

2023 Hawaii Island



Annual Report



Message from the Mayor

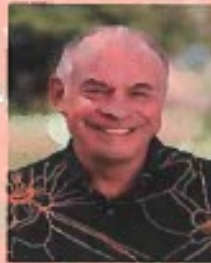
Mitchell D. Roth
Mayor



Deanna S. Sako
Managing Director

Robert H. Command
Deputy Managing Director

County of Hawai'i
Office of the Mayor



MAYOR'S MESSAGE

Aloha! On behalf of the people of the County of Hawai'i, we extend our heartfelt thanks to the dedicated staff and volunteers of the Hawai'i Island Soil and Water Conservation District, whose achievements are documented in the 2023 SWCD Annual Report.

Each district operates under the guidance of a board of directors who generously donate their time and expertise to various aspects of resource management. From soil and water conservation, watershed management, flood mitigation, reforestation, erosion control, pollution prevention, wildlife habitat conservation, and educational initiatives, these individuals play a pivotal role in safeguarding our island's natural splendor.

Despite often operating behind the scenes, the volunteers of the Hawai'i Island Soil and Water Conservation District are true heroes. Tirelessly committed to the protection and preservation of our environment, your important contributions benefit the people of Hawai'i now and set the foundation for a sustainable future for generations to come.

A handwritten signature in black ink, appearing to read "M. D. Roth".

Mitchell D. Roth
Mayor

Diversified Agriculture On Hawaii Island

Whats growing in Hawaii.....

- **Cattle and Calves – \$59.8 million:** A steer typically weighs about 1,000 pounds and yields about 450 pounds of edible meat.
- **Sugarcane – \$51.4 million:** One stalk of sugarcane, a tall perennial true grass, contains 30 teaspoons of sugar and six teaspoons of molasses.
- **Coffee – \$49.2 million:** A coffee tree, which grows berries called coffee cherries, produces about 10 pounds of coffee cherry each year.
- **Macadamia Nuts – \$45.6 million:** Macadamia nuts are not picked from trees but instead harvested after they have fallen to the ground.
- **Floriculture – \$45 million:** Floriculture is flower farming. More than 30 percent of U.S. consumers buy fresh flowers each year.
- **Chicken Eggs – \$15.6 million:** U.S. poultry farms provide about 10 percent of the world's egg supply, or 75 billion eggs each year.
- **Bananas – \$10.9 million:** This fruit doesn't always come in its familiar yellow color. In fact, bananas can grow in a variety of colors, even red.
- **Papayas – \$10.6 million:** The papaya is thought to be native to southern Mexico and Central America.
- **Dairy Products – \$9.92 million:** A dairy cow produces about 6.3 gallons of milk each day and 350,000 glasses of milk in a lifetime.
- **Mushrooms – \$6.93 million:** The most widely cultivated mushroom in the world is the button mushroom, which is sold both fresh and canned.

Ginger, taro, avocados,, pineapples to name a few, are added to the list of diversified agriculture that is produced on Hawaii Island.

Message from...NRCS PIA DIRECTOR

It's hard to imagine when surrounded by such natural beauty and unique ecosystems that working in the Pacific Islands Area (PIA) can be both challenging and extremely gratifying at the same time. Yet, it is.

Outsiders think that because it is so beautiful here, that our work to conserve our natural resources is a walk in the park. While I've only served as Director of the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) in PIA since the past year, I've learned nothing could be farther from the truth.

Conservation, no matter the beauty of our surroundings, is difficult but important work. Especially at NRCS PIA where the agriculture is as diverse as the producers we serve. PIA is a melting pot of diversity of different cultures and different people that live on islands sometimes thousands of miles apart. We have different time zones, different languages and different backgrounds. But we all have the same goals to protect our natural resources and feed a growing world.

We have experienced catastrophic tragedies such as Typhoon Mawar and the Hawai'i Wildfires due to extreme weather. Together, we mourned the loss of neighbors who perished in the Maui wildfires, the deadliest wildfire in our country's history.

During this time of grief, I saw the aloha spirit in the resilience of our communities. Many of our staff stepped up to shelter, feed and support those directly impacted by the wildfires. NRCS PIA immediately established disaster response teams to assess the destruction and worked closely with our partner agencies to form a detailed strategic response.



As of April 17, our team has enabled more than \$18.1 million in financial assistance and more than \$2.7 million in technical assistance through the Emergency Watershed Protection (EWP) program to help mitigate widescale environmental damage in Upcountry Maui caused by the Olinda, Pūlehu, and Kula wildfires in August 2023. NRCS PIA continues to offer financial and technical assistance through the Environmental Quality Incentives Program, Conservation Stewardship Program and Agricultural Conservation Easement Program to affected agricultural producers, private landowners and forest managers. NRCS continues to play an important role, not only in the recovery but also for the future of clean and abundant water, healthy soils, resilient landscapes, and thriving agricultural communities.

It was a year that also brought NRCS Chief Terry Cosby to Hawai'i during our OneUSDA-OnePIA operational meeting. This three-day meeting brought together our entire agency from all 12 service centers to join with the Farm Service Agency. It was an opportunity for our employees and partners to share ideas for improvement with thoughtful conversation and team building exercises to grow a stronger PIA. Seeing everyone together in one place was a fitting end to another challenging year.

So far in 2024, our dedicated staff continues to carry out our critical mission of conservation as we embark on new partnerships like Hawai'i Sentinel Landscape on the islands of Kaua'i, O'ahu, and Hawai'i, and work with producers like MA'O Organic Farms of Wai'anae to offset the costs of organic transition as part of new USDA programs to create and expand organic markets. As we embark on these new partnerships, we continue to forge strong relationships with enduring partners like Soil & Water Conservation Districts throughout PIA.

NRCS looks forward to delivering USDA's conservation programs to all of PIA through the extension of the Farm Bill and increased Inflation Reduction Act funding to protect viable farmland, rangeland and forestland throughout our islands, sustain vital natural resources and wildlife habitat, and support climate resiliency.

J.B. Martin
Director,
NRCS Pacific Islands Area



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Hilo Field Office Staff Servicing Hamakua, Waiakea, Puna and Ka'u Districts

The Hilo Field Office (comprised of members of NRCS, Hamakua, Waiakea, Puna and Ka'u Soil and Water Conservation Districts) team focused their 2023 fiscal year on working together to provide excellent customer service and helped our agricultural producers achieve their natural resource and business goals!



(from Left to Right)

*Meghan Mulley, Nanea Babila, Jennifer Reavis, Kanoa Lee Loy,
Chelsea Sakamoto, Chloe Gallegos, Brittany Camp, Rebecca Delimont,
Kevin Burke, Vansa Chuon, Kyle Honda*



Waiakea Soil and Water Conservation District



Leslie Takayama
Chairman

Susan Litteral
Vice Chairman

Amy Bugado
Treasurer

George Mikami
Secretary

Sheldon Takajo
Director

Chairman Takayama speaks on behalf of Waiakea SWCD

The mission of the Waiakea Soil and Water Conservation District (SWCD) is to preserve our land and water resources by assisting in planning and education. The Waiakea Soil and Water Conservation District provides conservation plans for individual agricultural landowners to help control surface water and reduce sediment runoff. The Waiakea District, being in an urban setting, also assists on flood control projects along with the County Department of Public Works (DPW) and Natural Resource Conservation Service (NRCS) with planning and annual inspection of such projects. Plans are also provided for USDA NRCS Farm Bill cooperators, primarily for Environmental Quality Incentive Program (EQIP) with the District acting as a Technical Service Provider (TSP).

The District would like to thank its partners the County of Hawaii Department of Research & Development, County of Hawaii Department of Public Works, USDA Natural Resources Conservation Service, the University of Hawaii Cooperative Extension Service and the State Department of Land and Natural Resources for all their assistance in our goals. We also would like to thank the cooperators for their earnest efforts towards helping to create and implement the plans.

The Waiakea SWCD would also like to thank HACD for all their efforts to secure funding from the State Legislature. We at the Waiakea SWCD would like to join with all District Directors to come up with new ideas for better funding. One idea our District wants to promote is the potential use of lands controlled by the Department of Land and Natural Resources. If part of the income from State land leases can be directed to the Districts, we may have sufficient funding to carry out our mission. Or if given the land we could produce and sell plant material for windbreaks, ground covers, forage, or native species for natural area restoration. The State is land rich. Let's see if we can tap this wealth for the benefit of conservation.

Waiakea SWCD

Outstanding Cooperator of the Year

“Donn Yanagisawa”

Donn Yanagisawa along with his family, own and operate D&L Ranch. They own 6 acres in the Wai-akea Uka area within the Waiakea Soil and Water Conservation District.

This parcel was an old, abandoned flower nursery,

with years of neglect. It was overgrown with Melochia, African tulip and gunpowder trees. In 2016, after purchasing this parcel, Donn wanted to raise sheep and started to clear a boundary to install a perimeter fence, once that was completed, he contacted NRCS planner Spencer Nagata to develop a conservation plan. Through the Environmental Quality Incentives Program, Donn’s first contract was approved. He removed all trees on the parcel, followed by 2 consecutive treatments of spot spraying wedelia, and other weeds. He then reseed half the pasture with guinea grass and the other half was hand planted with California grass sprigs.

He installed 2,035 feet of woven wire and 660 feet of pipe, to create 8 paddocks, each with its own water trough. As an example to Donn’s dedication to this project, while planting grass, NRCS specifications call for 6 feet by 6 feet spacing for hand planting vegetative material.

Donn would set up grids by pulling strings across the pasture to make sure he planted every 6 feet.

After completing this contract in 2020, Donn now raises grass finish steers, and is now underway with his second contract with Conservation Stewardship program (CSP) which he's been enrolled for 5 years of prescribed grazing. He’s currently completing his 3rd year.

Donn Yanagisawa’s dedication to the health and well-being of his animals, as well as the land on which they graze, is a testament to his passion for responsible farming. Congratulations on being selected for Waiakea Soil and Water Conservation District’s “2022 Outstanding Cooperator of the Year Rancher Award.”

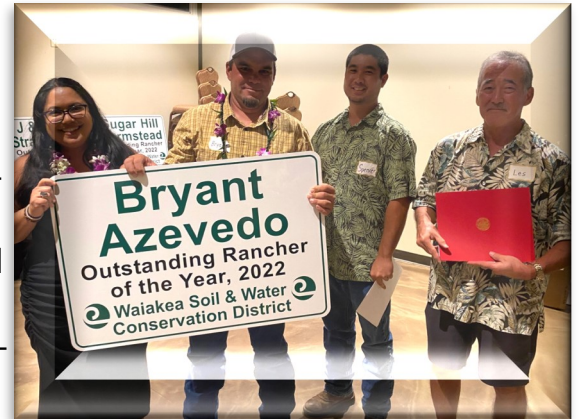


Waiakea SWCD

Outstanding Cooperator of the Year

“Bryant Azevedo”

Bryant Azevedo along with his family, own and operate Azevedo Farms; they lease numerous tracts of land around the island, raising beef cattle. However, this 15-acre parcel is in the Ainalako subdivision, within the Waiakea Soil and Water Conservation District. Bryant and his family live on site, where he raises finishing hogs and steers.



In 2018, Bryant contacted NRCS with a goal to create a rotational grazing system for this parcel in Waiakea Uka. With an already established Baron Goto grass pasture, he cleared pockets of brush with his excavator and let the land rest from grazing for eight months. With no surprise, the goto grass proved to be dominant and spread to the areas cleared.



Bryant also installed 3,170 feet of barbed wire fence and 900 feet of pipe to create 8 paddocks. Each paddock contains its own gravel pad and trough to provide drinking water to his cattle while protecting the surrounding area



from erosion. Bryant also planted 810 feet of Pine windbreaks to provide shade for his livestock.

Bryant has done an excellent job in implementing his conservation plan and was a true blessing to work with. We look forward to working with Bryant and Azevedo Farms, again on an upcoming Conservation Stewardship application, as he plans to concentrate on his prescribed grazing to intensify his grazing management.

Congratulations to Bryant and the Azevedo Family for their dedication and hard work and for being awarded Waiakea Soil and Water Conservation District “2022 Outstanding Cooperator of the Year Rancher Award.”

Waiakea SWCD

Outstanding Cooperator of the Year

“Michael Watanabe”

Michael Watanabe operates a combined 15-acre parcel of leased and owned land in the Panaewa subdivision within the Waiakea Soil and Water Conservation District. Dedicated to pasture, Michael runs two separate Black Angus grass finishing steer herds.



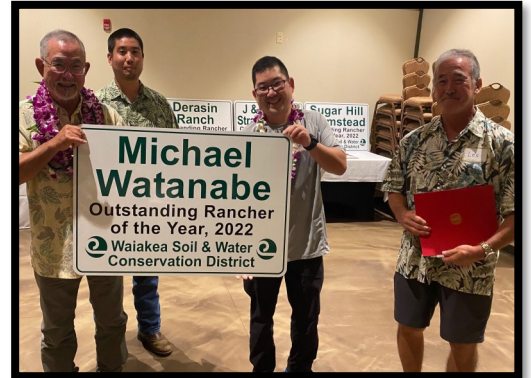
In 2016, Michael started working with NRCS planner Spencer Nagata to develop a conservation plan. Once awarded an Environmental Quality Incentives program contract in 2017, work began on removed 2.5 acres of dense thickets of Albizia and candle bush. He also followed up with 2 consecutive treatments over 10 acres each of spot spraying Lantana, joe weed, and any other invasive weeds that appeared.

Michael then re-seeded parts of the pasture where he had cleared, with signal and guinea grass. He installed over 2,100 feet of woven wire fence, 1,100 feet of pipe, and 8 troughs to create 4 paddocks for each herd to rotate through. After completing this contract in 2020, Michael has achieved a 1:1 ratio of 1 steer per acre, which is truly phenomenal.

Mike is now underway with his second contract with Conservation Stewardship program which he's been enrolled for 5 years of Prescribed grazing. He's currently completing his 3rd year.



Congratulations to Michael Watanabe for being a dedicated rancher, steward of the land, and for always having a humble and positive attitude. This is why you've been selected for the Waiakea Soil and Water Conservation District 2022 Cooperator of the Year Rancher Award.



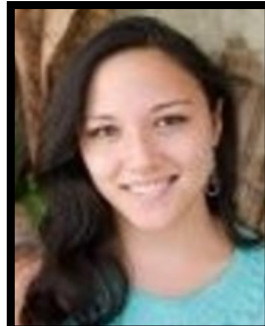
Puna Soil and Water Conservation District



*Oliver English
(Chairman)*



*Aileen Yeh
(Vice Chair)*



*Leanne Kami
(Secretary/Treasurer)*



*Elton Mow
(Director)*



*Atto Assi
(Director)*

Puna SWCD Chairman's Message

The Puna Soil and Water Conservation District (SWCD) have been instrumental in conservation planning and accomplishments throughout the agriculture lands in the Puna District.

The Puna district had a very challenging year with invasive species attacking ranches, farms and businesses. It was a challenge assisting farmers control these pests not to take over farms.. However with the assistance of the SWCD board, district employees, Meghan Mulley, Jennifer Reavis, and NRCS Hilo Field Office, the Puna District worked to make it happen. All in all the District continues to be one of the fastest growing districts in the State of Hawaii.

Animal waste continues to be a high priority in the district. Invasive species are increasing in this district as more nurseries and potted plant cooperators start to expand. The Coqui frogs are also spreading to higher elevations. Other invasive pests of interest include the Nettle Caterpillar, Fire Ants, and pests such as the Varroa Mites and Small Hive Beetles affecting our bees and their hives.

We would like to thank the many governmental agencies that assist and support the District programs. The State Legislature through DLNR, USDA Natural Resource and Conservation Service (NRCS), the University Extension Service, and Mayor Roth's Office and the County Department of Research and Development for funds to hire our District Employees for implementation of the Hawaii County Grading Code.

Puna SWCD

Outstanding Cooperator of the Year

Gayle Chavez Ola'a Mauka

Gayle Chavez and Terence Spencer have owned their forest operation since 2016. This 21-acre parcel is in Volcano that falls within the Puna Soil and Water Conservation District. Adjacent to the Hawai'i State Ola'a Forest Reserve, the first few months of their restoration endeavor consisted of countless hours of invasive weed eradication of yellow Himalayan raspberry and kikuyu grass.

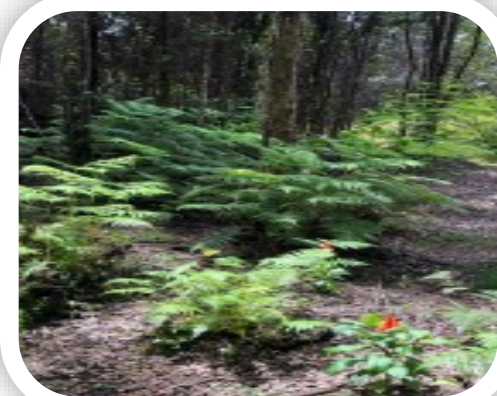
Gayle and Terence knew that the existing native plants like `ohi`a lehua, hapu`u pulu, olapa, and much more needed space to breathe, but there was no real plan in place.

In 2017, Gayle contacted NRCS with their main plan objective to restore the

terrestrial habitat for native forest birds. From a completely unfenced 21-acre parcel and constantly browsed by feral cattle and pigs to a fully enclosed 4.3-acre portion with no ungulate traffic since late 2018 and additional vegetation improvements, Terence and Gayle express their positive experience in working with the native forest and NRCS simultaneously.

As they observed and learned so much along the way, management of the 4.3-acre enclosure became their passion. Second generation Mamaki are sprouting in many places and in more densely shaded areas, the hapu`u pulu fern growth is incredible and is filling in its historical niche very nicely.

One of the best parts of my job is getting to work with people as driven, ambitious, and knowledgeable as Gayle and Terence. They have put a lot of effort in and done a phenomenal job with the implementation of their forestry plan that Gayle is now a Conservation Stewardship Program participant. Congratulations to Gayle Chavez and Terence Spencer for being awarded as Puna Soil and Water Conservation District's "2022 Outstanding Cooperator of the Year Forester Award."



Puna SWCD Outstanding Cooperator of the Year

Marcel Alfons.....Big Island Hog Farm LLC

A passionate farmer and mother, Marcel Alfons is dedicated to generating locally sourced food for her 'ohana and community. Throughout her two NRCS contracts, Mrs. Alfons has shown a commitment towards improving the resource concerns



and production limitations on her 1 ac Mountain View property and creating a source of reliable meat and produce for personal and community benefit. In previous years, Mrs. Alfons worked with District Conservationist Kori Hisashima to imple-

ment an exemplary deep litter piggery for her pigs, completing the NRCS contract in a timely manner. In her current contract, Mrs. Alfons is working with planner Alina Abramovich to complete two High



Tunnel Systems (with gutters and downspouts) over two garden plots on either side of her existing piggery. The total square footage of the High Tunnels adds up to 4,919 sqft. Both High Tunnels have been successfully certified, as well as one of the Roof Runoff Structures, and Mrs. Alfons is on schedule to complete the final Roof Runoff

Structure by the end of the 2023 fiscal year. These practices of reliability, commitment and punctuality regarding NRCS deadlines and specifications make Mrs. Alfons an excellent choice for Cooperator of the Year 2023, as well as an exemplary representative cooperator for the Puna Soil and Water Conservation District.



Puna SWCD

Outstanding Cooperator of the Year

Joey Pascual J P Seven Strands Ranch

Joey Pasucal has been a cooperator of the Puna Soil and Water Conservation District since 2017. Joey and his family manages 20 acres off North Kulani Road in Mountain View. Joey worked with NRCS to develop a conservation plan that would address resource



concerns in manageable amounts, taking into consideration Joey's time and resources.



Joey's resource concerns on his ranch included noxious and invasive plants like Waiawi, Koster's Curse and Albizzia, inadequate quantities and quality of feed and forage, and decreased forage quality and palatability. Joey and his family installed over 1,500 feet of fence and expansion of his livestock watering system to service newly created paddocks and extensive pasture renovation.

Joey sprayed to help control weeds in his pasture and revegetated the paddocks with Baron's Goto grass to replace the marginal Vasey, Hilo, Carpet and weedy vegetation mixture that were there. Although they often complained, Joey and his wife Pulele was able to motivate their children to help with the daunting task of planting grass. They allowed the newly planted paddocks to rest for at least 8 months before allowing his cows in for a light graze and uniform grass regeneration. He now rotates his herds around 8 paddocks. This new rotation created a higher animal stock density impact per paddock, resulting in uniformed grazing of paddocks, a high plane of animal performance and diet quality, balanced with the health of the grazing resources like the forage, roots, and soil. The family also planted a Kukui tree in each paddock with tree protection to provide shade for livestock.



Joey appreciates the helpful guidance and planning of NRCS District Conservationist Kori Hisashima. He commends NRCS for their technical knowledge on grazing systems that helped a rancher like himself to become a successful beef producer while conserving and enhancing his natural resources. He claims that he would not be where he is today without the help received from NRCS. Joey has and continues to be a pleasure to work with. He utilizes the management tools we have shared with him to ensure the continued

success of his operation. Congratulations to Joey Pascual of J&P Seven Strands Ranch for being honored as the 2022 Puna Soil and Water Conservation District Rancher of the Year.

Ka'u

Soil and Water Conservation District



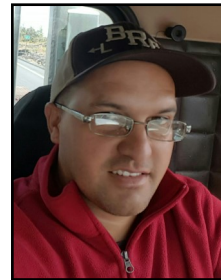
Chairperson
John Cross



Vice Chairperson
Brenda Iokepa-Moses



Treasurer
Ka'ohi Mokuhalii



Secretary
Tyler Johansen



Director
Mark Aurelio

Ka'u SWCD Chairperson's Message

Ka'u Soil and Water Conservation District (KSWCD) has a board made up of dedicated volunteers that include John Cross, Brenda Iokepa-Moses, Kao'hi Mokuhalii, Tyler Johansen, and our newest member: Mark Aurelio. Board Members all bring something different to the table and this diversity helps them in their decision making and recommendations. This past year has been one of recovery from flooding to windstorms. Our farming community is resilient and have made great strides to mend what has been broken. In times of natural disaster, the Soil and Water Conservation and NRCS staff play an important role in assisting the farmer to repair damages or in some places relocate and start over. We are blessed with a Hilo staff that is not only good at their jobs but also go above and beyond to assist farmers because they truly care. Meghan Mulley is our soil conservationist that make things happen in the office along with the unwavering support of Kanoee Lee Loy and the rest of the NRCS staff. Jennifer Lopez-Reavis heading the Field Office in Hilo also handles three districts (Puna, Ka'u and Waiakea) on top of coordination of special events, budgets and anything else that comes up! With these talented members of our team and with all the different backgrounds our goal collectively is to do our part to help preserve the land and water resources by assisting in the planning and preparation of the lands as well as facilitating education for the farmers.

With our district being comparable in size to the Island of Oahu it is a challenge just getting to our clients. With the drive being an hour or two away from the field office a lot of time is spent on the road getting to these rural area clients. With the help of our partner NRCS they make it work with careful planning.

A special mahalo to Mayor Mitch Roth, the County of Hawaii R&D, DPW, Department of Land and Natural Resources, Natural Resources Conservation Service, and other affiliated agencies for their continued support of the agricultural community.

"Buy Local it Matters"

Ka`u SWCD Outstanding Cooperator of the Year

Keane & Salina Iranon 4 Boys Ranch

Keane Iranon and his wife, Salina Iranon, own and operate Four Boys Ranch raising beef cattle. This 908-acre parcel is leased and located in Volcano that falls within the Ka`u Soil and Water Conservation District. Keane and his



family live on-site, where they also raise horses. In 1998, Keane initially reached out to NRCS to help improve his kikuyu grass pasture by creating a rotational grazing system. Since then, he has implemented brush clearing of yellow Himalayan raspberry and Christmas berry with his skid steer, and installed fence and livestock pipeline to create 12 total paddocks. Each paddock contains its own

trough with gravel pads to provide and distribute drinking water to his cattle. Keane also installed two fence enclosures containing koa plantings to provide livestock shade.



I am always astounded at the level of dedica-



tion and hard work Keane and the Iranon family has put in through the implementation of three completed conservation plans under the Environmental Quality Incentives Program. Keane is now working on another contract to focus on the remaining paddocks that are still in need of pasture improvements. Your hard work has not gone unnoticed – Congratulations to Keane and the Iranon family for

being awarded as Ka`u Soil and Water Conservation District's "2022 Outstanding Cooperator of the Year Rancher Award."

Ka'u SWCD

Outstanding Cooperator of the Year

Derasin Ranch..... Kirk Derasin

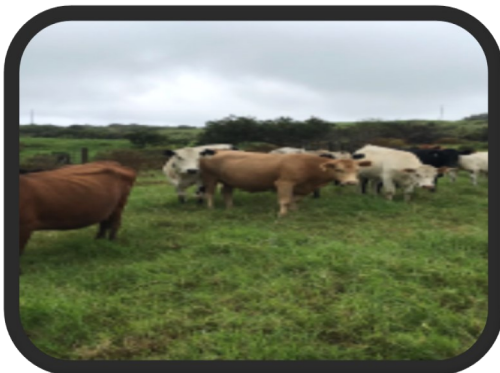
Kirk Derasin and wife Denisha, own and operate Derasin Ranch. With a focus on beef cattle, Derasin Ranch owns and leases several parcels of land in Kau. Kirk's day job as senior forester for Forest Solutions has allowed him to work with NRCS for over a decade, writing and executing forest stewardship plans.

This experience with NRCS and associated programs made for an easy transition from consultant to producer.



In 2017, Kirk acquired a 193-acre parcel in the South Point area within the Kau Soil and Water Conservation District. In its current condition, the land could only sustain a herd of roughly 20 cows. With NRCS planner Spencer Nagata, they developed a conservation plan with a focus on improving and increasing accessible grazing. Once awarded the Environmental Quality Incentives program contract, Kirk removed 49 acres of Christmas berry trees, and reseed with guinea and signal grass. He then installed 2,900 feet of barbed wire fence and 2,100 feet of pipe to

increase grazing rotations by 2 paddocks. One of Kirk's biggest challenges was controlling the existing balloon plants within the pasture that can spread thousands of seeds annually. Since cattle often avoid eating balloon plants, Kirk devoted countless hours to administer multiple applications of herbicide.



Kirk has done a phenomenal job with the implementation of his plan. Through the improvements made, Kirk has successfully increased his herd by 300% . He is now working on another 2 contracts on parcels that are adjacent, for a total of 373 acres. Congratulations to Kirk and Denisha, and the Derasin Family for their perseverance, hard work, and for being awarded Kau Soil and Water Conservation District's "2022 Outstanding Cooperator of the Year Rancher Award."

Ka'u SWCD Outstanding Cooperator of the Year

James Dacalio J & L John Bull Hawaiian Coffee Farm

When I first moved here, I remember driving down to Pahala during a heavy rainstorm and seeing, as many of you have experienced, heavy runoff full soil running into the street starting in the Pahala area. Over the years as I drove south, I noticed a small coffee farm that was



mulching and planting perennial peanut. It made me happy to see that when there was runoff the water seemed a little cleaner each time. Little did I know I would end up working with Jimmy & Lisa Dacalio of John Bull Hawaiian Coffee Farm. They

have been farming coffee for over 20 years and I can tell you firsthand their coffee is delicious.

They created mulch and conservation cover plans



through the EQIP program with their original planner, Laila Jarryosi, to reduce

soil loss, slow runoff, and improve plant health. Jimmy has always gone above and beyond, mulching larger areas than required with high quality mulch, and persevering through low seed germination to make sure his coffee rows are pristine and healthy. The next time you're driving to Pahala be sure to check out their great work, just look for their new cooperator of the

year sign right off the highway.

Congratulations on all your hard work and being selected for Ka`u Soil and Water Conservation District's 2022 Outstanding Cooperator of Year award!



HAMAKUA

Soil and Water Conservation District



Doug Beaton
Chairperson



Kea Keolonui
Vice Chair



Dylan Shropshire
Treasurer



Michael Manor
Secretary



Shawn Aguiar
Director

Hamakua Chair's Message

As 2023 comes to an end, we are obligated to reflect on our challenges and accomplishments so that we can continue to move forward with providing valuable services for our community and producers. The need for those services continues to grow as our district is a very active agricultural area with operations ranging from small subsistence farms to large commercial operations. The demand for conservation planning services to conserve those resources will only increase as our population and population densities continue to rise. The agriculture residential interface will continue to increase as well, creating challenges for both the agricultural communities as well as the public.

The Hamakua SWCD, in partnership with the USDA Natural Resources Conservation Service, welcomed 22 new cooperators and approved 20 conservation plans in 2023. Over 5,000 acres of land have been included in our 2023 plans and will be implementing practices to address the identified resource concerns. The district also took part in several outreach activities including a UH Hilo Environmental Science class field session, the Waimea Healthy Keiki Festival, UH Hilo's Earth Day & Conservation Career Day, and volunteering at the 2023 Hawaii County Conservation Awareness Contest hosted by the Ka'u SWCD.

The Hamakua SWCD would like to acknowledge and extend our deepest appreciation to the County of Hawaii, the USDA Natural Resources Conservation Service, and the State Department of Land and Natural Resources for providing the financial and technical support that enables us to provide free conservation planning to for our district. The HSWCD Board would like to also thank Chloe Gallegos, Hamakua SWCD Conservation Planner and Administrative Assistant, for being their person in the field and the office and commend her for her dedication and commitment to conservation. Most of all, the Board wishes to thank all of the farmers, ranchers and foresters for their voluntary cooperation with the district and for willingly implementing conservation on the land they control and for understanding the value and impact it has on the environment and their sustainability.

Hamakua SWCD Outstanding Cooperator of the Year

Bodhi Anderson..... Sugar Hill Farmstead

Bodhi Anderson along with his wife Brittany, own and operate Sugar Hill Farms on a 10-acre parcel in Honoumuli, within the Hamakua Soil and Water Conservation District. Bodhi and his family live on site and raise cattle, chickens, lima beans, and everything in between.

Back in 2017, Bodhi first started working with SWCD planner Justin Yeh and NRCS planner Spencer Nagata to improve grazing conditions for his cattle. Once Bodhi was awarded a contract through the Environmental Quality Incentive program, he installed 2,060 feet of woven wire fence to create 13 paddocks, roughly $\frac{1}{3}$ of an acre each. He also installed an elevated roof catchment, 825 feet of pipe, and 7 troughs to complete his water system. Through proper grazing management, guinea grass came back and is now the dominant forage on property that was once only sweet potato.

While juggling to build a house for their family, Bodhi and Brittany were able to successfully complete their contract within 2 years. Bodhi is now working through his second contract with NRCS, where he has already installed a high tunnel greenhouse to grow more vegetables. He is also working on constructing a composting facility so that he can properly dispose of his farm waste and apply it to his fields. This farm is truly becoming a slice of heaven and a dream come true! Congratulations to Bodhi and the Anderson Family for their dedication to providing fresh, local food to our community.

Hamakua Soil and Water Conservation District 2022 Outstanding Cooperator of the Year, congratulates Bodhi and Brittany on a job well done!



Hamakua SWCD

Outstanding Cooperator of the Year

Neal Nakamoto..... Double N Ranch

Neal Nakamoto of Double N Ranch has been a cooperator of the Hamakua Soil and Water Conservation District since 2008. Neal manages a 74 acre parcel in Kalalau, Kaiwika that he leases from Kamehameha Schools. Over the years Neal worked with District Conservationist, Kori Hisashima to develop a long-term conservation plan that would address re-



source concerns in manageable amounts, taking into consideration Neal's time and resources. Neal also works full-time as a contractor and manages other ranches in Ka'u & Puna.

Neal has transformed his ranch in Kalalau from an extremely weedy Albizia, Gunpowder, and Lyons grass pasture with sparse California to a 8 paddock rotation through lush Guinea and California grass. He achieved this by installing over 6,000 feet of fence, extensive Brush Management by both mechani-

cal and chemical methods, and deferred grazing allowing the guinea and California regeneration. He has also installed a livestock water system with an elevated roof water harvesting catchment, corrugated metal tank, heavy use area protection and troughs to deliver water to each paddock to ensure his cattle have sufficient clean water.



The improvements to the land will allow Neal to increase his herd from 11 animal units to approximately 32 animal units. He practices year-round breeding and markets his weaned calves.

The advantages of intensive grazing for Neal is that he has the maximum forage production and use per acre, weed control through grazing, more even distribution of manure throughout the paddocks, more uniform animal distribution, and higher stock densities.

Neal is very appreciative of the services and financial assistance that he has received from NRCS. He has gained knowledge of grasses, rotational grazing, and how to set up a good grazing system that is very valuable to him. Neal credits his wife Cindy, and his kids for sacrificing their time and supporting him through his ranching endeavors.

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Kona Soil and Water Conservation District

MESSAGE FROM KONA SWCD CHAIRPERSON.....

Seven years ago, the Kona Soil and Water Conservation District (KSWCD) began a community-wide outreach program to inform Kona's farm and non-farm populations about our fragile environment. Focusing on our primary resource concerns of soil degradation, deforestation, water quality, and invasive species, we have made excellent strides in spreading this message to the Kona community.

The Kona SWCD has partnered with local schools, Konawaena High School Leo Club, Lions Club of Kona, Hiki Ola, Natural Resources Conservation Service (NRCS), County of Hawai'i, and others to enhance and broaden our community efforts.

Over the last three years, the Konawaena High School Leo Club completed over 500 radio spots, 5,000 mailings, *Call to Action* newspaper and social media ads, as well as Zoom broadcastings to educate our community on Kona's primary resource concerns.

In 2020, the Kona SWCD completed our Long-Range Plan (LRP) which set the stage for funding numerous projects, including our Regional Conservation Partnership Program (RCPP) to reforest and improve over 1,500 acres of native forests, as well as a soil quality improvement program.

District efforts include working with Hiki Ola for outreach events that have increased engagement with Hawaiians, Pacific Islanders, and others.

Kona SWCD continues to work with NRCS as we continue to grow our District that now includes an RCPP Project Manager, as well as (3) District Soil Conservationist Planners. We thank the leadership of NRCS and JB Martin for helping us move in the right direction.

We recently applied for \$400,000.00 from National Association Conservation Districts (NACD)/Department of Defense (DOD) to build the capacity of our District to provide for further outreach, as well as funding for innovative projects not eligible through federal farm bill dollars.

The Kona SWCD will continue to work hard to educate our farm and non-farm communities about Kona's resource challenges and solutions. Our goal is to become financially self-sufficient, building our capacity to protect our 'āina for future generations.

The Kona SWCD recognizes that Hawai'i SWCD's are among the most poorly funded districts in the nation and strives to strengthen our role as a conservation leader. We look forward to working with HACD to break the status quo and help Hawai'i become a national leader in funding, and building capacity for all of Hawai'i SWCD's.

~ Jeff Knowles, Chairman

KEALAKEKUA FIELD OFFICE AND THE KONA SWCD DIRECTORS

KEALAKEKUA FIELD OFFICE STAFF AKA TEAM KONA



TOP LEFT TO RIGHT: Robin Hill, KSWCD Conservation Assistant; Scott Turgeon, NRCS PIA Initiatives Program Coordinator; Nanea Wall, KSWCD Soil Conservationist; Mary Robblee, KSWCD Soil Conservationist; Kelsea Heider, NRCS Soil Conservationist; MJ Pagan, NRCS Engineering Technician (Civil); Laura Nelson, NRCS District Conservationist; and Brendan Brazee, NRCS PIA Range Land Specialist

BOTTOM LEFT TO RIGHT: Lele Kimball, NRCS Soil Conservationist; Ann Tan, NRCS MLRA Soil Survey Leader; Sarah Fernandez, NRCS Program Support Assistant; Jennifer Fedenko, NRCS Resource Soil Scientist; and Abby O'Bryant, KSWCD Soil Conservationist.

Kona SWCD Directors



TOP LEFT TO RIGHT: Jeff Knowles, Chairman; Steve Foelber, Vice Chair; and Greg Hendrickson, Treasurer.

BOTTOM LEFT TO RIGHT: Keli'ikanoe Mahi, Secretary; and Steve Foelber, Director.

Kona SWCD Outstanding Cooperator of the Year

KONA'S 2023 COOPERATOR OF THE YEAR NOMINEES

Every year, the Kona Soil and Water Conservation District has the honor of reviewing nominations for Cooperator of the Year. 2023 Nominees include Mā'ona Community Garden, Kona Restoration Farm, and the Markley Farm.

MĀ'ONA COMMUNITY GARDEN

The Mā'ona Community Garden has been an exemplary model of dedication and innovation in supporting sustainable food systems while addressing the cultural, spiritual, and physical needs of our community.

Community contributions for soil health and water conservation include:



- **Worm composting** (diverting organic waste from landfills and producing high-quality compost)
- **Cardboard shredding** (using cardboard techniques for mulching and weed suppression, as well as reducing water evaporation, enhancing soil structure, and promoting biodiversity)



- **Plant and seed giveaways** (empowering community gardeners, promoting food resilience, and increasing local plant biodiversity)
- **Educating students** (educational programs, firsthand learning experiences, and inspiring next generation of conservation leaders)

Kona SWCD Outstanding Cooperator of the Year

KONA RESTORATION FARM

Kona Restoration Farm was acquired in 2020 and many places on the ~10 acres were bare rock with little or no soil. They focused on rebuilding healthy soils and providing recycled carbon sources to feed the soil ecosystem.

Managing Coffee Leaf Rust (CLR) was a challenge and KRF partnered with CTHAR for on-farm trials, as well as included integrated pest management in their conservation plan. Diversification of plantings included food producing crops and cultural plant. They also removed invasive understory to encourage natural regeneration in remnant forest kipukas.



MARKLEY FARM

The Markley's purchased an existing avocado farm that had not been managed for some time. The Avocado Lace Bug had been a real menace. The Markley's land management of mowing and mulching brought this land to life and worthy of being nominated for Conservation Stewardship.

Other crops grown on the farm include citrus, starfruit, miracle berry, yuzu, breadfruit, Surinam cherry, longan, dragon fruit, white sapote, pineapple, and chicken eggs.



WAIMEA FIELD OFFICE AND THE MAUNA KEA SWCD DIRECTORS



*Pono von Holt
Chairman*



*Charlie White
Director*



*Richard William "Willie" Rice
Director*



*Guy Cellier
Treasurer*

*Missing
Photo*

*Jacob Tavares
Director*

Mauna Kea SWCD Directors



WAIMEA FIELD OFFICE STAFF

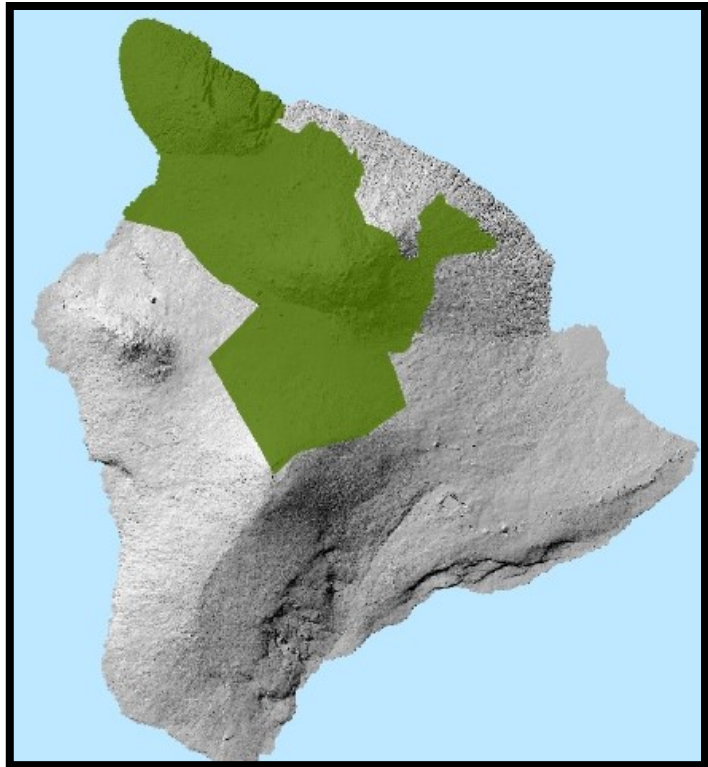


MAUNA KEA SOIL AND WATER CONSERVATION DISTRICT

Mauna Kea SWCD Chairman's Message

The Mauna Kea Soil & Water Conservation District had an active year planning, approving, and implementing plans for the cooperators. The District is guided by its Board members who are Pono von Holt, Willie Rice, Charley White, Guy Cellier, and Jacob Tavares. Our Administrator/Planner is Nicole Fernandez. Additionally, MKSWCD teamed up with NRCS to do a presentation at a Seeds of Knowledge outreach community event at Waimea in July. An enviro-

scape approach was used to model watershed degradation from soil erosion and its effects on the area and the protective actions that can be used. Also, we were able to reinstitute our cooperator of the year by honoring four cooperators: Farmer & Rancher David Fuertes, G&C Freitas



Ranch, Island Harvest Macadamia Nut Orchard, and Gomes Ranch. Finally, we are part way through administering the development of a 5 year Long Range Plan grant targeting a LRP for the Waimea office. This will help us strengthen the delivery of technical and financial assistance for the district community.

MAUNA KEA SOIL AND WATER CONSERVATION DISTRICT

Mauna Kea SWCD Cooperator of the Year

Mauna Kea SWCD held their cooperator of the year celebration at Ponooho Ranch. We had honored four cooperators: 1) Island Harvest, 2) David Fuertes, 3) G&C Freitas Ranch, and 4) Gomes Ranch. The celebration was a great turn out filled with fun, laughter, and getting to know our cooperators and their families and how each of our cooperators got their start in their agriculture operation. Mauna Kea SWCD appreciates our cooperators for their amazing work, agriculture is not easy, and the Waimea Field Office for their support and help in putting together this year's cooperator of the year celebration.



MAUNA KEA SOIL AND WATER CONSERVATION DISTRICT

Mauna Kea SWCD Cooperator of
the Year



**Missing.....
Gomes Ranch
Cooperator of the year
2023**

State Department of Agriculture

Continued.....

***Chromolaena odorata* (Devil weed)**

History:

Chromolaena odorata, also known as devil weed or bitter bush. It was first detected in the Kahuku area on Oahu in January 2011. *C. odorata* was detected by Big Island Invasive Species in February 2021 at a dragstrip and motocross area in Hilo on the Big Island and is now known to have isolated infestations in the Hilo and Puna district. *Chromolaena odorata* is native to Central and South America.

Description:

This shrub forms dense tangled bushes 1.5-2 meters in height but can reach greater heights (6-20 m) when “climbing” over other taller vegetation. Stems are generally hairy and yellow greenish and grow up to 7 m in length. The leaves are light green, triangular shaped, opposite, and with a toothed leaf edge. Leaves have a 3-vein “pitchfork” pattern which can be used when identifying *C. odorata* along with a distinct odor when the leaves are crushed; smell is often compared to turpentine. *C. odorata* prefers full sun to partial shade and tolerates a wide range of soil conditions.

Impact:

This plant can produce up to 800,000 seeds per plant that can easily spread through wind dispersal or unintentionally by hikers, vehicles, and other mammals which causes the growth of dense thickets. The growth of these dense thickets displaces native plants and animals, *Chromolaena odorata* is known to be allelopathic; does not allow for other plants to grow nearby. It is also toxic to humans by causing skin problems and asthma in allergy prone people. *C. odorata* is toxic to livestock and may cause allergic reactions and diarrhea, in some cases death.

**Please report all sightings to:
Hawaii Department of Agriculture
Phone Number: (808)974-4145**



Pitchfork shaped veins
Photo by: Kamran Fujimoto



Chromolaena odorata florets.
Photo by: Kamran Fujimoto

University of Hawaii College of Tropical Agriculture And Human Resources (CTAHR)

The University of Hawaii at Manoa, College of Tropical Agriculture and Human Resources (CTAHR) through the activities of the Cooperative Extension Service is responsible for providing community-based educational programs in agriculture and human resources. The Cooperative Extension Service is able to provide services to the public and your community through the work of county extension personnel.

County Extension Agents are University of Hawaii faculty members who work out of Extension Offices throughout the State. On the Big Island, the two principal Extension Offices are in Hilo (East Hawaii) and in Kainaliu (West Hawaii). County Agents are available for individual consultations or can provide educational workshops and short courses covering topics in agriculture, urban horticulture, aquaculture, home economics, leadership, family living, youth activities, community development, nutrition and health. Educational materials such as brochures, publications and videos are also available at extension offices for use by the general public. Services provided by County Agents are generally provided free of charge except those provided by the Agricultural Diagnostic Service Center that provides soil, tissue, water, feed and forage analysis, as well as, insect disease and nematode identification for a nominal charge.

CTAHR also maintains a network of eight agriculture research stations on the island, each with a unique environment. Researchers and extension faculty from CTAHR, other units of UH-Manoa, UH-Hilo, Hawaii Agriculture Research Center, U.S. Dept. of Agriculture, University of Wisconsin, and others utilize the stations for research on a variety of agricultural crops, forest trees and livestock; demonstrations on a new cultural techniques and cultivars; instruction; and work on native endangered plant species. A list of county extension agents, specialists and researchers who are assigned to the Big Island of Hawaii can be obtained by contacting the office in your area. CTAHR also has a number of agriculture researchers and specialists stationed on the Big Island to conduct research to solve high priority problems associated with various agricultural commodities. These researchers and specialists provide information to the extension agents who in turn are responsible for developing educational programs for the public. The extension agents are your link to the University and its community-based educational program.

COOPERATIVE EXTENSION SERVICES:

HILO

(808) 981-5199

875 Komohana Street

Hilo, HI 96720-2757

WAIMEA

(808) 887-6183

67-189 Kamamalu Rd.

Kamuela, HI 96743-8439

KONA

(808) 322-4892

79-7381 Mamalahoa Hwy.

Kealahou, HI 96750-7911

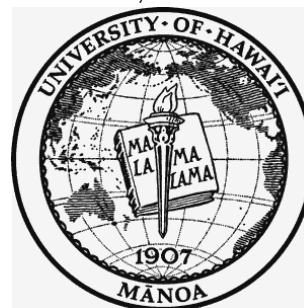
HAWAII AGRICULTURE EXPERIMENT STATION:

BEAUMONT RESEARCH STATION

(808) 981-2823

875 Komohana Street

Hilo, HI 96720-2757



Department of Land and Natural Resources

LAND
Division

STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES



About The Department of Land and Natural Resources (DLNR) Land Division is responsible for managing State-owned lands in ways that will promote the social, environmental and economic well being of Hawaii's people and for ensuring that these lands are used in accordance with the goals, policies and plans of the State. Lands that are not set aside for use by other government agencies come within the direct purview of the division. These lands are made available to the public through fee sales, leases, licenses, grants of easement, rights-of-entry, month-to-month tenancies or kept as open space area.

Besides maintaining an inventory of State-owned lands, the division serves as an office of record and maintains a central repository of all government documents relating to land dating back to the "Great Mahele" of 1848...

On the island of Hawaii, there are approximately 100+ leases and permits issued for agriculture and pasture purposes. These leases and permits encumber over 114,000 acres of land. The DLNR requires all its tenants to apply as cooperators with their respective Soil and Water Conservation District and submit a plan for approval by the Chairperson of the Board of Land and Natural Resources. This requirement insures the land is kept in a productive state while encouraging our tenants to carry out good conservation practices.

STATE Department of Agriculture



Department
of Agriculture
STATE OF HAWAII

Invasive Weed Watch

By: Jaye Lee-Kaiwi (PPC/CM Technician)

Imperata Cylindrica (Cogon Grass)

History:

This grass was found in the Puna district of the Big Island in January 2022. It was first reported by Big Island Invasive Species early detection team. It was found only on an estimated .5 acres across three vacant lots adjacent to each other. This grass is native to East Africa and Asia and now heavily found in the Southeastern United States.

Description:

Imperata cylindrica grows in dense patches and can reach a height of 4 to 6 feet. Leaves are light green in color and typically 3 feet long but can reach up to 5-6 feet long and a width of 0.5 to 1 inch. This grass can also be identified by its very serrated leaf margins and its whitish midrib which is often off center. The flower head is cylindrical in shape and starts off as purplish-tan which then becomes silvery white and typically blooms through mid-March to late June depending on the climate. *I. cylindrica* spreads vegetatively and by wind-dispersed seeds and has an extensive rhizome system that can penetrate to a depth of up to 4 feet but most of the root system is 6 inches of the soil surface.

Impact:

Imperata cylindrica forms dense monotypic stands of unpalatable grasses for livestock. These dense stands will also create fuel for wildfires. *I. cylindrica* dense stands displace native plants, animals, and ground-nesting animals due to the dense ground cover it creates. If left unchecked, *I. cylindrica* has the ability to take over pasture and farming lands causing damage to crop through competition.



Whitish off-center midrib on Cogon grass leaf blade.

Photo by: Kamran Fujimoto



Cogon grass has very erect leaves compared to other grasses such as Guinea grass.

Photo by: Kamran Fujimoto



Figure 5: Guinea grass which can be mistaken as cogon grass.

Photo by: Reinaldo Aguilar

