COUNTY COUNCIL

Bill "Kaipo" Asing, Chair Mel Rapozo, Vice Chair Tim Bynum Jay Furfaro Shaylene Iseri-Carvalho Ronald Kouchi JoAnn A. Yukimura



Council Services Division 4396 Rice Street, Room 206 Līhu'e, Kaua'i, Hawai'i 96766-1371

OFFICE OF THE COUNTY CLERK

Peter A. Nakamura, County Clerk Ernesto G. Pasion, Deputy County Clerk

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TESTIMONY OF COUNCIL VICE CHAIR MEL RAPOZO KAUA'I COUNTY COUNCIL

ON

S.B. No. 958, S.D.1, H.D.1, RELATING TO GENETICALLY MODIFIED ORGANISMS

House Committee on Agriculture March 19, 2009 9:00 a.m. State Capitol Auditorium

Dear Chair Tsuji and Members:

I humbly submit this written testimony as an individual member of the Kaua'i County Council in strong support of S.B. No. 958, S.D.1, H.D.1, which imposes a 10-year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State.

Councilmember Shaylene Iseri-Carvalho and I have introduced Resolution No. 2008-04, which supports S.B. No. 958, S.D.1, H.D.1 and the 10-year moratorium on genetically engineered taro in the State of Hawai'i, which is pending final approval of the Council. It is with utmost importance that we preserve the cultural and sacred aspect of the kalo for Native Hawaiians and the people of Hawai'i, and in addition to the kalo being a staple food, it needs to remain unaltered in any way, shape, or form.

During our previous Council hearings on Resolution No. 2008-04, many individuals have testified against the testing of genetically engineered taro, and to this extent we have a file of more than 2000 signatures that support the 10-year moratorium.

Thank you for your consideration and support of S.B. No. 958, S.D.1, H.D.1.

Sincerely,

Council Vice Chair

•

SI/wa2008-883

COUNTY COUNCIL COUNTY OF KAUA'I

Resolution No. 2008-04

RESOLUTION SUPPORTING S.B. 958, S.D.1, H.D.1 TO IMPOSE A TEN-YEAR MORATORIUM ON DEVELOPING, TESTING, PROPAGATING, CULTIVATING, GROWING, AND RAISING OF GENETICALLY MODIFIED TARO IN THE STATE OF HAWAI'I

WHEREAS, kalo, the Hawaiian word for taro, is a culturally significant plant to the kanaka maoli, Hawai'i's indigenous peoples; and

WHEREAS, today, there remains approximately 85 varieties of taro from the hundreds that were known in Hawai'i, and of these, the majority (69) are unique to the Hawaiian Islands due to the horticultural skills of native Hawaiian farmers; and

WHEREAS, taro is a healthy and nutritious staple in the diets of many residents throughout the State of Hawai'i; and

WHEREAS, the important cultural relationship between kalo and the kanaka maoli expresses the spiritual and physical well-being of not only the kanaka maoli and their heritage, but also symbolizes the environmental, social, and cultural values important to the State of Hawai'i; and

WHEREAS, taro continues to have tremendous agricultural, cultural and traditional significance to the residents of our County and State; and

WHEREAS, cross pollination of genetically modified taro would place an immeasurable threat on traditional varieties; and

WHEREAS, the amount of usable land for raising taro is scarce on Kaua'i, and any negative impact would devastate the taro industry on Kaua'i; and

WHEREAS, experimenting with the genetic engineering of this crop without thoroughly examining and evaluating the adverse effects of that process is careless and could have far-reaching, irreversible, and unintended consequences; and

Ren. No. 2008-04

WHEREAS, the purpose of S.B. 958, S.D.1, H.D. 1 is to recognize the importance of kalo in the heritage of the State by creating a ten-year moratorium on developing, testing, propagating, cultivating, growing, and raising of genetically modified taro in the State of Hawaii; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE COUNTY OF KAUA'I, STATE OF HAWAI'I, that it urges the Hawai'i State Legislature to adopt S.B. 958, S.D. 1, H.D. 1 to impose a ten-year moratorium on developing, testing, propagating, cultivating, growing, and raising of genetically modified taro in the State of Hawai'i.

BE IT FURTHER RESOLVED, that the County Clerk transmit copies of this resolution to Governor Linda Lingle; Mayor Bryan J. Baptiste; Sandra Kunimoto, Director, State Department of Agriculture; Andrew Hashimoto, Dean, U.H. Manoa C.T.A.H.R.; and the Kaua'i State Legislative Delegation.

MEL RAPOZO Maylan A. Canal

D:RESOLUTION:TARO/CA:lkd

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Gseri-Carvalha				
Kauchi				
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Certificate Of Adoption

We hereby certify that Resolution No. was adopted by the Council of the County of Kauc'i, State of Havai'i, Lihu'e, Kaua'i, Havai'i, an

	County	Clerk
Daled	<u></u>	

Chairman & Presiding Officer
RM. NO. 210804

COUNTY COUNCIL
BILL "KAIPO" ASING, CHAIR
MEL RAPOZO, VICE CHAIR
TIM BYNUM
JAY FURFARO
SHAYLENE ISERI-CARVALHO
RONALD D. KOUCHI
JOANN A. YUKIMURA



4396 RICE STREET, ROOM 206 LÎHU'E, KAUA'I, HAWAI'I 96766-1371 E-mail: cokcouncil@kauai.gov ERNESTO G. PASION, Deputy County Clerk Telephone: (808) 241-6371 Facsimile: (808) 241-6349

OFFICE OF THE COUNTY CLERK

PETER A. NAKAMURA, County Clerk

Council Services Division

Elections Division

Records Division

March 17, 2008

The Honorable Clift Tsuji, Chair & Members of the House Committee on Agriculture Hawai'i State House of Representatives, 24th State Legislature Regular Session of 2008
State Capitol Auditorium
415 South Beretania Street
Honolulu, HI 96822

Dear Chair Tsuji & Members of the House Committee on Agriculture:

SUBJECT: SENATE BILL NO. 958, S.D. 1, H.D. 1; RELATING TO GENETICALLY MODIFIED ORGANISMS

I submit this testimony as an individual member of the Kaua'i County Council.

I offer my strong support for Senate Bill No. 958, S.D. 1, H.D. 1 ("SB958"), which seeks to impose a 10-year moratorium on the developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State of Hawai'i.

The Kaua'i County Council ("Council") is currently considering Resolution No. 2008-04 ("Resolution"), which is pending final approval and seeks to express the full Council's support for SB958. As co-introducer of this Council Resolution, I believe it is imperative for the State to both recognize and protect the cultural significance and integrity of *kalo Hawai'i*. Testimony presented to our Council has indicated that the growing and cultivation of *kalo* is a tradition that stretches back for more than a thousand years.

Also during our recent Council hearings on this Resolution, many Kaua'i residents have testified as to their support of SB958. We have on file petitions supporting SB958 signed by over 2,000 people. It is very rare to see this kind of unity for support on a single piece of legislation that pervades the entire state. I would respectfully urge the members of the House Committee on Agriculture to also stand in strong support of this vital piece of legislation.

Thank you very much for your consideration of this testimony.

Sincerely,

SHAYLENE ISERI-CARVALHO

Kaua'i County Councilmember

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Council Chair G. Riki Hokama

Vice-Chair Danny A. Mateo

Council Members
Michelle Anderson
Gladys C. Baisa
Jo Anne Johnson
Bill Kauakea Medeiros
Michael J. Molina
Joseph Pontanilla
Michael P. Victorino



COUNTY COUNCIL

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

March 17, 2008

TO:

Honorable Clift Tsuji, Chair

House Committee on Agriculture

FROM:

Danny A. Mateo

Council Vice Chair

DATE:

March 19, 2008

SUBJECT:

TESTIMONY IN SUPPORT OF SB 958 SD1, HD1, RELATING TO

GENETICALLY MODIFIED ORGANISMS

Thank you for the opportunity to testify in support of this important measure. The purpose of this testimony is to urge your support to impose a 10-year moratorium on developing, testing, propagating, cultivating, raising, and growing of genetically engineered taro in Hawaii.

While the Council's Public Works and Facilities Committee voted to recommend approval of a resolution in support of SB958, the full Council has not had the opportunity to act on the measure. Therefore, I am providing this testimony in my capacity as an individual member of the Maui County Council.

I support this measure for the following reasons:

- 1. Kalo, the Hawaiian word for taro is a culturally significant plant to Hawaii's indigenous people, the kanaka maoli and represents Haloa, the elder brother of man and genetically altering the structure of the taro plant represents a defilement of the genealogical link between the two.
- Farmers, Hawaiian groups, and private individuals have expressed their concerns that
 genetically modified taro will destroy the genetic strains of native taro species, and is
 disrespectful of the cultural foundation taro holds for Native Hawaiians and their
 religious practices.
- 3. Experimenting with the genetic engineering of this crop, without thoroughly examining and evaluating the adverse effects of that process, is careless and could have far-reaching, irreversible, and unintended consequences.

For the foregoing reasons, I support this measure.

03/18/2008 IOE 10:50 LWY 000 2415100 OMITE HEVE HOCKT



Eric Gill, Financial Secretary-Treasurer

Hernando Ramos Tan, President

Godfrey Maeshiro, Seniar Vice-President

Tuesday, March 18, 2008

Representative Clift Tsuji, Chair Representative Tom Brower, Vice-Chair House Committee on Agriculture

Supporting the intent SB 958 SD1, HD1; relating to genetically modified organisms.

Chair Tsuji, members of the House Committee on Agriculture, I submit this testimony on behalf of UNITE HERE! Local 5.

UNITE HERE! Local 5 wishes to express our support for the intent of Senate Bill 958 SD 1, HD 1.

If enacted, SB 958 would recognize the cultural significance and importance of the kalo, or taro, in the heritage of our State.

We share in the concerns already articulated in the overwhelming testimony from farmers, and other interested groups and individuals all against genetically modified taro. Questions regarding possible health, environmental, economic and cultural impacts of genetically modified taro have led us to believe that more discussion on this subject and answers to these concerns must first be addressed. As such, we support the intent of SB 958 that calls for a ten-year moratorium on cultivating, and growing genetically modified taro in Hawaii.

I thank this Committee for providing me the opportunity to submit this testimony.

Sincerely,

Eric Gill

Financial Secretary-Treasurer

1050 Queen Street, Suita 100 • Honolulu, Hawaii • 96814-4130 • Phone (808) 941-2141 • Fax (808) 941-2166 • www.unitehere5.org

Hawaii Fruit Company PO Box 31264 Honolulu, HI 96820

Testimony of Michael Kohn owner Hawaii Fruit Company

Before the House Committee on Agriculture Wednesday, March 19, 2008 9:00 AM

Senate Bill No 958

Chairperson Tsuji and Members of the Committee:

My name is Michael Kohn. I am the owner of a small business called Hawaii Fruit Company. We pack and export papayas. Allow me tell you my experience with genetically engineered papayas and how it relates to the proposed Senate Bill No 958.

By 1996 the ring spot virus had nearly wiped out the papaya industry. Like a wild fire the virus raced through the papaya orchards. The few fruits that were taken to market had no taste. Their appearance was awful.

In prior years we had sold some 1500 cartons per week. I clearly remember when our production had fallen to only 46 cartons. I called our last customer telling him we would no longer be able to ship. It was a sad day. Retail prices shut up to over \$2.00 / lb. There was talk about importing papayas as the local industry would not recover.

There was however one bright spot on the papaya horizon. Just 25 years earlier the papaya industry got wiped out on Oahu. Local scientists knew about the virus problem and that it was a matter of time until the virus would hit the main production area on the Big Island as well. For some two decades these local scientists had worked on making the papaya trees resistant by applying genetic engineering. By the time the virus hit Puna and Kapaoho the scientist had already succeeded. Lengthy trials and tests mandated by USDA and FDA were almost finished. In the nick of time the industry was saved. Growers could successfully produce papayas again only better tasting than ever before. Papayas one of the healthiest fruits was back, at affordable prices that local people had been accustomed to for decades.

The taro industry, like papaya could also be threatened by a deadly virus. Taro is already attacked by various diseases making it harder and harder to grow. Costs to grow taro in Hawaii is so high that some 1.8 million lbs are imported annually.

For thousands of years agriculture has used science to improve crops that can adjust to an ever changing environment. Science in form of genetic engineering is a relatively new tool. It has saved Hawaii's papaya industry and it can save Hawaii's taro industry. It is an easy choice for me to oppose Senate Bill 958.

Michael Kohn

Öwner

Aloha

Hawaii Fruit Company



TESTIMONY TO THE HOUSE COMMITTEE ON AGRICULTURE

By Neil Hannahs, Director Endowment/Land Assets Division

Hearing Date: Wednesday, March 19, 2008 9:00 a.m., State Capitol Auditorium

March 18, 2008

To: Rep. Clift Tsuji, Chair

Rep. Tom Brower, Vice Chair

Members of the Committee on Agriculture

KS POSITION ON BILLS & COMMUNITY ACTIVITIES RELATING TO GMO KALO

This testimony sets forth the position of Kamehameha School on proposed legislation and community activities relating to genetic modification of kalo (*colocasia esculenta*). Kamehameha Schools:

- 1. Recognizes kalo as a heritage resource;
- 2. Understands that current cultivation challenges pose a threat to the survival of some or all kalo varieties;
- 3. Holds that intellectual property and any genetic patents related to kalo are inalienable to Native Hawaiians; and
- 4. Advocates continued suspension of activities related to the genetic modification of kalo and broad commitment to a process that will bring stakeholders together to refine current farm practices, fill informational gaps and bridge philosophical differences.

Kalo: a Heritage Resource

Hawaiian practices, values and worldview are central to issues concerning genetic modification of Hawaiian kalo, an important heritage resource and older sibling to those of Native Hawaiian ancestry. Kalo is referenced in the ancient cosmogonic history of the Hawaiian Islands as a prominent staple crop that was born from the body of Hāloa-naka-lau-kapalili (Hāloa-of-the-quivering-leaf), the first-born son of Wākea and Hoʻohōkūkalani. Stillborn, his body was returned to the earth and grew into the first kalo plant in Hawaiʻi. Their second-born son, named Hāloa in honor of his older sibling, became the progenitor from whom all kanaka maoli descend.

March 18, 2008

To:

Rep. Clift Tsuji, Chair

Rep. Tom Brower, Vice Chair

Members of the Committee on Agriculture

We recognize that these are not just mythologies, but connections that are as real to our people today as they were to our ancestors who planted the first fields of kalo over a hundred generations ago. These traditions convey an inherent ancestral responsibility for all Hawaiians to care for this heritage plant as one would care for family. This should compel us to take action to mitigate threats to kalo's survival and to protect the integrity of this genealogical link between Hāloa-naka-lau-kapalili and his descendents.

Kalo's Current Challenges

In traditional times, kalo was grown, propagated and diversified into over 300 Hawaiian varieties, with different names, morphologies, colors and tastes. Over the years, the number of distinct varieties has reduced dramatically. Today, some 70 Hawaiian varieties remain and there are fears that this number will continue to decline.

Kamehameha Schools currently has ten lessees who propagate kalo on our land. Our plans call for expanding the number of growers, as well as the acreage devoted to production. Half of our current kalo farmers have strong objections to genetic modification of kalo. Two are interested in possible benefits of GMO, but are very concerned about risks. One believes that GMO may help the industry. And two were not able to be reached at this time.

Our farmers have identified the following cultivation challenges, as well as their current tactics for mitigating these issues:

Challenge	Mitigation		
Apple snails	Ducks, hand removal, water volume		
Root/pocket rot	Select out diseased huli, improve water flow		
Soil quality	Fallow fields, cover crops, composting, crop		
	diversity, organic nutrients		
Leaf blight/phytophthora	None		
Water volume/temperature/turbidity	Increase flow, clean diversions, open auwai		
Weeds	Site husbandry, community work days		
Pigs	Hunting, fencing, human presence		
Farm gate pricing/profitability	Value-added processes, community-based		
	processing facilities		

To save the commercial kalo industry, some in our community have advocated boosting yields by engineering the creation of genetic varieties that are resistant to threats (diseases, pests, etc.).

March 18, 2008

To: Rep. Clift Tsuji, Chair

Rep. Tom Brower, Vice Chair

Members of the Committee on Agriculture

While such intentions are appealing, we believe that our first response should be to ensure that farmers are utilizing best cropping, nutrient cycling and pest control practices before we attempt higher risk mitigation through modern biotechnology.

Should it be necessary to address the threats to kalo through modern biotechnologies that effect genetic and biological changes that could not occur naturally, we share the concerns of those that believe a cautious approach should be adopted to ensure that solutions produced through such methods:

- preserve the genetic integrity of current kalo varieties;
- address the root cause of declining ecosystem health, rather than mask key environmental indicators and divert resources to treat symptoms; and
- incorporate reliable measures to prevent uncontrolled reproduction and other unintended, irreversible consequences.

Kalo as Intellectual Property of Native Hawaiian People

Genetic patents of a heritage resource raise serious indigenous intellectual property rights issues. Such patents are based on an English common law system of ownership that ascribes rights and entitlements to individuals or organizations.

Genetic patents of heritage resources do not align with the values of indigenous cultures, because individuals cannot own elements of heritage that are inalienable to a community. Such patents would commodify the relationship between farmers and Hāloa and cleave the social fabric of Hawaiian communities by overlaying proprietary interests and transactional processes upon communal resources and values of reciprocity. The practice of sharing huli (kōkua aku, kōkua mai) would be impaired as farmers become reluctant to accept huli of uncertain origin.

Moving Forward

Kamehameha Schools supports the continued suspension of activities related to the genetic modification of kalo, as well as a broad community commitment to a critical path of activities that will help refine current farm practices, fill informational gaps and bridge the philosophical divide between key stakeholders. The time needed to accomplish these goals will depend on available resources and the ability of polarized stakeholders to build trust. Under such circumstances, it may be unwise to stipulate a statutory timeframe.

March 18, 2008

To: Rep. Clift Tsuji, Chair
Rep. Tom Brower, Vice Chair
Members of the Committee on Agriculture

The critical path should include, but not be limited to, the following activities:

- Key stakeholders need to be identified and periodically convened to ensure consultation of appropriate parties in reviewing all proposals that would genetically modify heritage resources. Stakeholders should include: Native Hawaiians cultural practitioners; kalo farmers; commercial agricultural interests; Kamehameha Schools; Office of Hawaiian Affairs; appropriate departments of State government and the University of Hawai'i system; conservation organizations; as well as other related parties.
- 2. Kalo farmers (subsistence and commercial) and holders of kalo variety collections (such as botanical gardens) should be surveyed to prioritize their cultivation challenges and other threats to kalo varieties.
- 3. An assessment of farm practices should be conducted to ensure that kalo growers are implementing cropping, nutrient cycling and pest control practices that optimize ecosystem health and crop productivity.
- 4. All genetic modification proposals should be required to produce an exhaustive risk-reward analysis that includes an assessment of potential impacts upon native species integrity, consumer health, ecosystem services and economic viability.
- 5. Bio-security facilities, research protocols and dissemination procedures need to be developed and presented for consensus endorsement by the key stakeholders noted above.
- 6. Thorough discussions of intellectual property rights issues should be facilitated with representative stakeholders to ensure that indigenous property rights are protected and that responsibilities are associated with conferred rights.

Mahalo for the opportunity to testify on this matter.

TESTIMONY IN SUPPORT

SB958-10 Year Moratorium on the Genetic Modification of Taro

Dr. Lori Kimata N.D. Sacred Healing Arts 1188 Bishop St. Ste.1509 Honolulu, Hi 96813 808-783-0361 Sacredhealingarts.info

Dear Legislators;

I strongly support a 10 year moratorium on all forms of genetic modification and patenting of kalo (taro) because it is culturally inappropriate and poses unknown, potentially dangerous irreversible and long term risks to our health, environment and economy.

Kalo is very important to the Hawaiian diet. It is documented to help reduce health conditions found prominently in the Hawaiian community. As a physician I am concerned about the untested impacts attached to genetically modified organisms (GMO) and possible long term health risks, not yet documented. This is reason enough to oppose (GMO's) into kalo or any other agricultural foods. And as a farmer as well, I join other local farmers and Hawaiian island residences who urge you and your fellow legislators to protect Hawaii's cultural resources by passing SB 598 into law to provide a 10 year moratorium on the genetic modification and patenting of kalo in Hawaii.

Sincerely,

Dr. Lori Kimata N.D. Sacred Healing Arts





James Greenwood, President and CEO Biotechnology Industry Organization 1201 Maryland Avenue, SW, #900 Washington, D.C. 20024

Lisa Gibson, President
Hawaii Science & Technology Council
735 Bishop Street , Suite 401
Honolulu, HI 96813
(808)536-4670

POSITION: OPPOSE SB958hd1, GMO Taro Bill Wednesday, March 19, 2008 Capitol Auditorium – 9 am

Chairman Clift Tsuji House Agriculture Chair

Chair Tsuji and Members of the House Agriculture Committee:

BIO and our affiliate organization in Hawaii, the Hawaii Science & Technology Council, have the deepest respect for native culture and understand the historical importance of Kalo (Taro) in the Native Hawaiian community. We believe that bringing the stakeholders together to discuss concerns is the appropriate action to take to seek long term solutions for taro cultivation. Because there is no current research on Hawaiian taro underway, now is the time to do so. Many of our collective member companies are right now investing tremendous time and capital in your state and operating research and manufacturing facilities. Our industry collectively is well vested in helping to preserve and protect Native Hawaiian culture and way of life, while at the same time providing an impetus in the state for economic development.

BIO and HSTC therefore vigorously oppose SB958. Together, we represent well over a thousand public and private research entities and manufacturers ranging across the gamut of biotechnology. They are engaged in biomedical innovations, alternative energy and industrial applications, and modern agricultural technologies. All of these sectors of biotechnology can be regarded as one





technology with a vast number of applications all of which can help our health and the environment in Hawaii.

SB958 is based on unfounded fears and speculation and miscasts scientific research as somehow contrary to societal benefit and the environment in Hawaii. Nothing could be further from the truth. Biotechnology research and applications are truly changing how we can protect and enhance our lives, those of our children and the world in which we live. Biotechnology research in Hawaii can have tremendous positive influences on human and animal health, our ecosystem and be drivers for economic growth. Handing a death sentence to mere research could prove far more harmful in Hawaii then might be suggested by the bill's supporters.

HSTC and BIO represent companies that are investing not only time in Hawaii but also in human capital. Hawaii is a world leader in agricultural biotechnology and this growing sector provides much needed higher paying jobs. A ban on mere biotech research, even if directed at a plant species not being studied, would have a chilling effect on the growth of this newer industry. Why should Hawaii lose its best and brightest scientists more and more to other US states? How many jobs or avenues for economic development are being offered by the detractors to biotechnology?

There is absolutely no evidence that this type of research would prove somehow harmful in Hawaii. Some of the same non-Hawaii based detractors to biotechnology have been stating the same misinformation about other agricultural research elsewhere in the country for years. Over ten years of commercialized biotech crops, farmed in more than one billion acres worldwide, with not one negative environmental or human health effect shows how wrong these critics have been. All credible national and international organizations from the US government, to the American Medical Association, to the World Health Organization, to leading scientists around the world see the promises that we now derive and will in the future enjoy from biotechnology. Yet these detractors must persist in spreading fear and misinformation. Please ensure that you not be an unwitting ally to their ultimate goals.

Thank you for the opportunity to testify.

Cynthia Nyross

From: Jim Albertini [ja@interpac.net]

Sent: Monday, March 17, 2008 7:45 PM

To: sb958writtenonlytaro

Subject: in support of SB958

In Support of SB958

COMMITTEE ON AGRICULTURE

Rep. Clift Tsuji, Chair Rep. Tom Brower, Vice Chair

Wednesday, 3/19/08

TIME:

9:00 a.m.

PLACE:

State Capitol Auditorium

Aloha Kakou,

I suppot SB 958 calling for a 10 year GMO moratorium on kalo. I have been a kalo farmer in Ola`a (Kurtistown) on Hawaii island for 28 years. We have over 30 varieties of kalo growing on our farm. I also grew kalo on Oahu in both Manoa Valley and Waianae. For me, this issue comes down to respect for the sacred above science, putting the culture of the host people before the for-profit interests of foreign corporations like Monsanto.

Nana I Ke Kumu! Look to the source.

Mahalo.

Jim Albertini, president
Malu `Aina Center For Non-violent Education & Action
P.O. Box AB
`Ola`a (Kurtistown), Hawaii 96760
Phone 808-966-7622
email ja@interpac.net
www.malu-aina.org



REPRESENTATIVE CLIFT TSUJI, CHAIR REPRESENTATIVE TOM BROWER, VICE-CHAIR

HOUSE COMMITTEE ON AGRICULTURE

TESTIMONY RE: SENATE BILL NO. 958, SD 1, HD 1
RELATING TO GENETICALLY MODIFIED TARO

March 19, 2008, 9:00 a.m. State Capitol Auditorium

Good morning Chair, Vice-Chair, and members of the Committee:

My name is Paul Achitoff, and I am the managing attorney of the Hawai'i office of Earthjustice, a nonprofit, public interest environmental law firm. I appreciate the opportunity to offer this testimony regarding Senate Bill No. 958, SD 1 HD1, which imposes a 10-year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State.

The primary force behind this bill is the tremendous cultural significance of taro, and the concerns of many that the genetic manipulation of taro assaults that culture and threatens, on many levels, those who grow, process, and consume taro, and Native Hawaiians generally. Although I personally, and Earthjustice, have worked for many years on behalf of those who share and are directly affected by these concerns, there are many others who are more qualified than I to discuss them, and who no doubt have discussed them in their testimonies.

I therefore will address a few other aspects of this bill and its implications that bring into play my particular expertise as an attorney who has successfully litigated a number of lawsuits concerning genetic engineering in Hawai'i and elsewhere.

"Academic Freedom"

First, there has been a coordinated effort on behalf of some employees of the University of Hawai'i to argue that the bill would somehow violate "academic freedom," as though this were tantamount to violating a constitutional right, or at least a moral right, or fundamental freedom. This is cynical, it is manipulative, and it is intellectually dishonest..

There are those who may consider the genetic manipulation of taro intellectually stimulating, and also may see it as an opportunity to attract funding. This is fine—but instead of concealing it

with the grand-sounding phrase of "academic freedom," let's call the situation what it really is: A handful of individuals oppose a measure that is supported by thousands of Hawai'i's citizens, many of whom are deeply offended by the notion of permanently altering the genetic structure of a plant they consider inextricably bound up with their very identity as Native Hawaiians, and many others of whom are legitimately concerned about the economic threat to their livelihoods posed by genetic contamination, so that these few individuals can satisfy their intellectual curiosity and enhance their status within the academic community, and their personal economic status.

There is simply no such thing as "academic freedom" to conduct whatever research a UH employee wishes to engage in. Any exploration of the subject of academic freedom will quickly reveal that the concept has no applicability to this circumstance, but is being taken out of its accepted meaning by this handful of researchers, encouraged by the other interest group that opposes this measure, the so-called "seed companies," not to promote the public interest, but to serve their self-interests at public expense. In Regents of University of California v. Bakke, 438 U.S. 265, 312, (1978), the Supreme Court said "the four essential freedoms" of a university are to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study. We are not here considering whether an academic has the right to speak his or her mind. We are not considering whether someone is being dismissed, or denied tenure, because she expressed an unpopular view. Nor are we discussing what a professor has the right to teach his students. Genetic engineering is currently taught at the university—I myself recently guest taught a class on the subject—and no one is suggesting that university professors be told what position they may express about the subject.

What we are considering is whether a person has a right—a <u>right</u>—to do something in his laboratory merely because he is employed by a university, when it is perfectly obvious that no one has the right to conduct such research in his basement, beyond the ability of legislators to restrict it for the sake of the public interest. As a matter of law, and of accepted ethics, there exists no such right.

Contamination

Second, although cultural concerns are a sufficient basis for restricting research, the bill is supported by other sound principles that have nothing to do with culture. Regardless of any arguments anyone may assert in support of genetic engineering, it is beyond principled dispute that there have been many, many incidents of genetic contamination that threaten the economic livelihoods of farmers, if not the health of consumers, and that the efforts that has been made to prevent contamination have proven unreliable. Here a just a few of the many examples that are a matter of public record:

<u>August 2006</u> -- Bayer CropScience and Riceland Foods report widespread contamination of commercial long-grain rice supplies, including exports, with Bayer's unapproved, herbicide-tolerant genetically engineered ("GE") rice, LL601. Japan immediately suspends imports of U.S. long-grain rice and orders testing of processed rice products that might contain it. Since Bayer

stopped field-testing the rice in 2001, it has likely been in the rice seed supply, the food chain and/or the environment for 5 years or more.

<u>August 2006</u> -- EPA scientists announce that golfcourse grass (bentgrass) genetically engineered to withstand Monsanto's Roundup herbicide escaped the test plot via pollen flow or seed dispersal to form viable plants up to 2.4 miles away. Bentgrass can cross-pollinate with many different grasses, and 175 permits authorizing cultivation of over 4,400 acres of GE bentgrass have been issued since 1993.

<u>December 2004</u> -- Biotech giant Syngenta reveals to U.S. authorities that it had mistakenly distributed an unapproved GE corn variety, Bt10, to U.S. farmers from 2001 to 2004. Enough Bt10 to plant 37,000 acres and produce 165,000 tons was distributed. The episode resulted in numerous rejected corn shipments to Japan and the EU. Bt10 remains unapproved by US regulatory authorities.

<u>September 2004</u> -- In the longest "gene flow" incident on record, genetically engineered bentgrass (see above) was found by EPA scientists to have cross-pollinated conventional grass up to 13 miles away in Oregon. The Forest Service and Nature Conservancy report that bentgrass can displace natural grass species in forest and native prairie settings. Herbicide-resistant bentgrass weeds created by such cross-pollination could also endanger the grass seed industry.

<u>December 2003</u> -- UC Davis researchers discover that, for seven years, they had been mistakenly distributing for research purposes GE tomato seed in place of a conventional variety.

<u>July 2003</u> -- Over 100 farmers in Italy discover that the non-GE corn seed they planted was contaminated with an unapproved GE variety.

<u>May 2003</u> -- Tests show that biotech crops have contaminated wheat grown in the U.S., even though GE wheat is not approved for marketing. Grain industry experts warn that approving GE wheat could mean the end of US exports to Europe and Asia.

<u>September 2002</u> -- An experimental corn variety genetically engineered as a "biofactory" for drug-production, produced by ProdiGene, Inc. of Texas, contaminates corn and soybean fields in Iowa and Nebraska. 155 acres of corn is destroyed and 250,000 bushels of contaminated soybeans worth \$3 million are quarantined at the elevator and destroyed.

<u>April 2002</u> -- Corn grown in Argentina and sold as corn flour in Europe is discovered contaminated with a GE variety that is not approved for planting in Argentina or for human consumption in Europe.

<u>Sept 2001</u> -- Scientists were surprised to discover GE crop material in wild maize in Oaxaca, Mexico despite the country's moratorium on GE crop cultivation, in effect since 1998. It is thought that GE maize seed in food aid shipments from the US was saved and planted.

<u>July 2001</u> -- Austrian authorities order thousands of acres of corn destroyed when tests show contamination of non-GE seed by two unapproved GE corn varieties.

<u>April 2001</u> -- Just months after the StarLink fiasco, Monsanto is forced to recall thousands of bags of canola seed contaminated with a GE variety not approved for sale to Canada's major export markets. Incineration is planned for over 10,000 acres of fields already planted with the unapproved crop.

<u>September 2000</u> -- Over 300 food products were recalled due to contamination by a GE corn (StarLink, produced by Aventis CropScience), not approved for human food due to concerns that it might trigger hazardous food allergies. Experts estimated that half of the state's corn – about 1 billion bushels – could be contaminated. Exports of corn to Japan decreased by 44% in one year. StarLink contamination is still being discovered in US corn shipments three years later.

<u>May 2000</u> -- Nearly 15,000 acres of farmland in five European countries are contaminated with unapproved GE canola when pollen from the unapproved variety blows into a non-GE seed producers' field. In addition, French authorities reveal that unapproved GE seeds have contaminated nearly 10,000 acres of corn planted there.

<u>December 1997</u> -- Unapproved GE sugar beet from a Monsanto test field is sent to a sugar refiner, where it contaminates natural sugar sold for animal feed.

<u>May 1997</u> -- Monsanto is forced to recall 60,000 bags of canola seed when it discovers the seed contains unapproved gene-altered DNA, due to contamination from a planting error by a seed producer.

State Liability

The above contamination incidents illustrate several facts. First, genetic contamination cannot reliably be controlled; despite industry claims that they have learned from previous incidents how better to prevent contamination, it keeps happening, year after year after year.

Second, contamination can have devastating economic consequences. The rice farmers affected by the most recent of the incidents described above suffered multi-million dollar damages—and are suing Bayer CropScience and others seeking compensation.

Third: Whom does the Legislature think will be liable if a state university is responsible in any way for contamination of Hawai'i's taro? Who will be left holding the bag? Will it be the lobbyists from Monsanto, the Biotechnology Industry Association, or the Hawai'i Farm Bureau that are opposing this bill for fear of adverse precedent? It will be the university—and, of course, the State that funds and controls it.

I respectfully urge you to pass SB 958, SD1, HD1. Thank you again for the opportunity to offer this testimony.

HPACH

919 4th Street Pearl City, Hawaii 96782

March 19, 2008

Representative Clift Tsuji, Chair Representative Tom Brower, Vice Chair And Committee Members On Agriculture House of Representatives, The Twenty-Fourth Legislature Regular Session of 2008, State of Hawaii

Subject: SB 958 SD1, HD1, Relating To Genetically Modified Organisms, "SUPPORT"

ALOHA Kakou,

My name is Richard Pomaikaiokalani Kinney. As Sovereign of the Hawaiian Political Action Council of Hawaii, I SUPPORT the intent and passage of SB 958 SD1, HD1.

Taro is the most nutritious vegetable known to mankind. Taro has been cultivated in Hawaii from the beginning of time with the arrival of the native indigenous Kanaka Maoli people when they first arrived in Hawaii. Taro continues to be cultivated by the Kanaka Maoli Hawaii of today's Hawaii as it was in the past.

Taro should be Hawaii's Number One Cultivated Agriculture Crop. As a Health Food Taro should be added to all of Hawaii's produced products. Not only to Pan Cake Mix.

Once more HPACH strongly Supports the passage of SB 958 SD1, HD1.

Mahalo nui for the opportunity to present my testimony on this Bill.

ALOHA KUU AINA HAWAII

Richard Pomaikaiokalani Kinney, SOVEREIGN Hawaiian Political Action Council of Hawaii

Email: HIAHAWAII@ao.com





Maui County Farm Bureau

An Affiliate of the American Farm Bureau Federation and Hawaii Farm Bureau Federation Serving Maui's Farmers and Ranchers

SB 958 SD1 HD1 RELATING TO GENETICALLY MODIFIED ORGANISMS

HEARING BEFORE THE HOUSE COMMITTEE ON AGRICULTURE

Chair Tsuji and Members of the Committees:

My name is Warren Watanabe, Executive Director of the Maui County Farm Bureau, a non-profit general agriculture organization and an affiliate of the Hawaii Farm Bureau Federation.

Maui County Farm Bureau, on behalf of its member farmers, ranchers and agricultural organizations **strongly opposes** SB958, imposing a 10 year moratorium on the development of genetically modified taro varieties. We strongly recommend the need of clear State policies that provide farmers a freedom of choice for their cultural practices.

Farmers across the State are challenged with increased costs without an equivalent increase in revenue. Long term viability of farmers and ranchers will require ingenuity and creativity. WalMart recently announced their decision to support farmers in Guatamala as a way to improve the country's economy. It is inevitable that some day, in the near future, the vegetables and herbs from this Central American country will find their way to our grocery shelves. Behind this decision is the stark reality that the cost of produce from these countries will be at a fraction of the cost produced by Hawaii's farmers and ranchers. During these difficult economic times, the consumer will be extremely cost conscious. Farm Bureau believes that GM technology can help reduce costs while bringing benefits to the consumer. The example of papaya shows that this technology can coexist with non-GM plantings thereby giving farmers a freedom of choice of their farming methods. In turn, consumers can be provided a freedom of choice on the cost of their produce as well as methods under which they were grown. GM technology also provides means to develop new, and unique crops such as a protea with an aroma allowing our farmers a competitive advantage.

We strongly believe that work to understand pollen flow and provide best management practices for each crop is important. With such knowledge a diverse agricultural industry can thrive providing for self sufficiency and a strong agricultural base for future generations.

We respect the concerns for taro within the Hawaiian culture. Development and implementation of Best Management Practices to protect traditional native plantings should be a priority.

We respectfully request that this <u>Bill be held</u> and in its place a measure to develop a clear, science based policy to provide and protect the freedom of choice of farming practices for Hawaii's farmers and ranchers be passed.

Thank you for this opportunity to provide our input on this important matter.

P.O. Box 148 Kula, HI 96790 ph: 808 2819718 email:mauicountyfb@hotmail.com

Ryan Funayama, Senior Accountant, Hawaii Agriculture Research Center

TESTIMONY BEFORE THE HOUSE COMMITTEE ON AGRICULTURE HOUSE MEASURE SB958 SD1, HD1

RELATING TO GENETICALLY MODIFIED ORGANISMS

March 19, 2008 9:00am

TESTIMONY BEFORE THE HOUSE COMMITTEE ON AGRICULTURE

HOUSE MEASURE SB958 SD1, HD1

RELATING TO GENETICALLY MODIFIED ORGANISMS

March 19, 2008 9:00am

Chair Tsuji and Members of the Committee:

My name is Ryan Funayama. I am a Senior Accountant for Hawaii Agriculture Research Center (HARC). I am testifying today in support of the center, its research and support staff, and its members and clients. While it is clear by my title that I am no expert in the field of agriculture research, a well rounded education, the insight I have gained while working at HARC and the perusal of various related articles and publications enables me to offer an educated opinion on the matter.

I am strongly opposed to this measure proposing a 10 year moratorium on genetically modified taro in the state. Passage this bill into law is unnecessary and would be a significant setback for agriculture research. I shall note in the following my reasons why.

Passage of the bill is unnecessary partly due to the intricacies of the processes of research and development and commercialization of a given product. The process of research and development and commercialization of a given product are separate and distinct and interplay between the two is complicated and readily leans toward self-policing.

Passage is also unnecessary given the willingness and openness of the local research community to work with various Hawaiian groups and organizations to limit and/or restrict research on Hawaiian taro varieties. Keep in mind that there are many different varieties of taro outside of the Hawaiian ones such as Chinese taro. It would be senseless to ban research when the primary concern is already taken care of and heavy-handed for being so broad in its approach.

Should this measure pass it will more than likely that similar legislation will come across this Committee in the future. It is no secret that genetic modification is a very controversial topic. However, it seems very little is known about it among those who oppose it. Some may say we shouldn't interfere with the processes already in place. What they fail to mention is that agriculture has been and always will be a process of human interference and manipulation.

Agriculture research has greatly changed what we eat. Most of the crops we consume are so far removed from their wild counterparts it is nearly impossible to distinguish them. This has not happened by accident. The knowledge base acquired over many years through trial-and-error and scientific research allowed us to transform food crops into a stable and reliable source of nutrition. Without manipulation of these crops through

already established techniques such as selective breeding our current food sources would be different and wholly inadequate in quantity and quality.

Genetic modification will play a far more critical role in the future in terms of protecting our agricultural products from pest and disease. In today's globally interconnected world, the threats to the viability of our crops become increasingly real. Much in the way that flu pandemics threaten us especially in today's ever crowded and connected world, our crops our not immune to such threats.

Take, for example, bananas. Bananas in general lack genetic diversity, making them quite vulnerable to pests and diseases and likewise threaten both commercial cultivation and subsistence farming. Most of the diseases affecting bananas are fungal-based that can spread easily and are becoming increasingly resistant to fungicides used to combat them. In fact, a soil fungus was responsible for wiping out the earliest commercially grown and exported banana by the 1950s and a more virulent strain threaten the most commonly consumed banana of today. The only method available to prevent the loss of commercially cultivated bananas is genetic modification. Added restrictions and outright bans of genetic modification research could mean no more bananas to consume in the next decade or so in this case.

In conclusion, I would like to reiterate my opposition to this measure. It is unnecessary, heavy-handed, and would strike a dangerous precedent as far as how agriculture research would be conducted in the future and the dire consequences that could follow.

Thank you for your time in considering my comments on this measure.



Kauai Filipino Chamber of Commerce

P.O. Box 3618 • Lihue • Hawaii • 96766 (808) 651-9139 • filipinochamber@aol.com



President

Ernie Pasion

Vice President

Lesther Calipjo

Secretary

Connie Balisacan

Assistant Secretary

Remy de la Cruz

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Liza Trinidad

Past President

Sonia Topenio

Legal Counsel Shaylene Iseri-Carvalho

Asst. Legal Counsel

Rosa Flores

Executive Director

Oscar Portugal

March 18, 2008

Honorable Chair Clift Tsuji and Honorable Members of the House Agriculture Committee

415 South Beretania Street Honolulu, Hawaii 96813

Re:

Senate Bill 958

Dear Chair Tsuji, and Members of the House Agriculture Committee

The Kauai Filipino Chamber of Commerce opposes this bill. The bill does not allow certain types of research, which could be of benefit to our agricultural businesses in the future. We believe there are other bills currently being heard by the State Legislature that are positive and supportive of the needs of taro growers and processors.

There are currently six House bills and one Senate bill progressing through the legislature that would provide much needed research and support for taro farmers such as HB3425 for funding to develop control methods for apple snails or HB 2451 that establishes a taro farming education and training program. HB 2453 supports many of the aspects called for by those that want a moratorium bill to progress, appropriating funds for a taro grant program to assist taro farmers in preserving the cultural legacy of taro farming for future generations. One bill in particular, SB2915, is an appropriation bill for continued discussions to ensure preservation of taro plant materials where taro farmers, OHA, Department of Agriculture, and Hawaii Farm Bureau would discuss priorities, needs, and desires of the community for taro preservation and security. These positive, proactive bills would do much more to provide much needed support and help for taro farmers. A taro moratorium bill does little more than remove options for taro farmers throughout the state.

The Filipino Chamber recognizes the long history of agriculture as part of our State's economy. Today agriculture in Hawaii is still a significant part of our State economy, with more science and technology jobs. These jobs are higher skill, higher paying jobs, providing a good living wage for families. Students graduating from our local high schools and colleges today can find a wide variety of good jobs in the agriculture sector.

The applications of biotechnology are broad, and use of genetic engineering has already shown great benefit to one of Hawaii's crops, papaya. We support agriculture and the range of technologies that are used by researchers and farmers throughout the US and around the world. Moving forward the taro stakeholders should be deciding the future of taro research.

Thank you for the opportunity to present testimony.

Sincerely, /s/Ernie Pasion President



Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Doug Tiffany, I am a long-time Kauai resident and the Station Manager of the Syngenta Seeds - Kekaha facility, and I strongly oppose SB958.

As a Scientist trained in the discipline of Plant Breeding and Genetics, I feel very strongly about speaking up in support of science based decision making. Although I respect and am sensitive to the cultural importance of Taro, I do not feel that SB958 supports the protection or preservation of this critical crop. In fact, the bill undermines ongoing talks with the Native Hawaiian Community and does not address the fundamental concern of Taro preservation in the long term. We must not confuse the issue at hand. The real intent of Bill SB958 is to stop genetic engineering – not to support taro preservation. Unnecessary legislation of innovative research sets a dangerous precedent. Successful passage of this bill would set the stage for Hawaii to become an anti-science State at a time when support for innovation and research are critical to developing the future of Hi-Tech industry jobs in Hawaii. At one time the Hawaiian people had developed over 300 different varieties of Taro and were heralded as progressive plant breeders and geneticists. We must continue this tradition of evolution and innovation, using all the modern tools available, if we are to save the Taro germplasm base from eroding even further than it has. Only 60-70 varieties remain.

We must act to preserve Taro as a vitally important part of Hawaiian culture. The Hawaiian Community must lead these discussions about how best to sustain future of Taro. As such, SCR 206 is a more effective alternative to SB958 since it ensures continued dialogue with stakeholders and more constructive discussion on how to use all the tools available for the preservation of this vital resource.

I urge the committee to reject SB958. Mahalo for the opportunity to testify.

Cynthia Nyross

From: Falcon Tillotson, Jennie [jennie.falcon@pioneer.com]

Sent: Tuesday, March 18, 2008 4:58 PM

To: sb958writtenonlytaro

Subject: I strongly oppose SB958

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Jennie Falcon Tillotson and I strongly oppose SB958.

As a resident of Hawaii for the past 15 years, an alumnus of the University of Hawaii at Manoa for both my undergraduate and graduate work, as well as being employed in the agriculture field in Hawaii over the past 10 years, I am very concerned about the negative impact this bill could have if passed.

This bill is important to me for many reasons, primarily: 1.) The fact that this could set a dangerous precedent for restricting important research and development of life sciences that hold possibilities that we may one day rely upon both personally and professionally. Examples may include biotech medical breakthroughs for devastating diseases and viruses and disease or pest resistance for plants or animals on the verge of extinction. 2.) The limiting of biotechnology/science based business activity in Hawaii which could lead to the loss of competitive, professional jobs for us and our children which further inhibits Hawaii's reputation as a supportive business environment to attract and retain new business and talent to our state.

3.) Restricting the tools available for farmers to fight diseases and pests on their farms which could lead to irrevocable financial situations and/or loss of their farming business.

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Jennie A. Falcon Tillotson

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<u>Testimony on SB958</u> Relating to <u>Genetically Modified Organisms</u>

House Committee on Agriculture Wednesday, March 19, 2008 9:00 a.m.

Chair Tsuji and members of the Committee:

I STRONGLY SUPPORT SB958, which will impose a 10-year moratorium on the genetic modification of kalo in Hawai'i.

The people of Hawai'i have already made their wishes clear, and you MUST know that this is the right thing to do. The abuse of all things sacred here has gone on for MUCH TOO LONG.

We demand that you recognize to whom you are obliged. The people have spoken and you, the legislators, must listen. Neither will we allow ourselves nor our ancestors to be manipulated and disrespected. You must see to it that this law is passed, and yes, be proud in doing so.

Thank you,

Lydi Morgan Educator and Gardener lydi morgan@yahoo.com (808) 295-3375 Honolulu, HI

Cynthia Nyross

From: Carla Ritte-Hanchett [critteh@QLCC.org]

Sent: Tuesday, March 18, 2008 4:26 PM

To: sb958writtenonlytaro

Cc: Adam T. Kahualaulani Mick
Subject: Please say NO to GMO testing

To Whom It May Concern:

My name is Carla Hanchett form Hoolehua, Molokai. My husband and I have 8 children and are expecting our 14th grandchild in September. Over our lifespan we have had the privilege of living in the remote area's of Pelekunu, Molokai and Kaupo on Maui. We were able to raise our children with no fear of pesticides, toxins, or GMO tampering of our gardens, our fish, our water. In the past 20 yrs of living more mainstream we have witnessed more diseases, mental illnesses, and cancers which are increasing at an alarming rate. I am thoroughly convinced that man made toxins and tampering is the culprit and my family and I are currently in the process of RETURNING TO THE LAND. We will be nourishing the land with compost to grow our own food, we will work to reduce our carbon footprint by using natural alternative energy, and we are depending heavily on the kalo to be a very significant part of our food supply. We want, we deserve, we need it to be, GMO FREE! We along with our children, our grandchildren, our great grandchildren deserve a simpler, healthier lifestyle. It is our right, our inheritance!

PLEASE SUPPORT THE 10 YR. MORITORIUM ON ALL FORMS OF GENETIC MODIFICATIONS AND PATENTING OF TARO!

To: Seargent at Arms Office of the From: 16 Molokai Residents

Hawaii State Capitol

Fax No: 800-535-3859 Pages: 1

Phone No:

Date: February 11, 2008

Re:Testimony to OPPOSE SB958

Sergeant at Arms, please prepare the necessary copies and submit the following testimony to the COMMITTEE ON AGRICULTURE
hearing on Wednesday March 19, 2008, at 9:00am in the
State Capitol Auditorium, 415 S. Beretania St.

Honorable Committee Members, Vice Chair persons and Chair persons, We the undersigned residents of Molokai oppose SB958. This bill will eliminate the possibility to protect taro crops by new and effective technology. Taro crops throughout Hawaii are exposed to disease and insect pests. Biotechnology is a valuable tool to protect the Hawaiian taro from both. We support SB2915 that would create a taro security and purity task force. It calls taro growers, Native Hawaiian groups, and farmers to finding solutions without slamming the door on biotechnology.

Respectfully,

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Godfrey BusH	Acceptant Bus POBY 1210 KIKA, HI 96148	
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Signature	Print Name and Address	

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Signature Print Name and Address

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Hawaii State Capitol

Fax No: 800-535-3859

Pages: 1

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Hawaii State Capitol

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Respectfully. \(\Lambda\)

To:	Seargent at Arms Office of the	From:	6 Molokai Residents
Fax No:	Hawaii State Capitol 800-535-3859	Pages:	1 .
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Signature	Print Name and Address
	HELENA MULYEZ PO BOX 183 KMAH, itt 96
Maria L.S. Ba	lang of on More BOUNDEATAN P. D. BOX 951 Kamatas
Note Or	Note Oural POBOX 1620 K'kai 9674
Kidney Just	Kichard Smith Po box 421 Houlehunting
Judm ala	m Hydwin Calaro - Pobyzog & K.Kai 9

Cynthia Nyross

From: na

nagai chifumi [nagaichifumi@hotmail.com]

Sent:

Tuesday, March 18, 2008 3:39 PM

To:

sb958writtenonlytaro

Subject: Testimony on SB958

Chifumi Nagai 1021 Lunaai St Kailua HI 96734

Testimony on Senate Bill 958 SD1

Dear Chairman Tsuji and members of the Agriculture Committee My name is Chifumi Nagai and I am submitting testimony as an individual.

I am strongly OPPOSE AS UNNECESSARY Senate Bill 958 SD1 HD1, Relating to Genetically Modified Organisms which proposes a 10-year moratorium on genetically modified taro in the state.

- 1. The UH College of Tropical Agriculture has already agreed to stop research on genetic engineering on taro without consulting with the Native Hawaiians.
- 2. Even research is successful (develop a genetically engineered taro), it won't be commercialized if growers want to make it.

It takes long time to produce a new variety both using traditional or genetic engineering. When new pests or disease reach to Hawaii, it's too late to fine methods to protect the crops. We all know how quickly Wili Wili trees were gone (within a year) by the attack of new wasps. The bill says that over 300 taro varieties became 70 only. Even without new diseases not all the taro varieties could survive in various climates/ soils in Hawaii. I believe that it's dangerous to stop research which could provide alternate 'survival" ways of taros in Hawaii. The insect that pollinates Hawaiian taro is not here in Hawaii. Genetically engineered taro can not pollinate other taros naturally without hand pollination.

USDA and EPA have regulations to monitor field trials of Genetically engineered crops including taros. Genetically engineered taro can not be planted without these permits.

By stopping research and technology which could save taro in future, the bill can not save Hawaiian taro growers and Hawaiian communities.

Please consider to hold this unnecessary bill.

Thank you for the opportunity to testify.

Date:

March 17, 2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From:

Dan Clegg

Lahaina, Maui 283-4028

Hearing:

Wednesday, March 19, 2008, 9:00 a.m.

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

I would like to testify against this bill to ban genetic engineering research on taro.

There has been a lot of coverage in the media about this issue, and many things said at public meetings and e-mails. Activists who support this bill have said they are using this taro bill as a stepping stone to banning all GMOs in Hawaii. If that's the case, then Hawaiian culture is just being used by others who have a different agenda altogether.

Taro needs to be discussed by native Hawaiians, farmers, and others who are affected by it. Don't pass a bill that's being used for another purpose.

Mahalo.

Rosalina Africa PO Box 235 Kualapuu, Hawaii 96757 Phone Number: (808) 567-6698

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Rosalina Africa and I live on the island of Molokai. I moved here from the Philippines in 1973. My first job was working in the pineapple fields. I have worked for a corn company for about the last 10 years. I am 57 years old and have two children. Working in agriculture has provided income for me and my family. I would hope that I am able to continue working for this corn company until I retire. Pension from my work will then provide for my retirement. If this bill is passed, I am worried that it could affect my future financial security.

Sometimes my family enjoys eating por. It is now very expensive and we don't buy it as often as we normally would. By prohibiting genetic research we and other families we know aren't spending as much money which also contributes to the financial health of our island.

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this does not support agriculture on Molokal, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Simplicia Barbosa PO Box 1711 Kaunakakai, HI 96748 Phone Number: (808) 553-4377

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Simplicia Barbosa. I moved to Molokai from the Philippines in 1993 and started work at a seed company in 1994. Working in agriculture has been my sole income during this time. When I retire, the pension from this will be what I live on.

Living in Hawaii I have learned to love the local foods here. Taro is now an important part of my diet and I would miss it if not available. With my work history in corn and food source preferences, this bill is of concern to me

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60°s. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

To:8085866501

Shirley Ballocanag PO Box 1776 Kaunakakai, III 96748 Phone Number: (808) 553-5277

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Shirley Ballocanag. I am a resident of Molokai for 13 years having moved here from the Philippines. I am 45 years old and have worked in the agricultural field since arriving. I support myself and my son by working for a seed corn company. Jobs are very difficult to find on Molokai that will pay enough to support a family.

We have learned to enjoy eating taro and poi since arriving in Molokai. When I moved here, I didn't like it so much, but now it's very good. If something were to happen to taro, my family would miss an important part of our diet.

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawari is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Salina K.R. Victorino 684 Moai Loop Kaunakakai, HI 96748

8085679426

Phone Number: (808) 553-8323 Email:skvictorino@dow.com

Position: Oppose

Date: 3/13/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Salina Victorino. I'm a keiki o ka aina of Molokai, raised on homestead land in Kapa'akea. My family roots and connection on Molokai spans five generations. Please do not support SB 958sd1 as I believe passage of law to ban GE research on faro will close the door on our ability to preserve and sustain the taro for the future.

My dad and I have a lo'i for subsistence living of which the leaves are used for family luau's. Luau leaves and por are in constant demand, it's very costly and too expensive for us to consume on a daily basis, as a result today poi sale is limited. A 10 year moratorium on Taro would be devastating to our community socially and economically. So, please do not impose a law that could cripple the taro industry and make it difficult for us to continue and perpetuate our special way of life.

Agriculture is the main economic engine on Molokai. I support agriculture and believe hills like SB 958 does not support agriculture on Molokai, or anywhere else in the state. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Please support SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UH to talk about solutions for more taro

Ted Galam

Address: P.O. Box 1495 Kaunakakai Hi 96748

Phone Number: 808-639-2214

Email: ppl_fredaki@hotmail.com

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re. SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Ted Galam.

I'm 24 years old, born on the island Maui, raised and now living here on the island of Molokai for the past 24. I'm Hawaiian-Filipino. My mother's side, which is the Keohuloa, were farmers on Molokai. My grandfather was a supervisor for Dole pineapple until he retired, but is now a homestead farmer. He taught me a lot about surviving and providing for my family. I work for an agriculture company.

I feel that this bill will not support our taro farmers and that we are slowly running out of our taro supply. I think that it's good to find better ways to grow taro. In the future we will have taro and it won't be just a memory.

Passing of this bill would affect use because if anything would happen to our taro crops, we are the ones that are going have to find ways to save our taro plants.

I think that this bill does have an effect, and will impact our jobs in the long run. Because we as farmers are trying our best to provide and survive in fast growing world, and if we don't try to improve then who will?

Sick, I feel sick inside because of the current taro shortage, because my grandfather and even other kupunas are being limited to only 2 bags of poi per week. I recall grandfather used to grow taro in their backyard and was able to enjoy having taro. But even back then it was hard. I think that if they had the help of the testing that is available now that he may have been able to save his taro and could have continued growing and planting taro.

I feel that by stopping the testing of taro, we might slowly lose the taro completely and taro will be forgotten. Taro will only be just a memory or a story that will be told to our children

I think educating our future generations about ways to improve and that the old and new ways of growing taro will keep our culture crops such as taro alive and prospering.

Sincerely,

Ted Galam

Merline Jennings PO Box 482135 Kaunakakai, HI 96748

Phone Number: (808) 553-4307

Email: mm(a)wave.hiev net

To:8085866501

Position: Oppose

March 13, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Merline Jennings. I live on the island of Molokai. My husband and I have lived here for almost four years. We moved from Iowa where agriculture is important to the economy just as it is here in Hawaii. My grandparents and my parents were farmers. Currently, my livelihood (as well as the livelihoods of my Hawaiian and Philippine co-workers) depends on our jobs in this field.

We have incorporated ourselves into our new community, learning about the culture here. We've enjoyed many luaus and have come to love the traditional food served and this includes poi. Poi is to Hawaiians as corn is to an Iowan. It is obvious how devastating it would be not only economically, but culturally if that particular food source were lost due to insects or disease as it has in other parts of the world. My family therefore **does not** support SB958.

The vocal minority does not speak for me. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology

Thank you for the opportunity to testify.

To:8085866501

Phyllis Starkey PO Box 1614 Kaunakakai, Molokai 96748 Phone Number: (808) 553-3072

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Isuji and Members of the House Agriculture Committee:

My name is Phyllis Starkey and I live on the island of Molokai. My husband is a native Hawaiian. I am 57 years old and work for a seed corn company. I am concerned with this bill on several levels.

If passed, this bill could possibly impact my job and my friends' and family's jobs and livelihoods as well. It is not easy finding employment on Molokai, especially with a company that is stable and provides benefits and takes care of its employees. Also, if left improtected by research, the poi that my family enjoys could be taken away entirely or become too expensive. This bill could seriously affect the economy of my island as well as all of Hawan

P.8

Mcl Guerrero PO Box 69 Kualapuu, Hl 96757 (808) 567-6136

Position: Oppose

March 17, 2008

Rep. Clift Isuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Mel Guerrero. I live on the island of Molokai since 1968 when my family moved here from the Philippines. After I arrived, I worked at Libby, Dole and Del Monte in the pineapple fields until 1983. In 2005 I took a job with a seed corn company. As you can see, I've spent most of my life in agriculture

I enjoy eating taro and poi. However, it has gotten very expensive (almost \$7 now) and I can't afford to eat it as often as I would like. I feel that by **not** allowing the passage of this bill, research could help farmers produce more poi which would help the economy. It would benefit the farmers as well as people like me who like to cat it.

This bill might also affect my job since it could further impact all bio research. The island of Molokai depends heavily on agriculture. My family all work in this field. Our income would be drastically affected without these companies on our island because there is little tob opportunity available here

To: 8085866501

Mark Berfield PO Box 127 Kualapuu, Hawaii 96757 Phone Number: (808) 5676713

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawan

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Isuji and Members of the House Agriculture Committee:

I would like to offer testimony to the up-coming bill SB 958hd1 concerning taro. I am a recent arrival to Molokai and am employed with Mycogen Seed Company. As a research technician, 1 have, however, been in agriculture in Hawaii for over 20 years, previously growing and processing coffee in Kona.

Having been involved in many aspects of Ag production, I have come to realize how vital scientific and technological applications can be to successful production of almost every crop. Taro is no exception. A recent failure of taro crops here and in other places has shown the unreliability of this most important crop, both economically and culturally

Historically, other important (basic) crops that have failed in geographic areas have had profound effects on those populations that were dependant on crops. The failure of the potato crop in Ireland in the 19th century lead to a near collapse of their culture and spurred a mass migration to other places. Had genetic modification been available to farmers at that time, the crisis might have been avoided or at least mitigated. I feel that this comparison is quite valid

Thank you for allowing my testimony.

Luzviminda Guerrero PO Box 69 Kualapuu, Hawaii 96757 Phone Number: (808) 567-6136

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Luzviminda Guerrero. I came to Molokai in 1975 and after two weeks got a job with a corn company. I still continue to work for that company. My children worked in the corn during high school, my grandson works there now as well as my husband. Working in agriculture has provided for my entire family. If there was not an opportunity to have these jobs, my family would have suffered. Money earned from the corn, has also helped family back in the Philippines. It has helped some family members move to Molokai and contribute further to the community financially and culturally. When my sisters first arrived they were able to acquire jobs with the corn company to support themselves and get on their feet.

I do not support SB958sd1 because the vocal minority does not speak for me. We enjoy cating poi but now there is a shortage and it is expensive. My family cannot cat poi all the time, we can only afford it once a week. If genetically engineered poi will get us more poi and would make it cheaper, let's do it!

P.11

Lindsey Ahlo-Keohuloa PO Box 363 Hoolchua, HI 96729 Phone Number 808-560-6260

8085679426

Position: Oppose

Date: 3/17/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Lindsey Ahlo-Keohuloa, I was born and raised on homestead land in Hoolehua, Molokai. I am Hawaiian and my family roots and connections to this island run 5 generations. Being raised by my grandparents, agriculture has been in our family since the early 60's. My grandparents, homestead farmers, also raised taro for subsistence living.

I love to eat poi and any meal that includes taro leaf and believe that bills like SB 958sd1 could put a strain on our cultural way of life. Poi today is very expensive for my family and I cannot afford to cat poi everyday as I did as a child. If genetically engineered poi will get us more poi, cheaper poi, so we can eat it more, let's do it!

I do not support SB958sd1 because the vocal minority does not speak for me. Energy should go to SB 2915 which puts money behind a process for Hawaiians, taro growers. Department of Agriculture, OHA, and UH to talk about solutions for more taro.

Lilia Marzon PO Box 167 Kualapuu, Hi 96757 (808) 567-62203

8085679426

Position Oppose

March 17, 2008

Rep. Clift Isun House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Lilia Marzon. I moved here from the Philippines in 1980. My husband was originally born in Kona, and when he was 7 years old, his family went back to the Philippines. In 1967 he came back to Hawaii and it was in 1980 that me and the children were able to come. My husband was able to save enough money through his work in agriculture—working in the pineapple fields for Del Monte. In 1984 I got a job working in agriculture at Kumu Farm on Molokai. In 1990 I went to work for a corn company which I've worked for ever since. I am now widowed and 69 years old and still working in the corn fields. When I retire, I am relying on the pension from all these years of working in agriculture to support me. If the corn companies as well as other agricultural companies were not here to employ me, my family, and my friends on Molokai, I don't know how we would have supported ourselves. I believe this bill jeopardizes all employees in agriculture in Hawaii.

Also, I can say I enjoy eating taro and poi. It is difficult now for me to afford, but it won't be long before I'm on a fixed income, making it even more financially difficult. Research that would protect as well as promote more taro growth would help me and many others I know to be able to afford and enjoy taro more often. If genetically engineered poi will get us more poi, cheaper por so we can eat it more, let's do it!

I do not support SB 958sd1 because the vocal minority does not speak for mc. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however. I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Leona Cabaccang
PO Box 205
Kualapuu, 111 96757
Phone Number: (808) 567-6615

Position: Oppose

March 14, 2008

MAR-17-2008 14:35 From: MYCOGEN SEEDS

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Isuji and Members of the House Agriculture Committee:

My name is Leona Cabaccang. I live on the island of Molokai and came here from the Philippines in 1972. I have worked for a seed company from 1979 until now. I'll be retiring in a few months. Working in agriculture has been my only income and the pension from that work will be what I will live on after retirement. Agriculture is and has been very important to me. Besides relying on my income from the seed company, I have come to enjoy the foods of Hawaii over the years and that includes por. Therefore, this bill is a concern to me.

To:8085866501

Lahela Maliu Address: P.O. Box 103 Kaunakakai Hi 96748 Phone Number: 567-6005

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Lahela Maliu

I'm a fourth generation Molokai resident, mother of five children and grandmother to one grandson. I'm Hawaiian-Caucasian. I have family members that grow taro. For the past three months I've been working in agriculture and I enjoy my job. I don't just cat por, I love poi, and so does my family

I feel that they should not stop the testing because taro has been in our culture for many generations, and has been what we look forward to when going to parties and family gatherings. Consuming poi is an eating habit for me and my family. You can't eat fish without having poi! I feel that if this bill is passed, when something bad happens to taro crops, who would we look to for help. I believe that those tests will help our culture in those times of need.

I feel that this bill does not support me because it eventually will put my job at risk and other businesses as well here in the state of Hawaii.

I feel that the shortage of poi now is bad because it's hard to find poi for our parties now. Imagine how hard it will be for the next generation. I have a three year old niece who eats poi from when she was a baby. She loves poi. She cats poi straight from the bowl just like that, and for her age she is particular in what she eats. Poi is one of her favorites, and I just can't see her going without poi in the future. I feel with the existing poi shortage in Hawaii, we should not stop finding ways to grow more taro and having it less costly. Because taro is part of our culture I feel that we shouldn't lose that.

Keni Reyes PO Box 1864 Kaunakakai, III 96748

Phone Number: 808-553-5203

Email: kreyes2@dow.com

To:8085866501

Position Oppose

Date: 3/17/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Isuji and Members of the House Agriculture Committee:

My name is Keni Kanoa Reyes. I live on the island of Molokai, My family has been here for 4 generations. I was born on the island of Oahu and raised on Molokai. I lived in Hoolehua homestead for ¼ of my life. I do not have enough blood quantum to receive my own homestead I am still HAWAIIAN. I make my living by working in agriculture for the past 15 years. I also obtained a degree in horticulture and landscape maintenance. I plant a few varieties of kalo. enough for me to cat. I had the privilege of working with the taro collection grown by CES here on Molokai while going to school.

I do not support SB958sd1 because I can speak for myself. I grew up eating kalo in every way(squid luau,poi, kulolo, etc.). I may have lost my right as a HAWAHAN to receive homestead land but I stand firm for my right as a HAWAIIAN to have KALO on my table. Energy should go to supporting SB 2915 which puts money behind a process for HAWAIIANS, Kalo growers, Department of Agriculture, OHA, and UII to discuss solutions for more taro in the future.

David Na-O PO Box 32 Kaunakakai, HI 96748 Phone Number: 808-553-8280

Position: Oppose

Date: 3/17/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is David Na-O. I was born and raised in Honolulu and I now I live on the island of Molokai with my wife and 4 children. My wife's family is the Mollena's of Halawa Valley where taro first originated on Molokai. I am not of Hawaiian ancestry but I have learned the Hawaiian culture and values through my adopted parents.

Agriculture and taro is a way of life for all Polynesian races and SB958sd1 will put strain on our cultural beliefs. Energy should go to SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UH to talk about solutions for more taro.

I do not support SB958sd1 because the vocal minority does not speak for me. I love poi and grew up eating poi but now there is a shortage and it is too expensive. My family cannot afford to buy and eat poi everyday. If genetically engineered poi will get us more poi, cheaper poi so we can eat it more, let's do it!

I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Josephine Esteban Address: P.O. Box 1264 Kaunakakai Hi 96748 Phone Number: 808-553-5104

8085679426

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee.

My name is Josephine Esteban.

I'm 48 year old and was born in the Philippines. For more than 13 years I have been a US citizen and have been living on Molokai. I have been working in the cornfields the past 13 years and enjoy my line of work. It helps me to provide for family.

I feel that if this bill is passed, it will affect my job because stopping testing of crops will take away jobs; away from the people in that line of work. There will be fewer jobs for everyone in Hawaii.

Personally I tasted poi, and it's ok. But my concern is providing for what is important which are my family and their future in Hawaii.

The passing of this bill will affect our children, they will not have the opportunity to try work in my line of work and have the experience that I have gained working here.

Hove my job and I'm sure that taro growers feel the same!

To:8085866501

Jose Escobar Address: P.O. Box 1094 Kaunakakai Hi 96748 Email: jescobar36@yahoo.com

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Jose Escobar.

I'm part Hawaiian and am 39 years of age. I was born and raised here on the island of Molokai. I'm a father of 5 children. My family has been farming here on this island for some time now.

I feel that if taro dies, we won't have poi and luau leaves for our Lau 'Lau's to eat. I feel that we should do more research to prevent and strengthen our sustainability of our taro crops as well as other crops if something should happen.

I feel if the bill passes it will impact our island of Molokai, because we heavily rely on agriculture here. We as workers and families will suffer financially and economically by taking away our jobs that bio companies provide.

I feel right now that there is poi shortage in Hawaii I have friends that farm taro in Keanac, Maui, and they share about the poi demand nation-wide. I feel that if something would happen to make taro hard to get, that of course the cost of poi will increase.

I feel that if the taro shortage increases, our children won't have any opportunity to include in poi.

Jesus Rillon PO Box 235 Kualapuu, HI 96757

Phone Number: 808-567-6698

Email:

Position: Oppose

Date: 3/17/08

Rep. Clift Tsuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Jesus Rillon.—I was born and raised in the Philippines and migrated to Hawaii for a better life. I now live on the island of Molokai since 1971 and I have been a US citizen for past 30 years. I have two children and 6 grandchildren. I have worked in the agriculture business for 35 years. Agriculture is very important to me. I am a small business farmer as well who raised taro in the past. Currently my farm produces many varieties of fruits and vegetables to our local markets and for subsistence living.

I do not support SB 958hd1 because I feel this bill does not support agriculture and believe it will eventually impact our local economy and lifestyle in Hawaii. SB 958hd1 also would put a strain on the biotech companies or corn seed industries in Hawaii of which is the largest employers on the island of Molokai.

I eat poi and so does my family and if we do not help to protect this crop it will be devastating to a culture of which I have become accustomed to, love and appreciate and what I call is home "HAWAII". I believe more efforts should go to SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UH to talk about solutions for more taro.

Fred M Aki III Address: P.O. Box 126 Hoolehua Hi 96729

Phone Number: 808-639-2214

Email: ppl fredaki@hotmail.com

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Fred M Aki III.

I'm 24 yeas old, part Hawaiian. I was born and raised on the island of Kauai. My mother is Roxanne Arruda who was a teacher before she passed away, and my father is Fred M Aki Jr., one of the well known musicians on Kauai. My family and I have been catering for luaus for both visitors and islanders alike, and poi has been a staple food for our culture and an attraction to our visitor industry.

I feel that this bill doesn't support or solve any problem with our poi shortage, nor provide Hawaiians a way to preserve or grow more productive taro crops in Hawaii. The demand is extremely high as it is. I feel that stopping the testing, inhibits finding ways and options to help taro grow. We need research to find ways to use less time, use less water, and can meet the demand of poi. Then why are we even looking at this bill? This is just my opinion. It's not to offend anyone clse's' opinions or beliefs. I love and enjoy eating poi and it is becoming more and more costly. I would hate to see another part of our culture lost to the changes of our world from either natural or unnatural causes.

I am speaking from my life growing up on the island of Kauai, working and being surrounded by taro. Preventing the testing in Hawaii would not profit our taro growers. If something should ever happen to our taro crops and there is no one educated in finding solutions to protect our older bother (taro), then why wait until after something happens to start doing something about it. We all know that things out of our control do happen, but we can be prepared and knowledgeable and try to prevent them.

I do believe that passing this bill will affect bio companies in Hawaii as well other companies that serve or provide services for those companies. Every thing we do in life affects the people around us, there is always some thing going on. Leaders should come up with ways to increase our ways of farming, as well as our economy. As the world grows, changes, and learns, so should farms, friends, families, and people.

I grew up on Kauai, which has the largest taro growers on hand. It was still hard to get poi either because there wasn't enough or because crops did not grow good in the rainy season.

I feel that if something really bad should happen, for example a hurricane or diseases that kill more or varieties of taro, our taro future would be lost. We have lost many varieties of taro for many different reasons. Let us not lose more by not being pro- active in the preservation of taro and our cultural ways.

I feel that instead of passing the bill, we should be trying to share and educate our next generation of taro farmers in ways of keeping our food supplies maintained and even ways to improve our food supplies. I feel the effect of this bill if passed, which if in 5 years something should happen, there would be no one well educated enough to prevent the spread of what may happen. Like taro, we all need to dig in and plant our roots so we can stand strong, then spread our leaves wide and gather all that we need, to create a better world for the people that grow around us and the children that grow besides us.

In closing, the decisions we make don't affect only us but our future. We will never be able to go back in time but we can keep our past alive by sharing and learning from each other. Take the time to see what is going on. I thank you for your time.

Aloha Mai

Flora Antonio PO Box 1289 Kaunakakai, Hawaii 96748 Phone Number: (808) 553-5960

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Flora Antonio and I live on the island of Molokai. My family moved here in 2001. My family consists of my husband and two daughters. We were able to make this move because my sister-in-law who works for a corn company helped us. We moved in with her and we still all live together. In 2002 I also started working for the corn company. This company provides income for us all. Not only do we receive wages, but we are covered by a good medical plan as well as a retirement plan. If corn research was hampered by restrictions, our entire family would be at risk. Many other friends are in the same position.

Since arriving in Hawaii one of the foods we have learned to enjoy has been taro and poi. We would be very disappointed if disease or insects destroyed the taro here because of the lack of protection by genetic research. Taro might also be cheaper and more readily available because of this research.

Donald Maum PO Box 1071 Kaunakakai, 111 96748 (808) 658-0310

8085679426

March 17, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Position Oppose

Re SB 958hd1, March 19, 2008 Hearing

Dear Rep. Isuji and Members of the House Agriculture Committee:

My name is Donald Maum, President of the Molokar Farm Bureau, representing traditional, biotech and organic farmer members on Molokai. The Farm Bureau wishes to testify in <u>opposition</u> of the resolution to support Senate Bill 958 HD1, which will impose a ten-year moratorium on developing, testing, propagating, cultivating, growing and raising genetically-engineered (GE) taro in the State—Many of our farmer members do not support this for the following reasons:

Many members farm for seed corn companies on Molokai, which have been an integral part of the community for over 30 years, establishing themselves as one of the largest employers from the private sector. They are always looking at ways to outreach and build partnerships with the community. Regardless of philosophical differences, we have been able to co-exist collaboratively for many years on Molokai. The banning of any kind of agricultural research, including GF taro, will have an economic impact on corn seed companies that develop and grow GF crops on Molokai.

The DOH Director stated that the department has no evidence that genetically modified food crops are a danger to individuals and citizens of the state. This statement clarifies that the seed corn companies on Molokai would never knowingly conduct the kind of operations that would expose the community to any potential health and environmental tisk.

The University of Hawaii has voluntarily given up patents and, out of respect for Hawaiian cultural practices, will not work with GE Taro. Since they have already agreed not to work with GE taro, then there is no need to impose a law which could lead to the detriment of all agricultural research in the state of Hawaii.

Having seen first hand the damage caused to the will will trees in Hawaii by an introduced, non-native pest, it is not in the best interest of the people of Hawaii to stop research and development of GE crops, particularly taro. It only took four months for this pest to kill almost all of the will will trees in the state. The potential is real for this to also happen to other plants, including taro. In the event, heaven forbid, that a deadly disease or pest finds its way to the taro farms of Hawaii, do you really want your name on a bill that could realistically allow this to happen?

Genetic engineering saved the papaya industry in Hawaii and, in the event of the introduction of a pest to taro, could do the same for taro; a moratorium could potentially lead to ten years without taro, plus two to three more years of research it would take to find a way to combat the pest.

Again, the members of the Molokai Farm Bureau wish to testify in <u>opposition</u> of the resolution to support Senate Bill 958, or any bill relating to bauning GE agriculture in Dawaii.

Respectfully,

Donald G. Maum President, Molokai Farm Bureau Dante Reconsal PO Box 1584 Kaunakakai, HI 96748 Phone Number: 808-553-9994

8085679426

Position: Oppose

Date: 3/17/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Dante Reconsal. I have lived on the island of Molokai since 1993. My family has lived here since 1984. I was born in the Philippines and immigrated to Hawau for a better life. I have worked in agriculture for 10 years on Molokai and currently I have a vegetable garden for subsistence living. Agriculture is a way of life to my people.

I do not support SB 958sd1 I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. Therefore putting a 10 year moratorium on Taro could be devastating to our community, economy and island life style. Energy should go to SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UII to talk about solutions for more taro.

I do not support SB958sd1 because the vocal minority does not speak for me. I love to eat poi, however today there is poi shortage and it is expensive. My family cannot afford to eat poi all the time. If genetically engineered poi will get us more poi, cheaper poi so we can eat it more, let's do it!

Corazon C. Raguindin P.O. Box 922 Kaunakakai, III 96748 (808) 553-3464

Position: Oppose

March 16, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Representative Tsuji and Members of the House Agriculture Committee:

My name is Corazon C. Raguindin. I live on the island of Molokai and I have fived here since 1970. I was born in the Philippines and have been a US citizen for the past 32 years. I am a mother of three and a grandmother of eight. I have worked in the pineapple fields for ten years and currently work for a corn agriculture company for the past 19 years.

I do not support SB 958hd1 because I feel this bill does not support agriculture on Molokai, or anywhere else in the State of Hawaii. I believe this bill will eventually impact the existing biotechnology companies in Hawaii. On Molokai, the seed corn company is among the largest employer on island. If passed I believe this bill will stop the research that I work in and my future employment.

Consuelo Gorospe Address: P.O.Box 1289 Kaunakakai, HI 96748 Phone Number: 808-553-3848

Position: Oppose

3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Consuelo Gorospe.

I'm 60 years old. I was born in the Philippines and have been a U.S. citizen for 31 years. I've been working in corn agriculture for 31 years. I am the mother of 2 children and a grandmother of 5; all my children are now living here in Hawaii.

I feel that testing will help bring back the growing of taro, because now there is not very much taro due to diseases and natural causes.

I don't feel good about the passing of this bill, because it will affect the amount of taro in Hawaii and lower the amount of jobs if we don't maintain our food supplies or in other words taro.

I feel that preventing the testing of taro will soon lead to the stopping of all agriculture testing in Hawaii which will affect my job, and give me a harder time to provide for my family.

I enjoy having the ability to eat poi and I feel that my children's, children should be able to have the same ability.

Brian Haberstroh 298 Kaiwi St. (PO BOX 1402) Kaunakakai, HI 808-553-3613 Email:haber4(a)hawaiiantel.net

Position: Oppose

Date 3/17/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Brian Haberstroh. I live on the island of Molokai. My family has lived here since July 2004. I am involved in agriculture, and in fact, agriculture is the reason why I moved to Molokai. I work for Mycogen Seeds and I am proud of the work I do. My wife is a fifth grade teacher at Kualapuu School and I also have two boys enrolled in Kualapuu School.

I am very alarmed at the attempt to ban any GMO testing on taro for many reasons. The first reason is that if there would ever be some sort of insect or disease outbreak we need to have biotechnology as an available tool in our toolkit to stop this outbreak. We all know how fast the will will trees were destroyed, and biotechnology could help if something similar happened to taro. To enact a ban on GMO testing in taro is just too extreme and may actually be harmful for taro in the future.

I believe banning any GMO research on taro sets a bad precedent for our state, and could harm jobs on Molokai. I moved to Molokai to work with corn and my company provides good paying jobs which Molokai sorely needs! If this ban on GMO testing spills over into the seed corn industry, Molokai may loose many good jobs and many potential future jobs.

There are many extremely vocal people and groups in our state and they all scream loudly about saving taro, no GMO, no superferry, etc... but this very vocal minority doesn't speak for me or many of us on Molokai. These people and groups are in a wonderful position of opposing everything, but they never seem to care about jobs or the average person who may loose their job and NEVER can seem to come up with any viable alternatives for the jobs that could be lost.

In closing, I urge you not to support SB 958sd1. It is a bill that goes too far, the results it seeks to obtain can be achieved without a law being imposed. It limits options in case of a drastic pest outbreak, and it could spill over into other crops which would be bad for agriculture and bad for Molokai.

Thank you for the opportunity to testify.

Bingtian Wang Address: P.O.B ox 5 Hoolehua HI 96729

Phone Number: 808-658-0056

Email: bingtianw@hotmail.com

To: 8085866501

Position: Oppose

Date 3/14/08

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Bingtian Wang.

I grow up in China, and came to Hawaii for my master's study in 1995. My father and I were professors in Beijing. I've studied and worked in the UH Manoa in the project of transgenie papaya and corn breeding and I'm now presently working for Mycogen Seed as a biologist.

I known that taro here in Hawaii is a staple food, and I can relate taro with my area of expertise in corn and papaya. I feel as a biologist that Hawaii is leading research biotechnology providing year around full support to study ways to improve many type of crops.

Technically, I think the passing of this bill would start decreasing the research and education for studies of our native plants. If something should happen with taro then it will affect production and the economy of Hawaii.

Halting research may have a negative affect on my job as a biologist. The transgenic papaya project at UII of Manoa is another example. Under this project, one Ph.D, 3 masters, a technician, and a post-doctorate were hired and graduated. If this bill passes I feel that it will open up the possibility of affecting many other researches in Hawaii creating fewer jobs for biologists like myself.

I also don't like to see the limited supply of poi in stores. It not very pleasing to me!

In my point of view, we should not take the chance for our generation and future generations to not be able to learn and improve agriculture. I oppose this bill because we as researches are trying to help sustain agriculture for our future, and without this research how will we protect our future?

P.29

Benjamin Antonio PO Box 1289 Kaunakakai, Hawaii 96748 (808) 553-5960

8085679426

Position: Oppose

March 17, 2008

Rep. Clift Isun House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Benjamin Antonio. I moved here from the Philippines in 2001. I was able to make this move because the brothers and sisters that had already moved to Molokai were able to financially help me. They all work for a seed corn company. This is where their income is from and their jobs in agriculture are, and also how I was able to achieve the opportunity to move to the United States and improve my life. In 2002, I also got work with the same seed corn company. You can see how important having this company is for my whole family.

I feel afraid that if this bill was passed, it could also eventually affect my job and the jobs of my family.

Back in the Philippines I ate and enjoyed taro and I still eat it here. It is a staple in my diet. If it were lost due to disease or some natural disaster, it would affect my diet. I want to see research that allows the protection of this part of my diet and culture. Passing this bill would endanger the protection of taro in Hawaii. It would also endanger the income of fellow employees in agriculture and directly impact our taro farmers. The protection of taro is important to both the economy and culture of all Hawaii.

I do not support SB 958sd1 because the vocal minority does not speak for mc. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Barbara Caspillo PO Box 1218 Kaunakakai, Hawaii 96748 Phone Number: (808) 553-5249

Position: Oppose

March 14, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Barbara Caspillo and I am a resident of Kaunakakai, Molokai. I came to Hawaii in 1966 from the Philippines. I have worked in the cornfields since 1974, first with Funk Seeds International, then Ciba-Geigy, Cargill and finally Dow Agro.

Working in agriculture has been my sole source of income since I was widowed in 1979. I was able to raise my four children and send them to school. I can say that if not for the cornfields, I don't know what I would have done to survive as a breadwinner for my family.

I am now 66 years old and still working in the cornfields to supplement my pension.

Balbina Piros PO Box 1264 Kaunakakai, HI 96748 (808) 553-5104

Position: Oppose

March 14, 2008

Rep. Clift Tsuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Balbina Piros and I live on the island of Molokai. I've lived here since 1993 having moved from the Philippines. A year later I got a job with a seed corn company and have worked for them ever since. If I didn't have a job with the corn company, it would be very difficult to have an income to support myself. Agriculture and the seed company here provide employment for not only me but my sisters. Besides the importance of agriculture here in Hawaii, I have come to realize the cultural significance of taro. Culture and tradition are very important to Filipinos as well as Hawaiians.

P.32

Albert Antonio PO Box 370 Kaunakakai, Hawaii 96748 (808) 553-5275

8085679426

Position: Oppose

March 17, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Albert Antonio. I live on the island of Molokai having moved here in 1983 from the Philippines. My family was farmers there. We were able to move to the U.S. because previous family members came and got jobs in the agricultural field in Hawaii. They saved and helped all of us. Prior to my job now, I worked in irrigation, and was also a farm equipment driver. I have worked at a seed corn company since 1997. You can see that the agricultural field in Hawaii is very important to me. It has provided jobs and income for all my family members.

I am totally opposed to this bill. Being in agriculture, I feel crops can always use improvement through research. Protecting and improving crops, all crops, not just taro, provides food as well as continued employment for the people of Hawaii as well as continuing cultural food preferences.

Taro, corn, and rice were staples in the Philippines. Sometimes there were shortages just as there is a tare shortage here now. I think allowing research provides for more and cheaper growing of all agricultural crops. Taro is very expensive now and I'm limited to the times I can buy it because of the price.

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

FAX: (800) 535-3859

TO:

Honorable Clift Tsuji, Chair House Agriculture Committee

FROM:

Michael J. Molina Council Member

SUBJECT: TESTIMONY IN SUPPORT OF SB958, SD1, HD1 RELATING TO **GENETICALLY MODIFIED ORGANISMS**

The purpose of this testimony is to urge you to pass SB958 requesting a 10-YR moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State of Hawaii.

The Maui County Council will not have the opportunity to take a formal position on this measure prior to March 19th, the scheduled hearing date for SB958; however, the Committee of Public Works and Facilities (PWF) did pass a resolution in support of SB958 out of chambers on March 12th with full support. Therefore, I am providing this testimony in my capacity as an individual member of the Maui County Council.

I support SB958 for the following reasons:

- 1. Taro is not like any other crop. It is a culturally and spiritually sacred plant to the kanaka maoli, Hawaii's indigenous people, and is an integral part of the Native Hawaiian culture. Specifically, taro represents Haloa, the elder brother of man, and genetically altering the structure of the taro plant represents a defilement of the genealogical link between the two. It is disrespectful of the cultural foundation taro holds for Native Hawaiians and their religious practices.
- 2. Farmers, Hawaiian groups and private individuals have expressed their concerns that genetically modified taro will destroy the genetic strains of native taro cultivars unique to our islands, compromise the critical role taro plays as a hypoallergenic food for children and the elderly afflicted with severe allergies or digestive diseases, and will negatively impact taro farmers and poi millers economically.
- 3. A 10-year moratorium on testing, propagating, cultivating and growing genetically modified taro in Hawaii should provide sufficient time to address the numerous concerns raised by genetically modified taro experiments, including possible health, environmental, economic and cultural impacts.

For the foregoing reasons, I support SB958 and ask that the legislature and the House Agriculture Committee also support this bill.

Council Chair G Riki Hokama

Vice-Chair Danny A. Mateo

Council Members Michelle Anderson Gladys C. Baisa Jo Anne Johnson Bill Kauakea Medeiros Michael J. Molina Joseph Pontanilla Michael P. Victorino



COUNTY COUNCIL

COUNTY OF MAUI 200 S. HIGH STREET WAILUKU, MAUI, HAWAII 96793

www.mauicounty.gov/courcil

March 14, 2008

MEMO TO:

Honorable Clift Tsuji, Chair

House Agriculture Committee

FROM:

Michael P. Victorino

Council Member

SUBJECT:

TESTIMONY IN SUPPORT OF SB958, SD1, HD1, RELATING TO GENETICALLY

MODIFIED ORGANISMS

The purpose of this testimony is to recognize the importance of kalo, or taro, in the heritage of the State by creating a ten-year moratorium on developing, testing, propagating, cultivating, raising and growing of genetically modified taro in Hawaii. I urge you to schedule a public hearing on this important measure at your earliest opportunity.

The Maui County Council's Public Works and Facilities Committee did pass a resolution in support of SB958 on March 12th with full support. However, the full Council will not have the opportunity to take a formal position on this matter prior to the hearing date of March 19th.

I support SB958 for the following reasons:

- Taro is an integral part of Hawaii's indigenous people and is a spiritually sacred plant in 1. Hawaiian culture.
- 2. Hawaiian groups, farmers and private individuals have expressed their concerns that genetically modified taro will destroy the genetic strains of native taro cultivars unique to our islands.
- A ten-year moratorium on testing, propagating, cultivating and growing genetically 3. modified taro in Hawaii would provide sufficient time to address the numerous concerns raised by genetically modified taro experiments, including possible health, environmental, economic and cultural impacts.

I wholeheartedly support SB958 for the foregoing reasons and ask that the House Agriculture Committee schedule a hearing as soon as possible.

MPV:kyz

March 18, 2008

Testimony of Wayne O. Tanji Namolokama Farm, Inc. Taro Farmer, Hanalei

House Committee on Agriculture Rep. Clift Tsuji, Chair Rep. Tom Brower, Vice Chair Wed. March 19, 2008, 9:00AM House Conference Room State Capitol Auditorium

Opposition of SB 958 Relating to Taro

Dear Members of the House Committee on Agriculture:

My name is Wayne Tanji. I farm 1.9 acres of land in Hanalei which is leased from Princeville Corporation. I have been farming taro on this property since 1987. I harvest between 14,400 and 32,000 pounds of taro annually, depending upon the weather, apple snail infestation, Phytophthora (different species of which cause both pocket rot and leaf blight), Pythium (soft rot), and other taro diseases and pests. As you can imagine, taro farming is not an easy task.

The purpose of my letter is to ask you <u>NOT</u> to support SB 958, which severely limits research on taro.

The reason for my opposition to Senate Bill 958 is that research and development are necessary to assist taro growers in keeping up with introduced, evolving and mutating diseases and pests.

SB 968 proposes a ten-year moratorium on taro research and development. Can you imagine if a similar moratorium were to placed on cancer, heart disease and diabetes research, as well as on other ongoing research? It would spell certain doom for sufferers of those diseases! The moratorium on taro research and development would similarly mark the beginning of the end of the taro industry as we know it today. I cannot imagine that anyone would want that outcome.

Consequently, I again urge and implore you <u>NOT</u> to support SB958, and in fact, voice your opposition to it and its purpose. Support the taro industry with the necessary science and technology required to make us more viable and competitive, instead of turning it into a political football.

Thanking you for your consideration of my request.

Hobey Beck

Position: Oppose

Date: March 18, 2008

Rep. Clift Teuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: \$B 958hd1, March 19, 2008 Hearing

Chair Tsuji and Members of the House Agriculture Committee:

I am Hobey Beck of Hanalei. I am a Kauai taro grower and owner of Waikoko Farms, which began in 1948. I have been a taro farmer since 1992, farming 25 acres of 9 varieties of taro and 5 acres of cut flowers. Seven of the taro varieties are the result of the University of Hawaii's taro breeding program. I am also the co-founder of Hanalei Poi Factory, which began in 1998. However, I sold my interests due to taro supply issues and decided to concentrate on taro farming.

I oppose the moratorium on taro research because it sends a wrong message from taro growers. Most of the taro growers are in support of research and development, and like me, many growers receive their taro varieties from the University of Hawaii.

There are about 30-50 taro growers, and many of them are not full-time because it is difficult to make a living from taro due to the challenges of water, land and labor, not to mention the diseases and pests. I lose 20-40% of my taro crop annually to apple snails and another 10-15% to leaf blight. I've put in \$15,000 of fencing to keep wild pigs from eating my taro.

Please do not support SB 958hd1. Thank you for the opportunity to testify.

From: Twyla Cloyd [tecloyd@hotmail.com]

Sent: Tuesday, March 18, 2008 2:11 PM

To: sb958writtenonlytaro

Cc: Adam T. Kahualaulani Mick; Sis Naehu

Subject: kalo bill -10 yr. moratorium on Genetic Moidification of Taro

To whom it may concern:

It seems like an extremely dangerous idea to allow taro to be included in the GMO push. People all over the world are watching to see how the House of Representatives and the Senate of Hawaii respond to another possible tendency to ignore Hawaii's unique culture.

I am firmly behind the SB958 for <u>ALL</u> varieties of taro/kalo in Hawaii. This bill must protect <u>ALL</u> varieties of kalo, not just the Hawaiian varieties. Genetic modification of any variety of the taro plant species is a danger to the entire species and a danger to the purity of the Hawaiian varieties.

Please take a stand to protect the taro in its present forms. Allow the plant of the Hawaiian people that is part of their living culture and ancient history, native nutrition and ecological tradition be saved from those not interested in respecting the values of the Hawaiians and their culture.

Sincerely,

Twyla Cloyd

From:

Gay Barfield [okika@aloha.net]

Sent:

Tuesday, March 18, 2008 2:44 PM

To:

sb958writtenonlytaro

Subject: Support of Moratorium on GMO

Aloha,

Please consider putting in place the 10 year moratorium on GMO on Taro for further studies of possible unknown negative effects on health and well being.

I was deeply moved to hear a young father give testimony on the Big Island that Taro is the only item left to which infants and children are not allergic in terms of wheat's, other grains, etc.

What a tragedy it would be to remove that safety valve for health of all people, any age, in the name of technological fixes that end up being technological toxins.

Please take the time to do the needed studies, and to honor as well the deep relationship that the Hawaiian people have to taro.

With respect,

Gay Leah Barfield, Ph.D., Lic. MFT

From: Sent: harry ako [hako@hawaii.edu] Tuesday, March 18, 2008 1:33 PM

To:

sb958writtenonlytaro

Subject:

taro bill

As a native Hawaiian I am depressed by the ignorance shown by the Native Hawaiian community. It is true that the Ako family has been involved in education. This may be why I am appalled by the conversation going on. It is based on ignorance.

I disagree with not doing genetic engineering on taro. Not to do so condemns taro to extinction from a disease that may come in. Partially buying into Hawaiian creation mythology, if taro were a relative, I would use any means necessary to save taro from extinction. If a relative goes to the hospital, I wouldn't ask whether the drugs to be used are natural or man made. Asking this question for taro pathology condemns taro to death.

I have an affection for taro. From my Hawaiian side, we started our lives running a taro patch on Kauai. From my pake side, my mom's family owned a taro patch in Punaluu and their family's first job was with the Honolulu Poi Company in Kalihi. I have worked on taro all around the state. This is why I think it is such a shame to condemn taro to extinction.

Harry Ako, Professor and Chairman of the Department of Molecular Biosciences and Bioengineering speaking as an individual and not in an official capacity.

From: Adam T. Kahualaulani Mick [kahualaulani2@yahoo.com]

Sent: Tuesday, March 18, 2008 1:44 PM

To: sb958writtenonlytaro

Subject: TESTIMONY IN SUPPORT OF SB958 - 10 Year Moratorium on the Genetic Modification of Taro

COMMITTEE ON AGRICULTURE

Rep. Clift Tsuji, Chair Rep. Tom Brower, Vice Chair

Rep. Lyla B. Berg,

Rep. Glenn Wakai

Ph.D.

Rep. Jerry L. Chang Rep. Fave P. Hanohano Rep. Ryan I. Yamane Rep. Kyle T. Yamashita

Rep. Robert N. Herkes

Rep. Corinne W.L.

Ching

Rep. Joey Manahan

Rep. Colleen Rose

Meyer

NOTICE OF HEARING

DATE:

Wednesday, March 19, 2008

TIME:

9:00 a.m.

PLACE:

State Capitol Auditorium

415 South Beretania Street

TESTIMONY IN SUPPORT OF SB958 - 10 Year Moratorium on the Genetic Modification of Taro

Aloha Chair Tsuji, Vice Chair Bower, and members of the committee,

I support the 10 year moratorium on all forms of genetic modification and patenting of the taro (kalo) plant species. Genetically modifying any variety of taro is culturally disrespectful and also poses irreversible and irresponsible dangers to our food, health, environment and economy.

We must support sustainable farming and <u>precautionary</u> scientific research that does not expose the taro plant species to the disrespect and risks of genetic engineering. I ask that our elected officials actively support farmers/scientists in publicly accepted and safely advanced methods of protecting taro from land & water issues and invasive pests & diseases. Yes there are many kinds of threats to kalo (such as pests and diseases), but GE/GMO is NOT the answer is in returning to the ancient methods of natural farming and ecological stewardship!

Despite claims of people opposing this bill, no one has "hijacked" the Hawaiian culture to pursue a larger agenda against GMOs in general. Many of those who make this claim are employees of GMO companies (such as GMO corn seed companies on Molokai) who fear for their jobs. But this bill is specifically focused on and limited to kalo, due to the cultural importance of kalo to the Hawaiian people. Their jobs are not at risk. Rather, kalo is at risk – from genetic engineering.

Taro is an incomparably sacred and valuable part of our island community. I join mahi'ai (farmers) of Hawai'i in calling on all legislators to protect Hawaii's unique culture and resources by voting YES for the 10 year moratorium on the genetic modification and patenting of taro.

Me ke aloha 'aina a me ke aloha, Adam T. Kahualaulani Mick 1132 Ilikala Pl. Kailua, HI 96734-1854 Be a better friend, newshound, and know-it-all with Yahoo! Mobile. Try it now.

From: Markus Faigle [markus.faigle@gmail.com]

Sent: Tuesday, March 18, 2008 11:49 AM

To: sb958writtenonlytaro

Subject: Testimony in Support of SB958

Emailed to: SB958writtenonlytaro@capitol.hawaii.gov

TO: AGR: AGRICULTURE COMMITTEE

Rep. Clift Tsuji, Chair Rep. Tom Brower, Vice Chair

Markus Faigle POB 62223 Honolulu HI 96839 Markus.faigle@gmail.com

Date & Time of Hearing: March 19, 2008, 9 am

Support for SB958

Aloha Legislators,

I am writing to testify in favor of a 10-year moratorium on the genetic modification and patenting of kalo.

Having lived in these islands for over a decade I have been involved in taro growing since we moved here. I have great respect for the significance of kalo for Hawaiian culture. I had the privilege to witness many children, youth and adults to reconnect to their land by working in lo'i across the islands, and learn a great deal not just about growing food, but also about the importance of taro as the core of Hawaiian cultural traditions.

All the taro farmers I personally know I have spoken to, are in support of a 10 year moratorium. Some of them have strong cultural reasons, some scientific concerns about cross-pollinating plants in the laboratory setting or genetic modification. Patenting a plant created in a laboratory setting nobody I know wants to grow in the first place, is not compatible with the cultural tradition of sharing huli freely with anybody who needs it, regardless if they are Hawaiian or not.

I share many of their concerns and see great benefit in a ten-year moratorium.

I urge you to please listen to the kalo farmers in Hawaii who work the land every day and pass SB 958.

Best regards,

Markus Faigle

From: Sent: John Cho [john_cho@yahoo.com] Tuesday, March 18, 2008 10:43 AM

To:

sb958writtenonlytaro

Subject:

taro

TO WHOM IT MAY CONCERN

I am writing in to oppose SB958.

I am a scientist that has been working on the development of pest resistant taro using traditional cross pollination methods. I have conducted this research since 1997 and currently working with many commercial taro growers throughout the state of Hawaii. Because taro pest problems are worldwide, I have also been asked and am assisting other countries where taro pests are causing production problems. These countries include Guam, Puerto Rico, Samoa, Dominican Republic, Thailand, Vietnam, Australia, Palau, and Fiji.

I do not support SB958 because the ban is not confined to only Hawaiian taros but to all Colocasia esculenta taros.

Taro did not originate in Hawaii but its genetic home is outside of Hawaii and located in the area that includes India through Southeast Asia. Taro is thought to have evolve in that region over 50,000 years ago and there is scientific evidence that taro was being used by the peoples in the area of the Solomon islands about 28,000 BC. In fact, taro did not come to Hawaii until the first Polynesians sailed to Hawaii in what has been dated to about 900 AD and when taro came with those early voyagers, only a few varieties of taro were introduced.

I have written a paper that give details about the origins, movement, and development of new pest resistant commercial taros. Please refer to my publication that is available for free on the following website:

http://www.ctahr.hawaii.edu/oc/freepubs/pdf/SA-1.pdf

Respectfully,

John J. Cho, Ph.D. Plant Pathologist University of Hawaii POB 269 [424 Mauna Place] Kula, HI 96790 808 878-1213 fax: 808 878-6804 choj@hawaii.edu

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From:

laurenceland@aol.com

Sent:

Tuesday, March 18, 2008 11:00 AM

To:

sb958writtenonlytaro

Subject: Fwd: on behalf of Rep. Clift Tsuji

----Original Message----

From: Lora Lapenia lapenia@capitol.hawaii.gov

To: laurenceland@aol.com Sent: Tue, 18 Mar 2008 7:00 am Subject: on behalf of Rep. Clift Tsuji

Aloha and thank you for your recent correspondence on S.B. 958.

Please follow the instructions at the end of this Hearing Notice Link to submit official testimony to the House Agriculture Committee for Wednesday's hearing,

http://capitol.hawaii.gov/session2008/hearingnotices/agr_03-19-08_.htm

If you choose not to submit official testimony, please accept my thanks on the Representative's behalf for taking the time to communicate with him.

Lora Lapenia, Legislative Office Manager Office of Representative Clift Tsuji 3rd District: South Hilo, Panaewa, Puna, Keaau, Kurtistown Chair, House Committee on Agriculture State Capitol, Room 403 Phone: 808.586.8480 or toll free 974.4000 ext. 68480

Fax: 808.586.8484

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NOTE: For instructions on the 2008 procedures for submitting testimony, please refer to the bottom of the Public Hearing Notice for the specific Bill(s) of interest. Communications received by other means are not accepted as official testimony.

From: laurenceland@aol.com [mailto:laurenceland@aol.com]

Sent: Monday, March 17, 2008 9:48 PM

To: Rep. Clifton K. Tsuji **Subject:** Vote No to SB958

Date:

March 17, 2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Agriculture Committee

From:

Laurence Hayes

Waialua, Oahu, Hawaii

808-622-6525

Hearing:

Wednesday, March 19, 2008, 9:00 a.m., Conference Room 325

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

Dear Honorable Chair Tsuji and Vice-Chair Brower,

3/18/2008

If our state wanted to preserve the taro plant for future generations, native Hawaiians and our legislators should NOT support SB 958.

Just look at what's happened to taro in other parts of the world and reality will make itself evident. In Samoa and the Solomon Islands, the taro leaf blight and alomae virus have virtually wiped out commercial taro production. It's just a matter to time that Hawaiian taro will also be at risk. A hundred years ago, there were approximately 400 varieties of Hawaiian taro. Today, there are only about 60 left. Whether nature intended this or not, the loss of taro is due to various reasons including invasive pests and devastating diseases, NOT because of research.

It seems ironic to ban taro research when one day this will be the only tool we have to save this plant species. Instead of placing bans on technology, we should be encouraging more research not just on taro but other fledging plant species in Hawaii to ensure their survival.

Please vote	"no"	on SB958,	and instead,	find	positive	ways to	support	our agricul	tural inc	lustry.	, including	the taro	growers

Thank you.	
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Supercharge your AIM. Get the <u>AIM toolbar</u> for your browser.

From:

Paul Bienfang [pfang@hawaii.rr.com]

Sent:

Tuesday, March 18, 2008 6:43 AM

To:

sb958writtenonlytaro

Subject: SB958WrittenOnlyTaro@

Dear Sirs/Madams:

Respectfully, I deeply oppose this bill.

It has been forwarded without prudent involvement and communication with stakeholders, and it sends a devastating message regarding the State's capability and willingness to innovate in the field of biotechnology.

Paul Bienfang, Ph.D.

President

Analytical Services Inc

P. O. Box 62311

Honolulu, HI 96839

808-358-0414

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From: Mary Lacques [hokuokekai50@msn.com]

Sent: Tuesday, March 18, 2008 4:43 AM

To: sb958writtenonlytaro

Subject: Testimony in strong support of SB958

Re: SB958-Ten year moratorium on genetic modification of taro

From: Mary Lacques P.O. Box 14 Hale'iwa HI 96712

To: Rep. Clift Tsuji, Chair

Rep. Tom Brower, Vice-Chair Committee on Agriculture

Date: Wednesday March 19, 2008 9:00 a.m. State Capitol auditorium

Subject: Strong support of SB 958, relating to a ten year moratorium on testing, propagating, cultivating, growing, and raising of genetically engineered taro.

I feel a ten year moratorium on any growing of genetically engineered taro is vital to a sustainable Hawai'i because no public health or environmental studies exist that can predict the effects this technology is having on our aina and its inhabitants. We cannot assume that genetically engineered taro is safe until proven so. This is, of course, known as the Precautionary Principle: "When an activity raises threats of harm to human health or environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." We cannot risk: the loss of any more biodiversity throughout our island ecosystems, the loss of the genetic integrity of taro, the contamination of Hawaiian and other taro varieties.

As the world watched the University of Hawaii abandon its patents on Hawaiian Taro, the international community is again focusing attention on the future of Hawai'i, which has the distinction of being the world's center for experimentation of this radical, untested, and for the most part, unregulated technology.

Culturally speaking, we must respect the spiritual beliefs of Native Hawaiians, and leave the sacred ancestral roots of an indigenous people intact. The basic concepts of genetic manipulation of life forms is contrary to the cultural values of aloha 'aina. Hawaiian farmers have maintained the largest number of taro varieties for over 1200 years. A clean, abundant water supply is what our farmers need to perpetuate this sacred and vital food supply.

As I am sure you are aware, taro is a hypoallergenic food. There are many testimonials stating that taro has kept people at risk, alive and healthy. With 25% of our population showing some kind of digestive problem, the potential for taro to become an allergen-free substitute for rice and wheat in our food staples is tremendous. Genetically modified taro could destroy these valuable hypoallergenic properties. I urge you to be a part of the solution to preserve Hawaii's taro industry by joining with our neighbor island County Council resolutions and pass SB958. At this time I also urge you to support research for sustainable agriculture that can assist the statewide hui of hundreds of taro growers.

Respectfully submitted by, Mary Lacques P.O. Box 14 Hale'iwa HI 96712

From: arnold hara [amhara@hawaiiantel.net]

Sent: Monday, March 17, 2008 9:45 PM

To: sb958writtenonlytaro
Cc: Rep. Clifton K. Tsuji

Subject: Written Testimony for SB958 SD1 HD1 House Committee on Agriculture, 3/19/08, 9:00 am

Personal Testimony Presented before the House Committee on Agriculture

Wednesday, March 19, 2008 9:00 AM

By Arnold H. Hara

SB 958 SD1 HD1 RELATING TO GENETICALLY MODIFIED ORGANISMS

Chair Clifton Tsuji, Vice Chair Tom Brower and Members of the Committee:

My name is Dr. Arnold H. Hara and I am a Full Professor, Entomologist and Extension Specialist with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR) for over 25 years and born and raised in Hilo, Hawaii. I am pleased to provide personal testimony on **SB 958**.

This testimony does not represent the position of the University of Hawai'i or CTAHR.

Hawai'i, is by far the worst-case example of alien species invasion in the United States, and possibly the entire world. Once an invasive species is discovered in Hawaii, eradication is almost impossible. Each year for the past 65 years, Hawaii has received an average of 15 to 20 new alien mollusks, insects and other arthropod species. This amounts to over 1000 invasive species, some of which have seriously affected KALO (Colocasia esculenta), including the apple snail, taro root aphid, Chinese rose beetle, taro planthopper, melon aphid, spider mites, taro tarsonemid mite, in addition to devastating taro diseases including the root knot nematode, *Pythium* "soft" rot, Taro leaf blight, Taro pocket rot, and Hard rot ("guava seed").

Hawaiian taro will also be seriously affected by other insect pests and diseases not yet established in Hawaii, including the Taro Beetle, the Alomae/Bobone Virus Disease Complex, Dasheen Mosaic Virus Disease (DMV), Southern Blight, Taro Hornworm/Taro Hawk moth. In addition, other pests and diseases that occur on plants related to taro in the plant family, Araceae, will also seriously devastate taro in Hawaii.

Taro will be fatally attacked by invasive pests and diseases that will drive Hawaiian taro to extinction. It is not a matter of if these invasive species will establish in Hawaii, the question is when it will establish in Hawaii. Research in genetic engineering is an effective and environmentally acceptable tool in preventing the extinction of taro varieties and other agricultural, native ornamental and landscape plants in Hawaii.

There are no other environmentally acceptable tools to prevent the extinction of taro varieties in Hawaii. Without research in GMO, I predict that taro varieties, including Hawaiian taro, will be extinct within our lifetime due to serious exotic, alien, invasive pests and diseases.

I very strongly urge the committee not to pass SB 958 or it will be Hawaii without KALO. Thank you very much for this opportunity to testify

From: Luly Unemori [luly.unemori2@hawaiiantel.net]

Sent: Monday, March 17, 2008 7:19 PM

To: sb958writtenonlytaro

Subject: Please do not pass SB958 SD1 HD1

Dear Rep. Tsuji and members of the Agriculture Committee, State House of Representatives,

I am writing to ask that you please NOT pass SB958 SD1 HD1, the bill that would place a 10-year moratorium on genetic modification research on taro.

I'm originally from the Big Island and grew up surrounded by ag. Back then, it was sugar cane, macadamia nuts and anthuriums. I have family members and friends who were, or still are, in the ag industry, in pineapple, sugar, seeds, flowers and vegetables. Farmers need good land, labor, water, favorable weather, customers, and reliable and cost-effective transportation in order to survive. They also need research, to help protect their crops whenever another pest or disease comes into Hawaii.

Periodically, I've received mass e-mails from an activist organization called Hawaii SEED, pushing hard for this moratorium. Their primary interest is very clear: to get this bill passed because it's an important part of their anti-GMO agenda. I hear far more about this taro issue from them than I do from my friends who are farmers and/or native Hawaiians, and I believe this issue is being driven more by anti-GMO activists than anyone else.

SB958 is an anti-ag bill, and should not be passed. Thank you very much.

Sincerely, Luly Unemori Wailuku, Maui

From: Patrick DacayananJr [h9padaca@ksbe.edu]

Sent: Monday, March 17, 2008 9:26 PM

To: sb958writtenonlytaro

Hi my name is Patrick Dacayanan Jr. I am currently an 11th grade student at Kamehameha Schools Hawai'i in Kea'au on the Big Island. As one of Hawaiian descent and of Hawai'i residence, this topic has attracted me to have a voice in this decision making process, and state my position of objecting to genetically modifying taro.

People across Hawai'i are trying hard to get their own personal voice heard by any means possible to be that difference, but what difference would it make, when the most greatly affected generation of us all, are not even aware of this controversy and how it affects them. As a Hawaiian teenager in high school, I've found that this debated decision should be influenced by citizens like me above all the others, no matter their statures in the local society. A decision which will have a long-term affect, should be influenced by the youngest generation capable of understanding this concept to its greatest extent, and so here I am to give that opinion or knowledge based conclusion.

As a student of a Hawaiian preference school, I have received a thorough education on the background of our culture and it's growth or downfalls throughout Hawaiian history. The subject at hand known as kalo, taro, colocasia esculenta, or the cultural connected name of Haloa, has been named a responsibility of the Hawaiian people, making it our objective to keep Haloa thriving. Haloa, in Hawaiian belief, is known to be our older brother, both of us, the offspring of Ho'ohokukalani (star mother) and Wakea (sky father). So us of Hawaiian descent feel a connection above all others in reference to the view of others seeing this as just an endangered plant. As brothers in this Hawaiian viewed society, the Hawaiian people, similar to Haloa, have been pushed to the test of survival throughout the many generations, making adaptation key through these such changes. Though practices were different in the ancient Hawai'i, the living conditions were suitable and reasonable for the thriving of Haloa, but as the conditions changed through immigration and settlers, Haloa, as stated through Hawaiian belief, needs that help from its brother. As its brother, I've found the urge to lend that hand to my brother and do what needs to be done to allow it to push alongside the rest of the Hawaiian society in this new place of Hawai'i. Making that connection to Haloa, Hawaiians have been suppressed of their cultural through the years, and forced to claim a new, but now a hundred years later, all the efforts are being made to recover what has been lost, and through the minds of all Hawaiians, we regret ever blending into the western society, and consistently tell ourselves to never make that mistake again. So here's that "hanahou" of the events which haunts us to this very day, our culture is being forced or reshaped, to blend into the new, or to thrive in this outside set conditions. Are we going to let our culture leave us again? Many of us say that without the westerners taking Hawai'i by force, Hawaiians would persist as a race through the many years to come. We've said that if the Queen had taken a chance with her people, and went against these westerners, we would have had that chance to persist as "Hawai'i the Nation." As a Hawaiian with a voice, I say leave Haloa to the Hawaiians. Let us take what's left of our culture, and thrive as we would over a hundred years ago. Give us that chance to keep our brother pure, something we gave into many years ago. With the genetically mutating of Haloa, he becomes known as kalo, nothing more, and nothing less, just as Hawaiians became just another indigenous race on the list of "sad stories." Whether Haloa persists with our efforts, or dies at our hands, it would be at the hands of those who were responsible for it, rather than the hands of those who would just reach out for the nearest similar species. I could go on, and give as much information as that which could be found on wikipedia.com, but information and statistics makes no difference to me. Numbers, statistics, and graphs can show the number of times Hawaiians have lost pieces of its culture, but can never measure a Hawaiian's connections to its culture, making all the data in the world, from my belief, to be useless. All that matters is the distance people are willing to go to keep what is left of their cultural remains, give us that chance, because for you it won't make a greater impact than making the front page of the Honolulu Advertiser, but for us Hawaiians, it means a last hope. Thank You.

From: RATHJE, WESTON [AG/2004] [weston.rathje@monsanto.com]

Sent: Monday, March 17, 2008 5:28 PM

To: sb958writtenonlytaro Subject: Opposition to SB958

Date: March 17, 2008

To: Representative Clift Tsuji, Chair Representative Tom Brower, Vice-Chair House Committee on Agriculture

From: Weston Rathje

Kaunakakai, Molokai

808-336-0467

Hearing: Wednesday, March 19, 2008, 9:00 a.m.

Re: Opposition to SB958, Relating to Genetically Modified Organisms

Dear Honorable Chair Tsuji and Vice-Chair Brower,

I am writing to ask that you oppose SB958 and give your support instead to SB2915.

All SB958 does is put a stop to research at a time when taro growers need it the most to fight apple snails and other problems.

SB2915 would create a taro security and purity task force. It calls for discussion among taro growers, Native Hawaiian groups, farmers and other stakeholders. It supports finding solutions to pest problems without slamming the door on genetic engineering. The Kauai Taro Growers Association has come out against SB958 and in favor of SB2915.

Please vote "no" on SB958, and instead, find positive ways to support our agricultural industry, including the taro growers.

Thank you very much for your consideration.

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From: HC 'Skip' Bittenbender [hcbitt@hawaii.rr.com]

Sent: Tuesday, March 18, 2008 6:46 AM

To: sb958writtenonlytaro

March 18, 2008

TO: Committee on Agriculture

FROM: Harry Bittenbender

REGARDING: Testimony Against Bill SB 958 SD1 HD1 for Agriculture Committee hearing Wednesday 3/19/08

Honorable Agriculture Committee Chair Clift Tsuji and Committee Members,

I oppose SB 958 – 10 yr moratorium against genetic engineering research on taro.

As a scientist and a citizen I disagree that a Hawaiian cultural claim of ancestry from taro should prevent breeding, genetic engineering, or any scientific study of taro in Hawaii.

If our legislature bans research on taro because taro is sacred to Hawaiians, then are we not making Hawaiian beliefs the law of the land?

Our country has experienced another anti-science debate regarding Christian creationism vs evolution. Creationism was found to be religious-based not science-based. The justification for SB958 is Hawaiian creationism.

If people wish to make taro sacred that's their right, the United States protects freedom of religion. But for the state of Hawaii to impose restrictions on the work and business of its citizens in the name of religious beliefs is probably unconstitutional.

Lastly all taro varieties in Hawaii are under severe stress from pests and diseases. SB958 prohibits the use of modern science to save this economically and culturally important crop; how can this be acceptable?

I urge you to vote against SB 958 now and in whatever forms it takes in the future.

Thank you for this opportunity to share my concern.

Harry C. Bittenbender

2377 St. Louis Drive

Honolulu, HI 96816

TESTIMONY ON SB 958, SD1, HD1 HOUSE AGRICULTURAL COMMITTEE

CHAIRPERSON: Representative Clift Tsuji

BILL NO: SB 958, SD1, HD1

TITLE: Banning Taro Research with Genetically Modified Organisms

HEARING DATE & TIME: Wednesday, March 19, 2008, 9:00

HEARING LOCATION: State Capital Auditorium

NUMBER OF COPIES REQUIRED: 30

Chairman Tsiji and members of the committee:

I am a concerned citizen, and an advocate for sound science and a supporter of the Hawaiian agricultural industry.

I am testifying in opposition to this bill.

Installing a 10 year ban on genetically modified taro research is like banning the use of scientific technology. There is no scientific justification for such a ban. Over the years, taro diseases and pests are increasingly becoming more difficult to control, thus decreasing the number of taro varieties available and increasing the taro farmers cost to prevent plant diseases from destroying his crop. Without genetic research the papaya and anthurium and orchid industry may all have been destroyed.

Local organizations are being exploited by outside influences to support this research ban in order that these outsiders can promote their anti-GMO agenda. This is a well-funded effort from certain local, and many national and global organizations that do not support agriculture biotechnology in Hawaii or any other part of the world. They are scaring people into to believing genetic engineering has detrimental effects.

Without continued taro research, including the option of using genetic engineered to establish disease resistant taro varieties, there will be no resistant varieties in the research pipeline to protect the industry. Current UH experiments on disease resistance to Chinese taro have taken six years to come to fruition.

With such a ban in place, we could assume that the UH neither could nor begin any biotechnology research to solve a disease or pest problem until after the ban was lifted. All segments of scientific research of taro disease and pest control should be continued and none discontinued based on fear and innuendo. If research is halted, and diseases begin to destroy the taro, people won't remember this. All they can see is who to blame. They'll blame the legislature and UH. By then it maybe too late. It may take years to get research facilities up again and more so researchers like Susan Miyasaka would have left from disillusionment.

There are over 200 million acres of genetic engineered crops planted annually in the world today, and no harm as come of it. There is more government oversight than we get on most prescription drugs we might be taking.

All kinds of taro research is needed to preserve the future of taro farming in Hawaii, and no part of any scientific research program should be interfered with that offers potential benefits to Hawaii.

I strongly urge the committee to hold this bill and not pass it out of committee. Thank you for the opportunity to offer testimony.

Dr. Charles Sugiyama Hilo, Hawaii 808-934-8800

SB 958, Relating to Genetically Modified Organisms - Taro House Agriculture Committee Wed., March 19, 2008 Auditorium 9:00 a.m.

Position: Oppose

Representative Tsuji and members of the House Agriculture Committee:

Aloha, my name is Alika Napier and I am a resident of Waipahu on the island of Oahu for the past 35 years. I am a Native Hawaiian born and raised on the island under the traditions and values taught to me by my Kupuna Wahine; a kanaka maole. I continually strive to perpetuate those honored Hawaiian values by educating my children on the equivalent principles that would enable them to be effective contributors to our society. My family and I have been actively involved in Hawaii's agriculture industry for several generations.

I respect the importance of honoring not only the Hawaiian culture's spiritual connection to kalo, but also the significant role that taro plays to all the indigenous people of Polynesia.

I am strongly opposed to SB 958 that would impose a 10-year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro within Hawaii for the following reasons:

- SB 958 provides little hope of preserving the cultural heritage of kalo to the Hawaiian people, but more importantly, it will significantly inhibit the very technology that could otherwise be the key to its survival.
- Recombinant DNA technology has been shown to be a safe and effective tool used in productive and sustainable agriculture worldwide. SB 958 questions the sound scientific principles that has allowed farmers to increase yields, enabled nations to reduce hunger and provided the means by which Papaya is able to become one of Hawaii's top selling fruit; second only to pineapple.
- SB 958 provides the medium by which select special interest groups could further legislate the prohibition of the cultivation and research of other Genetically Engineered crops within Hawaii; the repercussions of which would discourage economic investment and inhibit employment opportunities for our local people.

I encourage Representative Tsuji and members of the House Agriculture Committee to reject SB 958 and support bills such as SCR 206 that legitimately preserve and protect the cultural significance of kalo to the Native Hawaiian people as well as facilitate the growth and sustainability of Agriculture Industry within Hawaii.

Mahalo for the opportunity to testify.

SB 958, Relating to Genetically Modified Organisms - Taro House Agriculture Committee Wed., March 19, 2008 Auditorium 9:00 a.m.

Position: Oppose

Representative Tsuji and members of the House Agriculture Committee:

My name is Andrea Woods and I am a resident of Hawaii on the island of Oahu.

I have worked in the agricultural industry since 1980, and recognize the many challenges faced by farmers. The taro crop is threatened by insects and diseases, and the use of biotechnology is a valuable tool to be used in preserving taro biodiversity and to help address agronomic pressures. The fear of losing native taro stock to genetically engineered material is invalid, as non modified material can always be preserved.

If this bill should pass, Hawaii would be the first state to pass a law that would ban genetic engineering research on a crop and growing of a biotech crop. This sets a bad precedence. New science, technology and agriculture businesses might be discouraged from relocating their businesses to Hawaii and local businesses may not expand their investments within the state.

Instead of passing a bill that takes away a tool that could benefit taro farmers and processors, we should look to bills like the ones introduced this legislative session for preserving and protecting taro, for taro farming education and training programs, funding to evaluate ways to control major pests like apple snails, and a Senate bill for continued discussions between taro farmers, OHA, Hawaii Dept of Agriculture and University of Hawaii.

Mahalo for the opportunity to present testimony.

Date:

March 13, 2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Agriculture Committee

From:

<Jason Y Matayoshi>

<Kaunakakai, Hawaii>

<808-336-0021>

Hearing:

Wednesday, March 19, 2008, 9:00 a.m., Conference Room 325

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

Dear Honorable Chair Tsuji and Vice-Chair Brower,

I apologize for now providing my testimony in person, but I am working and cannot attend this hearing on Oahu. However, I want to express my opposition to SB 958.

I have read that anti-GMO groups and a small contingent of Hawaiians want to ban taro research in Hawaii. But they do NOT speak for the majority of Hawaiians and residents in this state.

The future of taro should be decided by the majority of native Hawaiians and community stakeholders.

We need to look at all the considerations. Do we really know what the impact of a ban would have on the future of this cultural plant? Have we really done our homework on what would happen if this plant were infected with a virus that only scientists could find a cure for?

Before we place a ban, let's first talk logically and clearly. To make a harsh decision without all the facts is not an option.

Sincerely,

Jason Y Matayoshi

Date:

Sunday March 16, 2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From:

Jay Pershing

Wailea, Maui 1-314-422-0553

Hearing:

Wednesday, March 19, 2008, 9:00 a.m.

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

I would like to testify against this bill to ban genetic engineering research on taro.

There has been a lot of coverage in the media about this issue, and many things said at public meetings and e-mails. Activists who support this bill have said they are using this taro bill as a stepping stone to banning all GMOs in Hawaii. If that's the case, then Hawaiian culture is just being used by others who have a different agenda altogether.

Taro needs to be discussed by native Hawaiians, farmers, and others who are affected by it. Don't pass a bill that's being used for another purpose.

Mahalo.

Jay C. Pershing

Testimony in Opposition to Bill 958 Anthony H. Sang

Joint Committee of Agriculture

Written testimony in opposition of SB 958

Anthony H. Sang, I am a Maka'ainana homesteaders as described by Prince Jonah Kuhio Kalanianaole, delegate to Congress.

Reasons:

A decision to stop any future studies and experimentation of cross breeding of Hawaiian Taro is not pone, right. To GMO, as I understand, is simply cross-pollination or cross breeding of animals, plants, and other life forms, including myself as a human being. Hawaiians and other peoples have been cross breeding for centuries. I ask you, if GMO is bad for plants and animals, is it also bad for Humans? And should SB 958 include humans? Why pick on Taro? Humans all cross breed which is why so many ethnicities have evolved, which is why people are tagged "mixed plate." When two people of different ethnicities create a child is that not cross breeding? Think about that for a second.

A compromised plan between farmers and scientific and technical parties should be created by this committee to save what is left of the Hawaiian Taro population. I would also like to ask this committee to look at the pros and cons of this issue. Look for a third option. A possible compromise between the two parties with a solution that will benefit us the consumers. Like the many kupuna who love eating their poi or the non-Hawaiians who enjoy Taro and/or poi.

We the consumer whether Hawaiian or non-Hawaiian are being affected culturally, financially, and emotionally. These three words are deeply felt by a lot of Hawaiians and non-Hawaiians. Respect for your culture and other cultures should be practiced among all people and it isn't done. Prices and supply of poi are becoming out of reach for many people, the keiki are losing their taste for poi because the prices.

Luau's are serving rice instead of poi because of the price. Look at the sample that I have to show you. I paid \$6.82, ate half and saved the rest for later. This is not a GMO product. This product tells me that the producers of the product need help.

Date:

3/16/2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From:

Jody George Kihei, Maui 357-5439

Hearing: Wednesday, March 19, 2008, 9:00 a.m.

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

Dear Rep. Tsuji, Rep. Brower, and members of the House Committee on Agriculture,

I oppose SB958, Relating to Genetically Modified Organisms, and ask that you please do not vote for it.

Despite a tremendous amount of misinformation about genetically modified organisms, decades of data and research overwhelmingly show that plants derived from biotech research are safe for human and animal consumption, can successfully coexist with other crops, and has led to tremendous benefits for small farmers, resource-poor countries and the environment.

Biotech researchers are currently developing food crops that can improve human health by increasing nutrients and lowering unhealthy fatty acids, combat drought-related problems, and fighting the neverending battle against pests and diseases. Biotech's potential benefits to our world are tremendous.

I respect the cultural importance of taro for our native Hawaiian community, but I cannot support any legislation that seeks to stop responsible and potentially beneficial research. In fact, there may come a day when taro, already suffering from snails and diseases, could desperately need biotech research. Passing SB958 would be short-sighted and detrimental.

It sets a dangerous precedent to start closing books and minds instead of opening them.

Thank you for considering my testimony.

Personal Testimony Presented before the
Committee on Agriculture
March 19
9:00 AM
by
Raymond S. Uchida

SB 958

RELATING TO GENETICALLY MODIFIED ORGANISMS

Chair Clift Tsuji, Vice Chair Tom Brower, and Members of the Committee:

My name is Raymond S. Uchida, and I am a Manager/Director of the UH-ADSC and a County Administrator-Oahu County with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide a written testimony on SB 958. This testimony does not represent the position of the University of Hawaii nor CTAHR.

Working in the agricultural industry for more than 30 years, I have seen devastating effects of disease in crop productivity. Smut on sugarcane caused severe crop and revenue loss and the papaya industry on Oahu moved to the Puna area on the Big Island because of Papaya Ring Spot Virus. The virus eventually moved to the Big Island and caused severe production loss. Fortunately, local scientists had started research using genetic engineering and created a papaya resistant to the virus, which saved the papaya industry and the families whose livelihood depended on papaya farming. Bacterial and fungal diseases have also caused loss of millions of dollars on anthuriums and ornamental plants.

Insect pests and fungal diseases, including taro leaf blight and taro pocket rot (which has caused crop losses exceeding 50% on Kauai), continue to plague the taro industry in Hawaii. Additional diseases and pests that may invade Hawaii in the future include the viral disease, Alomae-Bobone, which causes crop losses in excess of 80% in the Solomon Islands and Papua-New Guinea.

Out of the recognition and respect for the significance of Hawiian taro in Native Hawaiian Culture, CTAHR has agreed not to pursue research to genetically engineer Hawaiian taro without first obtaining community input on a case-by-case basis. Stopping all GE research on all taro could be the demise of the taro industry of Hawaii. We should plan and be prepared for the taro industry, as the scientists did for the papaya industry.

Imagine if all GE research was totally prohibited in the medical arena: "Where would the some of our loved one's be?". We should not let good science die. I therefore urge the committee NOT to pass SB 958.

Thank you for the opportunity to testify on this bill.

From: Joan Conrow [joanconrow@hawaiiantel.net]

Sent: Tuesday, March 18, 2008 8:31 AM

To: sb958writtenonlytaro

Subject: Please support moratorium

Ever since my friend Ka'imi Hermosura told me the story, in a Hanalei taro patch, of Haloa, the stillborn offspring of gods from whom the Hawaiian people are descended, I've seen it as more than just a beautiful, hardy, useful, productive plant.

Ever since he planted the first row of huli behind my house and said, "Now you have an army of Hawaiians guarding you Aunty Joan," I've found it impossible to view it as just as another plant.

We've developed a rapport, the kalo and me, as I've watched it grow, harvested and eaten it, planted it again and again, seen it expand from a small army to a force to be reckoned with.

When I got sick, it started ailing, too. When I recovered, it flourished. When I walk among it, it leans toward me. When the moon is bright, it glows silver. When the rain is heavy, fat drops pool in the heart of its leaves.

In a world of remarkable plants, kalo is something special. It's sacred. Its cultural roots run very, very deep.

That's why I'm so adamantly opposed to the University of Hawaii's attempts to genetically modify taro. I happen to believe that all genetic engineering is morally wrong, scientifically dubious, economically motivated and environmentally dangerous.

And when it comes to taro, it's absolutely unconscionable. Many Hawaiians vehemently oppose it and see as the final co-opting of their culture. I agree. Taro farmers haven't asked for it. No current disease problem warrants it. Consumer acceptance of it is questionable. It's a bad idea in every way — except for UH, which could make money from selling the patent.

Don't be fooled by arguments that research should continue "just in case." It costs a lot of money to develop a genetically engineered plant. Once it's done, UH will want to sell it and then it will be difficult to keep it out of the taro patch.

If the state and the University truly want to help taro farmers, then they should figure out a way to eradicate the apple snail, take steps to restore water to the streams and put taro lands back into the hands of Hawaiians.

But please, leave the kalo genome alone. Support the GMO taro research moratorium.

Mahalo, Joan Conrow PO Box 525 Anahola, HI 96703

From: Sent: Katy Rose [klrose@earthlink.net] Tuesday, March 18, 2008 8:06 AM

To:

sb958writtenonlytaro

Subject:

Support SB958

Aloha Honorable Senators:

As a fairly recent settler in Hawai'i, I have had much to learn about the history and the culture of this beautiful land.

One of the things I have learned about is the importance of kalo to the Kanaka Maoli. Kalo is more than a crop - it has deep cultural, historical and spiritual significance.

That is why I support SB958, which imposes a moratorium on GMO testing on kalo. Where kalo is concerned, all actions must follow the guidance of the kanaka maoli who continue to be the caretakers of Haloa. Imposing Western, profit-driven motives onto kalo would be a grave miscarriage of justice to the Hawaiian people.

Please support SB958. Protect Haloa.

With respect,

Katy Rose PO Box 1459 Hanalei, HI 96714

Testimony on SB 958

A BILL FOR AN ACT

relating to genetically modified organisms.

The House Agriculture Committee

Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

Wednesday, March 19, 2008

9:00 AM

Opposition to SB 958 Relating to Genetically-Modified Organisms

Dear Members of the Committee:

I am Martin Rayner, a Professor of Cell and Molecular Biology in the John A Burns School of Medicine. I came to Hawaii from my birthplace in the United Kingdom in 1964 to join the faculty that was being assembled to develop our Medical School. I gave the first lecture to our students when the School opened in 1967, and I am still involved in teaching our students at this time.

During the time that I have been here I have been delighted to see a major resuscitation of the Native Hawaiian community in this state. From language immersion programs in the schools, to the reintroduction of the ancient navigational techniques, to the establishment of Native Hawaiian programs as effective scholarly units within the University structure, this has been an exciting time to be alive in Hawaii. This movement has my strongest emotional support.

Nevertheless, I am deeply concerned by the present wording of SB 958. Although I have profound respect for the spiritual context of the Hawaiian Creation chant, and while I understand and respect the spiritual significance of Kalo within that context, I see a dangerous precedent being adopted here: that the spiritual significance of kalo to Native Hawaiians should be interpreted as giving justification for a temporary protection for the present forms of that plant by forbidding its intentional genetic modification for a limited ten-year time period.

In other words, if SB 958 is approved, the state is accepting the truth and day-to-day relevance of one specific Creation concept. But how can this particular Creation parable be accepted, without recognizing the equivalent relevance of all other creation concepts? Facing this general problem, the Founding Fathers of our United States came to the very reasonable conclusion that one cannot legislate the relevance of spiritual understandings without trampling on individual freedoms. Thus, the U. S. Constitution under the First Amendment states "Congress shall make no law respecting an establishment of religion". Similarly the State Constitution in Article I, Section 4 states: "4. No law shall be enacted respecting an establishment of religion". It is not clear to me how the Legislature can enact SB 958 in its current form, given these clear constitutional prohibitions.

However, it seems possible that the present anguish over potential changes in the kalo genome arises primarily from temporal rather than from spiritual concerns. In that case there are a whole different series of issues to be taken into account, including the potential rights of indigenous peoples to limit and control financial benefits arising from the genetic richness of their native environment. I recognize that this is an intricate but significant legal issue. I can also agree that environmental impact statements may need to be considered as a valid way to evaluate and even restrict the conduct of science, when scientific research seems likely to invade or harm the natural environment, or even displace a natural crop form of cultural significance. Therefore, I would respectfully suggest that SB 958 be rewritten to concentrate on these legitimate areas of legal concern, and I wish you the wisdom to achieve a proper balance between the rights of researchers to explore genetic changes (for potential protection of this important food source) versus the rights of native peoples to protect the kalo in its present genetic forms.

I urge the committee not to pass SB 958 in its present form. Thank you for this opportunity to testify.

With Aloha,

Martin Drake Rayner Professor, Cell and Molecular Biology John A. Burns School of Medicine 651 Ilalo St, Honolulu, HI 96813 Representative C. Tsuji State of Hawaii House Agriculture Chair

Aloha e Chair Tsuji and Members of the House Agriculture Committee:

Mahalo for allowing me the opportunity to submit a written testimony in regards to OPPOSITION of SB958.

My name is Dr. Keiki-Pua S. Dancil, I am maka`ainana from Makawao Maui. I was born and raised on Maui. My father is kanaka maoli and he along with my portugese mother raised us in an environment embracing all of our culture. My parents instilled the importance of moving forward and seeking knowledge. They understood that not all knowledge is acquired in one place and therefore encouraged us to expand our understanding and education. However, they also instilled that we understand where we came from, who are ancestors were and what they went through to have me standing here today. I walk each day knowing that I do not walk alone. The understanding of my past is an essential part of my path in life today and tomorrow.

Because SB958 is considered a "culturally sensitive issue" I will try to convey to you my childhood from a kanaka maoli perspective. I was one of six children, we didn't have any money to travel so my dad would take us on trips around Maui County. At the time I didn't understand all what was going on but as I grew up I started to piece together what he was doing. Today, many people take part in "cultural retreats". They will take a trip to the lo`i to work, restore a heiau, take `olelo classes, there are so many venues today that allow people to reconnect with their culture. When we were growing up there was NOTHING like this at all, however we (us kids) were exposed to all of this—and let me tell you for a elementary age child this was not FUN at all. Pulling weeds in the lo`i, helping out in the poi shop, taking early morning trips to town to deliver the poi, working outside helping restore heiau, taking `olelo adult classes in the evening with my father (being the only elementary child in the class), traveling to Moloka`i to participate in the makahiki festival for years (this was fun!), attending public hearings and meetings regarding Native Hawaiian issues, the list goes on and on. I was exposed to it all. As I grew up I started to understand why my dad exposed us to all of this, there were many lessons learned and I am thankful for the experiences because they have made me the person I am today.

I always knew Hawaii would be my home and it was up to me to determine how I would be able to make a living wage and live here in Hawaii. EDUCATION--my grandparents and my parents stressed education, it was the highest priority for them. They knew if we had a great education, we'd be able to come back home and not have to struggle. The thought of us "losing our culture" was never an issue because it was an integrated part of us, it was like NOT an adjunct of our life, you cannot separate us from our culture. The strong cultural background instilled in us as a child allowed them to be confident in allowing us to seek knowledge from other sources. They understood that they could not teach us everything; that we needed to go away and learn from others.

I have a strong "western" educational background, here is a brief summary of my formal education:

Degree	Major (Focus)	Institution
Honors High School		Kamehameha Schools (1991)
Diploma(HS)		
Bachelors in Science (BS)	Chemistry (Analytical/Physical)	Santa Clara University (1995)
Doctorate of Philosophy	Chemistry/Biochemistry (Biosensors)	University of California, San
(Ph.D.)		Diego (1999)
Masters of Business	General Management	Harvard Business School
Administration (MBA)	(Entrepreneurial/Healthcare/HighTech)	(2006)

I have been accused of "losing my culture" because I've been educated in the "west". I strongly disagree with this, in fact my culture is my center that helped me endure the long winters, the oral examinations, the aggressive research environment, the many obstacles that made my journey almost impossible. So when I'm asked, "Are you a scientist? Or are you a Hawaiian? Pick one you can't be both." I feel empathy for these

people because they cannot see beyond the shores of Hawaii. Like my ancestors who traveled here from Tahiti and Portugal, I have vision beyond the shoreline and beyond the stars that light up the sky on a clear winter night. I will continue to seek knowledge and further my understanding so that I can pass on as much to future generations as my ancestors have passed on to me.

I oppose SB958 for the following reasons:

- 1. It is premature to put a moratorium in place. I would suggest creating a commission (staffed with stakeholders such as kalo farmers, researchers, policy makers, etc...) to come up with a plan that will allow for the testing, propagating, cultivating, raising, and growing of GMO taro in the State of Hawaii.
 - a. I understand the culturally sensitive issue of the thought of modifying our ancestor genetically. That is why we need to solicit a commission (staffed appropriately) to address these issues with everyone.
 - b. GMO is here in Hawaii, it is not going away. We need to work with the GMO farmers to understand the threats and benefits of the process.
 - c. Organic farming is here in Hawaii, it is not going away. In fact I hope the organic farmers will be able to reach a point where their products are NOT prohibitively expensive to purchase for our people. It is well known that processed food is much cheaper than organic food.
 - d. EVERYONE needs a seat at the table, and maybe then we can take the best of GMO farming, the best of organic farming, address the culturally sensitive issues and come up with a plan to SAVE our kalo from the disease that will kill its existence if not stopped.
- 2. Why 10 years? Is there a reason for this number? It seems like an arbitrary number, why not have experts in the area assess the time frame. We're not the first State to allow GMO exploration of a crop, there are others out there that have studied the effects of cross pollination, etc...should we not solicit their opinion on the matter for a moratorium time frame if one is to be put in place?
 - a. We've already seen the effect of the diseases affecting our kalo, why would we deprive future generations from kalo and poi by ignoring the diseases and letting it take its course.
 - b. Can we not learn from Samoa what will happen to our kalo? Ten years is a long time and to wait that long to start to address this issue is detrimental to the kalo existence.
- 3. In order to test the positive and negative aspects of GMO taro you need to "test, propagate, cultivate, raise and grow GMO taro". What better place to do it than Hawaii, where you (the State) can control the parameters of the testing, propagating, cultivating, and raising and growing. If you don't allow GMO taro here, it will be done somewhere else.

The passing of this bill would be detrimental to the existence of kalo. It is premature to pass a moratorium. We need to be aggressive and move forward and understand why our kalo is so disease infested and determine how we as a society can help preserve such an integral part of our culture. If current scientific tools can assist in this endeavor then "why not use them?"

We live in 2008, if we understand where we came from and who we are as a culture in this society then this strong foundation should guide us confidently in making the right decision.

Let us share Haloa with future generations, creating a moratorium on research on understanding kalo will surely deprive our children.

Aloha, Mahalo,

Keiki-Pua S. Dancil, Ph.D.

Hobey Beck P.O. 371 Hanalei, Hawaii, 96714

Position: Oppose

Date: March 18, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Holy Det

Re: SB 958hd1, March 19, 2008 Hearing

Chair Tsuji and Members of the House Agriculture Committee:

I am Hobey Beck of Hanalei. I am a Kauai taro grower and owner of Waikoko Farms, which began in 1948. I have been a taro farmer since 1992, farming 25 acres of 9 varieties of taro and 5 acres of cut flowers. Seven of the taro varieties are the result of the University of Hawaii's taro breeding program. I am also the co-founder of Hanalei Poi Factory, which began in 1998. However, I sold my interests due to taro supply issues and decided to concentrate on taro farming.

I oppose the moratorium on taro research because it sends a wrong message from taro growers. Most of the taro growers are in support of research and development, and like me, many growers receive their taro varieties from the University of Hawaii.

There are about 30-50 taro growers, and many of them are not full-time because it is difficult to make a living from taro due to the challenges of water, land and labor, not to mention the diseases and pests. I lose 20-40% of my taro crop annually to apple snails and another 10-15% to leaf blight. I've put in \$15,000 of fencing to keep wild pigs from eating my taro.

Please do not support SB 958hd1. Thank you for the opportunity to testify.

C167828888 TE:DD 8000/ZT/80

From: Joannie Dobbs [dobbs.foodinfo@gmail.com]

Sent: Tuesday, March 18, 2008 8:41 AM

To: sb958writtenonlytaro

Subject: Opposition to SB 958 Relating to Genetically-Modified Organisms

Personal Written Testimony before The House Agriculture Committee Wednesday, March 19, 2008 9:00 AM

Opposition to SB 958 Relating to Genetically-Modified Organisms

SB 958 A BILL FOR AN ACT relating to genetically modified organisms.

Chair Representative Clifton Tsuji, Vice-Chair Representative Tom Brower, and Members of the Committee:

My name is Joannie Dobbs and I am an Assistant Specialist in Human Nutrition, Food and Animal Sciences with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide personal testimony on SB 958, SD1, HD1, (HSCR1218). This testimony does not represent the position of the University of Hawai'i or CTAHR.

I believe that SB 958 is NOT a Bill that protects the Native Hawaiian community nor Hawaiian taro (kalo). This bill is NOT based on science NOR the best interest of the Hawaiian Community. As indicated by http://www.capitol.hawaii.gov/session2008/CommReports/SB958_SD1_SSCR28_.htm
SB 958 offends the religious views of one part of our society and softens the fears of those frightened by genetically-modified organisms.

Although these viewpoints are to be respected, for the legislature to mandate a ban purported to be based on science is a disservice to the integrity of the legislature and to all those who trust the legislature. But this is just the tip of the iceberg.

Approving this bill would set a precedence for the legislature to limit or ban research on any food species or any other research not supported by the voters. Science dictated by popular opinion is not science at all. In fact, this type of science would risk all we know about academic freedom and true exploration needed to further science itself. Science by the popular opinion or a vocal few would jeopardize critical thought itself. In a time when so many environmental factors are and will be affecting successful survival of our islands, legislated science would mark the end of progress to solving many of these crucial issues.

I urge the committee NOT to pass SB 958.

Mahalo for this opportunity to submit this written testimony

With Aloha,

Joannie Dobbs, PhD CNS 3017 Pualei Circle #217 Honolulu, HI 96815

(808) 923-7052

From: kauai Exotix [waikoko@aloha.net]

Sent: Tuesday, March 18, 2008 8:47 AM

To: sb958writtenonlytaro Subject: SB958 OPPOSE

Hobey Beck P.O. 371 Hanalei, Hawaii, 96714

Position: Oppose

Date: March 18, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Chair Tsuji and Members of the House Agriculture Committee:

I am Hobey Beck of Hanalei. I am a Kauai taro grower and owner of Waikoko Farms, which began in 1948. I have been a taro farmer since 1992, farming 25 acres of 9 varieties of taro and 5 acres of cut flowers. Seven of the taro varieties are the result of the University of Hawaii's taro breeding program. I am also the co-founder of Hanalei Poi Factory, which began in 1998. However, I sold my interests due to taro supply issues and decided to concentrate on taro farming.

I oppose the moratorium on taro research because it sends a wrong message from taro growers. Most of the taro growers are in support of research and development, and like me, many growers receive their taro varieties from the University of Hawaii.

There are about 30-50 taro growers, and many of them are not full-time because it is difficult to make a living from taro due to the challenges of water, land and labor, not to mention the diseases and pests. I lose 20-40% of my taro crop annually to apple snails and another 10-15% to leaf blight. I've put in \$15,000 of fencing to keep wild pigs from eating my taro.

Please do not support SB 958hd1. Thank you for the opportunity to testify.

From:

Susan Hawkes [hawkes@hawaii.edu]

Sent: To: Tuesday, March 18, 2008 9:05 AM

10.

sb958writtenonlytaro

Subject:

no gmo taro

To All those concerned, please support SB958, vote yes. Save what little cultural integrity that is left in the Hawaiian islands. Please be a part of the healing process not the degradation process. Mahalo and Sincerely, Susan Hawkes

Ke Akua me ke Aloha, Susie Hawkes

"My religion is simple, it is kindness." Dalai Lama

Testimony for the House Committee on Agriculture March 19, 2008 From Susan T. Matsushima

SB 958, SD1, HD1, Relating to Genetically Modified Organisms
Wednesday, March 19, 2008 9:00a.m.
State Capitol: Auditorium

Chair Tsuji, Vice Chair Brower, and Members of the Committee

My name is Susan Matsushima, owner of Alluvion, Inc. on the North Shore of Oahu.

I OPPOSE SB 958, SD1, HD1.

Taro has been a traditional crop of Hawaii providing food and nourishment for the people. However, during the last 60 years, production of taro has eroded 75% from 14 million pounds in 1948 to only 3.6 million pounds in 2005. This decrease had many factors contributing to it, but diseases and pests such as leaf blight, pocket rot, nematodes, aphids, and apple snails had major impacts.

This bill sets dangerous precedent setting special privileges in support of a particular religion.

We need to allow our scientists to have academic freedom to search for truth and knowledge to improve the world that we live in. There is little evidence that genetically-engineered organisms present a danger to our people and the environment.

Also, a moratorium already exists with CTAHR agreeing to stop GE research and development on Hawaiian taro with the passage of SCR 206 in 2007.

Please note my **OPPOSITION TO SB 958,SD1, HD1.** Thank you.

Susan Matsushima Alluvion, Inc. P.O. Box 820 Haleiwa, HI 96712 Phone: 637-8835 Date:

03/14/2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From:

Jay Ellis Kihei, Maui (808) 870-2974

Hearing:

Wednesday, March 19, 2008, 9:00 a.m.

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

I'm deeply concerned about this proposed moratorium on genetic engineering research of taro.

I work in agriculture. If you really want to save a plant, banning research is absolutely the wrong thing to do. The fundamental purpose of research is to find ways to help plants.

The biggest threats to taro and any plant are invasive species, diseases and poor climate. For bananas, it's the bunchy top virus. For wili wili, it's the gall wasp. For taro, it's apple snails and leaf blight. If you really want to protect and preserve taro, stopping research could hurt our chances of solving our problems.

The papaya industry in Hawaii nearly disappeared due to the ringspot virus. Genetic engineering found an answer. Don't let taro go the way papaya almost did.

ay Man

Please do not pass SB958. Thank you.

AA1 82:70 8002\81\60

Steven Arce PO Box 165 Hoolehua, HI 96729

Phone Number: 808-567-6026

Email:

Position: Oppose

Date: 3/18/08

Rep. Clift Tsuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

Aloha, my name is Steven L Arce. I was born and raised on homestead land in Hoolehua, Molokai. My family roots and connections to Molokai runs deep and we have been on homestead land since the early 20's. My grandparents were farmers who grew taro and other vegetable crops for subsistence living. I inherited the knowledge and as a result today I own and operate a hay farm that supplies the feed for our island customers.

Agriculture has always been apart of my life and bills like SB 958sd1 does not support agriculture on Molokai, or anywhere else in the state, therefore I oppose this bill. I also believe bills like this will impact agriculture as a whole.

I love to eat poi, however in Hawaii we have a shortage and taro is now being imported. To not use the science to perpetuate and sustain the taro plant could be disastrous by diseases, viruses, or any new incoming invasive species. If genetically engineered taro will make poi more available POI will become affordable in today's society. Energy should go to SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UH to talk about solutions for more taro.

Please do not support SB 958sd1. Thank you for the opportunity to testify.

Luciano Moufa Kawella, Molokai 96748 (808) 553-5929

Position: Oppose

March 18, 2008

Rep. Clift Tsuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Luciano Moufa and I live on the island of Molokai. I moved from the Federated States of Micronesia in March, 2007. I moved to Hawaii to look for a job and started work immediately for a seed corn company on Molokai. I support myself and one child from my income working in the fields. I am very happy that this corn company is here in Molokai, because there aren't many job opportunities available.

We depend heavily on taro back in Micronesia. If something were to happen to the taro crops it would be devastating because it is an important staple of our diet. I have found living here in Hawaii, that taro is very expensive. To me, the passing of this bill means that the protection and production of taro is not being considered.

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this do not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. This would drastically affect my life, and the lives of my family and my friend's families. On Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

Please do not support SB 958sd1. Thank you for the opportunity to testify.

Miles Cabanting Po Box 1926 Kaunakakai, HI 96748

Date: March 16, 2008

Position: Oppose

Rep, Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Miles Cabanting. I am 19 years old and I was born and raised on Molokai. Besides agriculture being financially important, our food choices are as well. My family eats poi regularly and we would miss it if it were not abailable. I work at an agriculture field and this job is important to me because this is my only income to help my mother and I maintain our household. I'm not only talking for myself but for others who are in the same position as I am. This is not only impacting the income of my family but also the income of other families whose primary financial help comes from their relative involvement with their job, in the GMO.

I do not support SB 958sd1 because the vocal Minority does not speak for me. I believe that bills like this does not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For examples, on Molokai, the seed corn company is among the largest employer and neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered Research and development and biotechnology.

Sincerely,

9.9

Miles Cabanting

Tiani P.D. Gamit

Address: P.O. Box 1035 Kaunakakai, Hawaii 96748

Phone Number: (808)757-0957 E-Mail: anigirl16@hotmail.com

Position: Oppose

March 18, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

Aloha, my name is Tiani Gamit, also known as Tiani Dudoit, since I recently got married. I 'm 27 years old, and live on the island of Moloka'i. I'm Hawaiian, Caucaision, Japanese, and Chinese and also a mother of two. I was raised on Moloka'i by my grandparents John & Marion Dudoit. My grandfather taught me how to fish, hunt, and just plain survive from the land. For the past three months I've been working in agriculture and I enjoy my job. I don't just cat poi. I love poi, and so does my family.

I think that this bill does have an effect, and will impact our jobs in the long run. Because we as farmers are trying our best to provide and survive in a fast growing world, and if we don't try to improve, then who will?

I feel they should not try and stop the testing of taro because, what if one day we have a shortage, what's going to happen? Actually, now days in the store, you only can buy two bags at a time. We're not going to have poi for the generations to come. I love to eat poi as part of my dinner and especially at luau gatherings. Cannot eat the fish if no more the poi. I feel that if this bill is passed, when something bad happens to taro crops, who would we look to for help? I believe that those tests will help our culture in those times of need.

I do not support SB958sd1 because the vocal minority does not speak for me. I grew up eating poi but now there is a shortage and it is expensive. My family cannot cat poi all the time. If genetically engineered poi will get us more poi, cheaper poi so we can eat it more, let's do it!

I think educating our future generations about ways to improve and that the old <u>and</u> new ways of growing taro will keep our culture crops such as taro alive and prospering.

Sincerely, Tiani Gamit

Paul R. Gamit

Address: P.O. Box 1035 Kaunakakai, Hawaii 96748 Phone Number: (808)658-0304 E-Mail: prgamit@dow.com

Position: Oppose

March 18, 2008

Rep. Clift Tsuji
House Agriculture Chair
House of Representatives
Hawaii State Capitol
Honolulu, Hawaii

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Paul Gamit. I'm 33 years of age and was born and raised on the island of Molokai. I'm Filipino, and a husband and father of two. My hobbies are fishing, diving, and spending time with friends and family. Being raised on Moloka'i, I see poi at luaus, dinners, and even at the beach with some poke on the side. My wife and children, don't just eat poi, they love it.

I'm an agriculture farmer for a Scod Company for the past 14 years. This job is really important to me, living on this small island. The bill will impact our jobs in the long run. Why? We as farmers, are trying our best to provide and survive in this fast growing world, and if we don't try to improve, then who will?

I do not support \$B 958sd1 because the vocal minority does not speak for me. I believe that bills like this does not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

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1	lease do not support	313	3000II.	THAIR YO	u ioi uic	opportunity to	LOSUITY.

Sincerely,

Paul Gamit

Corene Helm

P.O. Box 391

Ho'olehua, Hawaii, 96729

Phone Number: 808-567-6580

Position: Oppose

March 18, 2008

Rep. Clift Tsuji

House Agriculture Chair

House of Representatives

Hawaii State Capitol

Honolulu, Hawaii

Re: 5B 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House of Agriculture Committee:

My name is Corene Helm, a Ho'olehua homesteader on the island of Moloka'i. I am an educator for more than 30 years working under the Department of Education. Presently, I teach at the Molokal Middle School with 7th and 8th grade students. As an English teacher, I Work collaboratively with the Social Studies and Science departments. Within the last three years, I have had the opportunity to work with students on selected Science Research projects helping students with the writing portion of the research from the hypothesis to the bibliography. Working in such a collaborative way has increased the number of individual projects. These projects are displayed in our school cafeteria for families and community to view, appraise and acknowledge their own children's works. The top ten projects are sent to Maul for the district contest and then on to Oahu for the State contest. The Science Fair is a major part of our science curricula. I am in opposition to this bill because I believe it sends a confusing message to our young people with regards to research and technology. What are our true intentions when it comes to education? For the last century, we have been taking steps forward and now we are in a backward stride. With all due respect to SIr Issac Newton and all of the beautiful minds that have contributed to the excellence of education in this global world, I implore you to not support this bill.

Mahalo nui loa.

Mycogen Seeds P.O. Box 339 19 Hua'ai Road Hoolehua, Hawaii 96729 808-567-6871 Phone 808-567-9426 Fax



March 18, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Position: Oppose

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep Tsuji and Members of the House Agriculture Committee:

My name is David Gilliland, Site Leader of the Dow AgroSciences Mycogen Seeds Research Station on Molokai. Dow AgroSciences is a science-based technology company involved in crop protection, pest management, biotechnology and conventional seed production. Our research station is one of many Dow AgroSciences sites across the U.S. and globally and, on Molokai alone, employs 22 full time staff and up to 30 seasonal and high school students through-out the year.

We wish to testify in opposition of the resolution to support Senate Bill 958 IID1, which will impose a ten-year monatorium on developing, testing, propagating, cultivating, growing and raising genetically-engineered (GE) taro in the State.

We strongly oppose any legislation that limits the opportunity to deploy safe and thoughtful agro-biotechnology practices to solve the growing number of challenges facing the farming community. This moratorium would place at risk a culturally significant crop as well as a crop with material food importance. As we have seen with the Papaya ring spot virus and the Erythrinia Gall Wasp these risks are real. These risks accumulate and make an already difficult farming situation in Hawaii more tenuous.

At a higher level the focus of the anti-GMO activist groups on this Bill and not on the more proactive legislation related to SCR206 make it clear that this is a thinly disguised tactic to forward the political agenda of a vocal minority. The potential unintended consequences of this anti-technology approach could ironically severely damage the very culture these groups suggest they have in their best interests

As such we wish to testify in strong opposition of Senate Bill 958 HD1, or any bill relating to banning GE agriculture in Hawaii.

Respectfully.

Dave Gilliland

Site Leader, Dow AgroSciences

PERSONAL AND CONFIDENTIAL

Hobey Beck P.O. 371 Hanalei, Hawaii, 96714

Position: Oppose

Date: March 18, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

My Del

Re: SB 958hd1, March 19, 2008 Hearing

Chair Tsuji and Members of the House Agriculture Committee:

I am Hobey Beck of Hanalei. I am a Kauai taro grower and owner of Waikoko Farms, which began in 1948. I have been a taro farmer since 1992, farming 25 acres of 9 varieties of taro and 5 acres of cut flowers. Seven of the taro varieties are the result of the University of Hawaii's taro breeding program. I am also the co-founder of Hanalei Poi Factory, which began in 1998. However, I sold my interests due to taro supply issues and decided to concentrate on taro farming.

I oppose the moratorium on taro research because it sends a wrong message from taro growers. Most of the taro growers are in support of research and development, and like me, many growers receive their taro varieties from the University of Hawaii.

There are about 30-50 taro growers, and many of them are not full-time because it is difficult to make a living from taro due to the challenges of water, land and labor, not to mention the diseases and pests. I lose 20-40% of my taro crop annually to apple snails and another 10-15% to leaf blight. I've put in \$15,000 of fencing to keep wild pigs from eating my taro.

Please do not support SB 958hd1. Thank you for the opportunity to testify.

98:22 8002/11/80 8088267912

From:

Frank Altobelli [frank_altobelli@hotmail.com]

Sent:

Tuesday, March 18, 2008 9:20 AM

To:

sb958writtenonlytaro

Subject: SB958 Testimony

Aloha,

Please accept the following written testimony regarding SB958.

Mahalo, Frank Altobelli

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Frank Altobelli. I am a resident of Kauai, and I strongly oppose SB958.

SB958 is a fear-based reaction to genetic engineering and to the fear of the unknown. It is not based on scientific evidence. I'm not a biologist or biotechnologist, but I'm no stranger to science or technology. I have a PhD in Manufacturing Systems from the Massachusetts Institute of Technology. I understand the science behind genetic engineering, so I do not fear it. My family and I regularly eat genetically engineered crops, including Rainbow papaya, without concern. We also eat Taro. We would not be concerned at all about one day eating genetically engineered taro, but we are concerned that one day we will no longer be able to find Taro at the store.

I'm also a very strong proponent for science and technology based education and jobs in Hawaii. These are the jobs that will allow residents and children of Hawaii to compete in the global economy and maintain their standard of living. On May 30th, 2007, Governor Lingle signed a law designed to help transform the state's economy from one "based on land development to one based on innovation and developing Hawai'i's human capital." This transition will be a journey that will not occur overnight. SB958 is a huge step backward on this journey, and it sends the wrong message to our residents and children. It says that we can ignore science and technology and facts when they don't agree with our political objectives.

In 2004, the Massachusetts Institute of Technology named its 16th President, Dr. Susan Hockfield. The appointment was historic for 2 reasons. It was the first time that MIT had appointed a woman president, and it was the first time that it had appointed a Biologist. One of the rationales for selecting a Biologist was the assertion that during the prior 100 years, advancements in science and technology were physics based, but that in the coming 100 years, advancements in science and technology will be biology and biotech based. MIT wants to be on the forefront of these developments so that it doesn't become irrelevant. As Dr. Hockfield stated in her inaugural address, "this generation is bearing witness to a fascinating convergence of engineering and the life sciences. This convergence holds the promise of transforming our lives."

Biotechnology is not only science for the future. Our world has changed. Right now, our world is a place where biotechnology is making a difference in people's lives, and where you don't have to be a man to be a university president.

It is not appropriate, nor is it good for the people of Hawaii, for the legislature to start down the slippery slope represented by this moratorium. Proponents of SB958 have said: "Hopefully this moratorium will lead to not only a BAN on GMO taro, but ALL GMOs in Hawaii and elsewhere." Please reject this bill. Please allow the people of Hawaii to continue down the road to a transformed economy fueled by a workforce skilled in STEM disciplines, so that we don't become irrelevant.

Mahalo for the opportunity to testify. Frank Altobelli, Ph.D.

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From: Alan Titchenal [nutratc@gmail.com]
Sent: Tuesday, March 18, 2008 9:15 AM

To: sb958writtenonlytaro

Subject: Opposition to SB 958 Relating to Genetically-Modified Organisms

Personal Written Testimony before The House Agriculture Committee Wednesday, March 19, 2008 9:00 AM

Opposition to SB 958 Relating to Genetically-Modified Organisms

SB 958 A BILL FOR AN ACT relating to genetically modified organisms.

Chair Representative Clifton Tsuji, Vice-Chair Representative Tom Brower, and Members of the Committee:

My name is Alan Titchenal and I am an Assistant Provessor in the Human Nutrition, Food and Animal Sciences Dept. which is housed within the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am also a nutrition and health science columnist for the Honolulu Star-Bulletin.

I am pleased to provide personal testimony on SB 958, SD1, HD1, (HSCR1218). This testimony does not represent the position of the University of Hawai'i or CTAHR.

Although the intentions of the Bill are obviously positive, I believe that SB 958 is NOT a Bill that protects the Native Hawaiian community nor Hawaiian taro (kalo). This bill is NOT based on science and lacks the vision needed for maintaining important research on non-Hawaiian taro varieties. Such research is essential to the development of knowledge that may be needed to protect Hawaiian taro varieties from disease and pest problems in the future.

As the Bill now reads, its restrictions on taro research are much too broad.

A major mission of the College of Tropical Agriculture and Human Resources is maintaining agricultural productivity, including traditional Hawaiian agricultural practices. Researchers at this institution are highly sensitive to the central importance of Hawaiian kalo to the Hawaiian culture.

Approving this bill would set a precedence for the legislature to limit or ban research on any food species or any other research not supported by the voters. Science dictated by popular opinion is not science at all and not part of an intelligent democratic society. In fact, this type of science would risk academic freedom in general and true exploration needed to further science itself. Science dictated by popular opinion or a vocal few would jeopardize critical thought itself. In a time when so many environmental factors are and will be affecting successful survival of our islands, legislated science would mark the end of progress to solving many of these crucial issues.

I urge the committee to NOT pass SB 958.

Mahalo for this opportunity to submit this written testimony

With Aloha,

C. Alan Titchenal, PhD CNS 3017 Pualei Circle #217 Honolulu, HI 96815

3/18/2008

From: Brian Hunter [bhunter1950@hotmail.com]

Sent: Tuesday, March 18, 2008 9:20 AM

To: sb958writtenonlytaro

Subject: SB 958 Relating to Genetically Modified Organisms

SB 958

Position: Oppose

My name is Brian Hunter and I am a resident of Makiki on the Island of Oahu. I first came to Hawaii in 1974 and, as all of us who live here know, much has changed since that time. I am writing as a private citizen, but my professional affiliations include many years of cultural resource, land use planning, and environmental work. My present position includes concern with invasive species and their impacts from mauka to makai.

All of life exhibits genetic change over time. Nature is sometimes a slow hand at the game, however there is nothing intrinsically evil or unnatural about this process. For man to use our intelligence to understand the process and benefit from it, is no different in concept than the first settlers here using techologies such as canoes and star maps. Science is feared because it is not understood. It is easier to say no and do nothing than to say yes and make an effort. Culture is a reflection of its time, rather than an accurate reflection of the past. Why do different types of taro exist today? Genetic manipulation.

Genetic engineerings benefits are obvious to any informed citizen. It is not a panacea for all ills in society and certainly man has shown over time throughout the world that it is possible to misuse just about any technology, but we still fly and we still drive automobiles. This bill takes away another tool that may serve to our benefit. Resistance to disease and non native insect pests comes to mind. Please join me in opposing this bill.

Mahalo for the opportunity to present testimony.

Shed those extra pounds with MSN and The Biggest Loser! Learn more.

From: Perez, Bessie [Bessie.Perez@Pioneer.com]

Sent: Tuesday, March 18, 2008 10:19 AM

To: sb958writtenonlytaro

Subject: testimony

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Bessie Perez and I strongly oppose SB958.I live at Honolulu, Hawaii and have a Bachelor's degree in Agriculture and a Master's degree in Tropical Plant and Soil Sciences. I have been doing plant research for 14 years now and I strongly care about this bill for I love taro and poi too.

This bill undermines ongoing talks with the Native Hawaiian Community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous. On the contrary, there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Legislating research is a slippery slope and is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro. Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at a time when it is critical for us to support the rich potential for innovation that is the key for sustaining our future.

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

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From:

Joan Craft [joancraft@hawaii.rr.com]

Sent:

Tuesday, March 18, 2008 9:12 AM

To:

sb958writtenonlytaro

Subject: oppose SB958

Don't mess with the sacred taro.

Jade Bruhjell Molokai <u>Testimony</u>: Against SB 958 (10-year moratorium against genetically modified taro)

<u>Committee</u>: The House Agriculture Committee Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

Date: Wednesday, March 19, 2008

<u>Time</u>: 9:00 AM

Name: My name is Dr. Brent A. Buckley. I am an Associate Professor in the Department of Human Nutrition, Food and Animal Sciences, College of Tropical Agriculture & Human Resources, University of Hawaii – Manoa, but I am testifying today as a private citizen. I have a Ph.D. in Animal Breeding and Genetics and have evaluated the genetic improvement of livestock species, particularly cattle for over 20 years.

During my lifetime and academic career advances in genetics have been astonishing. We have went from barely understanding how genetics worked in the 1950's to now having a reasonable working knowledge of individual genes at the DNA level. However, these rapid advances have left the average consumer and even producer a bit bewildered as to what is actually happening. Unfortunately, some of the confused people rather than educate themselves have simply said no, no, no one should do this. If we prevent new knowledge from being developed every time some one does not understand it, we can never make any progress in any area.

A moratorium on improving Taro, sets the dangerous precedent that unknown knowledge is a bad thing and must be feared and stopped. I urge you to kill this bill and instead direct more efforts to educate the public about science and how it has benefited humans and can continue to do so in the future. Scientists are not the evil madmen depicted by Hollywood. They are dedicated individuals interested in improving the knowledge and subsequently the products produced by farmers, in this case, for other humans.

Please don't take a giant step backward because genetics is difficult to understand.

From:

kawaihapai@hawaii.rr.com

Sent:

Tuesday, March 18, 2008 10:54 AM

To:

sb958writtenonlytaro; Rep. Clifton K. Tsuji; Rep. Tom Brower

Subject:

Testimony Supporting SB 958 SD1 HD1





SB 958 SD1 HD1 - SB 958 SD1 HD1 - Pg 1.jpg (244... Pg 2.jpg (411...

PLEASE FORWARD MY TESTIMONY (ATTACHMENTS) SUPPORTING SB 958 SD1

HD1 TO:

HOUSE COMMITTEE ON AGRICULTURE: REPRESENTATIVE CLIFT TSUJI, CHAIR REPRESENTATIVE TOM BROWER, VICE CHAIR

HEARING NOTICE WEDNESDAY MARCH 19, 2008

TIME: 9:00AM

PLACE: STATE CAPITOL AUDITORIUM

MAHALO THOMAS T SHIRAI JR P O BOX 601 WAIALUA, HI 96791

Thomas T Shirai Jr P O Box 601 Waialua, HI 96791

email: Kawaihapak@hawaii.rr.com

Hearing Notice Wednesday, March 19, 2008 9:00AM State Capitol Auditorium

House Committee on Agriculture Representative Clift Tsuji, Chair

RE: Testimony Supporting SB 958 SD1 HD1 (Relating to Genetically Modified Organisms)

Aloha Chair Tsuji & Committee Members,

I support SB 958 SD1 HD1. In my ohana, I've been instilled with the kuleana of mo'okuauhau (genealogy) by my beloved Tutu Kane (David Peahi Keao Jr). It's thru him that I've learned much about our Ohana and Hawaiian culture. Therefore, I write this honoring my Grandfather (David Peahi Keao Jr), Great-Grandfather (David Maikai Keao) and Great-Great Grandfather (Kaaemoku Kakulu) who were all kalo mahiai. They were informants for the Bishop Museum and featured in their publication entitled The Hawaiian Planter (Handy 1940):

KAWAIHAPAI

There is a sizable area of terraces in the lowlands (now surrounded by sugar cane), watered by Kawaihapai Stream. Theses terraces have evidently been lying fallow for some time, though several were being plowed for rice or taro in the summer of 1935. At the foot of the cliffs, watered by a stream the name of which was not learned, are several small terraces in which taro is grown by David Keaau.

The Hawaiian Planter

THEY DIDN'T USE ANY ARTIFICIAL OR CHEMICAL GENETICS TO INCREASE OR ENHANCE Kato (Taro). They grew their perfered variety which is Ka'l along with other varieties such as Awenu and didn't MONO CROP which commercial growers do with Maoli Lehua.

The purpose of SB 958 SD1 HD1 is a 10 year moretorium and consistent with a *kalo mahiai* practice of leaving the *lo'i* fallow which gives it time to recuperate before planting again. It's our *kuleana* to protect *Haloa*. *Malama Kalo*.

Thomas T Shirai Jr Grandson, Great-Grandson & Great-Great Grandson of *Kalo Mahiai* Kawaihapai Ohana - Po'o

HONOLULU AND ISLAND OF OAHU. Kakalia David, lab road dept, bds I Kakalia. Kakalia Paris K, musician Hawn Band. Kakalia Thomas, carp road dept, bds 1211 Asylum rd. Kakio Wm, lab, r School m Asylum rd. Kakita, emp. George Rodick. Kaku, lab, r Waikahalulu lane.

Kakulu Kaaemoku, taro planter Kawaihapai, p o

Kalaaukapu Lui, lab Ewa road dept, Puuloa, p o Aiea.

Kalaepaa David, moulder Hon I Wks, r. Waiakamilo camp.

Allan R.

Kakunishi S, Japanese goods Waipahu.

Kalaehao George, dep postmaster, Flecia. Kalaciwa K, lab Judd st quarry, r Alewa.

Kalahele Elizabeth, r. Punchbowl nr Queen. Kalahiki David, lab US Light House Eng. Kalahikiola, kpr Myrtle Boat Club, r same.

Kalaefoa John, r 917 Waiakamilo.

Kalaaiheana (wid Pauahi), r 854 Kawaiahao.

Kalaaulane J, tmstr Oahu Sugar Co, Waipahu.

Kakuda, emp M. Fujimoto.

Kala, lab, rms 50 Magoon bik. Kalaae, r Waiakamilo camp.

Kalaehaena, r Kalihi-kai.

Kalahookahi; lab road dept.

From:

R McCormack [mcspresso@gmail.com]

Sent:

Tuesday, March 18, 2008 9:51 AM

To:

sb958writtenonlytaro

Subject: SB 958 - Testimony

SB 958, Relating to Genetically Modified Organisms - Taro
House Agriculture Committee
Wed., March 19, 2008
Auditorium 9:00 a.m.

Position: Strongly Oppose

Representative Tsuji and members of the House Agriculture Committee:

My name is Richard McCormack and I am a resident of Hawaii on the island of Oahu.

I have lived in Hawaii for over 30 years and have been involved in Hawaii agriculture for the entire time. I have worked in crop research and all aspects of tropical crop production.

Farming in a tropical environment is incredibly challenging with pressures from diseases and insects in our environment and the threat of introduced species from outside of our islands. Ongoing plant research, including biotechnology, could help preserve taro biodiversity and help address agronomic pressures.

I respect the cultural significance of taro. I believe that there needs to be further discussion on how to preserve and protect taro by all stakeholders in our island community.

However, SB958 is not the answer. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Science and technology hold a key to the future of our state. The passage of this bill sends a very clear message that Hawaii is an anti-science state.

If this should pass, Hawaii would be the first state to pass a law that would ban genetic engineering research on a crop and growing of a biotech crop. This sets a bad precedence.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Sincerely, Richard McCormack Michelle Tancayo P.O. Box 1753 Kaunakakai, HI 96748 808-553-5411

Position: Oppose

March 17, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Re: SB958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Michelle Tancayo. I am a resident of Molokai; I was born and raised on Molokai. I am a descendent of Rudolph Meyer and Kalama Waha our family roots began on Molokai in 1851. Great—great grandfather Rudolph served under King Kamehameha IV & V as their Ranch Manager on Molokai, he served under royalty up to the overthrow of the monarchy. I serve as secretary on our Meyer family corporation and work as a substitute teacher in the Hawaiian Immersion and English speaking classes of Kualapu'u School. I am voluntarily testifying to you today as a private citizen of Molokai. Because of knowledge that I have gained in the Poi manufacturing business of which I was directly involved with during 1989-1998.

I do not support SB958sd1 which imposes a 10 year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State. I married my husband Kegal-Joe Tancayo in 1989 as was immediately thrust into the poi manufacturing business. I worked side by side with my husband manufacturing pol as our main source of income for 9 years. The apple snails then were a huge problem, they ate away at the taro corms. Then pocket rot was also taking hold, I witnessed a decline in the quality and quantity of taro that we were buying from Keanae and Waialua, Maui. Our Chong family had always purchased our main supply of taro from Maui since the tidal wave of 1946 destroyed the taro patches in Halawa Valley on Molokai.

By 1994 we had to look elsewhere in the state to supply our need for more taro. A family friend on Kauai let us start buying taro from Hanalel to help us in addition to what we were still buying out of Maui. By 1996 prices paid for taro had increased drastically because supply could not keep up with demand. The older generation was passing on and the younger generation of taro farmers who we had bought from could not meet our

Fax: 553-5962

needs. 1997 found us completely dependent on our Kauai source of taro. It took longer and it was more costly to bring it in from so far but we were determined to see that Chong's Poi Shop would continue its family tradition of being the poi manufacturer on Molokai.

Till this day the family still gets taro for Kauai. All of our taro supply needs still can't be met. The family is down to manufacturing poi just once a week down from 5, 3, and twice weekly. Thankfully, everyone has other employment so the manufacturing of poi is done solely out of love.

I recently spoke with some taro farmers past and present. The problems with taro and their yields still exist. Although we want to be culturally sensitive we strongly feel that we need to be prepared for the future. I support, and encourage legislators to support proactive legislation that would benefit taro growers and poi producers. I understand that SB 2915 opens up dialogue and an avenue that all stakeholders can work together to help preserve taro for the future.

Please do not support SB 958sd1. Thank you for the opportunity to testify.

From:

K Pitz [pitzathawaii@gmail.com]

Sent:

Tuesday, March 18, 2008 8:16 AM

To:

sb958writtenonlytaro

Subject: Testimony for SB958-SD1-HD1

To the House Committee on Agrciulture,

I oppose SB 958 that seeks to protect taro by banning taro research. People at the University of Hawaii (UH) are working to protect taro from diseases and pests by doing research. SB 958 is not protecting taro, it's banning research that protects taro. Researchers at UH work with many different tools or technology to solve problems in agriculture. The goal is to help, not hurt agriculture. Using genetic modification techniques is another tool to try to improve taro and other crops. SB 958 may be well intended but it is inappropriate to try to curb research when there is no scientific basis for it. Every crop in this state need all the help it can get to grow successfully. We can't afford not to be able to use every tool that's available.

Sincerely, Karen Pitz

From:

LANSMAN, PHIL [AG/2563] [phil.lansman@monsanto.com]

Sent:

Tuesday, March 18, 2008 7:40 AM

To:

sb958writtenonlytaro

Subject: I strongly oppose SB958

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Philip Lansman and I strongly oppose SB958.

I have been in agriculture all of my life. Growing up on a farm and then working in the industry. I have been working with GMO crops for about 19 years and have seen what they can do for our future. I do have a wife and 2 children and after working with all the pesticides and herbicides in my earlier years I would much prefer my family eating GMO products than the conventional food that we grew up with.

The reasons I oppose this bill are:

The bill undermines ongoing talks with the Native Hawaiian Community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Legislating research is a slippery slope and is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro. Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at a time when it is critical for us to support the rich potential for innovation that is the key for sustaining our future.

If you are not convinced with all the testimony for GMO then I would suggest rejecting this bill and approve more studies around it before eliminating it all together.

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Phil Lansman	

Phil Lansman

Pre-Fnd

1215 So. Kihei Ste. 0-833

2111 Piilani Hwy

Kihei, Hi. 96753-5220

Office 808-879-4074 Ext.-7150

Fax - 808-879-0499

From: Mark Stoutemyer [mstoutemyer@hotmail.com]

Sent: Tuesday, March 18, 2008 7:38 AM

To: sb958writtenonlytaro

My name is Mark Stoutemyer and I strongly oppose SB958.

I was born and raised in Hawaii and was fortunate to return to find employment in the Hawaii Agriculture Industry. I know first hand the importance of agriculture in Hawaii in maintaining jobs, and the quality of life it assures for the peoples of Hawaii. I am fully aware of the sensitive issues surrounding Taro and its importance to the Hawaiian people. When I was young, my parents fed me poi as baby food and I still love eating poi and taro today. Without scientific efforts to control diseases in this crop, I fear that I will not enjoy eating this staple in the years to come.

The SB958 Bill undermines ongoing talks with the Native Hawaiian Community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous. On the contrary, there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Legislating research is a slippery slope and is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro.

Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at a time when it is critical for us to support the rich potential for innovation that is the key for sustaining our future.

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I strongly urge the committee to reject this bill. Mahalo for the opportunity to testify.

Mark Stoutemyer

Need to know the score, the latest news, or you need your Hotmail®-get your "fix". Check it out.

From:

James Brewbaker [brewbake@hawaii.edu]

Sent:

Monday, March 17, 2008 4:37 PM

To: Subject: sb958writtenonlytaro Stopping Taro Research

I write as a 47-year professor of the College of Tropical Agriculture, U. Hawaii.

I write from Australia, where I've delivered 3 seminars this week alone on the superb agricultural research of our university; e.g., the \$60 million beef industry of Queensland relies increasingly on leucaena varieties bred at UH.

I write to note that my professional colleagues here find it unbelieveable, as do I, that the Legislature of the State of Hawaii would be so ignorant of the contributions of Hawaii's agricultural research to consider bills like SB958. This would be an act of monumental stupidity.

Signed: James L. Brewbaker

Personal Testimony Presented before the House Committee on Agriculture March 19, 2008 9:00 am by John Powley

Position: Oppose

SB 958, SD1, HD1 GMO Taro Bill

Chair Rep. Tsuji, Vice Chair Rep. Brower and Members of the Committee:

My name is John Powley and I am an Extension Agent with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR) in Maui County. I am pleased to provide personal testimony on SB958. This testimony does not represent the official position of the University of Hawai'i or CTAHR.

I oppose this bill because research and development should be based on facts, not misinformation and fear. I support the Kauai Taro Growers Association's position that restricting research that may be necessary is not a good thing. No one knows what the future brings---look at the devastation of the wiliwili trees.

Your support of positive bills like SB 2915 Taro Security and Purity Task Force, and HB 3425 (research on apple snails) is needed. These bills are bills that will help the taro industry. SB 958 has divided the community too long. It's time it is stopped.

Thank you for the opportunity to testify on this bill.

Sincerely, John Powley

Testimony of SB958

MAR-17-2008 15:50 From:ADSC

Personal Testimony Presented before the

House Agricultural Committee

March 19 2008 at 9:00 AM

Opposition to SB 958 Relating to Genetically Modified Organisms

Dear: Chair Clifton Tsuji, Vice Chair Tom Brower, and the Members of the Committee

My name Chris Kadooka and I am a Research Associate at the College of Tropical Agriculture and Human Resources at the University of Hawaii at Manoa. I am glad to provide personal testimony on SB 958. This testimony does not represent the position of the University of Hawaii or that of the College of Tropical Agriculture and Human Resources.

I work in the Plant Pathology Program and I have done years of work with the taro industry. As part of our research we conducted many field experiments in the fields and I got to know many local taro growers. They are very hard working individuals who are committed to growing this difficult crop. Their hours are very long but their spirits are good and they were always willing to learn from new research based cultural practices.

I believe that most of the taro growers do not support SB 958. The basic research that the college is conducting is for the survival of the industry and includes efforts to maximize yields, while managing diseases and insect pests and at the same time protect the environment, and do all of this in a manner that is sensitive to the cultural importance of this precious plant. Quite a balancing act.

The intention to preserve taro is vital, but I do not believe that the blanket proposal to halt all research in taro is in the best interest of the farmers or of the people who honor it and seek to protect it.

Thank you for this opportunity to testify. I urge the committee not to pass SB 958.

Sincerely,

Chris Kadooka

Department of Plant and Environmental Protection Sciences

3190 Maile Way

University of Hawaii

Honolulu, Hawaii 96822

Clima y Malade

Personal Testimony Presented before the House Committee on Agriculture March 19, 2008 9:00 am by Dr. Paul Singleton

Position: Oppose

SB 958, SD1, HD1 GMO Taro Bill

Chair Rep. Tsuji, Vice Chair Rep. Brower and Members of the Committee:

My name is Paul Singleton and I am a Research Scientist with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am providing personal testimony on SB958.

I have read the bill and strongly oppose it. Scientific inquiry must be based upon facts and not upon misinformation. Taro productivity has been in steady decline for year on Hawaiian farms. It is apparent that disease susceptibility of older varieties has played a large role in declining yield. In order to sustain this industry growers need access to improved varieties with better disease resistance. These varieties will only be realized through research including modern genetic research.

Contrary to some concerns, the modern gentic tools we have at our disposal will not compromise the exisitance of traditional Hawaiian varieties. There has been ample documentation presented to the Committee on the flowering habits of taro and the Hawaiian cultivation practice of clonal propagation that ensure the integrity of traditional lines.

I understand that the Kauai Taro Growers Association, who supply most of Hawaii's taro, do not support this bill either. While no one can predict the future of the taro industry in Hawaii, one thing is sure: an a priori restriction of the tools growers' need to maintain viable production operations is not in anyone's interest.

Your support of positive bills like SB 2915 Taro Security and Purity Task Force, and HB 3425 (research on apple snails) is needed. These bills are bills that will help the taro industry. SB 958 is a flawed bill that is may significantly contribute to the demise of the taro industry and perhaps even the loss of the remaing Hawaiian varieties.

Thank you for the opportunity to testify on this bill.

Sincerely, Paul Singleton

Personal Testimony Presented before the House Committee on Agriculture March 17, 2008 3:00 pm by David Oka

Position: Oppose

SB 958, SD1, HD1 GMO Taro Bill

Chair Rep. Tsuji, Vice Chair Rep. Brower and Members of the Committee:

My name is David Oka and I am a Farm Manager with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR) in Maui County. I am pleased to provide personal testimony on SB958. This testimony does not represent the official position of the University of Hawai'i or CTAHR.

I oppose this bill because research and development should be based on facts, not misinformation and fear. I support the Kauai Taro Growers Association's position that restricting research that may be necessary is not a good thing. No one knows what the future brings---look at the devastation of the wiliwili trees.

Your support of positive bills like SB 2915 Taro Security and Purity Task Force, and HB 3425 (research on apple snails) is needed. These bills are bills that will help the taro industry. SB 958 has divided the community too long. It's time it is stopped.

Thank you for the opportunity to testify on this bill.

Sincerely, David Oka

Personal Testimony Presented before the House Committee on Agriculture March 19, 2008 9:00 am by Pam Shingaki

Position: Oppose

SB 958, SD1, HD1 GMO Taro Bill

Chair Rep. Tsuji, Vice Chair Rep. Brower and Members of the Committee:

My name is Pam Shingaki and I am an Agricultural Research Technician with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR) in Maui County. I am pleased to provide personal testimony on SB958. This testimony does not represent the official position of the University of Hawai'i or CTAHR.

I oppose this bill because research and development should be based on facts, not misinformation and fear. I support the Kauai Taro Growers Association's position that restricting potentially important research is not a good thing. No one knows what the future brings---look at the devastation of the Wiliwili trees. Transit of goods worldwide makes it very difficult to prevent the importation of new pests and diseases into Hawai'i. Our State plant quarantine offices are understaffed and unable to inspect every piece of cargo or luggage arriving at our ports and airports. We cannot just depend on a wish and a prayer that nothing slips through. By the time a disease or pest hits Hawai'i's taro farms and destroys them, it may be too late for research and/or technology to save them. Taro's sensitivity to foliar sprays and water movement of lo'i grown crops would severely limit traditional controls using pesticides and fungicides.

I fear a ten year moratorium on genetic research on Taro and the divisiveness it has already caused will discourage many researchers from working on this important crop. CTAHR's 100 year legacy of Taro research was always done with our growers and the community in our best interests. We hope to continue this legacy using modern science and technology to help keep this industry alive.

Your support of positive bills like SB 2915 Taro Security and Purity Task Force, and HB 3425 (research on apple snails) is critical and much needed. These bills are important to the survival of the taro industry and it's germplasm. SB 958 has divided the community too long. It's time it is stopped.

Thank you for the opportunity to testify on this bill.

Sincerely, Pam Shingaki

From: Hugh Lovell [pihi52@yahoo.com]

Sent: Monday, March 17, 2008 2:35 PM

To: sb958writtenonlytaro

Cc: Sen. Russell Kokubun; Sen. Lorraine R. Inouye; Rep. Clifton K. Tsuji; repbrower@capitol.haw

Subject: GMO

Aloha,

I am sending this e-mail in opposition to the SB958. I feel that this bill has been drafted without forethought and is being supported by a large number of Native Hawaiians that have been mislead.

Informational mailers have been sent by snail-mail as well as e-mail giving one the impression that if one does not support this bill, then you may not be Hawaiian. Immersion School children have been brought into this fight along with their parents to join together in lokahi to fight this "land grab" on our ancestors genes.

The Tribune Herald posted a story on Sunday 03-16-08 about the hearings that took place in Puna. Mr Jerry Konanui was the most outspoken promoter of SB958. It should be known that the poster pictures show n are not Konanui's taro. That taro field belongs to the University of Hawaii, CTAHR, and was planted by Susan Miyasaka in Kainaliu, N. Kona. Jerry Konanui does not have a Taro Field, he grows taro in buckets in his backyard in Puna. The other outspoken supporters of this bill are not Taro Farmers. In Kauai the taro farmers came out against this bill, so did the Keanae, Hana and Waipio farmers.

The real issue here is, 1)THERE IS NO GE RESEARCH BEING DONE ON KALO NOW, 2) IF THERE WAS A GE KALO IN THE WILD IT COULD NOT CONTAMINATE HAWAIIAN VARIETIES (reason- Taro is unable to pollinate in the wild, cross pollination can only be done by man), 3)THERE IS NO NEED TO DO GE KALO SINCE DR. JOHN CHO PROVED THAT THE SAME RESULTS COULD BE GAINED BY CROSS POLLINATION, 4) KALO IS BEING USED AS THE FIRST IN A STRING OF DOMINO'S, IF THIS BILL SUCCEEDS ADDITIONAL BILLS WILL FOLLOW TO ELIMINATE ALL GE/GMO RESEARCH IN THE STATE.

Using recombinant DNA, Genetic Engineering has provided millions of people with insulin which comes from e. coli bacteria. Our older Bovine insulin was in short supply and there was some allergic reaction. During oil spills, the bacteria used to "eat" the oil are genetically Engineered bacteria. When we look at a piece of cheese, all cheese, the bacteria used to curdle the milk is genetically engineered. There are many good and useful things that can and have been gained by using recombinant DNA in genetic engineering.

The initial fear of this technology is the use of Human DNA in plants and animals especially in the study and manufacture of medicines. This is where the problem started now everything is being labeled as "Franken science". The initial study by Dr. Miyasaka was to see if she could place resistance to Taro Leaf Blight into Chinese Bun Long taro. This research has concluded and it is still within the laboratory. This was nothing to do with Hawaiian Varieties, or attacking Haloa.

Where were all the activists that cared about Haloa when Kamehameha died and the Kapu was broken. We lost many varieties then. In 1849 when the Hawaiians walked away from the

lo'i we lost more varieties now totaling in the hundreds. By the time the University collected the Kalo there were 70 left. U of H has been caring for this Heritage for 85 years. Where is the help from the younger brothers of Haloa. Surprisingly absent. The activists we have today, do not farm and they have no clue to the science involved except that Environmentalists say its bad.

If this bill passes, I will know that our Legislators were held captive by a group of Hawaiians that used fear & mistrust to win at any cost.

Mahalo

3/17/2008

Hugh "Buttons" Lovell Waimea, Kohala, Hawaii 808-217-6124

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Date: March 17, 2008

To: Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From: Tom Scagnoli

Kaunakakai, Molokai

808-553-5070

Hearing: Wednesday, March 19, 2008, 9:00 a.m.

Re: Opposition to SB958, Relating to Genetically Modified Organisms

Dear Honorable Chair Tsuji and Vice-Chair Brower,

I am writing to ask that you oppose SB958 and give your support instead to SB2915.

All SB958 does is put a stop to research at a time when taro growers need it the most to fight apple snails and other problems. The papaya industry in Hawaii nearly disappeared due to the ringspot virus and Genetic Engineering played an important role in preserving that industry.

SB2915 would create a taro security and purity task force. It calls for discussion among taro growers, Native Hawaiian groups, farmers and other stakeholders. It supports finding solutions to pest problems without slamming the door on genetic engineering. The Kauai Taro Growers Association has come out against SB958 and in favor of SB2915.

Please vote "no" on SB958, and instead, find positive ways to support our agricultural industry, including the taro growers.

Thank you very much for your consideration.

Tom Scagnoli

Tor Legal.

Personal Testimony

by

Michael Melzer

before

The House of Representatives Committee on Agriculture

Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

regarding

SB958 RELATING TO GENETICALLY MODIFIED ORGANISMS

Wednesday, March 19, 2008

9:00 AM

Opposition to SB958 Relating to genetically modified organisms

Chair C. Tsuji, Vice-Chair T. Brower, and members of the Committee:

My name is Michael Melzer, and I am a Graduate Student and Junior Researcher in the College of Tropical Agriculture and Human Resources (CTAHR) at the University of Hawai'i at Mānoa (UHM). I wish to provide personal testimony on a Bill; SB958 Relating to genetically modified organisms. This testimony does not represent CTAHR or UHM.

In general, it is much easier to understand the things you can see as opposed to the things you cannot see. This is especially true for the general public when it comes to the subject of genetics. The vast majority of people think the only way genes get exchanged in nature is through mating. They see 'labradoodles' when their Labrador retriever has puppies with a French poodle, and hapa children whose parents are of different ethnic backgrounds. But scientists recognize that this type of mating is not the only way genes get around. DNA is much more promiscuous. Genes have been moving from viruses and bacteria into plants and animals a long time before scientists and "genetically modified organisms" came along. Tomatoes, bananas, and potatoes are on a long list of food crops that have DNA in them that did not arrive through mating with one of their own. It's a safe bet that taro will be on this list as well (and don't feel left out, it is estimated that 3-8% of the human genome came from DNA naturally inserted by microbes). In fact, scientists use these microbes that naturally insert their DNA into plants to make GMOs. The only difference is that scientists switch the gene the microbe would put in the plant with one they want in the plant. I personally think this approach is much more natural than that taken by the previous generation of plant breeders who bombarded seeds with radioactivity, high energy particles, or toxic chemicals in hopes of creating a beneficial mutation. Many of the foods on the supermarket shelves today came from this type of mutation breeding. And you will never hear a protest from any environmentalist group about the safety of this approach, mainly because organic stores also put these foods on their shelves, and that would be bad for business.

As for SB958 and those who wish to defend the 'purity' of Kalo from scientists in Hawai'i, I cannot understand how CTAHRs 10-year moratorium on genetic-engineering of Hawaiian varieties of Kalo is insufficient. Out of respect for my host culture, I supported this moratorium, but I cannot support SB958. How are Chinese varieties of taro a part of traditional Hawaiian culture? Why would people want to limit what we can learn about this important food crop? I can only speculate that those who crusade against GMOs, whose erroneous ideology has it that DNA can and should only be exchanged within a species, have highjacked those with the more noble goal of promoting Hawaiian culture in hopes of intertwining these very different pursuits. I suspect very few people would be in favor of SB958 or so vehemently opposed to GMOs if they could only see where all the DNA of a plant comes from as easily as they can see a labradoodle.

Thank you for the opportunity to provide this testimony.

From: Jan Dill [jedill@pidfoundation.org]
Sent: Monday, March 17, 2008 1:53 PM

To: sb958writtenonlytaro

Personal Testimony House Committee on Agriculture March 19, 2008 SB 958, SD1, HD1, Relating to Genetically Modified Organisms

Chair Tsuji, Vice Chair Brower, and Committee Members,

My name is Jan E. Hanohano Dill and I have the pleasure of serving on the Board of Advisors of the College of Tropical Agriculture and Human Resources of the University of Hawai`i at Manoa.

I am opposed to SB 958, SD1, HD1.

As a Hawaiian I appreciate the challenges of integrating the science and the practical social/cultural impact of GMO research, particularly as it relates to kalo. The challenges, however, to the survival of kalo are significant and cannot be underestimated. The disaster of the Samoan crop failure should be a wake up call for us to responsibly protect our Hawaiian varieties from a similar fate. To prohibit our scientists from responsible research and investigation on kalo as proposed in SB 958, SD1, HD1 removes Hawai'i from participating and contributing to the scientific work of protecting a plant that is culturally and nutritionally important to our community.

I urge the Committee to **not pass** SB 958, SD1, HD1.

Me ka mahalo.

Duane A. Ahina

Address: 89-117A Nanakuli Avenue

Waianae, Hawaii 96792 Phone Number: 808 351-4460

Email: duane.ahina@monsanto.com

Position: Oppose

Date: March 17, 2008

Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

Post-it® Fax Note, 7671	Date 3 7 pages
To 4avo /58958	From Duane Africa
Co./Dept. State Capital	co. Monsanto
Phone #	Phone # \$08.555.5070
Fax # 800.525.3659	Fax# 808-553-5436

Re: SB 958hd1, March 19, 2008 Hearing

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Duane Ahina. I live on the island of Oahu, but work on the island of Molokai. I commute weekly, leaving my family on Monday mornings and returning on Fridays.

My family has lived here since the beginning and we can trace our linage to King Kahekili.

My immediate family (just like my family in the past) has been raised eating poi from infant stage of our lives.

I want to be able to have this for future generations at affordable prices and I feel the only way is to oppose this bill.

I do not support SB 958sd1 because the vocal minority does not speak for me. I believe that bills like this does not support agriculture on Molokai, or anywhere else in the state. I believe that bills like this eventually will impact the existing biotechnology companies in Hawaii. For example, on Molokai, the seed corn company is among the largest employer and members of our business community since the late 60's. They have proven to be good neighbors, and more important, they are part of our families and contribute to our rural lifestyle. Hawaii is a proud state, however, I do not want it to be the first state to ban genetically engineered research and development and biotechnology.

I do not support SB958sd1 because the vocal minority does not speak for me. I grew up eating poi but now there is a shortage and it is expensive. My family cannot eat poi all the time. If genetically engineered poi will get us more poi, cheaper poi so we can eat it more, let's do it!

I do not support SB 958sd1 because the vocal minority does not speak for me. From what I understand no one is doing genetically engineered taro research anymore. Who would want to, with all this trouble! So, why do you need a moratorium? Energy should go to SB 2915 which puts money behind a process for Hawaiians, taro growers, Department of Agriculture, OHA, and UH to talk about solutions for more taro.

Please do not support SB 958sd1. Thank you for the opportunity to testify.

From: Rhian Campbell [campbellr021@hotmail.com]

Sent: Monday, March 17, 2008 11:36 AM

To: sb958writtenonlytaro **Subject:** Opposed to SB958

March 17, 2008

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Rhian Campbell and I strongly oppose SB958. I live in Waimea and have been working at Pioneer Hi-Bred's research center for over five years after relocating to the island of Kauai to be nearer to my family.

SB958 is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous; in fact there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. If Hawaiian taro farmers were to be presented the same challenges that papaya farmers faced on the big island years ago, this bill would restrict development of potentially effective tools for farmers to combat pathogens that could completely wipe out the very strains of taro they are trying to protect.

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Rhian Campbell

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Testimony Submitted to the House Agriculture Committee in Strong Support of SB 958 Relating to 10-Year Moratorium on Genetic Modification of Taro

Hearing: Wednesday, March 19, 2008, 9:00 am State Capitol Auditorium, House Conference Room

Aloha Chair Tsuji, Vice-Chair Brower and Committee Members,

I urge you to support SB 958.

I do not oppose GMO research per se. As an engineer, much of my career has been involved in research. However, I am <u>strongly</u> opposed to the irresponsible manner in which GMO research is being carried out in Hawaii, with no notification to the public regarding the location and nature of experimental GMO field sites; no effective assignment of liability to those who grow GMO crops for consequential health, environmental or other damages associated with those crops; and inadequate controls against the contamination of non-GMO crops from the open air growing of GMO crops.

While we should not take risks with <u>any</u> of our food crops, it is doubly important that we not take such risks in the case of taro, which is both culturally significant to many of Hawaii's residents and a mainstay of the Hanalei environment.

For these reasons, I believe it is both prudent and reasonable to impose a ten-year moratorium on the developing, testing, propagating, cultivating, growing, and raising of genetically modified taro in the state of Hawaii.

If during the ten-year moratorium both the academic research community and the industry can affirmatively prove that all of the controls and legal mechanisms have been put into place to fully address all of the potential problems that I have noted above, then subsequent legislation could easily be enacted to end the moratorium.

In the meantime, please support responsible science. Please support SB 958.

Thank you for this opportunity to testify.

Carl Imparato PO Box 1102

Cal F. Super

Hanalei, HI 96714

808-826-1856

carl.imparato@juno.com

Hawaii
Institute for
Molecular Sciences

HOUSE OF REPRESENTATIVES

THE TWENTY-FOURTH LEGISLATURE

REGULAR SESSION OF 2008

SB 958, SD1, HD1 RELATING TO GENETICALLY MODIFIED ORGANISMS

DATE: March 19, 2008

9:00 am., State Capitol Auditorium Conference Room 325

TO: COMMITTEE ON AGRICULTURE

The Honorable Clift Tsuji
The Honorable Tom Brower

FROM: Tak Sugimura Vice President, Director Hawaii Institute for Molecular Sciences

RE: Testimony In Strong Opposition to SB958

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

I strongly oppose SB958 which imposes a 10-year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State.

Thank you for the opportunity to testify.

Testimony to the House Committee on Agriculture Wednesday, March 19, 2008 9:00 a.m.

SB958 HD1: Genetically Modified Organisms; Taro; Moratorium

Dear Chairman Tsuji, Vice-Chairman Brower, and Members of the Agriculture Committee:

My name is Brent Sipes. I am an environmentalist, scientist, Professor in the College of Tropical Agriculture and Human Resources, and a concerned voter. I **strongly oppose SB958 HD1**: A moratorium on genetic modification of taro.

SB958 HD1 is fundamentally flawed. Imposing a moratorium on taro research, be it genetic engineering or otherwise, has the opposite effect of recognizing the importance of taro in the State. A moratorium of any length on research, testing, developing, propagating, cultivating, raising, and growing genetically modified taro in Hawaii puts the plant and its continued cultivation in the State at risk. Passage of this bill will facilitate the continued demise of taro cultivation in Hawaii, not recognize its importance.

While of cultural importance locally, taro is not unique to Hawaii. Taro is cultivated around the world. Currently most of the taro consumed locally is imported. Our state and community is better served by encouraging research that will help to increase the amount of taro produced locally, not to discourage research on the crop. SB958 HD1 works against efforts to create a sustainable Hawaii.

As the greater US agricultural community moves towards coexistence of different agricultural systems, it makes little sense for our State to move in the opposite direction of limitations and prohibitions. Our current regulations regarding genetic modification of plants work well.

Passage of SB958 HD1 would cater to fear mongering, validate unsubstantiated claims of danger, and hasten the demise of taro cultivation in our Hawaii. For these reasons, I hope that you will not pass SB958 HD1 out of committee. Thank you for the opportunity to offer testimony. IF you would like additional information, I can be reached sipes.brent@gmail.com.

Yours truly,

Brent Sipes Kamehameha Heights

Honolulu, HI

cc: Senator Suzanne Chun Oakland

Personal Testimony Presented before the House Agriculture Committee on SB 958 SD1 HD1 March 19, 2008 9:00 am By Ming M. Hu

SB 958, SD1, HD1

A Bill for An Act relating to Genetically Modified Organisms

Personal Testimony in OPPOSITION to the Bill

The House Agriculture Committee Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

Chair Tsuji, and Vice Chair Brower, and Members of the Committee:

My name is Ming Hu, a resident of Honolulu. I have a bachelor degree in Botany, and a master degree in Computer Science. I am writing to provide a personal testimony **in opposition** to SD 958, SD1, HD1.

With increased traffic in air and sea transportation, more invasive species are coming in Hawaii each year. According to HDOA, a new invasive species is established in Hawaii every three weeks. These invasive species pose the most challenges to the Native Hawaii plants and animals. According to an article appeared in the US News and World Report (January 29, 2007; page 56), the population of Americas is estimated more than 70 million in 1492, the year Columbus arrived in the New World. But, by 1650, only 6 million Indians remained. The catastrophic loss of native life was attributed to the various diseases brought to the New World by the settlers from the Europe!

Native Hawaiian Kalo are disappearing from our islands because of the new diseases brought in by the increased traffic. It is not whether, but when, a devastating taro disease will come to Hawaii. The new disease WILL destroy the remaining Hawaiian Kalo if we do not do something NOW. Genetic engineering disease fighting traits into Chinese taro will help scientists to develop new hybrids which will ensure the long term survival of all taro. Not allowing scientists to do their job will only speed up the demise of Hawaiian Kalo. Modern biotechnology is not a treat to the Hawaiian Kalo; but the ignorance is. Therefore, **I oppose this bill.** Thank you for the opportunity to testify in opposition to SB 958 SD1 HD1

Personal Testimony Presented before the House Committee on Agriculture March 19, 2008 9:00 a.m. by James R. Hollyer

SB 958, SD1, HD1 (HSCR1218), Relating to Genetically Modified Organisms

Chair Rep. Clift Tsuji, Vice Chair Rep Tom Brower, and Members of the Committee:

Rep. Lyla B. Berg, Ph.D.

Rep. Kyle T. Yamashita

Rep. Glenn Wakai

Rep. Robert N. Herkes

Rep. Jerry L. Chang

Rep. Corinne W.L. Ching

Rep. Ryan I. Yamane

Rep. Joey Manahan

Rep. Faye P. Hanohano

Rep. Colleen Rose Meyer

My name is James R. Hollyer, and I am an Agricultural Economist with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide personal testimony on SB 958, SD1, HD1 (HSCR1218). This testimony does not represent the position of the University of Hawai'i or CTAHR.

CTAHR scientists have been THE caretakers of taro for over 107 years. Since 1901 the Hawaii Agricultural Experiment Station has worked to resuscitate the health of taro plants and the health of the taro industry from less than optimal production practices, natural disease and pests, and a declining interest in its production, consumption, and preservation. CTAHR has been THE entity that has stood by taro and performed research, if adopted, would go a long way to reduce the impact of disease and pests on taro. In fact, in 1902 the second publication out of the research station was The Root Rot of Taro. Taro diseases have been in Hawaii for at least 107 years, and they have been met head-on by CTAHR's scientists who have promulgated, both in English and Hawaiian (in the beginning), best practices to keep taro healthy and as disease-free as possible. Similarly, the college's taro collection work in the late 1930's lead to the largest collection of unique taro cultivars in one place, and a systematic written description of taro varieties. Again, CTAHR scientists took the lead to support and preserve taro. Taro collections throughout the state can most likely trace their collections, or at least were inspired by, this visionary effort. College scientists have also worked on new taro products since the 1930's – a way to try to stimulate taro production and consumption. They introduced plastic bags to poi marketing in the late 1940's; thus allowing for poi to be sold in a wider variety of stores. What have other individuals or organizations done to preserve, enhance, or grow the taro industry for the last 107 years?

Our scientists have always used the technology of the day to solve problems; this is a rational behavior. With the diseases facing taro, and the production losses facing commercial growers, it seems senseless not to use safe, available technology. Taro does not have the luxury to wait hundreds of years to shore up its genetic strength by itself. And, it does not appear that other organizations or individuals are willing to put their collective knowledge and creativity, financial resources, and decades of their own time together for a sustained effort to use traditional breeding techniques to strengthen taro. Taro deserves us to use modern techniques to save it, just like humans do.

Thank you for the opportunity to testify on this bill.

Please vote against SB 958.

I am a resident of Honolulu and am a sales rep for a freight forwarder. I am very concerned about this bill.

First, it would restrict research on taro to improve disease resistance. There are deadly diseases in the South Pacific that could kill all Hawaiian taro varieties in Hawaii if it reaches here. Genetic engineering research may be needed in the future to save the taro industry in Hawaii similar to the way it saved the papaya industry in Hawaii.

Second, there is no conflict between cultural respect for Hawaiian taro varieties and genetic engineering (GE) research on Chinese taro Bun long. There is little risk of accidental movement of transgenes from GE Chinese taro to Hawaiian taro varieties, because: a) Bun long rarely flowers under the environmental conditions in Hawaii, b) Hawaiian taro varieties flower but rarely set seed capable of growing into whole plants in Hawaii; and c) the insect pollinator needed to cross-pollinate taro flowers is not found in Hawaii.

Third, the cultural/religious beliefs of one group should not be made into a law. This would be similar to the state Legislature passing a bill against birth control based on the religious beliefs of Catholics. Or similar to the state Legislature passing a bill against blood transfusions based on the religious beliefs of Seventh Day Adventists.

I am against SB 958 for these reasons and urge you to vote against it.

Sincerely,

Iris Iwami

>

Personal Testimony Presented before the House Agriculture Committee on SB 958 SD1 HD1 March 19, 2008 9:00 am By Ching Yuan Hu, Ph.D.

SB 958, SD1, HD1

A Bill for An Act relating to Genetically Modified Organisms

Personal Testimony in OPPOSITION to the Bill

The House Agriculture Committee Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

Chair Tsuji, and Vice Chair Brower, and Members of the Committee:

My name is Ching Yuan Hu and I am the Associate Dean and Associate Director for Research with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide personal testimony **in opposition** to SD 958, SD1, HD1. This testimony does not represent the position of the University of Hawaii or CTAHR.

In my role as Associate Dean and Associate Director for Research, I am responsible for overseeing CTAHR's research programs. CTAHR has close to 190 faculty members, and more than half of them have research appointment. Our state funded budget is about \$10 million, with a majority of these funds are used to pay faculty and staff salaries. Our faculty members generate more than \$20 million each year in grants and contracts. More than 340 research projects are being conducted by our faculty members. These projects range from very basic studies to understand functionality of the papaya genome to very applied study to identify new methods to combat invasive species, such as Coqui frogs, or Fountain grass. Of all research projects only about half a dozen are using taro as experiment subject. Only one project is using transgenic technology in the study.

Dr. Miyasaka is the project director for this USDA-funded transgenic Chinese Bung-Long taro project, a collaborative effort of CTAHR (Susan Miyasaka and John Cho), USDA/Pacific Basin Agriculture Research Center (PBARC; Paul Moore and Maureen Fitch) and Hawaii Agricultural Research Center (HARC; Judy Zhu) researchers. Although Dr. Miyasaka is the project director; all experimental work has been conducted at the HARC facility. No transgenic taro materials have ever been present in any UH facilities. The transgenic taro materials are plantlets in tissue culture or in the growth chamber in the laboratory. No transgenic materials are in green houses, or open fields. This project has been approved by both UH and HARC Institutional Biosafety Committees (IBC). Review and approval by these committees are a condition

of receiving funding from USDA. Faculty must follow all established rules and regulations, and approved research protocols must be followed. The USDA/CSREES grant to support this project will be ending in September 2008, and Dr. Miyasaka's IBC approved project protocol does not expire until June 2009. Dr. Miyasaka and her colleagues intend to publish three manuscripts based on the data collected from this project. Their first manuscript has been accepted for publication recently. They are in the process of revising the second manuscript. The third one is further along. It is not uncommon for journal reviewers to request additional data as a condition to publish. All experimental materials must be available to other scientists so that confirmation studies can be conducted to verify their results. Therefore, Dr. Miyasaka must keep all taro plant materials available for an extended period after the study is complete. If SD 958, SD1, HD1 passes, Dr. Miyasaka will be forced to destroy all transgenic materials, which will jeopardize her ability to publish their research results.

CTAHR has been very open and cooperative with our stakeholders and the farming communities on taro issue or any other issues. We have repeatedly expressed our commitment to uphold the Hawaiian taro moratorium, made in 2005, that we will not conduct any transgenic research on Hawaiian taro without first consulting Native Hawaiians. We have no plan to conduct any transgenic Hawaiian taro research at present or in the near future. Dr. Miyasaka's research project does not pose any threat to the Native Hawaiian kalo since all her work is inside the laboratory. She should not be forced to destroy her transgenic Chinese Bung-Long taro plants, as these plant materials may be useful to other scientists outside Hawaii to develop disease-resistant varieties. I cannot see the wisdom in banning any research activities regardless the methodologies used. Therefore, I oppose this bill. Thank you for the opportunity to testify in opposition to SB 958 SD1 HD1

Personal Testimony Presented before the House Agriculture Committee on SB 958 March 19, 2008 9:00 a.m. by Barbara Yee

Opposition to SB 958 Relating to Genetically-Modified Organisms

Dear Chair Representative Tsuji, Vice Chair Representative Brower, and Members of the Committee:

My name is Barbara Yee and I am a Professor and Chair, Family and Consumer Sciences with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide personal testimony on SB958. This testimony does not represent the position of the University of Hawai'i or CTAHR.

As a member of the Advisory of Research on Women Health at the National Institutes of Health, and social scientist conducting research on health of families and Asian and Pacific Islanders, I strongly oppose SF 958. This bill would have a chilling effect on all molecular and genetic research on plants, animals and humans that is so important for development of the Life Sciences research enterprise in Hawaii. We may be banning all genetic and molecular research that may one day cure cancer and other diseases that produce negative health outcomes for Native Hawaiians, and people in Hawaii and across the Pacific Islands. This bill would impose wide sweeping moratorium on conducting research on genetically modified organisms. This wide sweeping bill would send an international message to NIH, Life sciences companies, and seed companies (significant part of Hawaii's economy) that this important molecular and genetic research cannot be done here.

In my view as a Kanaka Maoli with family roots in the 1800s, I feel that the University of Hawaii and CTAHR has demonstrated their responsiveness to the cultural beliefs of Native Hawaiians by entrusting the Hawaiian taro patents to the Hawaiian community. As important, they have NO future intention to modify the Hawaii taro plants in future research. This important research must continue on other varieties of taro and other plants to counteract diseases and address world hunger. This science may one day save the native Hawaiian taro varieties and other indigenous Hawaiian plants from extinction.

Thank you for the opportunity to testify on this bill.

Barbara Yee <u>Dragonboomber@aol.com</u> 4460 Puu Panini Ave. Honolulu, HI 96816 Representative Clif Tsuji, Chair of Agriculture Committee Representative Tom Brower, Vice Chair of Agriculture Committee Wednesday, March 18th, 2008 – 9:00am SB958 SD1 HD1 – Relating to Genetically Modified Organisms

Aloha, my name is Summer Starr, resident of Upcountry Maui. I am in strong support of SB958, which provides for a 10-year safety period/moratorium on all genetic modification and patenting of Kalo.

The reasons to enforce such a safety period are staggering:

- 1. The genetic modification of any organism may have a number of unknown, adverse, and possibly irreversible effects on human health. In our recent history there have been many large-scale works of propaganda to convince us that what is potentially deadly, is actually harmless, and good for us no less i.e.: Tobacco, and DDT. This is not a pattern of deceit we need duplicate.
- 2. The status of our indigenous and endemic plant life is extremely threatened, and hangs in a delicate balance. We are **not** in any position to allow further endangerment of this fragile system. **Our priority should be the vehement protection of what remains of our unique ecosystems.**
- 3. Hāloa is an ancestor of the Hawaiian people, and for Kalo to undergo further genetically modification would be insulting and insensitive.
- 4. There are precautionary forms of scientific research, which do not expose the Kalo to the disrespectful and dangerous genetic engineering.

Please take the testimony from our communities as a strong signal that the people of Hawai'i Nei will not allow technological hubris and cultural insensitivity ruin the integrity of Kalo. Please, member of the House Committee on Agriculture – pass this bill.

It is the Legislature's responsibility to protect the health and well being of our people, of our mahi'ai, of our keiki, and of course, of our 'āina. Please don't let corporate interest ruin what is in our best interest.

Thank you kindly, legislators for hearing the concerns of our community. Your consideration and kōkua are greatly appreciated.

Mahalo, Summer Starr

TESTIMONY- IN SUPPORT

SB958- 10 Year Moratorium on the Genetic Modification of Taro

Aloha Legislators,

I write to ask that you support the 10 year moratorium on all forms of genetic modification and patenting of the taro (kalo) plant species. For 1200 years farmers in Hawai'i have cared for and protected the most varieties of taro on the planet. In Hawai'i taro is the plant of the people- it is our living culture and ancient history, native nutrition and ecological tradition. Taro provides a beloved and unique hypoallergenic food, medicine, sustainable agriculture and industry for Hawaii. Genetically modifying any variety of taro is culturally disrespectful and also poses irreversible and irresponsible dangers to our food, health, environment and economy.

I support sustainable farming & precautionary scientific research that does not expose the taro species to the disrespect and risks of genetic engineering. I ask that the legislators actively support farmers/scientists in publicly accepted and safely advanced methods of protecting taro from land & water issues and invasive pests & diseases.

Taro is an incomparably sacred and valuable part of our island community. We join mahi'ai (farmers) of Hawai'i in calling on you and your fellow legislators to protect all of us and Hawaii's unique culture and resources by passing a law to provide a 10 year moratorium on the genetic modification and patenting of all varieties of the taro plant species.

Malama Haloa! Malama Pono,

Kealii Makekau

2563 Date st #312

Honolulu, Hi 96826

Personal Testimony Presented before the House Agriculture Committee on SB 958 SD1 HD1 March 19, 2008 9:00 am By Douglas L. Vincent, Ph.D., P.A.S.

SB 958, SD1, HD1

A Bill for An Act relating to Genetically Modified Organisms

Personal Testimony in OPPOSITION to the Bill

The House Agriculture Committee Representative Clifton Tsuji, Chair Representative Tom Brower, Vice-Chair

Chair Tsuji, and Vice Chair Brower, and Members of the Committee:

My name is Douglas L. Vincent and I am the Special Program Director for Contracts and Grants with the University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR). I am pleased to provide personal testimony **in opposition** to SD 958, SD1, HD1. This testimony does not represent the position of the University of Hawaii or CTAHR.

In my role as Special Program Director for Contracts and Grants, I manage over several million dollars in agricultural research funding that comes to CTAHR from the federal government annually. One of the programs that I manage is the USDA Cooperative State Research, Education and Extension Service Special Research Grant entitled "Tropical and Subtropical Agricultural Research." Except for the federal FY 2007, this program has provided agricultural research funding to Hawaii since 1983. Since 2002, the program has had an annual budget of over \$4 million dollars in agriculture research funding to support important agricultural research to Hawaii. One of the projects funded in this program was the three year federal grant to Dr. Susan Miyasaka entitled "Increased Fungal Resistance of Taro through Genetic Transformation." This project using the Chinese 'Bun Long' variety of taro is a joint effort between CTAHR, USDA Agricultural Research Service Pacific Basin Agricultural Research Center (PBARC), and the Hawaii Agricultural Research Center (HARC). If this bill passes, it would force the end of very significant research to determine whether disease resistant genes from rice, wheat and grape will improve 'Bun Long' taro's resistance to fungal pathogens such as the pathogens that causes taro leaf blight, which causes significant losses to Hawaii taro growers. A condition of receiving the federal funds through the Special Research grant legislation is a requirement for scientific merit review. This project received rigorous scientific peer review prior to its approval. Experts in fungal pathogens and molecular biology deemed the project to not only be sound scientifically but also be important to Hawaii taro growers given the current threat to world-wide taro production, due to

taro leaf blight and other fungal diseases. Yet this moratorium refutes the opinion of scientific community who strongly recognized the importance of this research before the project was begun. If the legislature passes this moratorium, what's to stop the legislature from accepting the unscientific opinion of a few activists, who want to ban research on other Hawaii crops – banana, cabbage or anthuriums because it threatens their view of reality? We stand at the precipice of a very slippery slope. Please think of the message this ban would send to other research, innovation, and technology-driven industries who might consider expanding to Hawaii. It sends a strong message to those industries that generate high-paying jobs to stay away from Hawaii. Those jobs are safe here. If passed, this moratorium also threatens the academic freedom of Hawaii academics, scientists and researchers. As someone who has given over 23 years to educating Hawaii's youth and budding scientists as a member of the faculty of the University of Hawaii at Manoa, I fear for Hawaii's future should this moratorium be passed. If Hawaii's legislature is of a mind to ban scientifically valid, peer-reviewed taro research, what will be next? Biology, Evolution, Genetics? This moratorium threatens much more than taro research – academic freedom is threatened by its passage. I plead with the committee to stop this bill now. I oppose this bill. Thank you for the opportunity to testify in opposition to SB 958 SD1 HD1

Date:

Friday March 14, 2008

To:

Representative Clift Tsuji, Chair

Representative Tom Brower, Vice-Chair

House Committee on Agriculture

From:

Trent Yantes

Wailuku, Maui

1-808-891-8830 EXT 202

Hearing:

Wednesday, March 19, 2008, 9:00 a.m.

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

I would like to testify against this bill to ban genetic engineering research on taro.

There has been a lot of coverage in the media about this issue, and many things said at public meetings and e-mails. Activists who support this bill have said they are using this taro bill as a stepping stone to banning all GMOs in Hawaii. If that's the case, then Hawaiian culture is just being used by others who have a different agenda altogether.

Taro needs to be discussed by native Hawaiians, farmers, and others who are affected by it. Don't pass a bill that's being used for another purpose.

Mahalo.

Trent A. Yantes

From: Mary Chen [mrsmarychen@hotmail.com]

Sent: Friday, March 14, 2008 3:03 PM

To: sb958writtenonlytaro

Subject: Please vote against SB 958

Dear Representatives:

I have been trained as an engineer and I am also a part-time farmer. I value science as a means of discovering new technologies to improve our lives.

Please vote against SB 958.

If this bill passed, it would unnecessarily restrict research on Chinese taro cultivar Bun long to improve disease resistance. There are deadly diseases in the South Pacific that could kill all Hawaiian taro varieties in Hawaii if it reaches here. Genetic engineering research may be needed in the future to save the taro industry in Hawaii similar to the way it saved the papaya industry in Hawaii.

There is no conflict between cultural respect for Hawaiian taro varieties and genetic engineering (GE) research on Chinese taro Bun long. There is little risk of accidental movement of transgenes from GE Chinese taro to Hawaiian taro varieties, because: a) Bun long rarely flowers under the environmental conditions in Hawaii, b) Hawaiian taro varieties flower but rarely set seed capable of growing into whole plants in Hawaii; c) the insect pollinator needed to cross-pollinate taro flowers is not found in Hawaii; and d) taro is grown not from seed but from vegetative plant parts.

I urge you to vote against Senate Bill 958. This Bill would place a 10-year moratorium against genetic engineering research on taro. We should not restrict research using all available means to improve disease resistance of taro, because this research is needed. The number of taro varieties has declined

probably due to newly introduced pests and diseases. More pests and diseases will probably arrive due to the ease of global transportation.

Research using all available technologies is needed to ensure continued taro production in Hawaii.

Please vote against SB 958. Thank you. Mary and Chengwu Chen Farmers in Pepeekeo, Hawaii P.O. Box 1067 Pepeekeo, Hawaii 96783 808-640-7687

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From: Tane . [tane_1@msn.com]

Sent: Saturday, March 15, 2008 12:36 AM

To: sb958writtenonlytaro

Subject: Vote FOR SB 958 to set a moratorium on GMO experimenting with our taro

To all concerned:

GMO has been cited as more than possible to endanger the health of people and on nature. It has been stated that "no scientific studies exist that guarantee that genetically modified crops won't have negative effects on human health and on nature."

This is a worldwide concern and many countries have banned GMO products and the growing of it within their country. What affects us here in Hawaii is the same thing. The idea of GMO companies tampering with our traditional food and plants are unconcionable and seditious. They have no right to do it or claim ownership of our taro nor do they have our permission to experiment with it in our country.

If you do not pass this moratorium to safeguard our important food source; then one can only assume you disrespect us and plan to intentionally cause us harm and create a dangerous situation. It can also be assumed that you are in conflict of interest for not protecting your constituents while catering to GMO lobbyists for pecuniary reasons. This would be discernable by investigating your campaign donors.

It stands to reason that anything as controversial as this would demand a moratorium to further investigate the rammifications of such irresponsible activity done by GMO corporations, especially with a troublesome history and shady reputation. Therefore I urge you to vote for SB 958 and place a moratorium on experimenting with our taro. Let's leave it to our local farmers and not the infamous GMO corporations to develop our taro.

Mahalo,

Tane

AKA: David M. K. Inciong, II Pearl City, Oahu, HI 96782-2581

Tane 1@msn.com

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From: Parrish, Daniel [daniel.parrish@pioneer.com]

Sent: Monday, March 17, 2008 6:23 AM

To: sb958writtenonlytaro Subject: SB958WrittenOnly

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Daniel A. Parrish and I strongly oppose SB958.

Paragraph 1: Tell a little bit about yourself - where you live, your background, why you care about this bill. State if you are Hawaiian. Please personalize the paragraph as much as possible. Do you eat taro or poi? Does your ohana?

Paragraph 2: What are the three main reasons why you oppose the bill? Here are some options (or use your own!):

The bill undermines ongoing talks with the Native Hawaiian Community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous. On the contrary, there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Legislating research is a slippery slope and is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro. Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at a time when it is critical for us to support the rich potential for innovation that is the key for sustaining our future.

Paragraph 3: Recommend an alternative and ask them to reject the bill. Here is an option:

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Danny Parrish Area Supervisor Pioneer Hi-Bred International, Inc. 808-637-0100 ext. 46

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Francais Deutsch Italiano Espanol Portugues Japanese Chinese Korean

From: Carolyn Classen [pololu@hotmail.com]

Sent: Friday, March 14, 2008 11:54 AM

To: sb958writtenonlytaro

Subject: opposition to SB 958

Once again the anti-GMO people have brought this short sighted bill to you in the State House.

This is becoming an argument of science vs. religion/culture. How can Evolution support the premise that the taro plant was the older brother of the Hawaiian people?

We need more research not less, to help the UH scientists find disease resistance genes to ward off any leaf blight, etc. that may come to Hawaii in the future. There are no guarantees that state agricultural inspections of ships will keep this out of Hawaii. Taro is a valuable food product to all of us in Hawaii and needed to be preserved.

Please do not vote for a taro moratorium as proposed by SB 958.

Sincerely,

Carolyn Classen, Esq. 1222F Kaumana Dr. Hilo, Hawaii 96720

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From: RVOSGOOD@aol.com

Sent: Saturday, March 15, 2008 9:27 AM

To: sb958writtenonlytaro

Subject: Taro testimony for March 19 Senate Bill 958

Please see my testimony pasted belowfor Senate Bill 958 to be heard by the Agriculture Committee on March 19.

Robert Osgood

Robert V. Osgood 47-775 Ahilama Rd. Kaneohe, HI 96744

March 19, 2008

Dear Chairman Tsuji and Members of the Senate Agriculture Committee

Thank you for allowing me to testify on Senate Bill 958 SD1

My name is Robert Osgood. I am a retired agricultural researcher with 44 years of experience in Hawai'i agriculture including 6 years spent at the University of Hawai'i where I obtained a MS and Ph.D degrees in tropical agriculture. I currently serve on the Agribusiness Development Corporation (ADC) Board, serve as an at large board member of the Hawai'i Forest Industry Association (HFIA), serve as a board member of the Agricultural Leadership Foundation (ALF), and serve as a board member of the Oahu Resource, Conservation and Development Council (ORC&D). I am testifying today as an individual in opposition to Senate Bill 958 SD 1 and have presented below some background information for my position on this important subject.

Taro is an important crop for Hawaii`i both for cultural reasons and for its status as a source of nutritious food. There are many varieties of taro, many of which were brought to Hawai`i by the early Polynesian inhabitants. These Polynesian varieties were undoubtedly selected for transport to Hawai`i based on their qualities including adaptability, yield of corm and leaves, cooking qualities and taste. It is widely recognized that the original varieties of taro brought to Hawaii have changed in the Hawai`i environment; that is, they are no longer exactly the same as those originally brought to Hawai`i. In a sense they have been genetically modified by natural means via a process called mutation. In addition some chance natural pollinations and intentional pollinations between Hawaiian taro varieties and taro varieties introduced later by other cultures have also occurred resulting in new varieties. Because taro is vegetatively propagated any virus disease attacking the taro plant is passed along during the propagation process. This occurs with all vegetatively propagated crops plants such as sugarcane, potato, sweet potato, casava, ginger; etc. Insects are the usual carriers of virus disease. The viruses weaken the plants and often reduce the yield and quality. In modern agricultural systems virus diseases are removed from plants through a process called tissue culture where disease-free parts of the plant are grown in the laboratory and then increased in the field in locations free of the vector insects. This procedure is commonly practiced for potato and vegetatively propagated potato seed is routinely screened for several virus diseases before it can be sold as "clean seed". In Hawaii we clean sugarcane seed of virus by this method.

This process of removing virus via apical meristem culture has already been accomplished in Hawaii for taro,

however, as soon as the cleaned up taro plants were placed in the field they were immediately attacked by aphids which transmited the virus disease. The most common taro virus in Hawaii is dasheen mosaic virus.

Another way to rid taro of viruses is through the use of a new tool called genetic engineering. The GMO plants resulting from this process do not allow the virus to replicate in the plant. In a sense the resulting plants are vaccinated to provide resistance to the disease. In Hawaii we use this process to produce virus resistant papaya; e.g., UH Rainbow papaya, UH Sunup papaya, and Kamiya papaya. The papaya plant was changed in a very small way to make it more productive by providing resistance to an important yield limiting virus. The same procedure could be applied to taro to improve the production of taro to the benefit of those who grow it. And, not only viruses can be controlled by the GMO tools. Additional GMO procedures can be applied to control taro insect pests and fungus diseases thereby reducing the need for pesticides. The resulting increased yields would allow the taro farmers to grow more taro on less land at lower costs with fewer pesticides.

It should also be recognized that the small and precise changes brought about through GMO tools have much less effect on taro genetics than making a cross between two varieties and producing a hybrid or the often detrimental changes which occur when a natural mutation is expressed.

Because of the great potential of GMO tools to change taro very slightly (less than that which can occur in nature) with the benefit of disease and insect resistance, I am opposed to the moratorium on GMO research as stated in SB 958 SD 1 and therefore recommend that SB 958 SD 1 be held in the House Agriculture Committee. To pass this bill out of committee places taro at increased risk of succumbing to devastating diseases as have occurred in some South Pacific islands and further limiting profitable production of Hawai`i taro. Also, passage of this type of restrictive, non-science-based legislation sends a disconcerting message to the seed companies now operating in Hawai`i who use GMO technology to produce new seed products for agriculture.

Respectfully,

Robert V. Osgood, Ph.D

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From: Robert Paull [robert.paull@hawaiiantel.net]

Sent: Friday, March 14, 2008 7:20 PM

To: sb958writtenonlytaro
Subject: Oppose Senate Bill 958

Testimony on SB - 958 House Committee on Agriculture March 14, 2008 Bill to be heard Wednesday, 03-19-08 at 9:00 am in House conference room

Robert E. Paull

This testimony is against the passage of SB-958.

I am a Professor of Plant Sciences and have been a faculty member at The University of Hawaii for 28 years. My expertise is in plant growth and development. I am familiar with the newer technologies being applied to crop plant improvement and have been involved in the application of traditional plant breeding methods to crop improvement. Today, my testimony is given as a private citizen and I am not representing the University's position on this bill.

The growth worldwide in the planting of crops created by genetic engineering has been very rapid and extensive. Growers have been quick to realize the advantages in their production system of these varieties. Reduction in production costs, reduced risks to farm operators who applied pesticides and reduced need to apply pesticides that could harm the environment are seen as advantages. Growers are not forced to use these varieties, growers are voluntarily using these crops and would not use them if there were not advantages. Growers have free choice, one of this Bill's outcomes is to limit this choice and to limit the researcher options in solving grower problems.

The ten-year moratorium would effectively prevent any and all activities on any type of taro. Taro production in the State has declined significantly in the last ten years, part of this decline has been associated with disease. The moratorium would effectively prevent researchers from utilizing all technologies to solve this disease problem in any type of taro.

The Bills wording is so broad that it would apply to number species in at least four genera (Alocasia spp. Cryptosperma spp., Xanthosoma spp., and Colocasia spp.), not just unique Hawaiian Taro varieties. A number of species in these four genera have the common name taro.

These species are both ornamentals and some are grown for food.

I would possibly support a Bill if it was restricted to "unique Hawaiian taro varieties of the species Colocasia esculentia", though it would be most likely be declared unconstitutional as the Bill is justified on cultural/religious grounds.

Thank you for the opportunity to testify on this Bill.

From: Sent:

jungle3639pirate@localnet.com Saturday, March 15, 2008 1:38 PM

To: Subject: sb958writtenonlytaro moratorium on taro

Dear Chairman Tsuji:

We would like to submit the following questions for your consideration on the moratorium for taro:

- 1. What is the worst case scenario if the 10 year moratorium does not go through?
- 2. What is the worst case scenario if the 10 year moratorium does go through?
- 3. What variety of taro are the people speaking of when they refer to Ha loa as the revered ancestor that they would like to protect from genetic modification?

Thank you very much for your consideration,

Keihanaikukauakahihuliheekahaunaele and Loke Keihanaikukauakahihuliheekahuanaele P.O. Box 6150 Oceanview, HI 96737 jungle3639pirate@localnet.com

From: Sent:

Linda Nagata [Imnagata@yahoo.com] Saturday, March 15, 2008 9:08 PM

To: Subject: sb958writtenonlytaro Genetic engineering

Please vote against SB 958.

First, it would unnecessarily restrict research on Chinese taro cultivar Bun long to improve disease resistance. There are deadly diseases in the South Pacific that could kill all Hawaiian taro varieties in Hawaii if it reaches here. Genetic engineering research may be needed in the future to save the taro industry in Hawaii similar to the way it saved the papaya industry in Hawaii.

Second, there is no conflict between cultural respect for Hawaiian taro varieties and genetic engineering (GE) research on Chinese taro Bun long. There is little risk of accidental movement of transgenes from GE Chinese taro to Hawaiian taro varieties, because: a) Bun long rarely flowers under the environmental conditions in Hawaii, b) Hawaiian taro

varieties flower but rarely set seed capable of growing into whole plants in Hawaii; and c) the insect pollinator needed to cross-pollinate taro flowers is not found in Hawaii.

Third, the cultural/ religious beliefs of one group should not be made into a law. This would be similar to the state Legislature passing a bill against birth control based on the religious beliefs of Catholics.

Or similar to the state Legislature passing a bill against blood transfusions based on the religious beliefs of Seventh Day Adventists.

I am against SB 958 for these reasons and urge you to vote against it.

Linda Nagata

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From:

Jaimie-Lynn Y Kihara [kihara@hawaii.edu]

Sent:

Sunday, March 16, 2008 9:39 PM

To: Subject: sb958writtenonlytaro OPPOSING SB958

I am writing in opposition for Senate Bill 958.

Research is based on science and facts. Doing research on GMO taro is extremely significant, because we can find a way to save the taro from the disease.

I support local papaya farmers who grow GMO papayas. Without the research of GMO papayas, it would be impossible for these farmers to make a living, due to the papaya ring spot virus.

I enjoy eating poi and kalo chips, and I don't want to see it disappear. Doing research is a way to save our kalo here in Hawai'i. Therefore, I support the research on GMO taro.

Sincerely, Jaimie Kihara

From:

John McHugh [Mchughj001@hawaii.rr.com]

Sent:

Sunday, March 16, 2008 11:40 PM

To:

sb958writtenonlytaro

Subject:

Written Testimony in Opposition to SB958

Dear Representative Tsuji and members of the House Agriculture Committee,

I have been involved in the farming community in Hawaii since 1974 as a farmer and an agricultural educator. I am a proponent of sustainable agriculture in our state and have worked tirelessly to promote the approach starting with the invention and introduction of the use of intermittent overhead sprinkler irrigation to control a serious pest of watercress, the diamondback moth, in 1982. This non-chemical method of insect pest control is now used by all watercress farmers in our state. This approach to pest management could not have been accomplished in an atmosphere of legislated non-research. It seems outrageous to me that agricultural research, on any crop, would be targeted for a legislated moratorium making it, in effect, illegal to conduct that research. There are already too many laws on the books and, in this particular situation, great care has been taken to honor the wishes of the Hawaiian community so that there is, at the present time, no genetic engineering either being performed or planned on taro. What could a law accomplish that hasn't already been accomplished? Because of this I oppose the attempt to make into law, SB958 Relating to Genetically Modified Organisms - Taro. How would such a law even be regulated? Will there be gene cops? Will we bend to the will of the few whenever an atmosphere of fear is created so as to confuse and obfuscate the matter to such a degree that it generates the demand, from that same few, that "there ought to be a law"? This whole issue and the anti-biotech agenda makes me fear for the future of agriculture in Hawaii. With this type of mentality we are destined to be continuously at the mercy of outside sources for our food as we regulate our research and production capabilities out of business. I sincerely fear that this demand for a law regulating biotech research will not stop with taro. There are already other crops waiting in the queue, specifically coffee and corn, that will be paraded before the legislature with the demand from the same group of people for the same type of treatment being afforded to taro.

I appeal to your objective and rational sense of the issue to reject this transparent attempt by the opponents of agricultural biotech to create a stepping stone to even harsher and more draconian measures to eliminate this valuable, timely, and ennobling technology which has great potential to provide solutions to crop production challenges worldwide and even to position Hawaii as a leader in the field.

Mahalo for the opportunity to participate in this process and affording me the opportunity to testify on this critical issue.

John McHugh

Crop Care Hawaii, LLC

Crotolaria Seed Specialists, LLC

95-1048 Kelakela St.

Mililani, HI 96789

From: Sent: Kevin Kelly [kevink@hawaii.edu] Monday, March 17, 2008 7:28 AM

To:

sb958writtenonlytaro

Subject:

Testimony in opposition to SB958

Chair Tsuji & Members of the committee,

As a citizen of the state and having had the opportunity to interact with parties on both sides of this issue, I strongly oppose SB958.

This bill has now become a torch bearer for causes ranging from taro farming and research to genetic engineering and organic farming.

What's worse is that the testimony of farmers and experts in taro research are being drowned out by the multitude of ancillary agendas being pushed by local activist groups finded by international anti-GMO and 'environmental' organizations.

I urge you to defer this bill and pledge to support the work of the Taro Task Force and whatever recommendations they make in the future.

Thank you for the opportunity to testify on this matter.

Sincerely Kevin Kelly

From: F

ROTH, CHRIS M [AG/2563] [chris.m.roth@monsanto.com]

Sent:

Monday, March 17, 2008 9:05 AM

To:

sb958writtenonlytaro

Subject: Opposed to SB958

Aloha Chair Tsuji and Members of the House Agriculture Committee,

My name is Chris Roth and I strongly oppose SB958. As a resident of Kula, Maui, a tomato farmer, and a seed industry employee I feel it is incumbent upon the state not to turn its back on research into technologies that offer significant improvements in the farmer's ability to produce crops. Despite the sensationalized fear-mongering of various anti-GMO groups, GM crops have a flawless track record of safety. I cannot comprehend why the state would want to limit its future success by denying the opportunity for science and technology research to thrive in the state. Why legislate against research? SCR206 is a more effective way of ensuring appropriate dialogue into this issue and would provide the opportunity for the Hawaiian community to lead the discussion on how best to preserve taro.

Please reject SB958.

Mahalo for your time,

Chris Roth

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From: Willman, Mark [Mark.Willman@pioneer.com]

Sent: Monday, March 17, 2008 8:47 AM

To: sb958writtenonlytaro

Subject: SB958

Aloha Chair Tsuji and Members of the House Agriculture Committee:

My name is Mark Willman and I strongly oppose SB958.

I am a resident of Kaua'i. I grew-up in the mid-west and have grown my own food since a teenager. I have seen over the 30 years of gardening that genetic improvement of plants is a very effective way to improve our food supply and food quality. I oppose this bill because I eat poi and find it difficult to grow and purchase (due to shortages). I believe genetic improvements will alleviate these problems. This bill will result in less poi available for all of Hawaii.

The bill undermines ongoing talks with the Native Hawaiian Community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous. On the contrary, there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe. In fact, some articles I have read suggest genetic improvements results in increased food quality due to less disease and insect infestations. The bill restricts development of potentially effective tools for farmers and gardeners to combat existing and unforeseen biological threats to taro production. Legislating research is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro. Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at a time when it is critical for us to support the rich potential for innovation that is the key for sustaining our future. This aspect of agriculture will help diversify Hawaii's economy making it more stable during fluctuating economic events (i.e. hurricanes, terrorist attacks reducing tourism, recessions, etc).

I respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. I have seen successes of plant preservation in grass roots organizations (i.e. Seed Savers Exchange), in government organizations (Plant Introductions stations) and NGOs (i.e.CYMMIT). Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

I urge the committee to reject this bill. Mahalo for the opportunity to testify.

Mark Willman
Pioneer Research Scientist
Dupont Ag & Nutrition
1-385 Kaumuali Hwy
P.O. Box 609
Waimea, HI 96796-0609
808 338-8300 Tel xt108
808 645-1045 Mobile
808 338-8325 Fax

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TESTIMONY

IN SUPPORT

SB958-10 Year Moratorium on the Genetic Modification of Taro

Name:

Halona W. Tanner, Psy.D.

Organization:

Ko'olauloa Community Health and Wellness Center

Town, Zip Code:

Kaneohe 96744

Phone/Email:

808-239-9493 / htanner@koolauloachc.org

Dear Legislators,

I strongly support a 10 year moratorium on all forms of genetic modification and patenting of kalo (taro) because it is culturally inappropriate and poses unknown, potentially dangerous, irreversible long term risks to our food, health, environment and economy. The kalo plant species is rooted in Hawaiian folklore and a primary cultural reference for defining the Native Hawaiian persona and/or psyche. More so, kalo's history and its present use as a healthy, hypoallergenic starch and medicinal food has permeated Hawaii's local culture and is influential in promoting a health lifestyle and well-being. Research on genetically modified organisms (GMO) is controversial because of serious concerns regarding short as well as long term bio-physiological health risks that have not been adequately addressed by GMO industries and/or proponents. For these reasons I as a Native Hawaiian health professional in the area of behavioral health, chronic disease management, and clinical/health psychology, am opposed to genetic modification of kalo in Hawaii.

I support farming and precautionary scientific research that does not expose kalo species to the risks of genetic engineering. I encourage you and your colleagues to support local agricultural industries to promote publicly accepted and advanced methods of farming that protects as well as preserves kalo from intruding pests and diseases. More importantly, it is recommended that you adopt a Precautionary Principle that discerns the risks and benefits of GMO research and its potential harmful effects to the people of Hawaii.

Kalo is a cherished, valuable legacy of our island life and culture. I join farmers as well as others in the health field to urge you and your fellow legislators to protect Hawaii's unique culture and resources by passing SB 598 into law to provide a 10 year moratorium on the genetic modification and patenting of kalo in Hawaii.

Sincerely.

Halona W. Tanner, Psy.D. Clinical Psychologist

Matthew Rose

45-601 Apapane St., Kaneohe, HI 96744

Phone Number: 808-224-0922 E-Mail: mattr.kamiyagold@gmail.com

Position: Oppose

March 16, 2008

ATTN: Rep. Clift Tsuji House Agriculture Chair House of Representatives Hawaii State Capitol Honolulu, Hawaii

RE: SB 958hd1, March 19, 2008 Hearing

Dear Representative Tsuji and Members of the House Agriculture Committee: My name is Matthew Rose. I live in Kaneohe, Oahu. I have lived here for 2 years. My wife was born on Oahu and has lived here most of her life, as has my father-in-law, Ken Kamiya, who I work with on our papaya farm.

Ken has been farming papaya most of his life and experienced directly how genetic engineering saved the demise of the local papaya industry with the development of varieties resistant to the papaya ringspot virus. He, I, and the majority of local papaya farmers in Hawaii are most grateful for what biotech and genetic engineering has done to preserve our livelihood.

I do not support SB 958sd1 because such a bill will not help, but can only harm local farmers and consumers of local agriculture products. While a small vocal minority has raised this as a cultural issue, there is absolutely no basis for the argument that GMO taro should be banned for the sake of the protection of native values or because of some "danger" which has not even been substantiated or proven. I find it puzzling that the same group that is backing this bill has very little to do with farming and production of the taro products consumed in Hawaii. Furthermore, taro's historical origins have been traced back to China, and has been consumed throughout Asia and Pacific Island cultures for thousands of years, so it is not culturally unique to Hawaii or Hawaiins, but a common globally-consumed food.

This bill does not provide a solution for a sustainable and viable taro industry in Hawaii. In fact, it puts limits on grower's options and endangers the preservation of what varieties we have left. It is much better to support resolution SB 2915 which would fund the effort for Hawaiians, taro farmers, the DOA, OHA, and UH to collaborate on solutions for taro's future.

Please do not support SB 958hd1. Thank you very much for the opportunity to present testimony.

Matthew Rose

M. Rose

KAMIYA GOLD, INC.

Kenneth Y. Kamiya 48-466 Haupoa St. Kaneohe, Hawaii 96744 Ph. 808-239 5574

Position: Oppose SB 958hdl, GMO Taro Bill Wednesday, March 16, 2008 Capital Auditorium- 9:00 am

Fax: 586-8524

Representative Clift Tsuji House Agriculture Chair

Dear Rep. Tsuji and Members of the House Agriculture Committee:

My name is Kenneth Y. Kamiya and I am a papaya farmer from the north shore of Oahu. I have been a papaya farmer for over thirty five years and my mom and dad were farmers before me.

I truly sympathize with any effort that preserves, records, and promotes cultural mythology, traditions and rituals. I firmly believe that as individuals and as cultural groups that if we do not know where we came from we will not know where we will be going. As mythologist Joseph Campbell state in many of his works myths and their metaphors provide the moral order to enable societies to learn and survive.

On the other hand to evoke "factualized" myths in order to ban discovery and learning is tantamount to book burning. How often have we seen in recent history the act of book burning and its equivalent contribute immensely to the detriment of a society, a nation, and the world?

Thank you for the opportunity to testify.

From: Nancy Redfeather [nancyredfeather@yahoo.com]

Sent: Tuesday, March 18, 2008 3:08 PM

To: sb958writtenonlytaro

Cc: nancyredfeather@hawaii.rr.com

Subject: Support for SB958 Hearing Wednesday March 19, 2008

Aloha Chair Tsuji and Members of the Committee,

I farm taro for my family and friends, and have had the pleasure of working with Jerry Konanui on the plantings of Hawaiian malas and taro identification work at Bishop Museum's Amy Greenwell Ethnobotanical Garden in Kona. I farm in Kona with my family, give community classes and write for local publications on agricultural issues, and I am the Hawai'i Island School Garden Network Coordinator.

I have recently come from a week in Hanalei, where I had the opportunity to observe the taro lo'i firsthand. The commercially planted taro is in very bad shape, with pests and disease at a high levels in all the lo'i I observed. Monocropping, use of chemicals and herbicides, and general "over use" of these agricultural fields has weakened the taro, and invited diseases to come in. It is obvious.

Land Grant Universities such as UH Manoa have a mission to assist local farmers in developing successful and profitable agricultural systems. Monies come to UH from Federal and State sources earmarked for molecular solutions. Professors/scientists are then guided by decisions at these levels to look for a biotech solution to a systems management problem, instead of assisting farmers to "improve" the health of the overall agricultural ecosystem. This is a current weakness in our University funding system. Development of ecosystem health is less important that development of patents. The Hawai'i State Legislature has also had a hand in steering this direction.

When I once talked with Dr. Dennis Gonsalves about this, about the funded work for PBARC, he said I should talk to Senator Inouye or Representative Case (at the time). Have we come so far from reality that we can no longer make decisions on the University level that will truly benefit our local farmers and instead tie ourselves to grant monies to guide our agricultural path, a path decided far away with people who know nothing about our unique and fragile ecosystems and agricultural needs?

Biotech is NOT the solution to the problems facing taro or any other crop. As the world changes, and the second trillion barrels of oil are used up in the next 25 years (says Chevron Oil), we certainly won't be looking to ANY system of industrial agriculture based on oil inputs such as genetically engineered crops. They are already obsolete.

I have seen the Legislature this year, turn a deaf ear to the overwhelming public views on GE taro. What should communities do, when they see that their voice is unimportant to those who are sworn to preserve and protect the lands, people, and future of life in the islands?

People begin to lose their faith in what you stand for.

Everyone is now very aware that whenever a GE crop is planted for field trial or commercial use, it is only a matter of time before conventional and organic farmers can no longer farm with genetic certainty.

No farmers asked for GE taro. No communities asked for GE taro. Take steps today, to preserve and protect one of the major foods which will assist in lifting Hawai'i to food self-reliance in the future. Creating food sustainability is one of your current missions. Protection and preservation of taro is up to you.

Ua mau ke ea o ka 'aina i ka pono

Aloha,

Nancy 3/18/2008

Dr. Gary K. Ostrander Honolulu, HI

Position: Oppose SB 958hd1, GMO Taro Bill Wednesday, March 19, 2008 Capital Auditorium - 9:00 am

Rep. Clift Tsuji House Agriculture Chair

Chair Tsuji and Members of the House Agriculture Committee:

My name is Dr. Gary K. Ostrander. I serve as the Vice Chancellor for Research and Graduate Education at the University of Hawai'i-Mānoa. This is my personal testimony as official testimony on behalf of UH is being provided by the UH System.

In recent years the University of Hawai'i has demonstrated a tangible commitment to being culturally sensitive to the Hawaiian culture/community. In 2006 the University filed three patent disclaimers on prior work that had resulted in the patenting of three species of taros. This effectively "canceled" or eliminated the patents and made the results of this work available to everyone without license. There is no ongoing or planned work related to GMO technology and Hawaiian taros.

Nonetheless, The most troubling aspect of the proposed legislation, in my view, relates to the idea that as a society we would seek to limit the freedom of individuals to pursue certain types of scientific discovery. This creates a very "slippery slope" in which we signal to special interest groups that certain types of research that are not viewed a politically, culturally, or religiously "correct" by that group can be outlawed. In a very real sense passing of this bill would be using legislation to limit scientific discovery.

Finally, the proposed legislation undermines ongoing talks with the Native Hawaiian Community on how to preserve Taro while remaining sensitive to cultural issues.

I respect the cultural meaning of taro and firmly believes that the Hawaiian Community must lead the discussion about the future of taro and Hawaiian taro research and education programs. While I oppose this legislation, I strongly support efforts such as SCR 206 which would convene stakeholders in a dialogue to arrive at real solutions for Hawaiian Taro cultivation. This discussion is critical because risks of devastation to taro will require tools to preserve the future of this crop.

Science and technology can play a key role as we move to a much more diversified economy in our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and innovating solutions for healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at the exact moment when it is critical for us and our children to support the rich potential for innovation that is the key for sustaining our future.

Thank you for the opportunity to testify.

MAR-15-2008 09:42AM FAX:+1 808 956 2751

ID:REP BROWER

PAGE:002 R=100%

from: Dr. Susan Schenck, Plant Pathologist with Hawaii Agriculture Research Center

to: Rep. Clift Tsuji, Chair and members of the Committee on Agriculture

in regards to: the hearing on Wednesday, March 19, 2008 9:00am of SB 958, SD1, HD1 (HSCR1218) Relating to Genetically Modified Organisms.

Dear Rep. Tsuji and Members of the Committee:

The stated purpose of the proposed bill is to recognize the importance of kalo in the heritage of the State. It does not follow, therefore, that modification and testing in a laboratory of genetically modified kalo in any way affects the existing Hawaiian kalo nor its heritage in the state. This reasoning apparently derives from the false impression that modification of plants in a laboratory will somehow alter all the kalo plantings currently existing statewide.

Alternatively, the proposal was designed by persons simply seeking to halt any and all research into molecular genetics on the grounds that it is somehow dangerous or evil in itself.

On the contrary, genetic research seeks to provide kalo with greater defense against disease, better yields, and improved growth in Hawaii environments. Putting a halt to such research in kalo or other crops will prohibit the improvement of these crops which were, since ancient times, selected and improved upon by Hawaiian growers.

This bill, if passed, would have nothing but detrimental effects on kalo production and would in no way assist in recognizing the heritage of the state nor would it help preserve existing native Hawaiian kalo varieties.



Nohoana Farm LLC

West Weikō Road, Weikapū, Mani, HI

West Waikö Road, Waikapü, Maui, Hawai'i
Noho'ana Farm LLC, P.O. Box 967, Wailuku, Hawai'i 96793
808-242-4642 booksmani@hawaii.rr.com

To:

Members of State Legislature

From:

Victor Pellegrino

1420 Kilohi Street, Waikapu, HI 96732 242-4642 booksmaui@hawaii.rr.com

Re:

Testimony Supporting SB 958 Moratorium on GM Kalo

Date:

March 13, 2008

My name is Victor Pellegrino from Noho'ana Farm in Waikapu where we grow kalo. Thank you for giving me the opportunity to testify in support of SB 958.

I want to urge every member to vote unanimously to pass a resolution to support SB 958. There are many reasons why we must stop the genetic modification of kalo. Here are a few, stated briefly, to help you make your decision.

First of all, we will not grow GM kalo, buy GM kalo, sell GM kalo or eat GM kalo. We will not allow government or private enterprise to own kalo or restrict us in any way from exchanging kalo freely.

Second, GMO supporters believe that they will "save" kalo from disease. They are actually interested in making money. In every article you read about GM foods, even biofuels, it's all about money. They hide their arguments with jargon like "provides jobs," "maintains a healthy economy," "concerns our children's future," etc... These scare tactics are used without regard for humanistic or cultural concerns.

Third, European countries have restricted GM foods and require clear labeling. The U.S. continues to actively grow and allow companies to market GMO foods. No truth in labeling for GM food is required in the U.S., and scientific testing on the adverse affects of GM products is allowing us to be the guinea pigs. Selecting healthy foods should not require guesswork.

Fourth, kalo farmers want to grow healthy kalo, but they, along with scientists, need analyze soil conditions, invasive species that affect kalo, and especially the effects of lack of water for healthy kalo production. We need the time a moratorium will give us to do that.

Fifth, scientists have failed to provide empirical data on the safety of GMO foods as well as any simple or logical process whereby pure kalo or GM kalo can be identified or differentiated.

Sixth, science and government need to understand the cultural and religious foundations of kalo. Haloa does not want to be dissected, injected, experimented with, altered, poisoned or patented. If science and government want to fool around with religion, let them try it on their own Simply put, leave Haloa alone.

Finally, kalo already is a healthy, nutritious food that is allergy free and a boon to diabetics. Keep it that way.

Mahalo.

To:

Hawaii State Legislature

From:

Victor, Wallette and Hokuao Pellegrino 1420 Kilohi Street, Waikapu, HI 96732

242-4642

booksmaui@hawaii.rr.com

Re:

Testimony Supporting SB 958 and Moratorium on GMO Kalo

Date:

February 13, 2008

My name is Victor Pellegrino. My wife, Wallette Pellegrino, and my son, Hokuao Pellegrino are Hawaiian. We own **Noho'ana Farm** in Waikapu where we grow kalo. Thank you for giving me the opportunity to testify.

I want to urge every member to vote unanimously to pass a resolution to support SB 958.

There are many reasons why we must stop the genetic modification of kalo. Here are a few.

First, GMO supporters believe that they will "save" kalo from disease. Kalo farmers already know two reasons why diseases exist. The major reason is lack of water. Enough cool, running water for lo'i kalo was understood and practiced by Hawaiians until large, greedy agribusinesses diverted it in the 1800s, beginning with the Peck vs Bailey case. They still steal, divert, sell, dump and bank water on Maui. None of the 4 streams of Na Wai Eha reach the ocean, and streams have been dammed, altered, and channeled, reducing the much needed water by kuleana users, many who have been left in a desert. Many people ask me, "Why aren't there more kalo farmers?" I answer them with the question: "Why isn't there more water?"

Secondly, our State is negligent in allowing invasive species into our islands. One can only cite the continued governmental permissiveness in allowing invasive species a pathway to Maui via the Superferry, which our legislature and one time Maui mayor Lingle maneuvered around the required EIS. We can cite the apple snail, which has adversely affected kalo farmers.

Third, kalo is a pure food. Yet, scientists want to shoot genes from rice into kalo that is already a perfect diabetic food source; scientists want to shoot wheat genes into kalo that is already an allergy free food source; scientists want to shoot kalo with a hydrogen peroxide material. What other kinds of toxic, anti-health, non-organic procedures will they think of next? Scientists even want to shoot Haloa. Isn't it simply common sense that everyone must learn to respect the Hawaiians, their culture, and their ancient beliefs? Before they consider Haloa, maybe they should ask themselves if they would do the same to Adam, or maybe Eve?

Fourth, scientists have failed to provide empirical data on the safety of GMO foods. When asked what long term studies have been completed, for example for the papaya, they reply, "Well, people like it!" That is simply NOT a safe scientific response. How can we guarantee the safety of our food should it be toxic, affect our health, and contaminate the environment?

Fifth, kalo farmers already know what will face them and their huli should GMO not be halted. Once patented, farmers will not be able to share huli because it will be owned by another. Kalo farmers historically and currently exchange huli freely. It is the Hawaiian way not to sell them. Already we know of legal court cases where non-GMO farmers have been sued, and lost, because GMO seed was blown onto their lands from a nearby field, and grew. GMO for kalo means the end of kalo as we have known it for 100s of years.

Finally, just the thought of experimenting with GMO kalo is a drain on our psyche, our money, our time, our way of life, our

traditions, our beliefs, and our bodies, which yearn for this nutritious food, a carbohydrate that has proven to be healthier than rice, bread, or pasta.

If scientists really want to put their energy into improving Hawaii, let them rid us of miconia, the gall wasp, biting red ants,

and the coqui frog, to make just a short list.

All that I can say right now is: STAY OUT OF OUR GENES!

Genetically Modified Organisms (GMO) 3-13-08

Unfortunately, because of money, many of our crops have been or are being genetically modified. Genetically engineered (GE) means that the genes and DNA have been altered in that food item. Altering the genetic make-up of foods is creating, well, Frankenstein foods. The effects of these changes have not been fully tested on our environment nor on our health and what little information exists is dismal. Animals fed GMO corn, for example, developed problems of their blood (leukemia), blood pressure, kidney, liver (including significant changes kidney weight as well as lesions on the kidney and liver), allergies to infection, increased blood sugar levels, diseases, and yes, even cancer. These are not minor problems, but major changes in the body. These are a toxic reactions to a poison. (Even if the same effect doesn't occur in humans, think of the repercussions of us eating the meat of animals that ate the GMO corn and therefore unhealthy animals!) Corn and Soy are the top two genetically modified crops and are two of the largest crops. You can find corn and soy in practically every processed food. Chickens and cows eat corn and soy on feedlots (another reason to choose only grassfed meats and organic chicken) so the problem is multiplied in every way. Then there is nature's way of creating crops naturally with cross-pollination and it becomes clear that our entire food line is in jeopardy. The real fear is that at some point, it will be difficult to find any corn and soy that is not genetically modified. When we think of how many products use corn as a base and then the animals that are regularly fed this, we can easily see how this is a huge experiment with our lives and the health of humans everywhere. Genetic Modification is a scientific process that changes the very nature of a plant. Genes from humans, bacteria, viruses, plants and animals are inserted into the plants. This is the first time that science has been able to cross the species barrier. This allows the companies to control the foods, the farmers, and the food chain itself. Inserting these foreign organisms into corn changes how our body will use it nutritionally (many crops now offer less protein, for example) and creates new allergies and toxins that must be fought off with additional chemicals and drugs. And to further add insult to this injury, because these Frankensteins can now reproduce, "super weeds" are cropping up that need super strong pesticides! That's even MORE chemicals in our environment and in $^{\circ}$ our food. A vicious cycle, or is it a planned action for profit? The companies who are sponsoring this research and use include pharmaceutical companies like the drug company that owns Monsanto which creates weed killer (and Nutrasweet). and corporations like Phillip Morris which owns Kraft Foods. Kraft uses GMO. We are guinea pigs in this huge experiment. Though the goal of GMO crops is to make them less susceptible to pests, more resistant to drought and stronger overall, the actual result is that stronger pesticides will be needed for the stronger weeds and disease, just as overuse of antibiotics has created stronger strains of disease in humans. "Seralini points out that Bt crops create new pesticides. Mon 863, for example, is unique; it differs from the natural version of Bt pesticide in seven ways and should, according to Seralini, require at least the same level of evaluation as chemical pesticides. The same holds true for herbicide tolerant crops, which are engineered to survive large applications of weed killers such as Monsanto's Roundup. Seralini points out that these GM plants have far more herbicide residues in the edible portions and extensive toxicity tests must be performed. But the biotech industry claims that they could not afford to introduce GM crops if they had to pay for the tests normally required for pesticides in Europe. For GM crop approvals in the US, they spend even less. US authorities require only 30-day studies for the Bt plants and no safety tests whatsoever are required for herbicide tolerant varieties."*European countries have restricted GM foods and require clear labeling, but the U.S. falls far behind in this and are actively growing GMO foods. By definition, Organic foods are not genetically altered, but the issue is even bigger because of the potential of cross pollination of crops. GMO crops affect our environment, our animals, our body, and our future health, and our very survival since they have repercussions upon the very essence of our existence - food. Genetic modifications of our foods introduce new food allergens, potential antibiotic-resistant bacteria, changes in nutritional value, changes in the cattle and animals that eat them that we will then consume, changes in animals and life that consume them that we appreciate for beauty and life, and potential changes in our body when we eat them. We need to get rid of genetically modified foods. Supporting organic farmers and not buying foods that are GMO is the best way - since this is profit driven, speaking with the wallet is louder than any letter. When we learn which foods are more likely GMO, we can let the scientists and big companies know that it's not okay with us by not purchasing their products. We get many questions about seedless grapes and fruits like that. This is not genetic engineering. This is selective plant breeding for a certain characteristic. This process has been going on since the dawn of agriculture. GE or GMO only describes those foods that have been spliced with other genes and DNA nucleus. Genetically engineered foods are very different from selective plant breeding which is done for characteristics like orange for carrots, red for tomatoes, and seedless in grapes. The vast majority of our crops today have been bred for a special characteristic that we have found most appealing. These crops can still be grown organically. Understand GE crops are primarily in soy and corn (at present) and steer clear of these as well as things that contain these in their ingredients list.



Resources:

<u>List of Genetically Engineered Fish</u>, True Foods <u>Shoppers Guide to GM</u> July 2003

Genetically Modified Foods, Inc. Mercola

GMO LABELING LEAVES CONSUMERS IN THE DARK:

GREENPEACE Greenpeace, 1997

<u>Far Afield: Biotech Propaganda and the Truth</u> The Green Guide, 1999

Guide, 1999

<u>GMO Food Contamination is Forever</u> Organics Consumer Association, 2002

<u>Hazards of Genetically Engineered Foods and Crops: Why We Need A Global</u>

GMO Crops Are An Accident Waiting to Happen Toronto Globe, 2001

<u>Superweeds are Sprouting in GMO Crops</u> NY Times, 2003 <u>Genetically Modified Foods</u>

<u>Update</u> Organic Consumers Association BioDemocracy News July 2001

<u>Is Farm-Raised Salmon Bad For Your Health After All? - New report says it's high in</u>

probable carcinogens November, 2003

GM crops need more pesticide March 2003

<u>Drug Company Owns Monsanto and Their Weed Killer is What</u> <u>Funds GMO Crops</u> NY

Times, 2001

<u>Europeans More Resistant to Genetically Modified Foods</u> April 2003

Research Fuels Fear of Gene-Altered Fish, June 2004
Genetically Modified Corn Study Reveals Health Damage &
Cover Up*, Health Lies

Exposed, 2005

Food Safety, Risk & Technology of GMO Genetically Modified Foods, Food Science &

Nutrition University of Minnesota

WANTING THE PAST

by Victor C. Pellegrino Copyright 2008, MAC.

This poem has been written as a response to support HR-958. Read "Wanting the Past" as if it were 2018.

Everyone has a responsibility to pass this bill.

We have a choice to do what is right now...or weep ten years from now.

Mahalo.

"Give me back my kalo. Waving free of GMO."

Restore the long gone, now altered, tastes of poi. Even return my itching hands,
And, if need be, I would even compromise
And take back the leaf blight and pocket rot.
I would even bargain for apple snails!
GMO has invaded my lo`i.
"Take it out. Take it out!" I shouted.

"We can't."

The spiraling should have ended. Now we reach for the kalo And find it no more—gone— Never to return as it once was.

Give me back the right to share huli—unshot
With toxic wheat and diabetic rice genes.
"We wanted to 'save' the taro...making it resistant," they said.
"From what?" and "Resitant to what?" we questioned.
Why didn't you just give us back our cool, running streams
To feed our kalo?

But now it is here...unwanted.
Tainting the human body... and spreading itself island wide...
All the while unidentifiable and unnurturing.
Our babies cry for want of pure poi.
Parents bypass bags of poi, now unwelcome at their baby lu`au.
The kalo farmer's pocket is empty...his spirit soars no more.

Where was the vision of our scientists?
Did it lie in the purses of private enterprise?
Where was the sense of responsibility to the human body?
Did it lie in the unwritten journals of medicine?
Where is the untainted huli?
Can we tell one from another any more?
Where was the heart of our government leaders?
Did they not understand that their decision included them?

We told you..."Leave kalo forever untouched!" The Hawaiians understood. Haloa understood.

"Give me back my kalo. Waving free of GMO."







Victor Pellegrino is professor *emeritus*, University of Hawaii, Maui Community College. He and his family are owners of Noho'ana Farm, a kalo farm on Maui. Photos, copyright 2008. Noho'ana Farm.

From: Sent: Anthony Akana [akoni@mokuula.com] Monday, March 17, 2008 11:12 AM

To: Cc: Subject: sb958writtenonlytaro Shirley Ann Kaha'i Supporting SB958

March 17, 2008

State of Hawai□i, Legislators Aloha ia oukou pakahi apau,

I send this email in support of SB958. As a native Hawaiian and a practitioner of Hawaiian arts and traditions I am appalled at the thought of altering the genetics of our forefather, Haloa, the Kalo. Tradition dictates that we descend from are therefore are related to this precious live giving plant. Any change in genetics is to be considered a direct attack on he Hawaiian race and will have a direct effect on future generations who rely on kalo as their staple source of nutrition. My generation is responsible for the future of the next seven generations and we do not want to be responsible for the effects that genetically altered kalo may have on them. Please vote in support of this bill as it will allow for long-term studies to be conducted. YOU TOO ARE RESPONSIBLE! VOTE ACCORDINGLY!

Me ka 'o ia i'o,

Akoni Akana Executive Director Friends of Moku'ula

From: Richard Bowen [rbowen@hawaii.edu]

Sent: Monday, March 17, 2008 11:52 AM

To: sb958writtenonlytaro

Subject: Opposition to SB958

I urge lawmakers to not pass this legislation because it establishes a dangerous new precedence of the Legislature dictating what UH researchers cannot research. The assumptions underlying the bill are not consistent with what is known about taro genetics. Furthermore CTAHR has already agreed to not pursue genetic engineering of native Hawaii taro species and is working with farm groups and the community to assure that contamination of native species is not a threat. These have been the appropriate steps while SB958 represents a big step backward from sensible public policy.

Richard Bowen

Richard L. Bowen
Professor and Extension Specialist
Department of Natural Resources and Environmental Management (NREM)
College of Tropical Agriculture and Human Resources (CTAHR)
University of Hawaii at Manoa
808-956-8419 office
808-227-7574 mobile

From: Sent: Joel Fischer [jfischer@hawaii.edu] Monday, March 17, 2008 12:34 PM

To:

sb958writtenonlytaro

Subject:

SB958; 3/19; 9AM

Importance:

High



jfischer.vcf (343 B)

SB 958, Moratorium on Genetic Modification of Kalo

PLEASE PASS THIS BILL.

I am very grateful to you for introducing and hearing this important bill. The kalo is more than a plant to native Hawaiians; it is part of the essence of life, part of their geneology. So, any efforts to stop the exploitation of the kalo by others is greatly appreciated.

As you know, the Native community won a tremendous victory when the UH gave up its patents on certain varieties of kalo. Let us try to match that with a legislative mandate: STOP PLAYING WITH OUR NATIVE PEOPLES' BIRTHRIGHT!

This bill will give important breathing space for the Native Hawaiian community to formulate their plans for the treatment of the kalo for all time and to communicate those plans to those who wish to tamper with the kalo.

I urge you to pass this bill with my great appreciation for the House's aloha.

Thank you.

joel

Dr. Joel Fischer, ACSW President, 19-3, Democratic Party

Professor

University of Hawai'i, School of Social Work Henke Hall Honolulu, HI 96822

"There comes a time when one must take a position that is neither safe, nor politic, nor popular, but one must take it because one's conscience tells one that it is right." Dr. Martin Luther King, Jr.

"Never, never, never quit." Winston Churchill

From:

SCAGNOLI, JENNIFER A [AG/2563] [jennifer.a.scagnoli@monsanto.com]

Sent:

Monday, March 17, 2008 1:43 PM

To:

sb958writtenonlytaro

Subject: SB 958

Date: March 13, 2008

To: Representative Clift Tsuji, Chair Representative Tom Brower, Vice-Chair

House Agriculture Committee

From: Jennifer Scagnoli

Kaunakakai, Molokai

808-558-8487

Hearing:

Wednesday, March 19, 2008, 9:00 a.m., Conference Room 325

Re:

Opposition to SB958, Relating to Genetically Modified Organisms

Dear Honorable Chair Tsuji and Vice-Chair Brower,

I vote no on SB 958.

A hundred years ago, there were approximately 400 varieties of Hawaiian taro. Today, there are only about 60 left. Whether nature intended this or not, the loss of taro is due to various reasons including invasive pests and devastating diseases, NOT because of research.

To ban taro research in its entirety in Hawaii, would be to seal this plant's fate. We need to look at research not as a negative thing, but as a tool to keep our agricultural heritage alive.

Please vote "NO" on SB 958.

Jenn Scagnolí

Molokai Pre-Foundation

1351 Maunaloa Hwy

PO Box 40

Kaunakakai, HI 96748

Office 808-553-5070 Ext.20

Cell 808-336-0601

Fax 808-553-5436

3/17/2008

KUKUIPAHU ENERGY, LLC

65-1230 Mamalahoa Hwy., Suite E-23 Kamuela, HI 96743 808-885-0441 ph 808-885-4419 fax

> Position: Oppose SB 958hd1, GMO Taro Bill Wednesday, March 19, 2008 Capital Auditorium - 9:00 am

Rep. Clift Tsuji House Agriculture Chair

From:

John B. Ray

Title:

General Manager

Company:

Kukuipahu Energy LLC

Chair Tsuji and Members of the House Agriculture Committee:

My name is John B. Ray. I am the General Manager of Kukuipahu Energy LLC in Kamuela, HI. As a 30 year resident of Hawaii and former Trustee of Parker Ranch as well as serving on several community commissions and boards, I have a strong commitment to the culture and rich history of the Hawaiian People.

We are opposed to using legislation to limit scientific discovery. In addition, this legislation:

- Undermines ongoing talks with the Native Hawaiian Community on how to preserve Taro while remaining sensitive to cultural issues.
- Is based on fear-mongering and bad science. There is no hard evidence that genetically engineered organisms are dangerous. On the contrary, there are hundreds, if not thousands of peer reviewed scientific studies that prove that genetically engineered foods and crops are safe.
- Hamstrings the development of potentially effective tools for farmers to combat existing and unforeseen biological threats to Taro production.
- Is a slippery slope. It is an inappropriate process in particular because there is NO TARO genetic research currently underway.

I and Kukuipahu Energy LLC respects the cultural meaning of taro and firmly believes that the Hawaiian Community must lead the discussion about the future of taro and Hawaiian taro research and education programs. While we oppose this legislation, we strongly support efforts such as SCR 206, which would convene stakeholders in a dialogue to arrive at real solutions for Hawaiian Taro cultivation. This discussion is critical because risks of devastation to taro will require tools to preserve the future of this crop.

Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and innovating solutions for healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at the exact moment when it is critical for us and our children to support the rich potential for innovation that is the key for sustaining our future.

PAUL

The choice is ours, and the world is watching. We urge the legislature to reject this bill.

Thank you for the opportunity to testify.

18088854419

Respectfully_Submitted,

John B. Ray General Manager Kukuipahu Energy LLC

Cc: file

FAX:18088854419



Hawai'i Florists & Shippers Association
P.O. Box 5640
Hilo, Hawai'i 96720

Testimony for House Agriculture Committee

Regarding

SB 958 sd1, hd1, GMO Taro Bill

Wednesday, March 19, 2008

Capitol Auditorium - 9:00 am

Position: Oppose, SB 958 sd1, hd1

Representative Clift Tsuji House Agriculture Chair

Good Morning Chairperson Tsuji, Vice Chair Brower and Members of the House Agriculture Committee:

Aloha my name is Eric S. Tanouye, President of Hawaii Florists and Shippers Association. Hawaii Florists and Shippers Association, (HFSA) is a statewide organization founded in 1948. It has approximately 400 members on all Islands. Our membership is composed of breeders, propagators, growers, shippers, retailers, wholesalers, and allied businesses, which support agriculture/ornamentals here in Hawaii.

We oppose this bill because research and development should be based on facts, not fear. Please do not allow this proposed moratorium on Taro (Kalo) to negatively impact GMO research for the floricultural industry in Hawaii. In order to keep Hawaii competitive in the global marketplace, we must embrace all available technologies and we can not allow fear to stop our research and



Hawai'i Florists & Shippers Association
P.O. Box 5640
Hilo, Hawai'i 96720

development for floriculture and ornamental (other HI agriculture) GMO research. Technology can give us a competitive edge and it needs to be supported and not suppressed.

On behalf of the Board of Directors of HFSA we would like to thank you for your past support of our industry and ask for your continued support. Thank you for the opportunity to testify. If there are any questions, please feel free to contact me.

Supporting Hawaii Agriculture

Eric S. Tanouye, President

Hawaii Florists and Shippers Association

808-959-3535 ext. 22

808-959-7780 fax

gpn@greenpointnursery.com

ASSOCIATED STUDENTS OF THE UNIVERSITY OF HAWAI'I AT MĀNOA 2465 Campus Road, Campus Center 211A Honolulu, HI 96822

SENATE RESOLUTION 21-08

IN SUPPORT OF A MORATORIUM ON GENETICALLY MODIFIED KALO

BE IT ENACTED BY THE UNDERGRADUATE SENATE:

BE IT ENACTED BY THE UNDERGRADUATE SENATE:	
WHEREAS,	the Associated Students of the University of Hawai'i at Mānoa Senate is the elected body representing approximately 11,000 full-time classified undergraduate students; and,
WHEREAS,	Kalo (colocasia esculenta) is a culturally significant plant to the indigenous people of Hawai'i; and
WHEREAS,	Cosmogonic genealogies such as the Kumulipo connect all kanaka maoli to Hāloanakalaukapalili. 'O Wākea ke kāne. 'O Papahānaumoku ka wahine. Noho pū lāua a hānau 'ia 'o Hawai'i, he moku. 'O Maui, he moku. 'O Ho'ohōkūkalani, he akua wahine. 'O Wākea ke kāne. 'O Ho'ohōkūkalani ka wahine. Noho pū lāua a hānau 'ia 'O Hāloanakalaukapalili, he keiki alualu. A Hāloa, ke kanaka Hawai'i mua loa; and,
WHEREAS,	Hāloa, the second son of Wākea and Hoʻohōkūkalani, named after his brother, is seen as the progenitor of mankind; and,
WHEREAS,	Kanaka maoli have learned throgh this relationship their kuleana or responsibility of mālama 'āina, to honor, respect and protect Hāloa, so he in turn will sustain the Hawaiian people in providing food, and medicine; and,
WHEREAS,	the relationship between kalo and kanaka maoli continues today in the perpetuation of the cultivation of kalo, the cultural practices associated with kalo and the acknowledgement of the familiar relationship with kalo; and,
WHEREAS,	Kalo "intrinsically ties the interdependency of the past, the present, and the future, the essence of procreation and regeneration, as the foundation of any sustainable practice" as stated in Senate Bill 958; and,
WHEREAS,	There were once over 300 kinds of Hawaiian kalo, descended from a few types first brought to the Islands from Polynesia in the 4th to 5th century AD; and,
WHEREAS,	Hawaiians bred these different varieties of kalo through traditional farming practices to grow better in different environments, for higher yield to feed a growing population, for special qualities of color and taste, and for medicinal and ceremonial uses without genetic engineering; and,
WHEREAS,	Genetically modifying any variety of kalo is culturally disrespectful and also poses irreversible and irresponsible dangers to food, health, environment and economy.
WHEREAS,	The terms Genetically Engineered and Genetically Modified Organism refer to organisms that have had genetic material from a different species, or organic or chemical compound, inserted into their DNA; permanently altering their structure and character; and,
WHEREAS,	The genetic makeup of a plant modified or engineered with a bacteria for example, becomes part of the plant and could create allergic reactions, antibiotic resistance, or new bacteria that are resistant to antibiotic treatment in the consumer; and,

WHEREAS, In the past, a couple of biotech companies wanted to introduce a genetically engineered algae that produced experimental drugs to the Kona coast of the island of Hawai'i; and,

WHEREAS, Several community groups represented by Earthjustice took the State Board of Agriculture to court on this issue and won their case, mandating that the State conduct a proper environmental study of the potential risk to the environment and the people of Hawai'i; and,

WHEREAS, A few months later, a drug made from a product similar to the one proposed to be tested in Kona was given to six people in a human test trial in London, and all six experienced a sudden and unexpected super-immune response and were sent to intensive care suffering from multiple organ failure; and,

WHEREAS, There are no long term studies or research done on the effects of Genetically Modified Organisms on humans; and,

WHEREAS, Over thirty (30) countries around the world such as Japan and those in Europe have banned GMOs in some way; and,

WHEREAS, Kalo farmers from all over Hawai'i have been opposed to the genetic engineering and modification of kalo and the patents that arise from the newly created hybrid species; and,

WHEREAS, Researchers developing GMOs seek to "solve" the problems faced by farmers, by genetically engineering plants that provide higher yield with less water, less nutrient rich soil, less weeding, and the ability to be resistant to chemicals, but these "inventions" do not address the issue of environmental and social disparities such as access to water and land or the lack thereof, poor soil health and a poor ecological system that has a larger impact on the community as a whole; and,

WHEREAS, Students from all over the UH campus as well as the members of the campus community participated in the protest of GMOs and called for the State Legislature to grant them a hearing; and,

WHEREAS, The ten year moratorium would allow the Hawaiian community, farmers and others much needed time to educate the residents of the State and gain support to permanently end GMOs in Hawai'i.

BE IT RESOLVED, that the Associated Students of the University of Hawai'i at Mānoa firmly supports the Senate Bill 958 Relating to Genetically Modified Organisms; and,

BE IT FURTHER RESOLVED, that the Associated Students of the University of Hawai'i at Mānoa encourages the implementation of a moratorium on the genetic modification of kalo not only for ten years but indefinitely to protect the cultural, social and economic integrity of the kalo plant, and the ancestor of the Hawaiian people; Hāloanakalaukapalili.

BE IT FINALLY RESOLVED, that copies of this resolution shall be sent to: University of Hawai'i President David McClain, the University of Hawai'i at Mānoa Chancellor Virginia Hinshaw, the Board of Regents, The Hawai'inuiākea School for Hawaiian Knowledge, Dean Andrew G. Hashimoto of The College of Tropical Agriculture and Human Resources, Vice Chancellor for Research and Graduate Education Gary Ostrander, the State of Hawai'i Senate and House of Representatives, The Honolulu Advertiser, the Honolulu Star Bulletin, Ka Leo O Hawai'i, Ka Lamakua, and KTUH-FM.

ROLL CALL

SENATE RESOLUTION 21-08

Ayes:

Treasurer Sohn, Secretary McKellen; Senators-At-Large Baker, Fallon, Long; Senators Alton, Anderson, Arena, Chang, Choe, Chung, Fung, Green, Hovanec, Jones (Jennifer), Kaestner, Kron, Ragudo, Sakamoto, Serry, Whiter [21]

Nays:

[0]

Abstain:

Vice President Saiki [1]

Motion passed 21-0-1.

ADOPTED BY THE 2007-2008 ASUH SENATE ON TUESDAY, MARCH 11, 2008.

Introduced by Robert Green, Senator, Hawai inuiākea School for Hawaiian Knowledge and School of Pacific and Asian Studies; Bryan Whiter, Senator, College of Arts and Science; Cecil Bernhard, Senator, School of Ocean Earth Science; Theodore Chang, Senator, College of Arts and Science; Kalani Baker, Senator-at-Large; Brian Kron, Senator, College of Arts and Science; Jaime Sohn, Treasurer; Ikaika Payomo, Senator, College of Arts and Science



Hawaii Island Economic Development Board ISLAND OF OPPORTUNITY

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Director James Takemine Market Manager American Savings Bank

Director Barry K. Taniguchi President and CEO KTA Super Stores

Director Mark McGuffie Executive Director SENT VIA EMAIL

March 18, 2008

Representative Clift Tsuji, Chair House Committee on Agriculture State Capitol Honolulu, Hawai'i

Ref: SB958 SD1 HD1 – Testimony Opposing this bill:

Aloha Chair Tsuji and Members of the House Agriculture Committee:

On behalf of the directors and the 115 member organizations of the Hawaii Island Economic Development Board we strongly oppose SB958.

The bill undermines ongoing talks with the Native Hawaiian community on how to preserve and protect taro. The bill is a fear-based reaction to genetic engineering. There is no hard evidence that genetically engineered organisms are dangerous. The bill restricts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to taro production. Legislating research is a slippery slope and is completely unnecessary because the University of Hawaii is not conducting any genetic engineering on taro. Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and for improving healthcare.

We respect the cultural meaning of taro and firmly believe that the Hawaiian community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

We urge the committee to reject this bill. Thank you for the opportunity to testify.

'O wau no me ka ha'a ha'a

Mark McGuffie Executive Director

SB 958 Testimony

We strongly oppose SB 958 which will impose a 10 - year moratorium on genetic engineering of taro.

No matter how a new crop is created, either by traditional breeding or biotechnology, breeders and USDA will conduct field testing for several seasons to make sure only desirable changes have been made, and food is safe to eat. Bioengineering does not make a food inherently different from conventionally produced food, nor the technology makes the food to cause allergies. Diseases such as taro blight can wipe out the entire plant population in a matter of days. Only genetic engineered taro containing the bacterial blight resistant genes could continue to grow and provide food that is so important to our local communities. Science and technology also hold the key to the future of our state. They provide jobs/careers to our young generation employees, preserve our environment and sustain the supply of taro for local consumers.

We respect the cultural meaning of taro and firmly believe that the Hawaiian Community must lead the discussion about how to preserve and protect taro. Therefore, SCR 206 is the more effective alternative because it will ensure that a dialogue with stakeholders will continue to address the need for real solutions.

We urge the committee to reject this bill. Mahalo for the opportunity to testify.

Sincerely,

Ingelia White Ph.D.

Assoc. Prof. Botany/Microbiology Windward Community College

faculty, staff and students

Steven Moule

From:

Bill Spencer [bspencer@hawaii.rr.com]

Sent:

Monday, March 17, 2008 4:33 PM

To:

sb958writtenonlytaro

Subject: TESTIMONY GENETICALLY MODIFIED ORGANISMS - TARO MORATORIUM (SB958 HD1)

BILL SPENCER, President

Hawaii Venture Capital Association 805 Kainui Dr., Honolulu, Hawaii 96734 Phone (808) 262-7329 Fax (808) 263-4982

Sunday, March 16, 2008

Ladies and gentlemen:

I hereby submit the following testimony regarding SB958 HD1. The HOUSE Agriculture Committee is set to hear this bill on Wednesday, March 19, 2008 at 9:00 am in House Conference Room State Capital Auditorium.

I would appreciate if you would make and deliver 1 copies of my testimony to Room 403 for this hearing. Thank you.

TO: THE HOUSE AGRICULTURE COMMITTEE, Representative Clift Tsuji, Chair (telefax - (808) 586-6501)

FROM: BILL SPENCER, HAWAII VENTURE CAPITAL ASSOCIATION

SUBJECT: Testimony relating to GENETICALLY MODIFIED ORGANISMS - TARO MORATORIUM (SB958 HD1) - Strong Opposition To SB958 HD1, set to be heard on 3/19/2008 at 9:00 am in Conference Room State Capital Auditorium

I am strongly opposed to SB958's ten year moratorium on taro which in essense uses legislation to limit scientific discovery. In addition, this legislation:

- Undermines ongoing talks with the Native Hawaiian Community on how to preserve Taro while remaining sensitive to cultural issues.
- Is based on fear-mongering and bad science. There is no hard scientific evidence that genetically engineered organisms are dangerous.
- Hurts development of potentially effective tools for farmers to combat existing and unforeseen biological threats to Taro production.
- Legislating restraints on research when there is currently no genetic research underway on Hawaiian Taro at UH sets a bad precedent.

I respects the cultural meaning of taro to the Hawaiian community and firmly believe that the Hawaiian community must lead the discussion about the future of taro and taro research and education programs. While I oppose this legislation, I strongly support efforts such as SCR 206 which would convene stakeholders in a dialogue to arrive at real solutions for Hawaiian Taro cultivation.

I urge the committee to reject this bill.

Thank you very much for your consideration of my views and my testimony on this bill.

Respectfully submitted,

Bill Spencer, President Hawaii Venture Capital Association bspencer@hawaii.rr.com



CORPORATE OFFICE

28⁶ Floor 733 Bishop St. Honolulu, Hawaii 96813 808.441.3600 808.441.3601 fax

CALIFORNIA OPERATIONS

15150 Avenue of Science San Diego, California 92128 858.376.0185 858.376.0190 fax

FINANCE OFFICE

28" Floor 733 Bishop St. Honolulu, Hawaii 96813 808.680.9601 808.680.9624 fax Written Testimony of

Dr. Rick Holasek President and CEO NovaSol

Position: Oppose SB 958hd1, GMO Taro Bill Wednesday, March 19, 2008 Capital Auditorium - 9:00 am

Fax: For Testimony Less Than 5 Pages - Transmit to 586-8524(Oahu)
Or 1-800-535-3859 (Neighbor Islands)
Or email: AGRtestimony@Capitol.hawaii.gov

March 17, 2008

Rep. Clift Tsuji State of Hawaii House Agriculture Chair

Chair Tsuji and Members of the House Agriculture Committee:

My name is Rick Holasek, President and CEO of NovaSol. NovaSol is a local Hawaii-based high technology firm working in the aerospace/defense sector. Established in 1998, we specialize in reconnaissance camera systems and free space optical communications.

We are opposed to using legislation to limit scientific discovery. In addition, this legislation:

- Undermines ongoing talks with the Native Hawaiian Community on how to preserve Taro while remaining sensitive to cultural issues.
- Is based on fear-mongering and bad science. There is no hard evidence that
 genetically engineered organisms are dangerous. On the contrary, there are
 hundreds, if not thousands of peer reviewed scientific studies that prove that
 genetically engineered foods and crops are safe.
- Hamstrings the development of potentially effective tools for farmers to combat existing and unforeseen biological threats to Taro production.
- Is a slippery slope. It is an inappropriate process in particular because there is NO TARO genetic research currently underway.

NovaSol respects the cultural meaning of taro and firmly believes that the Hawaiian Community must lead the discussion about the future of taro and Hawaiian taro research and education programs. While we oppose this legislation, we strongly support efforts such as SCR 206 which would convene stakeholders in a dialogue to arrive at real solutions for Hawaiian Taro cultivation. This discussion is critical because risks of devastation to taro will require tools to preserve the future of this crop.

Science and technology hold the key to the future of our state. Not only will careers in these areas provide our children with living wage jobs, science and technology hold the solutions for preserving our environment and innovating solutions for

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healthcare. The passage of this bill sends a very clear message that Hawaii is an anti-science state at the exact moment when it is critical for us and our children to support the rich potential for innovation that is the key for sustaining our future.

The choice is ours, and the world is watching. We urge the legislature to reject this bill.

Thank you for the opportunity to testify.

Rick Holasek, PhD

Sincerely,

President and CEO, NovaSol

Testimony of SB 958

Personal Testimony Presented before the

House Agricultural Committee

Wednesday March 19, 2008

9:00 AM

Opposition to SB 958 Relating to Genetically -Modified Organisms

To: Chair Clifton Tsuji, Vice Chair Tom Brower, and the Members of the Committee

My name is **Janice Uchida**, an **Associate Professor of Plant Pathology** at the UH Manoa in the College of Tropical Agriculture and Human Resources. I am pleased to provide personal testimony on SB 958. This testimony does not represent the position of the University of Hawaii or of the College of Tropical Agriculture and Human Resources.

Saving Taro: As a Plant Pathologist, I have been involved in trying to solve the major disease problems that have decimated taro crops for more than 20 years. The entire industry is poorly mechanized and relies on manual labor to produce the precious taro corms. Identifying and finding control measures for the numerous parasites of this crop still needs years of research.

The Plant Destroyer: *Phytophthora colocasiae* is a pathogen that thrives on taro leaves and corms. Plants have less than one leaf in yearly *Phytophthora* epidemics. All other leaves are rotted. Aquatic pathogens that cause soft rots attack the corm and growers may lose over 80% of their crop close to harvest.

Phytophthora colocasiae is closely related to Phytophthora infestans, the cause of the Irish potato famine that killed over a million people, more than 120 years ago and research efforts have been strong for years. Yet, today, over a hundred years later, it remains uncontrolled. Potato breeding programs created many resistant cultivars. But Phytophthora infestans changes and breaks the resistance of new cultivars. Highly effective chemicals were developed but the pathogen is now resistant to those chemicals. Researchers are now investigating molecular methods to use a gene from Solanum bulbocastanum, a relative of potato, to protect the world's potato crops. Without the use of biotechnology, this gene cannot be moved into potato.

ID: REP BROWER

Can Taro be Saved? In science we go forward by learning new skills and applications to provide food for the world and protect our environment. Resistant taro cultivars will take many years to develop using traditional breeding. Then, it is likely that *Phytophthora colocasiae* will change and gain the ability to infect resistant cultivars, as with P. infestans.

What about chemical controls? Good farmers are aggressive in their actions to save their rotting crops. The most effective chemical control of *Phytophthora* infestans was Subdue, a fungicide. Today it is completely ineffective due to the development of resistance in potato fields. In a survey of Phytophthora colocasiae in taro farms in Hawaii, strains that were resistant to Subdue were already present. Thus the best chemicals will fail to save this crop.

What is our enemy? Clearly to address some of those difficult pathogens, we need to use genes from other aroids in the colocasiae family to save taro. Our enemies are the huge number of fungal, bacterial and viral pathogens that will devastate the taro crop. In a related situation, for many years we helped the papaya industry control *Phytophthora palmivora*, a pathogen that rots the fruits, leaves and trunks of the papaya plant. Yet, we knew that if the Papaya Ring Spot Virus were to invade the industry, there would be no solution to this incurable viral disease. The papaya industry was forced to move to Puna when the virus arrived on Oahu. When the virus arrived on the Big Isle and growers lost thousands of acres to this disease. Fortunately, local scientists had begun the research using genetic engineering to create papaya resistant to the virus. The papaya industry was saved not by prohibiting research but by fostering it. This made the new papaya resistant to viral attack and saved the papaya industry. This work was started over 10 years before the resistant papaya plants were needed.

Taro is important to the Hawaiian culture but it is also widely grown in Asia, South East Asia, and Central America. In the South Pacific two extremely severe viral diseases are known. It is only a matter of time before these incurable viral diseases arrive here. Our taro cultivars are defenseless.

My role has been and will continue to be the promotion of clean huli for propagation and establishment of new fields, the cultural and other methods to insure best fertility and soil health for this crop. This sustainable research is greatly needed in Hawaii. Our College leads the world in many aspects of Plant Pathology, Agronomic Research, Horticultural Developments, Entomology, and other areas. Biotechnology of Tropical Plants is crucial to the future ability of both our farmers and those in the world to produce food for the world. It is the tropical crops that must be developed to provide food for the future. Thus researchers who are willing to invest their time into this endeavor are valuable. We should not tie their hands. The issue is not Local it is about the Global Food Supply.

To:8085868524

Let us save taro with the new tools we have today. With my heart, I urge the committee NOT to pass SB 958.

Thank you for this opportunity to testify.

Kind regards,

Janice Y. Mchida, PhD

Department of Plant and Environmental Protection Sciences

Tropical Plant Pathology Program

3190 Maile Way, St. John 304

University of Hawaii Honolulu, Hawaii 96822

From: Gerry Ross [lavaboy@hawaiiantel.net]

Sent: Tuesday, March 18, 2008 10:55 AM

To: sb958writtenonlytaro

Cc: 'vincent mina'; 'Chuck Boerner'

Subject: SB 958 testimony

From: Gerald M. Ross, farmer-owner, Kupa'a Farms, Kula Maui

To: Committee on Agriculture

Hearing Time: Wednesday March 19, 2008 9 AM

SB 958 SD1 HD1: RELATING TO GENETICALLY MODIFIED ORGANISMS.

Imposes a 10-year moratorium on developing, testing, propagating, cultivating, growing, and raising genetically engineered taro in the State. (HD1)

Aloha Members of the Committee on Agriculture,

I am an organic farmer and raise several varieties of dryland taro for sale to customers on Maui. The current bill before you is well thought out proposal for a moratorium on genetically modified taro. Apart from the extreme cultural significance of taro/kalo to the Hawaiian culture I am concerned about the impact of the release of yet another genetically modified plant into the state of Hawaii. Human's belief that we understand the natural system to the point of where we can engineer plants to meet our needs without unintended impact is misdirected and arrogant. I have always believed in the maxim that "Nature bats last". We will grow to regret the release of genetically engineered plants for human consumption. Many people say that there are no documented effects...but one has to wonder how much of the increase in attention-deficit-disorder in children in the last decade is related to their consumption of corn products grown with GM corn. The Japanese have a moratorium on the import of GM food into their country with the explanation being that they will wait and see what the effects will be on the children of the United States before they consider lifting that ban

GM proponents claim that genetic engineering is the only solution to the decrease in taro production and the diseases of taro. That is false. It is the farmers who will learn solutions to these problems through experimentation within the natural system, not by imposing an external genetically engineered solution. Our taro used to be plagued by pocket rot, a common disease known to many taro farmers of both dry and wetland cultivation. We learned that by using compost with the predatory fungus *Trichoderma*, a naturally occurring fungus, that we were able to eliminate pocket rot and improve our yield. A natural solution.

I ask that you vote to pass this important resolution and keep Hawaiian taro natural and free from genetic engineering.

Mahalo Gerry Ross