



STATE OF HAWAII
DEPARTMENT OF EDUCATION
KA 'OIHANA HO'ONA'AUAO
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 03/27/2024

Time: 03:01 PM

Location: CR 229 & Videoconference

Committee: Senate Education

Senate Agriculture and Environment

Department: Education

Person Testifying: Keith T. Hayashi, Superintendent of Education

Resolution Title: SCR 0078 URGING THE DEPARTMENT OF EDUCATION TO REQUIRE ALL PUBLIC SCHOOLS AND CHARTER SCHOOLS THAT SERVE MEALS TO OFFER PLANT-BASED MEAL OPTIONS PRIORITIZING INGREDIENTS FROM LOCALLY SOURCED AND LOCALLY FARMED PRODUCTS.

Department's Position:

The Hawaii State Department of Education (Department) provides comments on SCR 78.

The Department appreciates this resolution's advocacy for the health benefits of a plant-based diet. However, the Department's School Food Services Branch (SFSB) finds Hawaii farms and vendors are not prepared to provide local plant-based meat/meat alternatives for meals at 257 schools statewide at this time. The SFSB's assessment of the capacity of local vendors, through its 2023 Request for Information campaign, found that Hawaii's agriculture and food manufacturing industry does not yet have large-scale vendors producing sufficient plant-based proteins, made from local ingredients.

The SFSB currently offers a vegetarian lunch entree on the menu at least once per week, including two plant-based entrees. It continues to research how to increase the number of vegetarian and plant-based entrees on the menu to provide more options for students. The SFSB is in support of increasing plant-based options on the menu to increase local purchases, but it realizes progress will need to be gradual and timely to allow farmers and local producers to scale up their production to meet our needs. To meet the Federal Requirements for Child Nutrition Programs, the SFSB needs to serve a set amount of meat/meat alternative equivalents on a daily and weekly basis. Currently, the majority of plant-based meat/meat alternatives that would make up a plant-based entree are processed and do not meet the local criteria for agricultural foods or value-added products. Examples of plant-based meat/meat alternatives are soy-based proteins like tofu and other legumes.

The SFSB is also required to offer cow's milk with each meal under Federal Guidelines. The only time a non-dairy plant-based milk alternative can be offered to a student is if a Recognized Medical Authority or parent/guardian signs off on a form that identifies the need that restricts their diet. In addition, the non-dairy plant-based milk alternative will need to meet certain federal nutrition requirements. At this time, there are no locally made plant-based milk alternatives that would meet these nutrition requirements.

Thank you for the opportunity to testify on this measure.

SCR-78

Submitted on: 3/26/2024 3:06:14 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Lorraine Sakaguchi	Testifying for Vegan Society of Hawaii	Support	In Person

Comments:

Testimony in favor of SCR78 Urging the Department of Education to require all public schools and charter schools that serve meals to offer plant-based meal options prioritizing ingredients from locally sourced and locally farmed products

Aloha,

Senator Michelle N. Kidani, Chair, Committee on Education

Senator Donna Mercado Kim, Vice Chair, Committee on Education

Senator Mike Gabbard, Chair, Committee on Agriculture and Environment

Senator Herbert M. "Tim" Richards, III, Vice Chair, Committee on Agriculture and Environment

I am writing as a representative of the Vegan Society of Hawai‘i (VSH), whose mission is to promote human health, animal rights, and protection of the environment by means of whole food, plant-based vegan education. VSH is an all-volunteer nonprofit 501(c)(3) educational and advocacy organization, formerly known for many years as the Vegetarian Society of Hawai‘i, which has been accomplishing our mission in Hawai‘i since 1990 for 34 years. We have active chapters regularly doing both in-person and online events throughout the year on Oahu, Maui, and Kaua‘i.

People here in Hawaii and elsewhere in the U.S. are having to cope with a growing and massive amount of debilitating health problems that come with poor food choices, much of it due to the increased availability of apparently affordable animal-based foods, which now mostly come from factory-farmed animals raised in extremely crowded, pollution-causing, inhumane conditions, then processed, and misleadingly presented to consumers as the main food urgently needed to maintain our health and lives.

Just turn on nearly any broadcast TV show in prime time these days, and see during commercial breaks, the previously unthinkable number of drugs being marketed to sufferers of many debilitating diet-driven chronic illnesses. These commercials are so ubiquitous in prime time because they can reach such a huge and profitable number of potential and current customers among their viewers.

But we can reverse that trend of people here in Hawaii almost inevitably growing up to become chronic sufferers of illnesses that are most often diet-driven, including type 2 diabetes and heart disease, and possibly having their lives cut short way too soon, by helping our children to learn to eat better, and grow up healthier. One of the best ways to accomplish this is to teach them at

their schools where they spend so much of their young lives, and to offer them tasty healthy whole food, plant-based choices for their snacks and meals.

A very large and growing body of research and experience, including the now classic The China Project (also known as *The China Study*, from the book written by T. Colin Campbell, PhD). a comprehensive, large-scale study in China conducted jointly by Cornell University, Oxford University and the Chinese government, has shown that populations generally live longer and healthier lives the less meat they consume in their diet. We are also currently in the early days of experiencing disastrous large-scale weather catastrophes stemming from world climate change. It has been shown that massive animal agriculture in the U.S. and around the world has driven a good amount of it. By eating more plant-based foods, and thus lessening the environmentally destructive and polluting practices associated with mass animal agriculture, such as deforestation of the Amazon, to make room for ever increasing amounts of animal agriculture, and confined animal feeding operations (CAFOs), we can help to ameliorate those negative effects, and perhaps eventually reverse them.

Prioritizing locally sourced and farmed ingredients saves on energy-consuming fuel for transport; and a shorter time and less handling from farm to table tends to keep vegetables and fruits fresher, tastier and more nutritious. Moreover, being able to source foods locally helps our local economy, and our keiki to be able to visit and learn about the farms where their food is grown, helping them to learn more about how their foods are grown, and to gain a closer, caring relationship with their environment.

Thank you for reading this. Please support this resolution. It's an important beginning to helping to secure a happier, healthier future for our young people and for their children, as well!

Mahalo,

Lorraine Sakaguchi
President
Vegan Society of Hawai'i

SCR-78

Submitted on: 3/27/2024 12:47:47 AM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Angela Melody Young	Testifying for CARES	Support	In Person

Comments:

CARES testifies in strong support.

SCR-78

Submitted on: 3/23/2024 11:23:25 AM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Helen Cox	Testifying for Kauai Climate Action Coalition	Support	Written Testimony Only

Comments:

Aloha Chair and Committee Members,

I am a parent and grandparent on Kaua`i writing on behalf of Kauai Climate Action Coalition to support SCR78. We are a group of over 150 Kauai residents. KCAC recognizes the imminent and devastating effects of the climate crisis, and works through education, direct action, and supporting effective policy to mitigate this crisis and create a sustainable, thriving, and equitable future. Offering a plant-based diet in the schools will improve health, bolster plant-based agriculture, and reduce greenhouse emissions.

Plant-based eating improves human health. Decades of research and thousands of studies indicate that plant-based eating reduces the risk of heart disease and certain cancers, as well as high blood pressure, high cholesterol, diabetes, and obesity. While many mistakenly believe that a plant-based diet cannot supply adequate protein, humans can survive and thrive on a plant-based diet. To offer plant-based meals in the schools will not only improve students' health during their school years but establish the habit of this healthy food choice for their entire lives. It will also have a ripple effect on their families.

This is not only an opportunity to improve the health of students; it will also support our local farmers by increasing demand for local produce. This increased demand for local produce and reduced demand for animal-based food also leads to a reduction in greenhouse emissions. We all recognize that we face a climate crisis that has existential implications not only for us but also for future generations. Animal agriculture is known to be a leading driver of climate change.

For the sake of our keiki, our community, and our planet, please pass SCR78. Mahalo!

Helen Cox, Chair

Kaua`i Climate Action Coalition



March 26, 2024

Senator Mike Gabbard
201 State Capitol
415 S. Beretania Street
Honolulu, HI. 96813

Dear Senator Gabbard:

Re: SCR 78 – Schools Plant Based Meals – Support

The Church State Council is the oldest public interest advocacy and legal services organization in the Western United States devoted exclusively to issues of liberty of conscience and religion and the separation of church and state. We are a Seventh-day Adventist organization serving a five-state western region (Arizona, California, Hawaii, Nevada & Utah) for the Adventist Church. We are writing this letter of support for SCR 78.

The Church State Council supports legislation that helps to bring about equality. All Americans are entitled to the fundamental rights of conscience, religious freedom and the pursuit of happiness.

The Seventh-day Adventist church since its inception has promoted a dietary pattern based on the biblical Book of Leviticus. It emphasizes whole plant foods, such as legumes, fruits, vegetables, nuts and grains, and discourages the consumption of animal products as much as possible.

Many health benefits are associated with this way of eating. In fact, research has shown that plant-based Adventists often experience a lower risk of many chronic diseases and many also enjoy a longer life.

Food plays a vital role in preparing children and students to learn and make sure they are healthy enough to attend school. Nutrition impacts brain development, memory and cognitive function, energy, attention and focus, which are all critical to the ability to absorb and retain information.

We have an opportunity to make a difference in the lives of our young vulnerable citizens. Effective laws protect everyone.

Thank you for your important work in authoring this measure.

Respectfully Submitted,

A handwritten signature in black ink that reads 'Dennis Seaton'.

Dennis Seaton
Director of Government Relations

W W W . C H U R C H S T A T E . O R G

2686 TOWNSGATE ROAD | WESTLAKE VILLAGE, CA 91361
(805) 413-7396 • FAX: (805) 778-8843

1228 N STREET, SUITE 1 | SACRAMENTO, CA 95814
(916) 446-2552

SCR-78

Submitted on: 3/22/2024 6:30:12 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Julia Estigoy-Kahoonei	Individual	Support	Written Testimony Only

Comments:

I absolutely support this bill as it would benefit everyone all around: kids, farmers, and the whole community

SCR-78

Submitted on: 3/23/2024 10:16:58 AM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Kristi Desaucido	Individual	Support	Written Testimony Only

Comments:

I support Bill 78 SCR because it advocates for inclusivity, sustainability, and health in our school meal programs. By requiring all public and charter schools to offer plant-based meal options, this measure ensures that all students, regardless of their dietary restrictions or preferences, have access to nutritious meals. Additionally, prioritizing ingredients from locally sourced and farmed products supports our local agriculture, reduces environmental impact, and fosters a connection between students and their community's natural resources. This bill aligns with values of healthy living, environmental responsibility, and economic support for local farmers, making it a comprehensive approach to improving our education system's meal offerings.

SCR-78

Submitted on: 3/23/2024 2:05:36 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Jacqueline S. Ambrose	Individual	Support	Written Testimony Only

Comments:

Aloha,

Yes to:- URGING THE DEPARTMENT OF EDUCATION TO REQUIRE ALL PUBLIC SCHOOLS AND CHARTER SCHOOLS THAT SERVE MEALS TO OFFER PLANT-BASED MEAL OPTIONS PRIORITIZING INGREDIENTS FROM LOCALLY SOURCED AND LOCALLY FARMED PRODUCTS.

SCR-78

Submitted on: 3/25/2024 12:48:37 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Christy Shaver	Individual	Support	Written Testimony Only

Comments:

Testimony in Support of SCR78

To Whom It May Concern,

I am writing in strong support of SCR78, which urges the Department of Education to mandate all public schools and charter schools that serve meals to provide plant-based meal options, prioritizing ingredients sourced from local farms and producers. This initiative not only aligns with growing health, environmental, and ethical concerns but also champions the importance of supporting our local economy.

****Health Benefits:**** Incorporating plant-based meals into school menus offers immense health benefits to our students. A diet rich in vegetables, fruits, legumes, and whole grains is associated with lower risks of obesity, heart disease, type 2 diabetes, and certain cancers. By providing plant-based options, we are not only catering to dietary needs but also fostering a culture of health-consciousness among our youth.

****Environmental Sustainability:**** The environmental impact of meat production is well-documented, contributing significantly to greenhouse gas emissions, deforestation, and water use. Transitioning to meals that are more plant-based is a crucial step in reducing our carbon footprint and promoting sustainability. By prioritizing locally sourced ingredients, we further decrease the environmental impact associated with long-distance food transportation.

****Ethical Considerations:**** Providing plant-based options respects the dietary preferences and ethical considerations of all students, including those who choose not to consume animal products for ethical, religious, or health reasons. It ensures that all students have access to nutritious meals that align with their values and dietary restrictions.

****Economic Impact:**** By prioritizing ingredients from locally sourced and farmed products, SCR78 supports local farmers and the agricultural sector. This initiative can boost the local economy by increasing demand for local produce, thereby supporting the livelihoods of our farmers and contributing to the community's economic well-being.

****Educational Opportunity:**** This initiative also presents a unique educational opportunity. By incorporating plant-based meals sourced from local ingredients, schools can educate students about nutrition, the environmental impact of their food choices, and the importance of supporting

local economies. This holistic approach to education can foster a sense of community and responsibility among students.

In conclusion, SCR78 represents a forward-thinking approach to school nutrition, environmental sustainability, ethical consumption, and economic support for local communities. I urge the Department of Education to adopt this resolution and require all public and charter schools that serve meals to offer plant-based meal options that prioritize locally sourced and farmed ingredients. Implementing SCR78 will not only benefit the health and well-being of our students but also contribute to a more sustainable, ethical, and economically vibrant community.

Sincerely,

Christy Shaver

SCR-78

Submitted on: 3/23/2024 2:52:24 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Gordon LaBedz, MD	Individual	Support	Written Testimony Only

Comments:

Our country is in the midst of a pandemic of obesity, heart disease and cancer. Nothing is more important than to teach our children good eating habits. This Bill would move that process ever so slightly forward.

Thank you for your support and concern for our kid's future.

Gordon LaBedz, MD

Family Physician

SCR-78

Submitted on: 3/25/2024 9:31:37 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Stephanie McLaughlin	Individual	Support	Written Testimony Only

Comments:

I am a retired Hawaii public school teacher (retired June 1, 2023) and taught Language Arts at Moanalua high school for 31 years. I was also the faculty adviser of our school's Vegetarian Club which lasted 16 years. I speak from experience when I say that public school children are STARVED for healthy food. Most of the cafeteria food ends up in the garbage after lunch because I had to deal with overflowing trash cans of non-eaten food near my classroom. The students in the Veg Club successfully campaigned the school cafeteria to offer veggie burgers on Mondays and they were a success. Most of the food offered at lunch time was high in fat and low in nutrition and according to the students, pretty tasteless. Many of my students did not eat lunch and said they waited until they got home to eat because they were dissatisfied with the offerings. Not only does there need to be more plant-based nutrition, but also starches such as sweet potatoes, potatoes, brown rice using no oil. I can't tell you the number of students I had who came to my classroom after lunch and felt sick or had to run to the bathroom because of what they ate for the school lunch. Please pass this important bill.

SCR-78

Submitted on: 3/25/2024 10:32:32 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Brian Lehmann	Individual	Support	Written Testimony Only

Comments:

Honorable Committee(s):

I support passage. For any already seeking plant-based options it's crucial. And as the measure states, it could encourage healthful options for all those interested. Thank you.

SCR-78

Submitted on: 3/25/2024 11:05:46 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Kathy Shimata	Individual	Support	Written Testimony Only

Comments:

Aloha Senators,

For the health of students & the health of our farming community, I urge the DOE to require all schools that serve meals to offer plant-based meal options. Whenever possible, meal ingredients should be locally sourced & locally farmed products.

Mahalo,

Kathy Shimata

96822

SCR-78

Submitted on: 3/26/2024 12:39:55 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Anna	Individual	Support	Written Testimony Only

Comments:

Growing up in Hilo, I never ate lunch in high school because the options were intolerable. I do hope school lunches have improved because all students have a right to healthy, locally sourced foods. This is a win for their health, our farmers, and our aina.

Furthermore, everyone can choose enjoy plant-based options if they choose to... no matter what your diet is!

Mahalo for considering this bill for future generations.

SCR-78

Submitted on: 3/26/2024 2:24:18 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Christine Gouveia	Individual	Support	Written Testimony Only

Comments:

I support having plant based lunches in Hawaii public schools prioritizing locally grown and cultivated produce and products.

SCR-78

Submitted on: 3/26/2024 5:15:05 PM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Harry Prince	Individual	Support	Written Testimony Only

Comments:

Without a doubt, a plant based diet has proven to be much healthier for all. And with the epidemic of unhealthy, obese children in our state, this bill makes really good sense. That's why I am submitting this testimony in favor of SCR78.

Mahalo

SCR-78

Submitted on: 3/27/2024 12:51:45 AM

Testimony for EDU on 3/27/2024 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Patience Artero	Individual	Support	Written Testimony Only

Comments:

To: House Committee on Education and Agriculture and Environment From: Patience Artero

Date: 26 March 2024

Hearing: 27 March 2024, 3:01 pm (Video Conference)

Re: Testimony for SCR 78

To Whom It May Concern:

Aloha and Hafa Adai, my name is Patience Artero an MSW student at the Thompson School of Social Work program at the University of Hawaii at Manoa who recognizes the much-needed support for SCR 78: URGING THE DEPARTMENT OF EDUCATION TO REQUIRE ALL PUBLIC SCHOOLS AND CHARTER SCHOOLS THAT SERVE MEALS TO OFFER PLANT- BASED MEAL OPTIONS PRIORITIZING INGREDIENTS FROM LOCALLY SOURCED FARMED PRODUCTS.

The passage of SCR 78 will have many benefits that can positively impact the students from the Department of Education, local farmers, and the community. As childhood obesity continues to be a global concern, plant-based meals, which are typically lower in calories and higher in nutrient density, would assist in preventing obesity and related diseases (heart disease and diabetes). In return, with the implementation of plant-based meals, there would also be a potential reduction in healthcare costs associated with diet-related diseases. Implementing such meals would offer more awareness that could be shared amongst the students' families to promote healthier lifestyle choices.

Secondly, in comparison to diets rich in animal products, plant-based diets are more sustainable because they require less energy and fewer natural resources and are less demanding on the environment. Studies have shown that decreasing the production and consumption of animal products helps greatly reduce greenhouse gas emissions while improving overall health outcomes. Other environmental benefits include reducing land use, water conservation, and decreasing pollution.

Lastly, the option to serve plant-based meals helps local agriculture and businesses flourish. By purchasing directly from local farmers, we reduce the need for large-scale food production and minimize carbon emissions by buying produce locally. By buying produce locally and

supporting local farmers, we help sustain businesses, create jobs, and generate income, which is reinvested into the local economy.

I urge you to SUPPORT SCR 78 and prioritize the overall well-being of our students by ensuring they have access to and knowledge of healthy, plant-based meal options to prevent future diet-related diseases. Adding a plant-based meal option in public and charter schools would be an essential step towards promoting the students' health, sustainability, and inclusivity within the community, as well as additional educational value for students to use throughout their lives.

Mahalo, thank you for your time and the opportunity to provide written testimony supporting SCR 78.



Hawaii Cattlemen's Council, Inc.

COMMITTEE ON EDUCATION
Senator Michelle N. Kidani, Chair
Senator Donna Mercado Kim, Vice Chair

COMMITTEE ON AGRICULTURE AND ENVIRONMENT
Senator Mike Gabbard, Chair
Senator Herbert M. "Tim" Richards, III, Vice Chair

SCR78

URGING THE DEPARTMENT OF EDUCATION TO REQUIRE ALL PUBLIC SCHOOLS AND CHARTER SCHOOLS THAT SERVE MEALS TO OFFER PLANT-BASED MEAL OPTIONS PRIORITIZING INGREDIENTS FROM LOCALLY SOURCED AND LOCALLY FARMED PRODUCTS.

Wednesday, March 27, 2024, 3:01PM
Conference Room 229 & Videoconference

Chairs Kidani and Gabbard, Vice Chairs Kim and Richards, and Members of the Committees,

The Hawaii Cattlemen's Council **opposes SCR78** urging the Department of Education to require all public schools and charter schools that serve meals to offer plant-based meal options prioritizing ingredients from locally sources and locally farmed products.

We believe that individuals should have the freedom to choose their diet based on their specific needs and values, but a well-rounded meal that includes beef is still a healthy choice. While it is important to focus on how to increase consumption of locally purchased products, requiring all schools to serve plant-based meals is not necessary. We are still trying to streamline and improve the process for schools to purchase local products, and adding this requirement of offering plant-based meal options will not help those issues. Let's focus on increasing local food purchasing, including beef which is a high quality protein that Hawaii's ranchers are able to provide to schools.

Advancing Food Security

With cattle consistently in the top 5 agricultural commodities in the state, beef is incredibly important to advancing Hawaii's food security. Hawaii's paniolo have endured generations of challenges, and while the pineapple and sugar industries faltered, the cattle industry continues to steward tracts of land and find innovative ways to stay in business. We encourage the State to look to Hawaii's ranchers as partners in increasing food security, such as continuing to provide beef for the Farm to School program and as a resource for reducing fire fuel loads.

Nutrition

The American Heart Association recognizes beef as a heart healthy protein and even provides recipes that include lean beef. Research by Roussell et al (2012) shows eating lean beef as part of a heart-healthy dietary pattern can help maintain normal cholesterol levels. Hawaii's locally grown beef



provides 10 essential nutrients in a single 3 oz. serving. This includes high-quality protein, iron, zinc and B vitamins. The iron in beef is heme iron, which is more easily absorbed than nonheme iron, which is the main form of iron found in plant proteins. Iron is vital as it helps red blood cells carry oxygen to body tissue, but even further, it also plays an important role in cognitive health such as memory, learning, and reasoning.

Environmental Stewardship

If we encourage individuals not to choose beef, some of our most avid land stewards will suffer. Ranchers are stewards of the land and are key in removing invasive species, reducing fire fuel loads, and increasing carbon sequestration through rotational grazing (Bremer et al., 2021). Beef raised in the US has one of the lowest carbon footprints in the world, and according to the Environmental Protection Agency, cattle are responsible for just 2% of greenhouse gas emissions in the US, with the full lifecycle of raising cattle accounting for 3.7% of greenhouse gas emissions (Rotz et al., 2019). This improvement in production is a result of research in genetics, the quality of cattle feeds, animal welfare and management techniques, and the inclusion of technology.

Since almost 20% of Hawaii's land is in pasture (with that number dropping each year due to conversions to other uses), we should not be discouraging the consumption of local beef.

Thank you for the opportunity to testify on this matter. The Hawaii Cattlemen's Council (HCC) is the Statewide umbrella organization comprised of the four county-level Cattlemen's Associations. Our member ranchers represent over 60,000 head of beef cows; more than 75% of all the beef cows in the State. Ranchers are the stewards of over 750 thousand acres of land in Hawaii, or 20% of the State's total land mass. We represent the interests of Hawaii's cattle producers.

Nicole Galase
Hawaii Cattlemen's Council
Managing Director

Sources Cited

Bremer, L. L., Nathan, N., Trauernicht, C., Pascua, P., Krueger, N., Jokiel, J., Barton, J., & Daily, G. C. (2021). Maintaining the Many Societal Benefits of Rangelands: The Case of Hawai'i. *Land*, 10(7), Article 7.

<https://doi.org/10.3390/land10070764>

Rotz, C. A., Asem-Hiablíe, S., Place, S., & Thoma, G. (2019). Environmental footprints of beef cattle production in the United States. *Agricultural Systems*, 169, 1–13. <https://doi.org/10.1016/j.agsy.2018.11.005>

Roussell, M. A., Hill, A. M., Gaugler, T. L., West, S. G., Heuvel, J. P. V., Alaupovic, P., Gillies, P. J., & Kris-Etherton, P. M. (2012). Beef in an Optimal Lean Diet study: Effects on lipids, lipoproteins, and apolipoproteins. *The American Journal of Clinical Nutrition*, 95(1), 9–16. <https://doi.org/10.3945/ajcn.111.016261>