SB797

RELATING TO THE HEALTH IMPACT OF PESTICIDES.

Establishes notice, reporting, and use requirements for any entity or person that uses pesticides under certain circumstances.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: lho@hawaiipublicpolicy.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Wednesday, February 11, 2015 2:02:05 PM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Adolph Helm	Dow Agrosciences	Oppose	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: gottlieb@hawaii.rr.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Wednesday, February 11, 2015 11:37:38 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Alan Gottlieb	Hawaii Cattlemen's Council	Oppose	No

Comments: Farmers and Ranchers strongly believe in the health and safety of their families, employees and the community. Farmers & Ranchers are the true environmentalists, stewarding over 25% of the State's land mass. We don't talk about helping the environment… we do it every day. Pesticide use is already regulated by the EPA and the Hawaii Dept of Agriculture, based on years of testing. Labeling requirements are based on good science, not on arbitrary buffers and activist sentiment. There seems to be an attack these days on the 1% of our population, the farmers and ranchers, who grow the food for everyone else. No one wants to use or over-use pesticides, but do use them when it is necessary. The little fire ant invading Hawaii is a great example. Do we want to fight it with available resources, or let those lovely critters take over our islands, biting everything in their path, raining down out of trees on our residents and visitor industry? Please oppose this anti-farming bill.

February 11, 2015

Testimony from Jeff Case, Senior Director Government Affairs, CropLife America

In opposition to SB 793, SB 797, SB 800, SB 801, SB 1037

Thursday, Feb. 12, 3 p.m. – Senate Committees on Health, Ag, Water/Land and Education

Aloha Chairs and Committee Members:

CropLife America represents the manufactures and registrants of pesticide products that are used for agriculture production. We recognize the need for these valuable crop protection products to be used in a manner that is protective to schools, children and sensitive environmental areas. But we are opposed to the series of bills - SB 793, SB 797, SB 800, SB 801 and SB 1037.

These bills will not provide any additional public or environmental safety than already exists in the use requirements, many precautions and setbacks identified on the product use labels which are enforceable by state and federal law. We dispute the idea that there are wide-spread problems with pesticide applications in the state, and the need for these extensive and unprecedented measures.

These bills have been develop and promoted by national anti-pesticide /agriculture organizations like Center for Food Safety and EarthJustice. The goal of these national well- funded groups is to make growing genetically modified crops in Hawaii as difficult as possible and has less to do with concerns about their use of pesticides.

These groups have misled the public and lawmakers by suggesting that 33 states which have already passed similar laws. Very few states have laws that contain ANY of the provisions that are in these bills. Integrated Pest Management (IPM) requirements in schools and on school property has nothing to do with the application of pesticides on agriculture lands.

Appropriately – schools have the responsibility of keeping students healthy and safe by ensuring pesticides are used appropriately. The recent incidents at schools in Waipahu, Ewa Beach and Hawaii Kai did NOT involve farmers, but were the result of improper use by neighbors.

We support SB 734 because we believe that a strong state pesticide regulatory program is essential to assuring the public that these valuable pesticide products are used properly. SB 734 strengthens the Hawaii Department of Agriculture's capacity to regulate pesticides in the state. If lawmakers are sincere about addressing public safety, support the pesticide branch of the Dept. of Ag.

Thank for your consideration.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: elle.cochran@mauicounty.us
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 2:41:51 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Elle Cochran	Maui County Council Member	Support	No

Comments: I support SB 797

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Gary L. Hooser
Arryl Kaneshiro
KipuKai Kuali'i
JoAnn A. Yukimura

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Ricky Watanabe, County Clerk
Jade K. Fountain-Tanigawa, Deputy County Clerk

Telephone (808) 241-4188
Fax (808) 241-6349
Email cokcouncil@kauai.gov

Council Services Division
4396 Rice Street, Suite 209
Līhu'e, Kaua'i, Hawai'i 96766

February 11, 2015

TESTIMONY OF GARY L. HOOSER
COUNCILMEMBER, KAUA'I COUNTY COUNCIL
ON
SB 797, RELATING TO THE HEALTH IMPACT OF PESTICIDES
Committee on Health
Committee on Agriculture
Committee on Energy and Environment
Thursday, February 12, 2015
3:00 p.m.
Conference Room 414

Dear Chair Green, Chair Ruderman, Chair Gabbard, and Committee Members:

My name is Gary L. Hooser and I presently serve on the Kaua'i County Council. I am here today testifying as an individual Councilmember in strong support of SB 797 Relating to the Health Impact of Pesticides.

SB 797 mandates disclosure and notification of agricultural pesticide use and further creates pesticide buffer zones for locations defined as sensitive areas.

The threshold amount I would suggest would be 5 lbs. or 15 gallons of any Restricted Use Pesticide purchased or used. I would also recommend buffer zones of ¼ mile or a minimum of 1,000 feet.

In terms of wind speed, I am less familiar with this element of the recommendation, but would recommend 5 mph or less depending on the label requirement, whichever is more restrictive.

I applaud this Senate Joint Committee and the introducer of the Bill for recognizing the importance of this issue.

There is no question in terms of scientific studies that pesticides in general, but especially Restricted Use Pesticides, have the potential to cause great harm to health and the environment.

Our research on Kaua'i shows that while a handful of very large companies use large amounts of Restricted Use Pesticides on a regular basis, most regular farmers use very little – focusing instead on the application of only general use pesticides.

On Kaua'i we found these companies utilizing 22 different types of Restricted Use Pesticides, many of which are banned in other countries. We also discovered these same companies experimenting with pesticides and using them in amounts that far exceeded national norms.

Please see the attached file entitled "9 Most Frequent Misstatements Made By Chemical Companies In Hawai'i". The electronic version contains links to the source documents and can be found at http://tinyurl.com/9Misstatements-02-04-15.

It is without question that pesticides are harmful and they should not be applied in sensitive areas adjacent to homes, hospitals, schools, and waterways.

Full disclosure is an essential element that must also remain included with SB 797, as without full disclosure the public is not able to avoid the areas being treated and they do not know when to shut their windows. When they seek medical attention for exposure to pesticide drift, the attending physician has no idea as to the impacts of the exposure as they do not know what chemicals were applied or when.

It is also without question that we as a community cannot determine the extent or degree of risk without further studies. Those studies are not possible without full and public disclosure of the types, amounts, and location in which these chemicals are applied.

Thus, the need for full disclosure plus strong buffer zones are clear and I urge this Senate Joint Committee to vote in full support of this measure. Should you have any questions, please feel free to contact me or Council Services Staff at (808) 241-4188.

Sincerely,

GARY L. HOOSER
Councilmember, Kaua'i County Council

AB:dmc
Attachment

9 Most Frequent Misstatements Made by Chemical Companies in Hawai'i

1) CHEMICAL COMPANIES: "All of these chemicals and pesticides have been tested and found to be safe when used according to the label."

THE TRUTH:

- No one has ever tested the combined impacts of these chemicals over time in the communities in which they are being used.

- Many of the chemicals (including Atrazine; Paraquat, also known as Gramoxone; and Chlorpyrifos, also known as Lorsban) that are regularly used near Hawai'i homes, schools, and hospitals are banned in other countries.

- Atrazine, manufactured by Syngenta, has been banned in the European Union since October 2003. See also Paraquat bans and Chlorpyrifos bans.

- The American Academy of Pediatrics' "Pesticide Exposure in Children" (2012) specifically recommends disclosure and buffer zones, and offers strong cautions about pesticides and children.

- The American Cancer Society's "Increased Cancer Burden Among Pesticide Applicators and Others Due to Pesticide Exposure" (2013) states definitively that people who live and work around agricultural areas that have high pesticide use suffer a greater incidence of certain cancers and other medical problems.

- The University of California at Davis recently released a report, "Neurodevelopmental Disorders and Prenatal Residential Proximity to Agricultural Pesticides: The CHARGE Study" (2014), linking the long term use of Glyphosate to the increased incidence of autism.

- Restricted Use Pesticide (RUP) labels forbid their use in conditions which allow the pesticides to drift onto neighboring properties. Nevertheless, there are numerous incidents of drift occurring in Hawai'i, with no legal consequences for the companies. The attached links of two modest studies on Kaua'i indicate that while the quantities are small, Restricted Use Pesticides are drifting into neighborhood schools and into adjacent streams:

    - "Air sampling and analysis for pesticide residues and odorous chemicals in and around Waimea, Kaua'i" (March 15, 2013)

    - "2013-14 State Wide Pesticide Sampling Pilot Project Water Quality Findings" (May 2014)

2) CHEMICAL COMPANIES: "We use less pesticides, not more."

THE TRUTH:

Despite the fact that no other farmer in Hawai'i uses anything close to what these chemical companies use, the chemical companies attempt to compare apples to oranges:

- The chemical companies compare themselves to conventional corn growers (who harvest one (1) crop growing cycle per year). In Hawai'i, the chemical companies are engaging in industrial and experimental agriculture, and planting three (3) or more crop growing cycles per year. See the non-confidential records obtained in the lawsuit by Waimea, Kaua'i residents against Pioneer Hi-Bred International, Inc..

- The chemical companies are experimenting with "Roundup Ready" and other chemical-resistant crops, encouraging greater pesticide use. "Roundup resistance has led to greater use of herbicides, with troubling implications for biodiversity, sustainability, and human health."

- The *Cascadia Times* reported: "Our investigation found that annualized pounds-per-acre usage of the seven highly toxic pesticides on Kaua'i was greater, on average, than in all but four states: Florida, Louisiana, North Carolina and Indiana."

- According to Kyle Smith, an attorney representing Waimea Residents in their lawsuit against DuPont Pioneer, during the August 5, 2013 Kaua'i Council Meeting regarding Bill No. 2491 (Ordinance No. 960): "Sixty-five percent (65%) of the days of the year on average, so about two hundred forty (240) days, they are applying pesticides. You can look at the combinations that are applied. You could look at it by on the application days, the average is between eight (8) and maybe sixteen (16) applications per day of pesticides on these research fields. Most importantly though and I think what is most relevant for this discussion is the total usage. Recently, the industry statistics I saw put out at the public comment was that Kaua'i was using about one (1) pound per acre, per season and that the mainland uses about two (2) pounds per acre and I have these charts to show you. Again, I believe it is a seed company graph. The reality is if you double that because we have multiple seasons, we have three (3) seasons. Typically, two (2) seasons are planted, you are looking at closer to two (2) pounds per acre, that puts us in the upper-level of the mainland usage. . . . 2010, 2009 you are looking at close to twelve (12) pounds per acre and the average usage, and this is Restricted-Use Pesticides, over that same time period would be eight (8) pounds per acre."

3) CHEMICAL COMPANIES: "The information regarding the pesticides we use is already public information."

THE TRUTH:

- The only State records kept are of Restricted Use Pesticides SOLD in the State of Hawai'i—NOT the Pesticides USED. Additionally, these records are for RUPs only, not all pesticides.

- The State does not keep records of, and the companies have refused to release any information regarding, the amount of "General Use Pesticides" (such as Glyphosate) that they are using.

- The HDOA will no longer provide company-specific data but only aggregated data, which makes it impossible to determine what chemicals are being used by whom at what geographical location.

- The HDOA has charged hundreds of dollars to provide the data.

- Hawai'i Revised Statutes 149A-31.2 (Pesticide use; posting online) (2013), mandating that HDOA "shall publish on its website the public information contained in all restricted use pesticide records, reports, or forms submitted to the department" still has yet to be implemented by HDOA.

4) CHEMICAL COMPANIES: "We are highly regulated."

THE TRUTH:
Not really.

- Federal agencies do not always have a Hawai'i presence, rarely conduct on-site physical inspections, and have delegated responsibilities to the States and localities. See also Wisconsin Public Intervenor v. Mortier, 501 U. S. 597 (1991).

- Even though the chemical companies are by far the largest agricultural users of RUPs in the State and operate on over 20,000 acres often adjacent to homes, schools, and sensitive environmental areas, the HDOA infrequently inspects their operations.

    - Approximately 43% of the HDOA inspection log incidents are redacted from public view indicating inspection cases that remain "open" and/or otherwise contain information not available to the public.

    - It takes YEARS to investigate violations and complaints of pesticide drift. See the following:

        - *Honolulu Civil Beat*, "Does Hawai'i's Failure to Enforce Pesticide Use Justify Action by Kaua'i?" (October 8, 2013)

        - Video of HDOA responses to the Kaua'i County Council during proceedings for Bill No. 2491 (Ordinance No. 960)

    - Licensed physicians on Kaua'i who practice in areas impacted by the chemical companies' operations have expressed that they believe there is 10 times the national rate of certain rare congenital heart defects in newborns.

    - The State birth defects registry until very recently has not been updated since 2005.

5) CHEMICAL COMPANIES: "We only use what every other farmer uses."

THE TRUTH:
Based on raw Kaua'i data provided by HDOA showing three (3) years of RUPs purchased for use in Kaua'i County – *NO OTHER REAL HAWAI'I FARMER USES ANYTHING EVEN CLOSE TO WHAT IS USED BY THE CHEMICAL COMPANIES.* Just in 2012, and just on Kaua'i, over 5,477 pounds and 4,324 gallons were purchased by the chemical companies. The chemical companies have used at least 22 different types of RUPs, while regular food farmers use one (1) to possibly three (3) different types and use only a few gallons every few years. Summary data is here.

6) CHEMICAL COMPANIES: "We do not experiment with pesticides."

THE TRUTH:

- Bacillus thuringiensis corn ("Bt Corn") is considered a pesticide by the United States Environmental Protection Agency (EPA), and experiments with Bt Corn require an "Experimental Use Permit" (EUP) issued by the federal government. See for example here, and here (documents were provided by HDOA with all redactions as shown).

- The chemical companies have other federal Experimental Use Permits; however, the total number of experiments conducted with pesticides is not known and public records contain redactions. See for example here, and here (documents were provided by HDOA with all redactions as shown).

7) CHEMICAL COMPANIES: "The State and County also use large quantities of pesticides."

THE TRUTH:

- The State and County primarily use general use pesticides such as Roundup for roadside spraying and park maintenance. These products are considered non-RUPs by the EPA and HDOA.

- The State uses very small amounts of RUPs in targeted efforts to fight invasive species.

8) CHEMICAL COMPANIES: "The County of Kaua'i uses more RUPs than anyone."

THE TRUTH:

- The only RUP the County uses is chlorine gas to eliminate bacteria in water. Chlorine gas is by definition a RUP but it is not applied in the open air near homes, schools, hospitals, or other sensitive areas. Its application is very controlled and the information pertaining to its use is public.

9) CHEMICAL COMPANIES: "What about golf courses? They use lots of pesticides, too."

THE TRUTH:

- Reporting of golf course RUP sales on Kaua'i in 2012 shows only approximately 50 pounds and 20 gallons of RUPs are used annually by all of the golf courses on Kaua'i combined—compared to over 5,477 pounds and 4,324 gallons used by the 4 chemical companies each year. The raw data is here and the summary data is here.

- Information provided by Kaua'i County Councilmember Gary Hooser -

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: JeffreyUDV@aol.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 8:09:19 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Jeffrey Bronfman	Haiku Aina Permaculture Initiative	Support	No

Comments:

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Planned Parenthood®
Care. No matter what.

Planned Parenthood of Hawaii

To:	Hawaii State Senate Committees on Health, Agriculture and Energy & Environment
Hearing Date/Time:	Thursday, February 12, 2015, 3:00 p.m.
Place:	Hawaii State Capitol, Rm. 414
Re:	Testimony of Planned Parenthood of Hawaii in support of S.B. 797

Dear Chairs Green, Ruderman and Gabbard and members of the Committees,

Planned Parenthood of Hawaii writes in support of S.B. 797, which seeks to require the department of health to establish a mandatory disclosure program for pesticide use by all persons or entities under certain circumstances.

Planned Parenthood of Hawaii is dedicated to providing Hawaii's people with high quality, affordable and confidential sexual and reproductive health care, education, and advocacy. To that end, we support increased pesticide regulation because it will help to ensure that pesticides are used in a safe manner and at safe levels and help to mitigate the impact of pesticides on reproductive health.

As pesticide use is widespread across Hawaii, we must be vigilant in preventing harmful exposures before they occur. Please note that women of reproductive age and both male and female farmworkers and those who work with pesticides are particularly vulnerable to excessive exposure. According to a recent study from the University of California, San Francisco, pesticide exposure can harm the reproductive health and function of adult females during all developmental stages and has been associated with male sterility, spontaneous abortion, diminished fetal growth and survival and childhood and adult cancers.[1] Increasing pesticide regulation will serve to reduce the risks associated with pesticide exposure and promote the overall public health of our communities.

Thank you for this opportunity to testify in support.

Sincerely,

Laurie Field
Director of Public Affairs & Government Relations

[1] *See, e.g.,* University of California, San Francisco Program on Reproductive Health and the Environment, *Pesticides Matter, A Primer for Reproductive Health Physicians* (Dec., 2011), available at http://prhe.ucsf.edu/prhe/pdfs/pesticidesmatter_whitepaper.pdf.

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KONA
Education & Outreach
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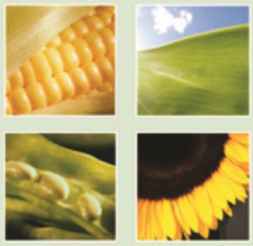

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Hawaii Crop Improvement Association

Growing the Future of Worldwide Agriculture in Hawaii

SENATE COMMITTEES ON HEALTH, AGRICULTURE, and ENERGY AND ENVIRONMENT

Testimony on Senate Bills 793, 1037, 797
RELATING TO THE HEALTH IMPACT OF PESTICIDES
February 12, 2015, Room 414, 3:00 PM

Aloha Chairs Green, Ruderman, and Gabbard, and Vice Chairs Wakai and Riviere, and Members of the Committee,

I am Bennette Misalucha, Executive Director of the Hawaii Crop Improvement Association (HCIA) and HCIA respectfully opposes Senate Bills 793, 1037, and 797.

Although the term pesticide has become a dirty word, pesticides are used throughout the world and in Hawaii to control pests and disease carriers, such as mosquitoes, ticks, and rodents. They are used in our drinking water to prevent disease and in our watersheds to control invasive species. Pesticides are also used in agriculture to control weeds, insect infestation, and diseases that can completely destroy a crop. Even organic agriculture uses pesticides.

Our member companies are very aware of their responsibility to use pesticides properly and they take this duty very seriously. The many employees of HCIA members are likely people you know as friends, relatives, and neighbors who contribute to communities throughout the Islands where we farm. We have been a part of these communities and local economies for over 50 years.

Our farms use trained employees who are experienced in pesticide application and apply pesticides only when necessary. The safety of our employees and the community is of utmost importance to us and we follow the strict federal and State pesticide laws and regulations carefully. We are regularly inspected by the State Department of Agriculture Pesticide Branch whose duty is to enforce these laws.

We disagree with the idea that there are wide-spread problems associated with pesticide applications in the state, and the need for these extensive and unprecedented measures. The proposed legislation assigns arbitrary restrictions and conditions that go far beyond science-based regulations. The U. S. Environmental Protection Agency evaluates and registers pesticides to ensure that they will not harm people, non-target species, or the environment. After thorough risk assessments, EPA determines if a pesticide can be sold and used. It dictates where a pesticide can be used, the amount, frequency, and timing of its use; and how it will be stored or discarded. EPA determines the conditions under which the pesticide can be used based upon ongoing research of any possible health or environmental effect.

It is clear that these bills have been developed by non-farmers who do not understand existing pesticide regulations and enforcement nor farmers' need to control insects, weeds, and disease. The bills are designed to unfairly target one segment of Hawaii's pesticide users - our member company farmers who grow genetically modified crops. The well-funded national organizations that are promoting this type of legislation here and across the country hope to set a precedent in Hawaii and make this farming as difficult as possible. Their claims that similar laws have been adopted across the country, in "33 states", are simply not true. A closer look at the laws they refer to reveals that they are concerned with requirements for schools' own procedures to use Integrated Pest Management; not pesticide use on farms. In fact, very few states have laws that contain ANY of the provisions in these bills.

These measures undermine EPA's role and will harm Hawaii farmers without providing increased safety. Before any additional State pesticide restrictions are imposed, they should be determined to be justifiable and necessary. The Hawaii Department of Agriculture currently has the authority and expertise to promulgate additional pesticide regulations to protect the public if it determines that further regulations are warranted.

We respectfully request that these bills be held. Rather than create new and arbitrary laws that will make it more difficult for farmers to stay in business in Hawaii, we support the concepts in other pesticide-related bills introduced this session, such as SB 734, that would give the HDOA and the University of Hawaii increased funding and capacity to more effectively perform their roles, including educating growers and others to ensure proper pesticide use, assistance in implementation of pesticide drift reduction strategies, and appropriate enforcement capability. We believe that a strong state pesticide regulatory program is essential to assuring the public that pesticide products are used

Thank you for this opportunity to submit testimony in opposition to these measures.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: henry.lifeoftheland@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Monday, February 09, 2015 3:19:21 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments:

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HAWAII Farmers & Ranchers UNITED

Founding Association Members

Hawaii Papaya Industry Association (*HPIA*)

Hawaii Cattlemen's Council

Big Island Banana Growers

Hamakua, Hilo & Kohala Farm Bureau Counties

Hawaii Floriculture & Nursery Association

We Grow 93% of Hawaii Island Agriculture Crops

~ 625,000 acres of land in production ~ $194 Million in Revenue ~

TESTIMONY BEFORE THE
SENATE COMMITTEE ON HEALTH, AGRICULTURE, ENERGY & ENVIROMENT

FEBRUARY 12, 2015 at 3:00PM in Capitol Room 414

TESTIMONY ON SB 793, SB 797, SB 800, SB 801, SB 1037

Aloha Chair(s) and Committee Members,

My Name is Lorie Farrell, I am the Project Director for Hawaii Farmers and Ranchers United, Mahalo for allowing us to testify on this matter.

Farmers are land stewards and we understand firsthand the need for crop protection methods and pesticides; we live in our communities and our children attend local schools; We are members of our communities. Farmers and agriculture is not the enemy, we feed and sustain Hawaii.

ACTIVISTS GROUPS HAVE TARGETED FARMERS WITH ANTI-PESTICIDE LEGISLATION
NO FACTS = NO FARMERS = NO FOOD

WE OPPOSE SB 793, SB 797, SB 800, SB 801, SB 1037

- All pesticide and product use labels already address public and environmental safety through mandated requirements, precautions and setback, all of which are already enforceable by state and federal law. Pesticides undergo years of study and tests based on scientific research to reduce risk and ensure health and safety for everyone and the environment. The average time frame to obtain a pesticide label is 12 years and a cost of $150 to 250 million dollars; this is due to the strict guidelines required by the EPA.

Obtain more information on the Process here.

-- ***We Feed Hawaii*** --

- These bills have been developed and promoted by national anti-pesticide /agriculture organizations like Center for Food Safety and PANNA. The intent of these national well- funded groups is to make make growing genetically modified crops in Hawaii as difficult as possible, and has less to do with concerns about their use of pesticides. The unintended consequences of which is Hawaii's farmers and ranchers are being squeezed of their hope and were forced to defend ourselves on multiple levels.

- These groups have misled the public and lawmaker sby saying similar laws have been adopted across the country, in "33 states". This is false! Very few states have laws that contain ANY of the provisions that are in these bills. Integrated Pest Management (IPM) requirements in schools and on school property has nothing to do with the application of pesticides on agricultural lands.
- Appropriately – schools have the responsibility of ensuring the health of students by ensuring pesticides are used appropriately. The recent incidents at schools in Waipahu, Ewa Beach and Hawaii Kai did NOT involve farmers, but were the result of improper use by neighbors.

- We support SB 734 because we believe that a strong state pesticide regulatory program is essential to assuring the public that these valuable pesticide products are used properly. SB 734 strengthens the Hawaii Department of Agriculture's capacity to regulate pesticides in the state. If lawmakers are sincere about addressing public safety, support the pesticide branch of the Dept. of Ag.

Good public policy must and should be based on facts. To accurately assess the merits of any bill and value to public health and safety, the facts must be taken into consideration. This can be an excellent opportunity to not only understand the actual risks posed by the use of pesticides, but to also educate the public on those risks. We respectfully oppose these measures.

Thank you…

From:	mailinglist@capitol.hawaii.gov
To:	AGL Testimony
Cc:	lynn@samesmallboat.com
Subject:	Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date:	Tuesday, February 10, 2015 3:19:22 PM
Attachments:	Sylvia Pager_HAAP_2015Testimony onPesticides.pdf

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Lynn B. Wilson, PhD	American Academy of Pediatrics, Hawaii Chapter	Support	No

Comments: I am submitting testimony on behalf of Sylvia R. Pager, MD, and the American Academy of Pediatrics, Hawaii Chapter- Mahalo

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ALEXANDER & BALDWIN, INC.

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SB 797
RELATING TO THE HEALTH IMPACT OF PESTICIDES

PAUL T. OSHIRO
MANAGER – GOVERNMENT RELATIONS
ALEXANDER & BALDWIN, INC.

FEBRUARY 12, 2015

Chair Ruderman, Chair Green, Chair Gabbard and Members of the Senate Committees on Agriculture, Health and Energy & Environment:

I am Paul Oshiro, testifying on behalf of Alexander & Baldwin, Inc. (A&B) and its agricultural company Hawaiian Commercial & Sugar Company on SB 797, A BILL FOR AN ACT RELATING TO THE HEALTH IMPACT OF PESTICIDES. We respectfully oppose this bill.

Pesticide use in Hawaii is extensively regulated by both the Federal Environmental Protection Agency and the State Department of Agriculture under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Hawaii Pesticide Law (Chapter 149A, HRS). Depending upon the pesticide and its intended use, the EPA and the State impose mandatory conditions and requirements that are science based and designed to protect the pesticide applicator, the general public, and the environment. These requirements may include, but are not limited to, maximum application rates, using only specified application methods and equipment, application only under specified weather conditions, prohibition of any pesticide drift to neighboring properties that causes health or environmental harm, and, in the case of restricted use

pesticides, allowing use only by or under the direct supervision of certified pesticide applicators.

Pesticide labels contain specific instructions such as what the pesticide may be used on, how much of the pesticide may be used, how often the pesticide can be used, and worker protection requirements. Federal Law states that the pesticide label is the law, and that use of the pesticide that is not in conformance with the label is a violation of Federal Law and may result in fines and/or imprisonment.

This bill includes provisions to impose new regulations and restrictions on the use of all pesticides by any entity or person that purchases or utilizes more than an unspecified amount of restricted use pesticides. Pesticide buffer zones are established for these entities and persons that restrict the outdoor application of all pesticides within an unspecified distance from schools, hospitals, adult residential care homes, child care facilities, places of worship, shoreline/watersheds, and other areas. Mandatory disclosure and notification requirements are also required for all pesticides used by these entities and persons. A provision is also included to stipulate that nothing in this bill shall be construed to prohibit or preempt the Counties from regulating pesticide disclosure, notification, and use in a manner that is equivalent to or more restrictive than this bill.

In the agricultural industry, pesticides are commonly utilized to protect crops from insect damage, disease, and weed infestation. Pesticides are an integral and essential component in many farming operations. The restriction and prohibition in the use of pesticides on agricultural crop lands will, in many instances, preclude the use of these lands for agricultural crop production.

By mandating the imposition of pesticide buffer zones, this bill may effectively prevent the continued use of lands presently in active agricultural production. The removal of lands presently in active agricultural production is likely to have a direct negative impact on the total crop output of the agricultural operation. A reduction in total crop output may pose significant challenges in the overall sustainability and viability of the agricultural operation.

The proposed pesticide buffer zones, which will only be applicable to entities and persons that purchase or utilize in excess of an unspecified amount of restricted use pesticides, may essentially allow other entities or persons who use the same restricted use pesticides in lesser aggregate amounts or use the same general use pesticides to be exempt from the provisions in this bill. Entities or persons applying significant quantities of restricted or general use pesticides per acre in the vicinity of sensitive areas may be excluded from the restrictive provisions in this bill if they do not purchase or use restricted use pesticides above the unspecified aggregate threshold in this bill. Conversely, entities and persons who apply the same pesticides would be subject to the bill's restrictions if their aggregate restricted use pesticide use is in excess of the unspecified aggregate threshold.

In the future, should a sensitive area facility be situated on lands adjacent to an affected commercial agricultural entity, new buffer zones may be established for the affected commercial agricultural entity. We note that readily identifying future sensitive area facilities may pose challenges for the agricultural operation. The uncertainty of future buffer zones being established as a result of actions on neighboring lands is likely to be problematic for even short-term farm planning.

The mandatory pesticide disclosure and notification requirements imposed by this bill may also create unintended negative consequences. By imposing these mandatory pesticide disclosure and notification requirements without accompanying public education on Federal and State pesticide oversight and regulation, this may result in an increase in the number of inquiries, complaints, and non-science based comments and concerns. In addition, despite every effort to follow proposed pesticide application schedules, these schedules may unexpectedly change due to various operational and weather related factors. Schedule changes implemented after the pesticide application notice is issued may create confusion and prompt additional inquiries and concerns. We understand that at present, the posting of warning signs for pesticide application is determined by the U.S. Environmental Protection Agency during their detailed pesticide evaluation and registration process based on the toxicity of the pesticide and other factors. The information required to be posted on warning signs as specified in this bill may require that large signs be posted at various locations. Multiple signs may also need to be prepared to include required information on the various ingredients included in pesticides applied to the agricultural crops.

This bill also includes a provision stipulating that nothing shall be construed to prohibit or preempt the Counties from regulating pesticide disclosure, notification, and use in a manner that is equivalent to or more restrictive than this bill. We respectfully oppose this provision as it is likely to result in pesticide oversight and regulations that differ throughout the State of Hawaii. With pesticide use heavily regulated at both the Federal and State levels of government, we believe that the imposition of any additional pesticide regulations should be science based and thoroughly researched and vetted

prior to implementation. We believe that the Federal and State entities presently overseeing pesticide regulation in Hawaii have the technical knowledge and expertise to implement additional pesticide regulations, when warranted and necessary, to protect and safeguard employees, the general public, and our environment.

Agriculture is a fragile and very challenging business that affords benefits to the broader community and the economy. Providing jobs for residents, revenue for support businesses, and the ambiance of open agricultural fields are some of the benefits derived from a healthy and prosperous agricultural industry. By imposing additional challenges on agricultural entities, this bill may negatively impact the long term viability and sustainability of Hawaii's agricultural industry.

Based on the foregoing, we respectfully request that this bill be held in Committee. Thank you for the opportunity to testify.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: sustainablesakala@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Monday, February 09, 2015 10:22:52 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Steve Sakala	Hawaii Farmers Union United, Kona Chapter	Support	No

Comments:

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HAWAII PEST CONTROL ASSOCIATION

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

February 12, 2015

Testimony To: Senate Committee on Agriculture
Senator Russell E. Ruderman, Chair

Senate Committee on Health
Senator Josh Green, Chair

Senate Committee on Energy and Environment
Senator Mike Gabbard, Chair

Presented By: Tim Lyons, CAE
Executive Director

Subject: S.B. 797 - Relating to the Health Impact of Pesticides.

Chair Green, Chair Ruderman, Chair Gabbard, and Members of the Joint Committees:

I am Tim Lyons, Executive Director of the Hawaii Pest Control Association and we only have a minor request regarding these bills. That is, there appears to be some exclusionary language under 321A definitions, "outdoor application" however the rest of the bill continues to use such language as "any entity" shall be subject to the section, buffer zones and other language that could inadvertently draw us back in. We would respectfully request a separate subsection that would provide for clear exclusionary language from the entire section.

Thank you for this opportunity to testify.

From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: warrenmcfb@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Wednesday, February 11, 2015 8:20:58 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Warren Watanabe	Maui County Farm Bureau	Oppose	No

Comments: Pesticides are regulated by federal and state agencies. Thorough studies and testing are done before the release of any pesticide. We concur with the Hawaii Farm Bureau testimony.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: aeryn.ralha@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Monday, February 09, 2015 10:13:25 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Aeryn Ralha	Individual	Support	No

Comments:

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To: AGL Testimony
Cc: afrancokaupo@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Wednesday, February 11, 2015 1:33:49 PM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Alex Franco	Individual	Oppose	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: bburdt3@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Monday, February 09, 2015 9:16:28 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: clareloprinzi@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 1:51:34 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
clare loprinzi	Individual	Support	No

Comments: always important for truth to be written...pono...if there is nothing to hide than why would we be even talking about this bill? the lease we can do is to write the truth

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: ipoc.m.chang@hotmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 3:35:37 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Corine Chang	Individual	Support	No

Comments: I am in support of SB797 that establishes notifying, reporting and use requirements for any entity or person that uses pesticides under certain circumstances.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: makena42@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Tuesday, February 10, 2015 9:52:27 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: orchid6128@aol.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 11:28:42 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
deb mader	Individual	Support	No

Comments: Aloha, My family supports 797 asking for disclosure of pesticide use. I am victim of over-spray of Monsanto on their Maui Mokulele field, where only a dozen feet or so separates their gmo experimental crops from public land. I was on a public sidewalk in front of this area on November 19, 2014 when I smelled a strong sweet perfume smell. It happened three times within 90 minutes. I became disoriented, feeling foggy. I suffered a headache and sore throat, irritated eyes, followed by a terrible dry cough which lasted 10 days. My voice was hoarse and speaking difficult for days after the incident. It took me two minutes once inside my car to figure out how to back up. I do not take prescription medicine and had not ingested anything that day that could have created this physical and neurological response. I asked the security guards at the gate if workers were currently spraying and they laughed at me and said "does it LOOK like we are spraying anything?" I was not able to find out what was being sprayed or how much. I reported all of this to Lester Chin at Dept of Ag, who was supposed to investigate. There were several other people who suffered similar things at the same place and time. I have yet to hear back from Mr. Chin regarding his findings. I am lucky that my (then) 6 month old was in the car with Grandma at the time this happened. Normally she goes everywhere I go, but the angels (ancestors) were looking over us that day as she did not breathe in the chemicals that I did. We desperately need to know what these companies are spraying. Particularly since they are conducting open-air GMO experiments where they are testing seeds for CHEMICAL RESISTANCE. An example that has me concerned is the new combo of 2,4D (components of agent orange) and glyphosate. The EPA has not approved this combined use (made by another company as "enlist duo") in the state of Hawaii, yet Monsanto has permits on file with the USDA to conduct field trials on soybeans testing for resistance to 2,4d and glyphosate. Meaning they are using the same components of "enlist duo" right here on Maui, probably in the same field that borders a public area. This is a where you can read the permit http://www.isb.vt.edu/getRelDetail.aspx?bp=14-238-102rm This is only ONE instance, ONE permit allowing open air testing of GMO seeds for CHEMICAL resistance...There are 178 records on file for 2014 for the state of Hawaii alone! I know that this bill does not single out one company, but I am hoping that the multi-national GMO corporations who have fields near schools and public sidewalks and homes will be included in those that will need to have buffer zones and disclosure.

We've seen what's happened to the school children in Waimea. KIDS ARE GETTING SICK! And yet, the poisoning is allowed to perpetuate. Living on Maui, I can assure you the problem of chemical exposure is not limited to the Garden Isle. It is happening here as well. Mahalo for listening to PEOPLE and placing our duty to uphold the public trust doctrine above corporate profits. The children (and those yet to be born) thank you for supporting this bill. Malama 'Aina! Respectfully Yours, Deb Mader Creagh

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: ihemphi@live.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 8:25:43 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Denise Key	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: res1z0vb@hawaiiantel.net
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 12:32:11 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: This is about protecting everyone from a possible hidden poisoning that can cause damage to people and our environment. Please support this bill because we have equal to nothing in place to do so now.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: elif.beall@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Wednesday, February 11, 2015 11:16:53 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Elif Beall	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: faypacheco@yahoo.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 1:25:54 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Fay I Pacheco	Individual	Support	No

Comments: I urge this committee to vote yes on SB 797 establishing mandatory notice, reporting, and use requirements when pesticides are applied outdoors near sensitive areas. Mahalo.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: likowallace@ymail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 12:07:52 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Faye L Wallace	Individual	Comments Only	No

Comments: I humbly ask that you pass this bill for it is requesting just the bare minimal time of notice for something that can seriously affect others in the area and beyond. Thank you for being our voice.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: mauileab@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Wednesday, February 11, 2015 9:26:20 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: harriet@passengerplanet.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 8:36:08 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Harriet Witt	Individual	Support	No

Comments: We need to be warned of what we are being exposed to. I support this.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: ian.l.york@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Wednesday, February 11, 2015 8:20:17 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Ian York	Individual	Support	No

Comments: I strongly support this measure to better inform residents of the type and quantities of pesticides used near them. This information is crucial in providing data for epidemiological studies to determine possible health risks and best practices for pesticide use.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: ambrosenterprises@yahoo.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 12:59:53 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Jacqueline S. Ambrose	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: olindaorganicfarm@hawaiiantel.net
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Sunday, February 08, 2015 11:56:21 AM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: Please keep our people and aina safe and support this bill to regulate pesticide use. Mahalo!

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: gordines@kauaiflowers.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 6:41:49 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
John R. Gordines	Individual	Oppose	No

Comments: This bill is too vague! No real content

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: wao-hsl@WeAreOne.cc
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 3:15:41 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Kohn MD	Individual	Support	No

Comments: www.WeAreOne.cc

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From: mailinglist@capitol.hawaii.gov
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Cc: kmurray.testimony@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 7:56:42 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: I fully support SB797 and hope that all of Hawaii's lawmakers support it to its fullest intent. As our population grows, monitoring chemical and pesticide use in a timely manner becomes even more vital.

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To: AGL Testimony
Cc: kkburdt@gmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Monday, February 09, 2015 9:10:27 PM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Kristen Koba-Burdt	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: caveguy@hawaiiantel.net
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Sunday, February 08, 2015 11:51:59 AM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Lars Lind	Individual	Support	No

Comments: Please support this bill to regulate the use of pesticides in our state. We must take steps to protect the health of our people and our aina. Mahalo!

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TESTIMONY IN SUPPORT OF SB797
Hawaii State Senate
Thursday, February 12, 2015
State Conference Room 414 at 3:00p
Submitted by Lynn B. Wilson, PhD

Chair & Committee Members of the Senate Committees on Agriculture, Health, Energy & Environment

Dear Senators:

I am a cultural anthropologist who has invested over 20 years in supporting the health and well being of young children and their families in Hawaii by partnering with public and private agencies including the Hawaii State Department of Health, UH JABSOM Department of Pediatrics, American Academy of Pediatrics/Hawaii Chapter, community health centers, and early childhood organizations in the areas of health, early learning, family engagement and support. I have also co-founded small businesses with Sharon Taba, MEd, Webfish Pacific, LLC & Same Small Boat Productions, LLC, that have received federal, state, and foundation support to develop projects supporting young children and their families.

I am writing to urge you to support **SB797: Relating to the Health Impact of Pesticides**, introduced by Senator Green.

This proposed law aims to protect communities across the state by establishing mandatory notice, reporting, and use requirements when pesticides are applied outdoors near sensitive areas.

Research clearly demonstrates that even low exposures to environmental toxins, such as pesticides (including fumigants, herbicides, pesticides, etc.), put healthy brain development in fetuses and young children at tremendous risk. Please see attached policy statements from the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists.

In Hawaii, where agrichemical companies are using increasing amounts of pesticides and increasingly using multiple pesticides, acute and chronic exposure can be due to pesticide drift, particulate dust, water we drink and the water we swim in, jeopardizing the health of pregnant women and young children as well as the environment itself.

It is particularly large chemical companies that are conducting "experiments," but not just on their seeds and the various, multiple pesticides they use in seed development. Their outdoor laboratories are also experimenting on the people and the islands of Hawaii- introducing a combination of killing chemicals year round into our islands that research shows can negatively impact human motor-neuron systems, increase autism, and result in endocrine disruption, with dramatic effects on vulnerable populations especially pregnant women and children.

To better protect the people and island environments of Hawaii, we need to learn from these corporations, from their past actions, because large chemical companies do not have a positive track record in protecting the communities in which they work. For example, look at the litany of disasters that have taken place across the country for Monsanto, just one of the companies operating in Hawaii: (documented largely after the contaminations occurred by U.S. EPA documents 1997-2012, see end references)

- Monsanto in Augusta, Georgia: Superfund-listed in 1984 for arsenic-ladern waste and sludge contributing to groundwater contamination.[1]
- Monsanto in Soda Springs, Idaho: Superfund listed in 1990 for arsenic, cadmium and other toxins.[2]
- Monsanto in Sauget, Illinois: Two Superfund sites are still being cleaned up after the initial cleanup in 1992; this plant produced 99% of all PCBs in the United States.[3]
- Monsanto in Anniston, Alabama: Listed under Superfund Alternative Approach in 2000 for extensive PCB contamination over six decades, a city characterized as on of the most polluted places in America.[4,5]
- Solutia plants, ranked #1 in Texas and #4 in Massachusetts for the EPAs top contaminated sites in 2007. [6]

I believe "Good Neighbor" reporting is not enough to protect Hawaii's families and young children, not enough to protect Hawaii's lands, animals, and waters—these reports lack specifics of when and where and in what combination pesticides are applied, do not protect families and communities by establishing effective buffer zones, and do not inform surrounding communities in a timely way.

Therefore, it is critical to establish effective buffer zones, require timely and comprehensive use notifications, and increase use restrictions. This bill aims to protect our environment and our residents by requiring public posting of pesticide outdoor application, notification to occupants and residents of sensitive areas, and recordkeeping and annual public disclosure. Importantly, this bill does not prohibit governing bodies at the county level from regulating pesticide disclosure, notification, and use from regulating pesticides in a more stringent manner.

Thank you for this opportunity to ask your <u>support</u> of **SB797.** It's a critical time to pay attention to the "upstream" solutions that will play such a prominent role in positively influencing the health and well-being of Hawaii's communities, families and young children for generations to come.

With Respect & Aloha,

Lynn B. Wilson, PhD
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American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

FROM THE AMERICAN ACADEMY OF PEDIATRICS

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

POLICY STATEMENT

Pesticide Exposure in Children

COUNCIL ON ENVIRONMENTAL HEALTH

KEY WORDS

pesticides, toxicity, children, pest control, integrated pest management

ABBREVIATIONS

EPA—Environmental Protection Agency
IPM—integrated pest management

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abstract

FREE

This statement presents the position of the American Academy of Pediatrics on pesticides. Pesticides are a collective term for chemicals intended to kill unwanted insects, plants, molds, and rodents. Children encounter pesticides daily and have unique susceptibilities to their potential toxicity. Acute poisoning risks are clear, and understanding of chronic health implications from both acute and chronic exposure are emerging. Epidemiologic evidence demonstrates associations between early life exposure to pesticides and pediatric cancers, decreased cognitive function, and behavioral problems. Related animal toxicology studies provide supportive biological plausibility for these findings. Recognizing and reducing problematic exposures will require attention to current inadequacies in medical training, public health tracking, and regulatory action on pesticides. Ongoing research describing toxicologic vulnerabilities and exposure factors across the life span are needed to inform regulatory needs and appropriate interventions. Policies that promote integrated pest management, comprehensive pesticide labeling, and marketing practices that incorporate child health considerations will enhance safe use. *Pediatrics* 2012;130:e1757–e1763

INTRODUCTION

Pesticides represent a large group of products designed to kill or harm living organisms from insects to rodents to unwanted plants or animals (eg, rodents), making them inherently toxic (Table 1). Beyond acute poisoning, the influences of low-level exposures on child health are of increasing concern. This policy statement presents the position of the American Academy of Pediatrics on exposure to these products. It was developed in conjunction with a technical report that provides a thorough review of topics presented here: steps that pediatricians should take to identify pesticide poisoning, evaluate patients for pesticide-related illness, provide appropriate treatment, and prevent unnecessary exposure and poisoning.[1] Recommendations for a regulatory agenda are provided as well, recognizing the role of federal agencies in ensuring the safety of children while balancing the positive attributes of pesticides. Repellents reviewed previously (eg, N,N-diethyl-meta-toluamide, commonly known as DEET; picaridin) are not discussed.[2]

SOURCES AND MECHANISMS OF EXPOSURE

Children encounter pesticides daily in air, food, dust, and soil and on surfaces through home and public lawn or garden application, household insecticide use, application to pets, and agricultural product

TABLE 1 Categories of Pesticides and Major Classes

Pesticide category	Major Classes	Examples
Insecticides	Organophosphates	Malathion, methyl parathion, acephate
	Carbamates	Aldicarb, carbaryl, methomyl, propoxur
	Pyrethroids/pyrethrins	Cypermethrin, fenvalerate, permethrin
	Organochlorines	Lindane
	Neonicotinoids	Imidacloprid
	N-phenylpyrazoles	Fipronil
Herbicides	Phosphonates	Glyphosate
	Chlorophenoxy herbicides	2,4-D, mecoprop
	Dipyridyl herbicides	Diquat, paraquat
	Nonselective	Sodium chlorate
Rodenticides	Anticoagulants	Warfarin, brodifacoum
	Convulsants	Strychnine
	Metabolic poison	Sodium fluoroacetate
	Inorganic compounds	Aluminum phosphide
Fungicides	Thiocarbamates	Metam-sodium
	Triazoles	Fluconazole, myclobutanil, triadimefon
	Strobilurins	Pyraclostrobin, picoxystrobin
Fumigants	Halogenated organic	Methyl bromide, Chloropicrin
	Organic	Carbon disulfide, Hydrogen cyanide, Naphthalene
	Inorganic	Phosphine
Miscellaneous	Arsenicals	Lead arsenate, chromated copper arsenate, arsenic trioxide
	Pyridine	4-aminopyridine

residues.[3–9] For many children, diet may be the most influential source, as illustrated by an intervention study that placed children on an organic diet (produced without pesticide) and observed drastic and immediate decrease in urinary excretion of pesticide metabolites.[10] In agricultural settings, pesticide spray drift is important for residences near treated crops or by take-home exposure on clothing and footwear of agricultural workers.[9,11,12] Teen workers may have occupational exposures on the farm or in lawn care.[13–15] Heavy use of pesticides may also occur in urban pest control.[16]

Most serious acute poisoning occurs after unintentional ingestion, although poisoning may also follow inhalational exposure (particularly from fumigants) or significant dermal exposure.[17]

ACUTE PESTICIDE TOXICITY

Clinical Signs and Symptoms

High-dose pesticide exposure may result in immediate, devastating, even lethal consequences. Table 2 summarizes features of clinical toxicity for the major pesticides classes. It highlights the similarities of common classes of pesticides (eg, organophosphates, carbamates, and pyrethroids) and underscores the importance of discriminating among them because treatment modalities differ. Having an index of suspicion based on familiarity with toxic mechanisms and taking an environmental history provides the opportunity for discerning a pesticide's role in clinical decision-making.[18] Pediatric care providers have a poor track record for recognition of acute pesticide poisoning.[19–21] This reflects their self-reported lack of medical education and self-efficacy on the topic.[22–26] More in-depth review of acute toxicity and management can be found in the accompanying technical report or recommended resources in Table 3.

The local or regional poison control center plays an important role as a resource for any suspected pesticide poisoning.

There is no current reliable way to determine the incidence of pesticide exposure and illness in US children. Existing data systems, such as the American Association of Poison Control Centers' National Poison Data System or the National Institute for Occupational Safety and Health's Sentinel Event Notification System for Occupational Risks,[27,28] capture limited information about acute poisoning and trends over time.

There is also no national systematic reporting on the use of pesticides by consumers or licensed professionals. The last national survey of consumer pesticide use in homes and gardens was in 1993 (Research Triangle Institute study).[29]

Improved physician education, accessible and reliable biomarkers, and better diagnostic testing methods to readily identify suspected pesticide illness would significantly improve reporting and surveillance. Such tools would be equally important in improving clinical decision-making and reassuring families if pesticides can be eliminated from the differential diagnosis.

The Pesticide Label

The pesticide label contains information for understanding and preventing acute health consequences: the active ingredient; signal words identifying acute toxicity potential; US Environmental Protection Agency (EPA) registration number; directions for use, including protective equipment recommendations, storage, and disposal; and manufacturer's contact information.[30] Basic first aid advice is provided, and some labels contain a "note for physicians" with specific relevant medical information. The label does not specify the pesticide class or "other"/"inert" ingredients that may have significant toxicity and can account for up to 99% of the product.

Chronic toxicity information is not included, and labels are predominantly available in English. There is significant use of illegal pesticides (especially in immigrant communities), off-label use, and overuse, underscoring the importance of education, monitoring, and enforcement.[31]

TABLE 2 Common Pesticides: Signs, Symptoms, and Management Considerations[a]

Class	Acute Signs and Symptoms	Clinical Considerations
Organophosphate and N-methyl carbamate insecticides	• Headache, nausea, vomiting, abdominal pain, and dizziness • Hypersecretion: sweating, salivation, lacrimation, rhinorrhea, diarrhea, and bronchorrhea • Muscle fasciculation and weakness, and respiratory symptoms (bronchospasm, cough, wheezing, and respiratory depression) • Bradycardia, although early on, tachycardia may be present • Miosis • Central nervous system: respiratory depression, lethargy, coma, and seizures	• Obtain red blood cell and plasma cholinesterase levels • Atropine is primary antidote • Pralidoxime is also an antidote for organophosphate and acts as a cholinesterase reactivator • Because carbamates generally produce a reversible cholinesterase inhibition, pralidoxime is not indicated in these poisonings
Pyrethroid insecticides	• Similar findings found in organophosphates including the hypersecretion, muscle fasciculation, respiratory symptoms, and seizures • Headache, fatigue, vomiting, diarrhea, and irritability • Dermal: skin irritation and paresthesia	• At times have been mistaken for acute organophosphate or carbamate poisoning • Symptomatic treatment • Treatment with high doses of atropine may yield significant adverse results • Vitamin E oil for dermal symptoms
Neonicotinoid insecticides	• Disorientation, severe agitation, drowsiness, dizziness, weakness, and in some situations, loss of consciousness • Vomiting, sore throat, abdominal pain • Ulcerations in upper gastrointestinal tract	• Supportive care • Consider sedation for severe agitation • No available antidote • No available diagnostic test
Fipronil (N-phenylpyrazole insecticides)	• Nausea and vomiting • Aphthous ulcers • Altered mental status and coma • Seizures	• Supportive care • No available antidote • No available diagnostic test
Lindane (organochlorine insecticide)	• Central nervous system: mental status changes and seizures • Paresthesia, tremor, ataxia and hyperreflexia	• Control acute seizures with lorazepam • Lindane blood level available as send out
Glyphosate (phosphonate herbicides)	• Nausea and vomiting • Aspiration pneumonia type syndrome • Hypotension, altered mental status, and oliguria in severe cases • Pulmonary effects may in fact be secondary to organic solvent	• Supportive care • Pulmonary effects may be secondary to organic solvent
Chlorophenoxy herbicides	• Skin and mucous membrane irritation • Vomiting, diarrhea, headache, confusion • Metabolic acidosis is the hallmark • Renal failure, hyperkalemia, and hypocalcemia • Probable carcinogen	• Consider urine alkalinization with sodium bicarbonate in IV fluids
Rodenticides (long-acting anticoagulants)	• Bleeding: gums, nose, and other mucous membrane sites • Bruising	• Consider PT (international normalized ratio) • Observation may be appropriate for some clinical scenarios in which it is not clear a child even ingested the agent • Vitamin K indicated for active bleeding (IV vitamin K) or for elevated PT (oral vitamin K)

IV, intravenous; PT, prothrombin time.

[a] Expanded version of this table is available in the accompanying technical report.[1]

CHRONIC EFFECTS

Dosing experiments in animals clearly demonstrate the acute and chronic toxicity potential of multiple pesticides. Many pesticide chemicals are classified by the US EPA as carcinogens. The past decade has seen an expansion of the epidemiologic evidence base supporting adverse effects after acute and chronic pesticide exposure in children. This includes increasingly sophisticated studies addressing combined exposures and genetic susceptibility.[1]

Chronic toxicity end points identified in epidemiologic studies include adverse birth outcomes including preterm birth, low birth weight, and congenital

TABLE 3 Pesticide and Child Health Resources for the Pediatrician

Topic/Resource	Additional Information	Contact Information
Management of acute pesticide poisoning		
Recognition and Management of Pesticide Poisonings	Print: fifth (1999) is available in Spanish, English; 6th edition available 2013	http://www.epa.gov/pesticides/safety/healthcare/handbook/handbook.htm
Regional Poison Control Centers		1 (800) 222-1222
Chronic exposure information and specialty consultation		
The National Pesticide Medical Monitoring Program (NPMMP)	Cooperative agreement between Oregon State University and the US EPA. NPMMP provides informational assistance by E-mail in the assessment of human exposure to pesticides	npmmp@oregonstate.edu or by fax at (541) 737-9047
Pediatric Environmental Health Specialty Units (PEHSUs)	Coordinated by the Association of Occupational and Environmental Clinics to provide regional academically based free consultation for health care providers	www.aoec.org/PEHSU.htm; toll-free telephone number (888) 347-AOEC (extension 2632)
Resources for safer approaches to pest control		
US EPA	Consumer information documents	www.epa.gov/oppfead1/Publications/Cit_Guide/citguide.pdf
Citizens Guide to Pest Control and Pesticide Safety	• Household pest control • Alternatives to chemical pesticides • How to choose pesticides • How to use, store, and dispose of them safely • How to prevent pesticide poisoning • How to choose a pest-control company	
Controlling pests	Recommended safest approaches and examples of programs	www.epa.gov/pesticides/controlling/index.htm
The University of California Integrative Pest Management Program	Information on IPM approaches for common home and garden pests	www.ipm.ucdavis.edu
Other resources		
National research programs addressing children's health and pesticides	• NIEHS/EPA Centers for Children's Environmental Health & Disease Prevention Research • The National Children's Study	www.niehs.nih.gov/research/supported/centers/prevention www.nationalchildrensstudy.gov/Pages/default.aspx
US EPA	Pesticide product labels	www.epa.gov/pesticides/regulating/labels/product-labels.htm#projects
The National Library of Medicine "Tox Town"	Section on pesticides that includes a comprehensive and well-organized list of web link resources on pesticides	http://toxtown.nlm.nih.gov/text_version/chemicals.php?id=23

anomalies, pediatric cancers, neurobehavioral and cognitive deficits, and asthma. These are reviewed in the accompanying technical report. The evidence base is most robust for associations to pediatric cancer and adverse neurodevelopment. Multiple case-control studies and evidence reviews support a role for insecticides in risk of brain tumors and acute lymphocytic leukemia. Prospective contemporary birth cohort studies in the United States link early-life exposure to organophosphate insecticides with reductions in IQ and abnormal behaviors associated with attention-deficit/hyperactivity disorder and autism. The need to better understand the health implications of ongoing pesticide use practices on child health has benefited from these observational epidemiologic data.[32]

EXPOSURE PREVENTION APPROACHES

The concerning and expanding evidence base of chronic health consequences of pesticide exposure underscores the importance of efforts aimed at decreasing exposure.

Integrated pest management (IPM) is an established but undersupported approach to pest control designed to minimize and, in some cases, replace the use of pesticide chemicals while achieving acceptable control of pest populations.[33] IPM programs and knowledge have been implemented in agriculture and to address weeds and pest control in residential settings and schools, commercial structures, lawn and turf, and community gardens. Reliable resources are available from the US EPA and University of California—Davis (Table 3). Other local policy approaches in use are posting warning signs of pesticide use, restricting spray zone buffers at schools, or restricting specific types of pesticide products in schools. Pediatricians can

play a role in promotion of development of model programs and practices in the communities and schools of their patients.

RECOMMENDATIONS

Three overarching principles can be identified: (1) pesticide exposures are common and cause both acute and chronic effects; (2) pediatricians need to be knowledgeable in pesticide identification, counseling, and management; and (3) governmental actions to improve pesticide safety are needed. Whenever new public policy is developed or existing policy is revised, the wide range of consequences of pesticide use on children and their families should be considered. The American Academy of Pediatrics, through its chapters, committees, councils, sections, and staff, can provide information and support for public policy advocacy efforts. See http://www.aap.org/advocacy.html for additional information or contact chapter leadership.

Recommendations to Pediatricians

1. Acute exposures: become familiar with the clinical signs and symptoms of acute intoxication from the major types of pesticides. Be able to translate clinical knowledge about pesticide hazards into an appropriate exposure history for pesticide poisoning.
2. Chronic exposures: become familiar with the subclinical effects of chronic exposures and routes of exposures from the major types of pesticides.
3. Resource identification: know locally available resources for acute toxicity management and chronic low-dose exposure (see Table 3).
4. Pesticide labeling knowledge: Understand the usefulness and limitations of pesticide chemical information on pesticide product labels.
5. Counseling: Ask parents about pesticide use in or around the home to help determine the need for providing targeted anticipatory guidance. Recommend use of minimal-risk products, safe storage practices, and application of IPM (least toxic methods), whenever possible.
6. Advocacy: work with schools and governmental agencies to advocate for application of least toxic pesticides by using IPM principles. Promote community right-to-know procedures when pesticide spraying occurs in public areas.

Recommendations to Government

1. Marketing: ensure that pesticide products as marketed are not attractive to children.
2. Labeling: include chemical ingredient identity on the label and/or the manufacturer's Web site for all product constituents, including inert ingredients, carriers, and solvents. Include a label section specific to "Risks to children," which informs users whether there is evidence that the active or inert ingredients have any known chronic or developmental health concerns for children. Enforce labeling practices that ensure users have adequate information on product contents, acute and chronic toxicity potential, and emergency information. Consider printing or making available labels in Spanish in addition to English.
3. Exposure reduction: set goal to reduce exposure overall. Promote application methods and practices that minimize children's exposure, such as using bait stations and gels, advising against overuse of pediculicides. Promote education regarding proper storage of product.
4. Reporting: make pesticide-related suspected poisoning universally reportable and support a systematic central repository of such incidents to optimize national surveillance.
5. Exportation: aid in identification of least toxic alternatives to pesticide use internationally, and unless safer alternatives are not available or are impossible to implement, ban export of products that are banned or restricted for toxicity concerns in the United States.
6. Safety: continue to evaluate pesticide safety. Enforce community right-to-know procedures when pesticide spraying occurs in public areas. Develop, strengthen, and enforce standards of removal of concerning products for home or child product use. Require development of a human biomarker, such as a urinary or blood measure, that can be used to identify exposure and/or early health implications with new pesticide chemical registration or reregistration of existing products. Developmental toxicity, including endocrine disruption, should be a priority when evaluating new chemicals for licensing or reregistration of existing products.
7. Advance less toxic pesticide alternatives: increase economic incentives for growers who adopt IPM, including less toxic pesticides. Support research to expand and improve IPM in agriculture and nonagricultural pest control.
8. Research: support toxicologic and epidemiologic research to better identify and understand health risks associated with children's exposure to pesticides. Consider supporting another national study of pesticide use in the home and garden setting of US households as a targeted initiative or through cooperation with existing research opportunities (eg, National Children's Study, NHANES).
9. Health provider education and support: support educational efforts to increase the capacity of pediatric health care providers to diagnose and manage acute pesticide

poisoning and reduce pesticide exposure and potential chronic pesticide effects in children. Provide support to systems such as Poison Control Centers to provide timely, expert advice on exposures. Require the development of diagnostic tests to assist providers with diagnosing (and ruling out) pesticide poisoning.

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ERRATA

Spooner. We Are Still Waiting for Fully Supportive Electronic Health Records in Pediatrics. *Pediatrics*. 2012;130(6):e1674–e1676.

An error occurred in this article by Spooner, titled "We Are Still Waiting for Fully Supportive Electronic Health Records in Pediatrics" published in the December 2012 issue of *Pediatrics* (2012;130[6]:e1674–e1676; originally published online November 19, 2012; doi:10.1542/peds.2012-2724). On page e1674, on line 33, this reads: "The alarming result from the survey was that only 3% of AAP Fellows reported that they had a system that provided all of the items listed by Leu and colleagues." This should have read: "The alarming result from the survey was that only 9.6% of AAP Fellows reported that they had or planned to adopt within 12 months a system that provided all of the five "pediatric-supportive" items listed by Leu and colleagues."

doi:10.1542/peds.2013-0134

Auger et al. Medical Home Quality and Readmission Risk for Children Hospitalized With Asthma Exacerbations. *Pediatrics*. 2013;131(1):64–70

An error occurred in this article by Auger et al, titled "Medical Home Quality and Readmission Risk for Children Hospitalized With Asthma Exacerbations" published in the January 2013 issue of *Pediatrics* (2013;131[1]:64–70; doi:10.1542/2012-1055). On page 69, in Table 2 under the heading Adjusted HR, on the line Medicaid, this reads: "0.28 (0.51–1.34)." This should have read: "0.82 (0.51–1.34)."

doi:10.1542/peds.2013-0187

Council on Environmental Health. Policy Statement: Pesticide Exposure in Children. *Pediatrics*. 2012;130(6):e1757–e1763

A couple of errors occurred in this AAP Policy Statement titled "Pesticide Exposure in Children" published in the December 2012 issue of *Pediatrics* (2012;130[6]:e1757–e1763; originally published online November 26, 2012; doi:10.1542/peds.2012-2757). In Table 2, in the second and third columns where glyphosate is discussed, the words "organic solvent" should be replaced with the word "surfactant." On page e1758, in the first paragraph of the left-hand column, immediately beneath Table 1, the first full sentence should be amended to read: "For many children, diet may be the most influential source, as illustrated by an intervention study that placed children on an organic diet (produced without most conventional pesticides) and observed drastic and immediate decrease in urinary excretion of organophosphate pesticide metabolites."

doi:10.1542/peds.2013-0576

Robert JR, Karr CJ; Council on Environmental Health. Technical Report: Pesticide Exposure in Children. *Pediatrics*. 2012;130(6):e1765–e1788

Several inaccuracies occurred in this AAP Technical Report titled "Pesticide Exposure in Children" published in the December 2012 issue of *Pediatrics* (2012;130[6]:e1765–e1788; originally published online November 26, 2012; doi:10.1542/peds.2012-2758). On page e1773 and in Tables 1 and 2 where the phosphonate herbicide glyphosate is discussed, changes should be noted. In the first paragraph of the first column on page e1773 about acute glyphosate poisoning, the word "intentional" should be substituted for the word "unintentional." In this same paragraph as well as in Tables 1 and 2, the word "surfactant" should replace the words "hydrocarbon solvent" and "organic solvent, respectively." The

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Pesticide Exposure in Children

COUNCIL ON ENVIRONMENTAL HEALTH

Pediatrics; originally published online November 26, 2012;
DOI: 10.1542/peds.2012-2757

Pesticide Exposure in Children

COUNCIL ON ENVIRONMENTAL HEALTH

Pediatrics; originally published online November 26, 2012;
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The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

Number 575 • October 2013

The American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women

American Society for Reproductive Medicine Practice Committee

The University of California, San Francisco Program on Reproductive Health and the Environment

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women and the American Society for Reproductive Medicine Practice Committee with the assistance of the University of California, San Francisco (UCSF) Program on Reproductive Health and the Environment. The Program on Reproductive Health and the Environment endorses this document. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. This information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Exposure to Toxic Environmental Agents

ABSTRACT: Reducing exposure to toxic environmental agents is a critical area of intervention for obstetricians, gynecologists, and other reproductive health care professionals. Patient exposure to toxic environmental chemicals and other stressors is ubiquitous, and preconception and prenatal exposure to toxic environmental agents can have a profound and lasting effect on reproductive health across the life course. Prenatal exposure to certain chemicals has been documented to increase the risk of cancer in childhood; adult male exposure to pesticides is linked to altered semen quality, sterility, and prostate cancer; and postnatal exposure to some pesticides can interfere with all developmental stages of reproductive function in adult females, including puberty, menstruation and ovulation, fertility and fecundity, and menopause. Many environmental factors harmful to reproductive health disproportionately affect vulnerable and underserved populations, which leaves some populations, including underserved women, more vulnerable to adverse reproductive health effects than other populations. The evidence that links exposure to toxic environmental agents and adverse reproductive and developmental health outcomes is sufficiently robust, and the American College of Obstetricians and Gynecologists and the American Society for Reproductive Medicine join leading scientists and other clinical practitioners in calling for timely action to identify and reduce exposure to toxic environmental agents while addressing the consequences of such exposure.

Reproductive Environmental Health

Robust scientific evidence has emerged over the past 15 years, demonstrating that preconception and prenatal exposure to toxic environmental agents can have a profound and lasting effect on reproductive health across the life course (1–3). Exposure to toxic environmental agents also is implicated in increases in adverse reproductive health outcomes that emerged since World War II; these changes have occurred at a rapid rate that cannot be explained by changes in genetics alone, which occur at a slower pace. For additional information, a detailed review is available at www.acog.org/goto/underserved.

Exposure to environmental chemicals and metals in air, water, soil, food, and consumer products is ubiquitous. An analysis of National Health and Nutrition Examination Survey data from 2003–2004 found that virtually every pregnant woman in the United States is exposed to at least 43 different chemicals (4). Chemicals in pregnant women can cross the placenta, and in some cases, such as with methyl mercury, can accumulate in the fetus, resulting in higher fetal exposure than maternal exposure (5–7). Prenatal exposure to environmental chemicals is linked to various adverse health consequences, and patient exposure at any point in time can lead to harmful reproductive health outcomes. For example, prenatal exposure to certain pesticides has been documented to increase the risk of cancer in childhood; adult male exposure to pesticides is linked to altered semen quality, sterility, and prostate cancer; and postnatal exposure to some pesticides can

interfere with all developmental stages of reproductive function in adult females, including puberty, menstruation and ovulation, fertility and fecundity, and menopause (8). A group of chemicals called endocrine disrupting chemicals has been shown to interfere with the role of certain hormones, homeostasis, and developmental processes (9). They represent a heterogeneous group of agents used in pesticides, plastics, industrial chemicals, and fuels. One study shows that the endocrine disrupting chemical bisphenol-A works in a fashion that is comparable to diethylstilbestrol at the cell and developmental level (10). Likewise, research has clearly shown that many industrial chemicals can affect thyroid function (9, 11). Because of deficiencies in the current regulatory structure, unlike pharmaceuticals, most environmental chemicals have entered the marketplace without comprehensive and standardized information regarding their reproductive or other long-term toxic effects (12).

Vulnerable Populations and Environmental Disparities

Although exposure to toxic environmental agents is ubiquitous among all patient populations, many environmental factors harmful to reproductive health also disproportionately affect vulnerable and underserved populations and are subsumed in issues of environmental justice. In the United States, minority populations are more likely to live in the counties with the highest levels of outdoor air pollution (13) and to be exposed to a variety of indoor pollutants, including lead, allergens, and pesticides than white populations (14). In turn, the effects of exposure to environmental chemicals can be exacerbated by injustice, poverty, neighborhood quality, housing quality, psychosocial stress, and nutritional status (14, 15).

Women with occupational exposure to toxic chemicals also are highly vulnerable to adverse reproductive health outcomes (16). For example, levels of organophosphate pesticides and phthalates measured in occupationally exposed populations are far greater than levels measured in the general population (17, 18). Furthermore, low-wage immigrant populations disproportionately work in occupations associated with a hazardous workplace environment (19, 20).

As underscored by a groundbreaking 2009 report by the National Academy of Sciences, the effects of low-dose exposure to an environmental contaminant may be quite different based on vulnerabilities, such as the underlying health status of the population and the presence of additional or "background" environmental exposure (21). Recognition of environmental disparities is essential for developing and implementing successful and efficient strategies for prevention.

Prevention

The evidence that links exposure to toxic environmental agents and adverse reproductive and developmental health outcomes is sufficiently robust, and the American College of Obstetricians and Gynecologists (the College) and the American Society for Reproductive Medicine (ASRM) join numerous other health professional organizations in calling for timely action to identify and reduce exposure to toxic environmental agents while addressing the consequences of such exposure (1, 22, 23). Reproductive care providers can be effective in preventing prenatal exposure to environmental threats to health because they are uniquely poised to intervene before and during pregnancy, which is a critical window of human development. An important outcome of pregnancy is no longer just a healthy newborn but a human biologically predisposed to be healthy from birth to old age (3, 24).

Providing Anticipatory Guidance

It is important for health care providers to become knowledgeable about toxic environmental agents that are endemic to their specific geographic areas. Intervention as early as possible during the preconception period is advised to alert patients regarding avoidance of toxic exposure and to ensure beneficial environmental exposure, eg, fresh fruit and vegetables, unprocessed food, outdoor activities, and a safe and nurturing physical and social environment. By the first prenatal care visit, exposure to toxic environmental agents and disruptions of organogenesis may have already occurred. Obtaining a patient history during a preconception visit and the first prenatal visit to identify specific types of exposure that may be harmful to a developing fetus is a key step and also should include queries of the maternal and paternal workplaces. A list of key chemical categories, sources of exposure, and clinical implications are provided in the online companion document to this Committee Opinion (www.acog.org/goto/underserved). Examples of an exposure history are available at http://prhe.ucsf.edu/prhe/clinical_resources.html. Once this exposure inventory has been completed, information should be given regarding the avoidance of exposure to toxic agents at home, in the community, and at work with possible referrals to occupational medicine programs or United States Pediatric Environmental Health Specialty Units if a serious exposure is found (25).

Reproductive care professionals do not need to be experts in environmental health science to provide useful information to patients and refer patients to appropriate specialists when a hazardous exposure is identified. Existing clinical experience and expertise in communicating risks of treatment are largely transferable to environmental health. Physician contact time with a patient does not need to be the primary point of intervention; information and resources about environmental hazards can be successfully incorporated into a childbirth class curriculum or provided in written materials to help parents make optimal choices for themselves and their children (26).

Reporting identified hazards is critical to prevention. For example, the reproductive toxicity of a common solvent used in many consumer products was first

described in a case report of a stillbirth (27). Physicians in the United States are required to report illnesses or injuries that may be work related, and reporting requirements vary by state. No authoritative national list of physician-reporting requirements by state exists. Resources for information about how to report occupational and environmental illnesses include local and state health agencies and the Association of Occupational and Environmental Clinics (http://www.aoec.org/about.htm). Illnesses include acute and chronic conditions, such as a skin disease (eg, contact dermatitis), respiratory disorder (eg, occupational asthma), or poisoning (eg, lead poisoning or pesticide intoxication) (28).

Patient-centered actions can reduce body burdens of toxic chemicals (ie, the total amount of chemicals present in the human body at any one time) (29–32). For example, research results document that when children's diets change from conventional to organic, the levels of pesticides in their bodies decrease (29, 30). Likewise, study results document that avoiding canned food and other dietary sources of bisphenol A can reduce measured levels of the chemical in children and adult family members (31), and that short-term changes in dietary behavior may significantly decrease exposure to phthalates (32).

Clinicians should encourage women in the preconception period and women who are pregnant or lactating to eat fruit, vegetables, beans, legumes, and whole grains every day, to avoid fast food and other processed foods whenever possible, and to limit foods high in animal fat, while providing information about how certain types of food affect health and how individuals can make changes. Also, patients should be advised that some large fish, such as shark, swordfish, king mackerel, and tilefish, are known to contain high levels of methylmercury, which is known to be teratogenic. As such, women in the preconception period and women who are pregnant or lactating should avoid these fish. To gain the benefits of consuming fish, while avoiding the risks of methylmercury consumption, pregnant women should be encouraged to enjoy a variety of other types of fish, including up to 12 ounces a week (two average meals) of a variety of fish and shellfish that are low in mercury. Five of the most commonly eaten seafood items that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish. White (albacore) tuna has more mercury than canned light tuna and should be limited to no more than 6 ounces per week. Pregnant women and breastfeeding women should also check local advisories regarding the safety of fish caught in local lakes, rivers, and coastal areas. If no advice is available, they should consume no more than 6 ounces per week (one average meal) of fish caught in local waters and no other fish during that week (33).

Primary Prevention: The Role of Reproductive Care Professionals Beyond the Clinical Setting

Ultimately, evidence-based recommendations for preventing harmful environmental exposure must involve policy change (34). Action at the individual level can reduce exposure to some toxic chemicals (29, 31, 32) and informed consumer-purchasing patterns can send a signal to the marketplace to help drive societal change (35). However, individuals alone can do little about exposure to toxic environmental agents, such as from air and water pollution, and exposure perpetuated by poverty. The incorporation of the authoritative voice of health care professionals in policy arenas is critical to translating emerging scientific findings into prevention-oriented action on a large scale. Accordingly, many medical associations have taken steps in that direction (23).

For example, in 2009, the Endocrine Society called for improved public policy to identify and regulate endocrine disrupting chemicals and recommended that "until such time as conclusive scientific evidence exists to either prove or disprove harmful effects of substances, a precautionary approach should be taken in the formulation of EDC [endocrine disrupting chemical] policy" (36). Consistent with the clinical imperative to "do no harm," the precautionary principle states, "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically" (37).

The College and the ASRM join these associations and call on their members to advocate for policies to identify and reduce exposure to environmental toxic agents while addressing the consequences of such exposure. Advancing policies and practices in support of a healthy food system should be pursued as a primary prevention strategy to ensure the health of pregnancies, children, and future generations. The College and ASRM urge the U.S. Environmental Protection Agency and other federal and state agencies to take all necessary actions when reviewing substances to guarantee health and safety. In addition, the College and ASRM fully support rigorous scientific investigation into the causes and prevention of birth defects, including linkages between environmental hazards and adverse reproductive and developmental health outcomes. Timely and effective steps must be taken to ensure the safety of all mothers and infants from toxic environmental agents. Because data are lacking on the safety of most chemicals, careful consideration of the risks posed must be given while the potential immediate and long-term health and genetic risks are evaluated. A chemical should never be released if a concern exists regarding its effect on health.

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SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Martha Lind	Individual	Support	No

Comments: I stongly urge you to support this bill. We must regulate the use of pesticides in our state, particularily near schools and communities, and keep our people and aina safe. Mahalo!

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Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Nancy Redfeather	Hawaii Island School Garden Network	Support	No

Comments: This comprehensive Bill outlines common sense changes to HRS that will help to protect our most vulnerable populations in Hawai'i. Nancy Redfeather Hawai'i Island School Garden Network FoodCorps Hawai'i

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Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Nate Hayward	Hawaii Farmers Union United	Support	No

Comments: Aloha, my name is Nate Hayward and I am vice president of the Kohala chapter of the Hawaii Farmers Union United. I am writing today in support of sb 797, and feel strongly that this bill should be passed. Pesticide use in general is a public health issue, not to mention the issues with multinational corporations using the Hawaiian Islands as their open air testing ground for the next generation of pesticides. We need to send a message that pesticides are dangerous and as such their use should be regulated. Please act to protect your constituents from the unregulated uses of pesticides and protect our environment for the keiki and future generations.

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Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Pamela Neswald	Individual	Support	No

Comments: Anything toxic that can or will migrate into public or private areas must at the very least be made known to anyone who potentially may come into contact with it. We certainly have every right to know what is or may be absorbed or ingested into our bodies or the bodies of our children.

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Submitted By	Organization	Testifier Position	Present at Hearing
Patrick Harley Simmons	Individual	Support	No

Comments:

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Submitted By	Organization	Testifier Position	Present at Hearing
Peter deVries	Individual	Support	No

Comments:

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Date: Sunday, February 08, 2015 6:43:43 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Rebecca Sydney	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: renaerobertson@hotmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 6:26:36 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Renae Robertson	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: mailani22@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 6:59:49 PM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Souza	Individual	Support	No

Comments: As a board member of Hawaii Farmers Union United and a garden educator in the public school system in Hawaii, I am in support of this bill.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: roxannedarling@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Wednesday, February 11, 2015 6:20:22 AM

SB797
Submitted on: 2/11/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Roxanne Darling	Individual	Support	No

Comments: Pesticides can be dangerous. It is very practical sense to have this information available to the public so people can take responsibility for avoiding it as necessary. I am surprised this is not already required.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: shannonkona@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Tuesday, February 10, 2015 10:02:41 AM

SB797
Submitted on: 2/10/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: Strongly support. Mahalo Senator Green for taking the overuse of pesticides in Hawai`i seriously.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: slwsurfing@yahoo.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Sunday, February 08, 2015 3:53:42 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: PLEASE! I have suffered for 4 years from Organophosphate/pesticide poisoning. Constant pain!

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: stacy@stacyvosberg.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 9:03:57 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
stacy vosberg	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: Tree@hawaii.rr.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Monday, February 09, 2015 9:02:45 AM

SB797
Submitted on: 2/9/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Stephen Luksic	Individual	Support	No

Comments: Long overdue, the chemical companies are taking advantage of the people of Hawaii. Please help by at least allowing information to be available to everyone.

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: ancientspin@hotmail.com
Subject: *Submitted testimony for SB797 on Feb 12, 2015 15:00PM*
Date: Sunday, February 08, 2015 8:51:13 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
Tammy Davis	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
To: AGL Testimony
Cc: tracy.emills@gmail.com
Subject: Submitted testimony for SB797 on Feb 12, 2015 15:00PM
Date: Sunday, February 08, 2015 12:54:10 PM

SB797
Submitted on: 2/8/2015
Testimony for AGL/HTH/ENE on Feb 12, 2015 15:00PM in Conference Room 414

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

Comments: If pesticides must be used, those living near or living downwind of the pesticide use should be advised of what is being used as well as when it's being used. Our islands and oceans (Honolua Bay)are already full of poison from the golf courses and pesticide-filled agriculture. The land and the oceans need help and we should stop and/or reduce the use of pesticides where and when we can. Let Maui become the first GREEN COURSE island for golfers who don't want to inhale the poisons sprayed on their courses!!

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