

SB 237

LINDA LINGLE
Governor



State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
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SANDRA LEE KUNIMOTO
Chairperson, Board of Agriculture

DUANE K. OKAMOTO
Deputy to the Chairperson

TESTIMONY OF SANDRA LEE KUNIMOTO
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEES ON ENERGY AND ENVIRONMENT
AND
WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS
TUESDAY, FEBRUARY 10, 2009
3:30 PM
ROOM 225

SENATE BILL NO. 237
RELATING TO GENETICALLY ENGINEERED FISH

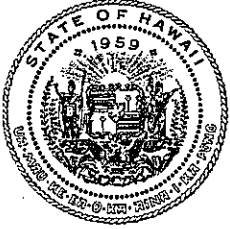
Chairpersons Gabbard and Hee and Members of the Committees:

Thank you for this opportunity to provide testimony on Senate Bill No. 237, relating to genetically engineered fish. This bill amends Chapter 486, Hawaii Revised Statutes by adding a new section to Part V that prohibits the sale of genetically engineered fish and fish products in the State for consumption unless labeling requirements are met. The department opposes this measure.

Food products that pose a potential health risk to the public are regulated by Food and Drug Administration and the State Department of Health. There are not deregulated genetically modified food fish at this time. If any became deregulated, they should comply with federal labeling laws.

As proposed, the labeling required would be inconsistent to federal requirements, and therefore, costly to implement. Hawaii imports 85% of the food consumed in the state. Although, we are overly import dependent, our population and food demands are not large enough to force domestic and foreign food suppliers to meet these labeling requirements when other states do not. As such, the cost will be borne by Hawaii's food importers and consumers.

Finally, the department must inform the committee that state labeling laws would be pre-empted by federal labeling requirements or laws such as the Fair Packaging and Labeling Act.



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR

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Statement of
THEODORE E. LIU
Director
Department of Business, Economic Development, and Tourism
before the
**SENATE COMMITTEE ON ENERGY AND ENVIRONMENT and the
SENATE COMMITTEE ON WATER, LAND, AGRICULTURE,
AND HAWAIIAN AFFAIRS**

Tuesday, February 10, 2009
3:30 p.m.
State Capitol Auditorium
Room 224

in consideration of
SB 237
RELATING TO GENETICALLY ENGINEERED FISH.

Chair Gabbard, Chair Hee, Vice Chair English, Vice Chair Tokuda and Members of the Senate Committees on Energy and Environment and Water, Land, Agriculture, and Hawaiian Affairs.

The Department of Business, Economic Development, and Tourism (DBEDT) opposes SB 237, which would require the conspicuous labeling of any genetically engineered fish or fish product sold for consumption in the State of Hawaii.

Foods produced using the tools of biotechnology are subject to the same labeling requirements imposed by the U.S. Food and Drug Administration on other foods. This requirement was reiterated in the final guidelines for the regulation of genetically engineered animals issued in January 2009. These requirements are based on providing valuable information to the consumer concerning health, safety and nutrition. If a genetically engineered food product has the same nutritional value and does not pose any valid, different health or safety concern than its conventional or organically produced counterpart, required labeling would

impose an unfair business expense. There is also the concern that labeling could generate unnecessary fears about products that demonstrate no increased safety risk.

Thank you for the opportunity to provide these comments.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
Senate Energy and Environment Committee and
Water, Land, Agriculture, and Hawaiian Affairs Committee
February 10, 2009 at 3:30pm

by
James R Gaines
Vice President for Research, University of Hawaii'i

SB 237 – RELATING TO GENETICALLY ENGINEERED FISH

The University of Hawaii stands in opposition to SB 237.

The first genetically engineered (GE) fish were produced almost 25 years ago and since that time over 35 species have been genetically engineered. As of 2005 no GE fish has been approved for food production in the United States. The greatest science-based concerns associated with GE fish are those related to the ecological consequences of their inadvertent release or escape, not the quality or safety of the product.

As the bill correctly states, in September 2008, the United States Food and Drug Administration (FDA) issued draft guidelines for the regulation of GE animals. These guidelines are to insure that both the food safety and environmental risks are properly tested and evaluated. To date only one application for approval of a GE fish for human consumption is under evaluation. The University of Hawaii (UH) believes it would be premature to legislate labeling requirements when not even one evaluation of a GE fish has been completed by our federal agencies.

Currently, there is no evidence to suggest that foods produced from GE animals would provide any greater hazards than the consumption of conventionally or organically raised animals. In fact, the FDA has already determined that cloned animals are safe to eat. As with GE plants, the FDA concluded in 1992 that there is "no basis for concluding that GE foods differ from other foods in any meaningful or uniform way, or that, as a class, foods developed by the new techniques present any different or greater safety concern than foods developed by traditional plant breeding."

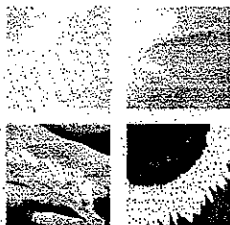
To label foods based on the process that was used to grow them would only add to consumer confusion and in the end, will provide little information that would assist consumers in making an informed decision on the healthful qualities and/or risk of using the product. UH believes that if any labeling legislation is enacted, it should be fact-based and focused on providing information to consumers on what is actually in the food they are choosing.

The UH strongly believes that any legislation should use an accurate and scientifically accepted definition of terms. The definitions of "genetically engineered fish" and "genetically engineered fish product" as provided in this bill are, at best, confusing. . We offer a scientifically accurate definition of genetic engineering may help clarify the term:

The development and application of scientific methods, procedures, and technologies that permit direct manipulation of genetic material in order to alter the hereditary traits of a cell, organism, or population.

UH supports providing relevant, fact-based information to consumers so that they can make informed choices on what to buy and feed to their families. However the UH cannot support this fish labeling bill. As written, this bill will only add to consumer confusion and assist in perpetuating misinformation that foods produced by one method or another are somehow safer than others when in fact, there is no data to support such presumptions. UH respectfully requests that this bill be deferred.

Thank you for the opportunity to testify on this bill.



Hawaii Crop Improvement Association

Growing the Future of Worldwide Agriculture in Hawaii

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Martha Smith

Mark Stoutemyer

Jill Suga

Past President

Sarah Slyan

Executive Director

Alicia Maluafiti

Testimony By: Alicia Maluafiti

SB 237, Relating to Genetically Engineered Fish

Senate ENE/WTL Committees

Tuesday, Feb.10, 2009

Room 225, 3:30 pm

Position: Strong Opposition

Chairs Gabbard and Hee, and Members of the Senate EDT/WTL Committees:

My name is Alicia Maluafiti, Executive Director of the Hawaii Crop Improvement Association. The Hawaii Crop Improvement Association (HCIA) is a nonprofit trade association representing the agricultural seed industry in Hawaii. Now the state's largest agricultural commodity, the seed industry contributes to the economic health and diversity of the islands by providing high quality jobs in rural communities, keeping important agricultural lands in agricultural use, and serving as responsible stewards of Hawaii's natural resources.

Although HCIA member companies do not sell any genetically engineered product in Hawaii, we strongly oppose this measure on mandatory labeling of genetically engineered fish.

Mandatory labeling is done for limited purposes: 1) to warn consumers of ingredients that might cause allergies, such as peanut or peanut derivatives, 2) to inform consumers that ingredients are of nutritional difference than traditional counterparts. (Please refer to the USDA, Oct. 4, 2002 letter)

This measure seeks mandatory labeling for consumer choice and marketing purposes and not for health and safety reasons.

Please hold this bill in committee. Thank you for the opportunity to testify.

91-1012 Kahi'uka Street

'Ewa Beach, HI 96706

Tel: (808) 224-3648

director@hciaonline.com

www.hciaonline.com



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration
Rockville, MD 20857

October 4, 2002

Governor John A. Kitzhaber, MD
State Capitol Building
900 Court Street NE
Salem, Oregon 97301-4047

Dear Governor Kitzhaber:

This letter explains why FDA objects to the pending ballot initiative to require the mandatory labeling of foods and food additives produced using genetic engineering sold in Oregon, or produced in Oregon and shipped to other states. In brief, FDA's scientific judgement is that there is no significant difference between foods produced using bioengineering, as a class, and their conventional counterparts. (By "genetic engineering," we refer to foods produced using recombinant deoxyribonucleic acid (rDNA) technology and not traditional breeding techniques; this technology is also referred to as "bioengineering" or "biotechnology.") Further, FDA's scientific evaluation of bioengineered foods continues to show that these foods, as currently marketed in the United States, are as safe as their conventional counterparts. Moreover, mandatory labeling to disclose that a product was produced through genetic engineering does not promote the public health in that it fails to provide material facts concerning the safety or nutritional aspects of food and may be misleading to consumers.

Under the Federal Food, Drug and Cosmetic Act ("the FD&C Act"), FDA is responsible for ensuring the safety of the nation's food supply, ensuring that food labeling is truthful and not misleading, and for regulating food additives. 21 U.S.C. § 321, *et. seq.* Foods and food ingredients produced using bioengineering must adhere to the same safety and labeling standards under the FD&C Act as their conventionally bred counterparts. FDA is not aware of any information or data that would suggest that any genetically engineered foods that have been allowed for human use are not as safe as conventional foods.

After numerous meetings and public comments on this issue,¹ FDA concluded that a safety assessment of any new food should focus on the traits and characteristics of that food, no matter which techniques (traditional breeding or genetic engineering) were used to develop the food. Food produced via bioengineering should be treated just like its conventional counterparts because, from a scientific standpoint, there is no evidence that these foods differ as a class from traditionally bred foods in any meaningful or uniform way. Nor is there evidence that, as a class, foods developed by rDNA breeding techniques present any different or greater safety concerns

¹ FDA has carefully considered the issues surrounding foods produced using bioengineering. As part of this consideration, FDA has reviewed public comments on its bioengineered food policies and has held public hearings on FDA's approach and experiences with foods produced via bioengineering. In May 1992, FDA published its "Statement of Policy: Foods Derived from New Plant Varieties" (the 1992 policy), which is available for your information at 57 Federal Register 22984 (May 29, 1992) or the FDA's web site at www.fda.gov.

than foods developed via traditional breeding. FDA's scientific evaluation to date has shown that the substances added to food via bioengineering have been well-characterized proteins that are functionally very similar to other proteins that are commonly and safely consumed in the diet every day.

FDA has previously concluded that requiring mandatory labeling for bioengineered foods is not scientifically or legally warranted. Rather, the labeling for foods produced using bioengineering must comply with the law applying to the labeling for all foods. Among other things, food labeling must reveal all facts that are material in light of representation made in the labeling or in light of consequences that may result from the use of foods. 21 U.S.C. § 321(n).

For example, FDA would consider mandatory labeling where:

- the food is significantly different from its traditional counterpart, such that the common or usual name no longer adequately describes the new food – FDA has required labeling for two foods (a soy oil and a canola oil) where the fatty acid composition was changed to mimic that of food oils not associated with the modified plant;
- an issue exists for the food or a constituent of the food regarding how the food is used or consequences of its use;
- the food has significantly different nutritional properties; or
- a new food includes an allergen that consumers would not expect to be present in the food based on the food's name.

Accordingly, the proposed legislation for mandatory labeling of foods produced using bioengineering would be contrary to FDA's position that the use of bioengineering, standing alone, is not a material fact that requires disclosure in food labeling. Moreover, as is summarized above, and described in more detail in FDA's public notices cited above, mandatory labeling of bioengineered foods is contrary to the science that currently shows no significant difference between foods produced using bioengineering and their conventional counterparts.

Moreover, the proposed legislation would impermissibly interfere with manufacturers' ability to market their products on a nationwide basis. If passed, manufacturers producing products in Oregon or manufacturers selling products in Oregon produced in another state would be required to create special labeling to comply with Oregon law – labeling not required by FDA or other states. Thus, as a practical matter, the Oregon law would require different labels for different states impeding the free flow of commerce between the states.

We hope you find these views useful.

Sincerely,

Lester M. Crawford, D.V.M., Ph.D.
Deputy Commissioner



Hawaii Agriculture Research Center

Administration: P.O. Box 100, Kunia, HI 96759

Ph: 808-621-1350/Fax: 808-621-1359

**TESTIMONY BEFORE THE SENATE COMMITTEES
ON ENERGY AND ENVIRONMENT
AND
ON WATER, LAND, AGRICULTURE, AND
HAWAIIAN AFFAIRS**

**SB237
RELATING TO GENETICALLY ENGINEERED FISH**

February 10, 2009

Chairmen Gabbard and Hee and Members of your Committees:

My name is Stephanie Whalen. I am Executive Director of the Hawaii Agriculture Research Center (HARC). I am testifying today on behalf of the center and our research and support staff

HARC strongly opposes SB 237 Relating to Genetically Engineered Fish

HARC's reasoning for opposing this measure is the same as for SB238. This measure is without merit.

Thank you for the opportunity to provide input.



SB237: RELATING TO GENETICALLY ENGINEERED FISH

DATE: February 10, 2009
TIME: 3:30pm
PLACE: Conference Room 225

TO: Committee on Energy and Environment
Senator Mike Gabbard, Chair,
Senator J. Kalani English, Vice Chair

Committee on Water, Land, Agriculture and Hawaiian Affairs
Senator Clayton Hee, Chair
Senator Jill N. Tokuda, Vice Chair

FROM: Lisa Gibson
President
Hawaii Science & Technology Council

RE: Testimony In Opposition to SB237

Aloha Chair, Vice Chair, and Members of the Committee,

The Hawaii Science & Technology Council stands in opposition to SB 237. The first genetically engineered (GE) fish were produced almost 25 years ago and since that time over 35 species have been genetically engineered. As of 2005 no GE fish has been approved for food production in the United States.

In September 2008, the United States Food and Drug Administration (FDA) issued draft guidelines for the regulation of GE animals. These guidelines are to insure that both the food safety and environmental risks are properly tested and evaluated. To date only one application for approval of a GE fish for human consumption is under evaluation. HISciTech believes it would be premature to legislate labeling requirements when not even one evaluation of a GE fish has been completed by our federal agencies.

Currently, there is no evidence to suggest that foods produced from GE animals would provide any greater hazards than the consumption of conventionally or organically raised animals.

HISciTech supports providing relevant, fact-based information to consumers so that they can make informed choices on what to buy and feed to their families. HISciTech cannot support this fish labeling bill. As written, this bill will only add to consumer confusion and assist in perpetuating misinformation that foods produced by one method or another are somehow safer than others when in fact, there is no data to support such presumptions.

The Hawaii Science & Technology Council (HISciTech) is a 501(c)6 industry association with a 28-member board. HISciTech serves Hawaii companies engaged in ocean sciences, agricultural biotechnology, astronomy, defense aerospace, biotech/life sciences, information & communication technology, energy, environmental technologies, and creative media.

Sincerely,

Lisa H. Gibson
President



Na Koa Ikaika o Ka Lahui Hawaii
c/o 400 Hualani Street, Bldg 10, Suite 194 ♦ Hilo, HI 96720
(808) 961-2888 phone ♦ (808) 935-8854 fax ♦ gibson@ilhawaii.net



TESTIMONY RE: SB 238 & SB 237 & SB 709

DATE: Tuesday Feb 10th, 2009

TIME: 3:30pm

PLACE: CR 225

Testimony on SB 238 Relating to Labeling of Genetically Engineered Crops [In Support]

I support this measure because I am a consumer who wants to exercise my right to choose the best food I can for my family and for myself. There is a growing debate on the safety of GMO foods, and it is well documented that people with food allergies may be severely injured by GMO. Please support and pass this measure.

Testimony on SB 709 Relating to GMO TARO [Support with amendments]

I support this measure but ask that the language and form be amended to reflect the language in HB 1663. These amendments would strengthen the measure by protecting all varieties of Kalo and addressing economic and health concerns that are not adequately Protected at present. Please amend and support these measures.

Testimony ON SB 237 Re: GMO FISH: [Support]

I strongly support this measure as it will protect not only our right to choose the food we eat and feed our families but it will protect our fishing industry. The introduction of live GMO fish would contaminate our own clean fishing products and injure the future fishing industry by contaminating our fish. We know that consumers in Japan have already rejected Hawaii Papaya because of discovered GMO contamination. Will Asian consumers be rejecting our fish next? Please Support this measure

Mililani B. Trask Big Island



Waikīkī Hawaiian Civic Club

President, Malia Nobrega
malianob@gmail.com

E HUKI LIKE!

TESTIMONY IN STRONG SUPPORT OF SB 237, RELATING TO GENETICALLY ENGINEERED FISH

Hearing Date: February 10, 2009

Time: 3:30pm

Conf. Room: 225

Committee: ENE/ WTL

Submitted by: Malia Nobrega, President, Waikīkī Hawaiian Civic Club

Mahalo nui for the opportunity to provide testimony in strong support of SB 237 relating to genetically engineered fish and prohibits the sale of genetically engineered fish or genetically engineered fish products for consumption in the State of Hawaii and appropriately labeled.

My name is Malia Nobrega and I'm the President of Waikīkī Hawaiian Civic Club and a Native Hawaiian concerned about the sustainability of our unique environment that my kupuna took care of and lived off of, and that Native Hawaiians today struggle to protect for our use and for generations to come.

Waikīkī Hawaiian Civic Club strongly supports this bill because it prohibits the sale of any genetically engineered fish or related products. It makes us sick in our stomach to think that anyone would want to genetically modify our plants and animals. We do not need any change to our biodiversity, our aina, our people. Our kupuna have taught us and continue to teach us how to live in harmony with one another and how to take care of one another and the genetic modification of our food is no where to be found in these teachings. Think of our keiki and the many generations to come... what kind of a legacy will we leave for them?

Paoakalani Declaration Addresses This Issue

Waikīkī Hawaiian Civic Club helped to organize and participated in the two Ka 'Aha Pono-Native Hawaiian Intellectual Property Rights Conference. This conference gathered Kanaka Maoli including kumu hula, elders, artists, teachers and academics, attorneys, and many others concerned about this very topic. Those gathered at Ka 'Aha Pono produced the Paoakalani Declaration which is a unifying statement that collectively shares the responsibility to determine

a pono future for Hawai`i nei, her culture, and indigenous peoples. The Paoakalani Declaration addresses the issue of bioprospecting and states that:

- We have the right to free, prior and informed consent before research relating to our biological resources commences. Researchers, corporations, educational institutions, government or others conducting such research must fully and entirely inform Kanaka Maoli regarding the purposes of their research and recognize our right to refuse to participate.
- Biological samples are being transferred, traded, bought, and sold without the agreement or consent of our peoples, in violation of our inherent human rights.
- Although biological and genetic samples have been transferred, sold, patented or licensed, Kanaka Maoli never relinquished our rights to our biological and genetic materials and, therefore, call for the rightful repatriation of such samples and due compensation.
- We further support a moratorium on patenting, licensing, sale or transfer of any of our plants, animals and other biological resources derived from the natural resources of our lands, submerged lands, waters, and oceans until indigenous communities have developed appropriate protection and conservation mechanisms.

Waikiki Hawaiian Civic Club's Commitment To Protect Hawai`i's Biodiversity

The Association of Hawaiian Civic Clubs has adopted four resolutions relating to research at the University, the collective intellectual property rights of Native Hawaiians, and the protection of Hawai`i's flora and fauna, over the past four years. One resolution adopted in 2002 calling for regulation of bioprospecting. Two others passed in 2003 related to the collective intellectual property rights of Native Hawaiians as well as a proposed Hawaiian Genome Project at the UH Medical School. In 2005, the Association of Hawaiian Civic Clubs urges the Hawai`i State Legislature to enact legislation to protect Hawai`i's flora and fauna. Collectively, these Civic Club resolutions and the Paoakalani Declaration evidence a strong conviction of the Hawaiian community to protect Hawai`i's biological resources and our related rights. The resolutions and the Declaration also indicate our concern regarding activities of the University and its researchers to undermine our rights.

In January 2006, the O`ahu Council of Hawaiian Civic Clubs has taken a position against the manipulation and patenting of our biodiversity, namely our kalo.

We continue to produce educational videos and organize community workshops related to protecting our biodiversity in Hawai`i and it's implications. We have committed ourselves to work to create legislation and continue educational efforts in the community regarding our biodiversity. In particular, the Waikiki Hawaiian Civic Club offers its assistance to your committee.

Mahalo again for this opportunity to testify and share my mana'o regarding Hawai`i's biodiversity.

Aloha,
Malia Nobrega



LIFE OF THE LAND

76 North King Street, Suite 203

Honolulu, Hawai'i 96817

Phone: 533-3454; E: henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator J. Kalani English, Vice Chair

COMMITTEE ON WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS

Senator Clayton Hee, Chair

Senator Jill N. Tokuda, Vice Chair

Tuesday, February 10, 2009

3:30 p.m.

Conference Room 225

SB 238 Labeling GE Crops

SB 237 GE Fish

SUPPORT

SUPPORT

3:45 p.m.

Conference Room 225

SB 239 GE Plants

SB 709 GE Taro

SUPPORT

SUPPORT

Aloha Chairs Gabbard, Hee, Vice Chairs English, Tokuda, and Members of the Committees,

My name is Henry Curtis and I am the Executive Director of Life of the Land, Hawai'i's own energy, environmental and community action group advocating for the people and `aina for almost four decades. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Life of the Land's Position

Genetically Engineering is a very young field of study (3 decades), and the terminology, techniques, and risks are undergoing rapid change. Reasonable regulations are trailing badly. Proponents are hiding behind terms like "life sciences". Some positive actions have occurred (creating cheap insulin in labs), however, the money is in experimental research, not in safety or risk analysis. Focusing on the money that can flow into the state and not the risks that the public will face is short-sighted.

Hawai'i should adopt the Precautionary Principle for all genetic engineering projects. The Precautionary Principle places the burden of proof on the proponent of new technologies. The requirement is to demonstrate, not absolutely but beyond reasonable doubt, that what is being proposed is safe.

Genetic Engineered crops, if grown at all, should be located within labs and enclosed structures. If they are grown outside, the fields should be clearly identified.

All consumer goods (food, clothing) containing genetically engineered materials and ingredients should be clearly labeled.

There must be a ban on Genetic Engineering of cultural crops such as kalo.

Genetic Engineering must never be used in species located in the open ocean where they can intermingle with wild ocean species.

Open field growing of Genetic Engineered pharmaceuticals, especially in food crops must be banned.

Background

Genetically engineered insulin using recombinant DNA technology was approved for use by diabetics in 1982. The first transgenic domestic animal, a pig was created in 1985. The gene that is responsible for cystic fibrosis was found in 1990. The Human Genome Project to map the entire human genome was launched in 1990.

Risks

Scientists at the Centers for Disease Control and Prevention have successfully reconstructed the influenza virus strain responsible for the 1918 pandemic. (www.cdc.gov/od/oc/media/pressrel/r051005.htm). The Spanish Flu Pandemic (La Grippe Espagnole, La Pesadilla) affected 1 billion people, killing 50-100 million people in 1918-19. More people died from the Spanish flu than the Black Death Bubonic Plague (1347-51) or from World War I (1914-18).

Hawaii regulates the importation of microorganisms and their movement between regulated labs, but not their creation in unregulated facilities. In Hawai'i it is legal to genetically engineer the avian bird flu and other deadly diseases. State laws pre-date genetic engineering, and policy-makers encouraging genetic research do not want to send any "wrong" signals by regulating this new technology.

Animal-Human Hybrids Spark Controversy

by Maryann Mott (National Geographic News, January 25, 2005)

Scientists have begun blurring the line between human and animal by producing chimeras—a hybrid creature that's part human, part animal. Chinese scientists at the Shanghai Second Medical University in 2003 successfully fused human cells with rabbit eggs. The embryos were reportedly the first human-animal chimeras successfully created. They were allowed to develop for several days in a laboratory dish before the scientists destroyed the embryos to harvest their stem cells. In Minnesota last year researchers at the Mayo Clinic created pigs with human blood flowing through their bodies. And at Stanford University in California an experiment might be done later this year to create mice with human brains. But creating human-animal chimeras—named after a monster in Greek mythology that had a lion's head, goat's body, and serpent's tail—has raised troubling questions: What new subhuman combination should be produced and for what purpose? At what point would it be considered human? And what rights, if any, should it have? There are currently no U.S. federal laws that address these issues.

What's caused the uproar is the mixing of human stem cells with embryonic animals to create new species.

Human Born to Mice Parents? For example, an experiment that would raise concerns, he said, is genetically engineering mice to produce human sperm and eggs, then doing in vitro fertilization to produce a child whose parents are a pair of mice. Last year Canada passed the Assisted Human Reproduction Act, which bans chimeras. Specifically, it prohibits transferring a nonhuman cell into a human embryo and putting human cells into a nonhuman embryo.

Irv Weissman, director of Stanford University's Institute of Cancer/Stem Cell Biology and Medicine in California, is against a ban in the United States. "Anybody who puts their own moral guidance in the way of this biomedical science, where they want to impose their will—not just be part of an argument—if that leads to a ban or moratorium. ... they are stopping research that would save human lives," he said.

Mice With Human Brains. Weissman has already created mice with brains that are about one percent human. Later this year he may conduct another experiment where the mice have 100 percent human brains. This would be done, he said, by injecting human neurons into the brains of embryonic mice.

Mahalo,

Henry Curtis



Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803
808.537.9019 hawaii.chapter@sierraclub.org

SENATE COMMITTEE ON ENERGY AND ENVIRONMENT SENATE COMMITTEE ON WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS

February 10, 2009, 3:30 P.M.

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 237

Chair Gabbard, Chair Hee, and members of the Committees:

The Sierra Club, Hawaii Chapter, with 5500 dues paying members statewide, supports SB 237, relating to the labeling of genetically engineered fish but encourages this body to take greater steps to control the use and spread of GMO products.

Genetically modifying organisms—the practice of splicing DNA from bacteria, viruses and other organisms into plants to lend them certain traits, like resistance to chemical weedkillers—poses extreme risks to our common environment. Manipulation of genetic material by inserting bacteria, plant, animal, and human genes into food products is a radical departure from traditional breeding techniques and represents an unprecedented break with natural processes.

The public is entitled to know more about these potential risks. The public is entitled to be able to make informed decisions about what products they purchase and eat. This may also impact the production of GMO products -- if no one purchases them, will there be a demand to continue growing them? An informed public is able to make informed decisions. To adequately protect the environment and the public health, this bill should be passed.

Thank you for the opportunity to testify.

From: Tane . [tane_1@msn.com]
Sent: Monday, February 09, 2009 5:31 AM
To: ENETestimony
Subject: RELATING TO LABELING OF GENETICALLY ENGINEERED CROPS

THE SENATE

THE TWENTY-FIFTH LEGISLATURE
REGULAR SESSION OF 2009

COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair
Senator J. Kalani English, Vice Chair

COMMITTEE ON WATER, LAND, AGRICULTURE, AND HAWAIIAN AFFAIRS

Senator Clayton Hee, Chair
Senator Jill N. Tokuda, Vice Chair

CORRECTED NOTICE OF HEARING

NOTE: The prior notice contained an error in the location of the hearing. The correct location is listed below:

DATE: Tuesday, February 10, 2009
TIME: 3:30 p.m.
PLACE: Conference Room **[224]** 225
State Capitol
415 South Beretania Street

A G E N D A

SB238 RELATING TO LABELING OF GENETICALLY ENGINEERED CROPS. ENE/WTL, CPN

Testimony Prohibits sale or distribution of any genetically engineered whole food intended for human consumption in the State that does not have a label conspicuously affixed identifying it as a genetically engineered. Defines "genetically engineered crop", "modern biotechnology", and "genetically engineered whole food".

Status

SB 237 RELATING TO GENETICALLY ENGINEERED FISH. ENE/WTL, CPN
Testimony Prohibits the sale of genetically engineered fish or genetically engineered fish products unless for consumption in the State of Hawaii and appropriately labeled as genetically engineered fish or genetically engineered fish products.

Status

Dear Senators:

I support both of these bills as it makes for good common sense. Genetic engineered products have had a bad reputation the world over, along with some horror stories; I have done some extensive research on GMO companies and feel this should be looked into along with the ramifications and indiscreet usage of this method especially in Hawai'i. They always say Hawaii is expendable and won't affect the contiguous U.S.A. should anything go wrong. For us, this will be devastating; for them, they can just blow us off without and good conscience because this is our home and not theirs that will suffer the consequence.

- *"I support protecting all natural taro and banning GMO-taro."*

- *"I support the amendments that the taro farmers are proposing to SB709 to protect all varieties of taro and to protect the health of consumers & our local taro industry from GMO-taro, by changing the bill language to reflect that of HB1663." - "Please support taro farming in Hawaii by showing up to vote in support at the committee hearing on Tuesday at 3:30 and pass this bill with those appropriate amendments."*

De-mystifying what science is.

Pure science is science based on self-evident truths as mathematics, logic, etc. Our Hawaiian society is based on these facts as well.

I'm indignant that the UH and GMO companies and some members of the government think they have a monopoly on science; what is valid and what isn't valid. Such arrogance and narrow-mindedness! We have our own science as well; our kumulipo exemplifies our knowledge.

Science is a systematic knowledge of natural or physical phenomena; truth ascertained by observation, experiment, and induction; ordered arrangement of facts known under classes or heads; **theoretical knowledge as distinguished from practical as utilized at UH and other western institutions.**

So what you are saying is western science is superior to Polynesian Pacific science and we of the Pacific region are mentally incapable of constructing our own science? Remember, the Western Civilization did not achieve the science they have today on their own; they got it from the mainstream civilization of the Middle East and Asia. They borrowed it from other civilizations and used it to begin their development in the 12th century to become the mainstream civilization of today. Their strength was industrializing, using what they learned from other civilizations.

Now they want to claim sole ownership of the knowledges and profit on them for self-gratification and pecuniary reasons. They want us to accept, comply with their self-aggrandizement and sole enrichment no matter the consequence. We say NO! We do not consent to their seditious and incompetent methods which they cannot guarantee is safe. For one group of Corporations to claim ownership of what is God-given to every free person in this world is criminal and we will not consent to this covetness.

Past dereliction of previous legislators have beset a precedent to covertly abet with these corporations in lieu of safeguarding our community. The burden now lies with you to protect the welfare of your constituents who have entrusted you to uphold your oath of office.

Mahalo,

Tane
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From: Melissa Yee [drmlsukyo@yahoo.com]
Sent: Monday, February 09, 2009 10:36 AM
To: ENETestimony
Subject: SB 237 Relating to Genetically Engineered Fish

To Committee on Energy and Environment, Senator Mike Gabbard, Chairperson, Committee on Water, Land, Agriculture and Hawaiian Affairs, Senator Clayton Hee, Chairperson Hearing Tuesday, February 10, 2009 3:30 pm Conference Room 225 State Capitol From Dr. Melissa Yee

To Chairpersons Gabbard and Hee,

This bill attempts to do two things: 1) limit the consumption of genetically engineered fish products to Hawaii and 2) label the fish products as GMO.

I support this bill but find that it is a bandaid solution to an inevitable spread of cancer. First, some background references: 1) The city council of Hilo recently overrode the Mayor's veto regarding GMO crops because the harm that can and will be done by the presence of GMO seeds in Hawaii's fragile environment is predictably devastating. 2) At present certain supermarkets do not label their papayas GMO, and the senior citizen or person on a budget chooses the cheaper food, thinking he is doing good for his health by eating fruit that is locally grown. 3) People, especially pregnant women, are discouraged from eating larger fish, such as tuna, swordfish, ahi and mackerel because of the risk of mercury contamination which unfortunately is not the fault of the fish but probably the result of pollution of industry, mercury runoff from farming and dental offices, and volcanic fallout, which most people avoid looking at. We can't do much about the volcanoes but we could be regulating industry and dental offices, and we are not.

Now regarding genetically engineered fish: Why do we not BAN the GE fish which will disrupt the fish food chain if the fish are raised in the ocean and can intermingle with other fish? At present farmed fish raised near open seas are contaminating nearby fish supplies, and the pellets given to the farmed fish are known to contain trace amounts of pesticides and heavy metals. In the interest of supporting biotechnology and feeding the masses through science due to growing populations and dwindling natural food supplies, we have sold our soul and made things worse.

As a doctor I look at the source of the problem and try to identify the original contaminants or irritants. Putting a sign on my patient saying he has cancer does not change his condition. Rather than pouring more chemicals and poisons into his body, detoxifying the patient can set him on the road to improving his health, and minimizing the amount of future exposure and education can help the patient and the next person to live a healthier life. Likewise labeling fish GMO or GMO free is not getting to the root of the problem, which is allowing the fish to be engineered in the first place.

This bill is a step in the right direction since the forces of GMO biotechnology have unfortunately already been released into nature, and it is better to do something than nothing.

However, this bill seems to be missing the point. Why subject only the people of Hawaii to fish that has been genetically altered?

Just as fish sellers have begun to label "poke" as being previously frozen or treated with carbon monoxide, at least give us a choice whether we want to eat GE fish or not.

Then work on a bill to ban genetically engineered fish.

Thank you for your consideration.

Respectfully submitted,
Dr. Melissa Yee

From: nancy redfeather [nredfeather@kohalacenter.org]
Sent: Sunday, February 08, 2009 9:20 PM
To: ENETestimony
Subject: Testimony for SB 238-Strong Support and Testimony for SB 237 - Strong Support

From:

Nancy Redfeather
Kawanui Farm
P.O. Box 906
Kealahou, Hawai'i 96750

Aloha Chair Gabbard, Chair Hee, and Vice Chair's Tokuda and English,

As relates to both bills SB 238 and SB 237, the time has come for the public to knowledgeably decide what they choose to eat. Labeling of genetically engineered whole foods and fish in Hawai'i puts the responsibility into the hands of the consumers where it belongs. People have a right to know what they are eating. Let the marketplace decide. This is not an issue that should be decided by the companies who produce these foods.

Once many years ago, I was talking to Governor Lingle about the farmer's concerns about genetically engineered agricultural crops. She said, " The marketplace can decide this issue, this is not for the legislature to mandate." I said, " That would be fabulous except that foods containing genetically engineered ingredients are not labeled." She said with surprise, "They're not?"

Mahalo for your support of this important public right to know issue.

Aloha,

Nancy Redfeather
Kawanui Farm
Honalo, Hawai'i

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 09, 2009 2:26 PM
To: ENETestimony
Cc: claudjrose@hotmail.com
Subject: Testimony for SB237 on 2/10/2009 3:30:00 PM

Testimony for ENE-WTL 2/10/2009 3:30:00 PM SB237

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Claudia Rosenbaum
Organization: Individual
Address:
Phone:
E-mail: claudjrose@hotmail.com
Submitted on: 2/9/2009

Comments:

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 09, 2009 4:14 PM
To: ENETestimony
Cc: bcbonse@yahoo.com
Subject: Testimony for SB237 on 2/10/2009 3:30:00 PM

Testimony for ENE-WTL 2/10/2009 3:30:00 PM SB237

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Bonnie Bonse
Organization: Individual
Address:
Phone:
E-mail: bcbonse@yahoo.com
Submitted on: 2/9/2009

Comments:

Thank you for this opportunity to give testimony in support of labeling of genetically engineered fish, should they be sold in Hawai'i.

I support this bill because I do not want to eat, or feed my family, fish - or any food - that have not grown as nature intended.

The few health studies that have been done on GMOs are not positive. Here is an excerpt from a recent study: "The results of most studies with GM foods indicate that they may cause some common toxic effects such as hepatic, pancreatic, renal, or reproductive effects and may alter the hematological, biochemical, and immunologic parameters." (Critical Reviews in Food Science and Nutrition, 49:164,175 (2009)2)

This is a risk I do not want to take and nobody should have to take unknowingly. To not label all foods that have been genetically tampered with is criminal - an infringement on our basic human rights.

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 09, 2009 3:37 PM
To: ENETestimony
Cc: judygrodan@gmail.com
Subject: Testimony for SB237 on 2/10/2009 3:30:00 PM

Testimony for ENE-WTL 2/10/2009 3:30:00 PM SB237

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Judy
Organization: Individual
Address: Kehala Dr. Kihei
Phone: 280-9349
E-mail: judygrodan@gmail.com
Submitted on: 2/9/2009

Comments:

I demand appropriate labeling of my fish products, whether or not they are gmo, definately.

Committee on Energy and the Environment
Chairman Sen. Mike Gabbard
Vice-Chair Sen. Kalani English

Committee on Water, Land, Agriculture and Hawaiian Affairs
Chairman Sen. Clayton Hee
Vice-Chair Sen. Jill Tokuda

Testimony in strong support of SB 238 & SB237
February 10, 2009, Room 225

Submitted by:
Una Greenaway - For Hawaii Farmers' Union

Aloha Chairs Gabbard and Hee and Vice Chairs English and Tokuda:

Good to see you again! I am here to speak on the two labeling bills.

First SB238 on the labeling of GE, or GMO whole food products in the state. For many years now, the consumers of the state of Hawaii have been consuming GMO crops without their prior knowledge. Papayas are not labeled, so it is very difficult to know what one is consuming, unless the papaya is certified organic. The papaya is known to have been exempted for its allergens, and clearly may cause problems for folks with allergies, and food allergies. For the rest of the population, they just may want to know how to avoid consuming a papaya with G.E. antibiotic resistance marker genes, that are resistant to gentamycin, neomycin, and tetracycline. Dr. Sabray Shehata, from CTAHR, published a paper in 2007, which shows that the citizens of Hawaii want labeling.

As to other whole food crops in our state, the only other crop that I could see being affected by this law, at this time, would be genetically engineered Bt sweet corn, a corn with the pesticide inserted into the plant. The largest sweet corn grower in the state has in the past used the Bt seeds when growing their corn. There has been much speculation over whether the corn they are currently growing and selling is Bt or not. They claim that it is not, but someone that I know used strip testing on many samples, and it came up positive for transgenes or gmos. I know for myself, the Bt corn has very strong allergens, known as the Cry1AB or Cry1AC proteins. Below, I have attached a small portion of a paper, *Safety Testing and Regulation of Genetically Engineered Foods*, written by two scientists William Freese, then with Friends of the Earth, now with Center For Food Safety, and David Schubert of the Salk Institute. There are real food allergy concerns with these crops. The aforementioned article illustrates the need for labeling, as the EPA ignored the conclusions of expert advisors.

“In an assessment of *Bt* crops, expert advisors to the EPA who reviewed the Bernstein study and one of Vazquez *et al.*'s four studies concluded that: ‘These two studies suggest that *Bt* proteins could act as antigenic and allergenic sources’ (SAP *Bt*, 2000, p. 76). Different approaches were called for to further characterize the allergenic risk of *Bt* proteins: ‘Only surveillance and clinical

assessment of exposed individuals will confirm the allergenicity of *Bt* products...’ (SAP *Bt*, 2000, p.76). Finally, the EPA’s experts noted that testing for potential reactions to Cry proteins in *Bt* spray and *Bt* crops could be undertaken now: ‘The importance of this [Bernstein’s] report is that reagents are available that could be used for reliable skin testing and serological evaluation of *Bt* protein exposed individuals.’ Unfortunately, in 2001 the EPA re-registered *Bt* corn for 7 years without making use of these reagents (EPA BRAD, 2001d, p. I2). The Agency has also discounted other evidence of the potential allergenicity of *Bt* proteins” (Freese & Schubert, 2004).

The citizens of our state should have the right to know what they are consuming. I represent the Hawaii Farmers’ Union, the newly formed Hawaii chapter of the National Farmers’ Union, an organization that has been around since 1902. NFU overwhelmingly supports the small family farmer over the large corporate agribusiness interests, across the USA. The NFU’s policy on Genetically Modified Organisms and Biotechnology requires genetically engineered foods to be labeled for consumers.

Regarding SB237 – There are currently genetically engineered fish that are awaiting USDA approval. The consumers of Hawaii once again must have the right to know what they are buying and eating. Please act responsibly, and give the citizens this basic right to know what they are consuming.

Mahalo,
Una Greenaway

From: Steve Slater [steve@vcasa.net]
Sent: Monday, February 09, 2009 4:29 PM
To: ENETestimony
Subject: Testimony SB 238 & 237

I would like to point out that the huge strides in Biology during the past 2 years, warn us to be very cautious with regard to possible future effect of GMO foods. Last Spring I took an intermediate Biology Class online from the University of California. The most impressive research touched upon in this class, was the discovery that far less than 3% of the microbes in a sample of soil were 'Known'. With the ease of current DNA analysis, Biologists began to understand that only the microbes which could grow on agar had been discovered.

This revelation, of the plethora of unknown microbes in soil, will also surely relate to unknown microbes in our bodies and in GMO foods.

Microbial colonies play massive roles in our digestion, immune systems, etc. The combination of man made manipulation of genetics, beyond what can be done through selective breeding, in conjunction with the relationships to yet unknown microbes, makes this a very dangerous time to allow foods to be unlabeled.

We are just beginning to relate to the complicated interactions of cell chemistry and must err on the side of caution.

Steve Slater
P.O. Box 790913
Paia, HI 96779

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 10, 2009 7:27 AM
To: ENETestimony
Cc: hokuokekai50@msn.com
Subject: Testimony for SB237 on 2/10/2009 3:30:00 PM

Testimony for ENE-WTL 2/10/2009 3:30:00 PM SB237

Conference room: 225
Testifier position: support
Testifier will be present: No
Submitted by: Mary Lacques
Organization: Individual
Address:
Phone:
E-mail: hokuokekai50@msn.com
Submitted on: 2/10/2009

Comments:

Dear Senators,

I am testifying in strong support of SB237 because it reflects the will of the people of Hawai'i. When the public at large, your constituents, have been asked whether they support a labeling bill on transgenic food crops, the answer has been an overwhelming and resounding "YES".

One of my concerns regarding genetic engineering, especially fish has been the non-target effects of genetic manipulation and the lack of data supporting the safety of consuming this radically altered "food".

Please take a few minutes to read the article by Craig Holdrege, "Nontarget Effects of Genetic Manipulation," a project of the Nature Institute. It provides clear and concise information on this subject.

Mahalo for the opportunity to testify,

Mary Lacques

Testimony transmitted by email 10 Feb 2009 from:

Penny Levin
224 Ainahou Place
Wailuku, Maui 96793

TO: Committee on Energy and the Environment and Committee on Water, Land,
Agriculture and Hawaiian Affairs, Rm225, February 10th, 3:30pm

**RE: Testimony for SB238 *Relating to Labeling of Genetically Engineered Crops* and
SB237 *Relating to Genetically Engineered Fish***

Aloha Honorable Committee members;

Regarding SB238 *Relating to Labeling of Genetically Engineered Crops* and SB237 *Relating to Genetically Engineered Fish*, I strongly support the proposed legislation to protect consumers' right to know about the food they eat in the State of Hawai'i.

Both these bills address important concerns for consumers in Hawai'i - the right to know what is in their food and the right choose food they deem as healthy, organic, and safe.

For some consumers, they may not care how their food has been altered. For others, including those who battle illnesses such as cancer or wasting diseases, whose children deal with autism, ASD or other diseases, or just those who consciously make an effort to maintain a healthy lifestyle, the importance of whole, macrobiotic, pure foods can not be emphasized enough.

In the case of medicines, full disclosure on the potential risks and side effects are required by law as part of packaging. In the case of genetically engineered plant and animal food crops, the impacts and side effects remain unknown and have yet to be fully studied.

Too many questions remain regarding the safety of genetically engineered foods to place so many people unknowingly at risk.

Additionally, the threat of contamination, whether through mixing into schools or fields or through uncontrolled hybridization of wild populations of fish or adjacent, similar plant crops or wild plant relatives by genetically engineered counterparts is very real and has been well documented in the last decade. Farmers deserve the right to protect the integrity of their crop and the quality of their products and markets. Hawaii's fragile island ecology requires our vigilance in this arena.

I ask the members of the ENE and WLT Committees to support SB238 and SB237.

Respectfully,

Penny Levin
Wailuku, Maui