REPORT TO THE BOARD OF REGENTS

COOPERATIVE RESEARCH AND EXTENSION

Building Resilient Communities

CRE MISSION STATEMENT

The Cooperative Research and Extension's mission is to enhance accessible, innovative, and resilient development in agriculture, aquaculture, nutrition, community empowerment, and youth and family well-being, while advancing climate change adaptation. Through research, education, and extension, we collaborate with stakeholders to support the College's mission and FSM's socioeconomic and environmental priorities and long-term goals.

HIGHLIGHTS

CRE Impact Report Released

As part of our ongoing commitment to serving the people and communities of the Federated States of Micronesia, the Department of Cooperative Research and Extension (CRE) proudly released its first CRE Impact Report during the April 22, 2025, College of Micronesia Land Grant Board of Regents meeting. This report, presented by President Dr. Theresa Koroivulaono and shared with board leadership, highlights the positive changes brought about by our community-based extension and research programs in agriculture, aquaculture, youth development, climate resilience, and local capacity building. It captures real stories and measurable outcomes from across the islands, demonstrating how federal investments are making a meaningful difference in the lives of our citizens. The report underscores the importance of continued collaboration and support to ensure sustainable development in our island communities.

CENTER FOR ENTREPRENEURSHIP

From Awareness to Action: Youth-Led Go Local Campaign Reaches Over 2,000 Students Across Pohnpei

As part of the SAP020 project, the Center for Entrepreneurship (CFE) supported the successful implementation of Go Local Campaigns in four Pohnpei high schools—Pohnpei Catholic School, PICS, MHS, and NMHS—reaching over 2,000 students. These events were designed, led, and championed by student members of the Go Local Clubs, who translated their training and summit action plans into impactful school-wide campaigns. Activities included cooking contests, food tastings, essay and poster contests, and trivia games that raised awareness about the nutritional and cultural value of staple crops like taro, yam, banana, and breadfruit. The clubs also emphasized how these crops can help address nutrient deficiencies identified by FSM Health and contribute to supporting local farmers. These campaigns are part of the Center's mission to build students' lifelong learning skills—including leadership, communication, and community engagement—through hands-on, meaningful experiences.

With campaigns in Pohnpei completed, the Go Local initiative will expand to Yap next month. Chuuk and Kosrae are scheduled to launch their school campaigns in the upcoming academic year. Meanwhile, Pohnpei school clubs are now transitioning from school-based efforts to organizing events in their communities, followed by outreach to elementary schools and local churches, ensuring the message of eating local spreads beyond school campuses. These next steps reflect the growing leadership and influence of Go Local Club members as they become active contributors to food security, community health, and cultural sustainability across the FSM.

CFE Collaborates with FSMDB to Strengthen Youth and Family Enterprises Through Business Training

The CFE, in partnership with the FSM Development Bank (FSMDB), conducted a four-day business training workshop to build the financial and entrepreneurial capacity of youth, students, and community members. This training began a broader collaboration between the two institutions to support small and medium enterprises (SMEs) and help aspiring entrepreneurs develop viable business plans, prepare financial projections, and understand the loan application process. Core topics covered during the training included budgeting, pricing strategies, recordkeeping, and business planning, with FSMDB staff on-site to guide on accessing financial services. The training attracted an average of 18 participants daily, reflecting strong interest in practical business education.

Participants engaged in hands-on exercises and real-world case studies, resulting in an average learning gain of 70% based on pre- and post-assessments. Many reported increased confidence in managing their finances and planning for business ventures. To encourage active participation, the Center gave basic calculators to participants who successfully answered questions and practical tools to support their initial bookkeeping efforts. Beyond the main workshop, the Center also conducted two bookkeeping sessions: one with Upward Bound students in Yap and another with Agriculture and Food Technology (AFT) students at the CTEC campus, each engaging 20 youth. Additionally, 60 students received introductory training in pricing strategies to strengthen their early financial literacy. These activities reflect the Center's ongoing commitment to equipping youth and families with lifelong financial skills and supporting inclusive business development across the FSM. Future joint efforts with FSMDB will focus on advanced training, personalized coaching, and expanded outreach to underserved communities.

Hands-On and Minds-On: Yap CRE Launches UNICEF Program Through College Fair Engagement

Yap CRE kick-started the UNICEF-funded Climate-Resilient WASH for Future Generations initiative by actively participating in the Yap College Fair. The CRE agents conducted hands-on demonstrations and distributed educational materials across five core program areas: agriculture, nutrition, food safety, youth development, and childhood obesity prevention. These activities were designed to promote understanding and engagement among students by translating technical topics into relatable, real-world applications. The interactive format allowed students to learn through doing while receiving printed resources to support continued learning beyond the event. As a culminating activity, students participated in a trivia contest that tested their knowledge based on the day's sessions. Prizes were awarded for correct answers, creating a fun and rewarding way to reinforce key messages. The event reached 124 students from 13 schools and established an engaging model for future community outreach under the UNICEF initiative. By combining demonstration-based learning with interactive engagement, the event helped build awareness of sustainable practices and healthy behaviors while laying the foundation for broader youth-focused efforts across Yap.

CTEC-CRE

Agriculture Extension Activities in Pohnpei: Promoting Food Security and Sustainable Practices

To address the ongoing challenges of limited local food production and food insecurity in Pohnpei, the CRE Agriculture Extension Program conducted follow-up visits, workshops, and advisory sessions focused on composting and crop production. 94 individuals were engaged through these activities, reflecting a growing community interest in sustainable agriculture and food security. As part of the outreach, 19 farmers participated in composting demonstrations, and 18 attended workshops introducing sustainable farming methods, including organic inputs and climate-resilient practices. Additionally, 57 students participated in educational sessions covering seed germination, soil preparation techniques, and seed distribution. These sessions provided theoretical knowledge and practical experience, helping build foundational agricultural skills among youth.

Follow-up visits were conducted with 10 farmers, including adults and youth, to provide continued technical assistance and monitor progress. Client feedback indicated strong interest and appreciation for the support, with many reporting successful vegetable harvests—including eggplants, tomatoes, okra, and Chinese cabbage—for household use and community sharing. As a result of these efforts, community members demonstrated increased engagement in gardening and composting activities, marking a positive shift toward self-sufficiency, environmental sustainability, and reduced reliance on food imports. The program continues to empower local communities and youth by promoting practical, sustainable farming techniques that contribute to long-term food security in Pohnpei.

CRE agents provided hands-on support and guidance, including advice on using commercial fertilizers effectively. They also strengthened their skills by attending a specialized workshop by the Pacific Community (SPC), improving service quality for clients.

Swine Program Activities: Enhancing Livestock Care Practices

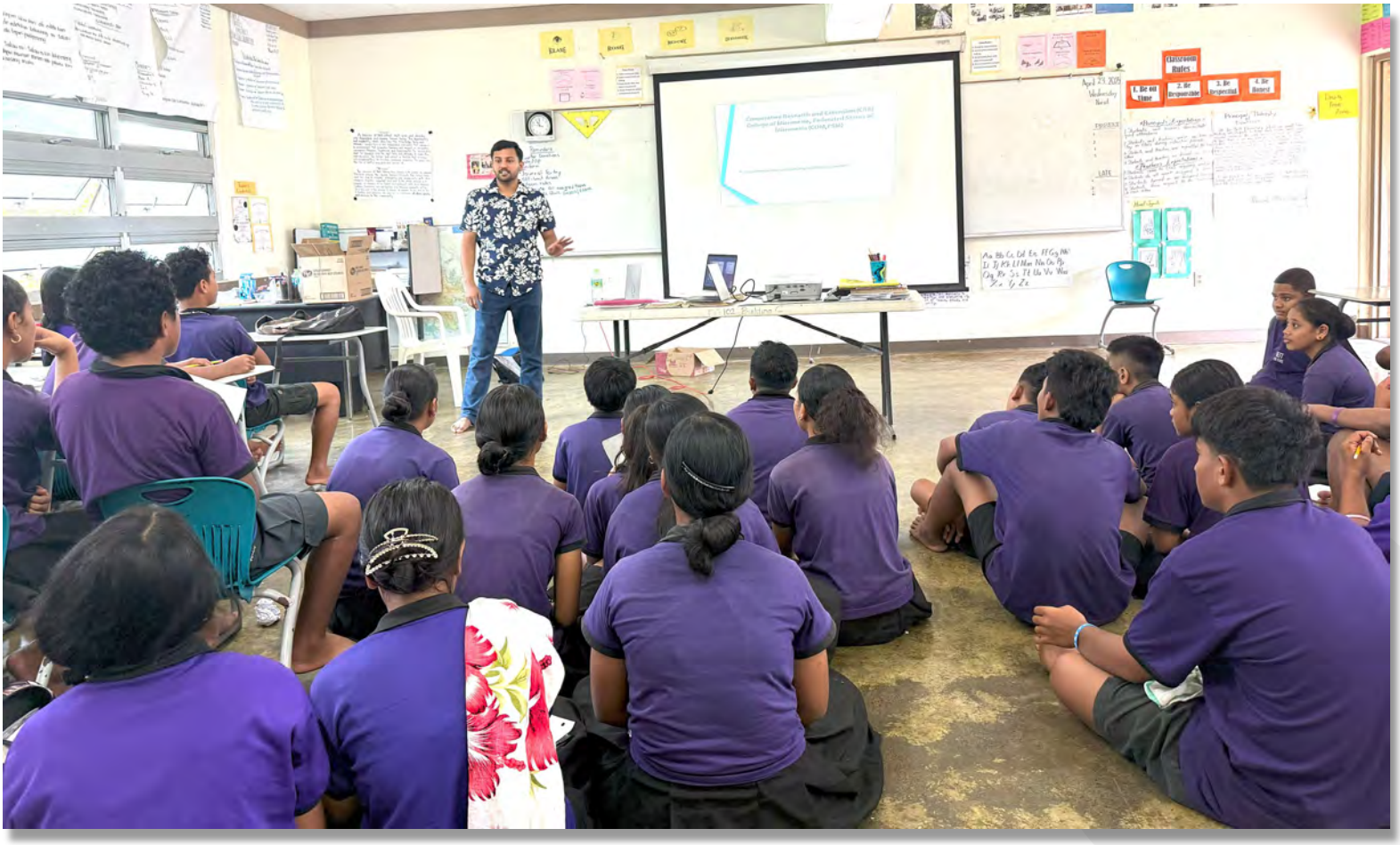
The swine program staff conducted a series of hands-on demonstrations and advisory sessions to improve livestock care practices among local farmers. 51 clients participated in these activities, gaining valuable knowledge and practical skills in swine management. 34 participants, including 13 men, 10 women, and 11 youth, attended training sessions on pig deworming. These sessions focused on properly using deworming medications to promote pig health and prevent parasitic infections. In additional sessions, 6 participants (3 men, 2 women, and 1 youth) received instruction on tooth clipping and administering iron injections to piglets. As a result, 27 piglets were given iron injections to prevent anemia and support healthy development.

Castration training was also conducted for 2 participants, during which 5 piglets were successfully castrated. Banana trunks were used as a sanitation platform to help minimize the risk of infection—a low-cost and innovative approach adapted to local resources. Furthermore, 9 clients (7 men and 2 women) received advisory support on medication dosage calculations, ensuring accurate treatment based on pig weight.

These activities enhanced participants' knowledge, confidence, and technical skills in swine care, aligning with the program's broader objective of improving swine production and livestock health management in the region.

Aquaculture Extension Activities

As part of ongoing extension initiatives, activities focused on expanding community engagement, promoting educational outreach, and enhancing research infrastructure to support sustainable aquaculture and agriculture in Pohnpei. A strategic meeting was held to explore the expansion of saline agriculture and aquaculture practices, underscoring a growing interest in integrated resource management. Participation in the Blue Prosperity Micronesia (BPM) workshop highlighted community-led mangrove crab farming and coastal development efforts. Extension staff delivered a motivational presentation at Nett School to support youth engagement and conducted an awareness session for 85 students on mangrove crab culture and rabbitfish cage farming. These sessions introduced fundamental concepts of sustainable aquaculture, emphasizing its role in local food security, environmental conservation, and entrepreneurship. They also inspired students to consider aquaculture a viable path for future careers and community development. Complementing these efforts, a visit to the hydroponic farm at the National Campus facilitated the evaluation of current systems and discussions on integrating aquaponics into future research. A comprehensive laboratory inventory was also completed at the campus, and the facility was proposed as a research and training hub for aquaculture and marine science students, aimed at promoting hands-on learning and building applied research capacity in the region.



Agriculture Research

Agriculture research initiatives in Pohnpei are progressing, focusing on developing proposals addressing local food security and supporting sustainable farming practices. One key proposal under development is titled "Evaluation of Copra Cake as a Component of Swine Feed in Pohnpei," which aims to compare three feed regimes: (i) commercial feed (CF), (ii) CF blended with Ordinary Coconut Oil (OCO) copra cake, and (iii) CF blended with Virgin Coconut Oil (VCO) copra cake. Stakeholder consultations, including interviews with VITAL staff, confirmed the ongoing production of OCO and VCO and underscored the relevance of integrating copra cake byproducts into livestock feed. This partnership will strengthen the connection between local industries and applied agricultural research, aligning with CRE's broader mission. A second proposal focuses on "Cassava Cultivation and Processing for Enhanced Food Security," targeting improved crop utilization and resilience. To maximize resources and promote collaboration, an approved agriculture project in Kosrae will also be jointly implemented in Pohnpei, fostering inter-island knowledge sharing and more efficient program delivery.

Aquaculture Research

During the reporting period, efforts were made to advance aquaculture research activities in Pohnpei. Key updates and revisions were completed for two major research projects: the Sustainable Aquaculture Development and Rabbitfish Hatchery Project. Two proposals—"Sustainable Mangrove Crab (*Scylla serrata*) Aquaculture in Kosrae, FSM" and "Sustainable Aquaculture Development in Pohnpei: A Study of Current Practices, Marine Resources, and Challenges"—were approved by the Land Grant Program and are currently under NIFA review. The mangrove crab initiative will be implemented in Pohnpei through a collaborative effort with the Kosrae aquaculture team to enhance resource efficiency. In parallel, coordination efforts with the Pohnpei Port Authority (PPA) are underway to establish a long-term lease agreement for the Nett Hatchery site. An operational summary detailing the hatchery's scope, technical framework, and anticipated benefits for local farmers has been drafted and submitted to PPA, marking a strategic step toward strengthening aquaculture infrastructure and capacity in the region.

Outreach Activities to Address Childhood Obesity

To address the growing concern of childhood obesity, outreach activities in Pohnpei engaged 33 clients, aligning with the program's objectives of promoting healthy lifestyles, collecting baseline health data, and encouraging physical activity. In Rohi, an awareness session successfully engaged 15 new clients (10 youth, 5 adults) and launched a softball league to increase physical activity among young people. This initiative supported physical fitness and promoted teamwork, discipline, and consistent participation in organized sports. Complementing these efforts, a workplace wellness survey was conducted at the CTEC Campus, involving 10 staff members. The survey assessed interest in a proposed "Biggest Loser Challenge," a weight management initiative to promote healthier lifestyle choices in professional environments.

A hands-on gardening session was held in Enipein Pah to encourage healthy habits further, attracting 8 new participants (5 men, 3 women). The session focused on home gardening as a practical and sustainable way to increase access to nutritious food while empowering families to grow vegetables. Participants received planting and garden maintenance training, reinforcing the connection between healthy eating and active living. Collectively, these outreach activities support the long-term goal of reducing childhood obesity by fostering community-wide lifestyle changes, enhancing nutrition education, and encouraging physical activity, particularly among youth and families in Pohnpei.

Youth and Community Outreach Report

During the reporting period, youth and community outreach activities addressed critical youth and family issues through awareness, education, and engagement. Over 137 participants, including youth and adults, took part in lectures, hands-on activities, and follow-up sessions. A key highlight was a lecture on drug use dangers, which drew over 100 attendees and emphasized its impact on well-being, relationships, and long-term potential. Positive outcomes are emerging—for example, one participant became chairman of the sports committee in the Uh community, showing continued engagement. Other sessions promoted sports and gardening as alternatives to risky behavior, with 21 new clients showing interest in inter-community sports, supporting health and community ties.

In a follow-up session with 16 youth and adult farmers, tangible progress was observed. Participants reported a successful cucumber harvest, generating over $300 in sales. Motivated by this achievement, the group has begun preparing new raised beds for continued crop production.

These youth program activities align closely with core objectives—promoting moral and social development, entrepreneurial skills, and healthier lifestyles. The growing participation and tangible outcomes reflect the program's role in fostering responsible, engaged, and proactive community members.

YAP CRE

Poultry Education and Farmer Support

The Poultry Program advanced community capacity through hands-on school engagement and targeted farmer support, reaching 30 individuals across multiple age groups. Gilman Elementary School students and staff, 23 children (15 boys and 8 girls), 3 youth (1 male and 2 females), and 4 adults (3 men and 1 woman) gained firsthand exposure to poultry production fundamentals. Participants learned to identify key breeds like the Barred Plymouth Rock and Rhode Island Red. They observed the egg incubation process, fostering a deeper understanding of poultry life cycles and care techniques.

Complementing the educational outreach, on-farm technical assistance strengthened production efforts in the community. One new male farmer began constructing a chicken coop with guidance from the extension team, while six returning farmers received tailored follow-ups focused on incubator sanitation and flock management. These combined efforts contribute to the program's goals of expanding local poultry production and equipping participants with the knowledge to sustainably grow their operations, supporting long-term food security and reducing dependency on external supply chains.

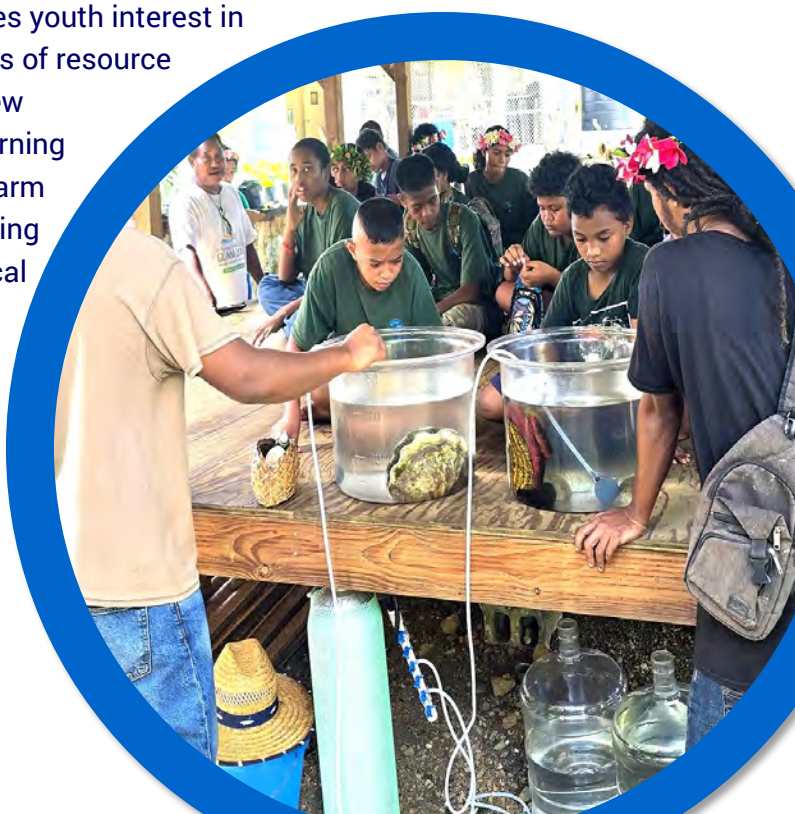
Vegetable Production Outreach

The crop production program promoted community education and engagement through a demonstration garden tour to Gilman Elementary School students, reaching 30 participants. This group included 15 boys and 8 girls from the elementary level, 3 youth (1 male and 2 females), and 4 adults (3 men and 1 woman) from the surrounding area. The tour offered an interactive experience in the school's demonstration garden, where participants learned about climate-resilient vegetable and root crops suitable for Yap's environment. A standout feature of the tour was the introduction of coconut husks as a sustainable planting medium. This low-cost, locally available material supports water retention and promotes healthy root development, offering a practical solution for improving garden productivity. The method sparked curiosity across all age groups, encouraging dialogue on resource-efficient farming.

This outreach supported the program's goal of promoting the adoption of appropriate and sustainable production practices by blending environmental stewardship with practical knowledge. Participants walked away with a deeper understanding of local agriculture and renewed enthusiasm for home gardening as a pathway to greater food security.

Aquaculture Outreach

The aquaculture program continues to foster sustainable marine livelihoods in Yap through targeted outreach and hands-on training, reaching 35 participants this quarter. An educational session for 30 students and educators from Gilman Community School—comprising 19 males and 11 females—was conducted, introducing them to the basics of giant clam farming and rabbitfish cage culture through live specimens and interactive presentations. This early engagement cultivates youth interest in marine-based careers and promotes awareness of resource conservation. In the Cho'ol community, four new participants (children and adults) and one returning youth received hands-on training in grow-out farm monitoring and management. These skill-building sessions empower individuals with the technical knowledge to support sustainable aquaculture practices. Through these initiatives, the program strengthens awareness and practical capacity in aquaculture among youth and families, aligning with its goal to promote local stewardship of Yap's marine resources and contribute to long-term food security.



Youth Program

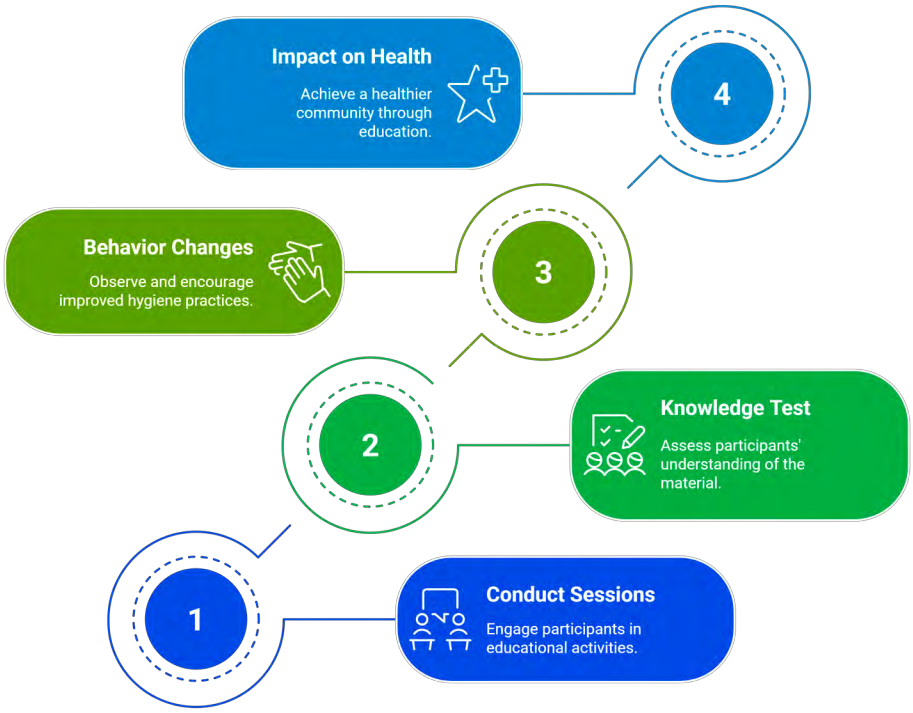
During this quarter, the youth and family Program engaged 35 participants—16 males and 19 females—through hands-on activities and mentoring sessions designed to support the development of social, moral, and life skills among youth and families. Participants included children, youth, and adults who participated in gardening, academic mentoring, and outreach initiatives. Two returning individuals demonstrated practical application of sustainable food practices by harvesting homegrown crops and preparing new plants for continued gardening. Meanwhile, three high school students engaged in mentoring showed substantial progress in literacy and writing, while identifying math as an area for growth. A school-based outreach session further sparked curiosity and active engagement in skill-building activities such as crafts and gardening.

These efforts directly support the program's goal of empowering youth and families through education and outreach that fosters the adoption of entrepreneurial skills, positive coping strategies, and teamwork, contributing to stronger, more resilient communities.

Addressing Food and Waterborne Illnesses Issue

116 participants, including children, youth, and adults, participated in food safety education sessions conducted across four elementary schools—Gagil, Dalipebinaw, St. Mary's, and Gilman—and through the Upward Bound Program. Through lectures, hands-on demonstrations, and interactive quizzes, participants gained essential knowledge on identifying symptoms and preventing food—and waterborne illnesses. All youth participants successfully passed a post-session knowledge test, demonstrating strong comprehension of the material. Positive behavior changes were observed in participating schools. At Gagil and St. Mary's Elementary Schools, 439 students have begun practicing proper handwashing before meals and after restroom use, with consistent teacher reinforcement. Meanwhile, Dalipebinaw students adopted improved hygiene habits following gardening activities, focusing on hand, nail, and face cleanliness. This initiative is making a measurable impact on public health in Yap by equipping young people and their communities with the knowledge, skills, and habits necessary to prevent illness and promote safe food handling practices. It reflects a strong step toward fostering healthier environments in both schools and households.

Achieving Food Safety Education



Addressing obesity issues

The obesity program progressed in increasing awareness and promoting healthy lifestyles among youth and educators across Yap. This quarter, BMI data were collected from 213 Yap High School students and teachers, showing that 58% demonstrated improvement toward achieving a healthier weight. Fifteen youth (5 male and 10 female) participants were involved in the final BMI measurements, providing critical sex-disaggregated data to monitor progress effectively. Complementing this, the program engaged 45 students (9 boys, 36 girls) and a teacher through ongoing Local Food Day activities at Gaanelay Elementary School, fostering increased promotion of nutritious local foods within the school wellness environment. Additionally, a focused educational visit for Gilman Elementary School reached 30 new participants—16 males (15 children, 1 youth) and 14 females (8 children, 2 youth, 4 adults)—providing interactive learning on obesity prevention, healthy food choices, and the benefits of physical activity. Participants responded positively, integrating the program's messages with their school curriculum. These efforts align with the program's objective to collect comprehensive baseline data, enhance knowledge of healthy food and exercise choices, and support behavioral changes to attain and maintain ideal BMI among children and adolescents. The continued engagement across schools and communities, with balanced participation of males and females, reflects a strong commitment to combating childhood obesity and fostering lifelong wellness.

EFNEP activities

Through the Expanded Food and Nutrition Education Program (EFNEP), 93 community members, including children, youth, adults, and school staff, gained hands-on experience in healthy cooking, nutrition, and home gardening. Among them were 18 male and 17 female children, 5 male and 3 female youth, 21 men and 21 women, and 4 male and 4 female school staff members. These activities significantly enhanced local knowledge and practical skills in diet quality, physical activity, food safety, and local food production. Aligned with its core objective—to improve diet quality, increase physical activity, enhance food safety, and promote local food production for food security—EFNEP continues to make a meaningful impact by equipping individuals and families with tools for healthier and more resilient living.

Aquaculture Research

During the reporting period, significant progress was made under the sea cucumber research project at the CRE Hatchery in Yap. Four batches of sandfish sea cucumbers (*Holothuria scabra*) were successfully produced to support community-based mariculture initiatives in Yap. The first three batches have been transferred to floating cage systems near the hatchery site for continued growth and monitoring. These stocking activities aim to enhance local capacity for sustainable sea cucumber farming and eventually restocking of natural habitats. The fourth batch of juveniles is currently being reared in the raceway system within the hatchery, where they continue to be monitored for growth and survivability. In addition, during a recent visit to Pohnpei, tissue samples from mud crabs (*Scylla serrata*) and rabbitfish (*Siganus* spp.) were collected for DNA extraction as part of related, approved Hatch-funded research projects. These genetic samples will support future work in species identification, broodstock management, and genetic diversity analysis for aquaculture development. These ongoing activities represent a critical step toward promoting sustainable livelihoods and resource conservation through science-based aquaculture of high-value species.

Aquaculture Extension Specialist Activities

As part of the extension activities during the reporting period, the aqua team actively participated in the College Fair at Yap Campus, where outreach and education on local marine resources were the focus. At the booth, four sea cucumber species, various marine fish, and two giant clam species were displayed to engage students and raise awareness about aquaculture in Yap. Poster presentations explained the life cycles, spawning methods, larval rearing, and grow-out techniques of sea cucumbers and giant clams. Students also had the opportunity to observe sea cucumber larvae under a microscope, providing a unique, hands-on learning experience. Altogether, 283 students visited the booth, gaining valuable insights into local aquaculture practices. In addition, a sea cucumber survey was conducted during a recent visit to Pohnpei, where the staff interacted with local sea cucumber farmers and visited an active farm, further supporting knowledge exchange and community engagement in sustainable aquaculture.

Bush Pepper Project

The Hatch project, "Bush Pepper Production as a Cash Crop for Small-Scale Growers," is progressing toward developing standardized methods for cultivating bush pepper (*Piper nigrum* L.) as a viable and sustainable crop for urban and small-scale farmers in Micronesia. This project aims to establish bush pepper as a user-friendly alternative to conventional black pepper vines, offering a sustainable solution that can help reduce household expenses while creating opportunities for surplus production and potential export. The research primarily focuses on overcoming propagation challenges, particularly by examining the effectiveness of lateral cuttings, identifying optimal growing mediums, and testing rooting hormones to improve the commercial viability of bush pepper across various farming contexts. Early results from the first cycle of pot experiments indicate that the combination of cocopith and potting soil, in a 3:1 ratio, led to a 45% survival rate of cuttings. An equal mixture of native and potting soil showed a promising 76% survival rate. The ongoing experiments and results will be evaluated periodically to refine the cultivation process.

Climate Change Challenges Extension Outreach

Over the past two months, the "Climate Change Challenges" Outreach Program has made significant progress in engaging island communities through climate-smart gardening methods. The program primarily provided agricultural students hands-on training in various sustainable gardening practices. A total of 21 Ag students participated in media preparation using cocopith, container gardening, seed germination, transplanting, and aftercare. In addition, 4 UB students received practical training in vegetable cultivation techniques, including seed germination, media preparation, and transplanting. These activities complemented the students' classroom learning, enhancing their skills in climate-smart agriculture. The program also extended its impact by offering technical assistance to 4 community members, providing one-on-one consultations on vegetable gardening and staple crop production. These efforts have enhanced the participants' understanding of climate-resilient farming, strengthened local food systems, and fostered sustainable livelihoods.

Italian Project Update

During the past two months, the Italian Project has steadily progressed across the four target communities—Ablul, Daboch, Makiy, and Ruu—through continued agricultural activities and infrastructure development. In Ablul, six new participants joined, bringing the total to 18, with 62 sweet potato beds and 38 taro beds established, and harvests of 48 lbs. each for sweet potato and soft taro. Daboch added one new client (a total of 14), with 29 sweet potato beds, 35 taro beds, and harvests of 9 lbs. of sweet potato and 48 lbs. of taro. Makiy maintained 13 active clients cultivating 59 sweet potato and 57 taro beds, while Ruu reported 11 participants managing 28 sweet potato and 21 taro beds, harvesting 68 lbs. of sweet potato and 10 lbs. of taro. On the infrastructure front, roof renovation and rainwater harvesting systems have been completed at Daboch and Satawal community houses, while the Ablul community house renovation is nearing completion and is expected to be finalized by the end of May 2025. These developments reflect the project's continued efforts to enhance climate-resilient agriculture and water security in atoll community settlements.

CHUUK CRE

Aquaculture Extension Activities

In May 2025, an outreach program focusing on sustainable farming practices was conducted on Etten Island, located in the Southern Namoneas region of Chuuk Lagoon. The program successfully engaged 16 community members (6 men, 10 women), who responded enthusiastically and curiously to the introduction of this innovative approach to marine resource management. The presentation effectively conveyed the concept and benefits of sustainable aquaculture, sparking strong interest among the participants. Two individuals expressed a keen desire for deeper involvement and requested a follow-up visit to explore potential opportunities further. Their enthusiasm was driven by Etten's favorable coastal environment, which they recognized as well-suited for aquaculture development. The outreach particularly focused on the potential for giant clam farming, which received highly positive feedback. This initial engagement suggests a promising foundation for future sustainable aquaculture initiatives on Etten Island, especially those centered on giant clam cultivation. It is recommended that further assessments be conducted to evaluate the feasibility, environmental suitability, and logistical requirements for establishing a clam farming operation in the area.

In addition to the Etten outreach, technical assistance was provided to the Oneisomw Municipality, regional NGO partners, and the Chuuk State Government to support the Oneisomw Clam Aquaculture Project. Guidance included site selection, best practices for clam farming, and strategies for sustainable project implementation. This collaborative initiative aims to improve local food security, promote marine conservation, and create livelihood opportunities through responsible aquaculture. Further contributions included technical input from the Chuuk State Protected Area Network (PAN) Committee, where the aquaculture researcher supported discussions on integrating aquaculture into conservation planning. A total of 25 stakeholders participated in these meetings, reflecting a strong regional commitment to sustainable marine resource development.

Community Outreach Events

During the reporting period, Chuuk CRE actively participated in multiple outreach events to promote sustainable agriculture, aquaculture, environmental stewardship, and public health awareness. These efforts directly engaged students, community members, and institutional partners across Chuuk Lagoon.

Chuuk High School Career Day: During Chuuk High School Career Day, CRE Agriculture and Aquaculture program staff introduced students to key concepts in food security, sustainable practices, and the impacts of climate change. Students were encouraged to explore career opportunities in these critical fields through engaging discussions. The event reached 70 students.

Earth Day Celebration: In collaboration with the Environmental Protection Agency (EPA), Chuuk CRE participated in Earth Day activities that included campus and community clean-up efforts. Students and CRE promoted environmental responsibility through hands-on action. A total of 25 individuals joined the celebration.

Health Fair Day: Chuuk CRE contributed to Health Fair Day with educational and health-promoting demonstrations. Ag program staff distributed brochures about oregano and its health benefits, while the Expanded Food and Nutrition Education Program (EFNEP) offered samples of oregano tea to help with coughs. The EFNEP also led a cooking demonstration on preparing banana chips—an accessible and nutritious local snack. The event engaged 60 participants (47 women and 13 men).

College Fair: During the Chuuk Campus College Fair, CRE showcased a range of programs, including climate-smart agriculture, aquaculture, and hydroponics. Informational brochures on oregano and banana chip recipes were provided, and healthy snacks were shared with attendees. Students actively interacted with the CRE booth, asking questions and exploring opportunities in agriculture and aquaculture. The event reached 117 students, marking a successful and informative event.

These outreach activities significantly contributed to public education and community engagement on sustainable practices, environmental health, and local food production. The events were vital for promoting awareness and inspiring youth involvement in science-based solutions to regional challenges.

Crop Production Program Outreach

During the reporting period, the Agriculture Program conducted outreach and training activities across three island communities: Piis Paneu, Fonoton, and Etten. These sessions focused on raising awareness about sustainable agriculture and promoting the 10x10 community and school garden concept, alongside educational content on climate-smart agriculture practices. In collaboration with the Department of Agriculture, a key hands-on activity was conducted demonstrating how to create a plant growing medium using shredded coconut husk. This innovative approach highlighted the value of using local, readily available resources to enhance soil quality and support crop cultivation. Participants learned how coconut husk can be processed into a moisture-retaining, plant-supportive soil medium, improving growing conditions and aligning with environmentally friendly and climate-resilient farming methods. The practical, interactive format encouraged active learning and reinforced the importance of sustainability in agricultural practices.

Poultry Farming Program

Of the 18 participating farmers who received chickens through the poultry program, 11 have also had incubators to start hatching their eggs. Encouraging progress has been reported, with three farmers completing their first incubation cycle and preparing for a second round of egg incubation. Additionally, five poultry farmers are expanding their operations, with plans to increase the production of two key chicken breeds: Rhode Island Reds and Plymouth Rocks. This growth reflects a positive trend in small-scale poultry farming and highlights the potential for greater local egg production.

EFNEP Activities

The EFNEP agent visited three communities to raise awareness about the importance of health, nutrition, and balanced diets. As part of these efforts, the agent led interactive cooking demonstrations and shared practical tips on preparing nutritious meals using locally available ingredients, making healthy eating accessible and culturally relevant. The most recent session was held on Etten Island, where 20 participants (8 women and 12 men) actively engaged in the learning experience. The event offered a valuable opportunity for community members to learn about healthy eating habits and the role of proper nutrition in supporting overall well-being. The outreach efforts continue to advance EFNEP's mission of improving dietary practices and promoting healthier lifestyles throughout the communities of Chuuk, empowering individuals and families to make informed, sustainable food choices.

KOSRAE CRE

Aquaculture Research

Efforts are underway to implement the three approved Hatch projects to strengthen aquaculture and fisheries management in Kosrae. These projects align with regional priorities for sustainable resource utilization and are gradually transitioning from planning to operational phases. These projects aim to strengthen foundational knowledge in fisheries management and sustainable aquaculture practices, strongly emphasizing local ecological conditions and community needs. Key developments include ongoing discussions with local authorities to formalize a Memorandum of Agreement for establishing a hatchery site at the Lelu Marine Park. Concurrently, preparatory steps have been taken to procure laboratory supplies and equipment necessary for initial operations. Among the approved projects, the sustainable mangrove crab aquaculture project will be implemented in collaboration with the Pohnpei site team. This strategic partnership will maximize resource efficiency and technical expertise across sites.

Aquaculture Extension Activities

As part of extension and outreach efforts, a clam species identification and environmental survey was conducted in Utwe, providing key baseline data for future conservation and aquaculture initiatives. Collaborative engagement with the Utwe Youth Group, KIRMA, and KCSO ensured inclusive participation and knowledge exchange. The youth group continues to lead giant clam and mangrove crab projects, with CRE offering scientific and monitoring support. Discussions with KIRMA included restoring partial oyster beds to assess hatchery-related environmental impacts, while consultations with KCSO focused on collecting rabbitfish juveniles for the upcoming project.

To expand funding opportunities and technical collaborations, two preproposals were submitted during this period:

- Sustainability of Mangrove Crab (*Scylla serrata*) through Hatchery Program in Kosrae, FSM" – submitted to the Micronesian Conservation Trust.
- Induced Spawning and Seed Production of Rabbitfish (*Siganus* spp.) in Kosrae Waters, FSM" – submitted to the Center for Tropical and Subtropical Aquaculture.

Agriculture Research Activities

As part of ongoing research efforts under an approved Hatch Project, a series of field activities were conducted in Pohnpei to evaluate the potential of dragon fruit as a high-value crop. These included a field survey, cultivar assessment, preparation of planting materials, and a fruit taste evaluation at the pilot farm. In addition, a dragon fruit nursery was established alongside a demonstration garden to support further propagation and farmer engagement. Early observations confirm that dragon fruit thrives under island conditions, presenting strong potential for income generation. Simultaneously, efforts in Kosrae focused on the propagation of tangerines and thornless lime in collaboration with local communities. These activities involve experimental design that compares cultivars, propagation methods, and various soil substrates to advance agricultural technologies and restore citrus varieties in the region. Furthermore, monthly coconut data collection continues across multiple municipalities to support species conservation, promote Good Agricultural Practices (GAP), and lay the groundwork for future market linkages between local farmers and restaurants. To ensure efficient use of resources, the approved coconut research project will also be extended to Pohnpei, where it will be jointly implemented with the local research team.

Agriculture Extension Activities

The CRE team participated in the College Fair, where a booth was set up to engage students and staff in agricultural education. The CRE booth featured specimens of dragon fruit and a variety of locally grown vegetables, providing a visual and interactive way to promote interest in crop production and local food systems. In addition, the Researcher introduced the High-Intelligent Nutrient, Fertilizer, and Soil Test Kit to raise awareness about the importance of soil management in sustainable agriculture. The demonstration highlighted how such tools can support the development of climate-resilient and efficient crop production systems. The booth attracted strong participation, with all staff and approximately 100 students actively engaging in discussions, asking questions, and learning about innovative farming techniques and technologies. This activity contributed to the broader goal of empowering youth and the community with practical knowledge in sustainable agriculture.

As part of its ongoing efforts to promote food security and agricultural literacy among youth, staff conducted outreach events at two elementary schools. These initiatives focused on introducing students to the concept and practice of container gardening, a simple yet effective method for growing vegetables in limited spaces. The outreach events combined educational presentations with hands-on activities, allowing students to understand and apply local food production principles. Through interactive sessions, students learned about the importance of growing local vegetables, the nutritional and environmental benefits of consuming locally grown produce, and how container gardening supports sustainable agriculture practices, especially in island communities with limited arable land.

The most engaging part of the outreach was the practical gardening experience, where students were introduced to basic gardening techniques using containers. They learned how to prepare soil, plant seeds, and care for their crops. The activity helped them develop practical skills and sparked a genuine interest in growing their food.

COOPERATIVE RESEARCH AND EXTENSION

Building Resilient Communities