those living near the fields” (Kasumba, 2011).

4.3. Fugitive Dust

- According to a research paper on fugitive dust or particulate matter (PM) “A number of studies measuring agricultural PM emissions have reported considerable concentrations of PM due to agricultural operations”. In addition “PM emissions have been found to be a function of the type of crop grown” (Kasumba et al., 2011).
- Fugitive dust is an issue of concern for agricultural land grant institutions. For example at the University of California Division of Agriculture and Natural Resources, fugitive dust issues and exposure to the public have been a part of its three to five-year midterm planning program priorities. Part of the actions plans for the U.C. system in a 2001 planning document included to “Develop extension education on best available practices to prevent the emission of fugitive dust from agricultural operations, construction, land use decisions, and transportation issues such as traffic on unpaved roads.” The U.C. planners clearly understood that “Residential development in or adjacent to agricultural areas creates concerns about air quality within these homes and the impact on the health of residents” (Univ. California, 2001).

4.4. Health Risks from Fugitive Dust

Dust escapes from agricultural operations are understood to be an important cause of fugitive dust, with potential health consequences (Kasumba et al., 2011):

- Exposure to particulate matter (PM) has been linked to premature deaths among the elderly (Comis, 2000), and to an increased incidence of heart attacks (Mustafic et al., 2012), and mortality (Mokdad et al., 2004). According to a review on wind erosion “Health risks associated with elevated levels of dust include skin irritations and diseases, eye irritations, shortness of breath, respiratory disorders such as chronic obstructive airways disease, occupational asthma, interstitial lung disease, lung fibrosis, lung emphysema, hyper-responsiveness, hypersensitivity, and increased risk of lung and skin cancer” (Norstrom and Hott, 2004; Clausnitzer and Singer, 2000).
- It is well established that wind erosion may result in the “transport of herbicides on sediments” (Norstrom and Hott, 2004), with pesticides impregnated in the fugitive dust. Pesticides that have been found in fugitive dust include: DDT, DDD, DDE, Fosfall, Chlorpyrifos (Dursban), Prowl (Pendimethalin), Etoxinol, Trifluralin, Dieldrin, and PCBs (Rogge et al., 2007).
- Dust from grains (‘grain dust’) is a potential health hazard to field workers, and/or to those exposed to grain dust. Respiratory problems from grain dust has been reported worldwide for grain storage workers. Acute reactions include grain fever syndrome, allergies, and asthma, while reported chronic effects include hypersensitivity pneumonitis and chronic bronchitis (Olenchock et al., 1986). Grain dusts may contain contaminants such as bacteria, fungi, mites, fumigants, pesticides (Olenchock et al., 1986), and *Bacillus thuringiensis* (Meadows et al., 1992; Hagstrum et al., 2010). Inhalation of these substances has potentially “profound biological consequences” (Olenchock et al., 1986).
- Note that pesticides such as Chloropyrifos, Pendimethalin, and *Bacillus*, listed above, are used by the GM seed industry in Hawaii (see Section 5.0.).

4.5. Pesticide Drift to non-target areas

Pesticide drift is a well established phenomenon “recognized as a major cause of pesticide exposure affecting people as well as wildlife and the environment” (Shulze, 2004; Tuduri et al., 2006; Lee et al., 2011). According to Tuduri et al (2006) “It is now accepted that following application pesticides can enter the atmospheric compartment and travel many kilometers,” and “For example, dacthal, chlorothalonil, chlorpyrifos, metolachlor, terbufos and trifluralin have been detected in Arctic environmental samples (air, fog, water, snow).”

Roundup may drift to non-target areas following spray applications, as frequently discussed in the research literature (Singh and Shaner, 1998), possibly affecting non-target species (Kurtz and Street, 2003). Recent research has confirmed the drift and presence of Roundup herbicide in the atmosphere (Chang et al., 2011). According to Chang and colleagues (2011) "Glyphosate and its degradate, AMPA, were frequently observed in air particles and rain at all three locations that were studied." Furthermore "Glyphosate occurred at concentrations equal to or greater than the concentrations of other high-use herbicides previously studied in the midwest" (Chang et al., 2011). With respect to AMPA, the metabolite of Roundup, the authors stated that "The presence of AMPA in air is due to wind erosion, because it is formed in the soil." The authors concluded that "The relatively elevated levels of glyphosate probably are due to its frequent use in these agricultural areas in conjunction with the genetically modified crops" (Chang et al., 2011).

Air sample surveys from agricultural communities in California detected residues of Lorsban (chlorpyrifos), which is another pesticide used by the GM Seed industry in Hawaii. According to a report from the survey conducted in Lindsay, California, "chlorpyrifos levels in Lindsay's air exceeded levels of concern derived from U.S. Environmental Protection Agency (EPA) studies by up to 11 times. In 2006, 28% of the 116 air samples were above the "acceptable" exposure level for a one-year-old child based on EPA studies." Because of the residues found on the air, the study also took blood samples of representative members of the community, and "The study found that 11 of the 12 people tested had above average levels of the primary chlorpyrifos breakdown product in their urine, and seven of the eight women had amounts above the "acceptable" level for pregnant and nursing women calculated from U.S. EPA data" (CPR, 2007).

Pesticides used by the GM Seed Industry, which have been documented to drift into non-target areas include atrazine, chlorpyrifos (Lorsban), cyfluthrin, Lambda-cyhalothrin (Warrior), dimethoate, metolachlor, and Roundup (Glyphosate) (Lee et al., 2011).

4.6. Pesticide residues in Aquatic Habitats

By the early 2000s, over 60 research papers had documented the presence of pesticides in aquatic habitats. Non-source pollution of surface waters may occur via runoff or via spray-drift contamination (Schulz, 2004; Bereswillia et al., 2012). Several of these studies reveal that some of the pesticides used by the GM Seed Industry, such as Lorsban, are frequently found in aquatic habitats at levels above those believed to cause environmental impact (Schulz, 2004). For instance, after the 1993 floods in the midwest U.S., according to a USGS hydrologist "the Mississippi River at Thebes (Illinois) was carrying more than 12,000 pounds of atrazine per day" (Panups, 1993).

Roundup has been detected in surface waters located in relative proximity to fields where Roundup is applied as a herbicide (Battaglin et al., 2005). Surveys have detected Roundup and its metabolite AMPA in streams and aquatic habitats of several U.S. mid-western states (Battaglin et al., 2005; Coupe et al., 2012).

With respect to Roundup “Although some conventional drinking water treatments such as activated carbon filtration, chlorine, and ozone seem to eliminate glyphosate, other treatments more common in primary sewage treatments such as settling and filtration may not. Glyphosate was detected twice as frequently in urban streams downstream from wastewater treatment plants than upstream of those plants” (Battaglin et al., 2005).

In Canada, Roundup and other herbicides were found to have drifted into wetlands. This research, published in 2011 was “the first field study to compare the masses of pesticides entering wetlands by atmospheric deposition” (Messing et al., 2011). Other herbicides, which are used by the GM Seed industry in Hawaii, and which were found to have drifted into wetlands of Canada included dicamba (Banvel), metolachlor (Dual), and bromoxynil (Buctril) (see Section 5.0.). With respect to Roundup, according to this study “Concentrations of glyphosate in wetlands may be due to atmospheric deposition” (Messing et al., 2011).

With respect to Kauai, the question remains whether pesticide drift or contaminated runoff from agricultural fields has reached the nearby Waimea stream or the ocean. In May 2011 the Kauai Garden Isle Newspaper reported that the County of Kauai issued notices of violation against both Pioneer and Dow Chemical for “grubbing area exceeding one acre, permit requirement and lack of minimum best practices.” According to the Kauai Garden Isle, “A source speaking on condition of anonymity said area residents witnessed mud slides along coastal agricultural fields following the heavy rains of last December, and that the subsequent muddy runoff ended up in the ocean and impacted commercial fishing.”

Furthermore, while Kauai County Engineer Larry Dill indicated that “The county has not conducted any underwater inspections” a caption of an underwater picture indicated that “Diver Terry Lilley captured images below the ocean on Jan. 29 near Dow fields in Waimea where non-permitted grubbing took place. He said he did seven dives over three days in an area within 100 yards of shore and found the coral ‘in bad shape’ and progressively deteriorating. He said the sediment was thick in the water and on the reef and visibility in the plume was from four to 10 feet in the areas where fish and young and old growth corals had previously created a healthy reef” (Vanessa Van Voorhis. County takes legal action against seed companies. The Garden Island, Kauai. May 4, 2011).

Some of the pesticides used by the GM seed industry in Hawaii (see Section 5.0.), which have been found in surface water surveys include: alachlor (Lasso), atrazine, bromoxynil (Buctril), carbaryl, dimethoate, dicamba (Banvel), Lorsban (chlorpyrifos), metolachlor (Dual), methyl parathion (PennCap-M), nicosulfuron (Accent), Permethrin, Glyphosate (Roundup), and Simazine (Princep) (Battaglin et al., 2005; Shulze, 2004, Frank et al., 1990).

4.7. Atrazine herbicide Health effects

While the complaint raised against Pioneer/DuPont in Kauai does not raise the issue of health from potential exposure of the community to pesticides, below are a few references with respect to potential health effects from exposure to some of the pesticides used by the GM seed industry in Hawaii.

Atrazine herbicide is manufactured by **Syngenta**, a Swizz agro-chemical company that is among the five GM Seed growers in Hawaii. Both Syngenta and academic product defense specialists continue to vouch for the safety of Atrazine. Dr. Stephanie Whalen, head of the former Hawaii Sugar Planters Association (now called HARC, Hawaii Agricultural Research Center), is a key supporter of the GM Seed and Pesticide industry in Hawaii. According to Dr. Stephanie Whale, from HARC, *"Atrazine is the most studied of all pesticides and comes up clean in each new study but the enviros/trial lawyers are after it."* Dr. Whalen cautioned that *"If atrazine goes down it will be the end of pesticide use as we know it"* and further cautions that if Atrazine is taken off the market: *"Hmm: no pesticides; no engineered crops; no food?"* (Stephanie Whalen, email Feb. 28, 2011).

In reply to the tone of Dr. Whalen's email a Senior UH Professor and Entomologist replied in an email to Dr. Whalen, that "Before you start impugning people because they have a different viewpoint, be honest and recognize the numerous studies that raise reasonable questions about the safety of atrazine (see links below). You can't have an open, honest, intellectually rigorous scientific discussion about risks and benefits if you start off by politically smearing people that disagree with you" (email Feb. 28, 2011).

Internal documents indicate that Syngenta has been involved in a PR campaign to discredit research showing potential adverse effects from exposure to Atrazine (Hodai and Graves, 2012; Jervin, 2012). U.C. Berkeley Professor Tyron Hayes, in a review on the potential adverse effects from Atrazine came to similar conclusions:

"In summary, seven studies have been published to date that show effects of atrazine on amphibian sexual development. Although conducted under different experimental conditions, these studies support the conclusion that atrazine is a potent endocrine disruptor that both chemically castrates and feminizes male amphibians. The confusion generated by Syngenta's press releases and statements to the popular press has not been substantiated by peer-reviewed science. Furthermore, as described here, the studies made available to the EPA (Steeger et al. 2003a, 2003b, 2003c, 2003d, 2003e) and recent publications (Coady et al. 2004, Hecker et al. 2004) have not supported Syngenta's claims. Unfortunately, financial incentives and industry involvement in the research on this issue have generated

confusion in the scientific community and the public sector, marking it more difficult to understand the science involved" (Hayes, 2004).

According to the Natural Resources Defense Council, "Banned in the European Union and clearly linked to harm to wildlife and potentially to humans, the pesticide atrazine provides little benefit to offset its risks." Also according to the NRDC "The most recent data confirms that atrazine continues to contaminate watersheds and drinking water. Atrazine was found in 80 percent of drinking water samples taken in 153 public water systems. All twenty watersheds sampled in 2007 and 2008 had detectable levels of atrazine, and sixteen had average concentrations above the level that has been shown to harm plants and wildlife" (source: <http://www.nrdc.org/health/atrazine/>).

Atrazine researcher Tyrone Hayes commented that ""We use 80 million pounds [of atrazine] annually in the United States. It's the number-one pesticide contaminant of ground water, surface water, and drinking water. It's used in more than 80 countries but it's now outlawed in all of Europe or, as the company likes to say, has been denied regulatory approval. The main point here is that here's a compound that we use 80 million pounds of, and it's illegal in the home country of the company that makes it" (LaSalle and Kripke, 2010).

Below is a brief sample of studies showing potential health risks from exposure to Atrazine:

Endocrine & Immune System Disruption

For general reference to research studies see, Hayes, 2004; Hayes et al., 2002; and Brodtkin et al., 2007. In reference to Atrazine, a recent research report indicates that "Studies have suggested that exposure to environmental pollutants may modulate or disrupt the endocrine system of humans and wild-living animals in ways that are detrimental to the reproductive system and may cause cancer. According to the authors exposure to endocrine disruptors "is associated with the development of various diseases, including breast cancer" with Atrazine being "of particular concern" (Quignot et al., 2012).

Reproductive System Impacts

(Swan et al., 2003; Arbuckle et al., 2001)

Cancer

(Kettles et al., 1997; MacLennan et al., 2002; Sass and Brandt-Rauf, 2003)

4.8. Lorsban (Chlorpyrifos) Health Effects

Note: High bee toxicity

Note on text below: LOC= Level of Concern

Lorsban insecticide is produced by Dow Chemical, a major GM seed grower in Hawaii.

A recent study determined that Lorsban may interfere with gene expression and cell development with the human placenta as a possible "target organ." The authors thus call for further studies on pregnant women exposed to Lorsban (Ridano et al., 2012). Health effects of Lorsban and other organophosphate insecticides include delayed neurotoxicity, interference with brain development, possible adverse effects on fetal growth, increased risk of preterm delivery and spontaneous abortions, impairment in neurodevelopment and psychomotor indices, plus an inverse relationship between weight at birth versus level of exposure to Lorsban residues in umbilical cord plasma (Ridano et al., 2012).

Lorsban affects the nervous system, the brain and it is especially harmful to children (PANNA, 2004). A study found that fetal exposure resulted in "lower birth weight and length at age 3, delayed movement and mental and attention deficits" (Ruah et al., 2006).

Lorsban is also a "cholinesterase inhibitor, suspected endocrine disruptor and PAN Bad Actor pesticide" (PANNA, 2004). In addition, based on recently published studies "Scientists now estimate that as many as 1/4 of all U.S. children may have lower IQs due to eating foods sprayed with pesticides like chlorpyrifos" (PANNA, 2011). Also, "The vast majority of us - including children - carry breakdown products of the chemical in our bodies" (PANNA, 2011).

Lorsban residues were found in Latino families of Lindsay in the San Joaquin Valley of Central California. In 2005 Panups conducted surveys in Lindsay. From the 108 samples collected from drift catchers in 2005, Panups found that "Eighty percent contained chlorpyrifos, and the LOC [Level of Concern] was exceeded 23% of the time. In 2006, 28% of the 116 samples collected from six sites contained chlorpyrifos in levels that exceeded the LOC. That year, urine samples were also collected from 12 residents and tested for a metabolite of chlorpyrifos. The metabolite was found in everyone's urine; all but one had levels above the national average and above the level EPA says is 'acceptable' (Dinham, 2010).

Similarly surveys from drift catchers conducted in Parlier, California found Lorsban "in most samples—often in amounts exceeding LOCs" (Dinham, 2010).

4.9. Roundup (Glyphosate) Health Risks

For a list of several suspected health side effects, based on animal studies, go to:

https://docs.google.com/document/d/1FpOjzD_5UoPM9-ozbY8lyxGAQQkBTM8LEFzx4KZjng/edit?hl=en_US

A pdf version of this report (Health Effects of Roundup) can be downloaded from:

<http://dl.dropbox.com/u/33544971/RoundupHealth%20HV-11.pdf> and in: responsibletechnology.org/docs/RoundupHealth2011.pdf

Roundup (Glyphosate), Glufosinate herbicide, and Bt residues in Humans

Roundup residues have been found in blood samples of field workers or residents in rural communities that are in proximity to farms that apply herbicides. A recent survey from Germany found Roundup residues in the urine of community residents (Brändli and Reinacher, 2012). However, other than the abstract, I have been unable to review this paper because it is written in German, so for now the data needs to be treated with caution.

A recent study found that Roundup and Glufosinate herbicide residues, both used extensively to grow GM crops, were found in the body of non-pregnant women. The same study found residues of the Bt toxin in pregnant women, and in the fetus. The Bt toxin was found in 93% of pregnant women, and in 80% of fetal blood samples. The authors concluded that "Given the potential toxicity of these environmental pollutants and the fragility of the fetus, more studies are needed" (Aris and LeBland, 2011).

While Monsanto claimed that the low levels of Roundup found in non-pregnant women could be inconsequential, the authors of the study responded that "nothing excludes the possibility of disruptions caused by low doses of glyphosate in the long term. Thus, it is necessary to undertake large and long-term studies in humans" (Ariz, 2011b).

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4.10. Suspected or documented Health or Environmental Impacts for other Pesticides used by the GM Seed Industry in Hawaii

Dicamba

- Listed by the U.S. EPA as a developmental toxin.
- Negative reproductive effects;
- Cholinesterase inhibitor;
- Linked to non-Hodgkin's lymphoma;
- Surface and groundwater contaminant; (PPB, 2002).

Dimethoate

- Reproductive function in animals (Walsh et al., 2000).

Carbaryl

- Potential Endocrine disruptor
- Exposures may cause sterility or decreased fertility, impaired development, birth defects of the reproductive tract, and metabolic disorders
- Linked to spontaneous abortion
- Linked to non-Hodgkin's lymphoma
- Toxic to fish, bees and earthworms (PPB, 2002)

Glufosinate (herbicide used to grow GM glufosinate-resistant crops)

With respect to Glufosinate and its metabolites "it has been recognized that 3-MPPA is neurotoxic, as well as glufosinate, causing severe convulsions." Concerning its metabolites "data from Aventis indicates that NAG, formed in transgenic plants, can be reconverted into the active herbicidal form by micro-organisms in the digestive tract of warm-blooded animals, including humans. Thus, it is possible that 3-MPPA can undergo the same reversion and acquire the toxic effects of glufosinate. One more reason, 3-MPPA has been found more persistent and more mobile than glufosinate (Aris, 2011a).

Bacillus thuringiensis (Bt), Environmental Risks. Bt is an EPA registered pesticide that is embedded in Bt crops, such as on Bt GM corn varieties. Bt crops represent about 40% of the total acreage planted to GM crops globally. Concerns have been raised about potential environmental impacts when Bt residues reach non-target organisms. A recent survey of 217 streams in the Midwest found that 86% were contaminated with Bt corn residues. According to the authors over 250,000 Km of streams in the U.S. Midwest are within close proximity of corn fields. Its presence in aquatic habitats is an environmental concern because Bt residues may persist for up to 6 months in the water (Tank et al., 2010). A separate study determined that indeed Bt residues were harmful to some aquatic organisms (Rosi-Marshall et al., 2007). Some aquatic insects that had fed Bt pollen had reduced growth rates and greater mortality compared to non-Bt treatments. A separate study also showed that the Bt toxin increased with trophic

LATE

levels within the food-chain (Harwood et al., 2005), indicating the potential for risk, if the Bt toxin proves to be harmful to non-target organisms.

Bacillus thuringiensis (Bt), Health Risks. Concerns have been raised about potential health effects on humans and on field workers and communities exposed to dust from Bt crop residues. Recent research concluded that Bt residues in plants are not "inert" in terms of physiological activity in the body. The research found that the Bt residues, alone or in combination with the herbicide Roundup (Glyphosate) were toxic to human cells. Also, when combined with Roundup, Bt residues were found to promote *apoptosis*, or cell suicide (Mesnage et al., 2012). This finding follows earlier research showing that the Bt toxin promoted apoptosis in insect larvae cells (Loeb et al., 2000; Loeb et al., 2001). At the time Professor Joe Cummings criticized regulators for failing to address the known issue of apoptosis, and cautioned that "such agents require care in evaluating their impact on non-target animals and plants" (Joe Cummins, Sanet, email Feb. 11, 2005).

Other research based on animal studies found that Bt crops caused adverse effects on the kidney and liver, as well as some effects on the heart, adrenal glands, spleen and blood (Vendemois et al., 2009).

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5.0. Partial List of Pesticides used by the GM Seed Industry in Hawaii

Note: Pesticides listed in the complaint include Lorsban, Atrazine, Princep, Dual II Magnum, & Warrior. The list below provides only a partial list of the pesticides used by the GM seed industry in Hawaii. If you have additional information about pesticides used in Hawaii, or about potential health or environmental risks please send to: hector@hawaii.edu.

Note: The chemical active ingredient, and the manufacturer are listed below in parenthesis.

Note: Of the 28 pesticides listed below, used for the production of GM seed crops in Hawaii, 75% are manufactured and sold by the GM seed companies (Dupont/Pioneer, Monsanto, Syngenta, BASF, Bayer, and Dow).

Note: For a list of pesticides used by the GM seed industry in Hawaii, that have been been detected in surface waters, based on national surveys see Section 4.4.

Accent, (Nicosulfuron, produced by DuPont, parent of Pioneer Seed)
Aquamaster, open (Roundup, Glyphosate, produced by Monsanto)
Atrazine herbicide, Triazine family (Syngenta)
Asana XL rice, soybean (Esfenvalerate, produced by DuPont)
Banvel herbicide, (dicamba, dimethylamine salt of dicamba)
Basagran, nutsedge/broadleaf, corn (sodium salt of Bentazon, also produced by BASF)
Baythroid XL, Hoppers, earworm, corn (beta-cyfluthrin, restricted use pesticide, extremely toxic to fish and aquatic invertebrates, produced by Bayer)
Bicep II Magnum, herbicide, weeds, corn (Metolachlor & Atrazine, Syngenta)
Buctril, herbicide (bromoxinil, Bayer),
Callisto, herbicide, nutsedge, corn (Mesotrione, Syngenta)
Carbaryl, insecticide (Sevin)
Dimethoate, insecticide
Dual II Magnum, herbicide, corn (S-metolachlor, produced by Syngenta)
Ignite 280SL + AMS, herbicide, corn, open (Glufosinate-ammonium, Bayer)
Lasso (alachlor, produced by Monsanto)
Laudis, herbicide broadleaf, corn (tembotrione, Bayer)
Liberty herbicide (glufosinate-ammonium, Bayer)
Lorsban advanced, cutworm, thrips, worms, corn (chlorpyrifos, Dow Chemical)
Oberon 2SC, whiteflies, rice (Spiromesifen, Bayer)
PennCap-M, cutworms, corn (methyl parathion)
Permethrin, insecticide, leaf hoppers, corn (Pounce)
Phostoxin Pellets, insects, rice, soybean, corn (aluminum phosphide, restricted use pesticide)
Princep, triazine herbicide (Simazine, Syngenta)
Prowl herbicide (Pendimethalin, BASF)
Quadris fungicide, rice, soybean (azoxystrobin, Syngenta)
Roundup Powermax, screening, open, corn (Monsanto)
Tilt fungicide, blights, corn (Propiconazole, Syngenta)

LATE

Warrior II w Zeon, worms, leaf hoppers, corn, rice (Lambda-cyhalothrin, restricted use pesticide, Syngenta)

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