HB673
Testimony

NEIL ABERCROMBIE
Governor

RUSSELL S. KOKUBUN
Chairperson, Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF RUSSELL KOKUBUN
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEES ON AGRICULTURE AND ENERGY AND ENVIRONMENT
THURSDAY, MARCH 14, 2013
ROOM 229

HOUSE BILL NO. 673 HD 2
RELATING TO PESTICIDES

Chairpersons Nishihara and Gabbard and Members of the Committees:

Thank you for the opportunity to provide testimony on House Bill No. 673 HD 2. The purpose of this bill is to address public health and environmental issues relating to pesticides use by requiring the Department of Agriculture to post on its website information regarding restricted use pesticides. Specifically, this bill requires the Department to post on its website all reports the Department receives regarding restricted use pesticides. With the assistance of the Attorney General's Office, the concern has been raised that there is no provision allowing redaction of confidential material in these reports before posting.

Currently, for an individual public records request, the Department would look at the requested record to see if it contained personal privacy information like home address and home telephone number that are considered to be confidential. There may be other information in the targeted records, in addition to personal privacy information, that is protected from disclosure under Hawaii's Open Records Law, chapter 92F, Hawaii Revised Statutes (HRS). This bill does not recognize that reports received by the Department may contain protected information. The bill requires that the designated reports be displayed on the Department's website and makes no mention of protection for confidential information in the reports, including any investigation-related information that may be contained in the reports to be posted.

We would want to make sure that the protection provided for personal privacy information and other confidential information under chapter 92F, HRS, is preserved for the reports that are the focus of this bill. Therefore, we ask that the reports required to be posted on the Department's website under this bill be subject to chapter 92F, HRS.

Thank you for this opportunity to present our testimony.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Testimony of
WILLIAM J. AILA, JR.
Chairperson

Before the Senate Committees on
AGRICULTURE
and
ENERGY AND ENVIRONMENT

Thursday, March 14, 2013,
2:45 PM
State Capitol, Conference Room 229

In consideration of
HOUSE BILL 673, HOUSE DRAFT 2
RELATING TO PESTICIDES

House Bill 673, House Draft 2 would require the Department of Agriculture (DOA) to make reports of the use of Restricted Use Pesticides available online, and would require the Legislative Reference Bureau (LRB) to conduct a study of the requirements and costs of pesticide registries in other states. **The Department of Land and Natural Resources (Department) offers the following comments.**

As an island state, Hawai‘i relies on the use of approved pesticides to manage threats to agriculture and natural resources posed by non-native pests. The use of these pesticides is carefully considered and must follow the product-specific guidelines of the Environmental Protection Agency. Regarding the gathering of information relating to restricted use pesticides and posting of said information online by DOA, the Department defers to DOA in determining the efficacy of such postings and the capacity to provide such information.

Regarding the requirement of LRB to conduct an analysis of pesticide registries in other states, the Department offers the following general comments on the value of a pesticide registry. The addition of a new state system to register and track pesticides, along with the substantial amount of annual reporting associated with this system, would decrease the efficiency of the State's protective measures with regard to agriculture and natural resources. The creation of this system would increase the amount of bureaucratic oversight involved in initiating agricultural and conservation projects, increasing the time it would take to respond to new pests. Further, the creation, maintenance, and annual

reporting associated with this system would likely be costly. The original draft of House Bill 673 would have authorized DOA to charge a fee to cover those costs, meaning that the cost would have been borne by conservation practitioners and/or farmers.

Charlotte A. Carter-Yamauchi
Acting Director

Research (808) 587-0666
Revisor (808) 587-0670
Fax (808) 587-0681

LEGISLATIVE REFERENCE BUREAU
State of Hawaii
State Capitol
415 S. Beretania Street, Room 446
Honolulu, Hawaii 96813

Written Comments

HB673, HD2

RELATING TO PESTICIDES

Comments by the Legislative Reference Bureau
Charlotte A. Carter-Yamauchi, Acting Director

Presented to the Senate Committees on Agriculture and Energy and Environment

Thursday, March 14, 2013, 2:45 p.m.
Conference Room 229

Chairs Nishihara and Gabbard and Members of the Committees:

Good afternoon Chairs Nishihara and Gabbard and members of the Committees, my name is Charlotte Carter-Yamauchi and I am the Acting Director of the Legislative Reference Bureau. Thank you for providing the opportunity to submit written comments on H.B. No. 673, H.D. 2, Relating to Pesticides.

The purpose of this bill is to:

(1) Require the Department of Agriculture to publish on its website all reports received by the Department regarding restricted use pesticides in the State; and

(2) Require the Legislative Reference Bureau to conduct a study on pesticides that includes:

(A) Pesticide reporting requirements of other states as they relate to urban and agricultural areas;

(B) Pesticide use registry requirements of other states as they relate to urban and agricultural areas; and

(C) The costs incurred by other states to establish restricted pesticide use and registration programs.

While the Legislative Reference Bureau takes no position on this measure, we submit the following comments for your consideration.

As currently drafted, the purpose of the report required of the Bureau is somewhat ambiguous and, as such, may not provide the Legislature with whatever information it is seeking to obtain. For example, the requirement that the Bureau report on pesticide reporting and pesticide use registry requirements of other states as they relate to urban and agricultural areas does not provide sufficient guidance as to what is meant by "as they relate to urban and agricultural areas." In addition, the report required by the measure does not differentiate between household pesticide use and restricted pesticide use. Consequently, the report request could be interpreted to mean that the Bureau would have to survey: if and how the forty-nine other states regulate both household pesticide and restricted use pesticide use; and if and how such regulations differ between urban and agricultural areas. It is uncertain whether this is the intent.

Furthermore, and more importantly, we note that, for the Committees' information, after conducting some research on the issue of restricted use pesticide reporting requirements, the report required under this measure as to restricted use pesticides is unnecessary because the United States Department of Agriculture (USDA) already requires all states to either abide by federal restricted use pesticide recordkeeping requirements, or establish and maintain recordkeeping requirements deemed by the USDA to be *equivalent to federal requirements*.

The Federal Pesticide Recordkeeping Program was authorized by the Food, Agriculture, Conservation, and Trade Act of 1990, commonly referred to as the 1990 Farm Bill. The 1990 Farm Bill requires all private applicators to keep record(s) of their federally restricted use pesticide (RUP) applications for a period of two years. The USDA Agricultural Marketing Service's (AMS) Pesticide Recordkeeping Program administers the federal pesticide recordkeeping regulations. Under this federal law, all certified private pesticide applicators whose state has no RUP recordkeeping requirement must comply with the federal pesticide recordkeeping regulations.

AMS utilizes the services of state pesticide regulatory agencies to conduct record compliance inspections in states and territories that are under the federal pesticide recordkeeping regulations. There are currently twenty-seven states and two territories under the federal pesticide recordkeeping program.

Hawaii, twenty-two other states, and one territory operate under state or territorial recordkeeping regulations that are recognized by AMS as *equivalent to the federal regulations*. Certified private applicators in these states and territory are required to maintain RUP records required by their state or territorial regulations. In Hawaii, such records must be maintained for two years (see section 4-66-62, Hawaii Administrative Rules).

According to the AMS's website, in order to provide certified private pesticide applicators with a certain amount of recordkeeping flexibility, no standard federal form is required for recording RUP applications. However, there are nine required elements that must be recorded within fourteen days of each RUP application as follows:

- The Brand or Product Name; that is, trademark name of the pesticide being used.
- The Environmental Protection Agency (EPA) Registration Number.
- The total quantity of the pesticide applied in common units of measure.
- The date of the pesticide application, including month, day, and year.
- The location of the restricted use pesticide application. Options are by: (a) County; range, township, or section; (b) Identification system established by USDA, such as plat IDs used by the Farm Service Agency (FSA) or the Natural Resource Conservation Service (NRCS); (c) Legal property description as listed on the deed of trust or county/city records; or (d) An applicator generated identification system that accurately identifies the location of the application.
- Crop, commodity, stored product, or site being treated.
- Size of area treated (such as acres, linear feet, bushel, cubic feet, number of animals, etc.) which is normally expressed on the label in reference to the application being made.
- The name of the certified private applicator performing and/or supervising the application.
- The certification number of the private applicator.

The Federal Pesticide Recordkeeping Program also requires all certified private pesticide applicators to keep records of their use of federally restricted use pesticides (RUP) for a period of two years. AMS regulations pertaining to pesticide recordkeeping are found in the Code of Federal Regulations Title 7 Part 110.

In view of the foregoing, it seems that the information requested, at least as to restricted use pesticide, is already available. In short, the report requested of the Bureau seems to be an unnecessary waste of resources.

Thank you again for this opportunity to provide written comments.

HAWAII ORGANIC FARMING ASSOCIATION

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Toll Free: 1-877-ORG-ISLE (674-4753)

Tuesday, March 12, 2013

Re: H.B. 673 Relating to Pesticides

Committee Chairs Senator Nishihara, Senator Gabbard, Vice Chairs Senator Kouchi, Senator Ruderman, Committee Members,

HOFA (Hawaii Organic Farming Association) supports the passage of H.B. 673 HD2 provided it is amended to provide mandatory public disclosure of pesticide use.

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 supports passage of H.B. 673 HD2, with amendments adding mandatory public disclosure, for the following reasons:

1. Pesticides pose a potential risk to human and animal health, their use should be monitored.

2. The information that will be collected and reported will lead to an increased understanding of the use of pesticides in Hawaii.

3. The information thus collected will potentially alert the public to the amount of pesticides being used and any trends thereof, and help move society in the direction of reducing the use of these poisons, thus helping Hawaii move towards more sustainable and environmentally friendly methods of pest control.

4. Gives organic farmers the right to obtain information about pesticide use close to their farms; pesticide use by neighboring farms poses an economic risk to organic farmers and they need to have the right to obtain information about pesticides being sprayed on abutting properties.

Please vote in favor of H.B. 673 HD2 and amend it to require mandatory public disclosure of pesticide use.

HAWAII ORGANIC FARMING ASSOCIATION

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Respectfully submitted,

Mark Fergusson
President

HAWAII PEST CONTROL ASSOCIATION

Century Square – 1188 Bishop St., Ste. 1003*Honolulu, HI 96813-3304
Telephone (808) 533-6404 • Fax (808) 533-2739

March 14, 2013

Testimony To: Senate Committee on Agriculture
Senator Clarence K. Nishihara, Chair

Senate Committee on Energy and Environment
Senator Mike Gabbard, Chair

Presented By: Tim Lyons, CAE
Executive Director

Subject: H.B. 673, HD 2 - Relating to Pesticides.

Chair Nishihara, Chair Gabbard and Members of the Joint Committees:

I am Tim Lyons, Executive Director of the Hawaii Pest Control Association. It is our members that routinely treat people's homes, workplaces and other areas visited by the public for structural pests including things like cockroaches, centipedes, fleas, mites, mosquitos, bed bugs and termites.

We have very mixed emotions about this bill. First, we think it is important to understand that restricted use pesticides are those that require application by a certified applicator. The individual is certified by testing and fulfilling continuing education requirements. General use pesticides, on the other hand, might best be described as "over the counter" although some have labels which dictate "for professional use only" they, in essence, are available to anybody. Pest control operators just happen to have the expertise, the experience and the "know how" of when to apply them, how much to apply and how not to over apply.

We have very strong reservations about making information available about restricted use pesticides on the website. Competitors wanting to know something about their competition including how much they use of what would have this information available. On the mainland (fortunately not in Hawaii) there have been reported fears of ecotourism; that is, individuals finding out about this information and using it to determine whether a theft or a hijacking is going to be worth the trouble and the risk. We do not however have a problem with this information being available, but on the website it would appear to be problematic.

This bill also calls for a study by LRB and we think it is missing one very important factor. While it does discuss the cost incurred by other states to establish a registration program, it does not discuss the benefits of implementing such a program. In other words, are the benefits, particularly in relationship to the cost, worthwhile and in proportion? As proof of such a proviso it would be interesting to find out the number of times that this information is accessed right now with the Department of Agriculture since restricted use pesticides sales reports are already required to be provided on a monthly basis to DOA.

In conclusion, we believe that if the Committee is going to pass this bill it definitely needs to have a cost benefits feature to the study and we believe that the information should be retained and accessible at the Department of Agriculture not on a website.

Thank you.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: JeffreyUDV@aol.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Wednesday, March 13, 2013 9:05:17 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jeffrey Bronfman	Aurora Foundation	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: athurston@irmt.org
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 5:30:05 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Anne Thurston	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: aniko65@live.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Monday, March 11, 2013 10:54:47 AM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Avi Okin	Individual	Support	No

Comments: Allowable pesticides need to be in the Public domain.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: barb@punapono.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 10:51:17 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Barb Cuttance	Individual	Comments Only	No

Comments: I strongly support this bill, please pass.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: bmurphy420@mail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 9:59:35 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brian Murphy	Individual	Support	No

Comments: We have the right to know there spraying & How much!

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To: AGL Testimony
Cc: peepail@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 12:08:49 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Christopher Kasak	Occupy Monsanto (OWS~Maui)	Comments Only	No

Comments: Informed consent is a fundamental human right. What in the world are they spraying? How much? How can we gage what effects without independent peer review and assesment EIS? Malama Aina or kick rocks.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lotuslover@hotmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Tuesday, March 12, 2013 11:21:53 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Courtney Bruch	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: peacesubhadra@gmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 12:16:16 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
D. Corcoran	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: dan.marks99@gmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 4:09:32 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Dan Marks	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: res1z0vb@hawaiiantel.net
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 2:03:52 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Dana G. Moss	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: mealaaloha@aol.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 8:22:15 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Daniel Bishop	Individual	Support	No

Comments: I am in support of HB673, but would like more mandatory public disclosure of the use of poisons through out our state.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: davidlhenkin@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Friday, March 08, 2013 5:10:20 PM

HB673
Submitted on: 3/8/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
David Henkin	Individual	Support	No

Comments: Please ensure that the public can access accurate and comprehensive information about the pesticides being used in our communities. Mahalo.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: Kumukahi77@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 10:41:48 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

Comments: Empower the people to know what poisons are being used on People and Aina.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: djp@kona.net
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 12:59:15 PM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Douglas Phillips	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: inunyabus@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 8:47:01 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Elaine D.	Individual	Support	No

Comments: Why hasn‘t this been in place before now?

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: garypopkin@yahoo.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:42:47 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
gary popkin	Individual	Support	No

Comments:

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Cc: gysiemee@hotmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:42:17 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Geiselle Meek	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lizcrosson@aol.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Monday, March 11, 2013 4:18:32 AM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
James Heidelberg	Individual	Comments Only	No

Comments: I support this bill.

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Cc: jpappas60@gmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Tuesday, March 12, 2013 6:53:02 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Janet	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: palmtree7@earthlink.net
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Monday, March 11, 2013 8:35:47 AM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
janice palma-glenie	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: Jaymanmolokai@live.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 11:34:07 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jay w Duquette	Individual	Support	No

Comments: We as citizens of this state have a right to know when, where, and what type of chemicals are being used by agriculturalists. I support this bill but cannot understand why it would take until 2050 to take effect. I sincerely hope that was a typo in the introduction. Please put the citizens of Hawaii first, think of our health and the health of those future generations who will benefit from this type of regulation. Aloha and mahalo for your time.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: jeannine@hawaii.rr.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Saturday, March 09, 2013 4:37:27 PM

HB673
Submitted on: 3/9/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jeannine Johnson	Individual	Support	No

Comments: In 1981, got married and became pregnant with my oldest son who was born in April of 1982. I lived in fear until his birth because Del Monte's spraying of the highly toxic pesticide heptachlor on its pineapple fields and feeding the pineapple tops to dairy cows contaminated Hawai'i's milk supply at that time. Can you imagine being told to "drink more milk" for your unborn baby and then worrying that the milk that you drank was poisoning him? Heptachlor is a carcinogen and the effects of this contamination were wide-spread. I had breast cancer in 2005 and, to this day, I still fear that my son will come down with cancer related to the milk that I drank when he was a fetus. One of the biggest users of pesticides, corporate conglomerate Monsanto, is also one of the highest bidders for farmland in Hawai'i, with statewide acreage increasing at an average rate of over 300 acres per year. In the U.S., the genetically engineered crops like those grown on Monsanto's farmlands increased overall pesticide use by 318.4 million pounds over their first 13 years on the marketplace (1996–2008) according to a study derived from U.S. Dept. of Agriculture data. Increased concentration of chemicals in air, water, and soil in the communities surrounding GE fields is a legitimate public health concern. Pesticides persist in soil, may leach into groundwater, and is very irritating to eyes. Chronic exposure has been linked to developmental disorders and autoimmune deficiencies. Please don't sentence our families to live in fear that their children are being poisoned by Monsanto just so they can make money. We deserve to live in a healthy environment and environmental justice demands that you pass HB673 HD2. Mahalo!

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: jsacher@kona.net
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 8:03:08 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jeff Sacher	Individual	Support	No

Comments:

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Aloha Representatives,

Thank You for considering my testimony today in support of HB673. I am a very concerned mother. These pesticides we are talking about are lethal to pollinators as well as aquatic life. They are poisoning the air air and drinking water. This concerns me deeply. Having some sort of way to monitor, regulate and minimize use should be a top priority.

Science has been relatively clear in predicting how few are the years between when the bees die and when the humans follow them. It appears now that the honey bees are pretty well on their way to extinction- in the majority of the globe.

Up till now it was considered something of a mystery as to who killed them.

New scientific evidence is now emerging to explain very clearly the sequence of steps - between Monsanto's marketing of GMO corn - and the death of the bees. Here below, please find the paper - with abundant references.

The global bee die off did not reach Brazil for example until just after they let in Monsanto's GMO corn. Now it is Australia's turn. That is one of the few places in the world which still has healthy bees. The test is whether they will follow the foolish lead of Brazil in letting in GMO corn.

Here is the deadly sequence of steps which created our global funeral for the bees:

1. 1. Monsanto decides- that since the bacteria Bacillus thuringiensis - kills a corn parasite- to insert the DNA sequence from that bacteria IN to their GMO corn.
2. The BT in the corn pollen causes an immune system response (rather like triggering a sneeze) in the bees- similar to if they had eaten the BT directly - also causes holes and porosity in the gut.
3. During the summer- the bees have enough protein to tolerate the immune 'sneeze' response- and still learn navigation ... BUT during the winter when protein (pollen) is in rather short supply in the hive- bees had evolved a survival response. IF a bee's immune system was threatened in Winter - then the hive was best served if it was eliminated. The way this works - is that the protein normally invested in learning and remembering complex navigation requirements- has gone into immune reaction- and so - those bees - immune challenged - get lost trying to get back to the hive. (Rather like the older people of the Eskimo's who simply don't show up at the next igloo in the march - during Winter).
4. This accounts for the facts:
    a. CCD - Colony Collapse Disorder was originally called: Fall Dwindle Disease - because the bee disappearance almost always is worst just as Winter sets in.
    b. It also explains why the few dead bees who are found- have the same blackened & porous guts- like bees responding directly to the BT.
    c. It also explains why the global bee die-off generally followed the spread of GMO crops.

COLONY COLLAPSE DISORDER AND GENETICALLY MODIFIED CROPS

by **Peter Olson** BA. Dip Ed.
Original version published in The Northern Star
NSW, Australia

- Genetically modified (GM) crops often contain a bacterium called Bacillus Thuringiensis (Bt)
- Most of the research on Bt has looked at the directly lethal

affects of Bt and little research has looked for indirectly lethal affects the Bt

- Some insects have been shown to survive the Bt poison by having a strong immune response to the Bt poison. (Ref R)
- Insects generally and Bees specifically, have been shown to experience learning impairment and memory disorder, if they have an immune response. (Ref A1, B, D, E)
- A learning impairment or memory disorder would mean that Bees could not navigate back to their beehive
- Thus, a learning impairment or memory disorder is lethal to a foraging Bee
- Colony Collapse Disorder (CCD) of Bees, was originally called Fall Dwindle Disease, meaning the disease occurred in the cold months of the year
- Bees use protein to construct a memory and their protein comes from pollen, but in winter there is no pollen
- Bees also use protein to achieve an immune response, so an immune response in winter, means all protein reserves are rapidly used up and none are left for memory formation. (Ref D)

Have you ever noticed that when you are sick, that you can't think quickly and clearly? It's a bee gets sick and can't think probably, it will not be able to return to its beehive.

Studies listed below show that learning in bumblebees is impaired, if the bumblebee has an immune response (Ref A1,B,D,E).

The insecticide Bt is incorporated into many genetically modified crops and Bt causes an immune response to a wide range of creatures in nature, even if it does not kill those creatures. (Ref Q,R,S)

It is a virtual certainty that the bumblebee does have an immune response to the Bt present in the pollen of genetically modified plants.

Bees only carry enough honey with them to fly directly to the target flowers and straight back to the beehive. The navigation to and from those flowers is extremely complex and so requires the bee to have a very good memory. Since learning and memory are impaired in bees that have an immune response, bees with an immune response get lost, run out of honey fuel, fall to the ground and are then are carried away by ants. Thus, if a bee gets lost, for even a few minutes, it is dead.

The *Encyclopedia Britannica* states of CCD that,

> "it appears that the disorder affects the adult bees' ability to navigate". (Ref Y)

Thus suggesting that worker bees fly out from the high hive to collect food, but get lost and never return.

In the case of the viruses and pathogens that have been suggested as causes of CCD, those viruses and pathogens result in large numbers of dead bees either inside or outside of the beehive. Dead bees are found outside the hive, because worker bees carry dead bees outside.
In CCD, the symptoms are that no dead bees are found inside or outside the beehive, rather all the,

> "worker bees from a beehive or European honey bee colony abruptly disappear" (Ref V).

One of the most common traits inserted into man-made genetically modified crops is

resistance to caterpillars, which is given by inserting a gene for a naturally occurring insecticidal bacterium called Bacillus thuringiensis (Bt).
In crops that are genetically modified to contain this Bt gene, the Bt will be present not only in the plants leaves and fruit but also in the pollen of the flowers. Thus Bees that take pollen from genetically modified crops are ingesting significant quantities of Bt insecticide. Many scientists have assured the public that Bt is safe, because Bt is not directly lethal to Bees.
However alcohol is also not directly lethal to a car driver, yet many car drivers have died from alcohol, even though alcohol is not directly lethal to a car driver. Scientists looking for a cause for CCD have generally looked for a direct cause, something such as virus or parasite, that is directly killing the bees. Discovering an indirect cause of mortality in bees, would be much more difficult and would only occur after scientists had first exhausted examining the most probable direct causes of mortality in bees.
A review of the literature shows that at the time of writing, according to **Cox Foster** et al 2009,

> "no single culprit has been identified" as the cause of CCD (Ref Z3).

German research (Ref C), showed that bees who were fed Bt were not killed by the Bt, but that they became greatly more susceptible to a subsequent disease challenge.
The Jenna University study showed that mortality in Bees exposed to a parasite, was far greater in Bees that had previously been fed BT, compared to Bees that were not previously fed BT (Ref C). Meaning that BT increased the susceptibility of Bees to the pathogen and thus Bt multiplied the mortality caused by the pathogen.
In regard to that increased mortality from a pathogen combined with Bt ingestion, the authors concluded,

> "the significant differences indicate an interaction of toxin and pathogen on the epithelial cells of the honeybee intestine. The underlying mechanism which causes this effect is unknown" (Ref C).

This is a highly significant finding because when GM crops containing BT were being approved, the universal assumption was, that GM crops containing Bt would be totally safe, because Bt has no effect on bees. Thus government scientists who approved GM Bt crops, would clearly have objected to those crops, if they thought that GM crops containing Bt would adversely affect bees.

In the USA, Cox Foster et. al. state of the CCD bee colonies that they studied,

> "we hypothesized that something had compromised the bees' immune system, making them susceptible to any number of infections that healthy colonies would normally fend off" (Ref Z3).

This sounds quite similar to the Jenna University findings above. Furthermore, Cox Foster et. al. note that their Bee autopsies found symptoms never observed before, such as scar tissue in the internal organs (Ref Z3).

Bt is a living bacterium, that forms crystals of *proteinaceous insecticidal endotoxins*, whose mode of action is to form a pore or hole in the insect's gut cell membranes (Ref Z2).
Since the mode of action of BT is to damage the gut lining and since Cox Foster et al. found scar tissue in the internal organs of Bees, the question must be asked, was the damage to the internal organs of Bees that Cox Foster et. al. found, caused by the Bt in the pollen of GM crops, that the bees ate?
Cox Foster et al. 2006 noted during the autopsies,

> "when wet mounts were examined they appeared to have crystalline arrays" and that "Crystal-like formations were observed in the thorax" (Ref Z4).

Bt toxins are crystalline.

Cox Foster et al. 2009, did consider the possibility that bees with CCD may have been poisoned by pollen from genetically modified crops. However the authors refer to earlier research, showing that the Bt toxin is only activated in certain insects and they note that the Bt toxin does not work in the digestive tracts of honeybees (Ref Z3).
Thus because of prior research showing that bees are not killed by Bt, and that BT cannot possibly effect bees, many bee scientists have avoided testing Bt on Bees, believing such testing has already taken place and have thus ruled out GM Bt as possible cause of CCD of Bees. The online encyclopedia Wikipedia takes a very different view however and does list GM crops as a possible cause of CCD (Ref V).

Testing for subtle, sub-lethal effects or synergistic affects of Bt with other organisms, where Bt is a cofactor, rather than a singular causative agent, has only been done recently. Where such testing has been done, the finding of sub-lethal effects or cofactor effects, was often by chance, rather than planned.
It was only by chance that the bees in the above mentioned Jena University study became infected with a parasite and thus only by chance that the scientists observed the synergistic effect, of combining a pathogen and Bt. The results of a growing number of studies, now show clear and substantial, non-lethal effects and cofactor affects, of Bt on Bees; a dramatic change from the previous scientific view, that Bt has no effect on Bees.

Even so, the non-lethal effects and cofactor affects of Bt on Bees still remain scantily studied and more research on these subtle kinds of affects is urgently required.

Ramirez et. al. 2008, tested Bt toxin on honeybees and discovered substantial non-lethal affects on the bees, including "disturbed learning performances".
Ramirez et al. concluded:

> "Our results show that transgenic crops expressing (Bt) Cry1Ab protein at 5,000ppb may affect food consumption or learning processes" in Bees (Ref B).

The honeybee depends upon an unusual array of complex learning processes, in order to successfully find its food and navigate back to the beehive.
Unlike a car driver who may not remember exactly where the car is parked, in a large parking lot and who can afford to take some time to find the car, the honeybee cannot afford to forget, even for a short time, exactly where the beehive is located, even if the hive is several miles away. Memory impairment is not lethal to humans, but memory impairment and learning impairment is indeed lethal to honeybees. Thus in addition to causing increased disease susceptibility, BT is also shown to produce cognitive impairment in Bees.

It is important to note that BT is not the only insecticidal that has been shown to cause cognitive impairment in Bees.
Cox Foster et al. mentioned in 2006, that Neonicotinoid insecticides can produce sub-lethal effects, such as learning impairment and that as a result of a such learning impairment, Bees "may not be able to learn the location of the hive" (Ref Z4) and may thus may be unable to navigate back to the hive.
So one can now see, a proven trend, of learning impairment in Bees, caused by insecticide exposure at a sub-lethal dose. Cox Foster et al. 2006 clearly state what happens when Bees eat pollen contaminated with sub-lethal doses of neonicotinoid insecticides.

> "If bees are eating fresh or stored pollen contaminated with these chemicals at low levels, they may not cause mortality but may impact the bee's ability to learn or make memories" (Ref Z4).

That sounds very similar to the above reference from Ramirez et al. 2008 who found "disturbed learning performances" in Bees after consumption of GM Bt pollen (Ref B).

So the learning impairment in Bees, induced by consumption of insecticidal GM Bt pollen, can be seen as part of a larger trend for sub-lethal doses of certain insecticides, to produce learning impairment in Bees.

The difference between a neonicotinoid insecticide spray and the Bt insecticide in a genetically modified crop, is that the former is very easy to restrict or recall, whereas the latter may prove impossible to recall. With genetic materials, the quantity of GM material in existence gets bigger as time passes. If a problem develops with a GM crop, then that problem will likely increase as time passes.

The fact that CCD can be transmitted by beehive equipment could be to do the presence of the Bt bacterium in that beehive equipment and and the fact that Cox Foster et. al. were able to break the cycle of CCD by irradiating the beehive equipment (Ref Z) and restocking with a new supply of Bees, could be due to the fact that the Bt bacterium was killed by the irradiation.

In order to understand CCD, or the disappearance of bees, one needs to understand something about the specialized lifestyle of the bee. In order to save weight and increase performance, bees only carry enough fuel (honey) to fly directly to the target flowers and then straight back to the beehive. If a bee gets lost, or encounters unexpected head-winds, it will not have enough fuel reserves to make it back to the beehive. Instead it will fall to the ground and die.
Ants will then carry the dead bee down into the ant nest.

Memory is also crucial to bees because a bee has to learn from other bees in the beehive, where the target flowers are located. The Bee must memorize the directions from the hive to the target flower and back again, so a perfect memory is essential for the survival of bees. Other insects like mosquitoes are less reliant on a good memory, and simply "follow their nose" to the food - whereas bees rely on memorizing complex navigation tasks and memorizing specific aromas (Ref F), to find specific food and then to find their way back to the beehive.
If one was to impair the learning or memorizing ability of bees, that would cause indirect mortality in bees, since they would not be able to find their way back to the hive.

GM Bt pollen is widely known not to kill bees directly, but was not tested prior to the release of GM Bt crops, for the ability of GM Bt pollen to kill bees indirectly, through impairing the memory of Bees.

There is scientific agreement that many different things can be lethal to Bees - such as disease, chemical sprays and even certain seed coatings.

In the Flour Moth Ephestia kuehniella, a non lethal response to Bt and "tolerance (of Bt) correlates with an elevated immune response" to the Bt. (Ref R). For 99.99 percent of creatures, such a non-lethal immune response to Bt is of no practical significance and because of this, Bt is referred to as "soft" and is used widely in organic agriculture. There is however one particular species that is very unusual, in that it has a life threatening response, to sub-lethal immune stimulation (Refs B, D, E) and that species is the Bee. Immune response in Bees, can lead to memory loss and learning impairment (Ref B,D,E) and as previously stated, loss of memory would cause bees to forget where the beehive is located.
Bees are insects and an,

> "immune response inhibits associative learning in insects" (Ref E).

Bees are now eating GM Bt pollen and Bt is toxin known to cause a non-lethal immune response in a wide variety of creatures (Ref Q,R,S).

Bees use up protein in memory formation and they also use up protein if they have an immune response (Ref D). Bees only protein source is pollen and if pollen is in short supply and bees have an immune response, they will use all available protein for the immune response, leaving none available for memory formation (Ref D).
Pollen for bees is in short supply during Autumn and Winter, so if bees have an immune response when pollen is in short supply, they will lose their memory (Ref D). CCD was originally called *Fall Dwindle Disease*, meaning loss of bees in the Autumn, when pollen from flowers is in short supply. If bees loose their memory, they lose their navigational skills, they fail to find their way back to the beehive, they fall to the ground, die and get carried away by ants and are never seen again.
As mentioned above, the loss of memory due to an immune response, is not confined to Bees, but occurs in insects generally.

> "The cost of an immune response (in insects) therefore not only affects survival of the host…. but also everyday behaviour and memory formation" (Ref E).

This learning impairment was only discovered recently (Ref E), long after GM crops had already been planted, however the effects of the GM Bt crops will go on for millions of years, since, like other introduced foreign species, GM crops can not be recalled.

During discussions with various Bee scientists, the writer was unable to find any scientist who had ever heard that insects and Bees loose their memory if they have an immune response. Perhaps the reason they did not know, is because the discovery of an immune - memory relationship in insects is very recent.
There is no evidence of direct mortality in bees from exposure to GM Bt crops, yet there is substantial evidence of sub-lethal effects in Bees from such exposure, that can result in high indirect mortality of Bees. If every air plane pilot had a sudden, non-lethal lapse of memory, there would be chaos which could cause in high mortality. Similar chaos occurs for Bees if they have a sudden lapse in memory, caused by an immune response and coincident pollen protein deprivation (Ref D).

When speaking to a PhD at a Gene Regulator's office, that PhD scientist described some of the information herein as "new" and not previously known by that Gene Regulator. Scientists that wish to defend GM Bt crops, need to counter the proven scientific evidence of indirect mortality in Bees that is provided herein, rather than simply stating that GM Bt pollen is not directly lethal to Bees.

Bt toxins produce sub-lethal effects in Bees and those sub-lethal effects result in changes in the Bee's "feeding behavior", "learning processes" and "foraging efficiency" (Ref B). Behavior change is evidence of learning impairment, and learning impairment can lead to lethal situations for Bees in the field - navigation problems and reduced flower finding abilities (Ref F), which are dependent on a perfect memory.

The different kinds of toxic GM Bt crystalline proteins are designated with different letters; Cry1A, Cry2A, Cry3A, etc.
Scientists in Mexico discovered that,

> "the Bt toxin Cry1Ab caused reduced foraging activity in bees after they were fed with syrup containing the toxin" (Refs A, A1).

Something new is being put into the Bee's environment; something which is herein shown to impair the Bees functions and to increase their mortality from diseases such as parasites (Ref C).
Bees do not simply go out and look for any flower. They learn and memorize the aroma and location of a specific flower while in the hive, then they fly directly to that specific flower's location (Ref F). Memory impairment would thus prevent Bees from finding a specific flower's location and similarly prevent Bees successful return to the hive.

It is crucial to understand that with CCD, dead Bees are seldom found in or near the hive.
When Bees are attacked by the lethal Bee mite,

> "thousands of dead bees will pile in front of the hive" (Ref U), as a result of infestation.

In the case of CCD however, few if any dead Bees are ever found in or around the hive. Hence although Varroa mite is a serious disease of Bees, its symptoms do not match the symptoms of CCD. Also, the timing of Varroa mite infestation does not match the timing of CCD appearance. Varroa first entered Japan in 1960's, Brazil in 1971, France in 1982 and the USA in 1987 (Ref T), but CCD was first noticed in USA around 2004, and in Europe about 2006, many, many years after Varroa arrived, but only shortly after GM crops were widely planted.
The writer does not wish to rule out other possible causes for CCD, because the intent is to simply demonstrate that GM Bt crops may harm Bees, regardless of whether they are the sole cause CCD or not.
It took decades to show that cigarette smoking was harmful and it could take just as long to gain consensus over the cause of CCD. It is simpler to suggest GM Bt pollen causes Bee memory loss (Ref D, E). That memory loss occurs when Bees have an immune response and are deprived of pollen (Ref D).

The *German Speigel article* states that the bacterial toxin in the genetically modified corn may have "altered the surface of the bee's intestines, sufficiently weakening the bees to allow the parasites to gain entry" (Ref C).
Wikipedia says that the mode of action of Bt through making pores or holes in the gut lining (Ref T) and such holes caused by Bt, would obviously allow the parasites a new and easy pathway into the Bee. Is it not logical, that Bt exposure in the wild, would cause a similar, significant increase in mortality from parasites, like Microsporidia, just as it did in the trials (Refs A2, C)?

Bees are a key species for human food supply and bio-diversity and several lethal risks to Bees from GM Bt pollen are demonstrated here.

Britain's chief scientist Sir **David King**, once *proudly* stated that Genetically Modified (GM) crops "could solve third world hunger". Later he admitted that his claim was wrong (Ref M) and in fact the real outcome would appear to have been the exact opposite of his prediction. Now that GM crops have been widely planted and hence can not be recalled, we learn that GM crops actually produce significantly lower yields than natural varieties do.
A large American study showed that,

> "modified soya produces 10 per cent less food than its conventional equivalent" (Ref O).

REFERENCES

NB: References with a PMID number can be found at the US National Library of Medicine website below, by simply typing the PMID number in the search box and hitting the enter key.
http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&TabCmd=Limits

- Ref A.
  ISIS Press Release 26/04/07
  Dr. Mae-Wan Ho and Prof. Joe Cummins (Ontario Univesity)
  http://www.i-sis.org.uk/MysteryOfDisappearingHoneybees.php
  Mystery of Disappearing Honeybees - Quote: "The Bt toxin Cry1Ab caused

reduced foraging activity in bees after they were fed with syrup containing the toxin"

- Ref A1
  Ramirez-Romero R, Chaufaux J and Pham-Delègue M.
  Effects of Cry1Ab protoxin, deltamethrin and imidacloprid on the foraging activity and the learning performances of the honeybee Apis mellifera, a comparative approach Apidologie 2005, 36, 601-11.
- Ref A2
  The effects of Bt maize pollen on the honeybee, 2001-2004 Jena University, GMO Safety, Federal Ministry of Education and Research,
  http://www.gmo-safety.eu/en/safety_science/68.docu.html
  http://www.gmo-safety.eu/en/oilseed_rape/honey_bees/339.docu.html
  http://www.gmo-safety.eu/en/safety_science/195.docu.html
- Ref B.
  Ecotoxicol Environ Saf. 2008 Jan 16
  Does Cry1Ab protein affect learning performances of the honey bee Apis mellifera L. (Hymenoptera, Apidae)?
  Ramirez-Romero R, Desneux N, Decourtye A, Chaffiol A, Pham-Delègue MH.
  Instituto de Ecologia A.C., Km. 2.5 Carretera Antigua a Coatepec No. 351 El Haya, 91070 Xalapa, Veracruz, Mexico.
  The tested concentrations of Cry1Ab protein did not cause lethal effects on honey bees. However, honey bee feeding behavior was affected when exposed to the highest concentration of Cry1Ab protein, with honey bees taking longer to imbibe the contaminated syrup. Moreover, honey bees exposed to 5000ppb of Cry1Ab had disturbed learning performances. Our results show that transgenic crops expressing Cry1Ab protein at 5000ppb may affect food consumption or learning processes and thereby may impact honey bee foraging efficiency.
  PMID: 18206234 [PubMed - as supplied by publisher]
- Ref C.
  http://www.spiegel.de/international/world/0,1518,473166,00.html
  University of Jena, Germany, 2004
  Spiegel Online International: March 22, 2007
  - COLLAPSING COLONIES
    Are GM Crops Killing Bees?
    By Gunther Latsch
    quote: "when, by sheer chance, the bees used in the experiments were infested with a parasite... a "significantly stronger decline in the number of bees" occurred among the insects that had been fed a highly concentrated Bt poison feed."
    According to Hans-Hinrich Kaatz, a professor at the University of Halle in eastern Germany and the director of the study, the bacterial toxin in the genetically modified corn may have "altered the surface of the bee's intestines, sufficiently weakening the bees to allow the parasites to gain entry -..."
- Ref D
  Brain Behav Immun. 2006 Mar;20(2):135-8. Epub 2005 Aug 9.
  Insect psychoneuroimmunology: immune response reduces learning in protein starved bumblebees (Bombus terrestris).
  Riddell CE, Mallon EB.
  Department of Biology, University of Leicester, UK.
  There is evidence that protein is intricately involved as this immune induced reduction in memory only becomes apparent after the bees are deprived of pollen (their only protein sources)".
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- Ref E

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Immune response inhibits associative learning in insects.
Mallon EB, Brockmann A, Schmid-Hempel P.
Ecology and Evolution, ETH Zürich, ETH-Zentrum NW, CH-8092 Zürich, Switzerland.
Here, we present behavioural evidence indicating a link between the immune system and the nervous system in insects. The cost of an immune response therefore not only affects survival of the host, as previously shown, but also everyday behaviour and memory formation.
PMID: 14667337 [PubMed - indexed for MEDLINE]
Related Links
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  Katie Mantell 19 April 2002
  http://www.scidev.net/News/index.cfm?fuseaction=readNews&itemid=145&language=1
  Quote: The Mexican government has confirmed earlier reports that transgenic maize is growing within the country's borders and has apparently contaminated wild varieties, despite a national ban on the cultivation of genetically modified (GM) crops. A government-commissioned study has shown that as many as 95 per cent of maize fields in the Mexican states of Oaxaca and Pueblo contain evidence of GM 'contamination'.
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  http://en.wikipedia.org/wiki/Horizontal_gene_transfer
  Lateral gene transfer (LGT), is any process in which an organism transfers genetic material to another cell that is not its offspring.
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  The only human clinical trial showed that transgenes from soy transfer into intestinal bacteria.
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  Nature,November 29 issue 2001,
  David Quist and Ignacio Chapela, University of California
  Quote: "showed that DNA from GM maize had been found in wild varieties" Lateral Gene Transfer.
- Ref K
  Proc Natl Acad Sci U S A. 2007 Oct 9;104(41):16204-8. Epub 2007 Oct 8.
  Toxins in transgenic crop byproducts may affect headwater stream ecosystems.
  Rosi-Marshall EJ, Tank JL, Royer TV, Whiles MR, Evans-White M, Chambers C,
  Griffiths NA, Pokelsek J, Stephen ML.
  Department of Biology, Loyola University Chicago, Chicago, IL 60626, USA. erosi@luc.edu

  We show that corn byproducts, such as pollen and detritus, enter headwater streams and are subject to storage, consumption, and transport to downstream

water bodies Laboratory feeding trials showed that consumption of Bt corn byproducts reduced growth and increased mortality of nontarget stream insects. Stream insects are important prey for aquatic and riparian predators, and widespread planting of Bt crops has unexpected ecosystem-scale consequences.

PMID: 17923672 [PubMed - indexed for MEDLINE]

- Ref L
  http://www.hort.purdue.edu/rhodcv/hort410/genint/ge00001.htm
  Department of Horticulture and Landscape Architecture
  Purdue University, West Lafayette, IN USA
- REF M
  Scientist who claimed GM crops could solve Third World hunger admits he got it wronghttp://www.dailymail.co.uk/pages/live/articles/technology/technology.html?in_article_id=503339&in_page_id=1965&ito=1490
  18 December 2007
- Ref O
  The Independent. Exposed: the great GM crops myth
  Jeoffrey Lean 20/04/2008
- Ref Q
  Mol Immunol. 2007 Feb;44(6):1209-17. Epub 2006 Aug 22.
  Analysis of the cellular immune response induced by Bacillus thuringiensis Cry1A
  toxins in mice: effect of the hydrophobic motif from diphtheria toxin.
  Guerrero GG, Russell WM, Moreno-Fierros L.
  Universidad Nacional de MÃ©xico.
  Insecticidal Cry1A toxins from Bacillus thuringiensis elicit strong humoral immune response in mice.
  PMID: 16930715 [PubMed - indexed for MEDLINE]
- Ref R.
  http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=365683#id2782119
  Proc Natl Acad Sci U S A. 2004 March 2; 101(9): 2696-2699.
  Published online 2004 February 20.
  Quote: We present evidence that tolerance to a Bt formulation in a laboratory colony of the flour moth /Ephestia kuehniella/ can be induced ….. and that the tolerance correlates with an elevated immune response.
- Ref S
  http://www.ehponline.org/members/1999/107p575-582bernstein/bernstein-full.html
  Environmental Health Perspectives Volume 107, Number 7, July 1999
  Immune Responses in Farm Workers after Exposure to Bacillus Thuringiensis Pesticides
  Leonard Bernstein, Jonathan A. Bernstein, Maureen Miller, Sylva Tierzieva,1 David I. Bernstein, Division of Immunology, Department of Internal Medicine, University of Cincinnati, USA. Quote: Exposure to Bt sprays may lead to allergic skin sensitization and induction of IgE and IgG antibodies
- Ref T
  http://en.wikipedia.org/wiki/Bacillus_thuringiensis
- Ref U
  http://beelab.osu.edu/factsheets/sheets/varroa_mites.htm
  Dr. James E. Tew, Associate Professor of Entomology, Beekeeping Consultant quote: Colonies can die so fast from high Varroa infestations that thousands of dead bees will pile in front of the hive.
- Ref V
  http://en.wikipedia.org/wiki/Colony_Collapse_Disorder

- Ref W
  http://cat.inist.fr/?aModele=afficheN&cpsidt=17736738
- Ref X
  http://www.i-sis.org.uk/agrobacteriumAndMorgellons.ph
- Ref Y
  http://www.britannica.com/EBchecked/topic/1348211/colony-collapse-disorder
- Ref Z
  Science 12 October 2007:Vol. 318. no. 5848, pp. 283 - 287
  A Metagenomic Survey of Microbes in Honey Bee Colony Collapse Disorder
  Diana L. Cox-Foster Et Al
- Ref Z2
  http://en.wikipedia.org/wiki/Bacillus_thuringiensis
- Ref Z3
  Solving the Mystery of the Vanishing Bees
  Scientific American Magazine - March 31, 2009
  Cox-Foster D. and vanEngelsdorp D.
- Ref Z4
  Fall Dwindle Disease: A preliminary report
  December 15, 2006 Dennis vanEngelsdorp, Diana Cox Foster, Maryann Frazier, Nancy Ostiguy, Jerry Hayes,
  CCD Working Group, The Pennsylvania State University

Return to Dan Winter
Return to Genetically Engineered Foods
Return to 'Who' or 'What' is Killing The Bees?
Return to Monsanto - A Multinational Factory of Death

Here is another example of pesticides and the direct killing of our pollinators>> Please Do Not ignore what is obvious to do . Monitor & minimize use of these toxic chemicals.

Reported 1,500 Colonies of Honeybees Die in Campeche

By Jesse Herman On February 10, 2013 · Add Comment

According to The Yucatan Times

1,500 colonies of honeybees, from a community in Hopelchen, Campeche, died this February 6 from the fumigation of Monsanto's GMO's in a nearby area.

This has directly impacted more than 50 impoverished families, who recently suffered a poor corn crop due to drought. The community was relying on their sale of organic honey to compensate for the lack of maize. The current honey left by the bees is also lost due to the contamination of pesticides and transgenic pollen.

Alvaro Mena, a mayan farmer from Hopelchen and member of the Network in Defense of Maize, estimated losses at nearly 10 million pesos and is the equivalent of one year's worth of corn and honey production for the community.

Fumigation has intensified where GM crops have been planted in Mexico. GMO's are known to be resistant to pesticides and are planted in large monocultures, applying huge amounts of Roundup. It is no accident says Mena: it is the toxic onslaught that comes with GM crops and the threat of allowing millions of acres of GM Maize to be planted.

Mena attended the debate at which officials failed to attend and began with his witness of GMO's. Thousands showed up to participate in the debate on GM maize on Thursday, February 7, in a packed auditorium of the Faculty of Science, organized by several networks, including #YoSoy132 Environmental Via Campesina Popular Urban Movement, and the Network in Defense of Maize.

The officials were called to discuss the authorities of Agriculture, Environment and the Interministerial Commission on Biosafety and Genetically Modified Organisms (Cibiogem), but did not attend the meeting of social organizations and visiting scientists. The two secretariats claimed that they had no position on the issue. Currently, there are thousands of hectares of experimental and pilot fields in Mexico contaminating transgenic maize fields. Cibiogem, is reported to have had a busy schedule and could not attend.

Semarnat's response, sent the day of the debate, stated that the "reports that are pending will not go away because of a think tank debate." The debate was composed of academics from UNAM, CINVESTAV, Colpi, Conacyt UAAAN and was meant to determine a "public policy on GM corn."

Several opinions are not in favor of GMOs, and many scientific recommendations have been given to the recently elected Mexico Government from the first day they took office. They have received a solid flow of documents signed by researchers from the above mentioned institutions and others (over 3,000 scientists and experts, who have a high number of national and international awards) calling to cancel transgenic maize crops in centers of origin for the risks involved, and to establish "an immediate review of the environmental and social aspects that would be impacted by planting transgenic maize in Mexico, based on rigorous science and broad

public participation (…) for the consideration of the best technological options to address food production in our country. ”

In favor of GMO's, Dr. Antonio Turrent, president of the Union of Scientists Committed to Society (www.uccs.mx) showed that transgenic maize is necessary to increase maize production in Mexico, and that the country has land conditions, water, seeds and diversity of public resources and technologies to meet all of Mexico's current and future needs without jeopardizing economic independence, diversity, health or the environment, as implied by the GM. Dr. Turrent who recently published a study detailing these options.

On the other hand, Peter Rosset, biologist and researcher, presented a list of papers published in refereed scientific journals, particularly a compilation of studies conducted in 2009 by scientists and Ioannis S. Dona Artemis Arvanitoyannis, indicating that GM crops are associated with toxic effects, hepatic, pancreatic, renal, reproductive and immune and blood disorders and cancer effects. He said the study by Dr. Séralini in France (2012), where it studied the Monsanto GM maize planted in 700,000 hectares in Mexico, caused cancer in rats. In this regard, Rosset said that since Mexico is a country that consumes more corn than any other country, and because of the risks that have been observed in several studies for years, recommended that Mexico does not expose the public to GM Maize. He said the risk is greater for children who will be most affected. He considers it urgent to apply the precautionary principle, and cancel the transgenic, for future generations.

At the debate, the convening organizations, including urban, rural and students expressed their critical views on GMOs from their perspectives. They manifested their intent to stop the planting of GM maize and will continue through all struggles and will do all that they can to not allow the government to impose, against the interests of the vast majority of the population, GM Maize for the benefit of Government and a few multinationals. They agreed to promote further discussions, forums and activities, and strengthen the links between the organizations to avoid GM foods and crops. Also they will promote the widest possible participation in the pre-hearings on Corn and Food Sovereignty of the Permanent Peoples Tribunal, which among other topics will hold a pre-hearing of scientific evidence on GM and failures and corruption of the biosecurity system in the country.

Alvaro Mena called to the public to support the growth of 2013 becoming the “Year of resistance to transgenic corn and native corn in defense of life and independence of the peoples of the Maize.”

Glyphosate Toxic to Mouth Cells & Damages DNA, Roundup Much Worse

Further evidence of genotoxic and cytotoxic effects – a prelude to cancer, birth defects and reproductive problems Dr Eva Sirinathsinghji

A fully referenced version of this articles is posted on ISIS members website and is otherwise available for download here

New research finds that glyphosate causes cell and DNA damage to epithelial cells derived from the inside of the mouth and throat [1]. It raises concerns over the safety of inhaling glyphosate, one of the most common ways in which people are exposed to the herbicide.

Siegfried Knasmueller and his colleagues the Medical University of Vienna, Austria, found that Monsanto's formulated version of glyphosate called Roundup Ultra Max caused cellular damage and DNA damage including chromosomal abnormalities and ultimately killed the cells at higher concentrations. Importantly, DNA damage occurred at concentrations below those required to induce cell damage, suggesting that the DNA damage was caused directly by glyphosate instead of being an indirect result of cell toxicity.

These are not the first findings of glyphosate-based herbicides' cytotoxic and genotoxic effects. Numerous independent research teams have been documenting the hazards of glyphosate exposure over the last few years with *in vivo*, *in vitro* and clinical studies.

DNA damage was observed in blood samples from exposed residents in Argentina and Ecuador [2, 3]. Lab mice were found to harbour chromosomal and DNA damage in bone marrow, liver and kidney cells as well as lymphoid cells [4]. Similar effects were found in non-mammalian species, including sea urchins [5], goldfish [6, 7], eels [8], tilapia fish [9] as well as the fruitfly [10]. These experiments show that glyphosate herbicides are dangerous for humans and many other animals. Glyphosate is highly soluble in water, so impacts on aquatic wildlife may be of particular concern, especially following the recent report on the presence of glyphosate in rain water, groundwater, rivers and air [11, 12]. Its extreme toxic effects on amphibians such as frogs has already been shown (see [13] Roundup Kills Frogs, *SiS* 26). Cell damage has been documented in many cell types including those derived from the rat testis (see [14] Glyphosate Kills Rat Testes Cells, *SiS* 54), human placenta, umbilical cord, and embryo (see [15] Death by Multiple Poisoning, Glyphosate and Roundup, *SiS* 42), rat and carp neurones [16, 17], and liver [18, 19].

Multiple tests all show cellular damage in response to Roundup

To reflect occupational exposure, human buccal epithelial cells were exposed to glyphosate and Roundup for 20 minutes only at concentrations from 10 mg/L to 200 mg/L. The Roundup formulation used for the experiments contains 450 g/L of glyphosate and should be diluted according to the manufacturer's instructions to 1–3 % before use (final concentration 4 500–13 500 mg/l). The researchers found some significant effects with 10-20 mg/l, equivalent to a 225–1 350-fold dilution of the spraying solution.

Cell damage was assessed by the release of the membrane-bound enzyme lactose dehydrogenase into the culture medium. The integrity and viability of cells was indicated by their staining with neutral red as only healthy cells retain the dye. Mitochondrial function was assessed by measuring the activity of the enzyme mitochondrial dehydrogenase with the substrate XXT that gives a yellow colour product. And cell proliferation was measured by the total protein content of the cell cultures.

The results showed that the cells were much more sensitive to the Roundup formulation than glyphosate. With Roundup, a significant effect was seen at a dose level of 40 mg/L with the XXT assay, while a clear increase of the lactose dehydrogenase levels was seen already with 10 mg/L. The cell proliferation and the neutral red assays were less responsive, with significant effects detected at 80 and 100 mg/L, respectively (still well below agricultural use levels). All effects were dose-dependent.

With glyphosate, no significant effects were seen in 3 of the 4 assays, with only lactose dehydrogenase showing significant effects at over 80 mg/l.

Multiple tests show Roundup causes DNA damage

DNA damage was analysed by two methods. The first is the Single Cell Gel Electrophoresis (SCGE) assay, which reveals single or double-stranded breaks in DNA. The second is a special comprehensive assay of chromosome instability that picks up many DNA aberrations including chromosome breakage, DNA misrepair, chromosome loss, as well as cell death by either necrosis (cell death that results from external stressors such as toxins), apoptosis (programmed cell-death) and cell growth. Different nuclear anomalies were measured including micronuclei, a biomarker of chromosomal damage, breakage or loss; nuclear buds, a biomarker of elimination of amplified DNA and/or DNA repair complexes; and nucleoplasmic bridges reflecting the formation of dicentric chromosomes (chromosomes with 2 instead of 1 centromere) , a marker of DNA misrepair and/or end-fusions of the chromosomes.

Significant effects on DNA integrity as assessed by the SCGE assay were seen at 20 mg/l of both Roundup and glyphosate, increasing in a dose-dependent manner.

Exposure of the cells for 20 minutes also led to a significant and dose-dependent increase of nuclear anomalies including increases in the total number of micronuclei beginning at 10 mg/L of Roundup, and 15 mg/L of glyphosate. The number of nuclear buds increased with exposure concentrations, starting at 10 mg/L with both glyphosate and Roundup. In the case of the nucleoplasmic bridges, the only significant effect was obtained with the highest dose of Roundup used (20 mg/L). Apoptotic

cells were observed following 20mg/L of Roundup but not glyphosate, while necrosis occurred in response to 20mg/L of both Roundup and glyphosate.

In summary, Roundup was cytotoxic at concentrations as low as 20 mg/L, while its active ingredient was not generally cytotoxic to buccal epithelial cells. Both glyphosate and Roundup elicited genotoxic effects at concentrations below the level required to induce cell damage. The different effects between the active ingredient and its commercial formulation is consistent with previous work, including experiments done on testicular, placental, embryonic and umbilical cord cells (see above). These results may explain some of the ailments observed in people who work with this herbicide and adds yet more weight to an outright ban of the herbicide [20] Ban Glyphosate Herbicides Now, *SiS* 43).

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Cc: hilobliss@yahoo.com
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HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
joy cash	Individual	Support	No

Comments:

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Monday, March 11, 2013 3:30:27 PM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

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Cc: Karen@RedwoodGames.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 11:34:10 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Karen Chun	Individual	Support	No

Comments: So many of our aquifers are being contaminated by agricultural chemicals. This would go a long way to keeping the corporate farmers accountable for their destruction of our water supply.

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
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HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Kerri Marks	Individual	Support	No

Comments:

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
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HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Kristi McShane	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lztran@yahoo.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:43:33 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
L Tran	Individual	Support	No

Comments:

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
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HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
lieu nguyen	Individual	Support	No

Comments:

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:42:28 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Kirbin	Individual	Support	No

Comments:

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HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Nguyen	Individual	Support	No

Comments:

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Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 10:32:42 AM

HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
Louise Butler	Individual	Support	No

Comments:

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Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 10:01:36 PM

HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
Marjorie Erway	Individual	Support	No

Comments: Seems like a 'no-brainer' -- as this kind of info is really important and needs to be posted. Please support this bill by voting YES!

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Cc: maefuimaono@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Monday, March 11, 2013 11:23:29 PM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Me Fuimaono	Individual	Support	No

Comments: I work as a Registered Nurse and I am about to be a Nurse practitoner. The recent finding of Atrazine in the school in Waimea is very concerning. The fact that we don't know what pesticides are being used is equally disturbing. There have been multiple studies that show that wide use pesticide use can cause birth defects, cancer, infertility, endocrine disruption etc. At the very least we have a right to know what they are spraying in the fields. Please do what is right for our children. How would you feel knowing that there is Atrazine in your drinking water. It has already been banned in Europe because it is infamous for getting into the drinking water. We need to know what pesticides are being used in Hawaii. Act with your heart and do the right thing. Mae Fuimaono RN

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Cc: michaelbroady@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Monday, March 11, 2013 9:38:47 PM

HB673
Submitted on: 3/11/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

Comments: Aloha, my name is Michael Broady Jr., I am a life long resident of O'ahu, a student at Leeward Community College, and a small organic farmer practicing biodiverse permaculture. I support the disclosure of pesticude usage, so that local residents may be informed of what chemicals are being used near their homes and schools. In Waimea / Kekaha on Kaua'i, the company DuPont Pioneer is facing a lawsuit for the impacts of pesticide drift on the health of local residents. This same company, DuPont Pioneer, is registered as the owner of 3,257 acres of land surrounding my grandparents in Waialua on O'ahu (according to Dept. of Planning and Permitting's Honolulu Land Information System). If they can disregard human health on Kaua'i, why would they care any more for my grandma and grandpa in Waialua? Please protect my ohana by requiring the disclosure of pesticides used. I need to know what chemicals DuPont Pioneer is spraying, so that I can test to be sure my grandparents aren't breathing them.

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Cc: foodsovereigntynow@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Monday, March 11, 2013 10:11:15 PM

HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
Mitsuko Hayakawa	Individual	Support	No

Comments: I support HB673 to require pesticide registry but would appreciate an amendment to this Bill to allow public disclosure of when, where, what and how much each pesticide is to be used. I am extremely concerned about lack of knowledge on pesticide use in Hawaii and concerned about the health and welfare of our land and children. This Bill is a step in the right direction for transparency and to monitor toxic pesticide use. Mahalo.

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From: mailinglist@capitol.hawaii.gov
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Cc: neil.vonhof@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 6:40:34 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Neil Vonhof	Individual	Support	No

Comments: Full disclosure of important information regarding our health is the right thing to provide. We must all feel that our elected representatives have give top priority to our health and safety. Without it government fails us. Thanks for your consideration.

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HB673
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Submitted By	Organization	Testifier Position	Present at Hearing
Pat Gegen	Individual	Support	No

Comments: Support the citizen's right to know. We should be aware of what is being sprayed in our vicinity.

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Date: Tuesday, March 12, 2013 8:59:56 AM

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Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Penny Levin	Individual	Support	No

Comments: Hawaii's soil and water resources are limited and precious to life. Our reefs bear the burden of what we do to the soil. Mahalo for supporting this bill.

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Cc: pualehuafarm@hotmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:41:56 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Pua Kamaoa	Individual	Support	No

Comments:

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Cc: rfreitasjr@hotmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Sunday, March 10, 2013 6:58:40 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Robert Freitas Jr.	Individual	Support	No

Comments: I support this bill.

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Cc: samanthacresanto@gmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:44:55 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
sam cresanto	Individual	Support	No

Comments:

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Cc: slwsurfing@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 11:25:33 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

Comments: Support from the Big Island.

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Cc: sherrianwitt@aol.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
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HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
sherrian witt	Individual	Support	No

Comments:

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Cc: davidsher@juno.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Tuesday, March 12, 2013 7:32:13 AM

HB673
Submitted on: 3/12/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments: I would like to voice my support for a Hawaii pesticide registry HB673 that we might willfully track the effects of pesticides in Hawaii. I and many others are particularly concerned about those pesticides related to genetically modified organisms (GMOs). HB 673 will help to establish a baseline understanding of how much and what types of pesticides are being used in our state. Of particular concern, and one of many reasons why this pesticide registry is so important, is the effect pesticides are having on our bees. Beekeepers worldwide are concerned about the myriad of pesticides being used in so many places. Hawaii is the world's leading exporter of Queen bees, and the bees are unable to find their way back to the hives upon pesticide exposure, resulting in bee Colony Collapse Disorder. Without bees we have no food. It’s that simple. We must do something to become better stewards of the land and ensure our children’s future. We are counting on you.

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HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
susan campbell	Individual	Support	No

Comments:

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Cc: tammui@sbcglobal.net
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:40:16 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tam Mui	Individual	Support	No

Comments:

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HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tatiana Rocks	Individual	Support	No

Comments:

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Date: Sunday, March 10, 2013 9:41:44 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tia Kent	Individual	Support	No

Comments:

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Cc: tjsimms2000@hotmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Sunday, March 10, 2013 9:40:30 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
tj simms	Individual	Support	No

Comments:

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Cc: tracy.emills@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 7:30:33 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tracy E Mills	Individual	Support	No

Comments: I support this bill in that it requires the Department of Agriculture to post information regarding pesticide use to its website. I fully support the Legislative Reference Bureau to conduct a study regarding other states' pesticide reporting and registration requirements and report its findings to the Legislature. I wish that the above study including states would have added to it, a study including other countries and I believe that New Zealand is a perfect example of a country Hawaii could emulate. Thank you for your time. Tracy Mills Haiku 808-214-6136

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Date: Sunday, March 10, 2013 9:40:50 AM

HB673
Submitted on: 3/10/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tram Quen	Individual	Support	No

Comments:

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Cc: angelavideotron@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 10:54:57 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Angela Breene	Individual	Support	No

Comments: Aloha Senators, Mahalo for the opportunity to testify in support of HB673 regarding a statewide pesticide registry, with amendments to strengthen mandatory public disclosure requirements. Hawaii needs a thorough and mandatory statewide pesticide registry now! We are being inundated with birth defect causing chemicals that are banned in many other places. Atrazine is a prime example. Please strengthen this HB673 to protect our health and environment. Mahalo, Angela Breene Haleiwa, Hawaii

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Mahalo nui loa for the growing surge of support for a GMO Free Kaua`i!! We are so grateful that this issue is being highlighted by our entire island. Together we can create a healthy and happy future for Hawai`i.

Aloha Committee members,

I strongly support the creation of a Pesticide Registry for our state. We would be happy to help connect you with experts and models of how this has been accomplished in other states.

On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than anyother place on Earth.

We currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d.

The community has a growing concern about the ever-increasing amounts of stronger and stronger chemicals, and more and more acres, but we have very little information.

We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure.

Chemical Agriculture may look green and benign but unless you live near these fields you would never know the true experience of undisclosed spraying. This is radically different than local food farming.

Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right to know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels.

Pesticide drift can travel to non-target areas. If we had more information we could avoid exposure for the children, the kapuna and pregnant women. Pesticides are especially harmful to babies in the womb.

This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number 1 in gmo experimentation. We should all understand the unintended reality of these research practices by chemical companies.

Mahalo nui loa for supporting disclosure for the residents from Polihale to Poipu, and Lihue. We need your help, too many people are at risk without adequate representation and without proper disclosure.

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To: AGL Testimony
Cc: afcs101@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:10:16 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Brian Allen	Individual	Comments Only	No

Comments: Please do the right thing and support and pass the Pesticide Registry. We all breath the air and drink the water and everyone has the right to know what we are being subjected to. Mahalo

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Cc: charlottep@hawaii.rr.com
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Date: Wednesday, March 13, 2013 11:54:11 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
charlotte casey	Individual	Support	No

Comments: I SUPPORT HB 673 to create a pesticide registry in our state - Mahalo, Rep. Dee Morikawa. This is an important first step to having a better understanding of health and environmental exposures for our children, communities, streams and honeybees. Aloha!

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Cc: waioli2@hawaiiantel.net
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:59:03 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

Comments: aloha committee members, - please pass this bill in support of peoples right to know, for the safety and health of our unborn babies, children and our elderly who are most vulnerable as well as the rest of the population of humans and animals and our aina. - please make this bill stronger by requiring MANDATORY DISCLOSURE. mahalo.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: dan.nellis@dole.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:19:23 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Daniel Nellis	Dole Food Co. Hawaii	Oppose	No

Comments: Dole Food Company Hawaii responsibly operates utilizing an Integrated Pest Management(IPM)program. We recognize public concerns over proper pesticide use and we believe in minimizing use whenever possible. However we do not agree that the trained, certified, registered users that are regulated by the Dept. of Ag. should also be identified on a website that would invite harassment and intimidation. This is counter active to the Governor's goal of a sustainable agriculture industry in Hawaii. A better alternative is to increase funding to the DoA so that better training and enforcement can be done. Spend money on a study to see what other states do but also spend money on increased Ag inspectors and enforement agents. We oppose this bill as is; fix it or kill it.

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Cc: shiningspirit333@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:44:00 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Donna	Individual	Comments Only	No

Comments: Aloha, I support pesticide registry and eviction of monsanto and like companies. Mahalo

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To: AGL Testimony
Cc: elathrop@punahou.edu
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 11:56:56 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Eliza Lathrop	Individual	Support	No

Comments: Aloha Committee members, Hawai`i SEED and GMO Free Kaua`i strongly support the creation of a Pesticide Registry for our state. We would be happy to help connect you with experts and models of how this has been accomplished in other states. On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than another place on Earth. We currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d. The community has a growing concern about the ever increasing amounts of stronger and stronger chemicals, and more and more acres, but we have very little information. We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure. Chemical Agriculture may look green and benign but unless you live near these fields you would never know the the true experience of undisclosed spraying. This is radically different than local food farming. Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right the know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels. Pesticide drift can travel to non target areas. If we had more information we could avoid exposure for the children, the kapuna and pregnant women. Pesticides are especially harmful to babies in the womb. This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number 1 in gmo experimentation. We should all understand the unintended reality of these research practices by chemical companies. Mahalo nui loa for supporting disclosure for the residents from Polihale to Poipu, and Lihue. We need your help, too many people are at risk without adequate representation and without proper disclosure.

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Date: Wednesday, March 13, 2013 12:08:24 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Felicia Cowden	Individual	Support	No

Comments: We need to take critical steps to safeguard the health of our land and people. All of us, at every level of landscaping need to be aware of how we are impacting the eco-system. The Bio-tech industry needs forceful incentives to shift their business model toward a peaceful co-existance with the life in the land. It is clear they cannot self-regulate. Instead they undermine the authority of the local governments. Please force them to declare the contaminants in their usage. If they have an ethical business practice, this should be welcome. Their own production office surely keeps track of the expenses and processes it utilizes. It is clear they simply DON"T WANT TO divulge what they are doing. Please make them.

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Cc: hanakapiai@excite.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:34:49 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Hanakapi'ai Grosse	Individual	Support	No

Comments: I support the creation of a pesticide registry for our state!!

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Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 11:39:44 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
James Trujillo	Kaua'i Beekeeper's Association	Support	No

Comments: Mahalo for accepting this testimony in favor HB 673. Opposition to this bill is mainly from industry users of pesticides while the support for it's passage comes from a wide assortment of community groups and individuals concerned with excessive and widespread use of pesticides in Hawai'i. As beekeepers, we are greatly concerned with application of harmful chemicals for the suppression of weeds and pests. These concerns are based on the growing body of evidence that pesticides have a negative effect on insect pollinators, such as honeybees. HB 673 as originally drafted would provide a record of pesticide use. as amended this bill will help to start the process of a registry program like other states. this is the next step in helping pollinators rebound from the harmful effects of exposure to pesticides. please pass HB 673 as amended. mahalo for considering this testimony in favor of its passage. with respect and aloha, james g trujillo chair, Kauai Beekeepers Association

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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/1FrgfwqSlAmxhUbz-2JvhWZwSwOZSOM7RKpxnY3NSgI0/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 every10 days.

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

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1.0. Introduction

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."

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 atmophere (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; Bereswilla 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 Brodkin 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 resent 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 organosphosphate insecticides include delayed neurotoxicity, interference with brain development, possible adverse effects on fetal growth, increased risk of preterm delivery and spontanous abortions, impairment in neurodevelopment and psychomotor indices, plus an inverse relationship between weight at birth versus level of exposure to Lorsban residues in umilical 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-ozbY8IyxGAQQkBTM8LEFzx4KZijng/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) .

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 reconversion 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

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).

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)

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

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: jr@kauainature.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:05:07 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Jill Richardson	Individual	Support	No

Comments: Please support this bill and represent the health of the land and the people, we have no idea what the effects of poisons are until we know what we are looking for, where and what when it is being applied to the land.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: naniokauai76@hotmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:32:45 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Johnathan Rivera	Individual	Support	No

Comments: I am writting in support of HB673. We need to know what's going into our ground and waterways. It can only help to protect the people. I can see no reason why this should not become law. It just supports accountability on people or corporations who wish to expell poisons into our environment. Aloha

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: kellyball2222@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:22:22 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Kelly Ball	Individual	Support	No

Comments: It's about time isn't it!

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HB 673 HD2
RELATING TO PESTICIDES
STRONG SUPPORT FOR HB 673 HD2

Aloha Committee Members,

The Nobrega and Olivera ʻohana from Hanapepe, Kauaʻi and Kaimuki, Oʻahu **strongly support** the creation of a Pesticide Registry for our state.

Kaua`i today is home to numerous chemical companies that lease thousands of acres of our ʻāina for experimental crops. Our ʻāina is home to more test fields than any other place. This concerns our ʻohana.

One of our keiki attended Waimea Canyon School when many of them fell sick a few years ago. Our keiki experienced many of the symptoms of nausea, watery eyes, etc. We do not want this to happen to any other keiki and pray that this will not have any effect on their well-being in the future.

The community has the right to know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels.

Mahalo nui loa for supporting disclosure for all residents of Hawaiʻi.

Malia Nobrega-Olivera
on behalf of the Nobrega and Olivera ʻohana from Hanapepe, Kauaʻi and Kaimuki, Oʻahu

From:	Marissa Leimakanalani Sperry
To:	AGL Testimony
Subject:	Support HB673
Date:	Wednesday, March 13, 2013 12:10:27 PM

Aloha Committee members,
I strongly support the creation of a Pesticide Registry for our state.
On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than anyother place on Earth.
We currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d.
I am very concerned about the little information I am provided with regarding these chemicals.
We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure.
Chemical Agriculture may look green and benign but unless you live near these fields you would never know the the true experience of undisclosed spraying. This is radically different than local food farming.
Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right the know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels.
Pesticide drift can travel to non target areas. If we had more information we could avoid exposure for the children, the kupuna and pregnant women. Pesticides are especially harmful to babies in the womb.
This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number 1 in gmo experimentation. We should all understand the unintended reality of these research practices by chemical companies.
Mahalo nui loa for supporting disclosure for the residents from Polihale to Poipu, and Lihue. We need your help, too many people are at risk without adequate representation and without proper disclosure.

Mahalo,
Marissa L. Sperry

Aloha Committee members,
I, along with Hawai`i SEED and GMO Free Kaua`I, strongly support the creation of a Pesticide Registry for our state.

As caretakers of the land, parents of the children, and citizens of the earth, we all have the right to know what chemicals and poisons are being sprayed on our beautiful islands. I truly believe that the use of chemicals and the unethical patenting of seeds is the single greatest threat to the well-being of all beings.

Please do what is pono! Help us to at the least have the basic right to know what chemicals are being used in our environment, and ultimately to be able to protect ourselves from these chemicals. We must not let the chemical companies and their deep pockets speak louder than our voices of reason, compassion and love.

On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than any other place on Earth.

We currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d.

The community has a growing concern about the ever-increasing amounts of stronger and stronger chemicals, and more and more acres, but we have very little information.

We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure.
Chemical Agriculture may look green and benign but unless you live near these fields you would never know the the true experience of undisclosed spraying. This is radically different than local food farming.

Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right the know so that we can take precautionary steps to avoid repeated and prolonged

exposure in our homes, schools and hotels.
Pesticide drift can travel to non target areas. If we had more information we could avoid exposure for the children, the kapuna and pregnant women. Pesticides are especially harmful to babies in the womb.

This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number one in GMO experimentation. We should all understand the unintended reality of these research practices by chemical companies.

Mahalo nui loa for supporting disclosure for the residents from Polihale to Poipu, and Lihue. We need your help, too many people are at risk without adequate representation and without proper disclosure.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lfoster@heartofhawaii.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:27:14 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Ray Foster	Individual	Oppose	No

Comments: I oppose HB673. This is an extremist attempt to provide private business information to the activist community. It will require an unecessary burden on the HI Dept. of Agriculture. The quantities of pesticides used in Hawaii are available now from different public information sources. Please bring common sense back to our legislative process and kill this bill. Respectfully, R. Foster

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: hawaiifish@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:35:35 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Ron Weidenbach	Hawaii Aquaculture and Aquaponics Association	Oppose	No

Comments: This is unnecessary and inappropriate legislation that could be misused to intimidate legitimate users of such chemicals.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: shannonkona@gmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Wednesday, March 13, 2013 12:27:39 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

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

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: normandsusieh@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 11:52:09 AM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Heitmann	Individual	Support	No

Comments: I support the enactment of a pesticide registry for the Hawaiian islands. The safety of our residents and the protection of our land is at stake. Thank you.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: gizmografix@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 12:45:20 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tommy Cook	Individual	Support	No

Comments: Aloha Committee members, Hawai`i SEED and GMO Free Kaua`i strongly support the creation of a Pesticide Registry for our state. We would be happy to help connect you with experts and models of how this has been accomplished in other states. On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than anyother place on Earth. We currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d. The community has a growing concern about the ever increasing amounts of stronger and stronger chemicals, and more and more acres, but we have very little information. We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure. Chemical Agriculture may look green and benign but unless you live near these fields you would never know the the true experience of undisclosed spraying. This is radically different than local food farming. Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right the know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels. Pesticide drift can travel to non target areas. If we had more information we could avoid exposure for the children, the kapuna and pregnane women. Pesticides are especially harmful to babies in the womb. This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number 1 in gmo experimentation. We should all understand the unintended reality of these research practices by chemical companies. Mahalo nui loa for supporting disclosure for the residents from Polihale to Poipu, and Lihue. We need your help, too many people are at risk without adequate representation and without proper disclosure.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: tracydubose@yahoo.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:01:42 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Tracy DuBose	Individual	Comments Only	No

Comments: Aloha, The development of a Pesticide registry would be the first and only step taken to stop the mindless spraying of Kauai's west side. There have been nights in the past where a fog of pesticides clouded the air of Kekaha, we are exposed to constant dust full of 50 or more pesticides. The chemical companies are also within 20 feet of the Niihau charter school, 100 feet from Kekaha elementary and right across the ditch from residences on Kekaha Rd., Kekaha Gardens, and the Hawaiian Homes new subdivision. There is a huge and real concern for our childrens health. We at least deserve to know what the risks are. Already, our communities have lost good hard working families who have chosen to leave. It is affecting property values and rents for people wanting to move. It is bringing in migrant workers who cause problems in our neighborhoods. I know we need jobs, but we could do much better. We can not even make decisions until we have information. The USDA, EPA, FDA, are nowhere to be found to truly help measure or regulate this industry. There farming and tilling practices are unbelievably damaging. They at one point clear plowed from Waimea River to Hanapepe town. Also during our fourty days and fourty nights of rain an entire container of Pioneers chemicals swept down the river, banging the bridge and continued out into Port Allen. We have had huge urchin die offs. There is constantly possibly contaminated soil and mud from runoff and commercial vehicles. We need help to manage and change this corporate model to protect the people. This is very serious, very personal, and the ramifications of doing nothing are a potential health and environmental disaster for a place with unlimited potential for positive growth. Please stand by the health of the people, lets grow our human resources out here, not destroy the natural resources. We can create a win, win for the west side and especially the Hawaiian Homelands which are being poisoned.

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AGL/ENE hearing on 03-14-13 2:45PM in conference room 229.

Aloha Honorable Chairmen and Committees,

Thank you for the opportunity to testify. STRONGLY SUPPORT HB673 and Kauai Council member Gary Hooser's comments. **I am further suggesting a doable amendment to provide for more maximal health without waiting for a pesticide register and study of existing states.**

1. Suggest an amendment provision in the HB673 to **REQUIRE a notification of no less than 24 hours- notice for all aerial spraying of chemicals and particularly pesticides..** They are hazardous to people, animals , organic and wild lands. unless there is a reasonable buffer already provided to prevent adverse effects from intentional wide spread spraying ---barring emergencies defined. Wind speed should be accounted for.—of concern are school grounds where children play, business, properties, subdivisions, and where people conduct ioutdoor events. PLEASE DO THIS BECAUSE THERE ARE BIG AG COMPANIES CAUSING HARM WHO ARE NOT DOING NOTIGICATION VOLUNTARILY.

2. Opportunity to notify can be set up on company and government websites. Hot lines have been used successfully by HC & S for daily burn schedule with cancellation provision based on wind speed. This could be applied fairly easily to aerial spraying. and potentially on the ground heavy pesticide use near public facilities or private.

3. Provision to post complaints should be available on the company's site and HI Health Dept. This is just good community relations.

4. We also need dialogue between Counties and the state to institute policy on buffer zones to prevent issues from ongoing noxious chemical use on the ground. Our Maui Island Plan the council passed massive development out over 20 years too close to chemical agriculture. This should be addressed state wide with EPA.

The difference between nuisance and hazard should be clearly defined as well as penalties.. **Bottom line: Human and animal health is not optional! Given reasonable notice, humans can plan for animals and coverage, to close windows, doors and be out of the path of toxins.** Mahala for your kokua.

Unmani Cynthia Groves
Health Care Practice Management Consulting since 1985

Member: Kihei Community Association Planning Committee
Alliance of Maui Community Associations

SW Maui Watershed Advisory
Halau Ke'alaokamaile

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: esfhawaii@hotmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:33:08 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Elijah Frank	Ohana O Kaua'i	Support	No

Comments: I strongly support complete oversight of pesticide registry and use is Hawaii. Out State Constitution specifically states that our Ag lands are to be farmed self-sufficiently and sustainably and in a way that protects our land going into the future. How can we even begin to protect our land if we don't even know what chemicals are being used and in what quantities. It is the publics right to know how our natural resources are being impacted by industry. It is the duty of our legislatures to work on behalf of the people they represent and not be lobbied by big mainland chemical companies. The people are watching and we need to know what is being done on and in our land, water and oceans. Please vote yes to register pesticides and inform the public on exactly what is being used where it is being used and in what quantity. Elijah Frank Ohana O Kaua'i

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lmochida@whshipman.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:22:49 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Loren Mochida	Individual	Oppose	No

Comments: Restricted Use Pesticides are already regulated by the EPA and DOA and can only be purchased by Certified Applicators.

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March 13, 2013

Senator Clarence K. Nishihara
Chair, Senate Agriculture Committee
Hawaii State Capitol, Room 204

Senator Mike Gabbard
Chair, Energy and Environment Committee
Hawaii State Capitol, Room 201

RE: SUPPORT HB673 HD2 – Pesticide Use Reporting

Dear Chairs Nishihara and Gabbard:

On behalf of Pesticide Action Network North America, and our 85,000 supporters in Hawai'i and across the country, we urge you to pass HB 673. This measure ensures that farmers, beekeepers, neighboring residents and public health officials have the best information about what pesticides are being used and where they are being used in our communities.

California and Oregon have implemented similar reporting systems, resulting in greater transparency, efficiency, accountability and safety. In 1990, California implemented the first and most comprehensive state-based system, responsive to state needs. Since then, reporting has allowed growers and state officials to better track the use of pesticides, reduce their use and costs associated with their use and also allowed beekeepers to make better decisions about where to locate their hives. In addition, reporting has allowed public health officials to create better protections for pesticides that are known to drift, reducing pesticide exposure for the most vulnerable, especially children.

Until we measure, we can't make progress to reduce pesticide use, support prosperous farming and promote public health. I respectfully ask for your support of HB673 HD2.

Sincerely,

Paul Towers
Organizing & Media Director

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: Cmanfredi@kaufarmandranch.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:47:22 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Manfredi	Ka'u Farm Bureau	Oppose	No

Comments: Please perform the cost benefit analysis contemplated by this measure prior to implementing an online resource. Our members have told us that this sort of reporting incentivizes them to use less effective non-restricted products requiring heavier applications which are harmful. Mahalo for your consideration!

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To: AGL Testimony
Cc: mary@lauhala.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:48:20 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Mulhall	Individual	Support	No

Comments: Please create a pesticide registry for Hawaii. It's important. Mahalo.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: leslielarsen@earthlink.net
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:54:29 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Leslie Larsen	Individual	Support	No

Comments: Support HB 673. We really appreciate all our elected officals who are taking the responsibility to protect the health of our people, 'aina, kai and wai. Since the Federal Government is not doing their job regulating these multinational corporations, and their use of genetically altered life forms and poisons, please help do it at State and Local levels. Thank you.

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To: AGL Testimony
Cc: Inglis@mclink.it
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:54:59 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara inglis	Individual	Comments Only	No

Comments: Aloha, I am writing in hopes to inspire you to support the pesticide registry for our State. I live in Kalaheo, Kauai. I have been increasingly sick in the last few years and multiple doctors have found extremely high levels of pesticides in all of my organs and already had to have one organ surgically removed because of that. I am told that in order to regain some strength and stay alive I need to avoid exposure to round up (or leave the Idland) and have done everything I can to that effect. Unfortunately the pesticides keep accumulating in my body and I don't know where it is coming from. Having more information on where and when these pesticides are been used would help me and others like me avoid expodure. Thank you for your consideration of this important public health matter. Barbara Inglis Kalaheo, Kauai

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: rfunayama@hotmail.com
Subject: *Submitted testimony for HB673 on Mar 14, 2013 14:45PM*
Date: Wednesday, March 13, 2013 1:54:17 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Ryan Funayama	Individual	Oppose	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: mkelley323@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 1:58:12 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Mary Lu Kelley	Individual	Support	No

Comments: Aloha, I strongly support the creation of a Pesticide Registry for our state. Since this Pesticide Registry has been accomplished in other states, Hawaii should be able to find models and experts to assist. On Kaua`i we have 5 of the Big 6 chemical companies. They are leasing over 12,000 acres for experimental crops in various attempts to create herbicide resistant grains like corn, soy, sunflower and rice. We have more test fields than anyother place on Earth. Kauai people currently have no disclosure of what is being sprayed, and where. We do observe signs that show they are using a very long list of highly toxic chemicals such as round up, atrazine, dicambra, chlorpyrifos and 2-4,d. We the Kauai community have a growing concern about the ever increasing amounts of stronger and stronger chemicals, and more and more acres, but we have very little information. We need to set up a system of the spraying and chemical irrigation so that communities can protect themselves from exposure. Chemical Agriculture may look green and benign but it is radically different than local food farming. Residents and students suffer from sore throats, headaches, shortness of breath and nausea. We need the right the know so that we can take precautionary steps to avoid repeated and prolonged exposure in our homes, schools and hotels. Pesticide drift can travel to non target areas. If we had more information we could avoid exposure for the children, the kapuna and pregnant women. Pesticides are especially harmful to babies in the womb. This is a very reasonable request and Kaua`i asks for your support of a pesticide registry. This is long overdue for a state with the distinction of being number 1 in gmo experimentation. We should all understand the unintended reality of these research practices by chemical companies. Thank you for supporting disclosure for Kauai residents as we need your help with adequate representation and proper disclosure.

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Cindy Goldstein, Ph. D
Hawaii Industry Relations Manager
DuPont Pioneer
Waialua Parent Seed, Kekaha Parent Seed
Kunia Research Center, Waimea Research
PO Box 520
Waialua, HI 96791

HB 673 H.D.2 Relating to Pesticides
Senate Committee on Agriculture and Committee on Energy and Environment
March 14, 2013
Conference Room 229, at 2:45 p.m.

Position: opposed

Chairs Nishihara and Gabbard, Vice Chairs Kouchi and Ruderman, and members of the Agriculture, and Energy and Environment Committees,

DuPont Pioneer is a seed company with operations in four locations in Hawaii. We carry out plant breeding work at our 2 Hawaii research sites to develop crops with improved characteristics including greater insect and disease resistance and higher yields. Breeding for disease and insect resistance reduces the use of pesticides. Our two parent seed locations multiply seed to develop new hybrids and varieties that are more productive for farmers in the US and around the world. DuPont Pioneer employs approximately 350 people in a wide range of types of jobs on Oahu and Kaua`i.

Before moving forward to enact legislation, we would support having the Legislative Reference Bureau conduct a study first, to gain insight into the costs and benefits of developing a new pesticide registry and reporting system. The LRB report would provide insight into the costs of developing the infrastructure, costs associated with collecting and compiling data, and identification of costs associated with staffing. In reviewing and reporting on the costs associated with a pesticide use registry and generation of a pesticide report, the LRB should include an assessment of what additional information would be made available that is not already provided in reports to Hawaii Department of Agriculture that would already be provided upon request.
A few states have enacted legislation to require pesticide reporting, not all have implemented their plans. It would be important to include an evaluation of whether people that currently have access to this type of information online are taking the time to access and review the information that is available. One aspect of the LRB report should be gaining an understanding of benefits, knowing that it is already possible to access this information through a request to HDOA, and to gain an understanding of whether individuals would take the time and make the effort to review the information if it was provided on the HDOA website.

We have significant concerns about the information that might be released on the HDOA website, especially the names of individuals that hold the applicator's license

associated with the purchase and use of restricted use pesticides. Public disclosure of the names of individuals holding applicator's licenses may generate threats and harassment.

The Hawaii Department of Agriculture has oversight of pesticide use, and is able to inspect records of restricted use pesticides at our workplaces at any time. If HDOA receives a complaint about pesticide use, the agency responds quickly. Record keeping requirements are already in place and Hawaii Department of Agriculture can track use of restricted use pesticides through reporting at point of sale. Users of pesticides follow strict guidelines described on the label of each compound. Generation of a report by Hawaii Department of Agriculture will be time consuming and may add no additional information. Requiring extensive reporting of information for products that are approved for use by the EPA creates an additional burden.

Thank you for the opportunity to provide testimony on HB673.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: 2da1wahine@gmail.com
Subject: Submitted testimony for HB673 on Mar 14, 2013 14:45PM
Date: Wednesday, March 13, 2013 2:22:58 PM

HB673
Submitted on: 3/13/2013
Testimony for AGL/ENE on Mar 14, 2013 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Sandra Herndon	Individual	Support	No

Comments: Please support this bill to register the Pesticides and dangerous agricultural chemicals. We deserve to know what chemicals our food is being grown with, whether sprayed or genetically modified. Mahalo!

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