FOOD SYSTEMS SOLUTIONS

FSM R&D Division of Trade

Funded by the United States Department of Commerce
Economic Development Administration

Developing a Food Innovation System for Pohnpei State:

Food Systems Solutions Data Collection

Methods and Results

RUTGERS

Acknowledgements:

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This addendum includes the results of the surveys and the survey tools used to capture the voices of the many FSM food system stakeholders and was used in part to guide and inform the food systems development framework that was codesigned and developed with each FSM state.

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Food Systems Solutions Pohnpei State
Survey Methodology

Study design and setting: The research protocol titled *"Strengthening Food Security in the Federated States of Micronesia: An Innovative Approach to Enhancing Information Systems, Establishing an FSM Food Innovation Center and Supporting Local Capacity Building"* received Institutional Review Board (IRB) approval from both the College of Micronesia-FSM and Rutgers University. At Rutgers, the protocol (IRB Number Pro2024000757) was reviewed under minimal risk and granted exempt status (Exempt 2i) on April 30, 2024, with approval issued by the Rutgers Human Research Protection Program. At the College of Micronesia-FSM, the protocol (WIRB® Protocol #0020724072024) was reviewed on July 2, 2024, and formally approved as exempt on July 29, 2024, by the COM-FSM IRB. Both approvals affirmed that the study may proceed in accordance with the approved protocols and applicable human subjects protection regulations. For the surveys, partnering NGO facilitated trained local enumerators to conduct the food system stakeholder interviews. All enumerators were required to complete and were awarded CITI certification and received training from the Rutgers Food System Science Team prior to conducting the surveys.

In Pohnpei State, the surveys were designed and conducted in concert through a strong partnership framework that integrated collaboration with local institutions and stakeholders. The State of Pohnpei served as the core partner and provided essential guidance and logistical support, and the Conservation Society of Pohnpei acted as the principal contact and survey implementer. The survey effort was carried out by a dedicated team of seven enumerators, each CITI trained prior to initiating the study. There were 10 different survey tools and a total of 251 surveys were completed.

The surveys were strategically and geographically distributed across Pohnpei's five main municipalities of Sokehs, Kitti, Madolenihmw, U, and Nett between August 1 and September 30, 2024. Outer islanders of Mwokilloa, Kapingamarangi, Sapwuafik, and Nukuoro living on main island Pohnpei were also included to ensure their voices and aspirations were included.

Study population and sample selection: Producers accounted for 91 surveys conducted across the five main municipalities. Enumerators defined producers as individuals engaged in farming, harvesting, fishing, aquafarming, or livestock rearing regardless of whether these activities were full time occupations or supplemental income sources. Given Pohnpei's population and resources, farmers and fishermen are mostly engaged in small scale commercial food production. As a result, the surveyed producers were primarily those who participated in food related activities on a part-time or supplemental basis.

Consumers represented 81 of the surveys across the five municipalities. They were identified as individuals who purchase or harvest food from their own land but do not produce food for sale. To ensure accurate representation of consumption habits, particular attention was given to include consumers living on smaller islands such as Lenger and Depehk Takaiou. These areas lack reliable transportation, and the survey highlighted how mobility constraints shape food access and purchasing patterns across different household types.

Community management leaders were represented by 12 participants who held significant social and leadership roles in Pohnpei communities. Respondents included Traditional Village Chiefs, municipal mayors, women leaders, community group organizers, and representatives from non governmental organizations. Careful selection across municipalities and traditional leadership systems ensured diverse perspectives on governance, community management, and the role of traditional authority in shaping community life.

Policymakers contributed to 14 of the completed surveys. This group included members from the executive branch such as the Governor's Office and the Department of Resources and Development, the legislative branch including Pohnpei State Senators, and municipal council members. Their perspectives captured the influence of decision makers on food systems, commerce, and community welfare.

FSS Multi-Stakeholder Surveys Conducted for Pohnpei State:
Producer Survey: 92 surveys conducted
Consumer Survey: 82 surveys conducted
Community Management Leader Survey: 12 surveys conducted
Food Distributors and Retailers: 31 surveys conducted

- Local markets: 19 surveys conducted
- Restaurants: 12 surveys conducted

Trainer Surveys: 13 surveys conducted
Information Content Providers Survey: 8 surveys conducted
Information Infrastructure Provider Survey: 3 surveys conducted
Technical IT Survey: 3 surveys conducted
Policymaker Survey: 14 surveys conducted

Questionnaire and interview of study participants: The survey also engaged several specialized groups whose input was critical to understanding the broader dynamics of Pohnpei's food system.

Educators and information content providers were represented by eight participants. These included staff from the College of Micronesia's Cooperative Research and Extension program, the Land Grant program, the Invasive Species Taskforce of Pohnpei, the Disaster Office, the Governor's Communication Office, the Chamber of Commerce, local municipal government, and the Resource and Development Agriculture Division. Their contributions were essential in assessing how agricultural, health, and food safety information is generated and disseminated to the public.

Three information infrastructure providers and IT specialists were surveyed, including representatives from FSM Telecom, the FSM National Government, and the state's telecommunications sector. These interviews provided insights into the accessibility and performance of Pohnpei's digital infrastructure, highlighting both constraints and emerging opportunities for improved information flow.

Three technical IT personnel participated, representing FSM Telecom and the FSM National Government. Their perspectives offered valuable input on the current state of technical resources and future possibilities for technological development.

Twelve trainers were surveyed, including representatives from the College of Micronesia Cooperative Research and Extension program, the Pohnpei State Resources and Development Division, the E Commerce Office, and local NGOs and community groups. Trainers play a key role in building capacity, transferring skills, and promoting sustainable agriculture, food production, and resource management. Their insights underscored the importance of training programs in strengthening resilience among producers and communities.

The food distribution and retail sector was represented by 27 respondents. Twelve were restaurant and catering service providers, including establishments such as local caterers serving meetings and workshops and restaurants that, while not currently serving local food as their main dish, expressed interest in adapting their menus to include local produce. This indicates a potential growth market for local food and a strengthening of the local supply chain. Fifteen surveys were conducted with retail stores, food markets, and food vendors such as street takeouts. These participants were generally responsible for food orders and sales within their businesses, and their perspectives provided a clearer picture of demand for local produce and the potential for retail growth.

Data limitation: The survey faced certain limitations. Although it achieved broad representation across sectors, Pohnpei's relatively small pool of technical and infrastructure providers restricted the scope of input from these areas. In addition, the concentration of food production in small-scale and semi-commercial activities meant that larger-scale agricultural perspectives were limited. The survey team's efforts to include outer islanders living on main island and to target vulnerable groups with transportation constraints ensured that critical perspectives were captured across the food system.

Summary of survey insights: The Pohnpei survey effort provided a comprehensive view of the state's food system, encompassing a wide range of sectors and stakeholders. By gathering perspectives from producers, consumers, community leaders, policymakers, distributors, IT specialists, trainers, and information providers, the study offers a holistic understanding of food production, distribution, and consumption patterns. The findings highlight both opportunities and challenges, including growing interest among restaurants to serve local food, constraints in infrastructure and technology, and the importance of transportation and mobility in shaping household consumption. The data gathered serves as a valuable resource for designing initiatives aimed at strengthening Pohnpei's food system, supporting local agriculture and fisheries, and improving infrastructure in ways that better meet the needs of farmers, fishermen, and local communities.

Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Pohnpei State

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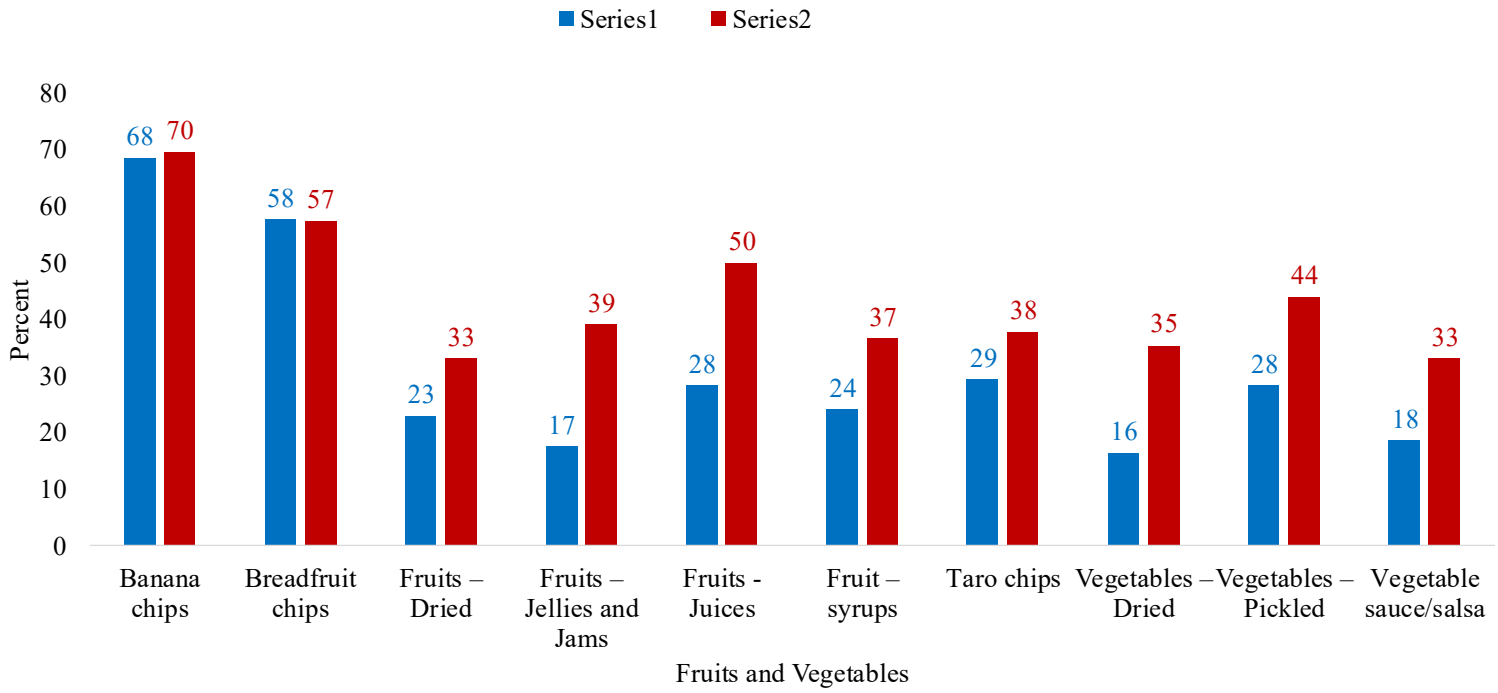
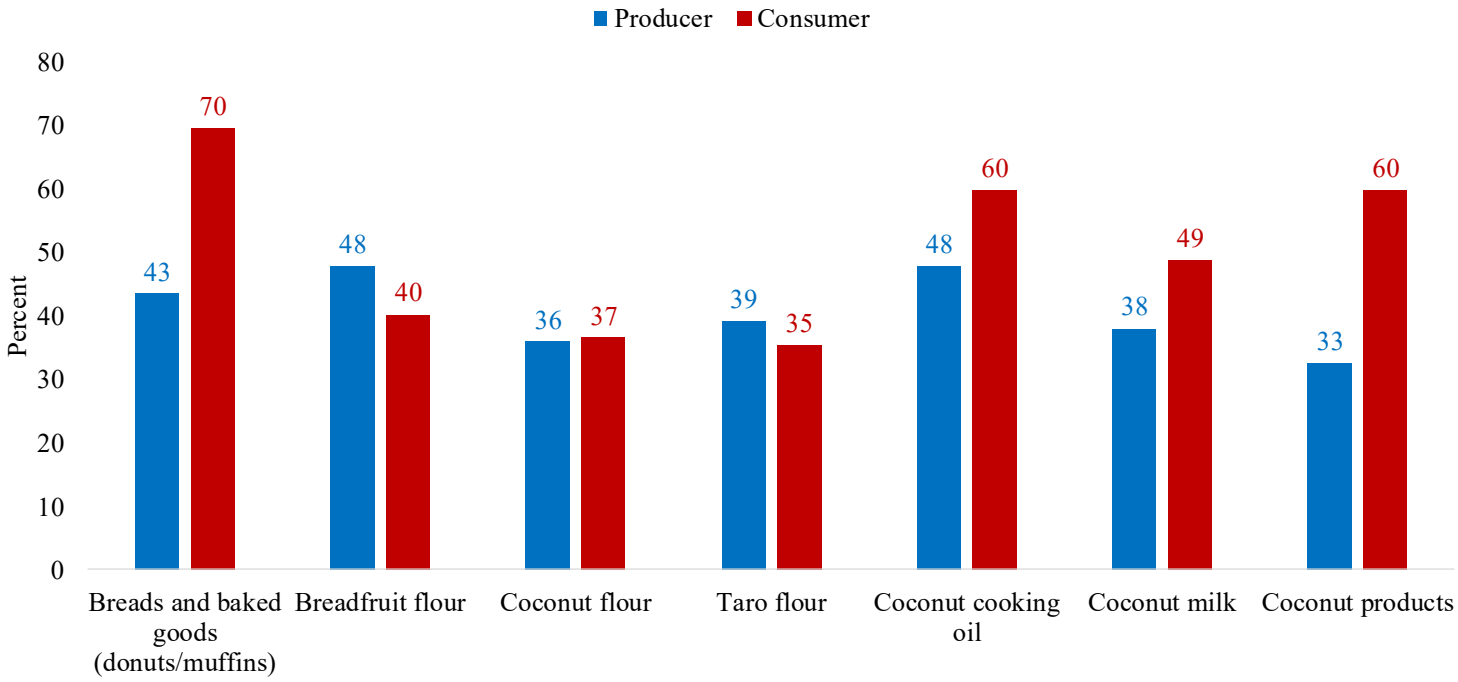
General and Combined
Stakeholders

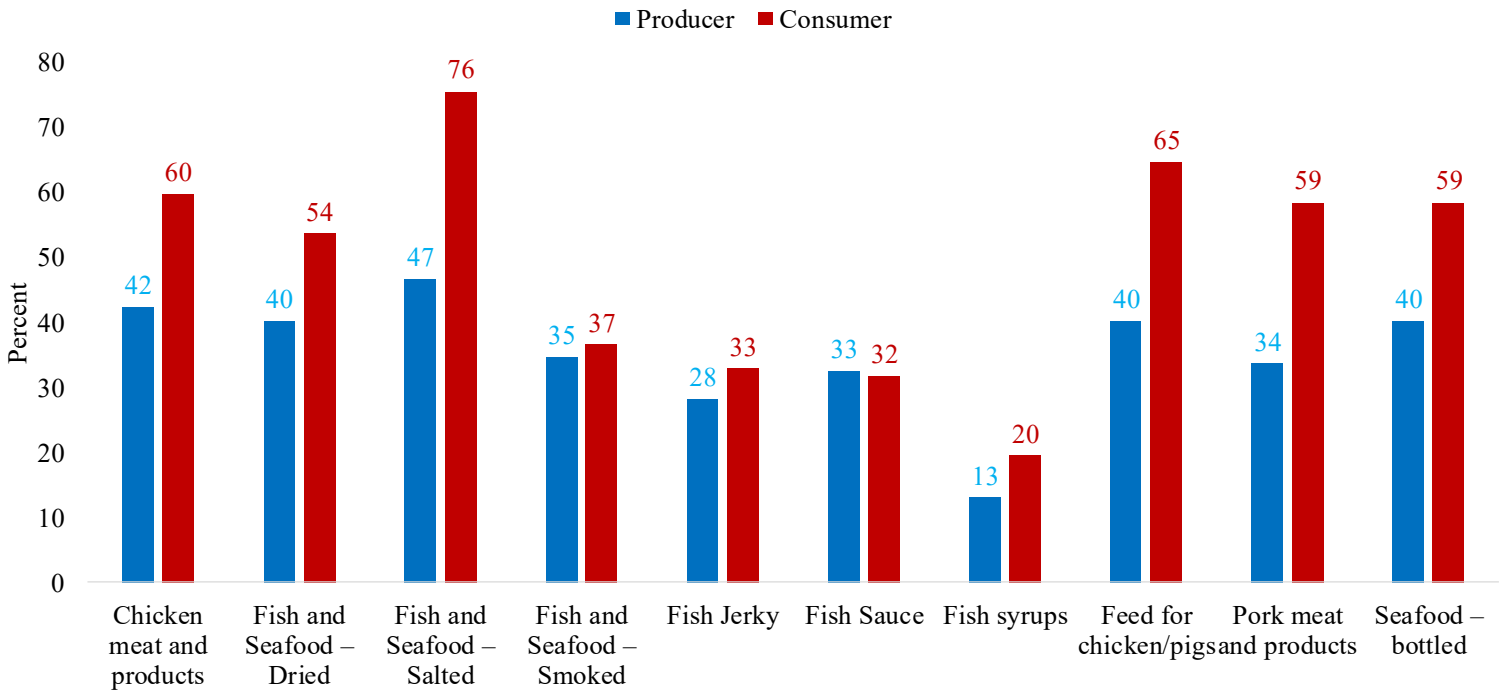
Pohnpei State : Producers (Series 1) and Consumer (Series 2) Preference – Fruits and Vegetables



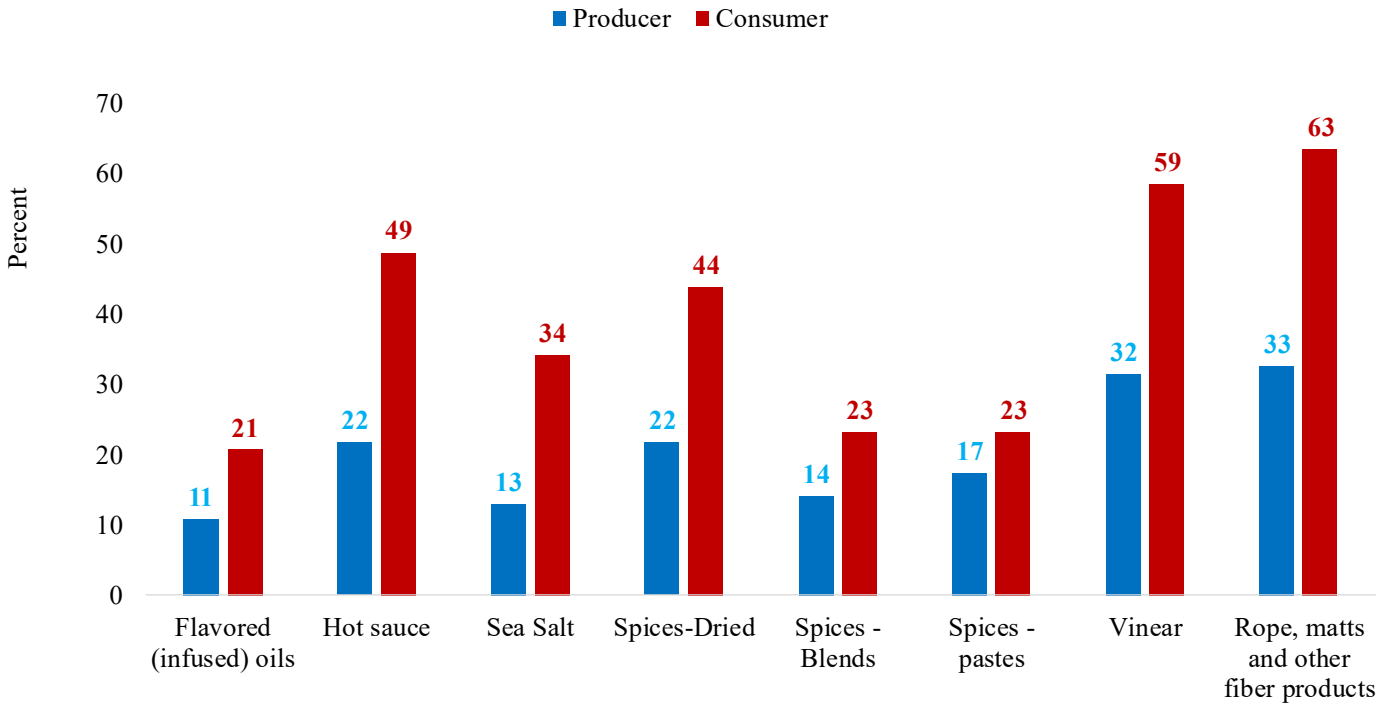
Pohnpei State : Producers and Consumer Preference – Baking Products



Pohnpei State : Producers and Consumer Preference – Meat and Seafood Products



Pohnpei State : Producers and Consumer Preference – Seasoning and Misc. Products



Federated States of Micronesia
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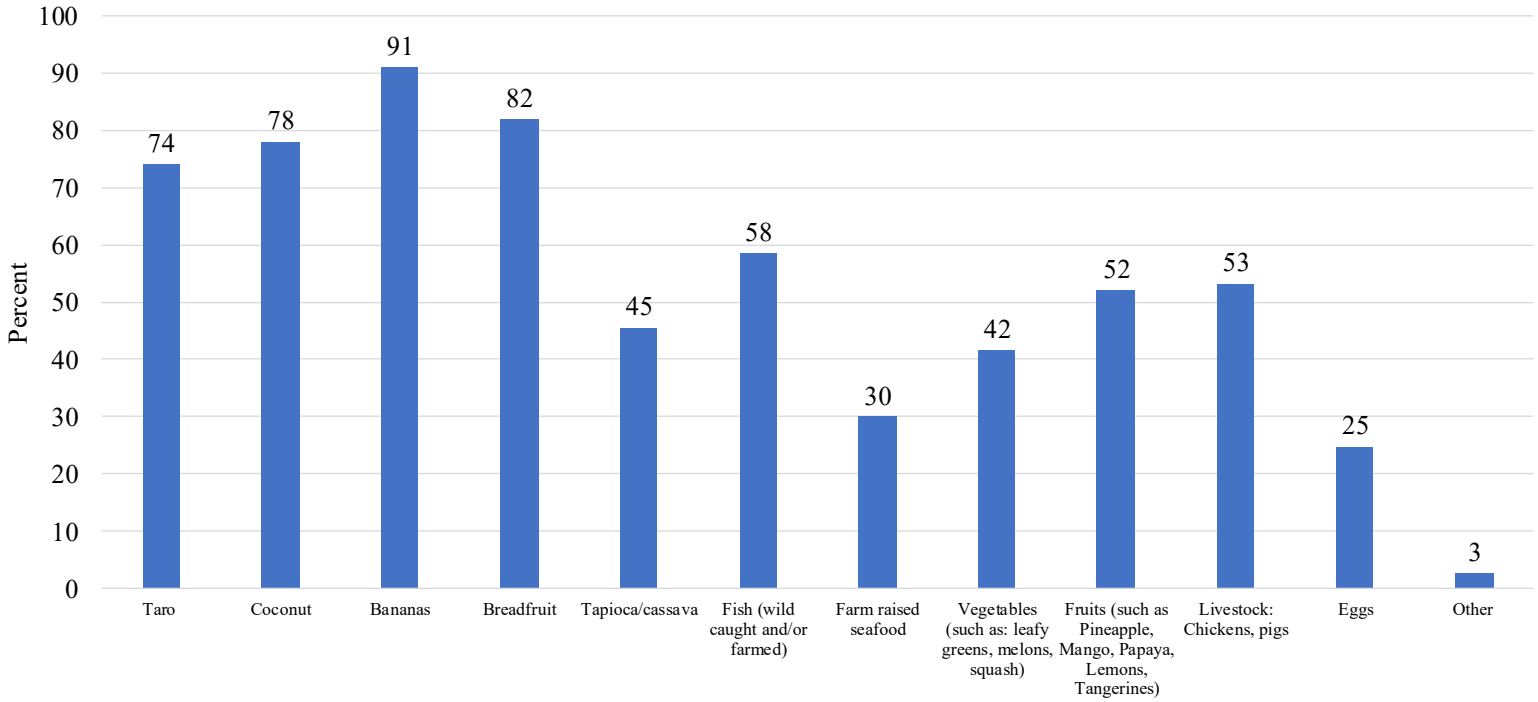
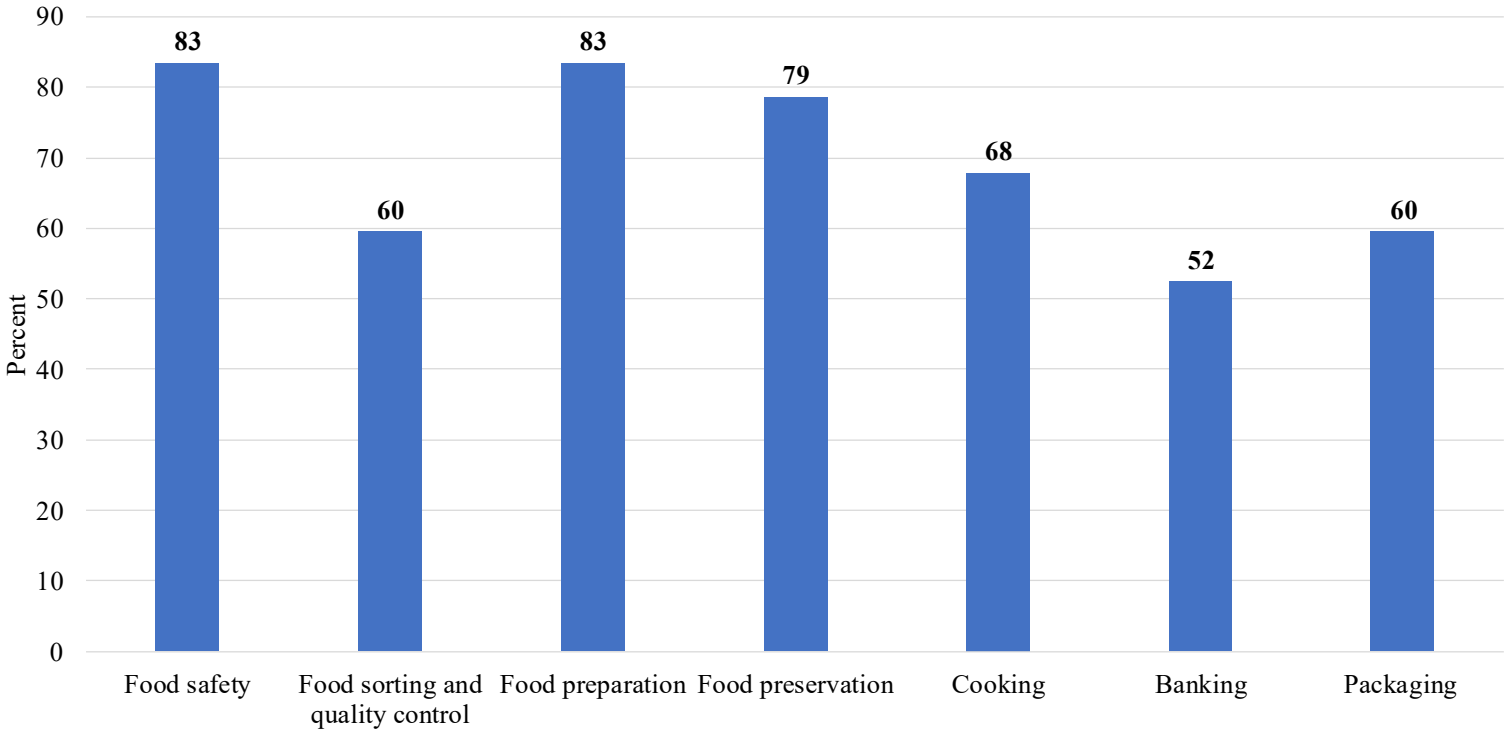
FSS Survey Data Tables and Charts
Pohnpei State
Producers

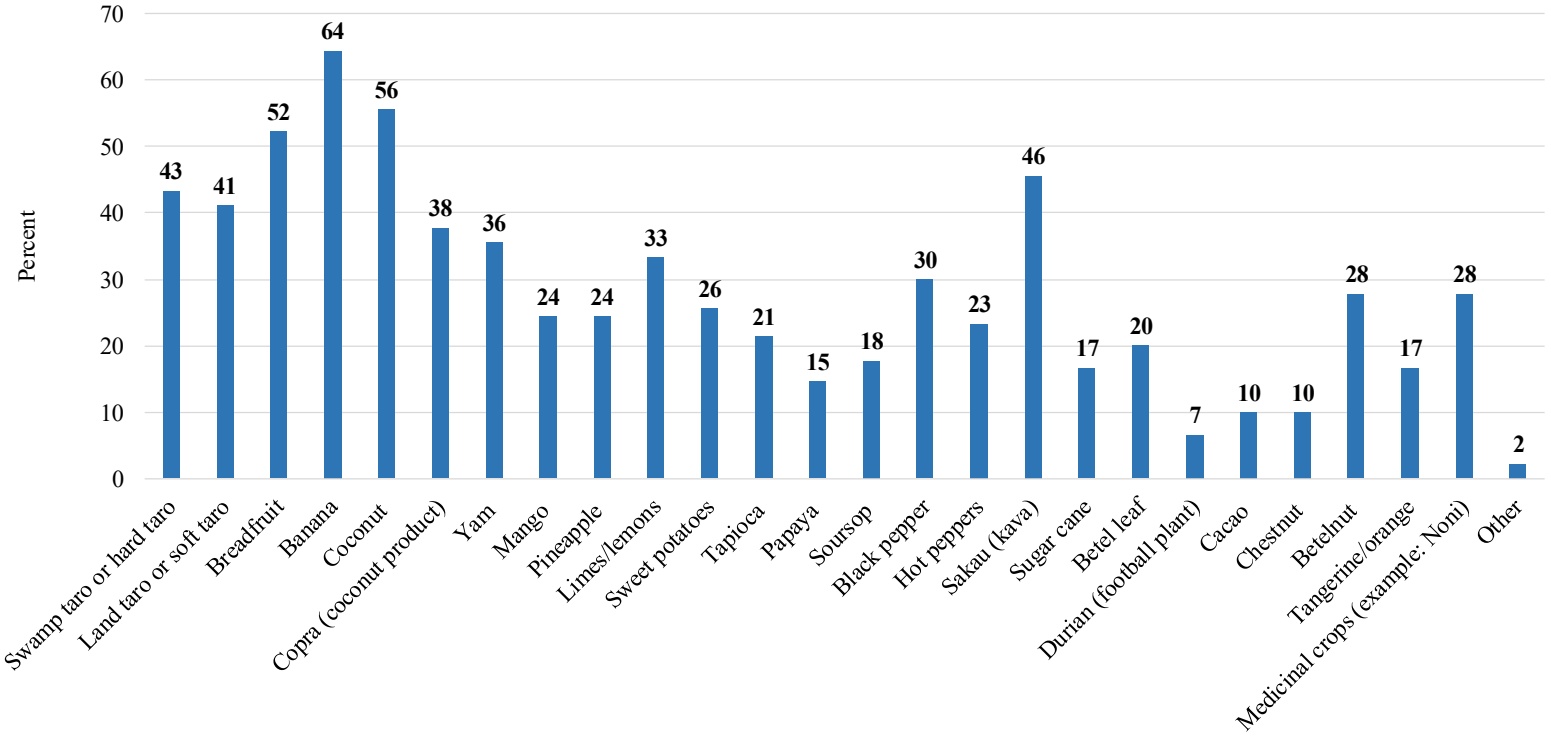
Pohnpei State : What food could you regularly provide to a food processing plant ?



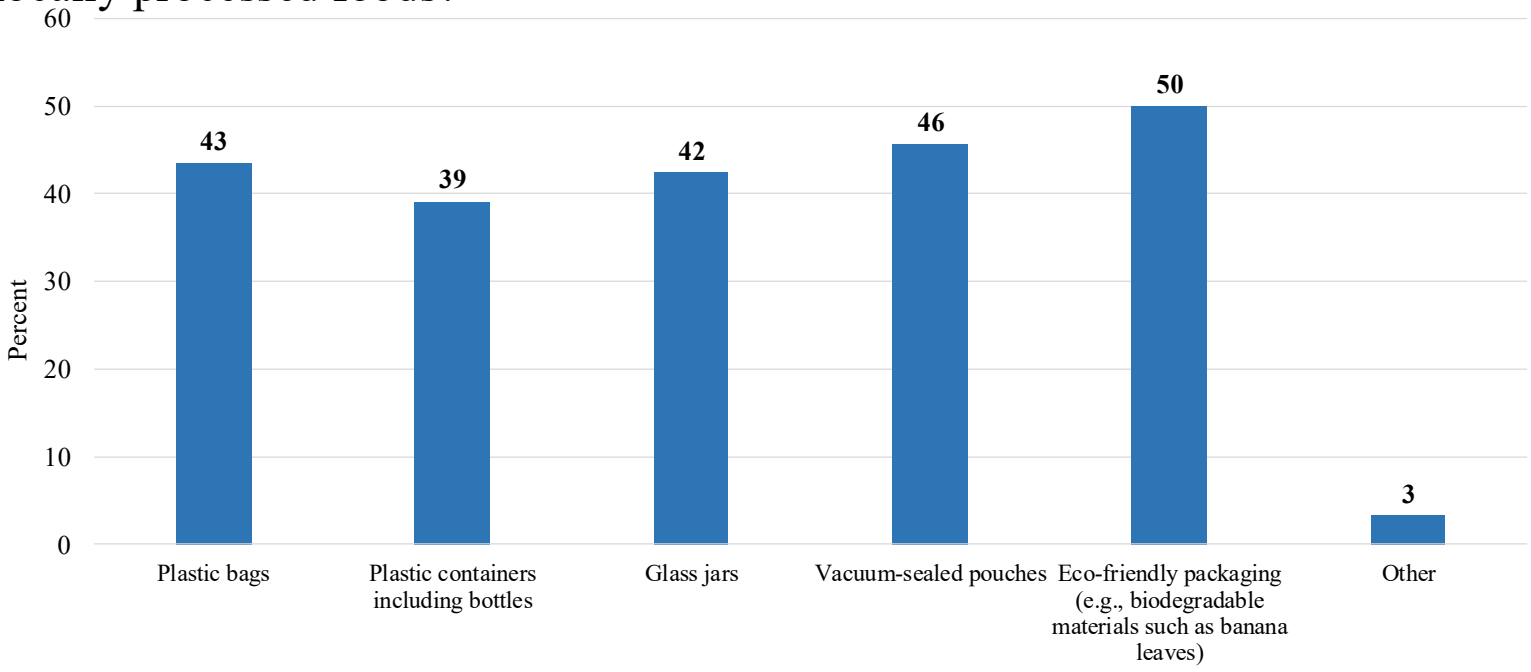
Pohnpei State : Which food processing skills are you interested in developing ?



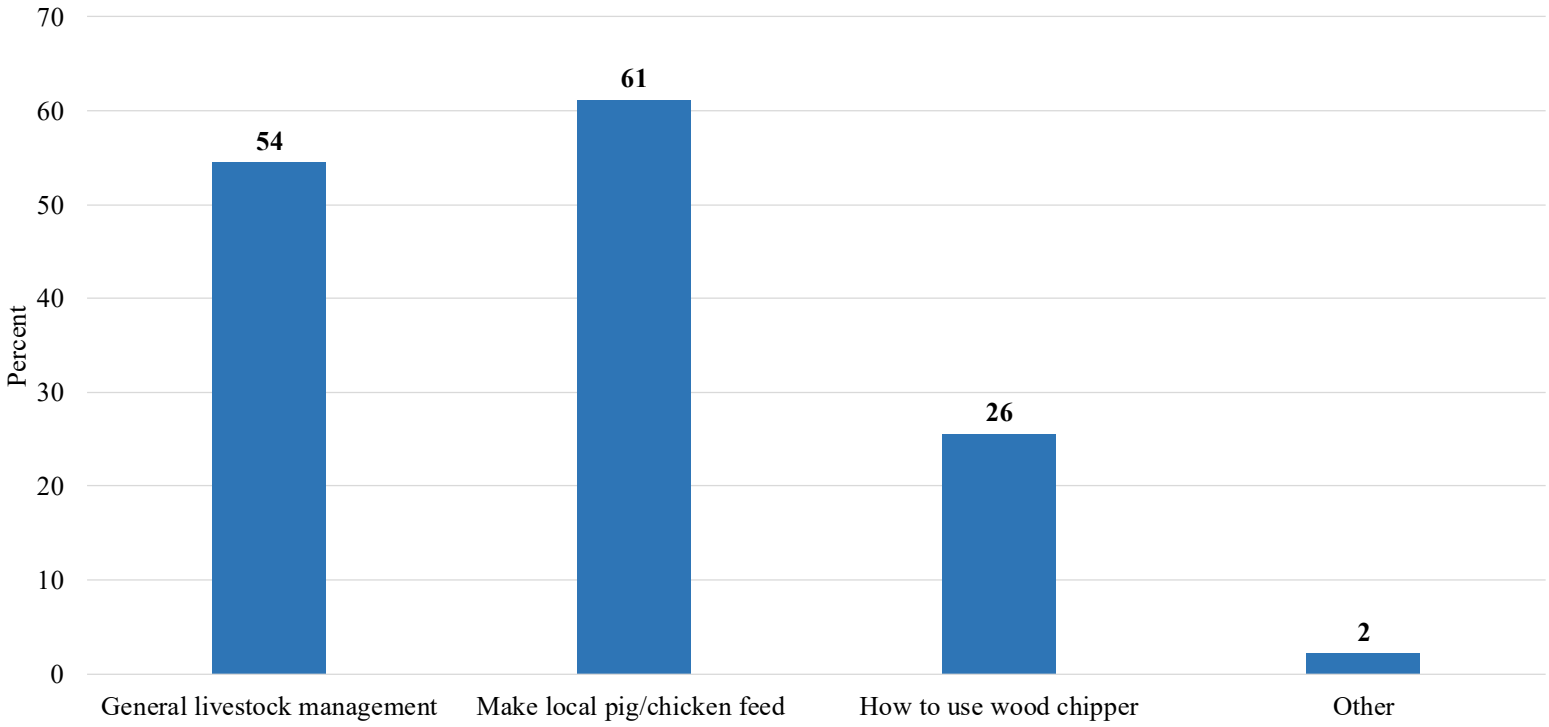
Pohnpei State : What agricultural skill would you like to develop ?



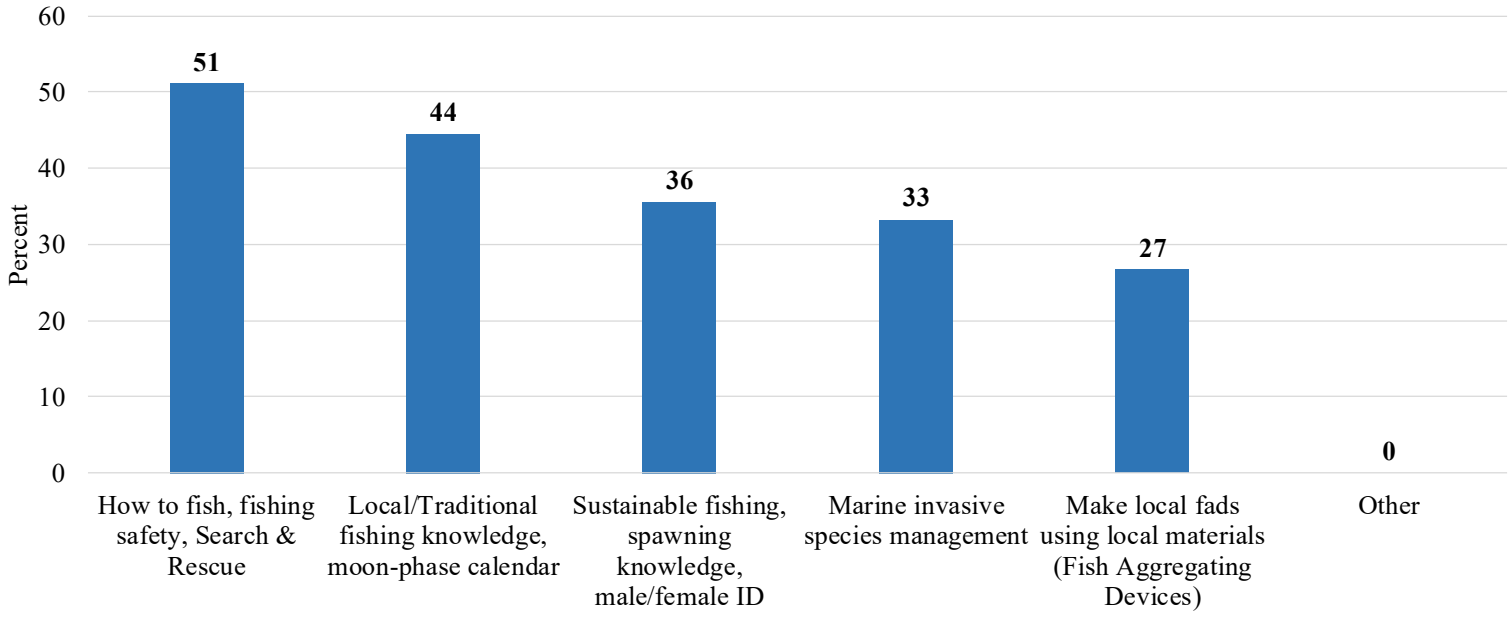
Pohnpei producers: What types of packaging do you think would best suit the locally processed foods?



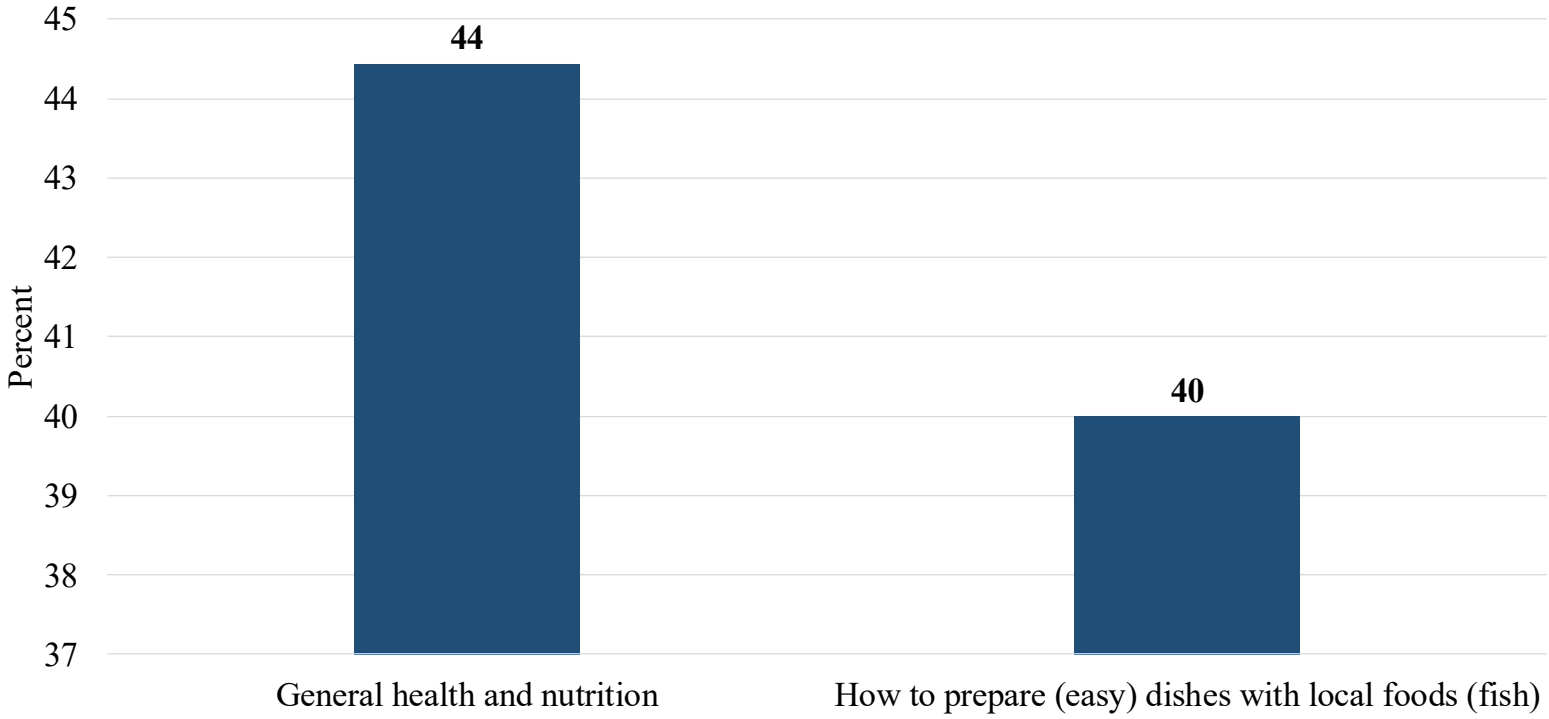
Pohnpei producers: What training would you like : LIVESTOCK ?



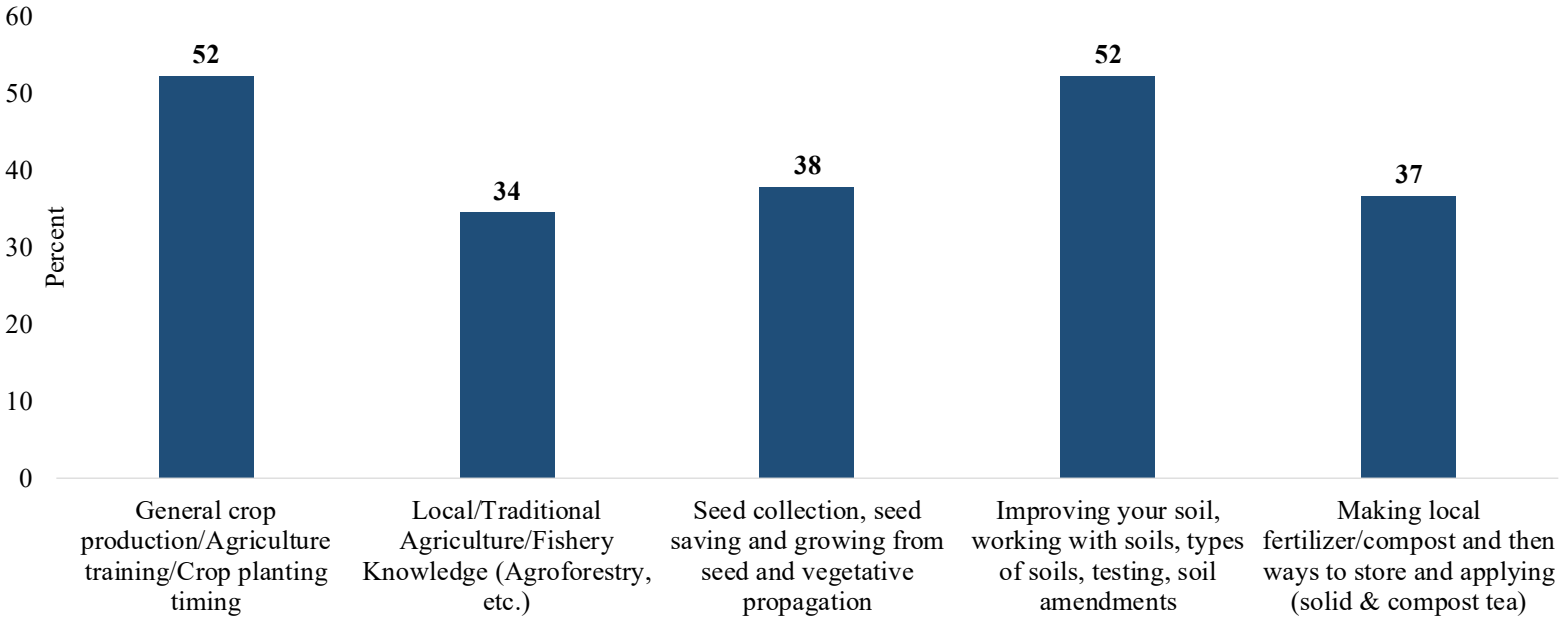
Pohnpei producers: What training would you like? MARINE/AQUACULTURE ?



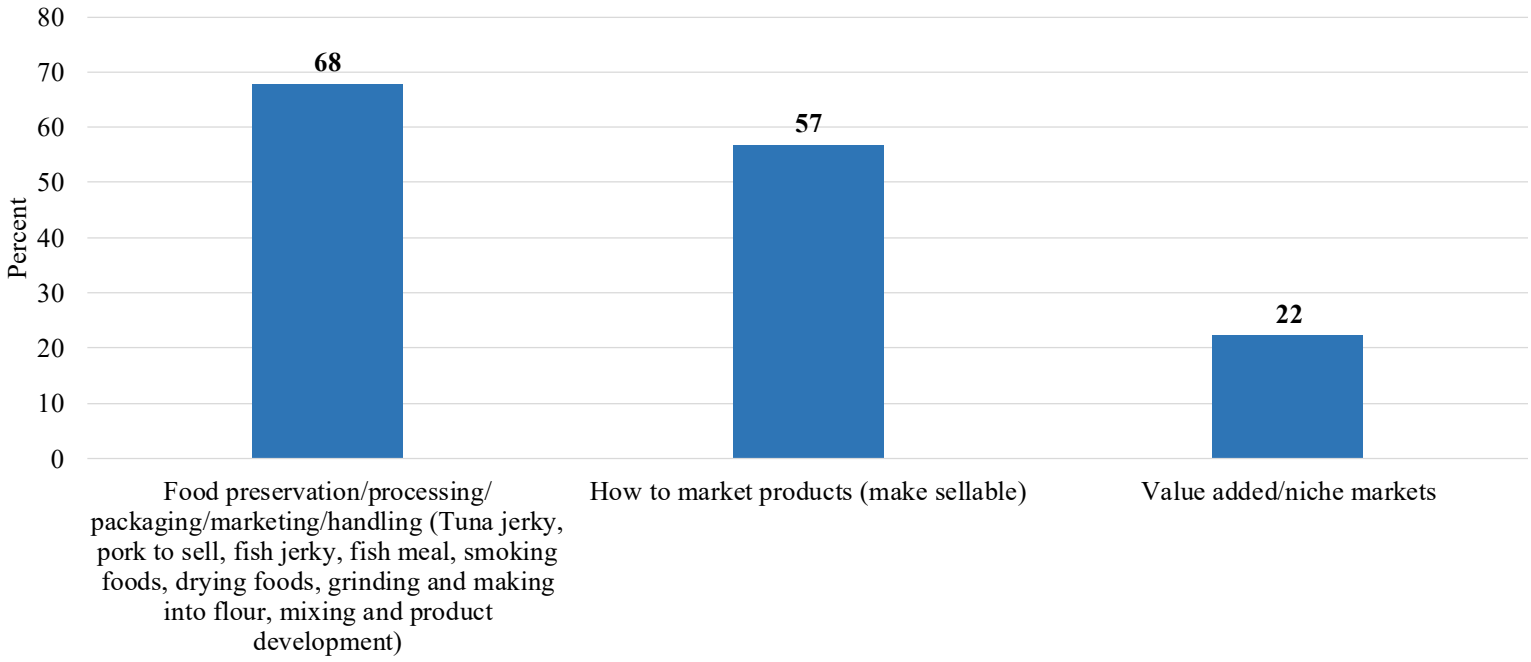
Pohnpei producers: What training would you like : HEALTH AND NUTRITION ?



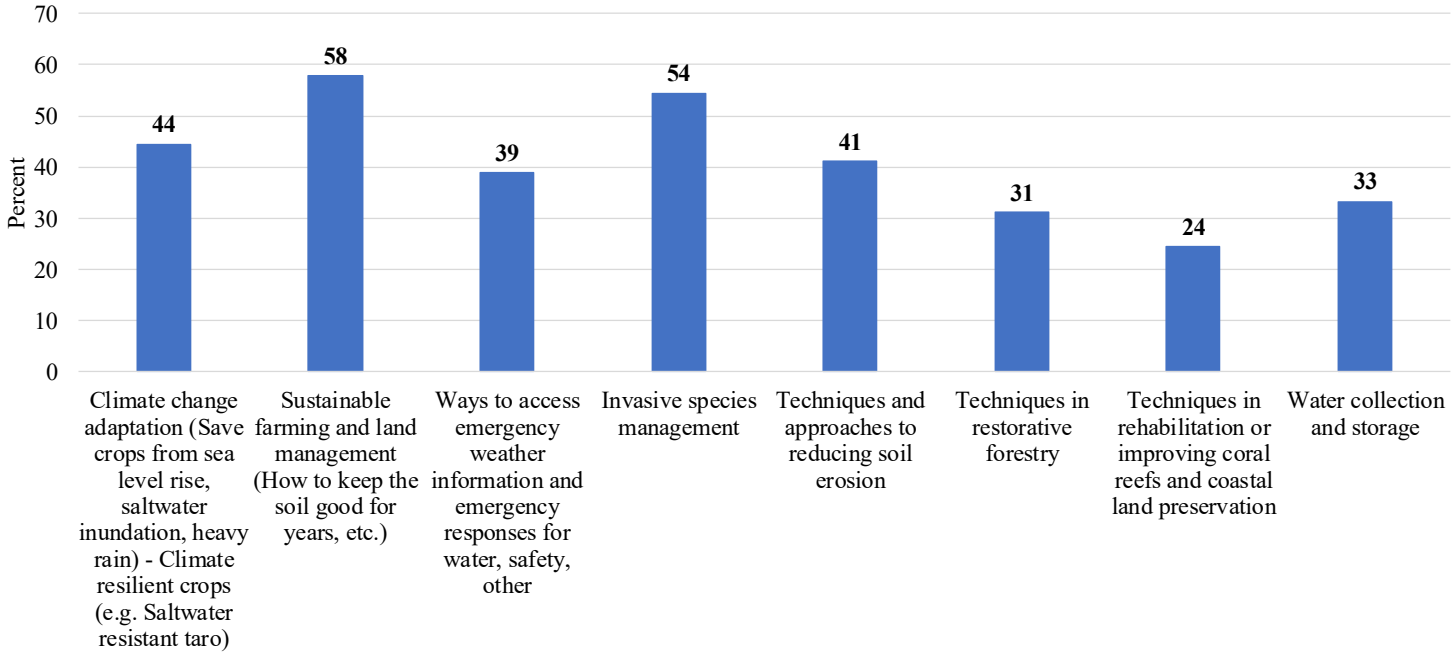
Pohnpei producers: What training would you like AGRICULTURE ?



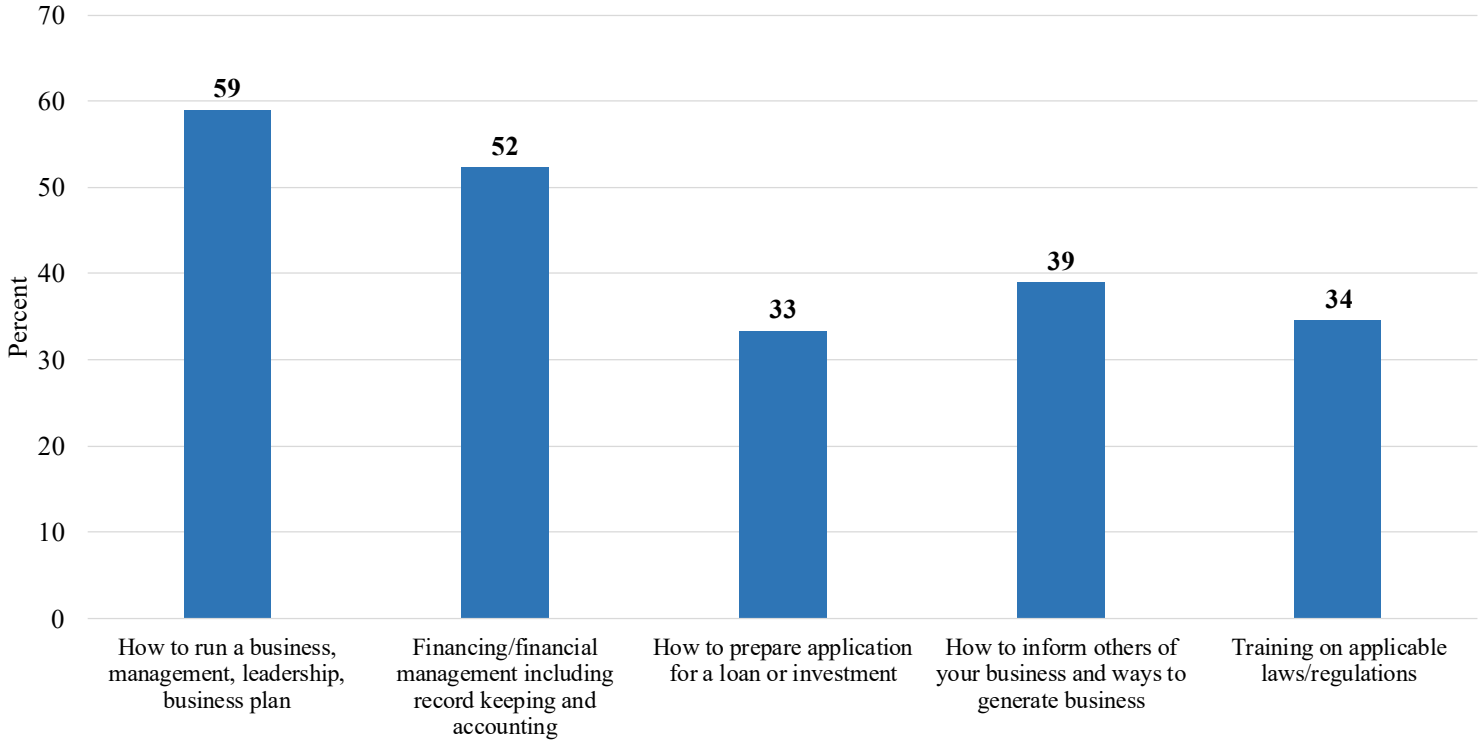
Pohnpei producers: What training would you like: MARKETING ?



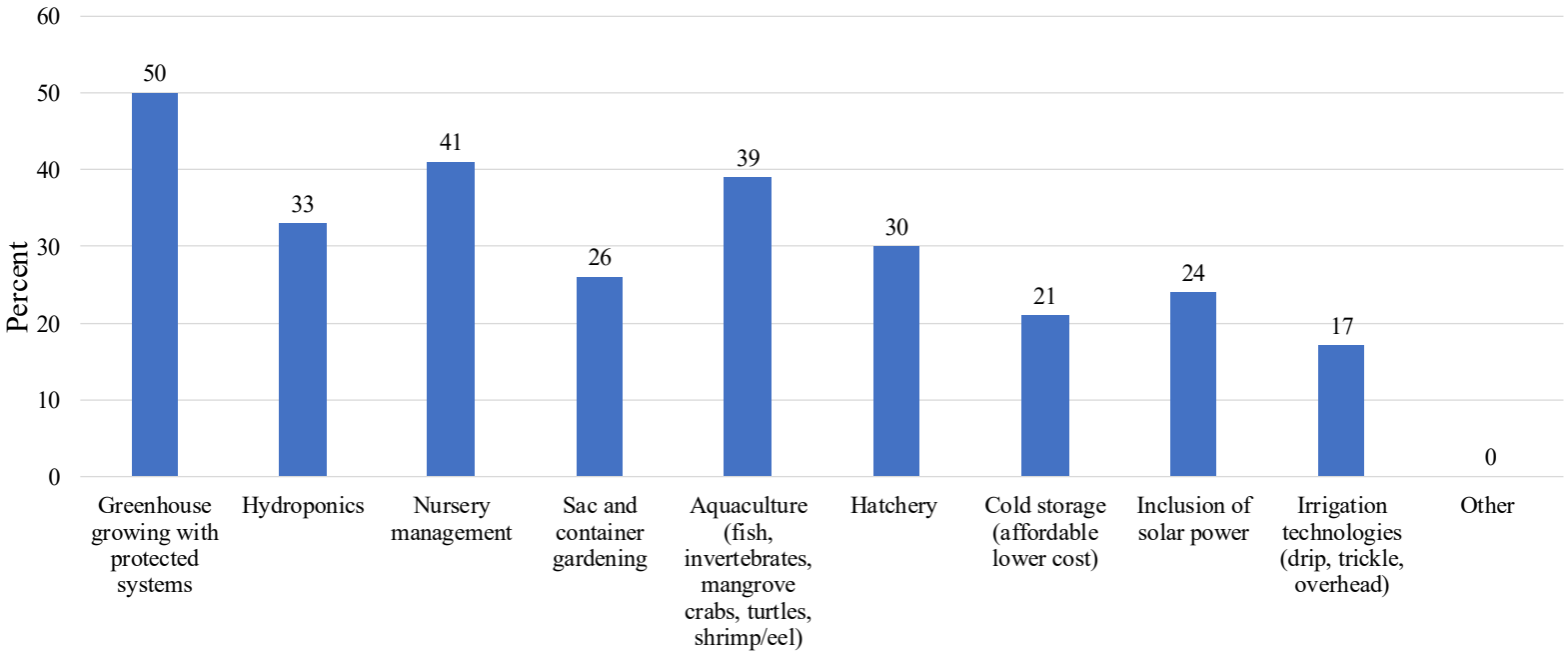
Pohnpei producers: What training would you like: CLIMATE CHANGE ?



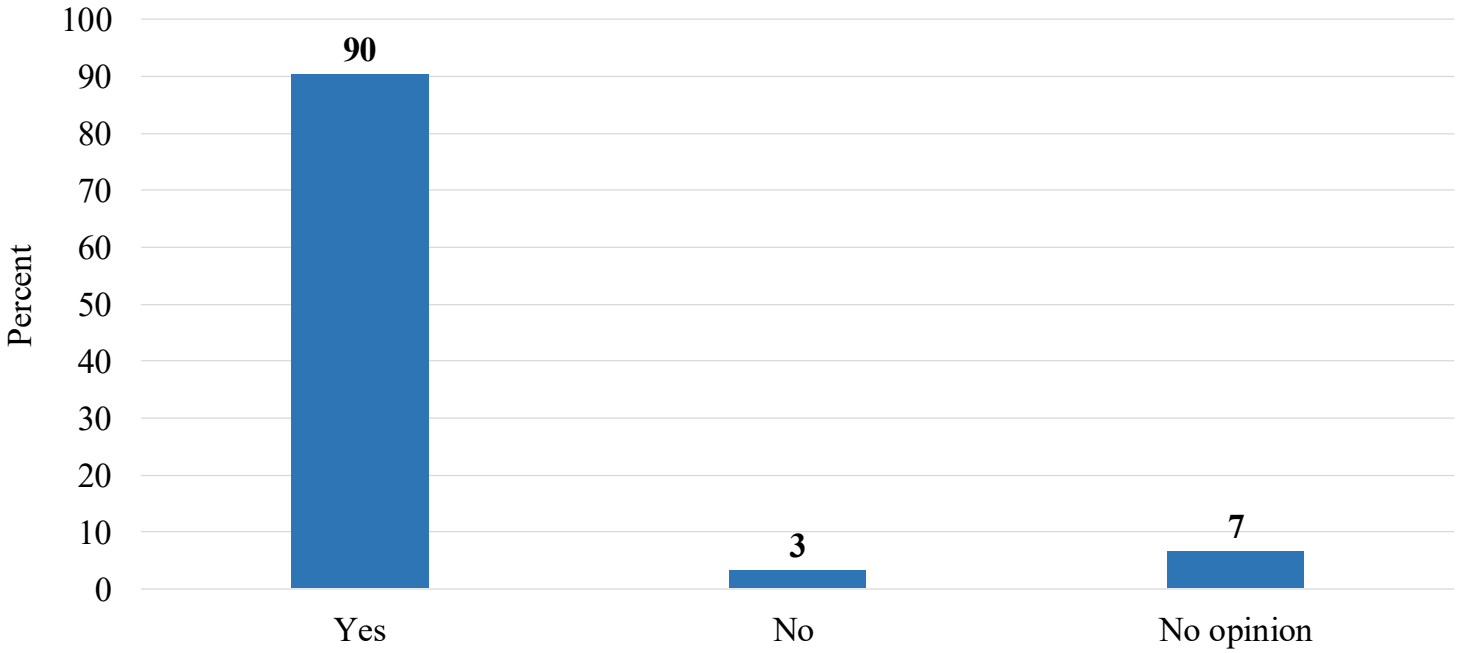
Pohnpei producers: What training would you like: BUSINESS MANAGEMENT ?



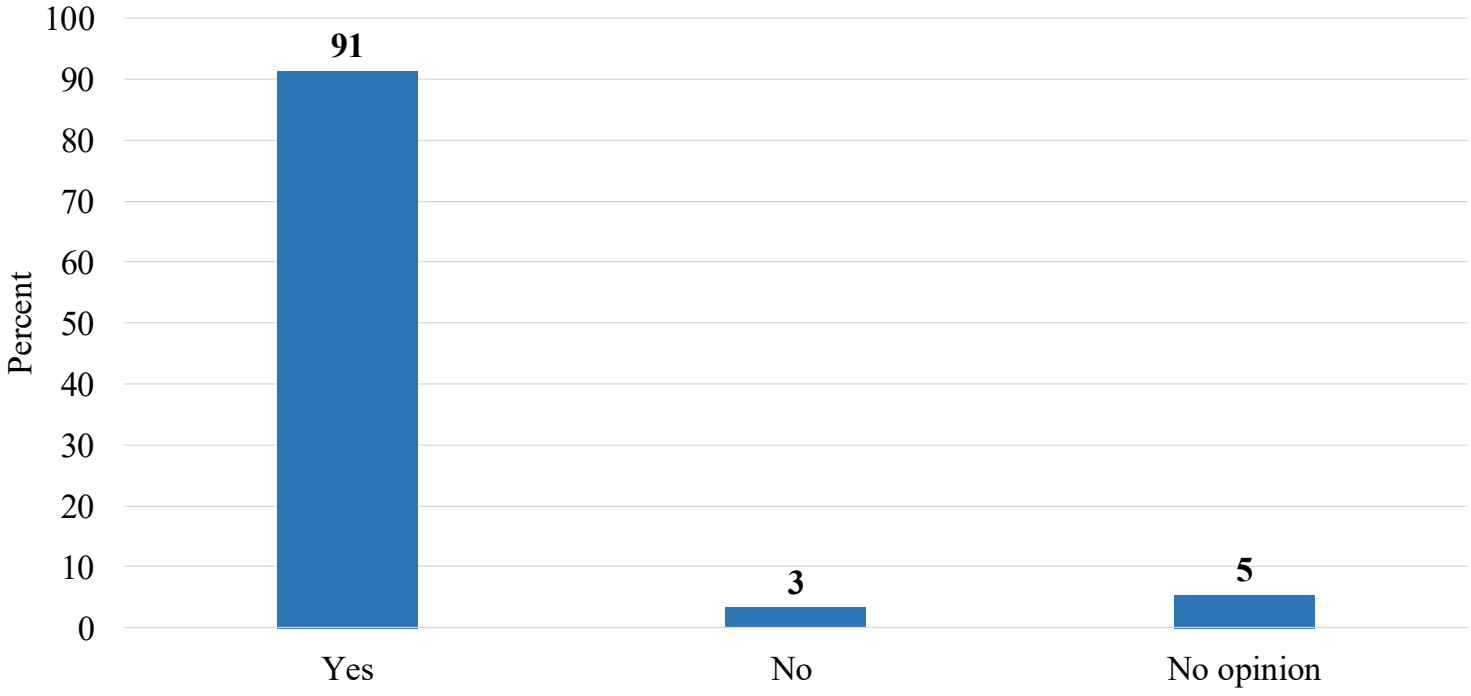
Pohnpei producers :What technologies would you like: AGRICULTURAL TECHNOLOGIES ?



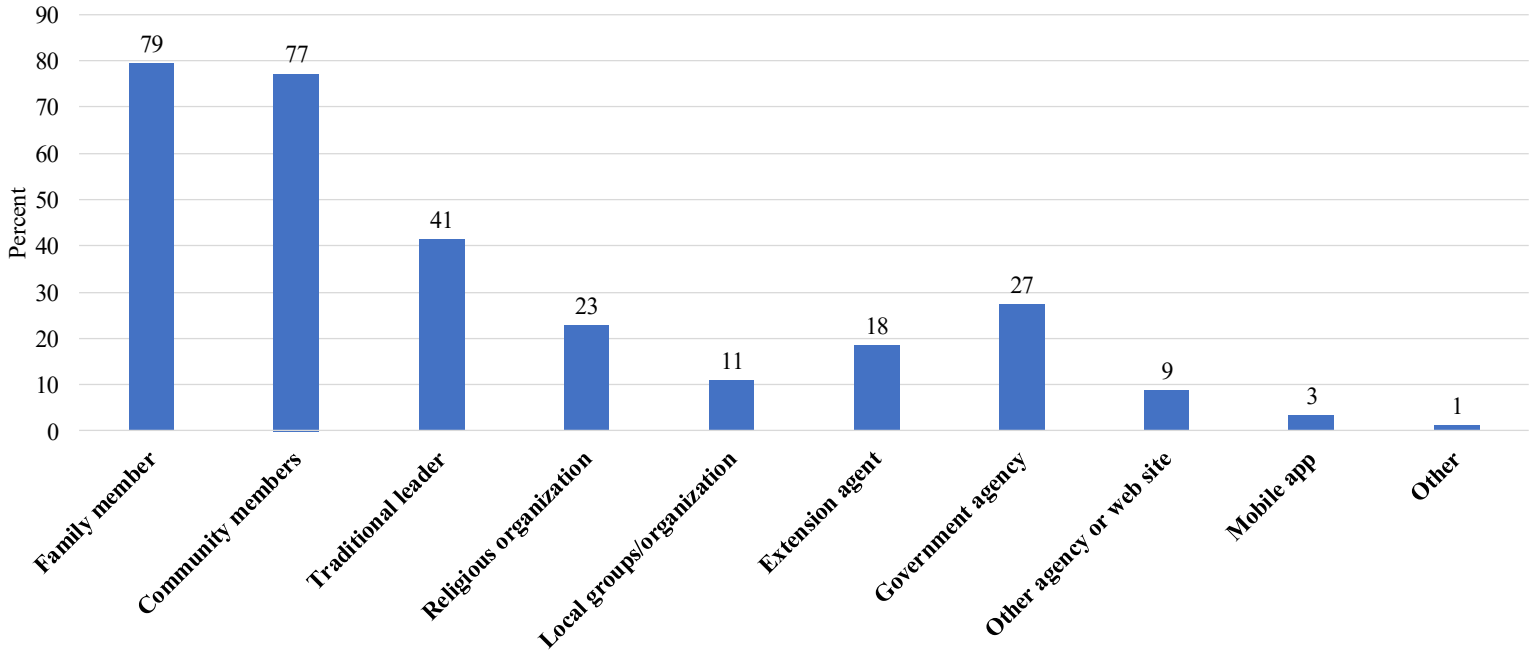
Pohnpei Producers: Would it be helpful to offer agriculture and farming training for women?



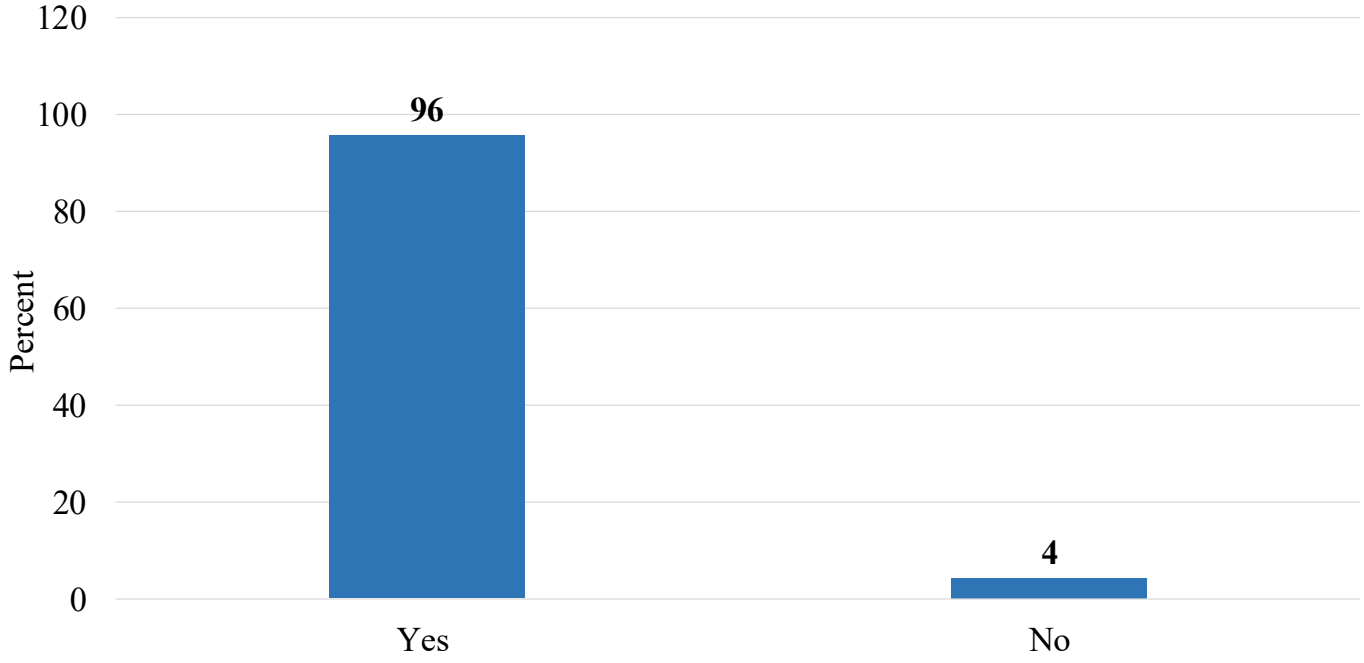
Pohnpei Producers: Would it be helpful to offer agri business training for women ?



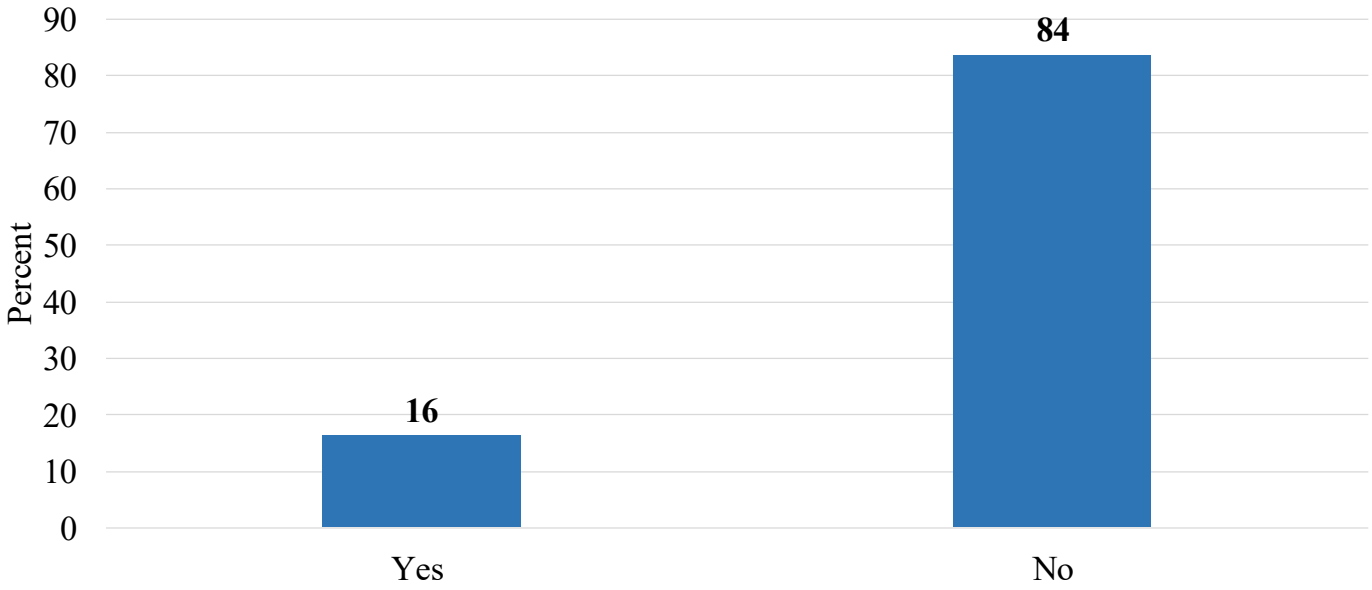
Pohnpei Producers: If you need to communicate with the government leaders responsible for making laws/policies, where would you go ?



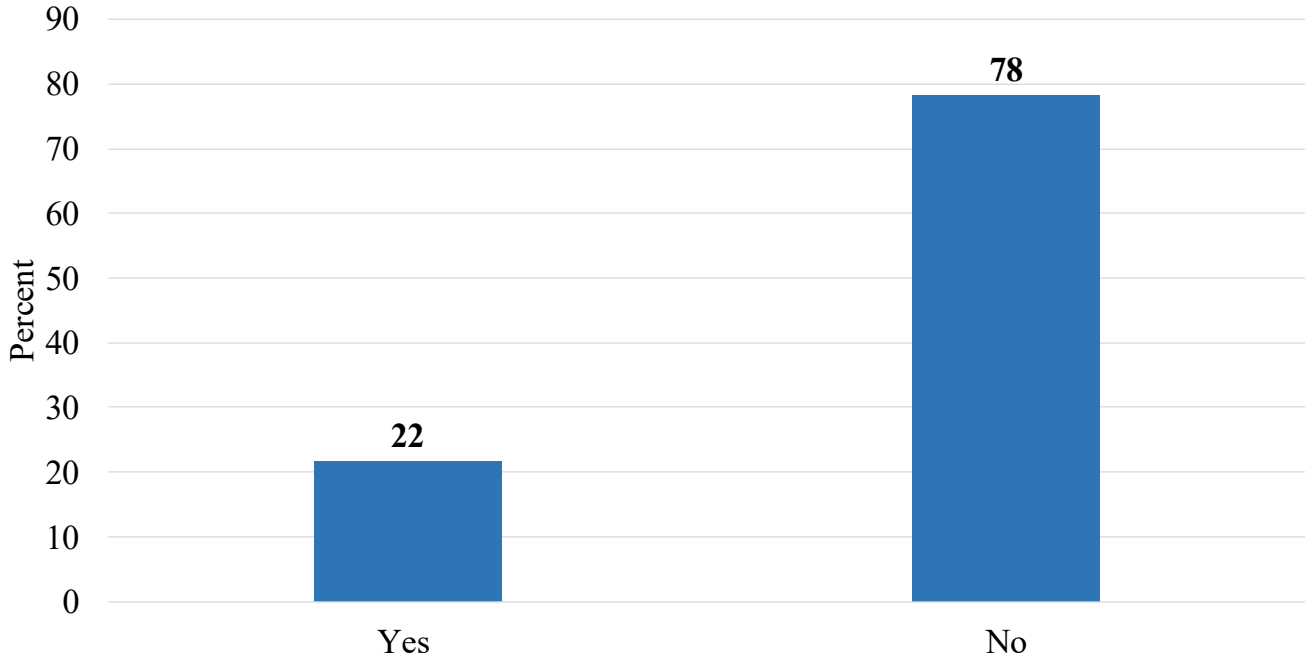
Pohnpei producers: Would you be interested in being more active in your community relative to preserving land, water resources ?



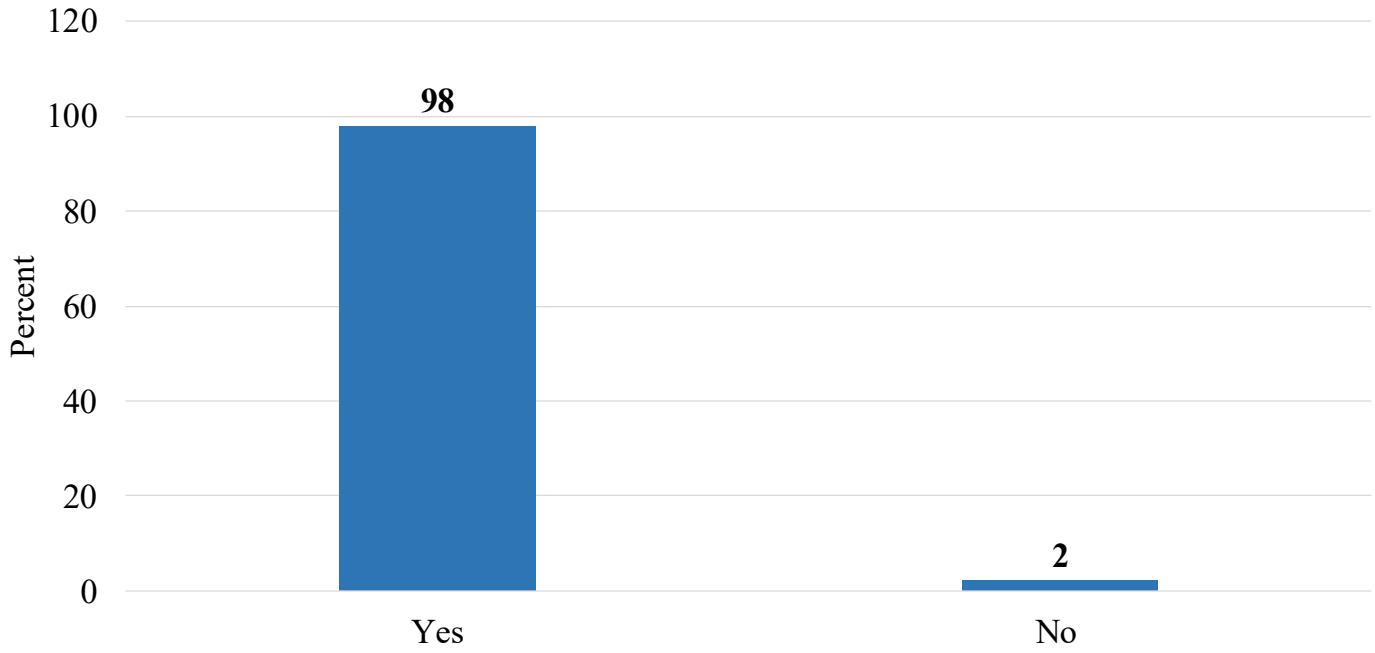
Pohnpei Producers: Have you been trained in or have managerial experience?



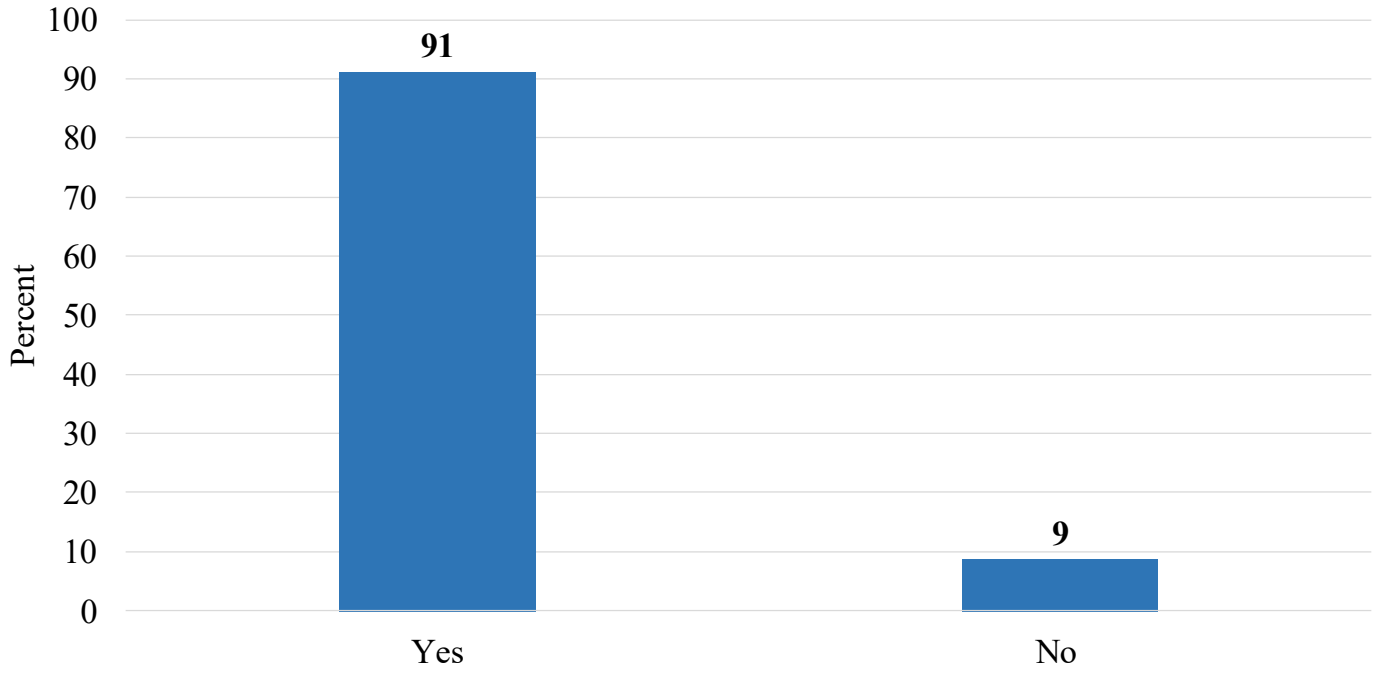
Pohnpei Producers: Have you been trained in or have organizational experience?



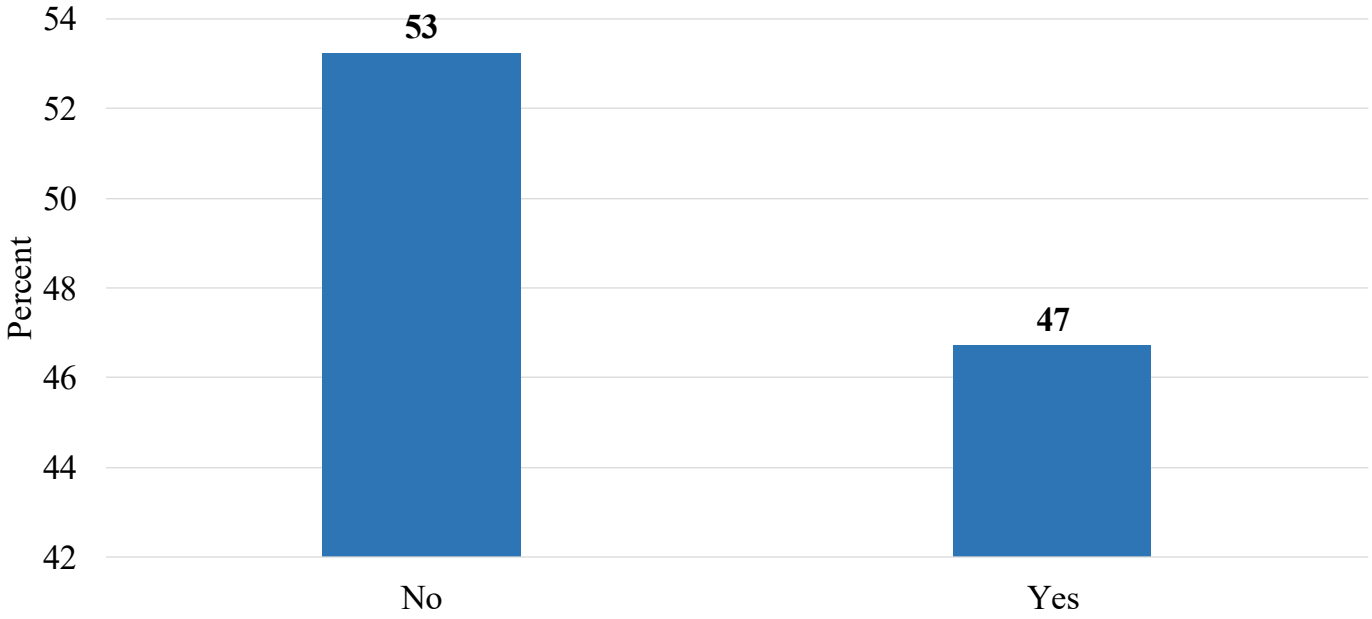
Pohnpei Producer: Would you like any training to help you produce more food ?



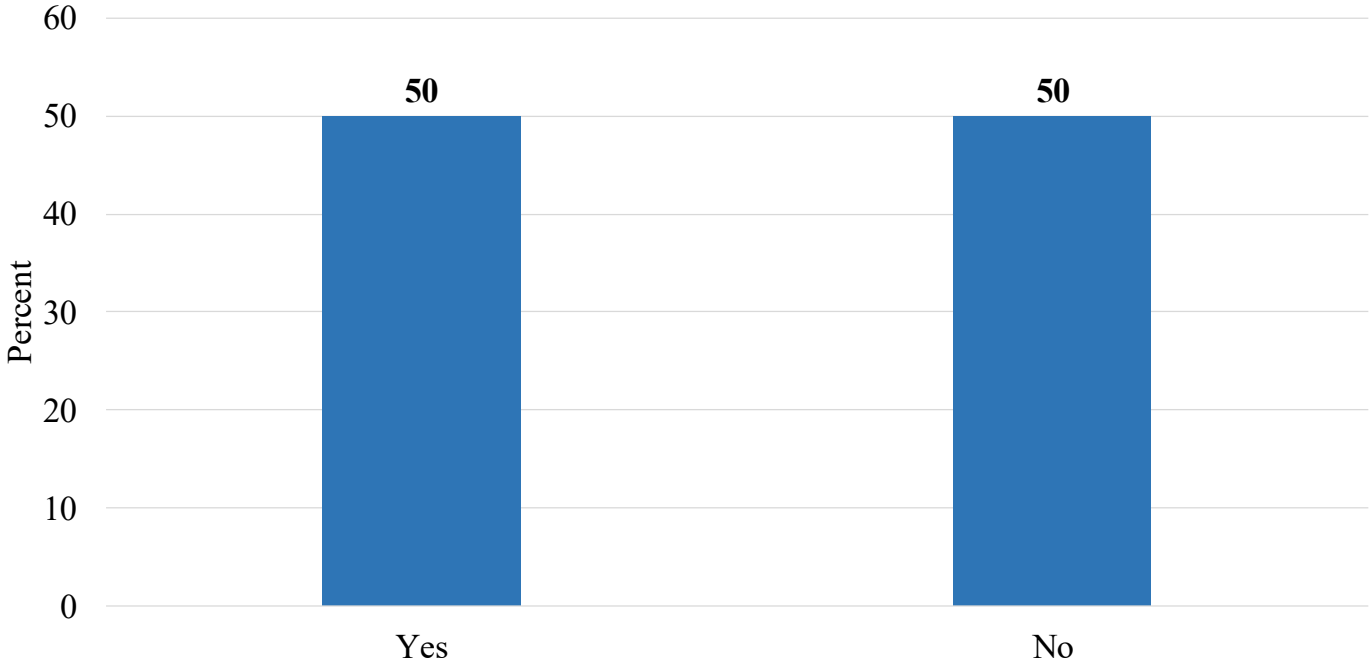
Pohnpei Producers: Would you be interested in being trained in commercial food processing



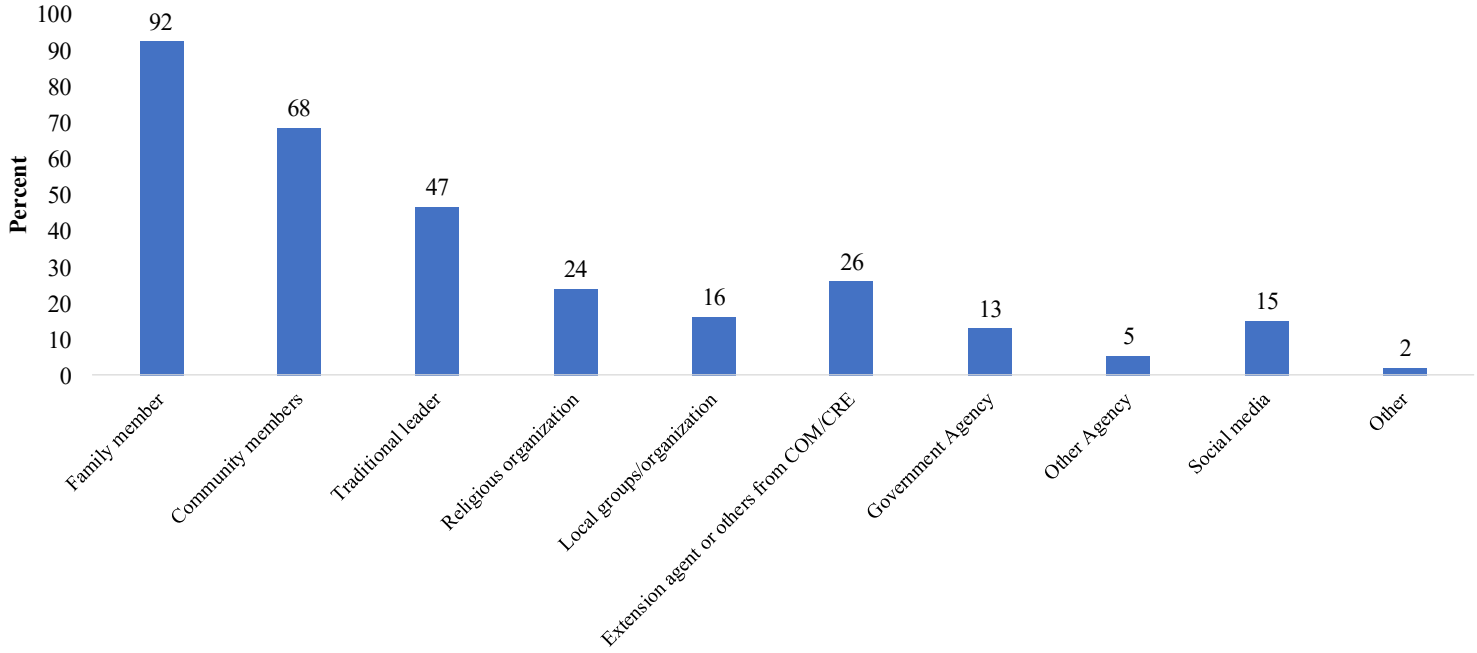
Pohnpei producers: Online Notification for trainings opportunities (example cooking, seedling training etc.)?



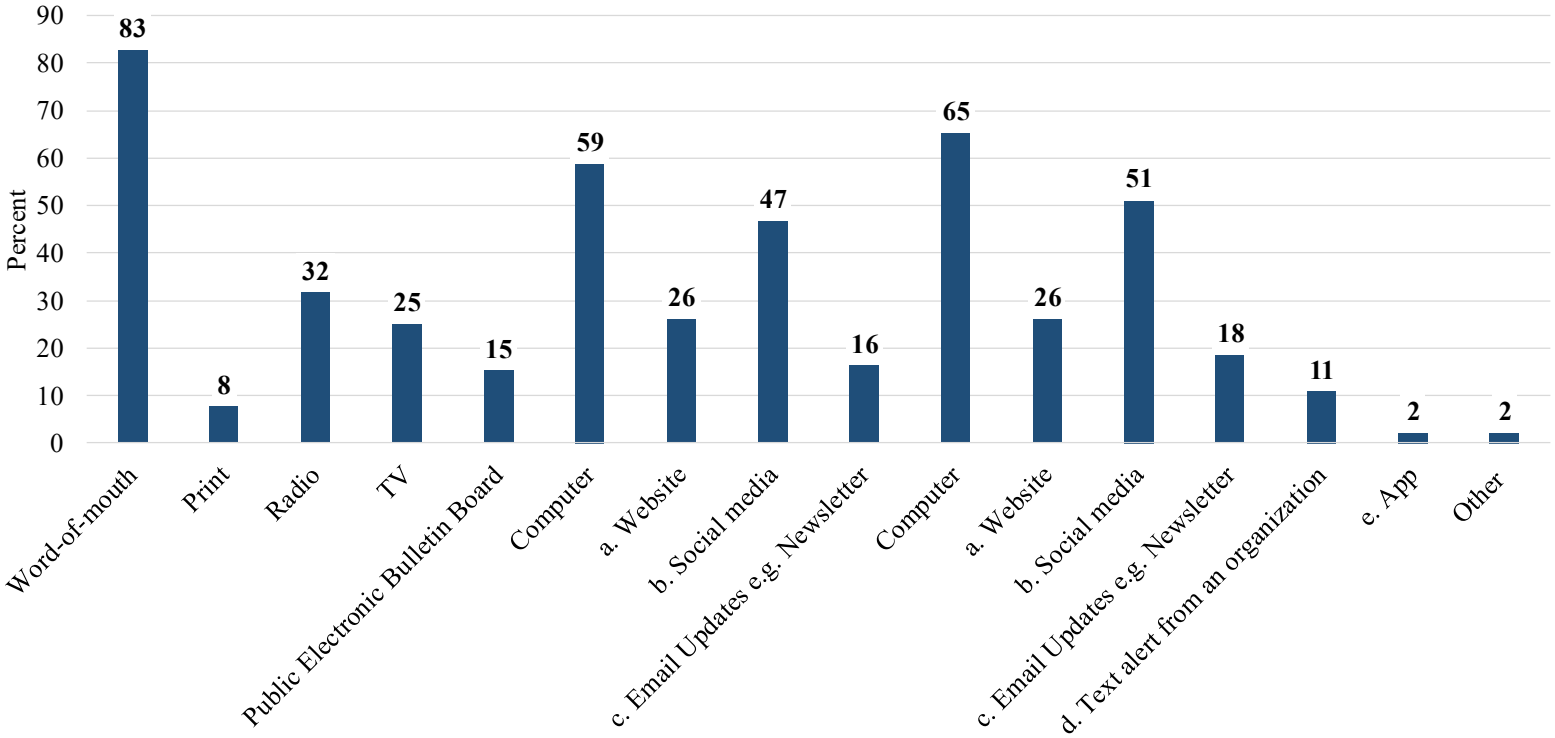
Pohnpei Producers: Would you pay to get additional food production information?



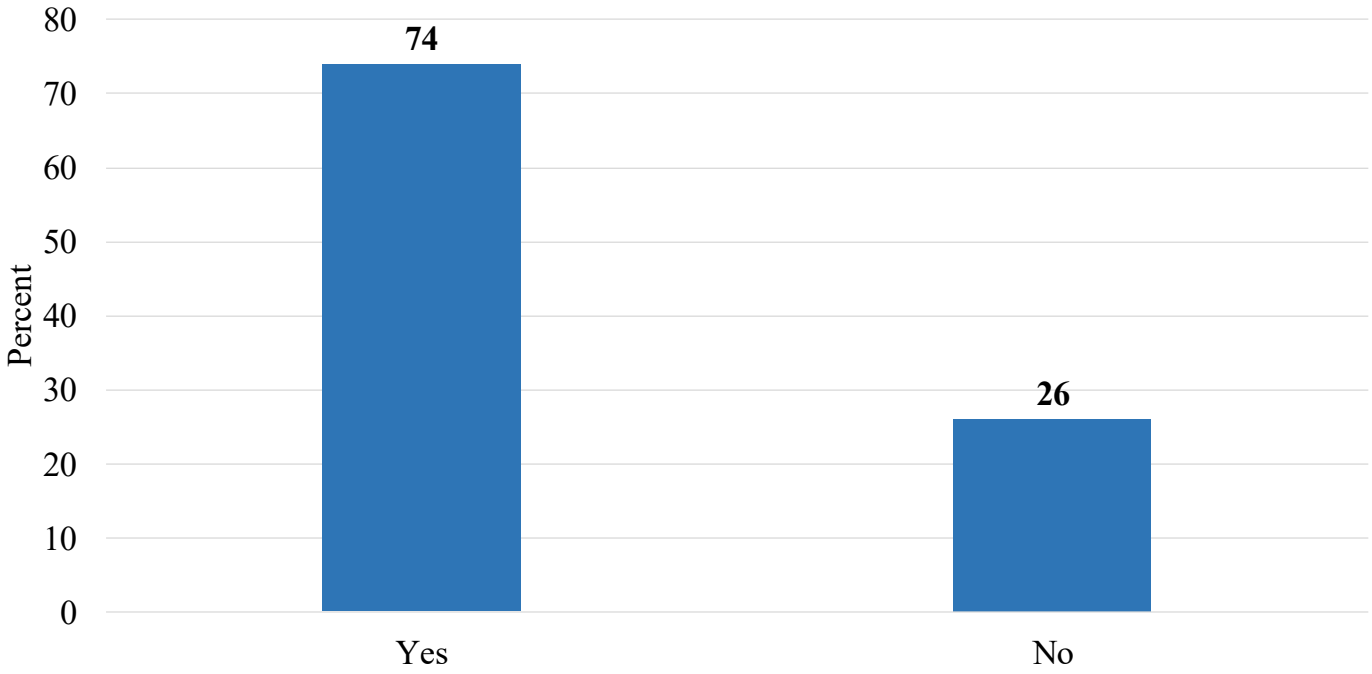
Pohnpei Producers: Who gives you, or can give you the information you need (source person/agency/organization)?



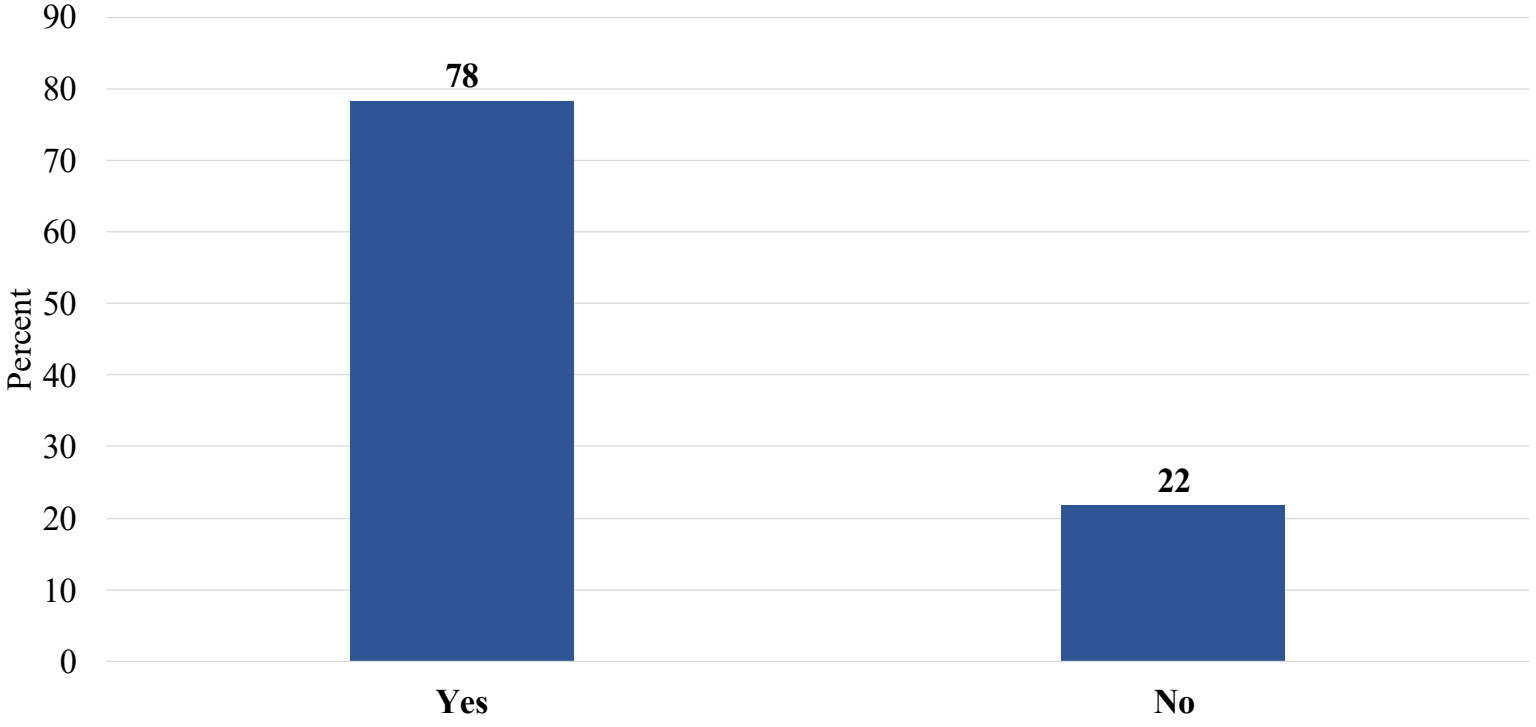
Pohnpei producers: How do you currently access the information you need?



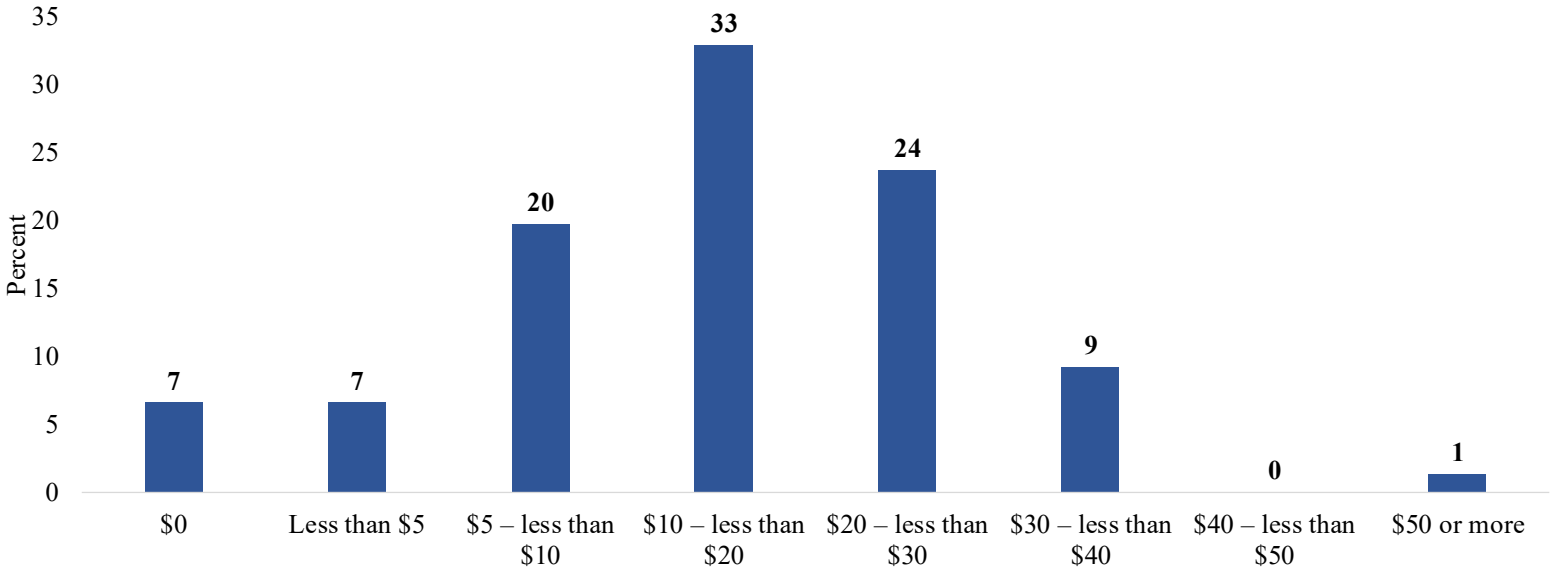
Pohnpei Producers: Do you need better access to information?



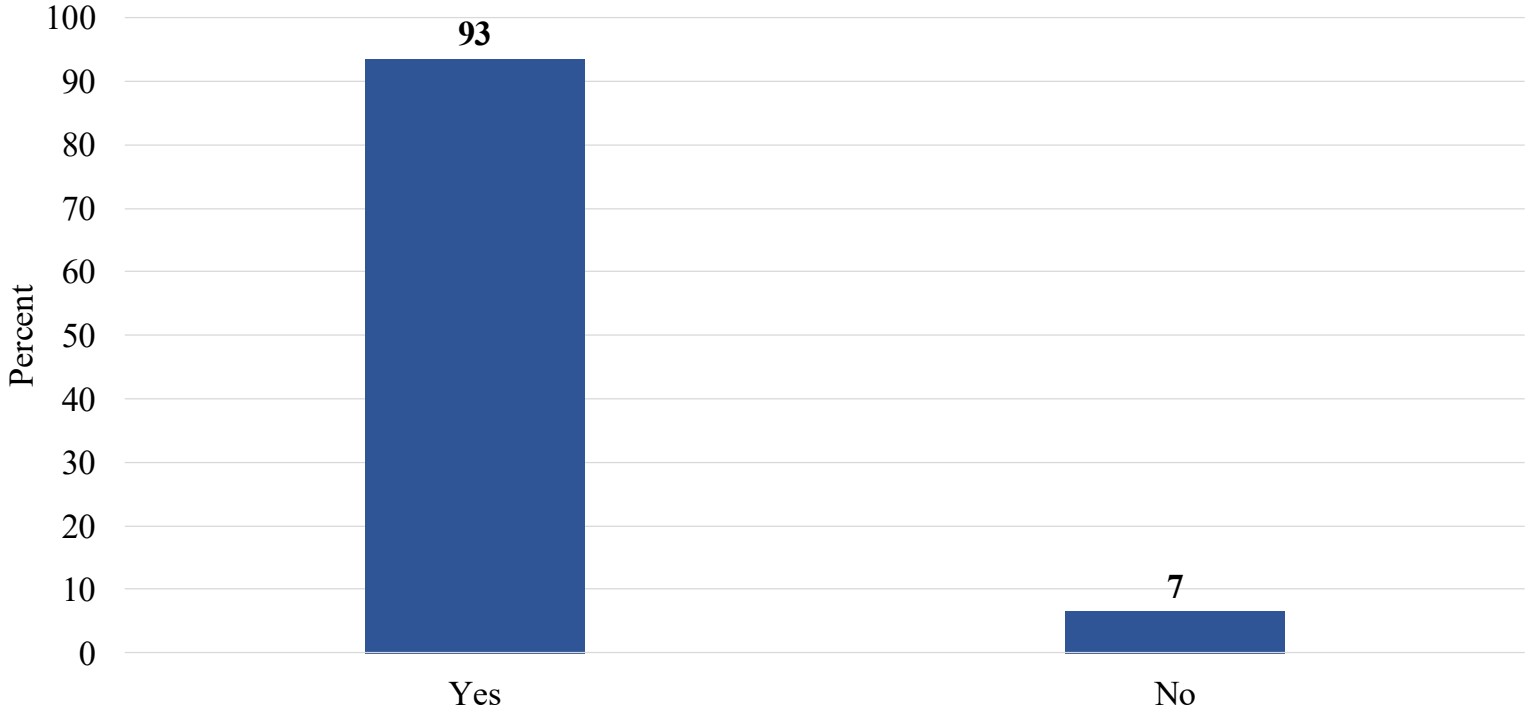
Pohnpei Producers: Do you have your own cell phone?



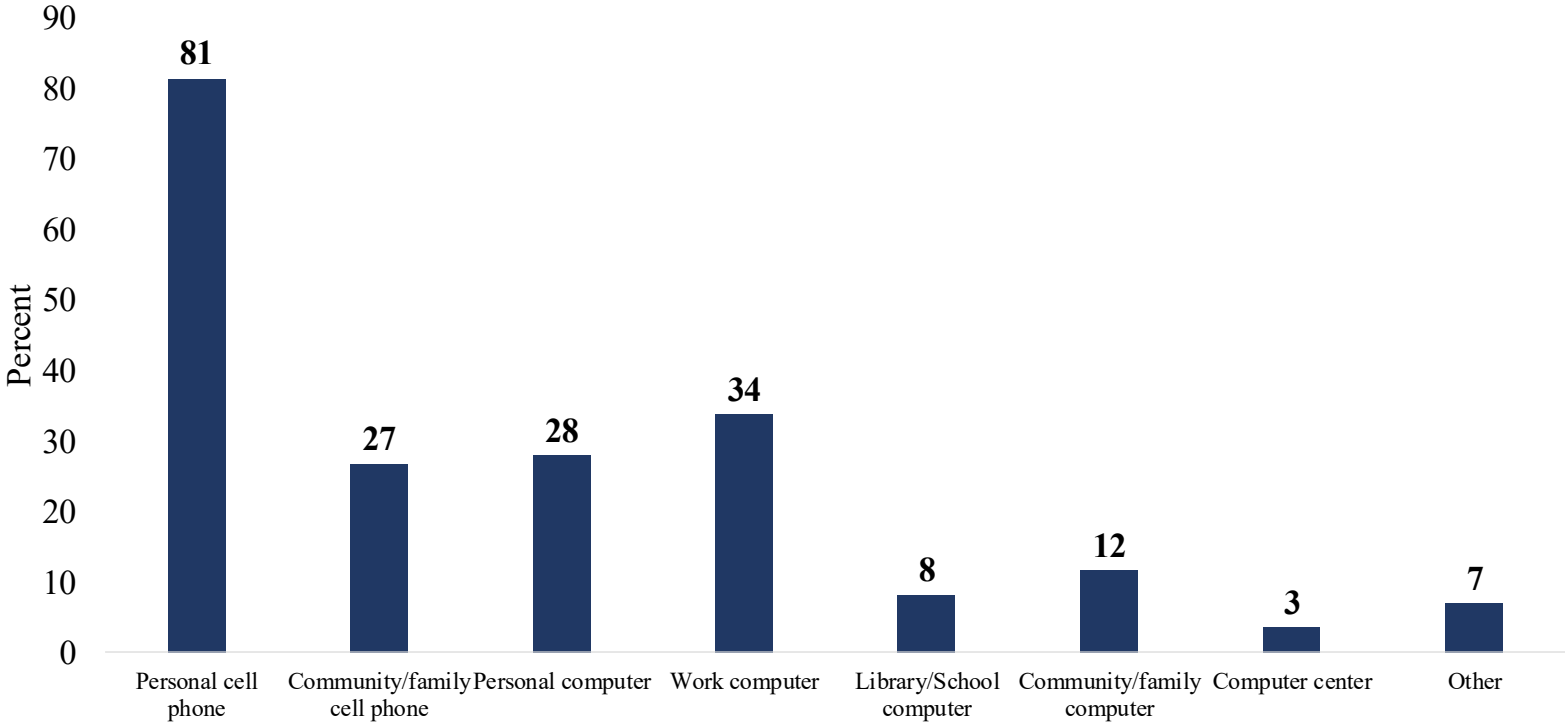
Pohnpei Producers: How much do you spend per month on cellular data?



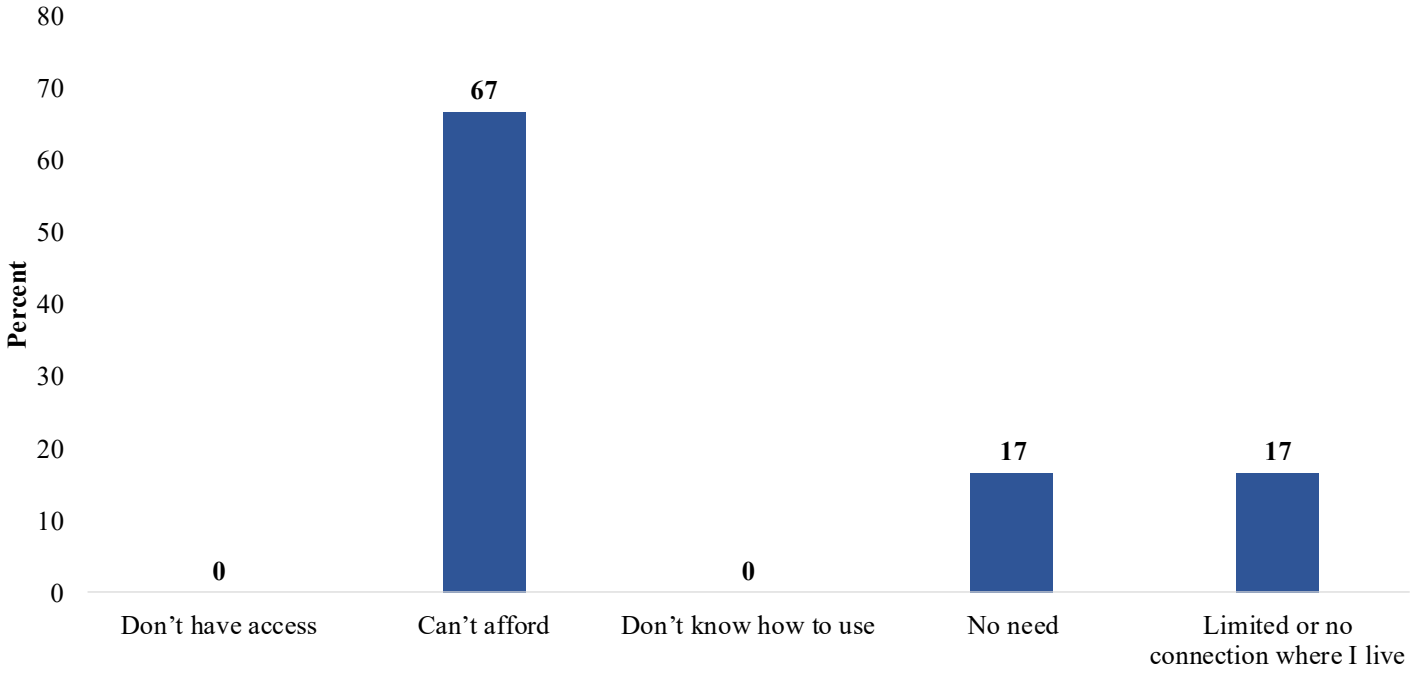
Pohnpei Producers: Do you have access to the internet ?



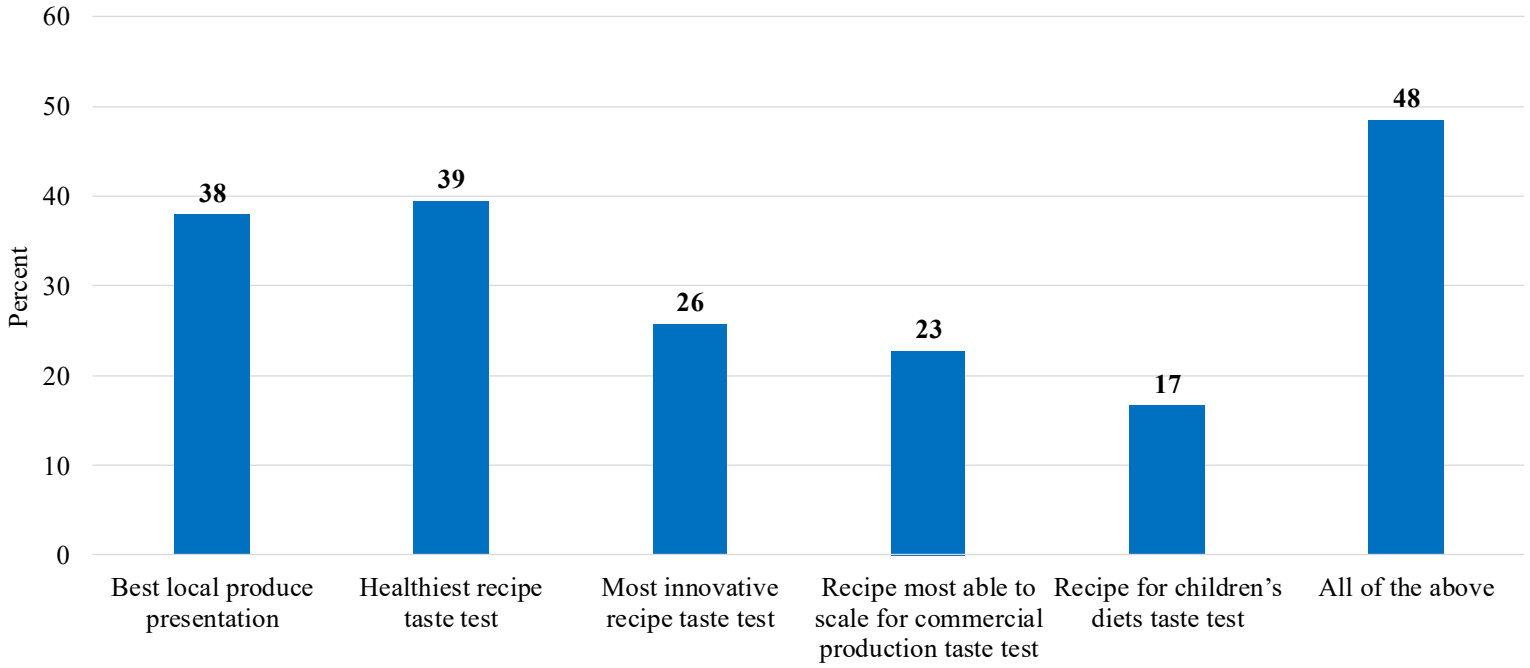
Pohnpei Producers: How do you access the internet ?



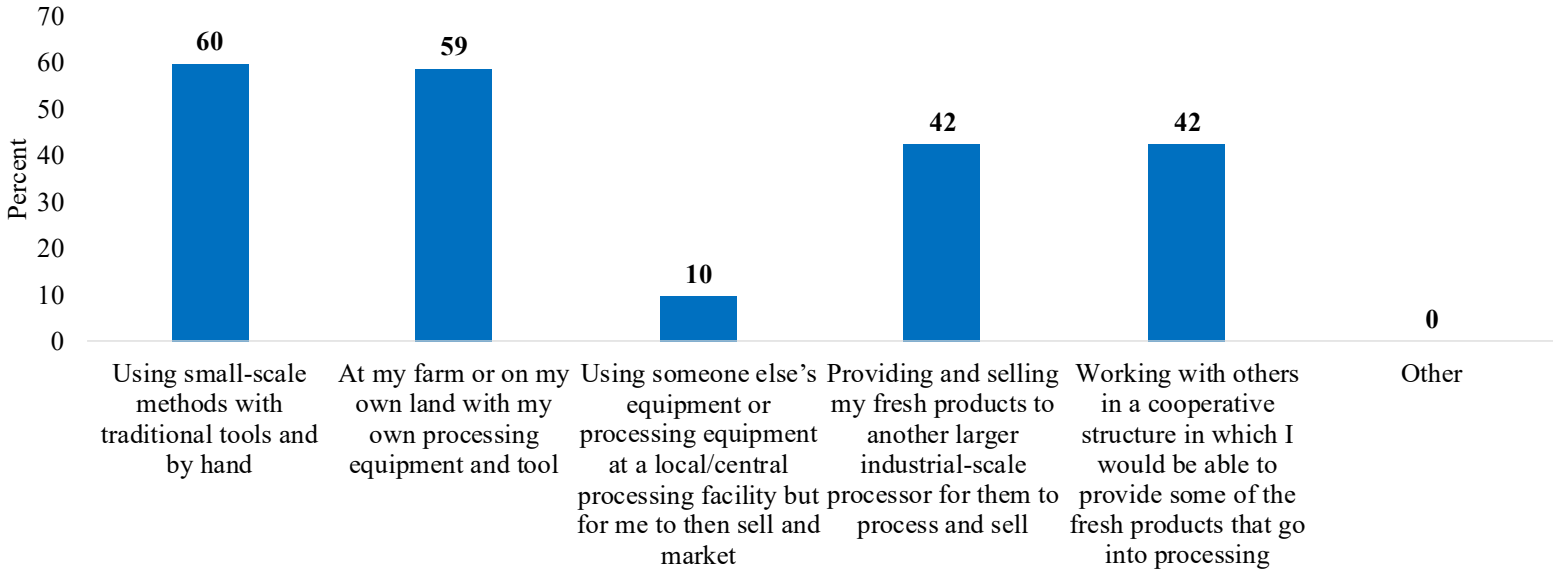
Pohnpei Producers: if you don't have internet access, why not ?



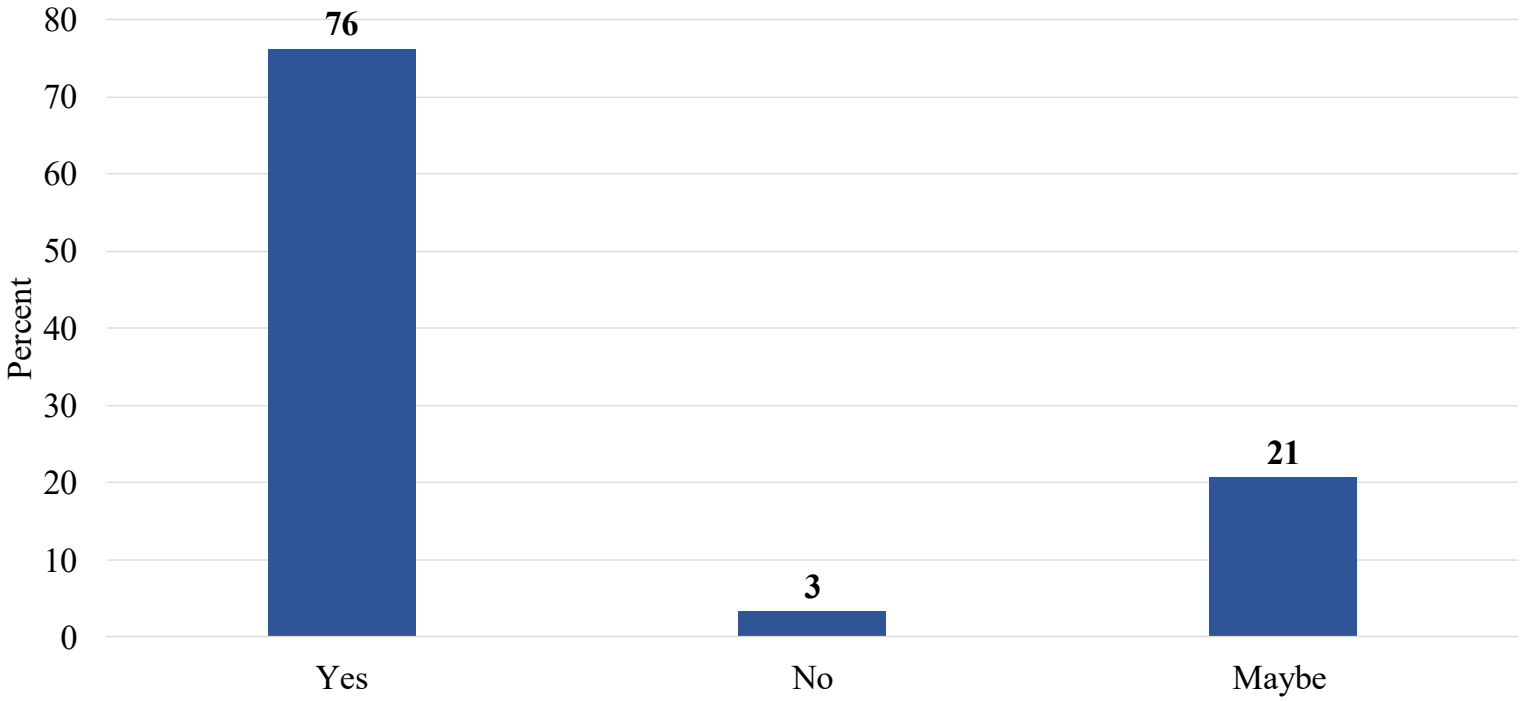
Pohnpei Producers: What types of competition categories would interest you ?



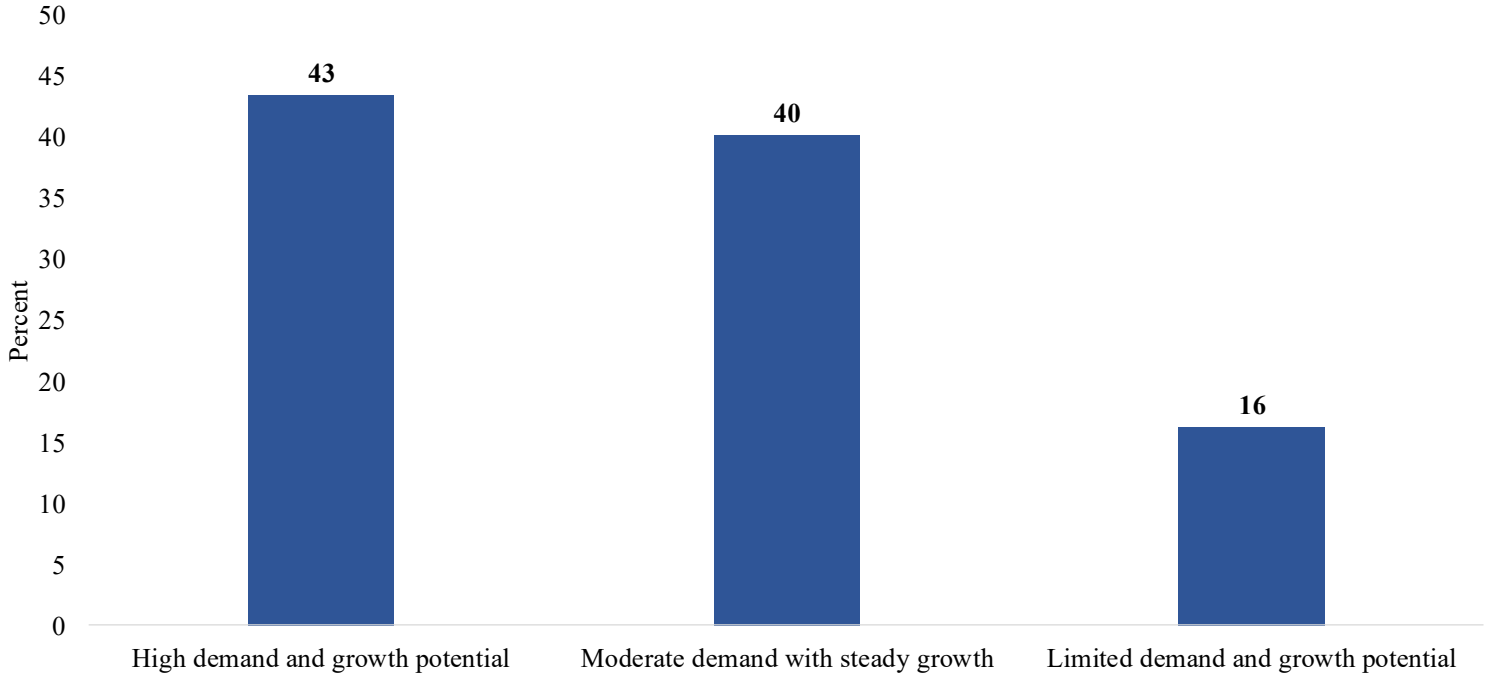
Pohnpei Producers: How would you prefer to process these locally processed foods ?



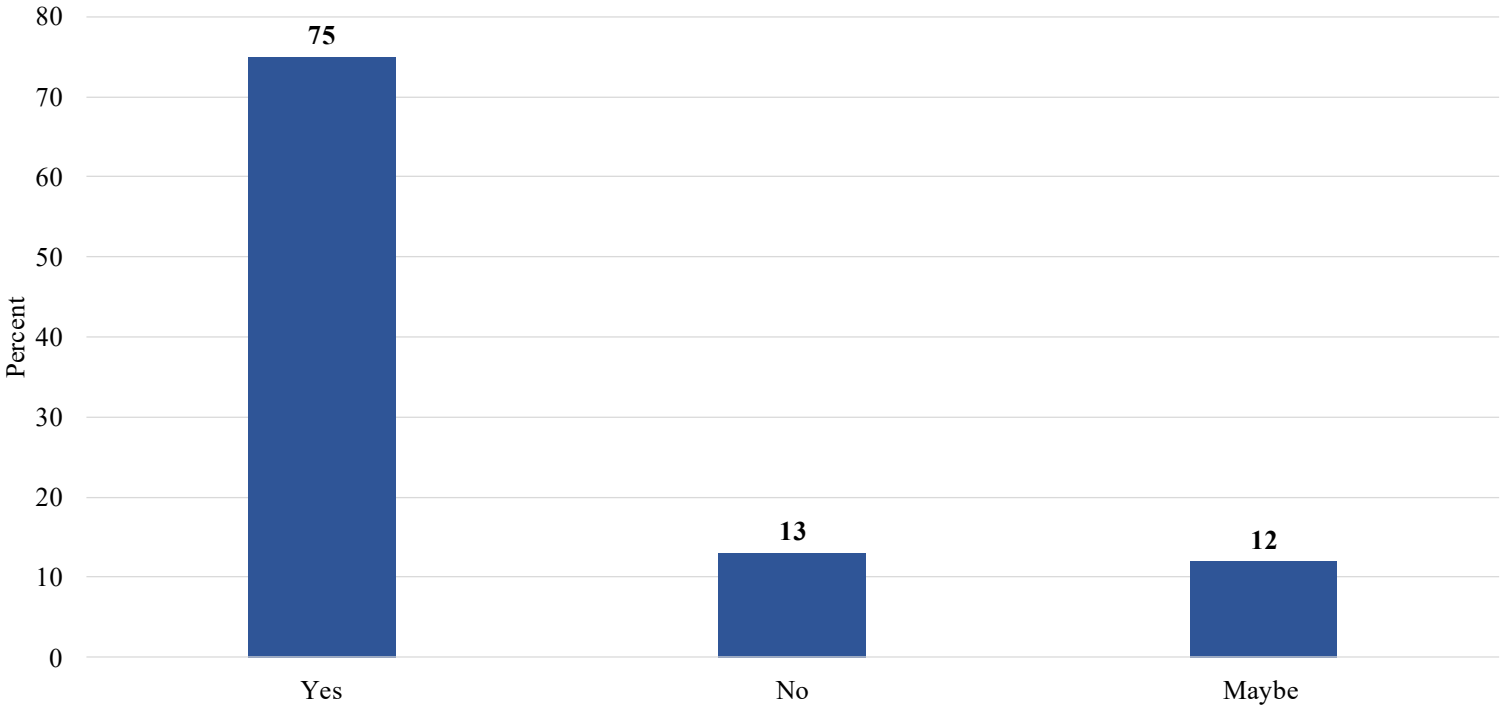
Pohnpei Producers: Would you prioritize using local ingredients for the production of locally processed foods?



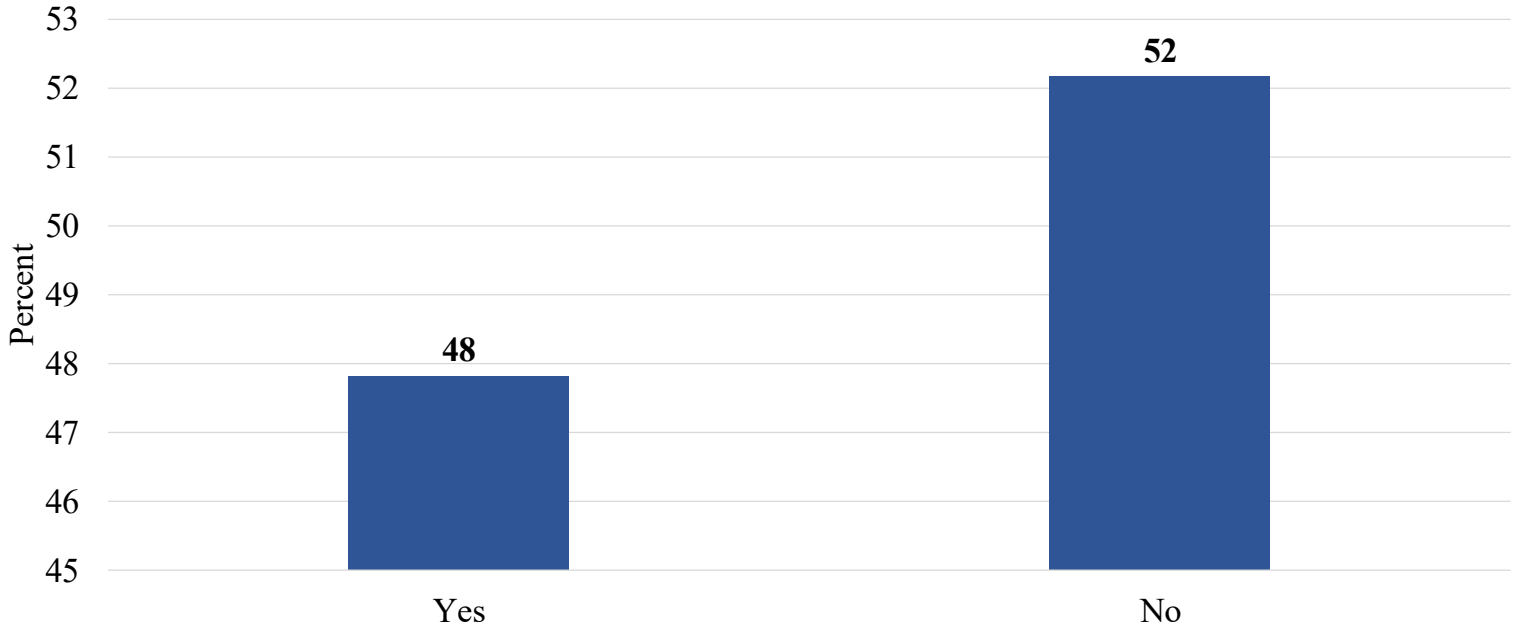
Pohnpei Producers: How do you perceive the market potential for locally processed foods in the FSM and potentially beyond?



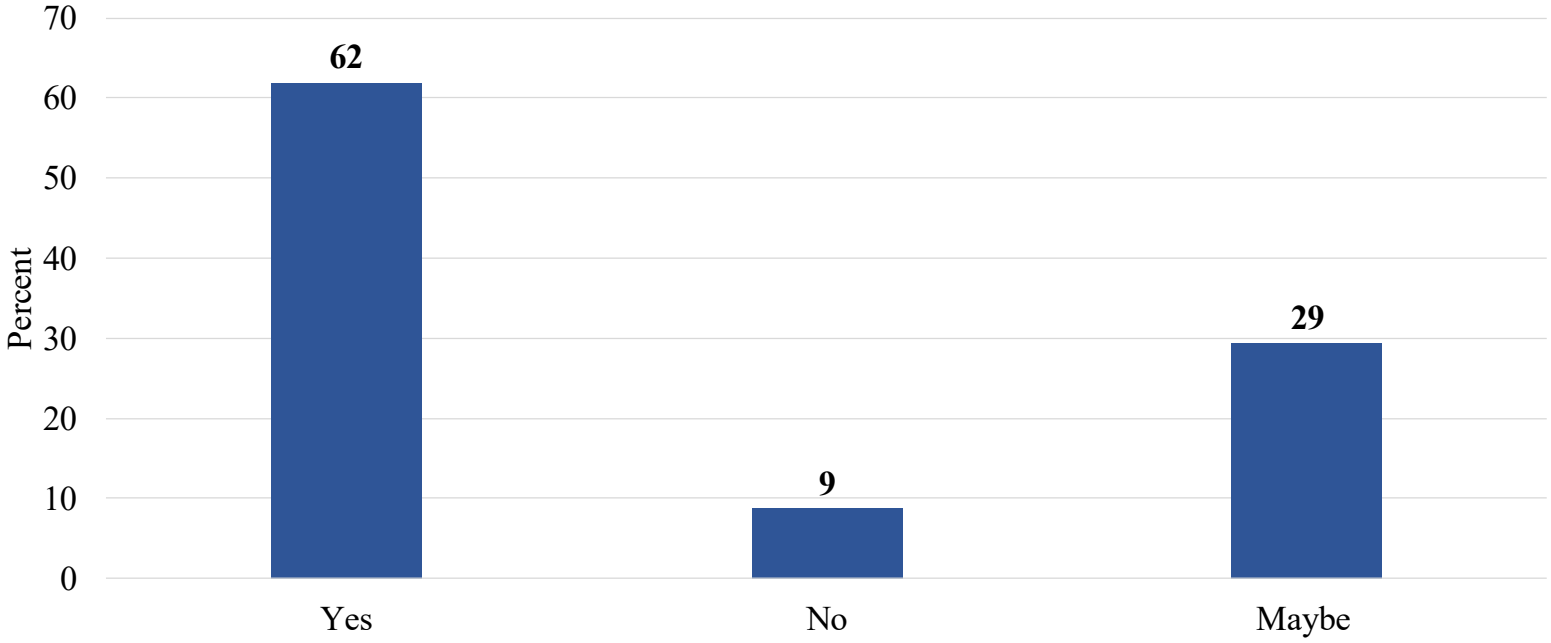
Pohnpei Producers: Would you require any technical or financial support or assistance in terms of training, access to technology, marketing, or other aspects?



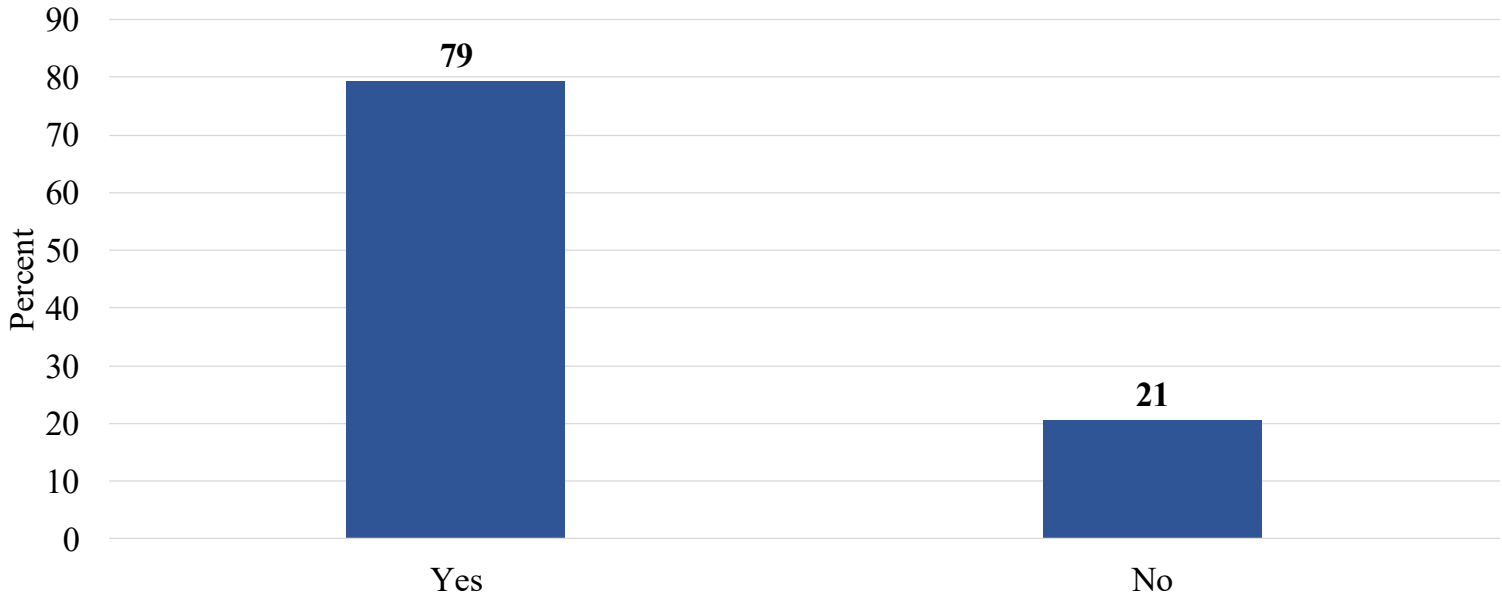
Pohnpei producers: Are you aware of the regulatory requirements and standards for processing and selling local food products in the FSM [NOTE: there are differences in regulatory compliance issues for fish, meat, poultry, juices, foods] ?



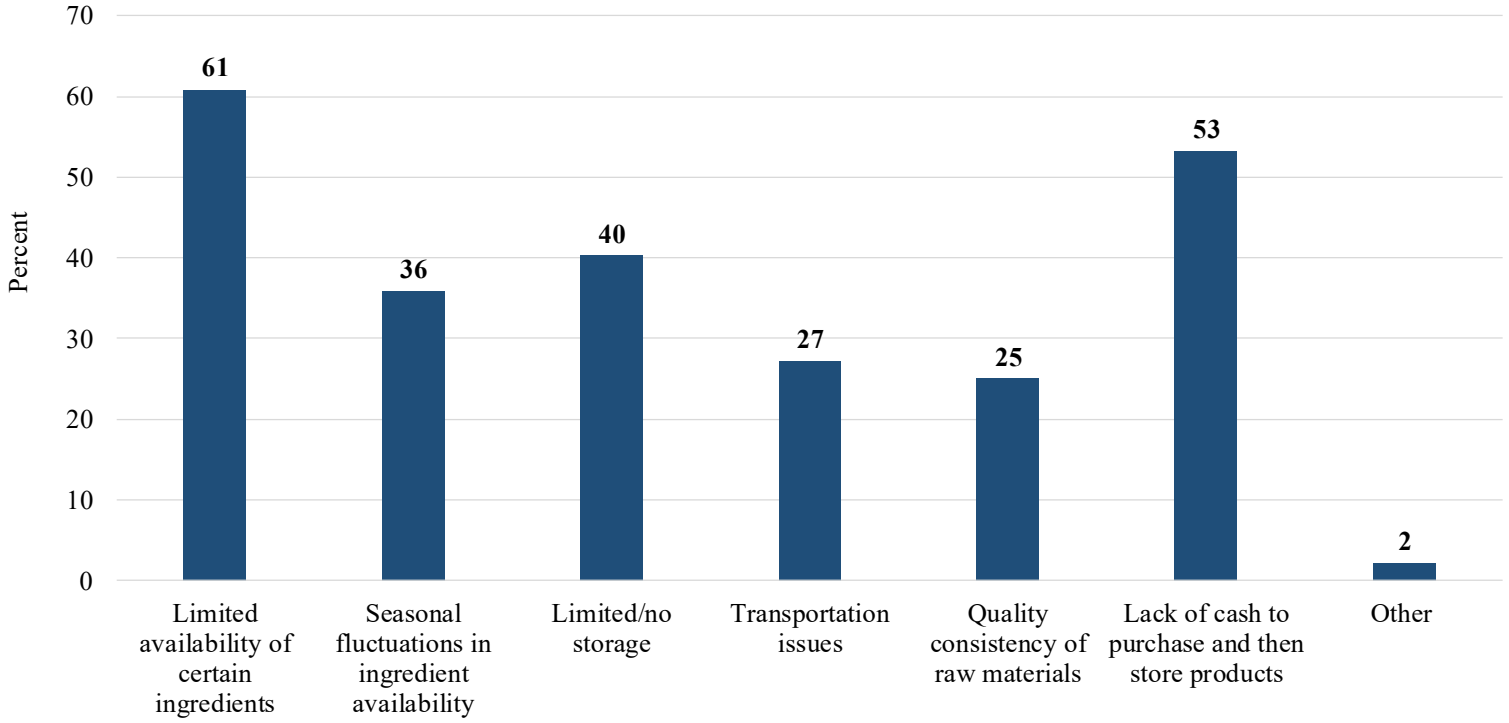
Pohnpei Producers: Would you be interested in collaborating with other producers or stakeholders in your community, or locality or state for joint processing or marketing initiatives?



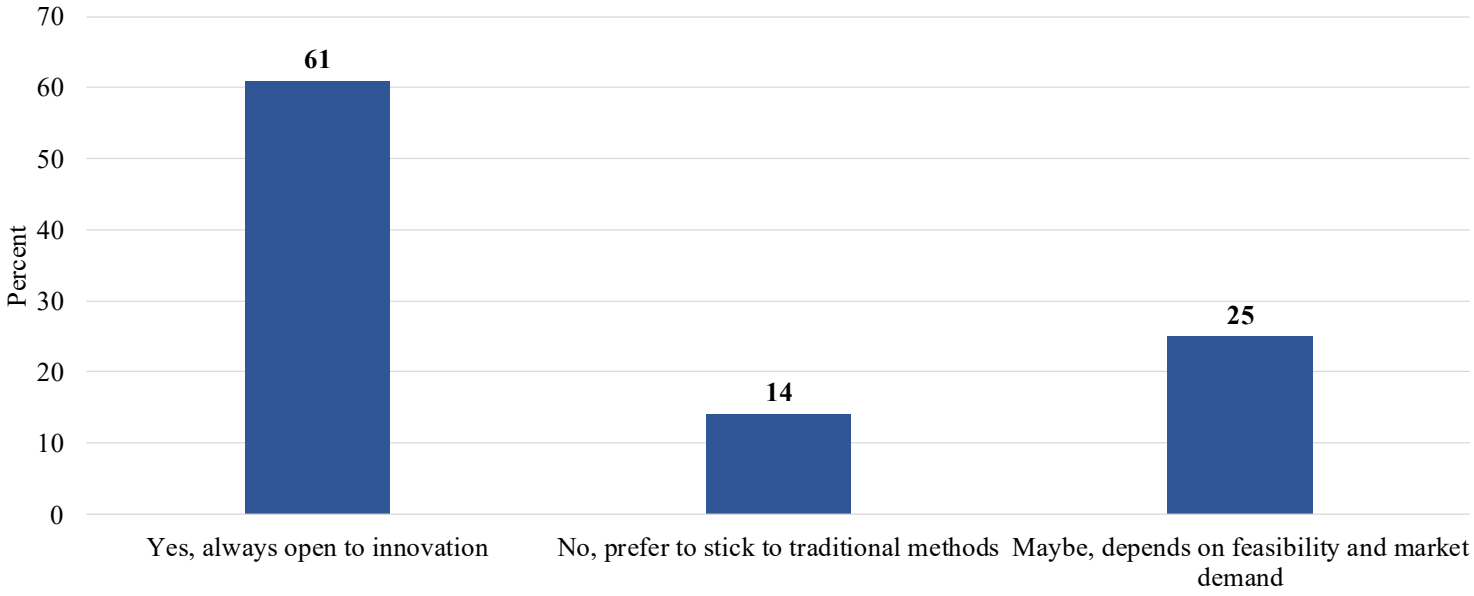
Pohnpei Producers: Do you require assistance with the regulatory requirements and standards ?



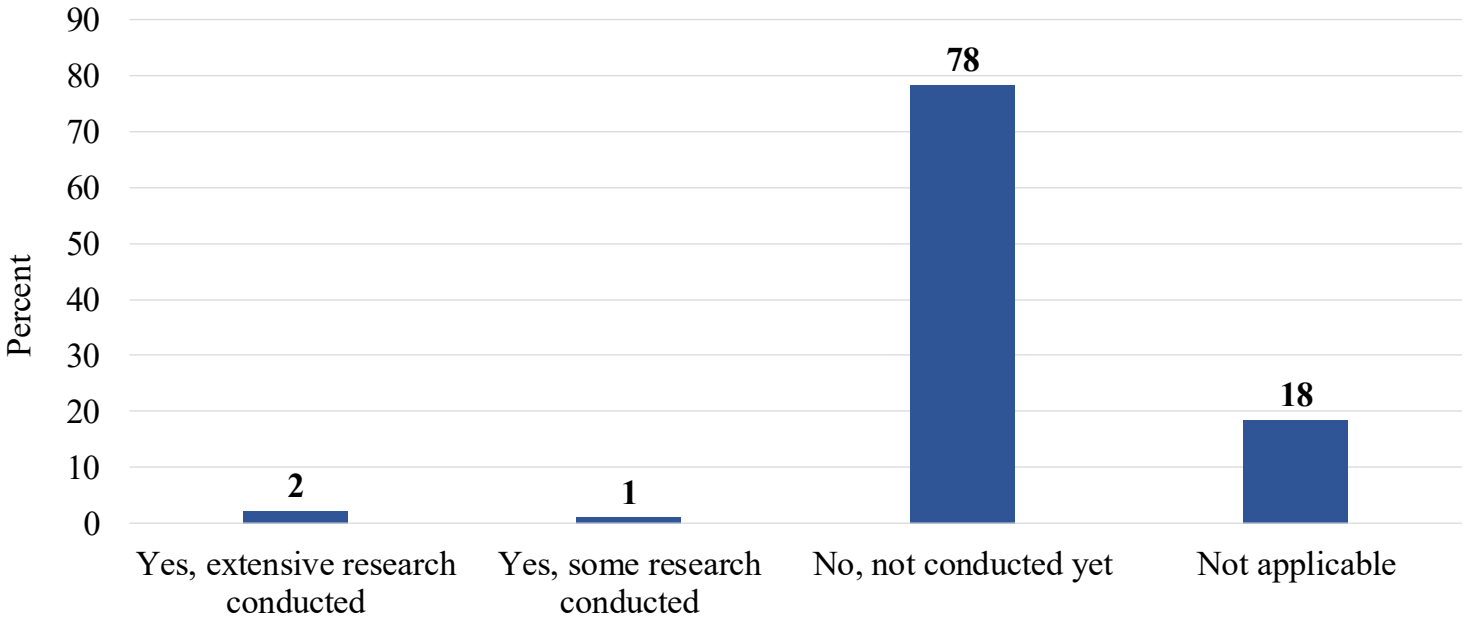
Pohnpei Producers: What are the challenges you face in sourcing local ingredients to ensure you have enough materials for processing local foods



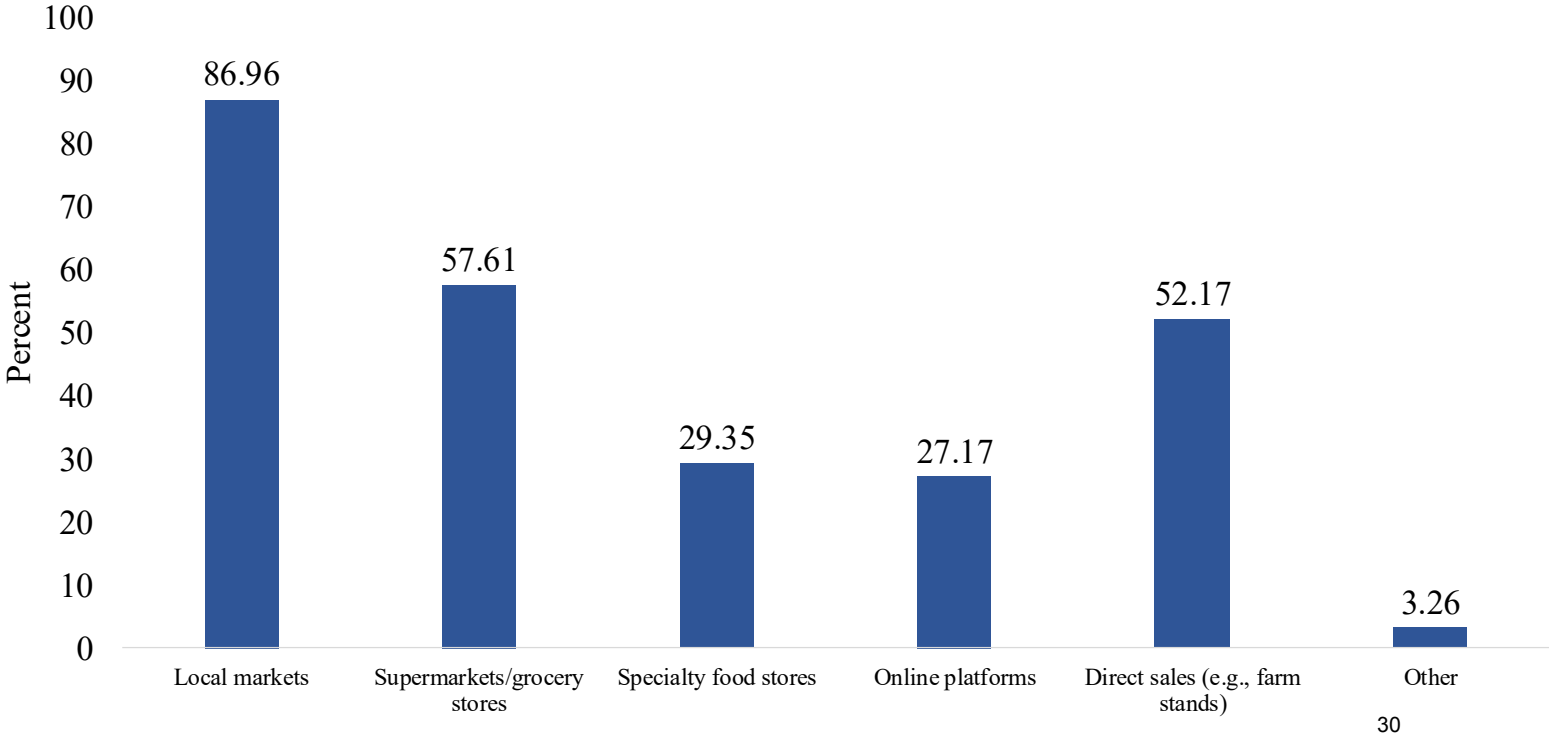
Pohnpei Producers: Are you open to exploring innovative techniques or recipes for locally processed foods to cater to evolving consumer preferences ?



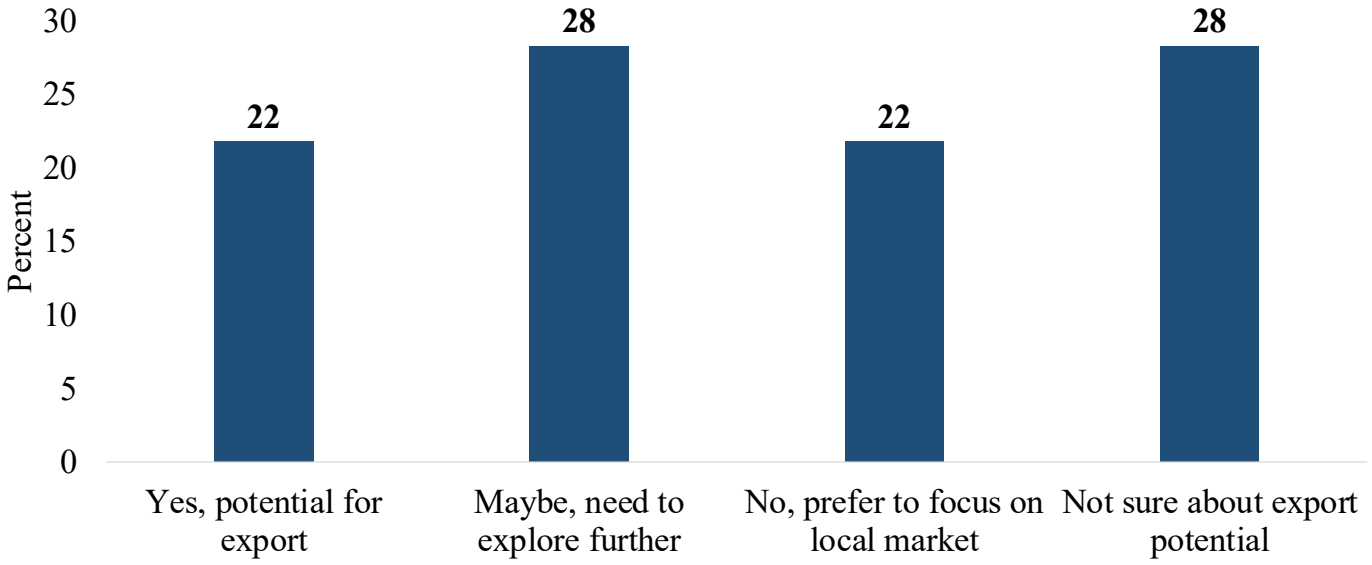
Pohnpei Producers: Have you conducted any market research or feasibility studies to assess the demand for locally processed foods in the FSM market ?



Pohnpei Producers: What distribution channels do you envision for selling locally processed foods ?



Pohnpei Producers: Do you see potential for exporting locally processed foods into other states in the FSM or beyond the FSM ?



Pohnpei Producers: Besides raw materials and processing equipment, what other costs do you anticipate in the production of locally processed foods (e.g., labor, utilities, packaging) ?

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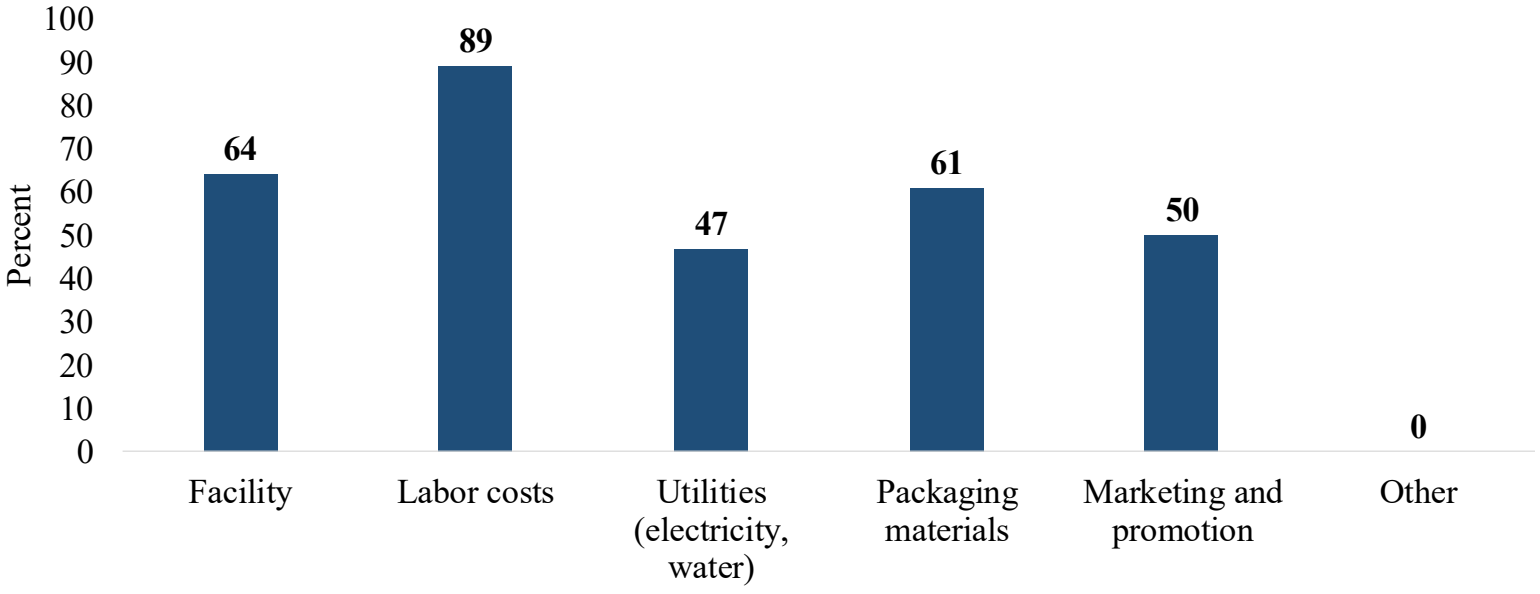
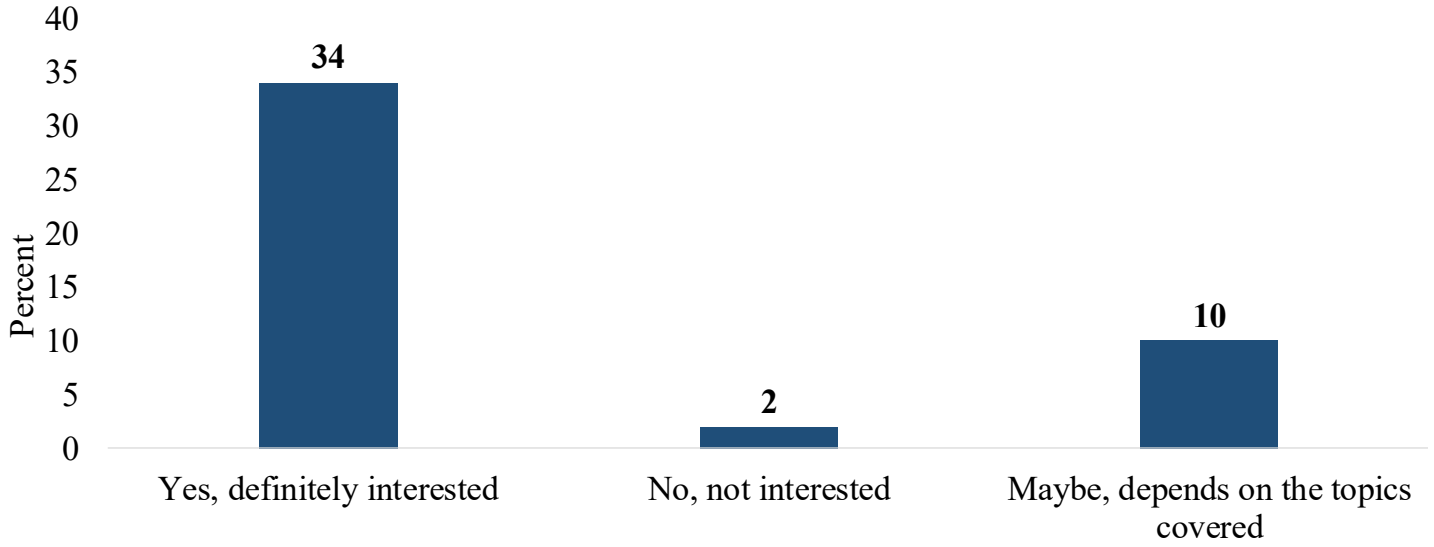
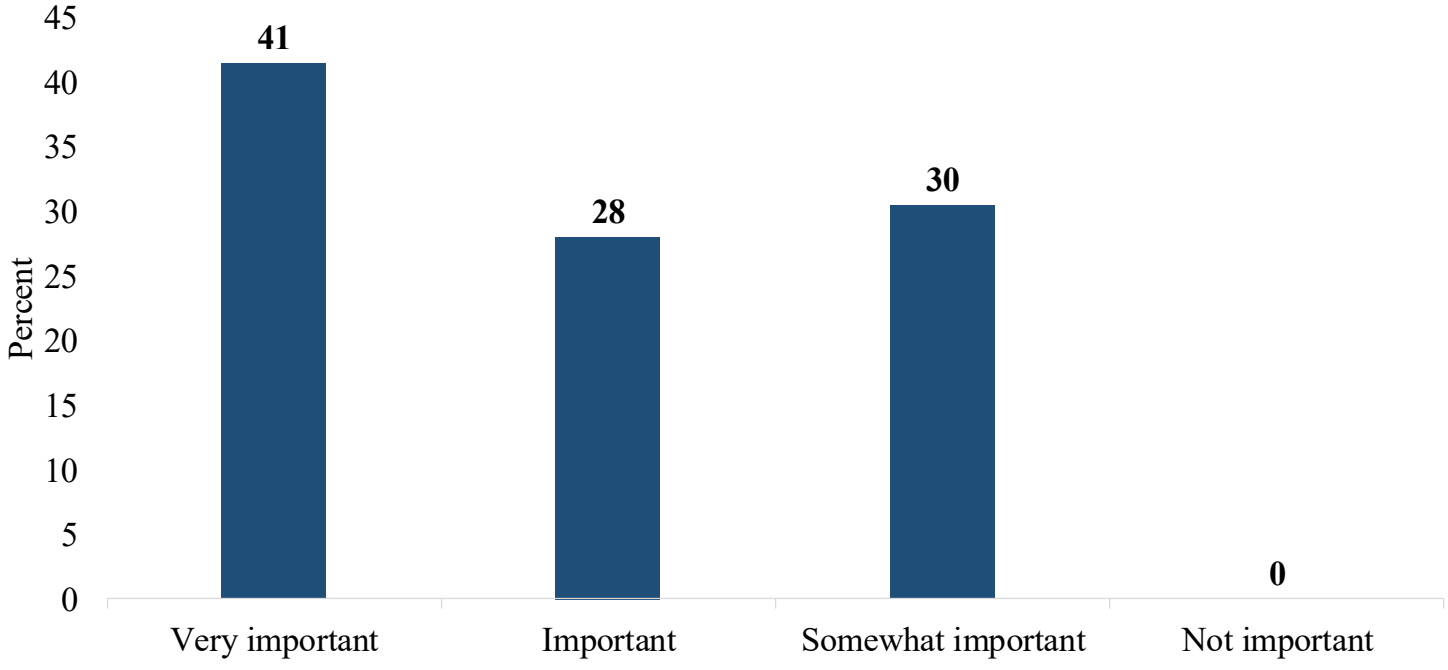


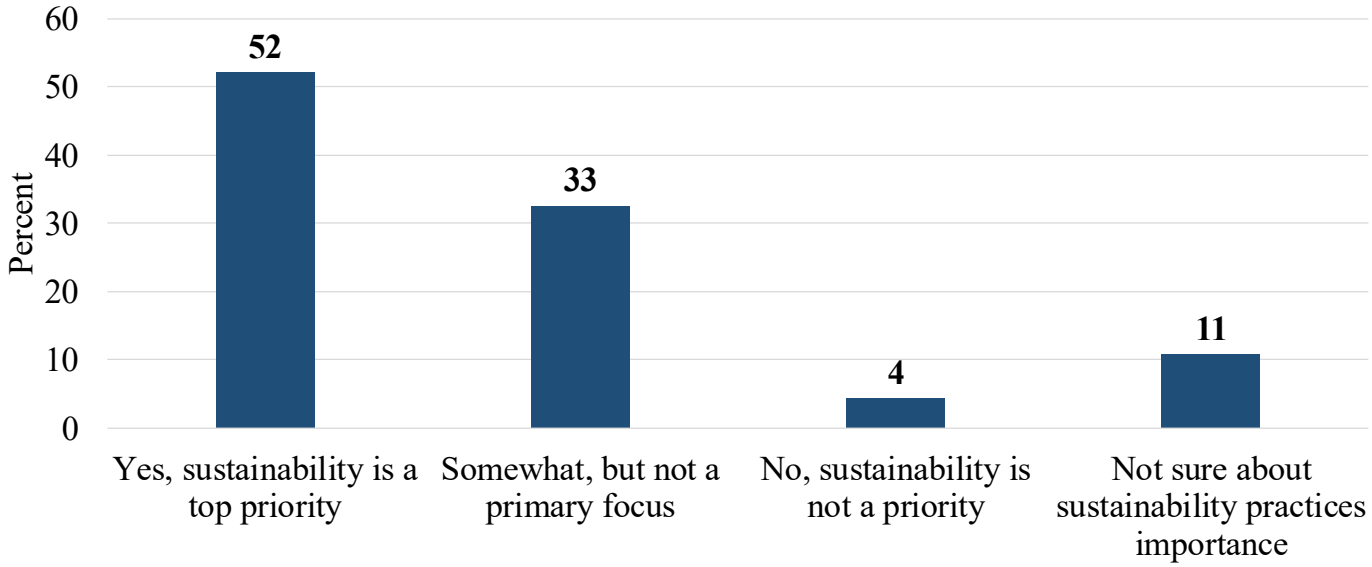
Pohnpei Producers: Would you participate in training programs or workshops offered by the Food Innovation Center to enhance your skills in traditional food processing techniques, quality control, or business management ?



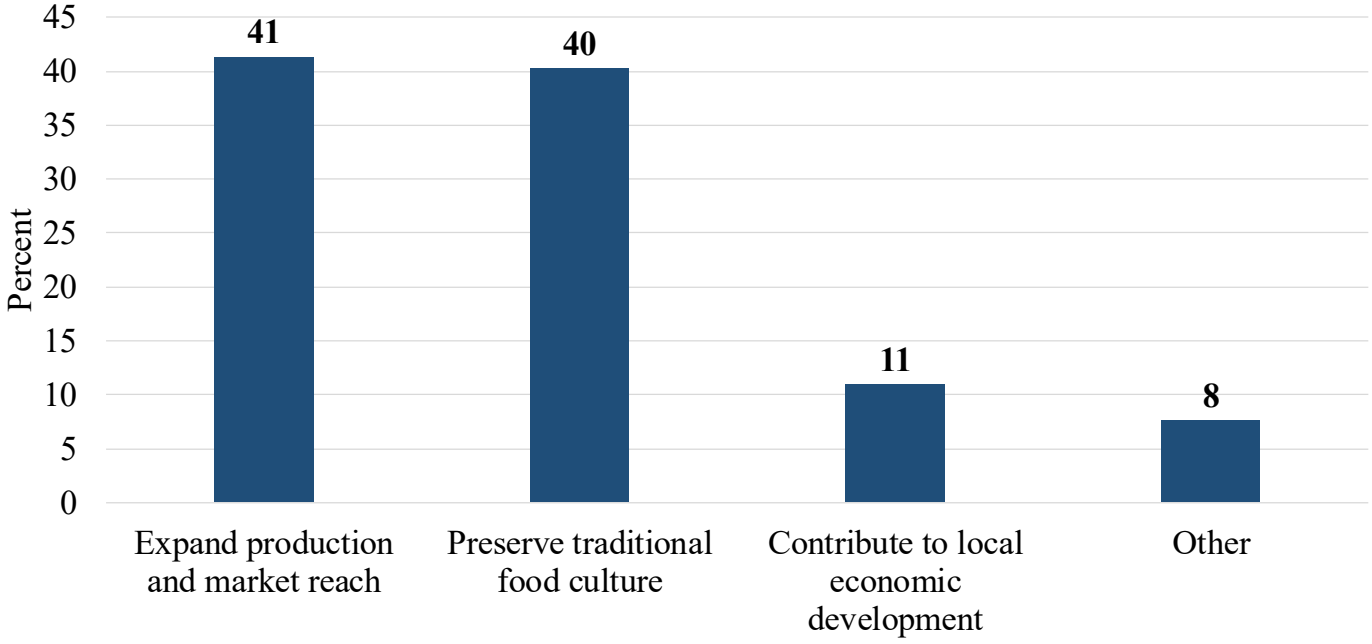
Pohnpei Producers: How important is community involvement and support in your vision for producing locally processed foods ?



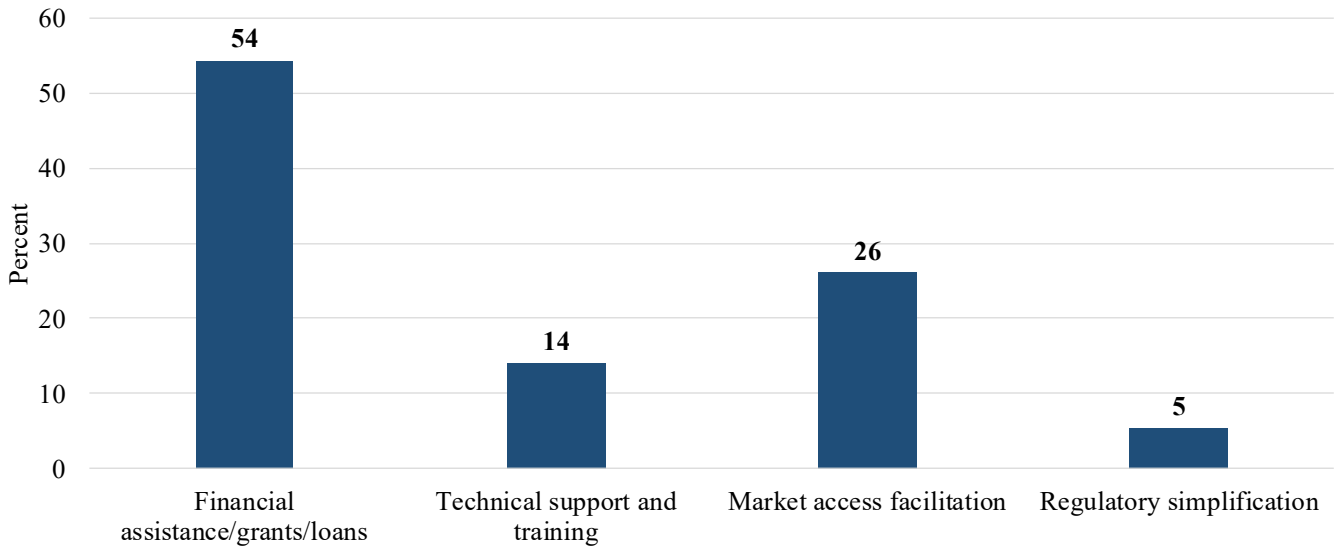
Pohnpei Producers: Do you prioritize sustainable practices in your production processes, such as minimizing waste, conserving resources, or supporting local ecosystems?



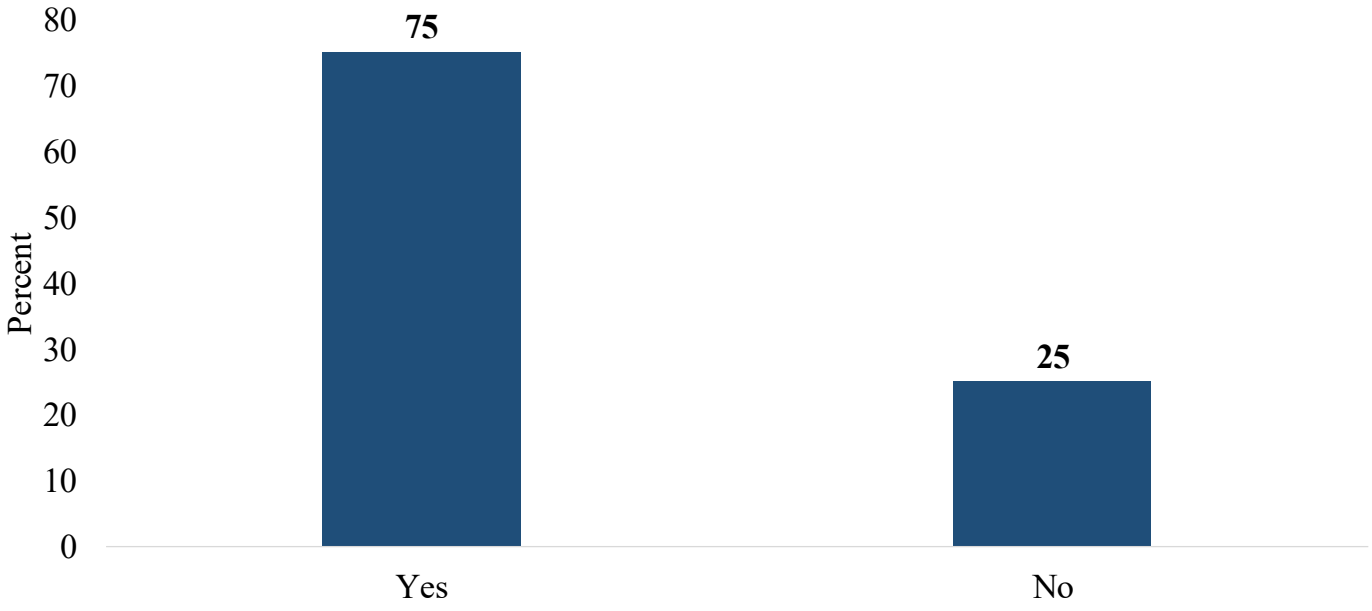
Pohnpei producers: What are your long-term goals and aspirations for your involvement in producing locally processed foods. How do you see your role evolving in the future ?



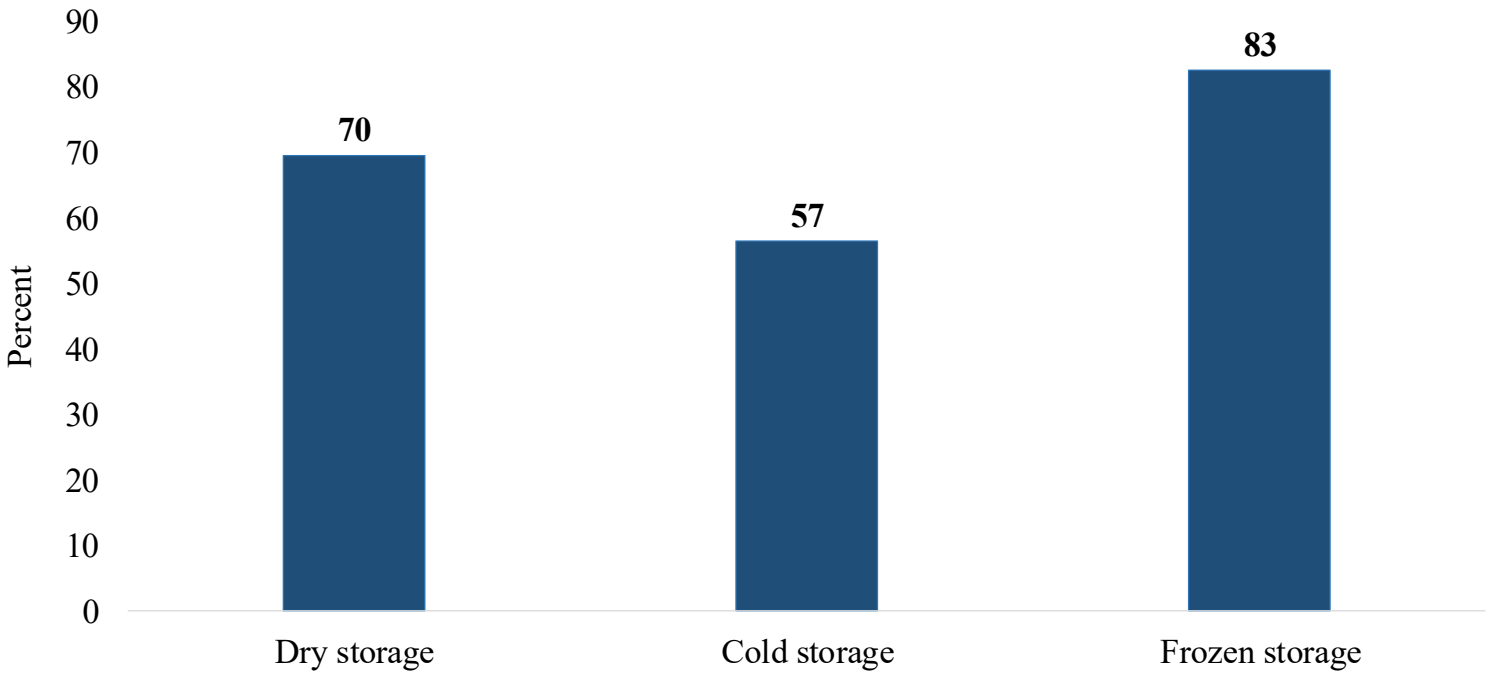
Pohnpei Producers: What kind of support or incentives from the government would be most beneficial to you for promoting the production and marketing of locally processed foods in the FSM ?



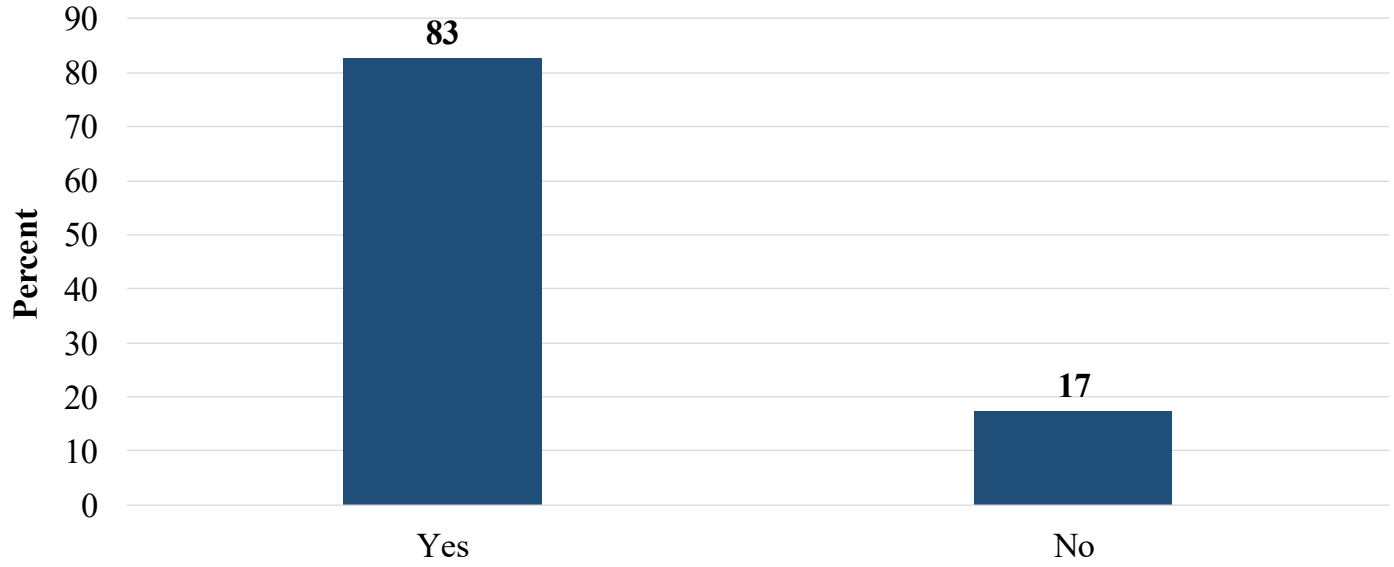
Pohnpei Producers: Would you use a food storage facility if one was provided to your municipality / Community ?



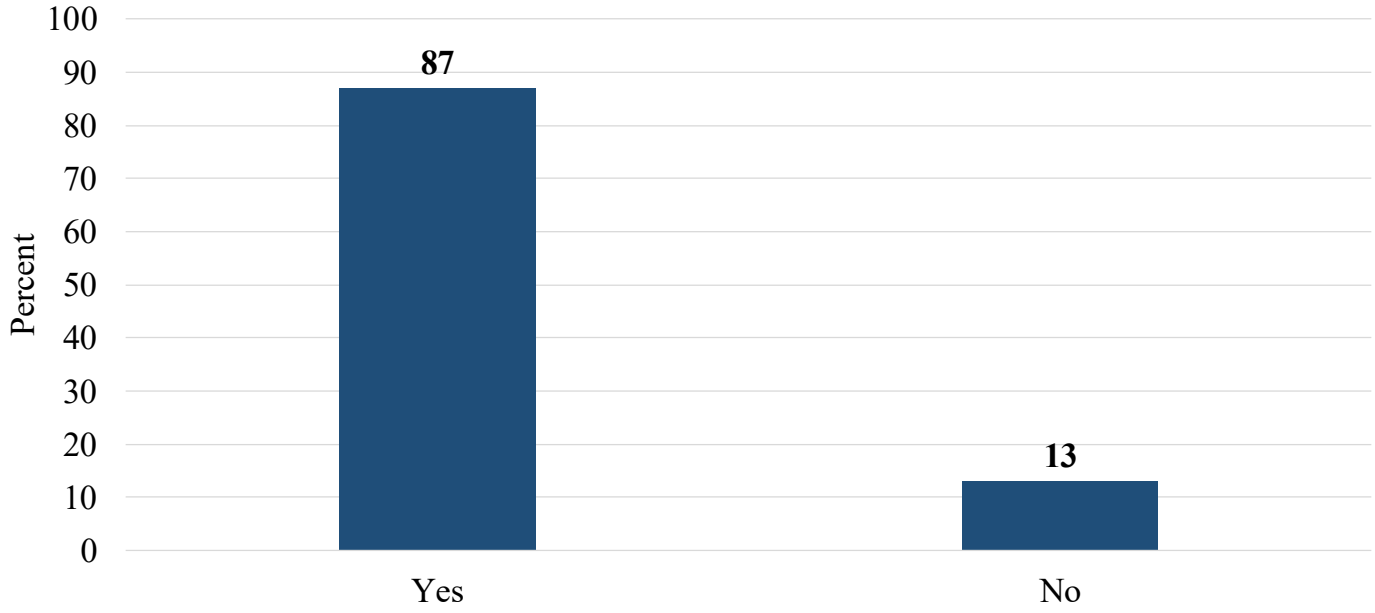
Pohnpei Producers: Which Kind of Food storage facility would you use ?



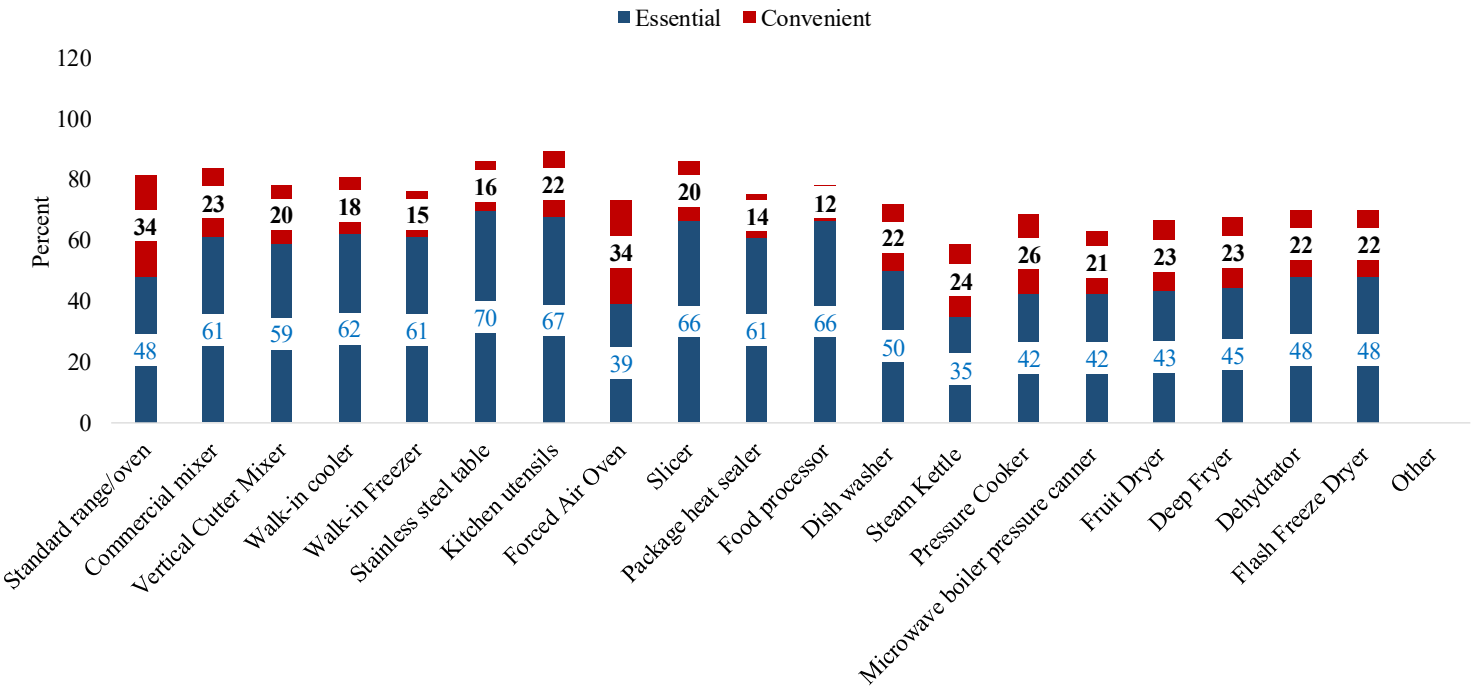
Pohnpei Producers: Would you be interested in selling the food you produce to a local food processing plant?



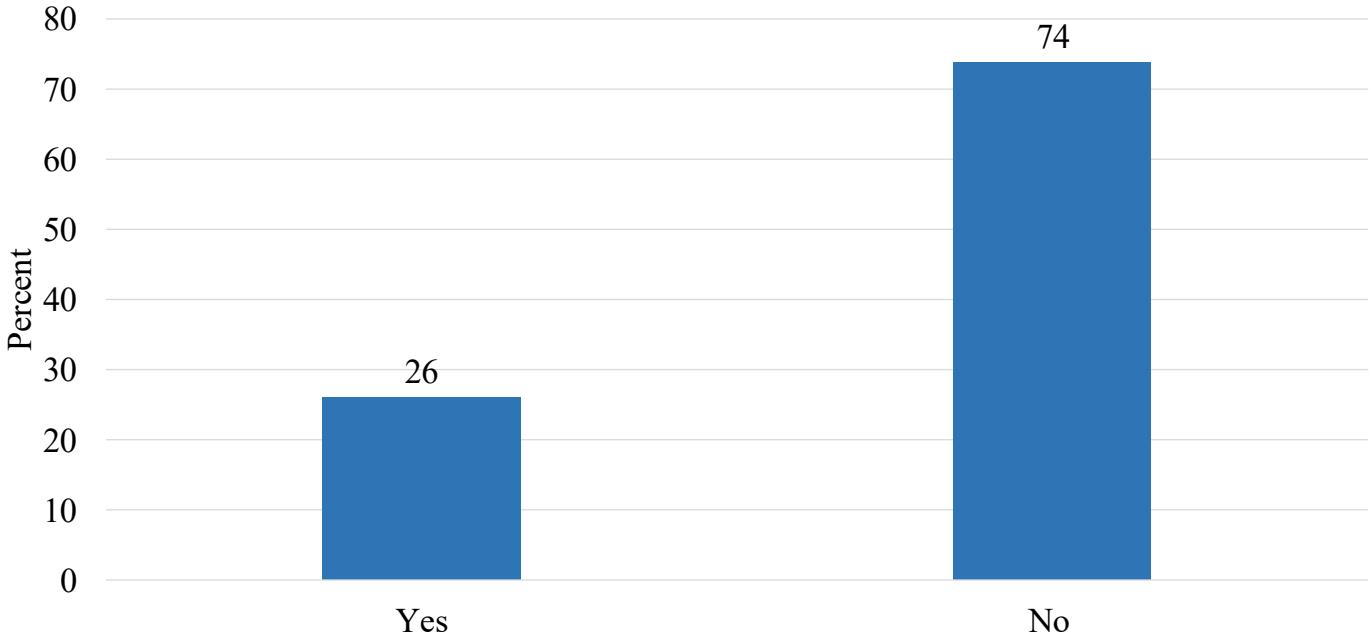
Pohnpei Producers: . Would you be interested in having your raw food products purchased directly from your farm/island (So, you do not have to transport them to market) ?



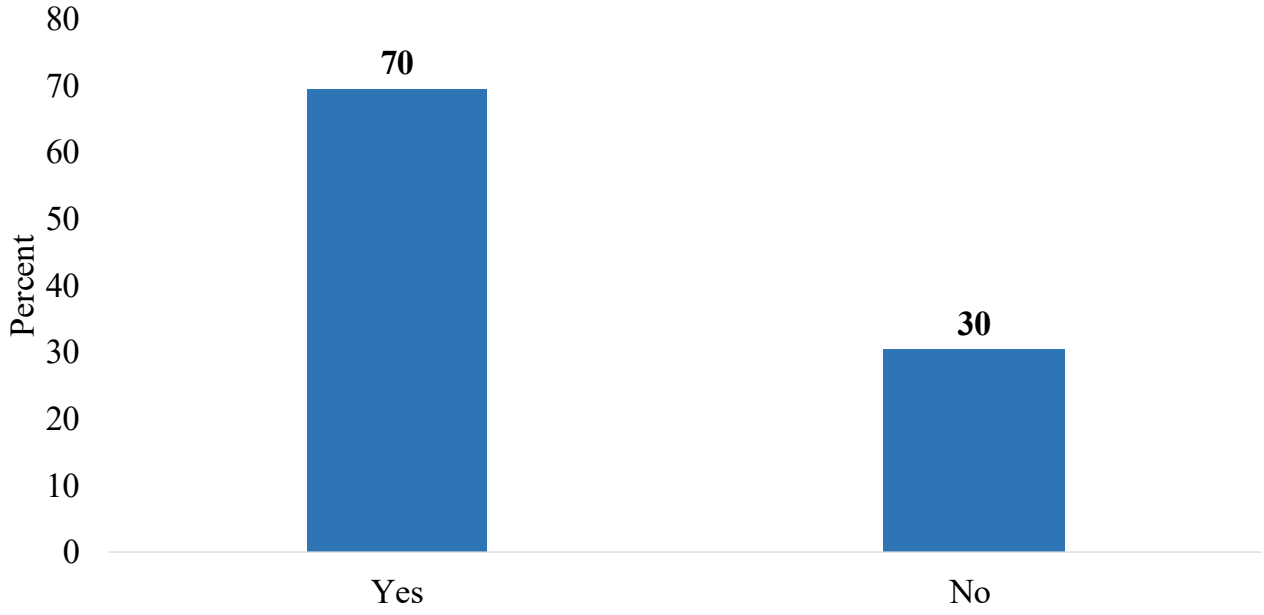
Pohnpei Producers: Rate your level of need for the following type of equipment's ?



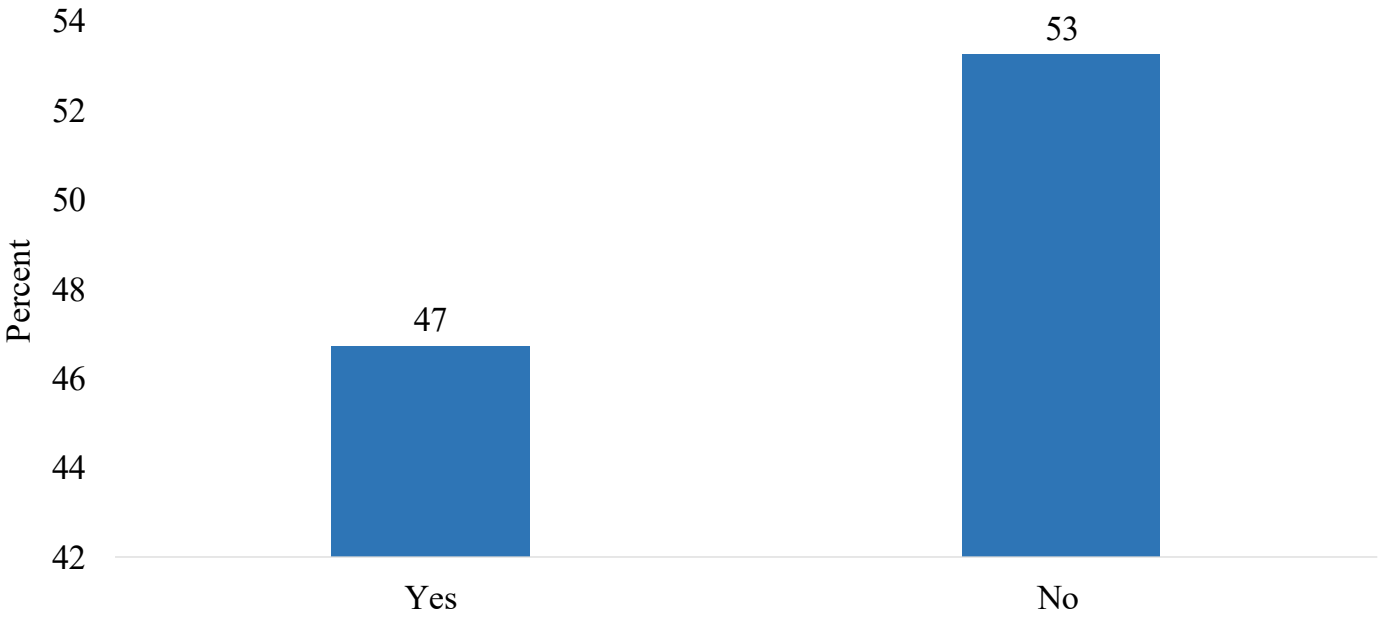
Pohnpei Producers: Do you have a business plan ?



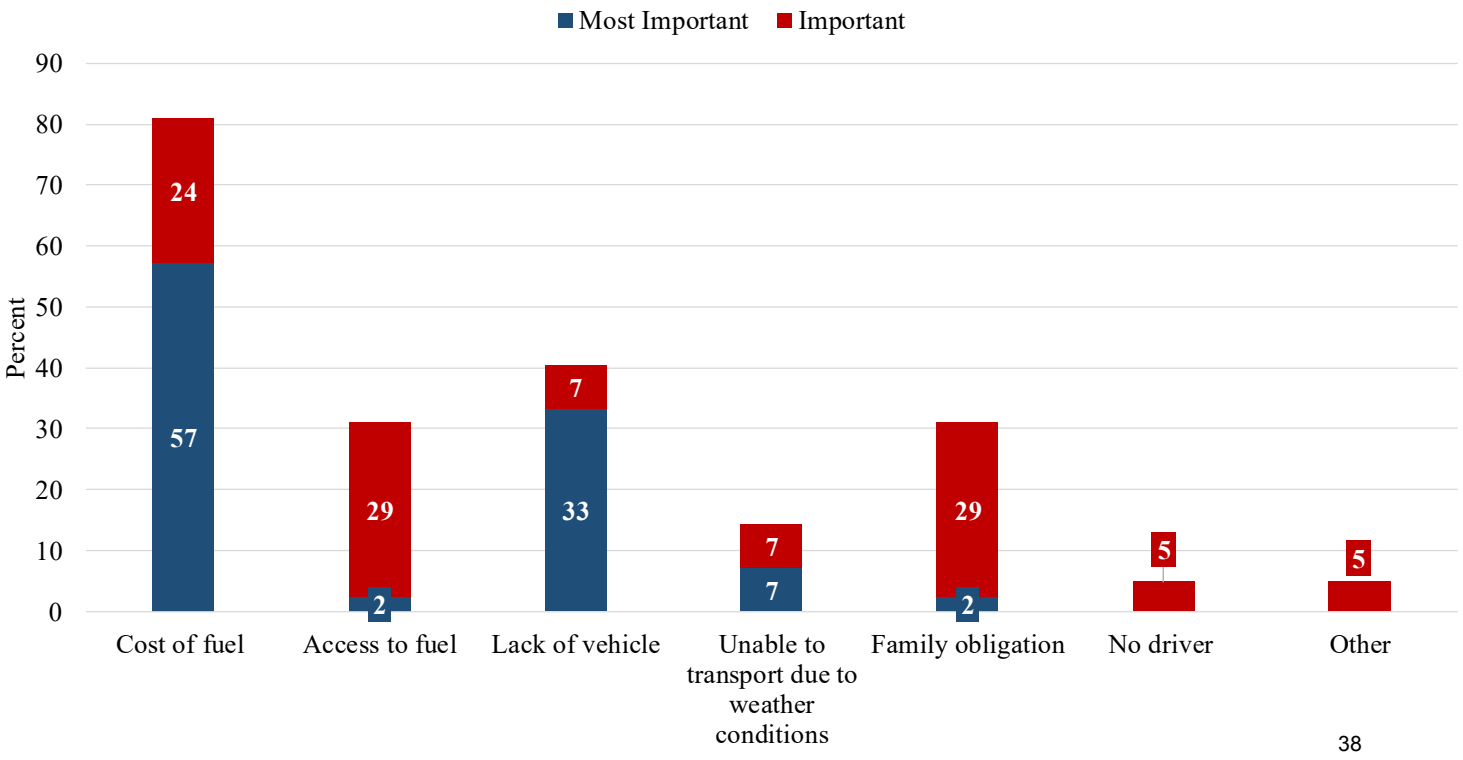
Pohnpei Producers: Would you be willing to work with business advisors to create or improve an existing business plan ?



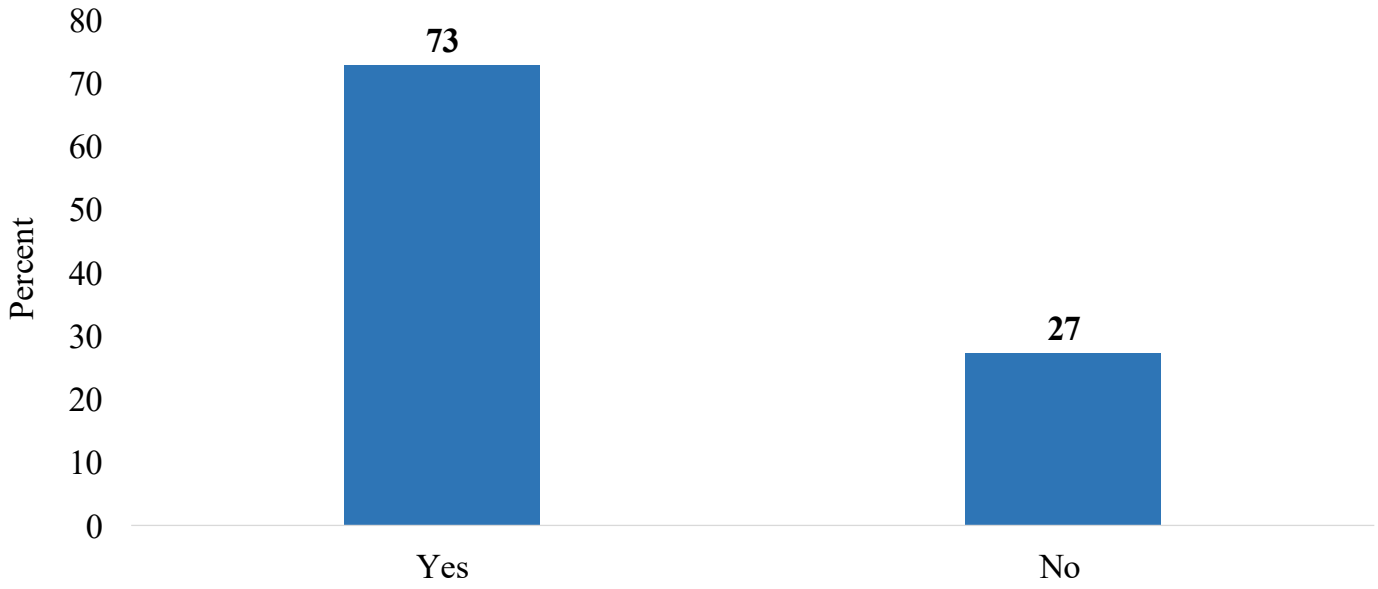
Pohnpei Producers: Is transportation of your food products and food crops to market a serious constraint ?



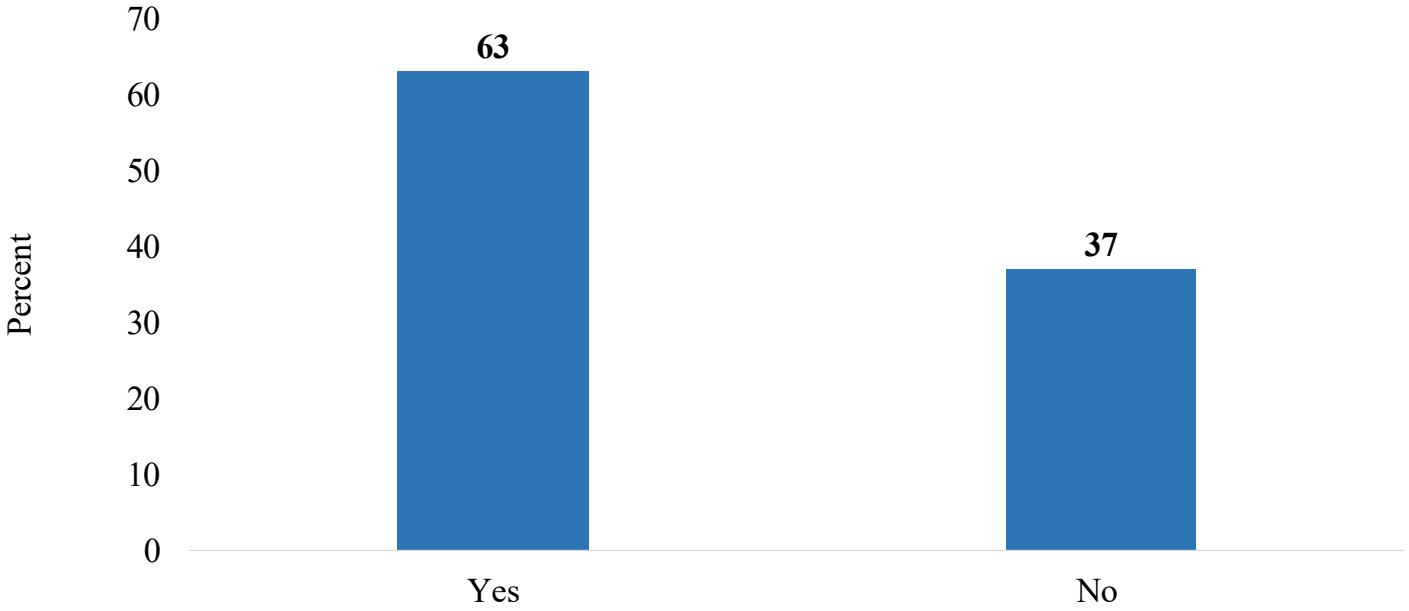
Pohnpei Producers: How is transportation a constraint ?



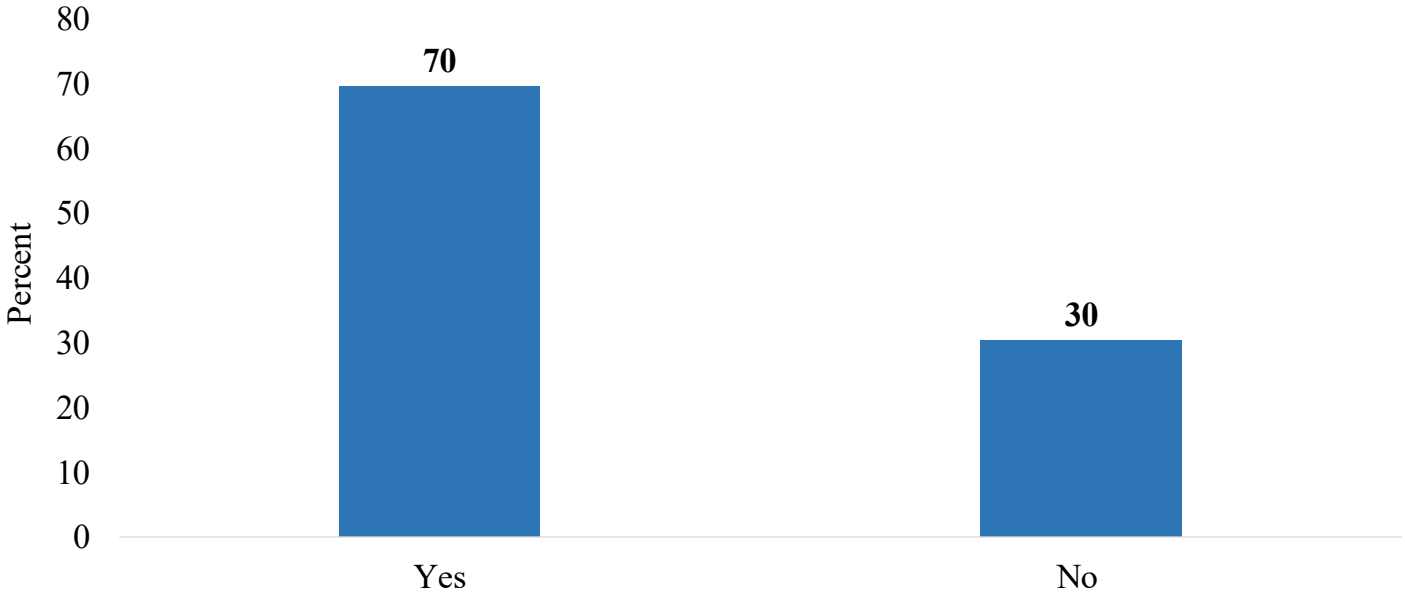
Pohnpei Producers: Is lack of labor a serious constraint to your food harvesting?



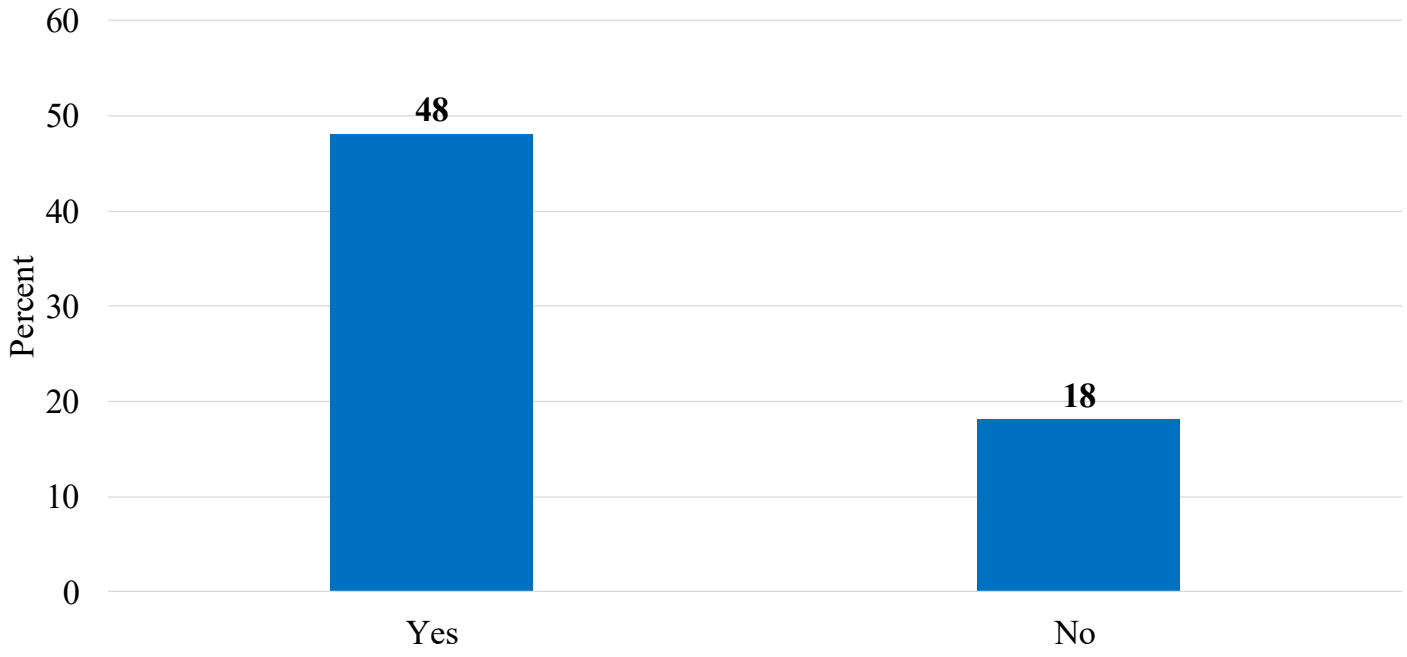
Pohnpei Producers: Is lack of labour a serious constraint to your food production and packaging ?



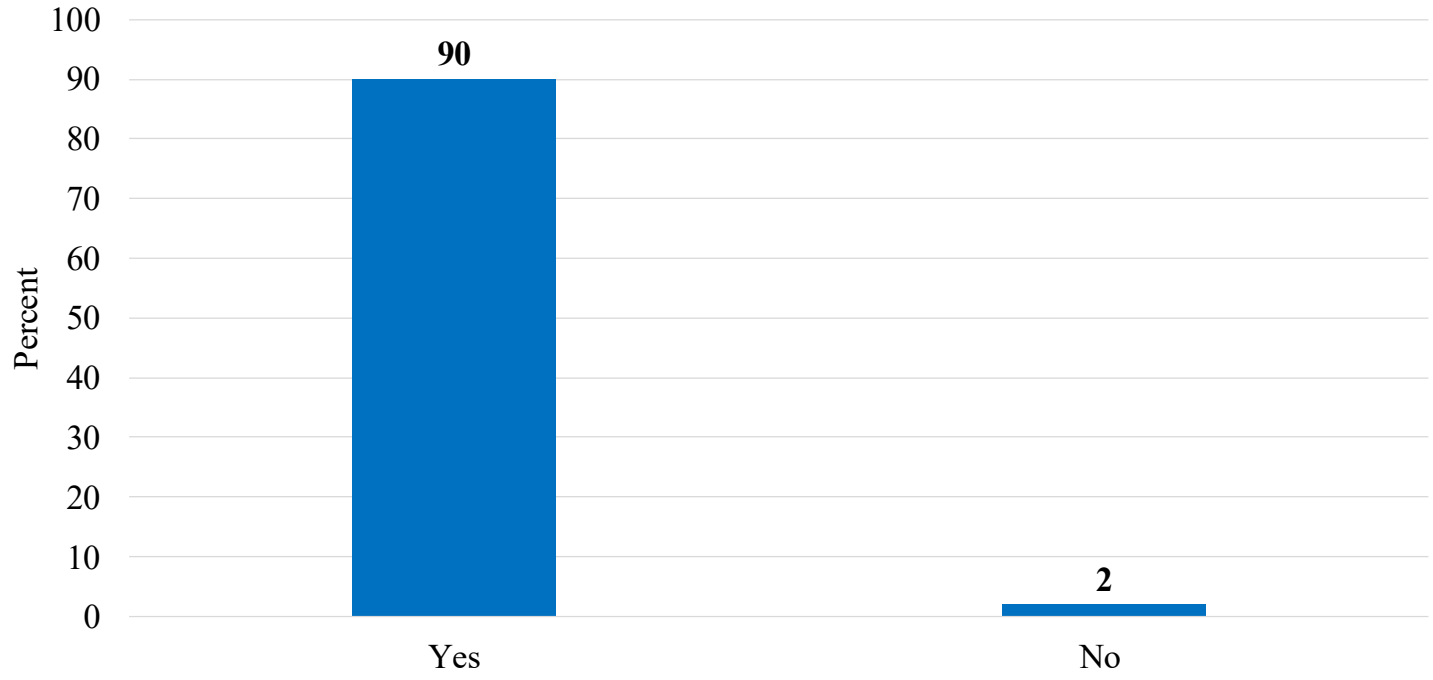
Pohnpei Producers : Would you be willing to work with business advisors to create or improve an existing business plan ?



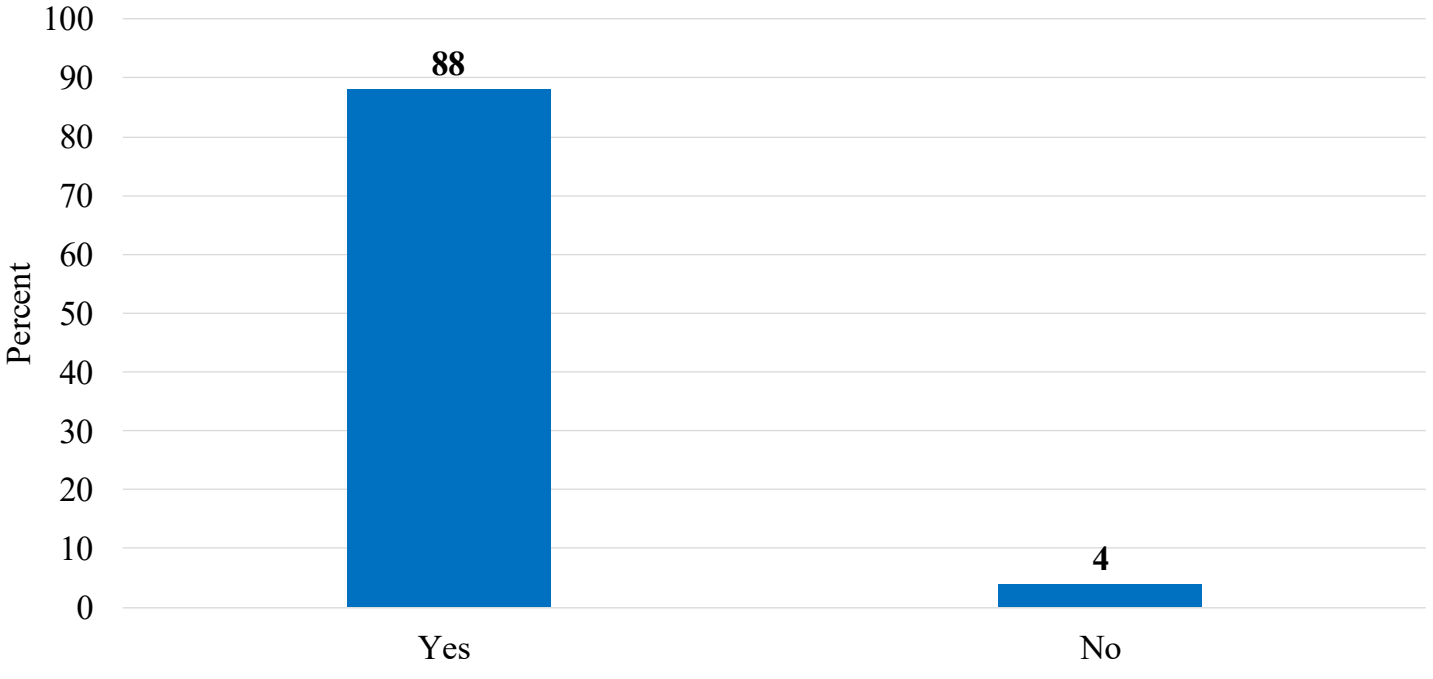
Pohnpei Producers: If so, is lack of labour a serious constraint to the selling of your food products



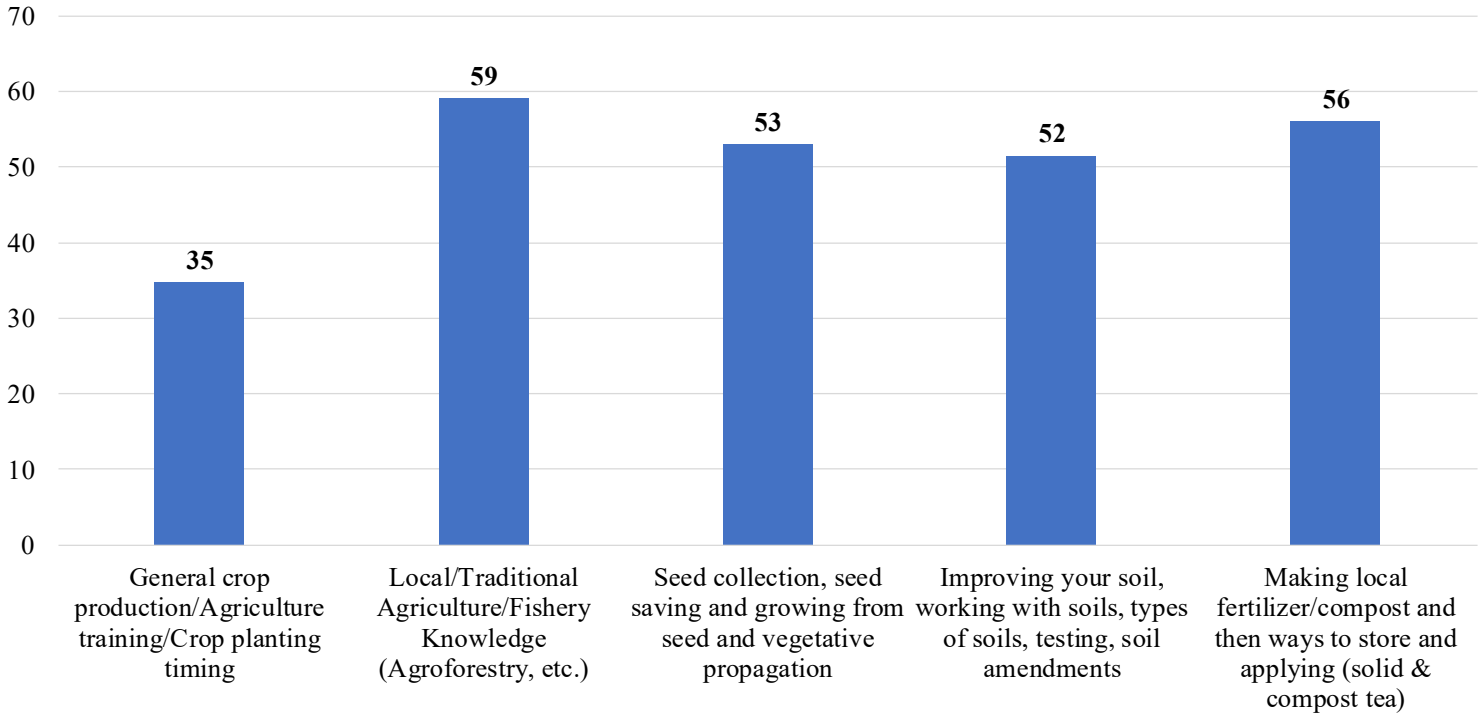
Pohnpei Producers : would you like any training to help you produce more food ?



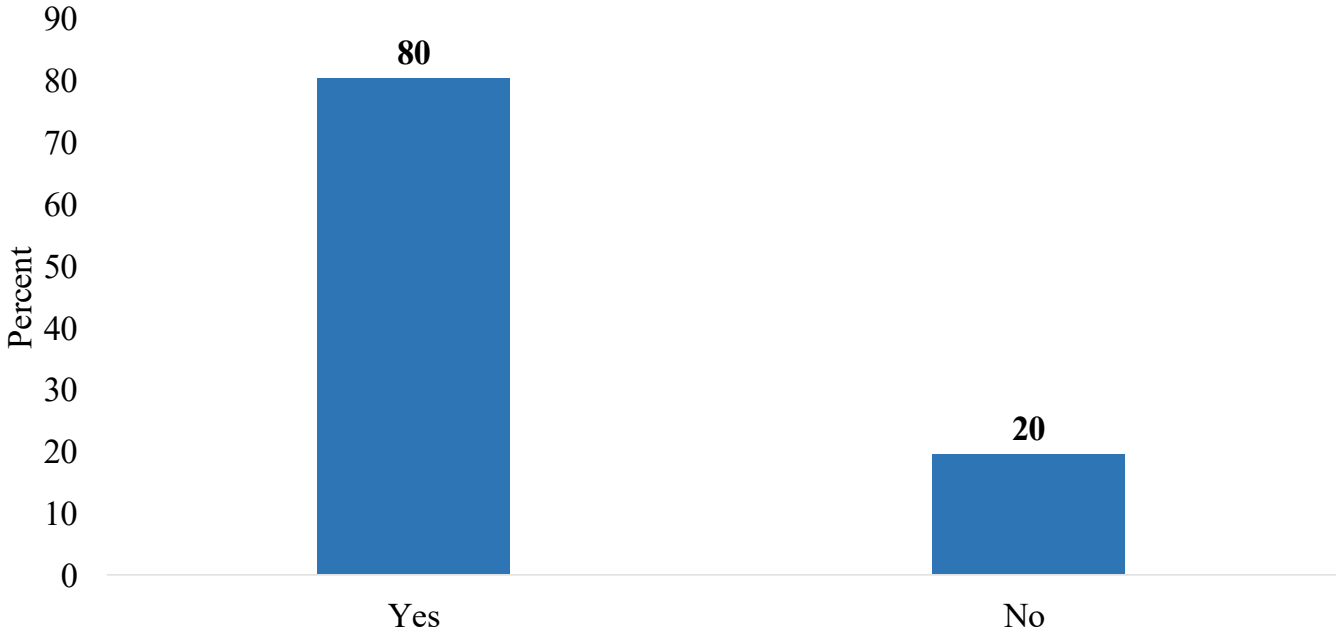
Pohnpei Producers : Would you be interested in being trained in commercial food processing ?



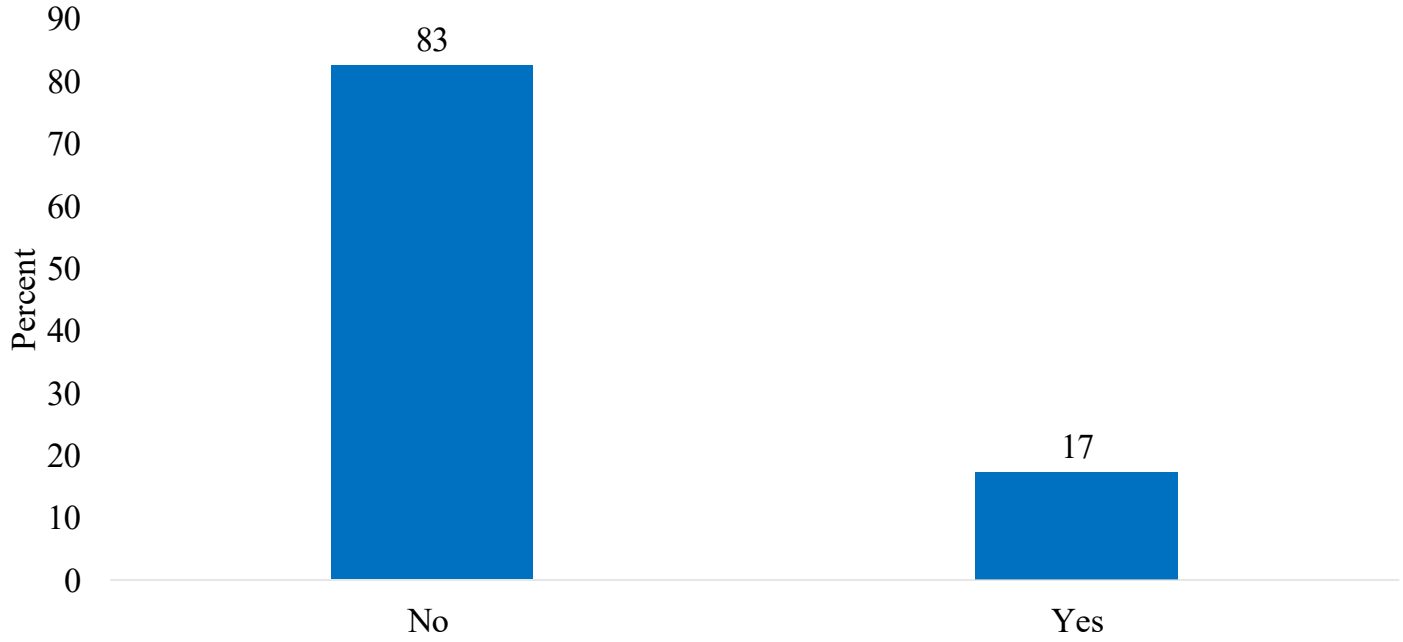
Pohnpei Producers : What kinds of agricultural training would you like to receive ?



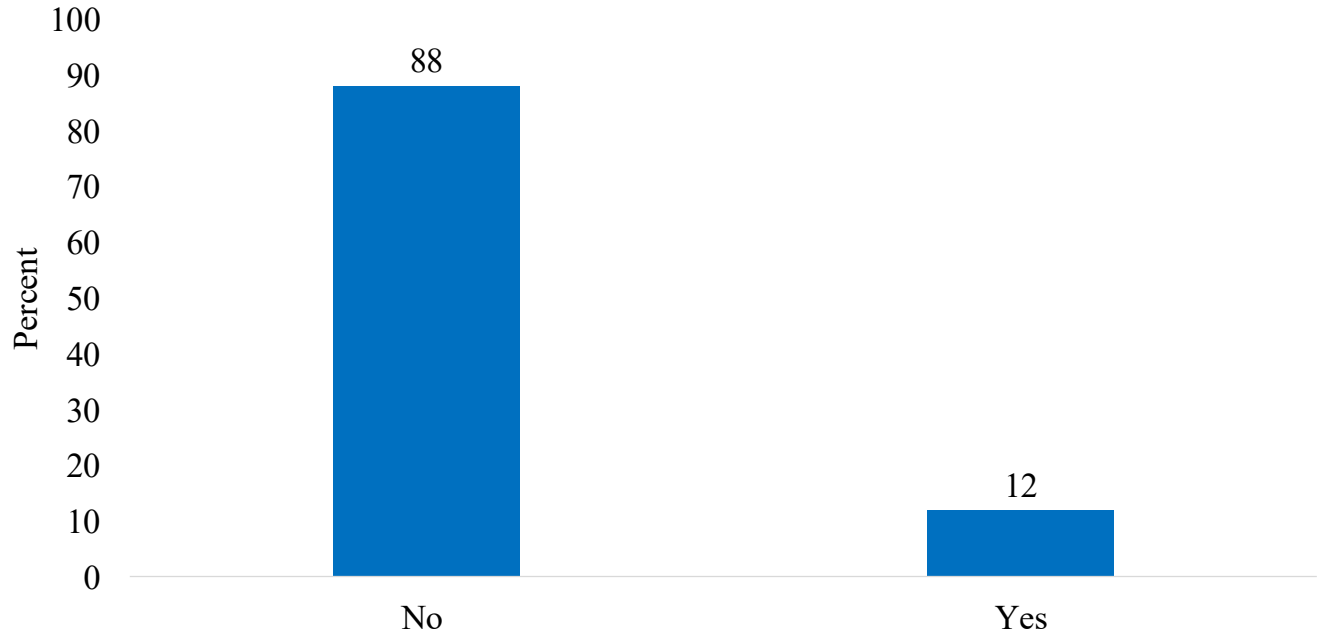
Pohnpei Producers: Would you like to teach other food producers from your own experiences ?



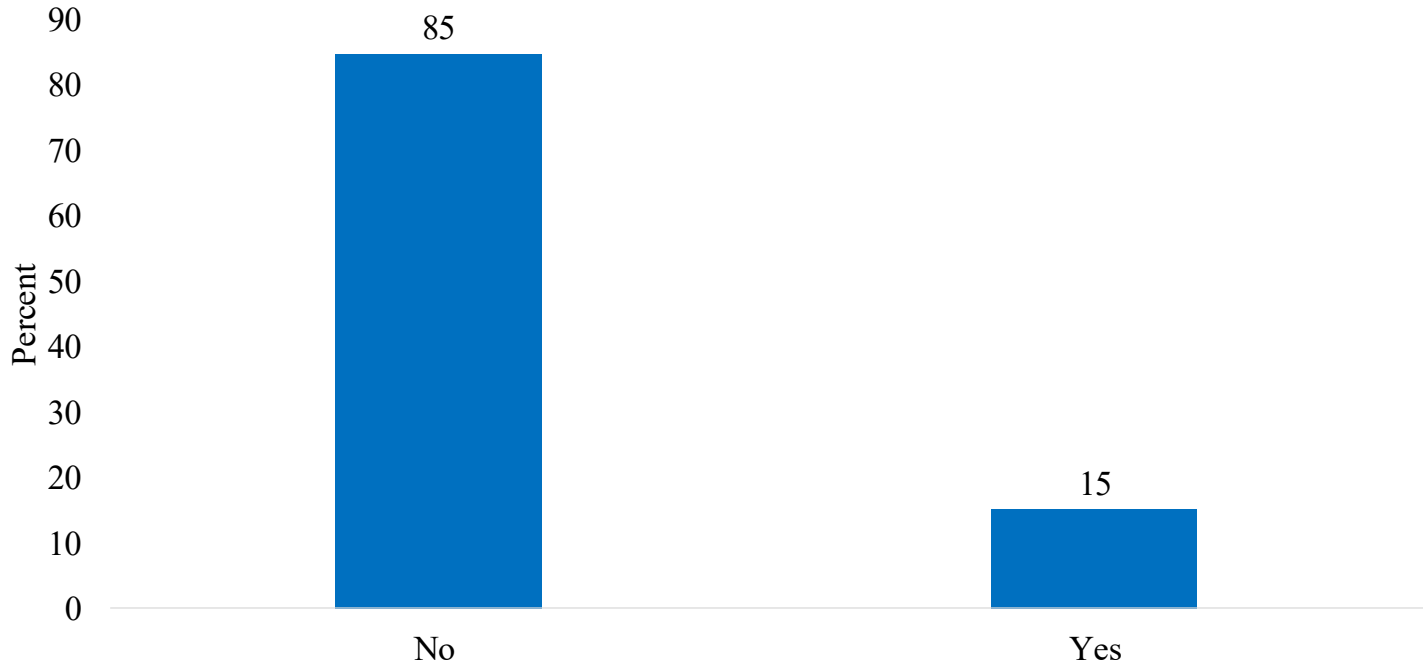
Pohnpei Producers: Do you belong to any local community group ?



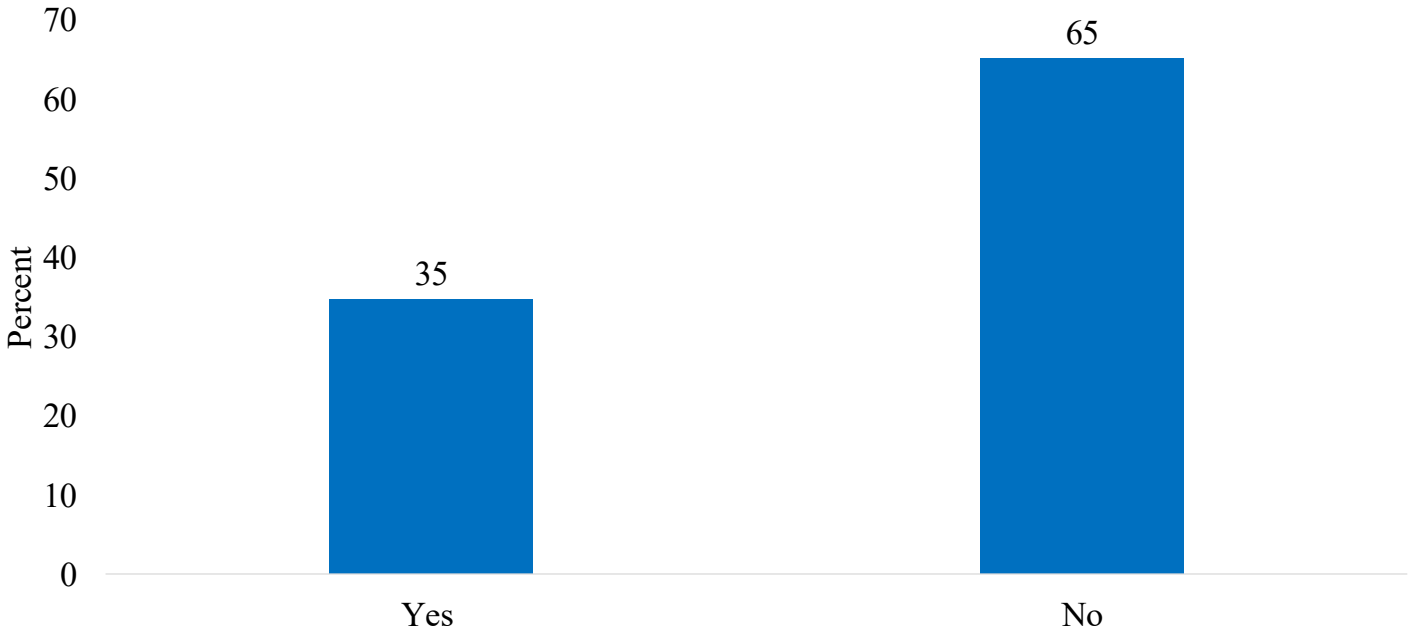
Pohnpei Producers: Do you belong to any local Farmers association ?



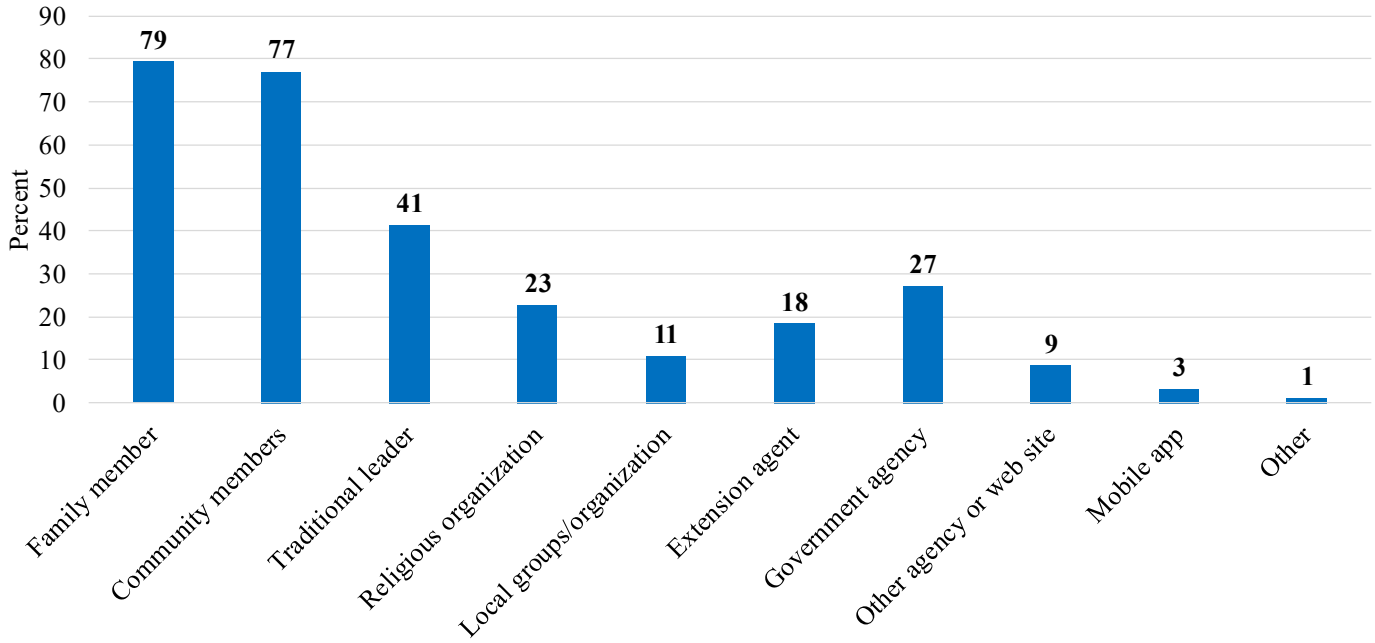
Pohnpei Producers: Do you belong to any local fishing organization ?



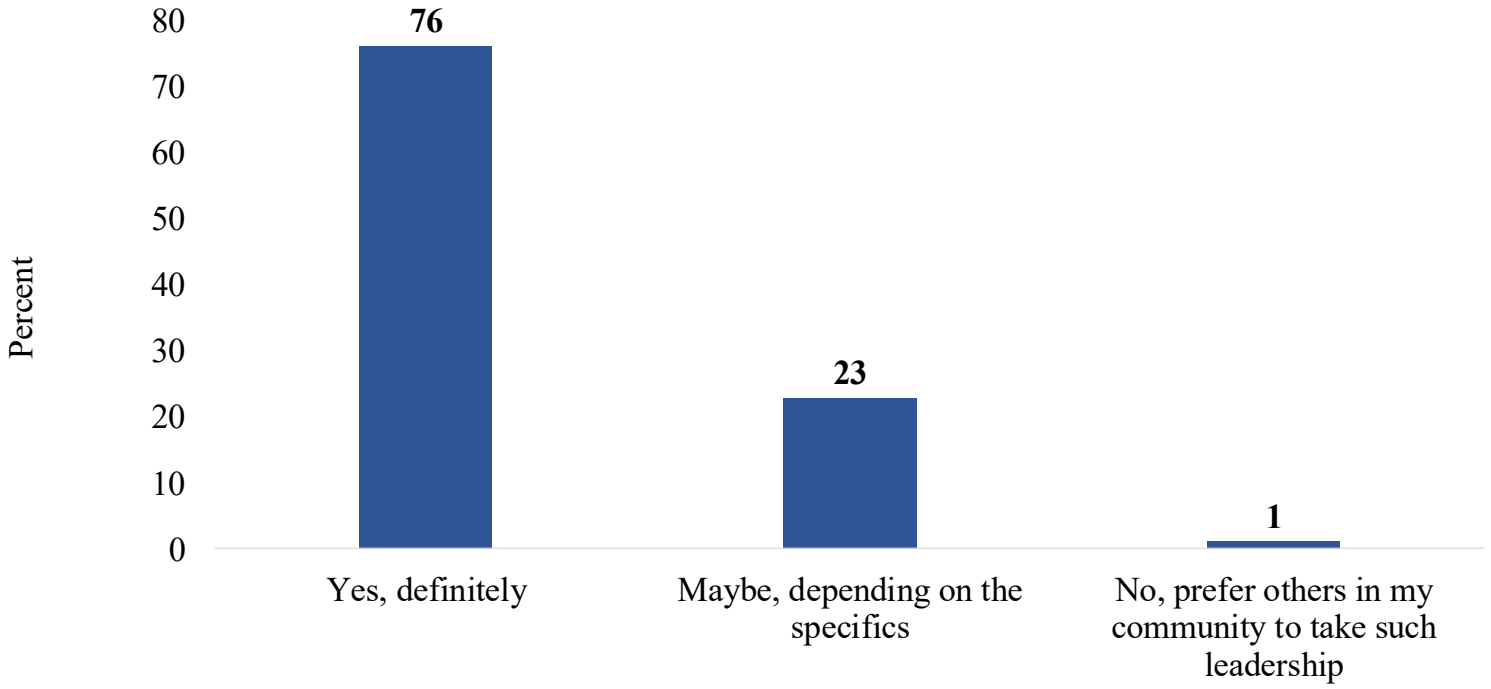
Pohnpei Producers: Are you familiar with the State and National laws and policies that affect your food production ?



Pohnpei Producers: If you need information about the State and National laws and policies, where would you go ?

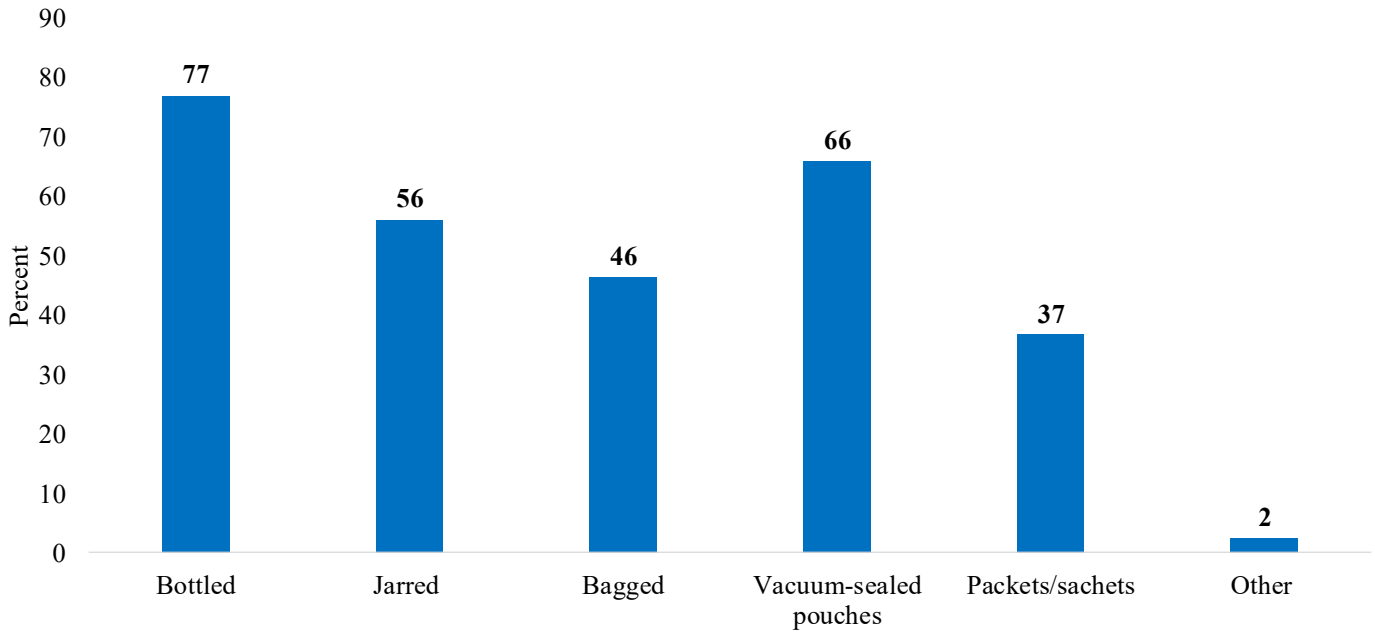


Pohnpei Producers: Would you be interested/willing to participate in trainings and workshops that provide those skills ?

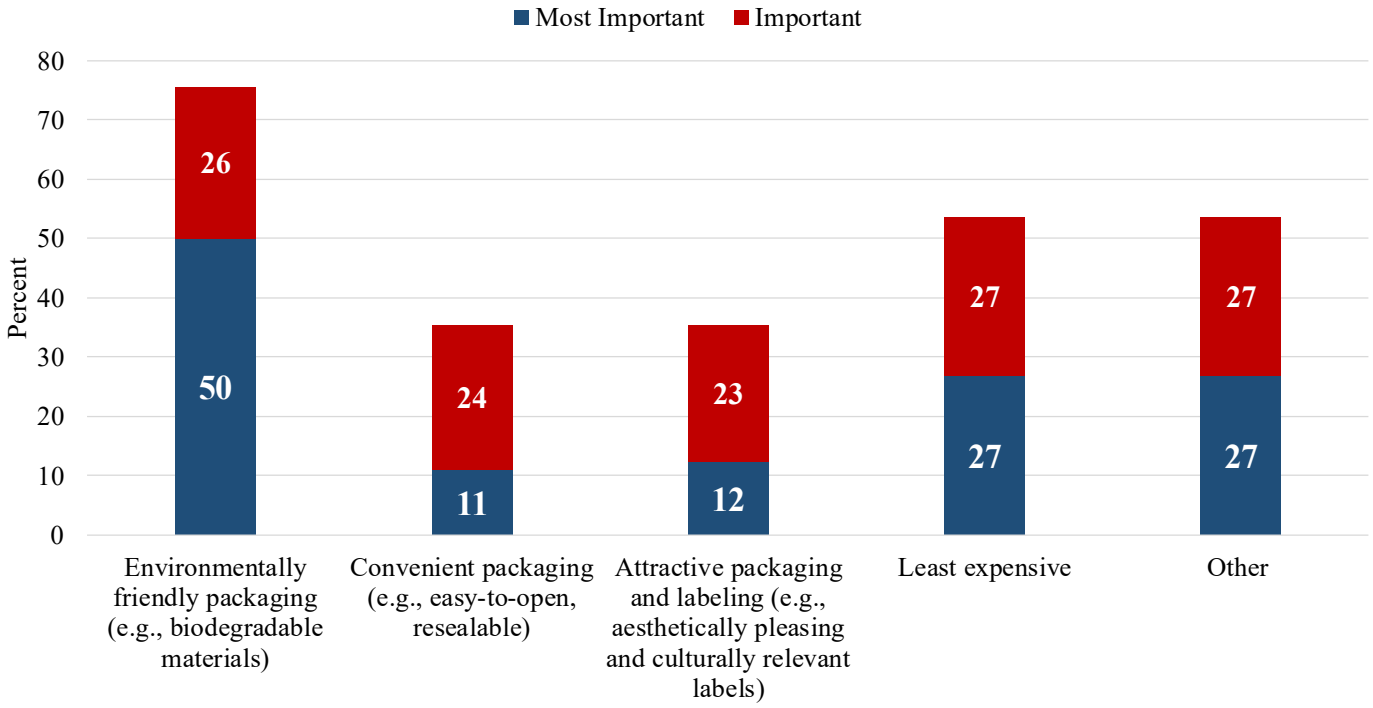


Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Pohnpei State
Consumers

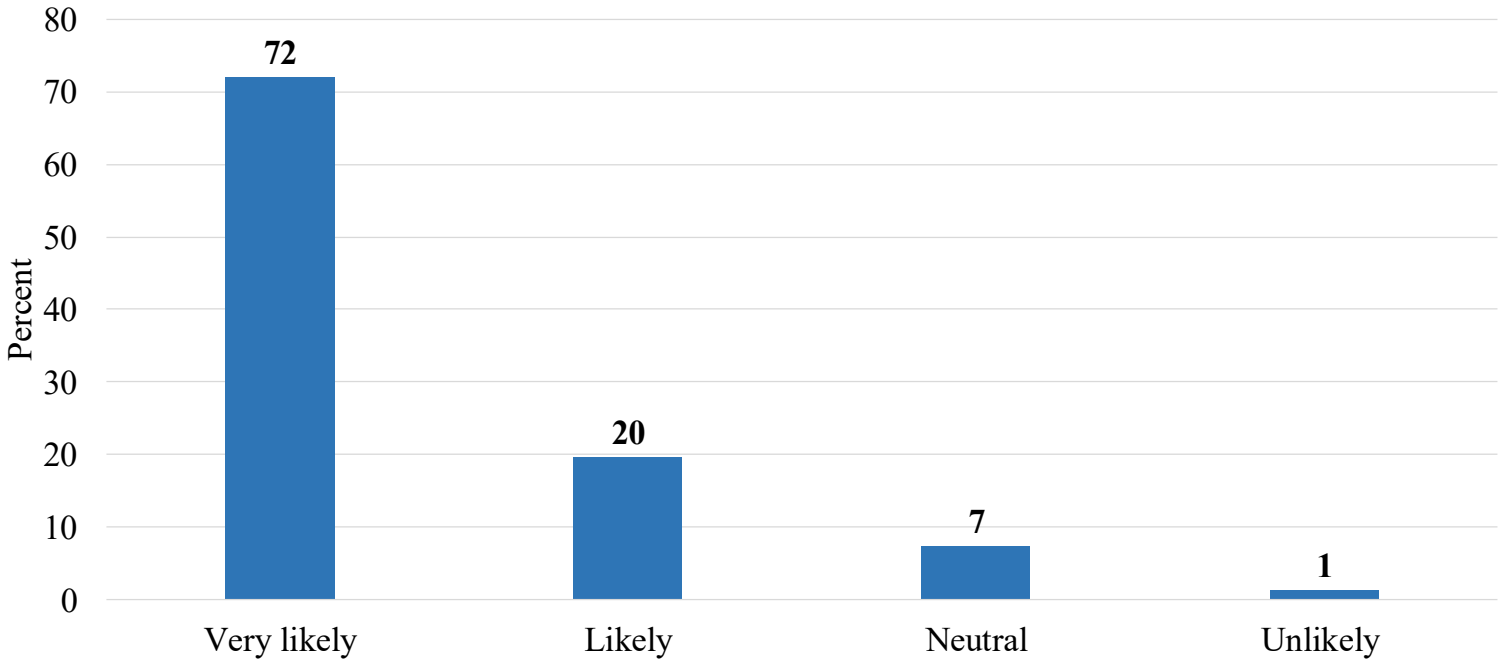
Pohnpei Consumers : What type of packaging would you prefer ?



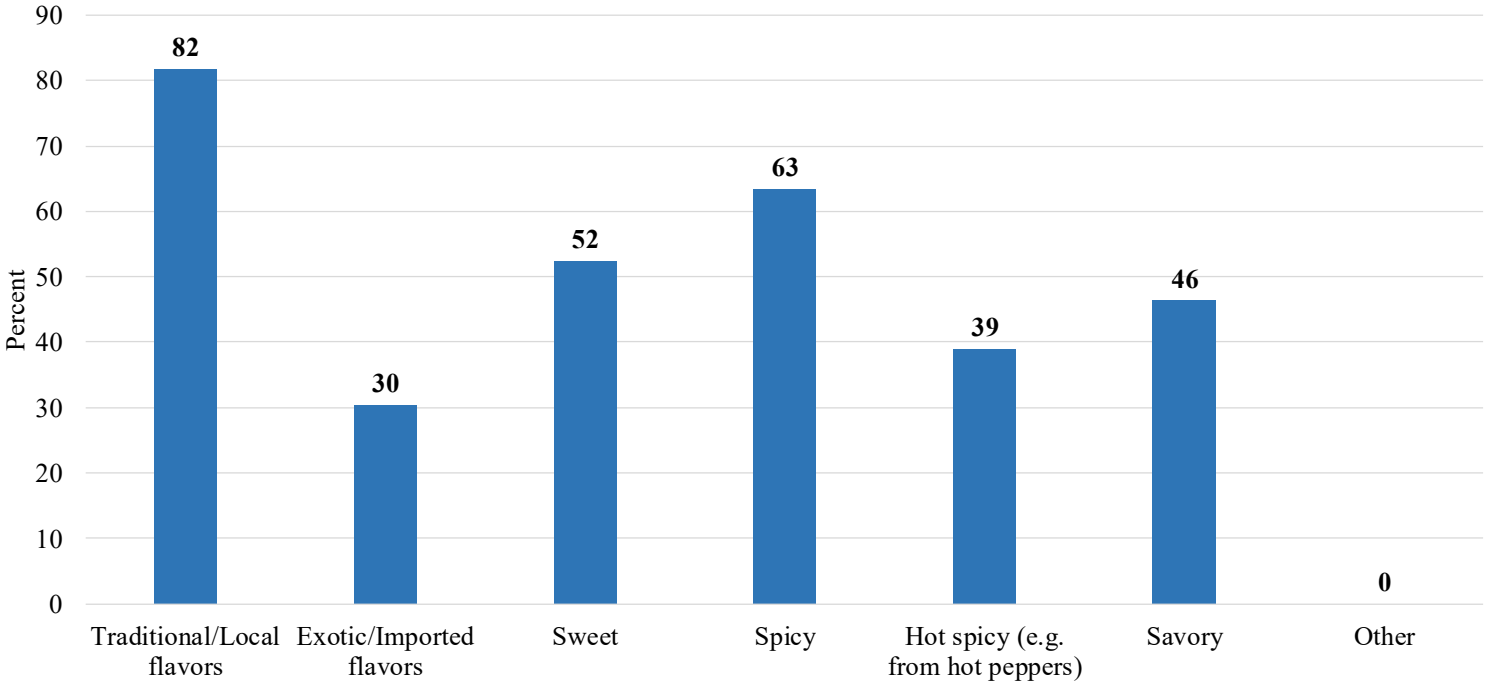
Pohnpei Consumers : What features of the packaging do you consider most important ?



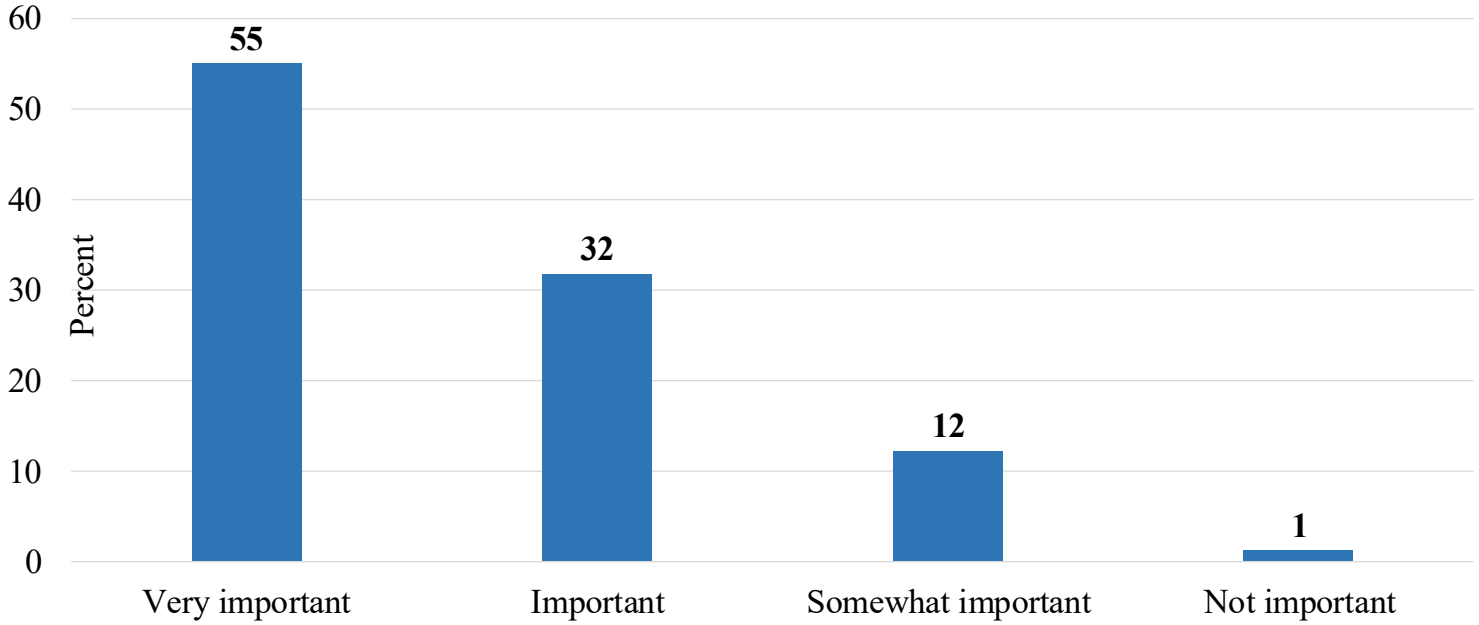
Pohnpei Consumers : How likely are you to purchase locally processed food products if they are the same price and the same quality, as comparable imported products (example: local coconut oil versus imported cooking oils) ?



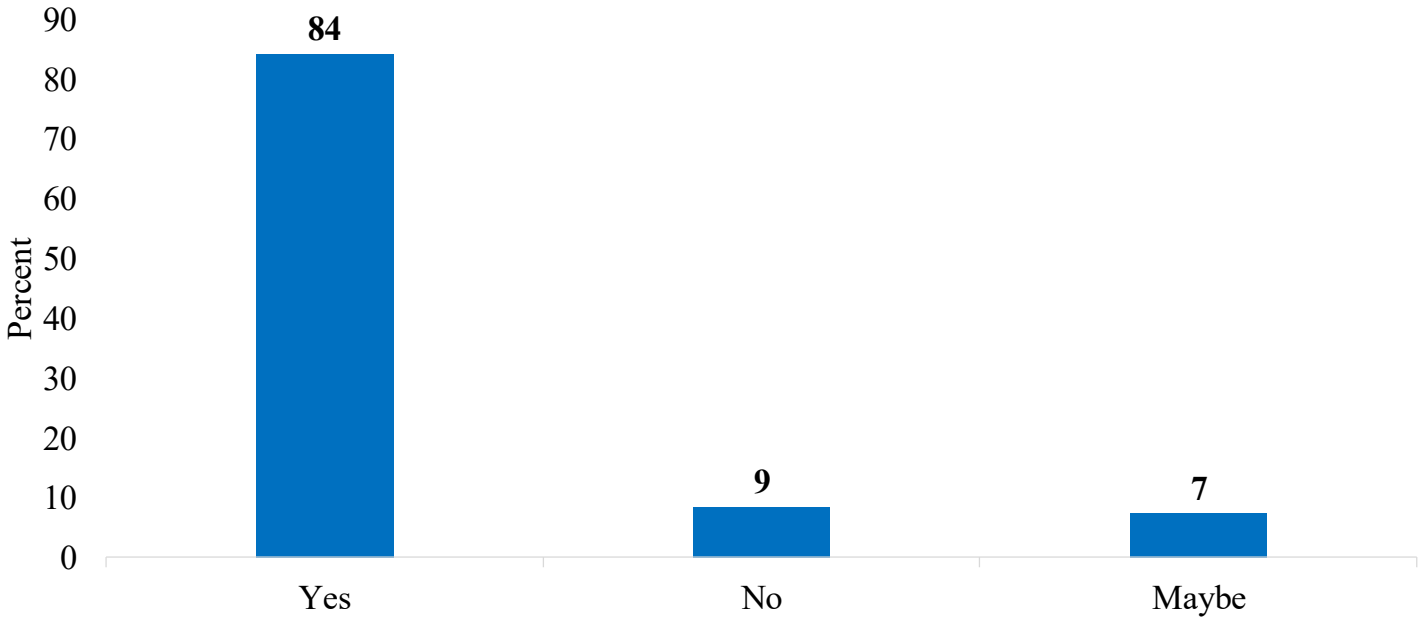
Pohnpei Consumers : Which flavors or varieties of locally processed foods would you be most interested in ?



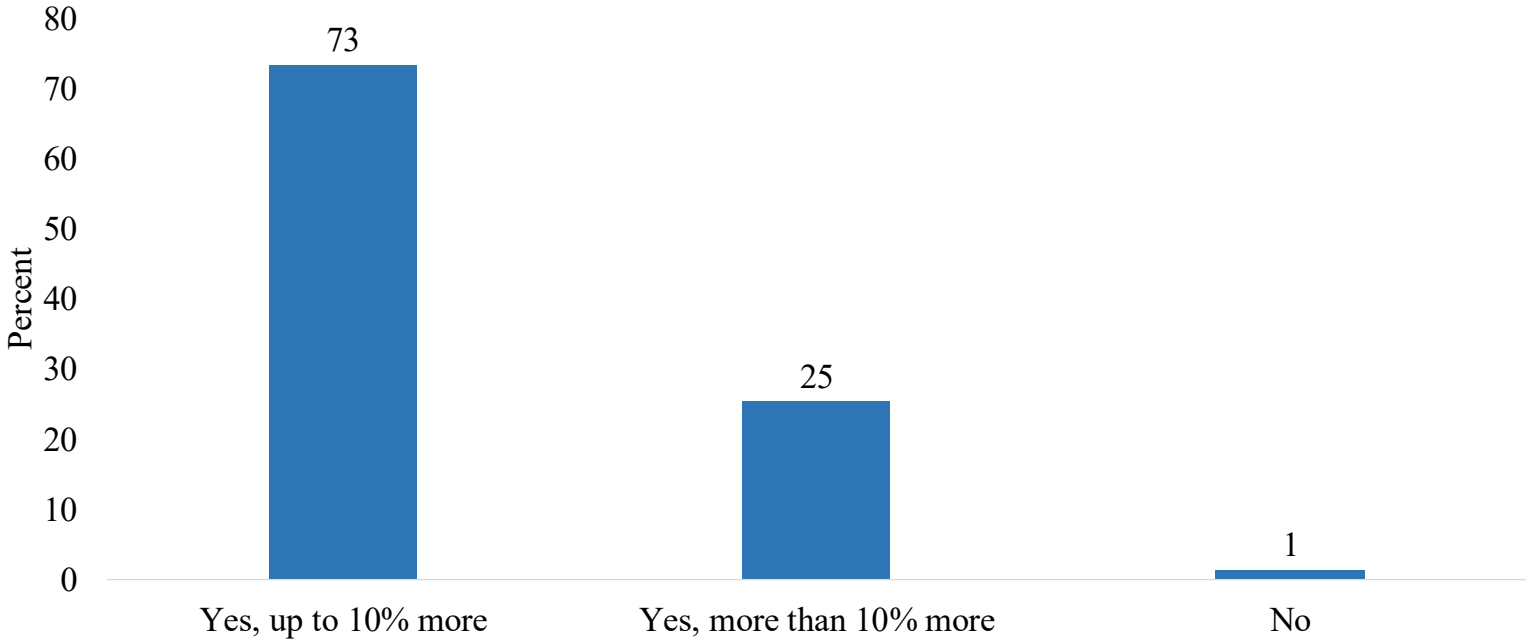
Pohnpei Consumers : How important is it for you that locally processed foods are nutritious and contribute to a healthy diet ?



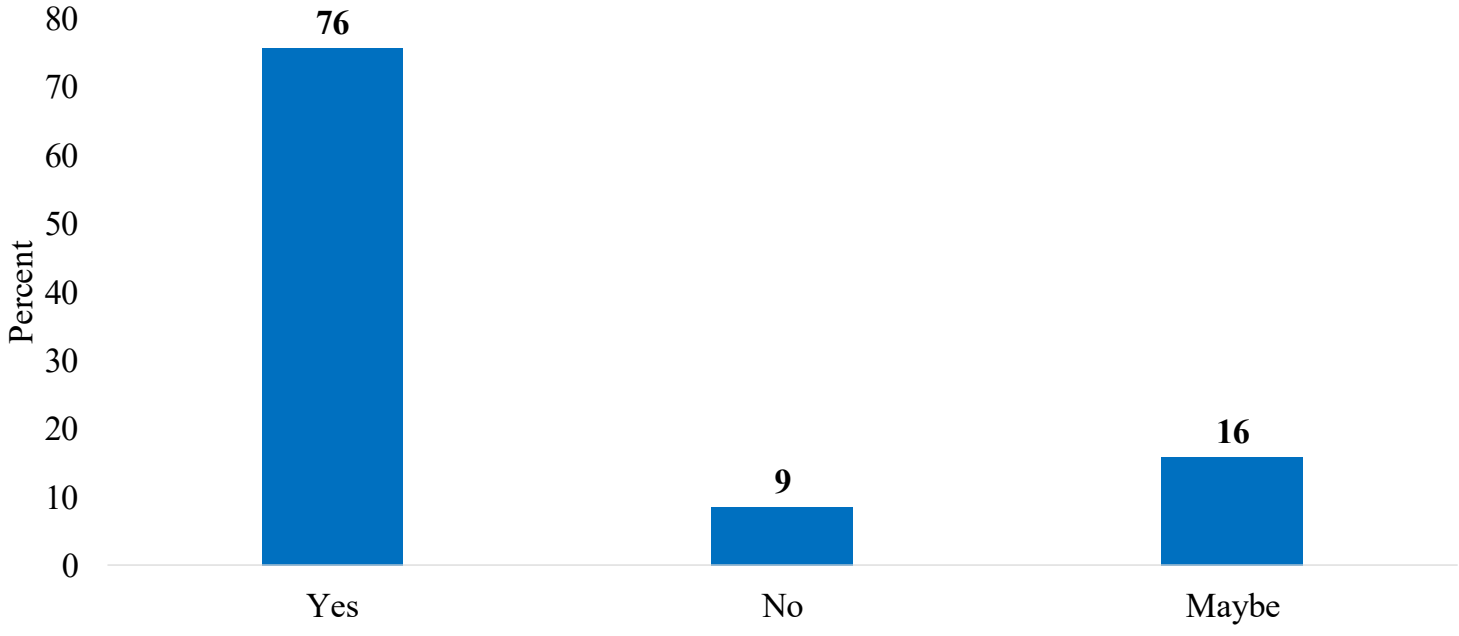
Pohnpei Consumers : Would you support the purchasing of locally processed foods that contribute to community development or social causes (e.g., supporting local farmers, empowering women's groups)?



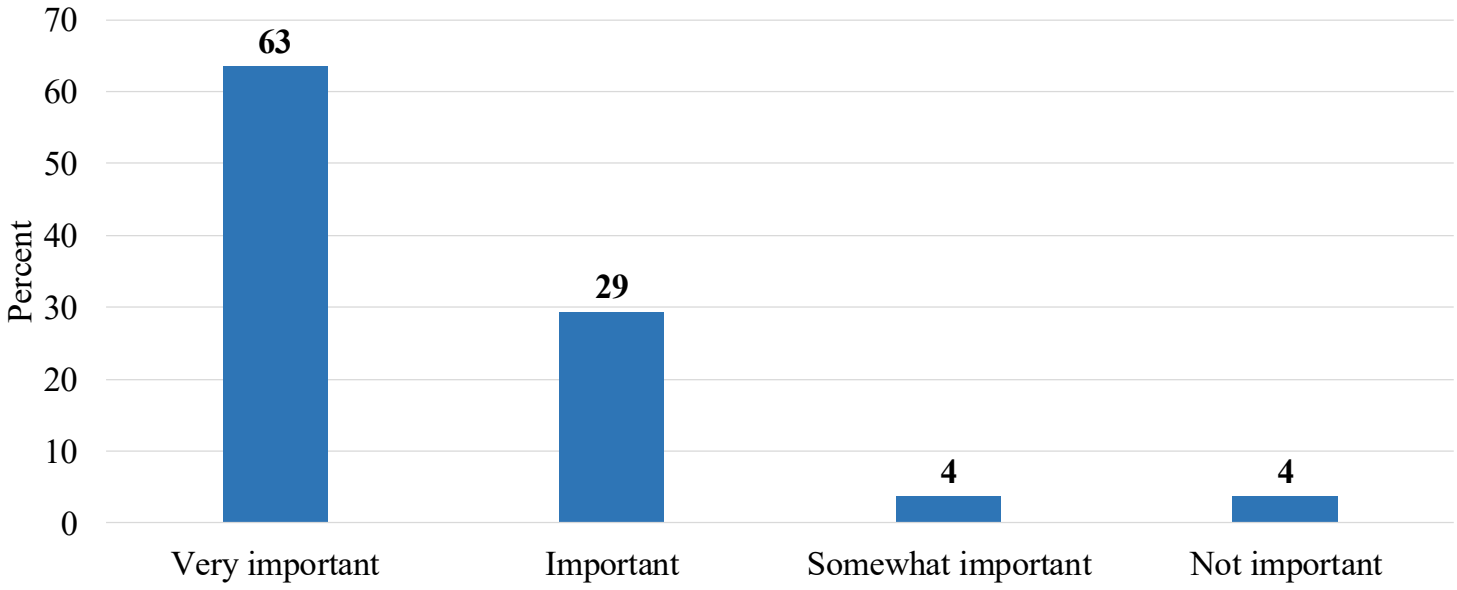
Pohnpei Consumers : Would you be willing to pay more for products that support community/social causes ?



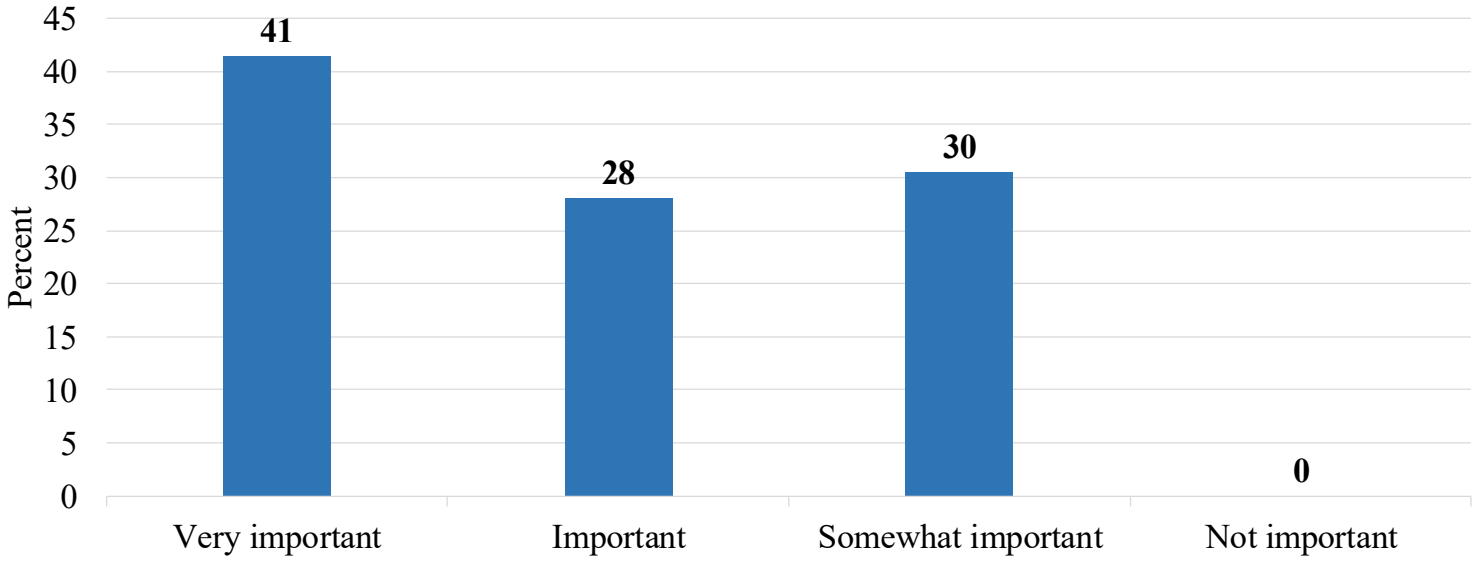
Pohnpei Consumers : Would you participate in educational programs or workshops offered by the Food Innovation Center on local food processing techniques, cooking contests, nutrition programs, or culinary skills?



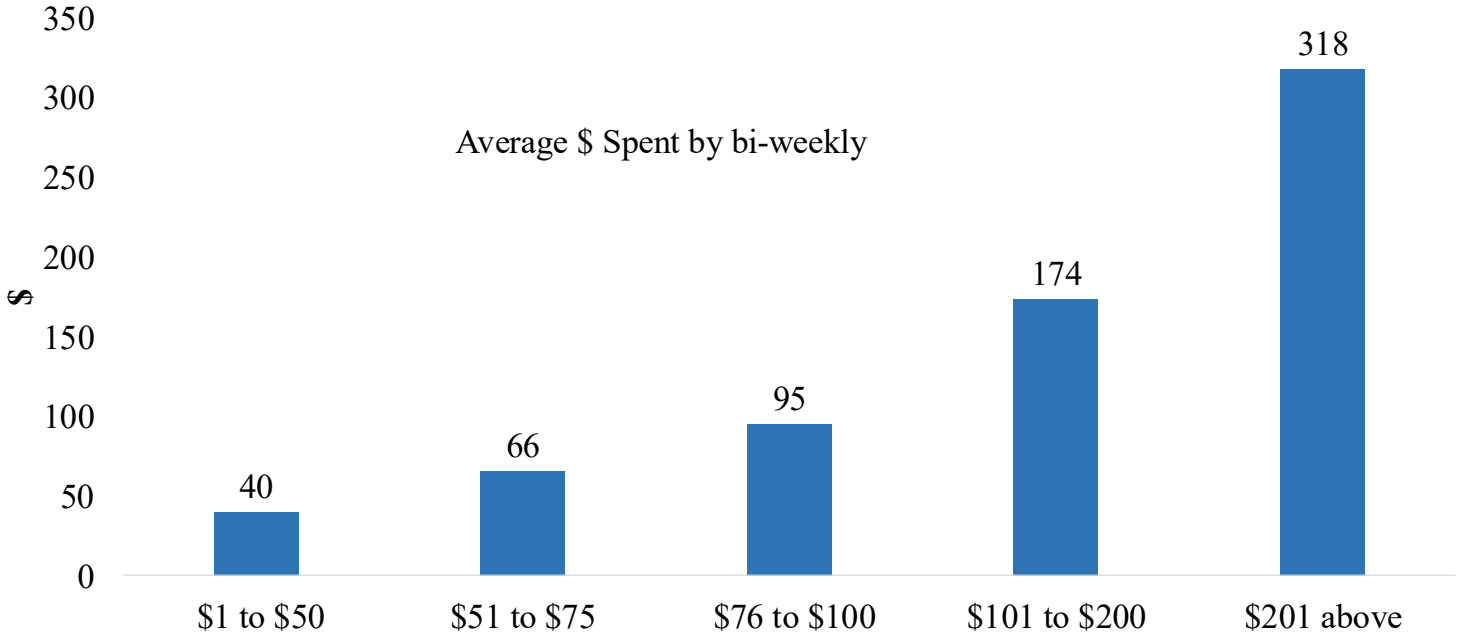
Pohnpei Consumers : How important is it for you that locally processed foods have a long shelf life (does not easily spoil)?



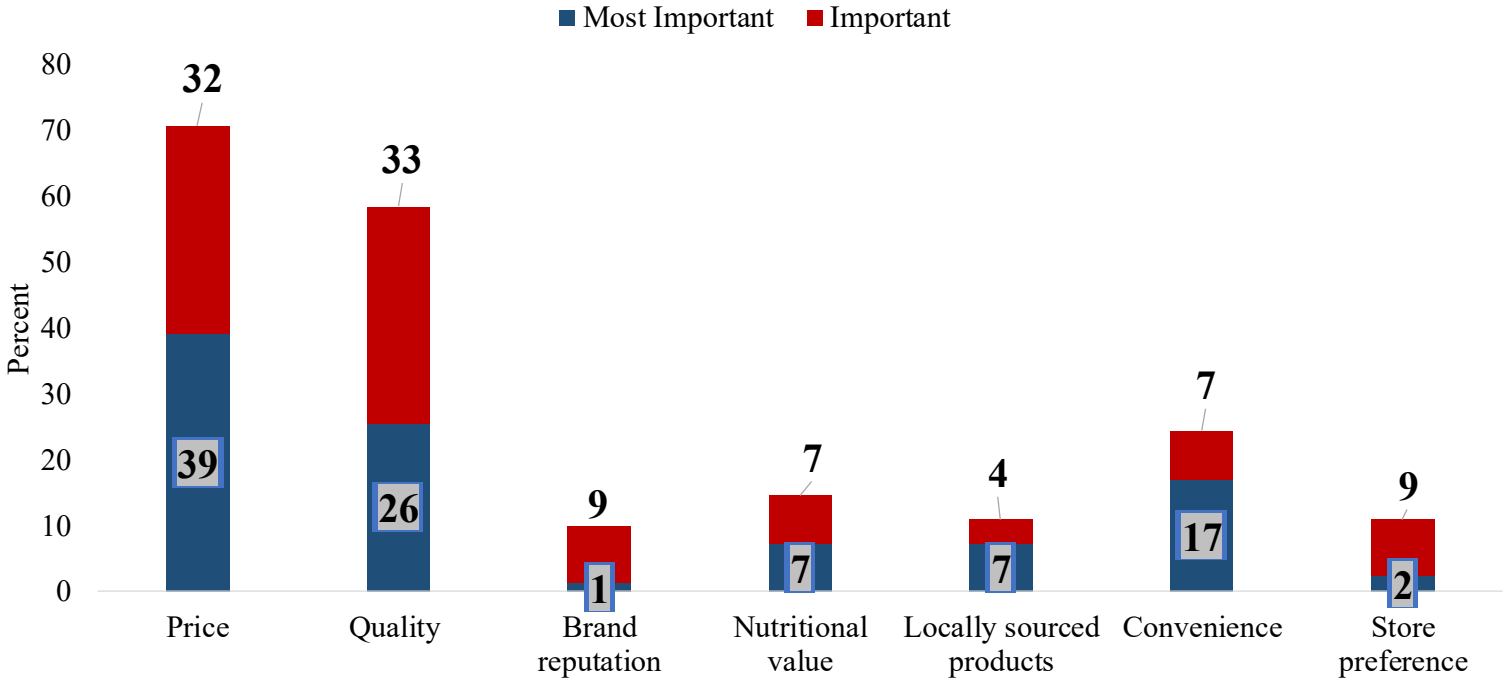
Pohnpei Consumers : How important is it for you to have clear information on the nutritional content, ingredients, of your locally processed foods (labeling) (Example: How many calories, how much sugar, how much salt)?



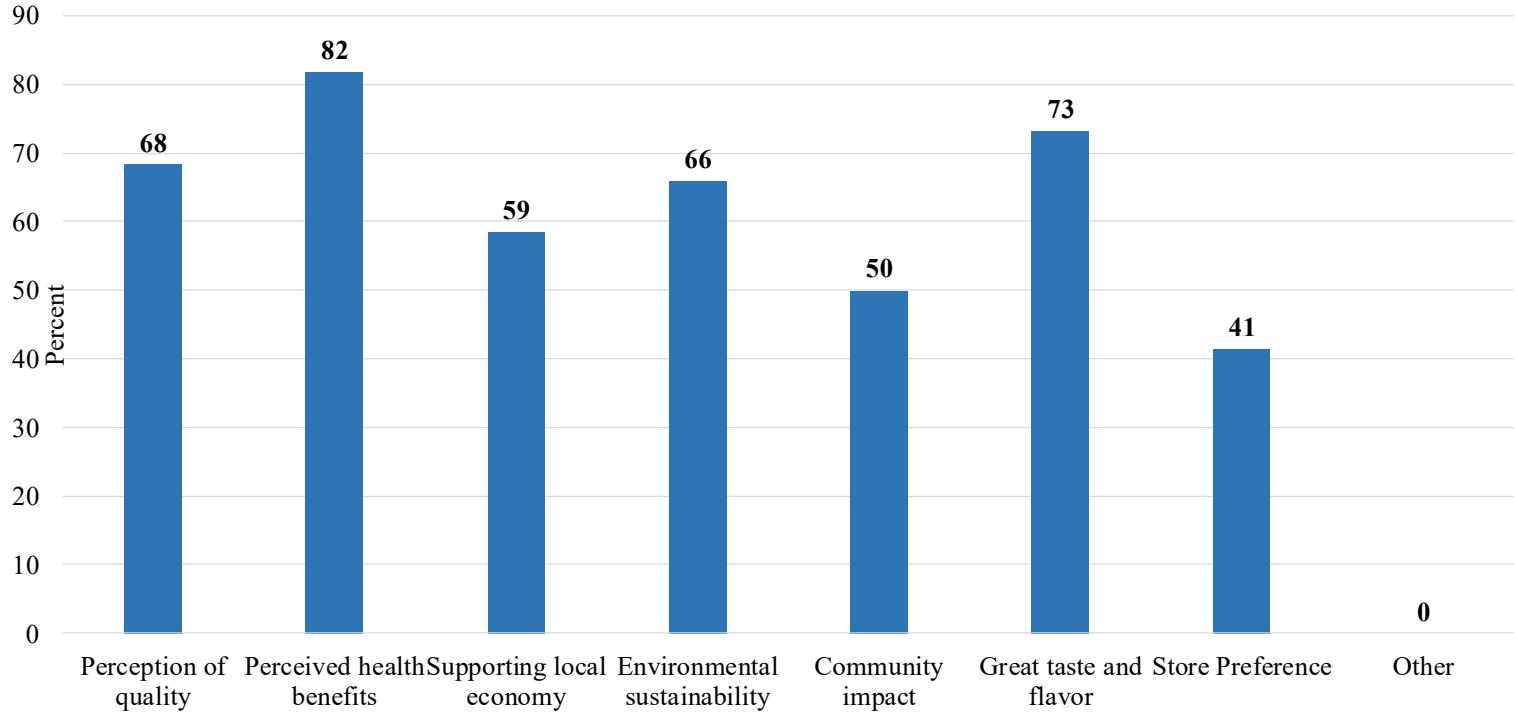
Pohnpei Consumers : Approximately, how much money do you spend each bi-weekly on imported food?



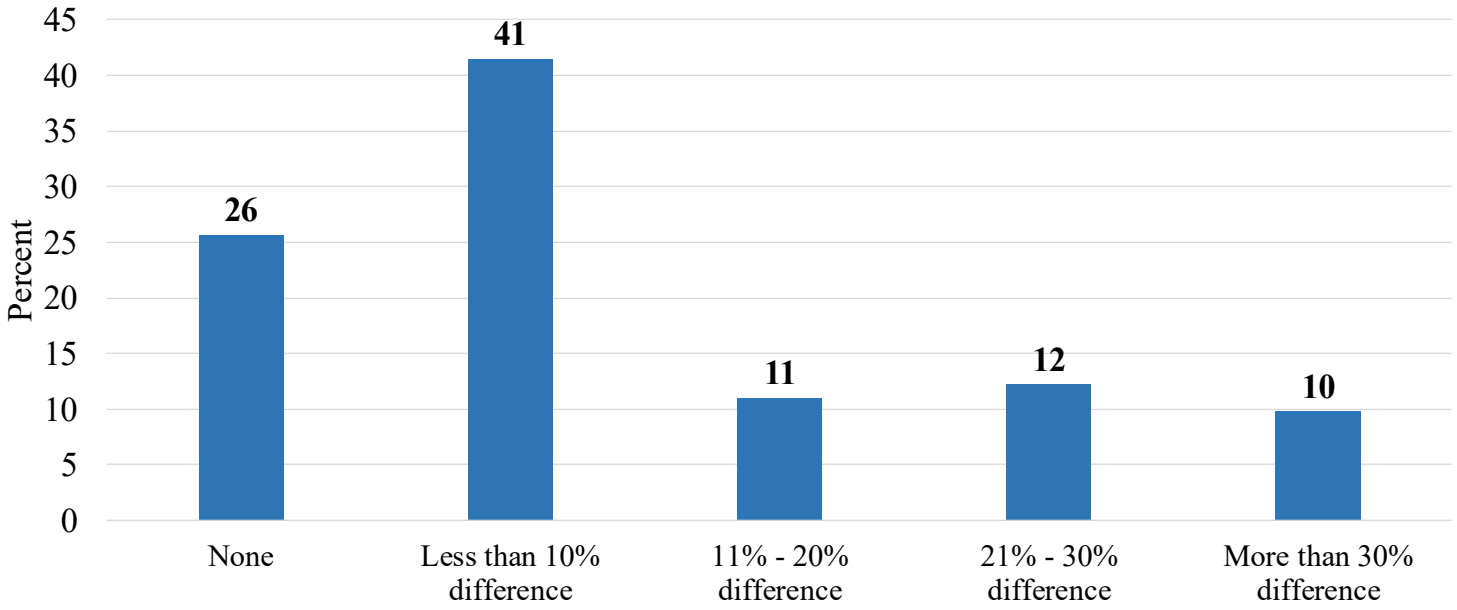
Pohnpei Consumers : When it comes to purchasing food products, which of the following factors influence your spending decisions the most ?



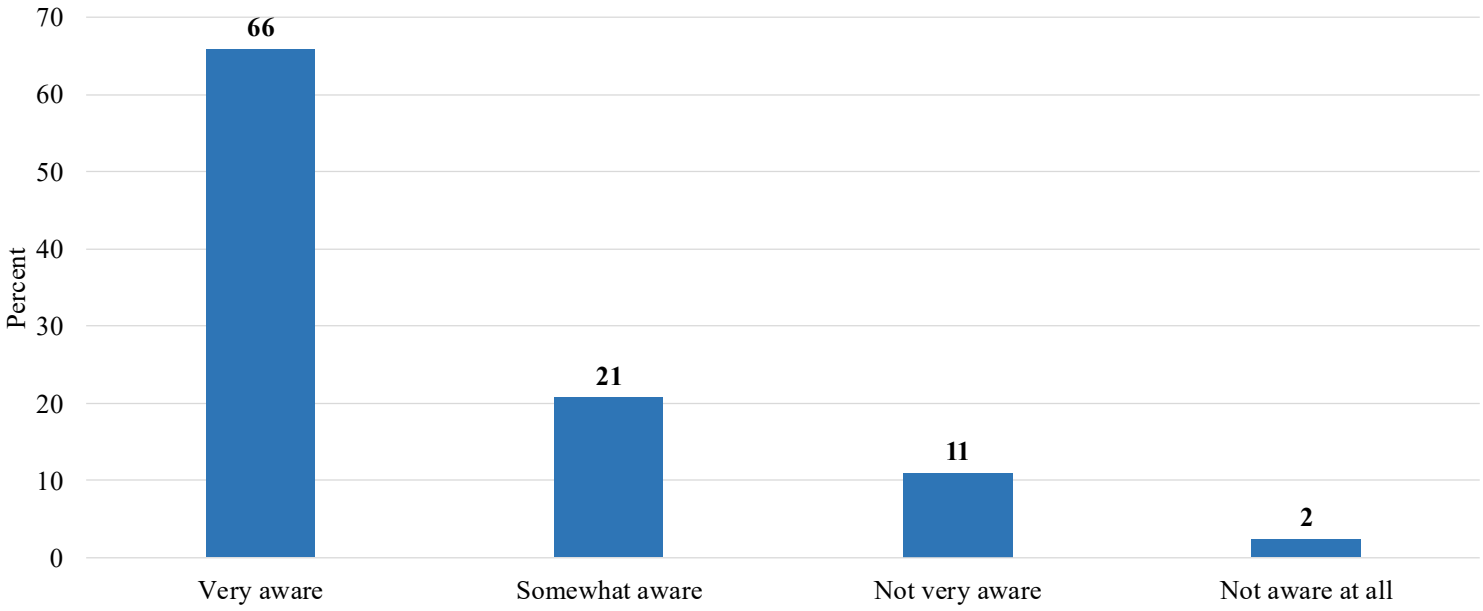
Pohnpei Consumers : What factors would influence your willingness to pay more for local processed products?



Pohnpei Consumers : How much of a price difference would deter you from purchasing locally processed products over an imported alternative ?

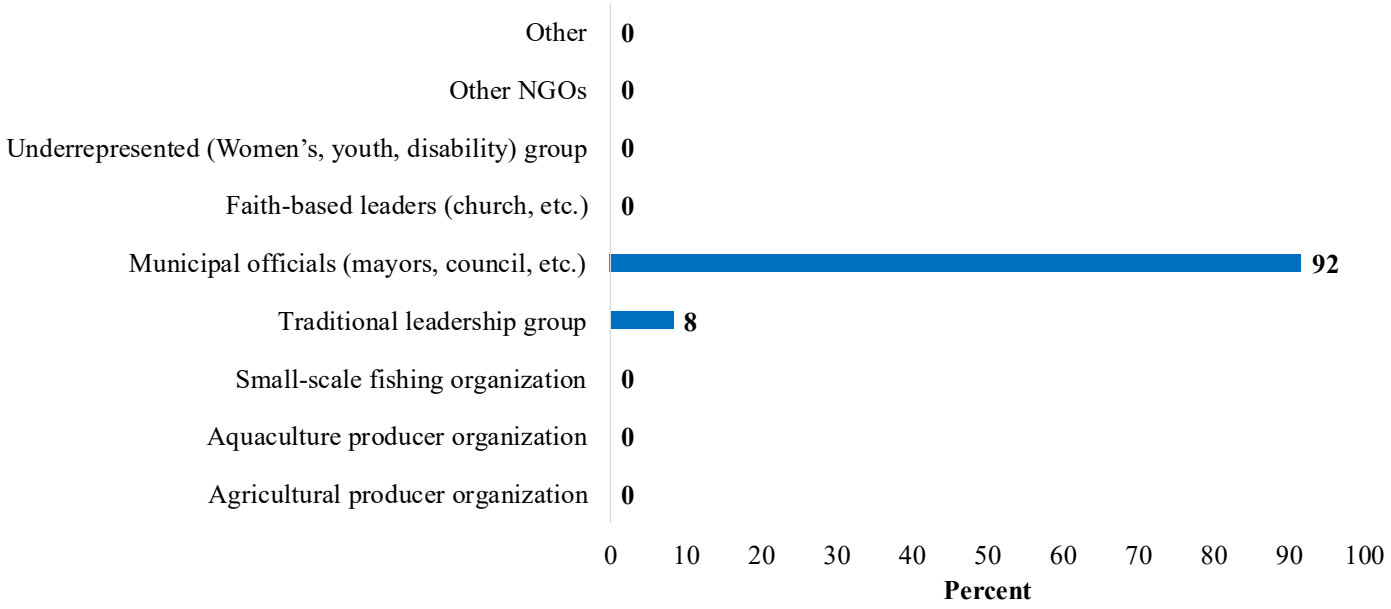


Pohnpei Consumers :How aware are you of locally produced processed products currently available in your town, state and the FSM?

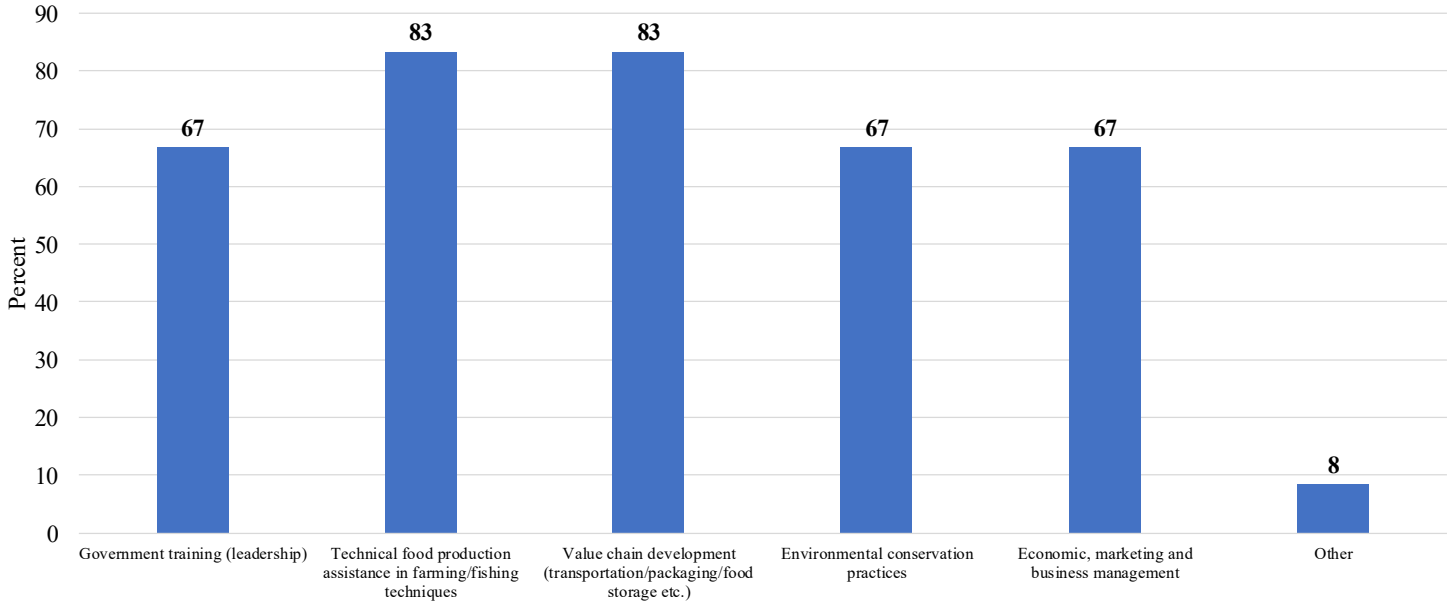


Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Pohnpei State
Community Management

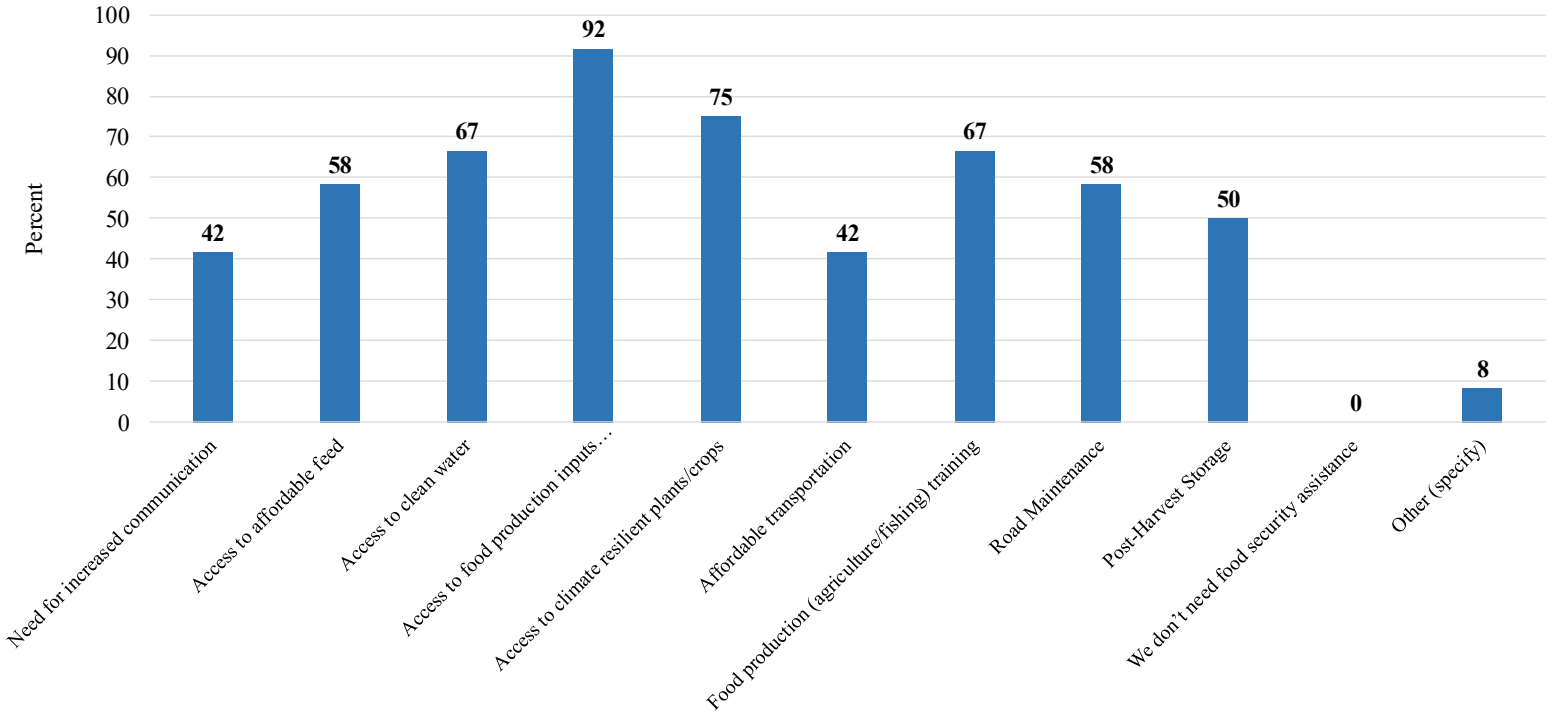
Pohnpei Community Managers : What type of organization/group (NGOs) do you represent?



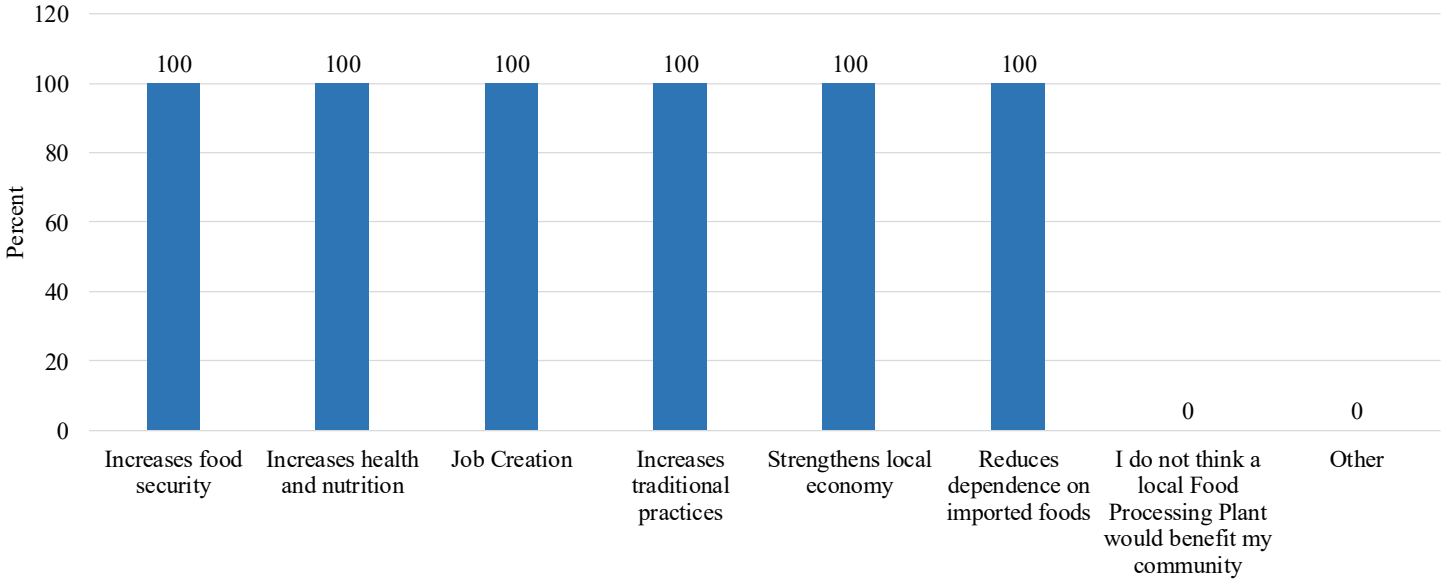
Pohnpei Community Managers : What areas do you think your organization/community may need support for more effective management of your farming families and food producers?



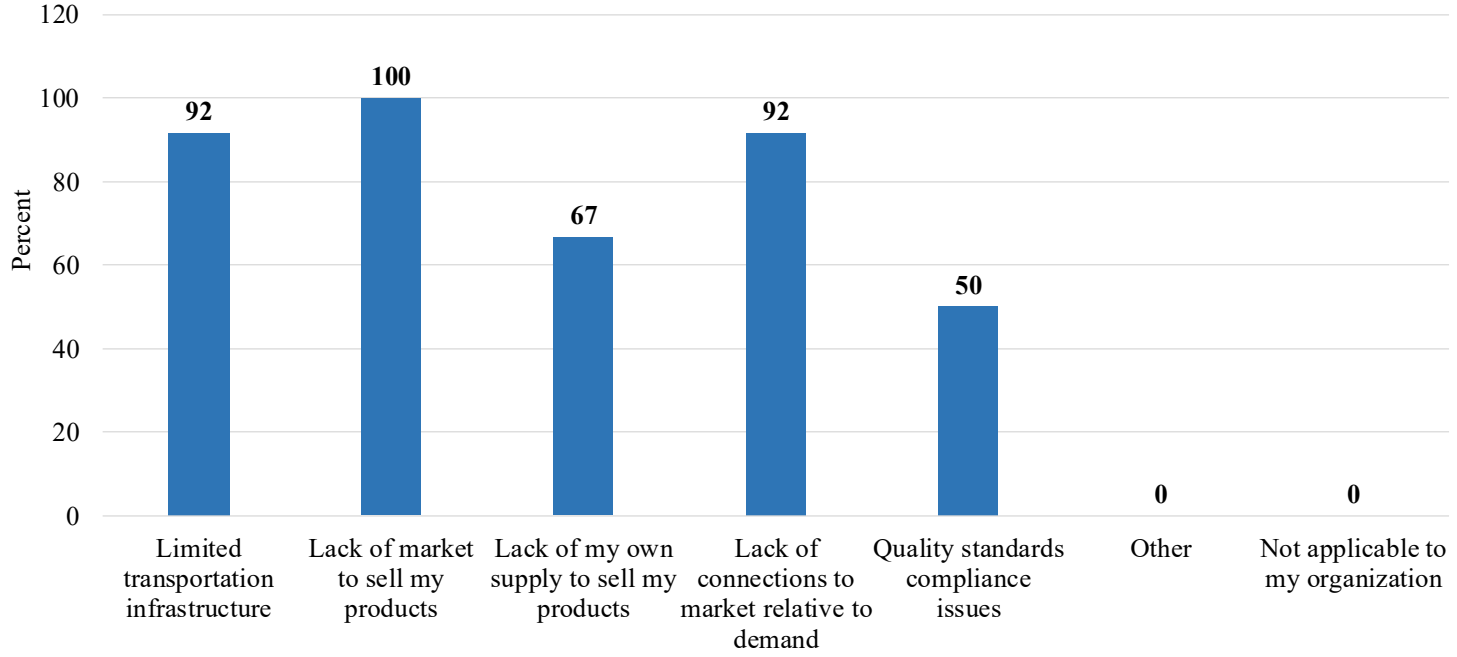
Pohnpei Community Managers : What food production challenges/needs are your organization/community members bringing to you seeking assistance ?



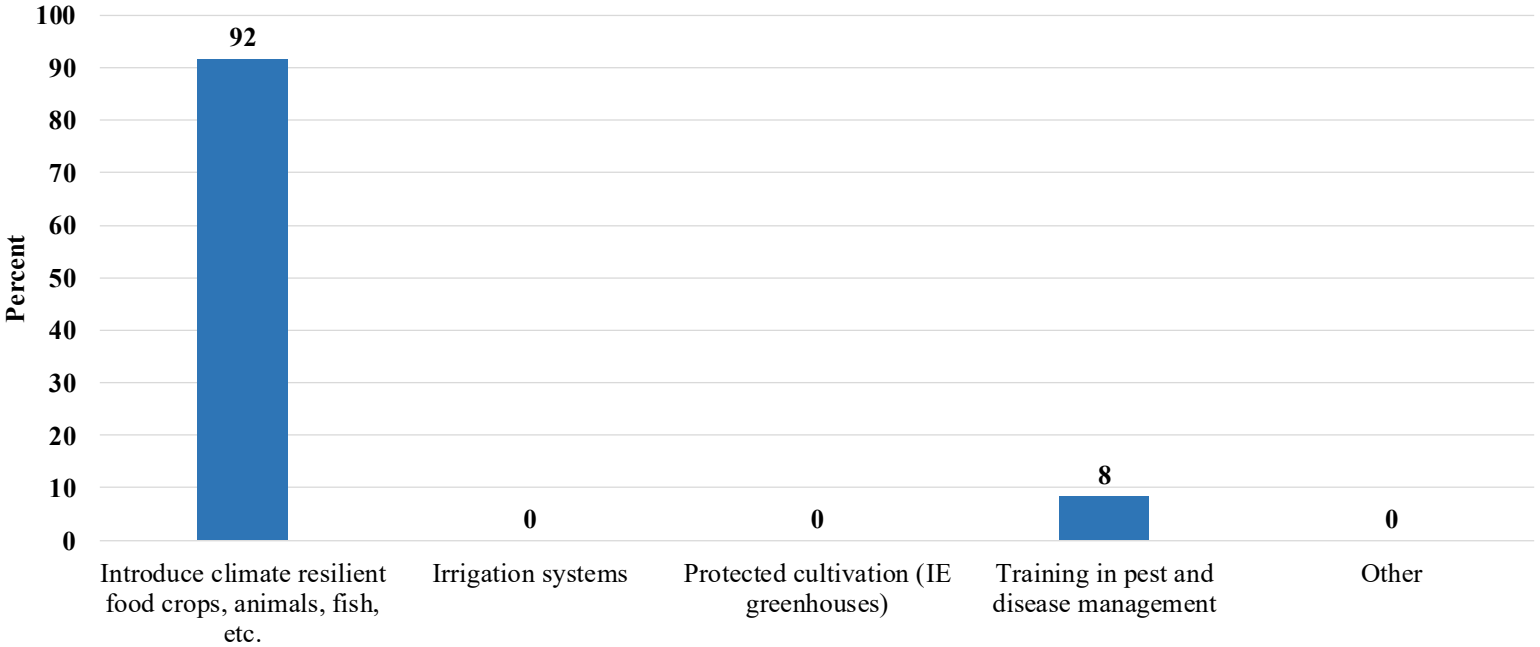
Pohnpei Community Managers : In what ways do you feel a local food processing plant (Food Innovation Center) supports the goals and needs of your organization/community ?



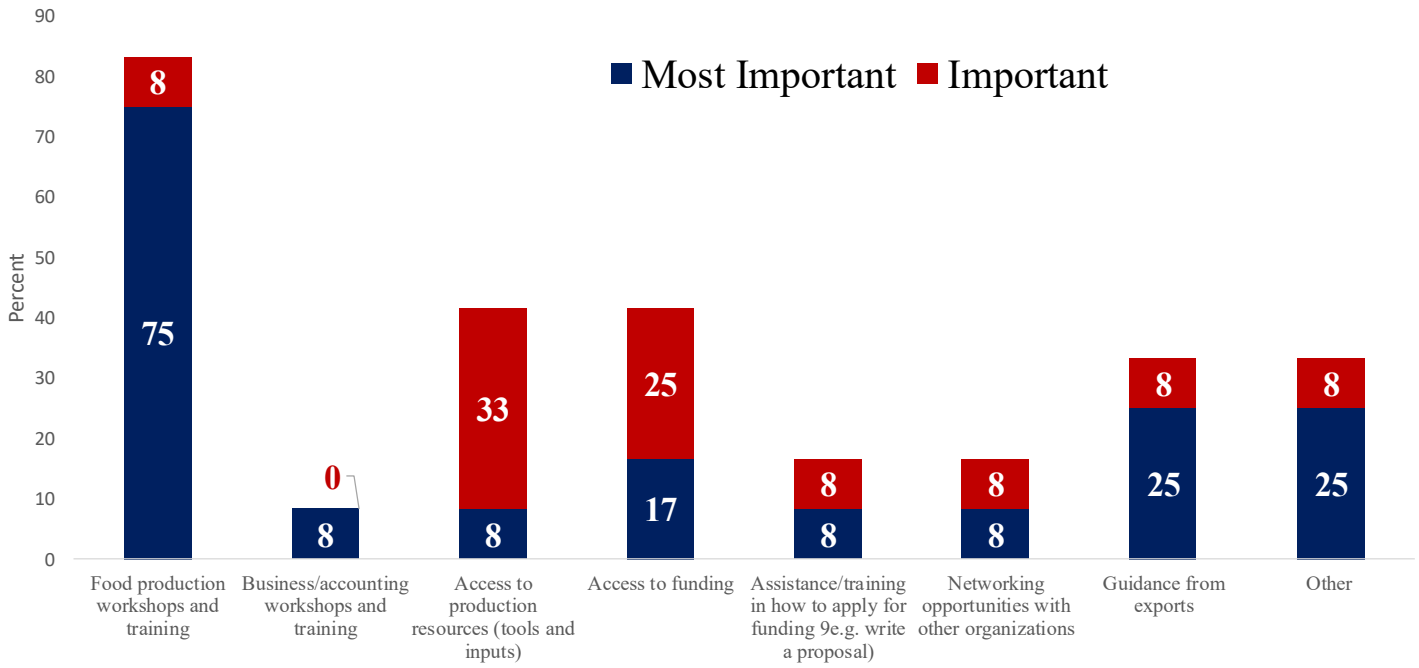
Pohnpei Community Managers : What challenges does your organization/community face in accessing markets for your agricultural or aquatic products?



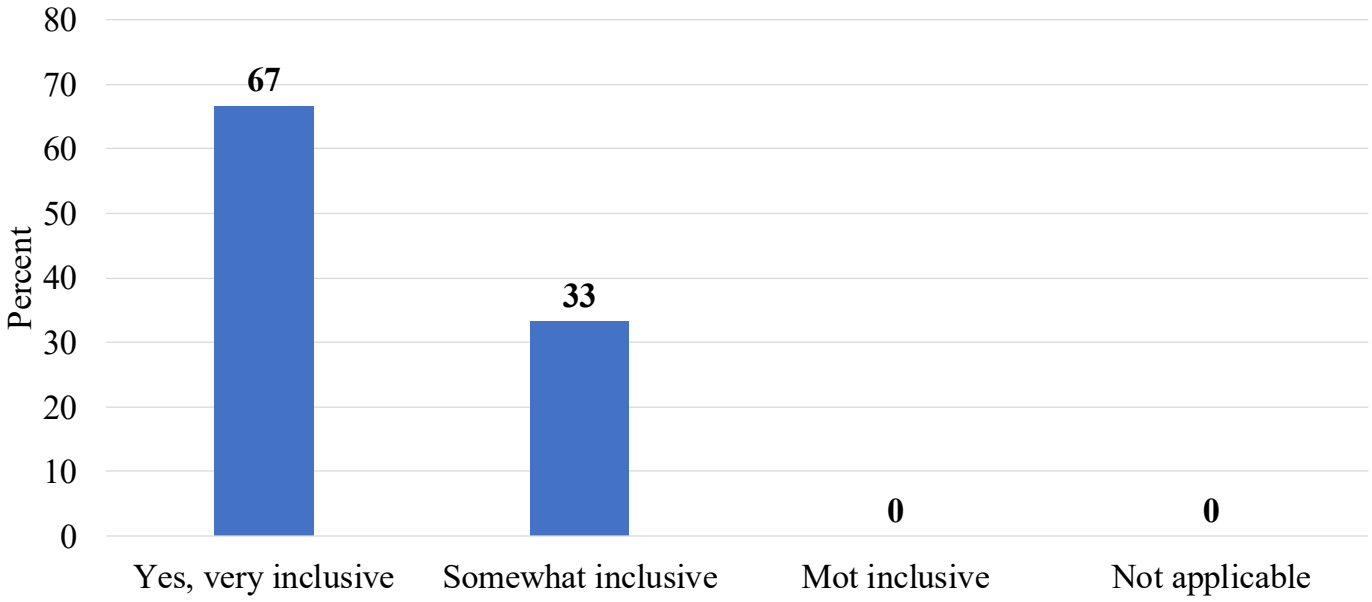
Pohnpei Community Managers : What climate smart strategies would you be interested in employing to best support the needs of your organization/community ?



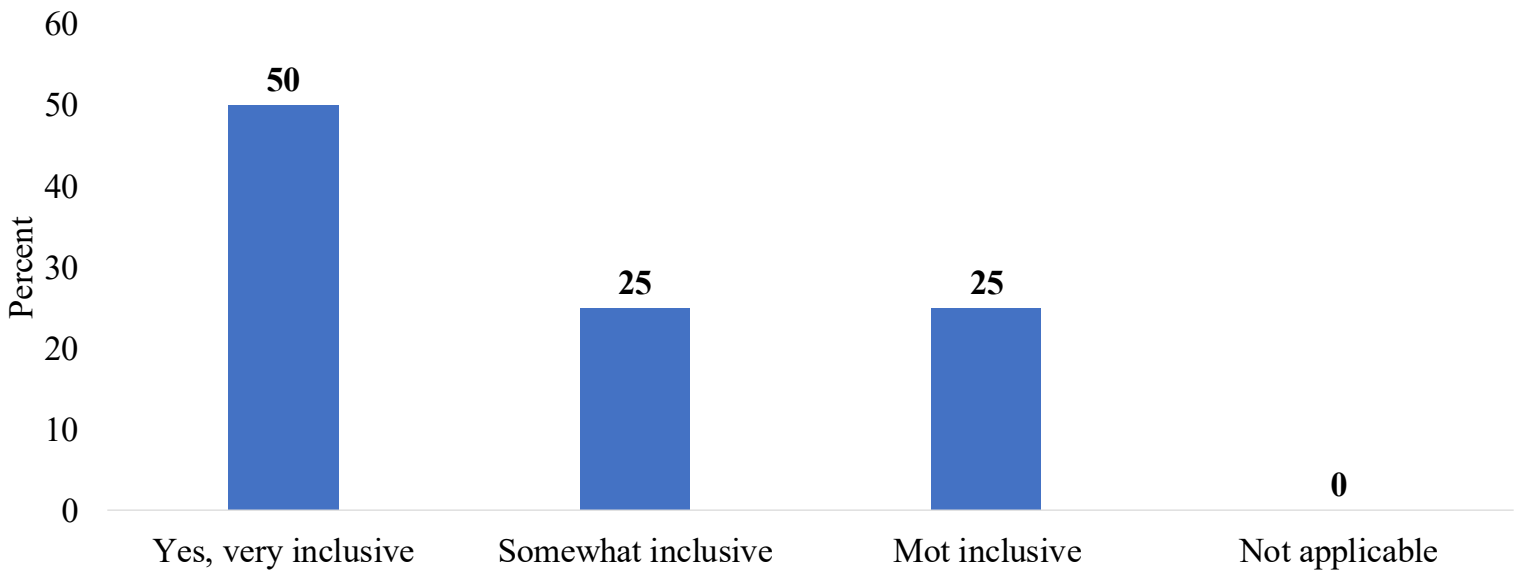
Pohnpei Community Managers : What type of support do you feel would be most helpful to your food producers ?



Pohnpei Community Managers : Do you feel your organization/community is inclusive to differently-abled and senior citizens in decision-making processes and leadership roles ?



Pohnpei Community Managers : Does your organization/community engage youth (ages 13-35) in training and participation?



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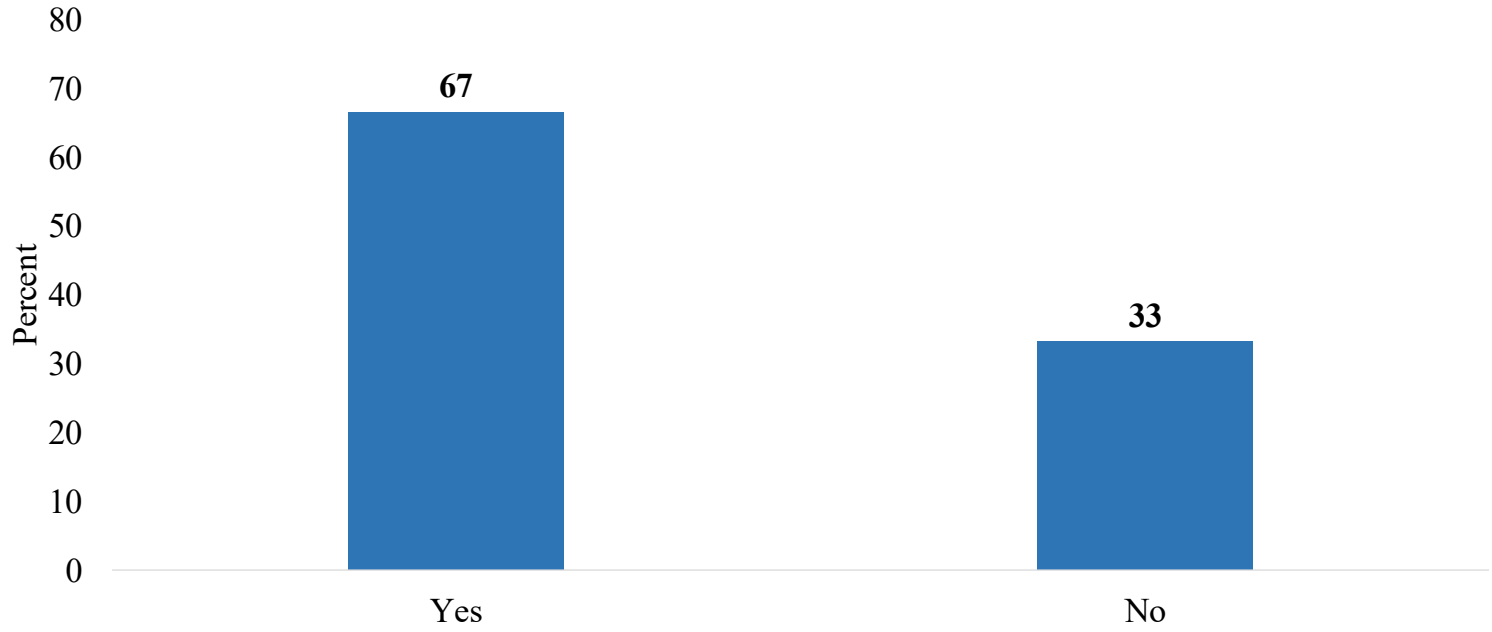
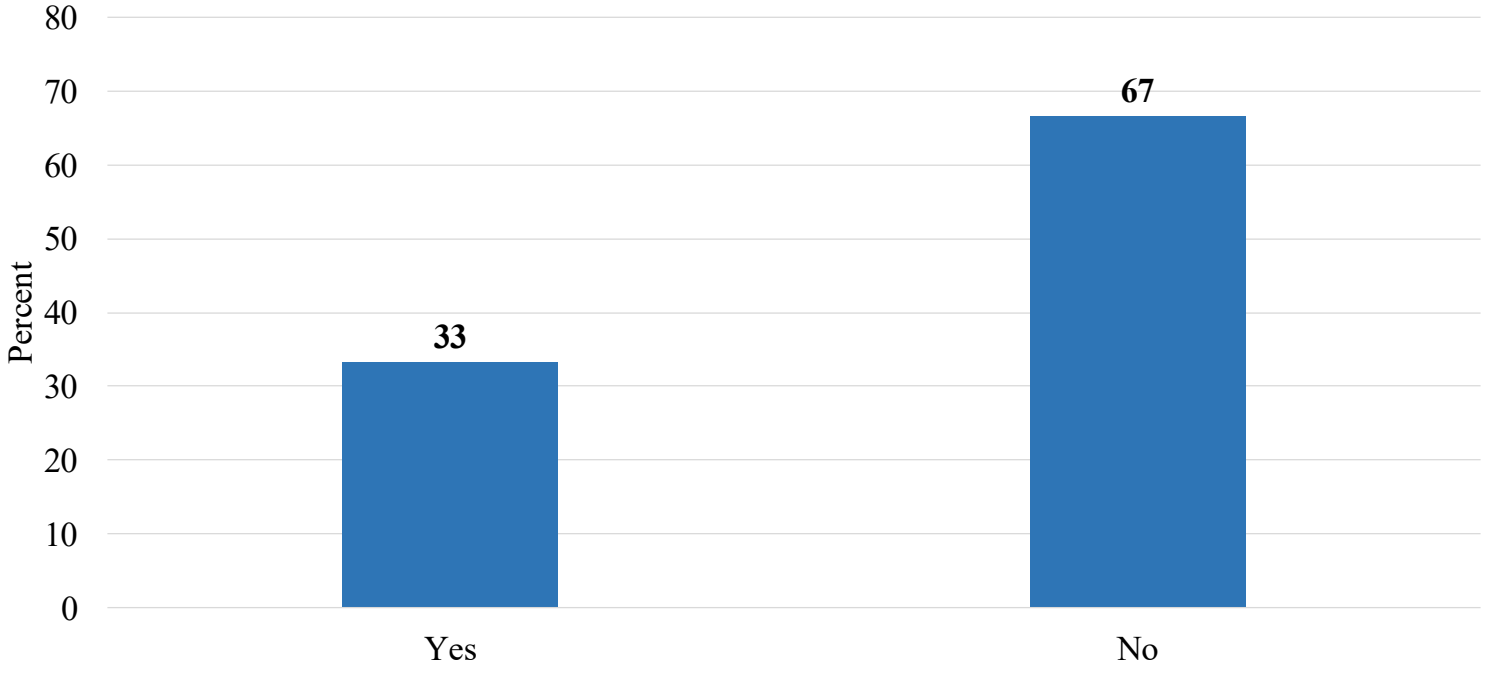
FSS Survey Data Tables and Charts
Pohnpei State
IIP & IT

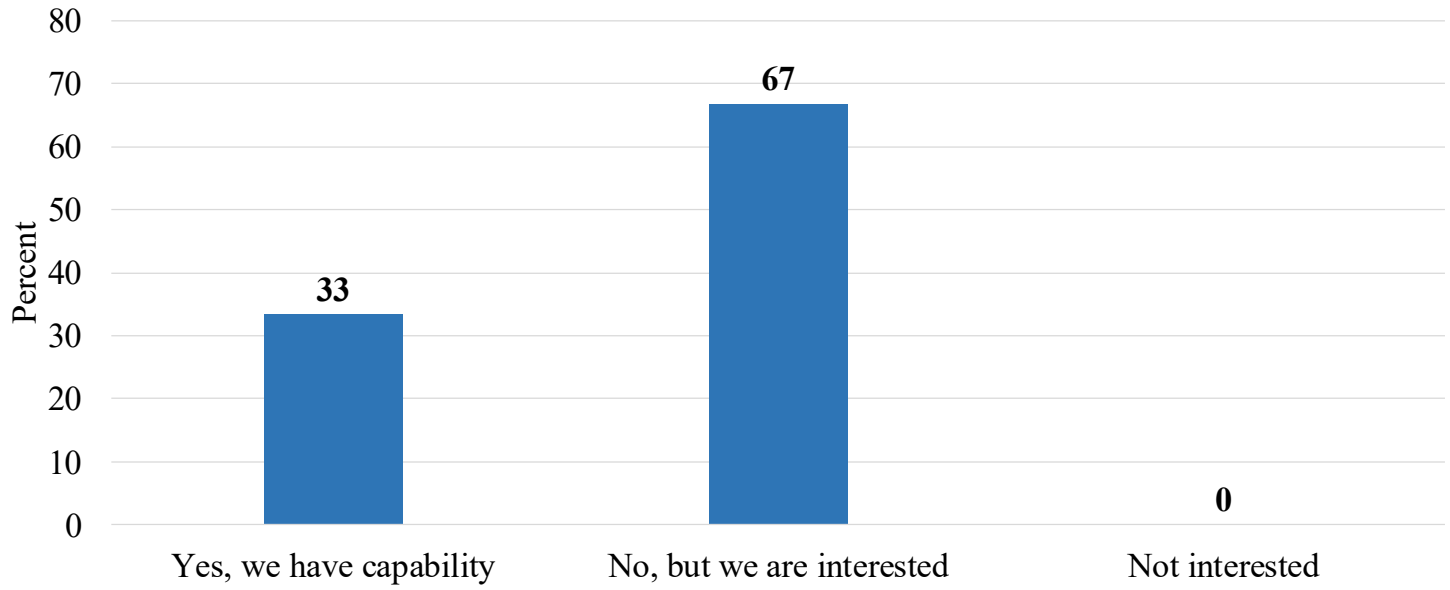
Pohnpei IIP and IT : Is there now (using Emergency Responders or other specialized means) a way to utilize content delivery networks (CDNs), for example to distribute agricultural content across servers closer to the islands, reducing the distance data needs to travel ?



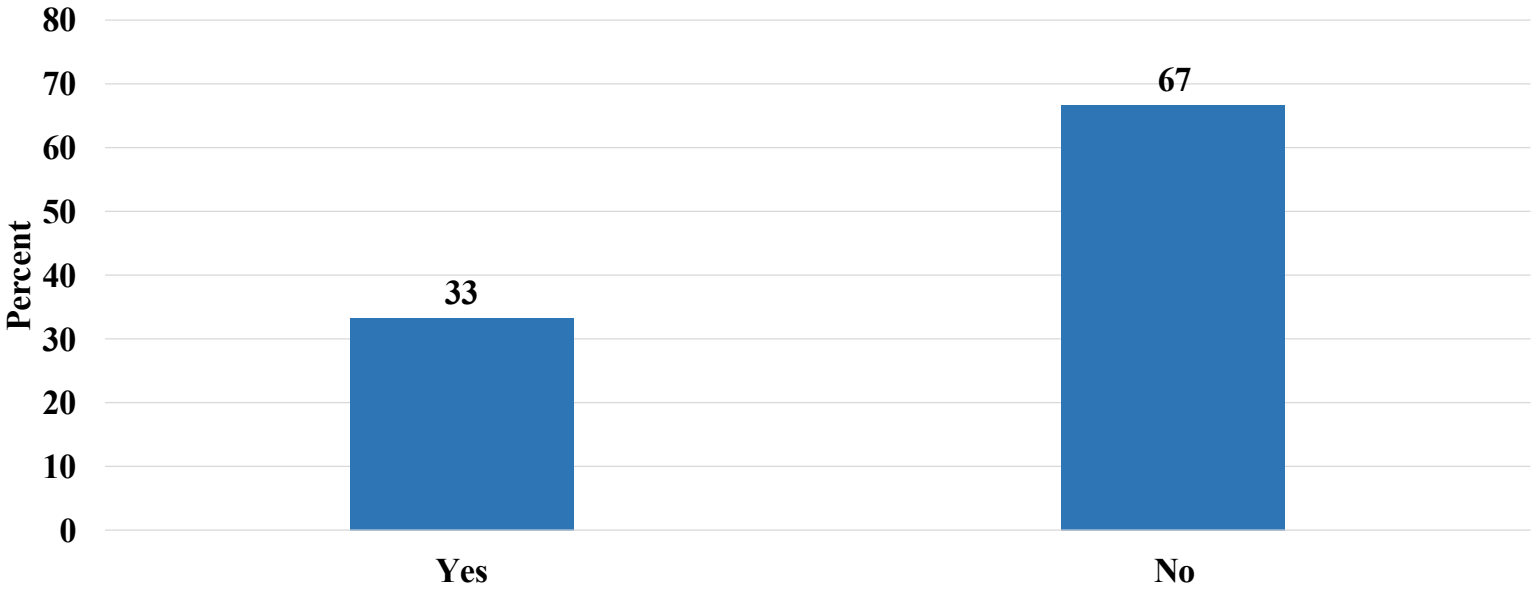
Pohnpei IIP and IT : Do you already have or can you set-up voice-based hotlines with interactive voice response (IVR) systems to provide agricultural information and guidance ?



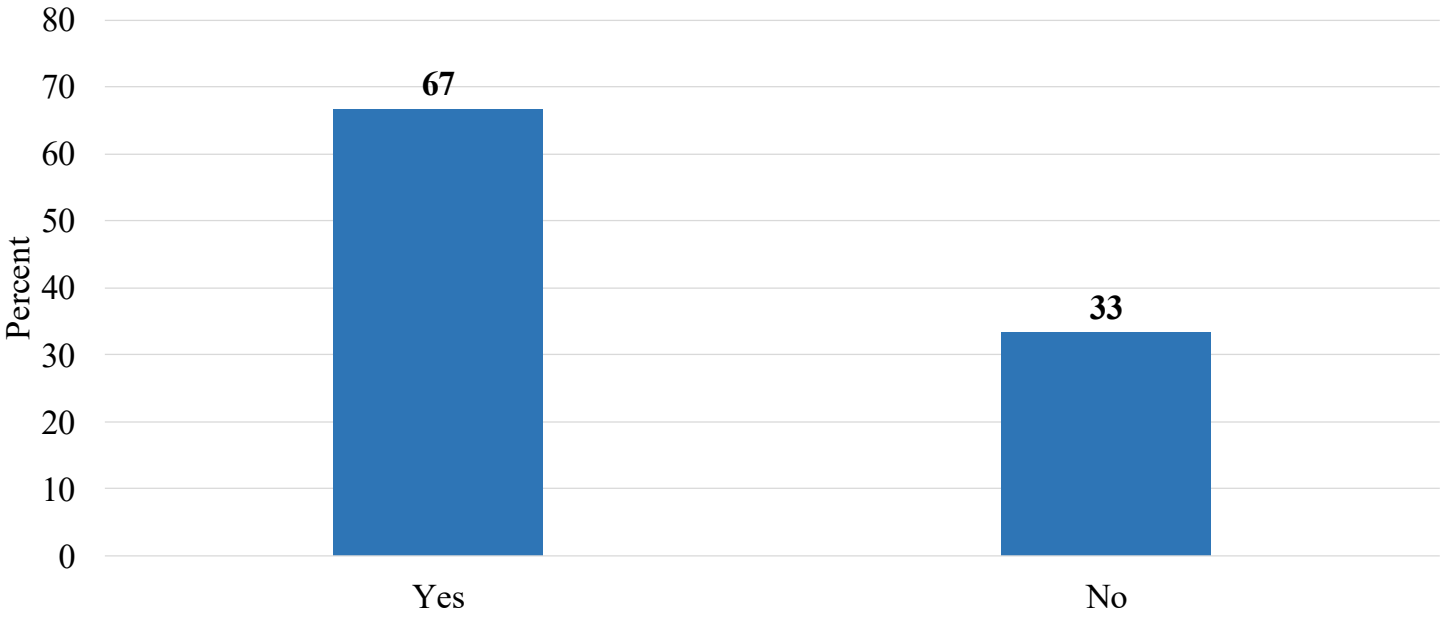
Pohnpei IIP and IT : Do you have capability and interest in SMS-based systems to deliver agricultural information, market updates, and weather forecasts to growers and residents?



Pohnpei IIP and IT : Does your company have plans to recommend the implementation of traffic management techniques, such as quality of service (QoS), to prioritize agricultural information dissemination over non-critical data?

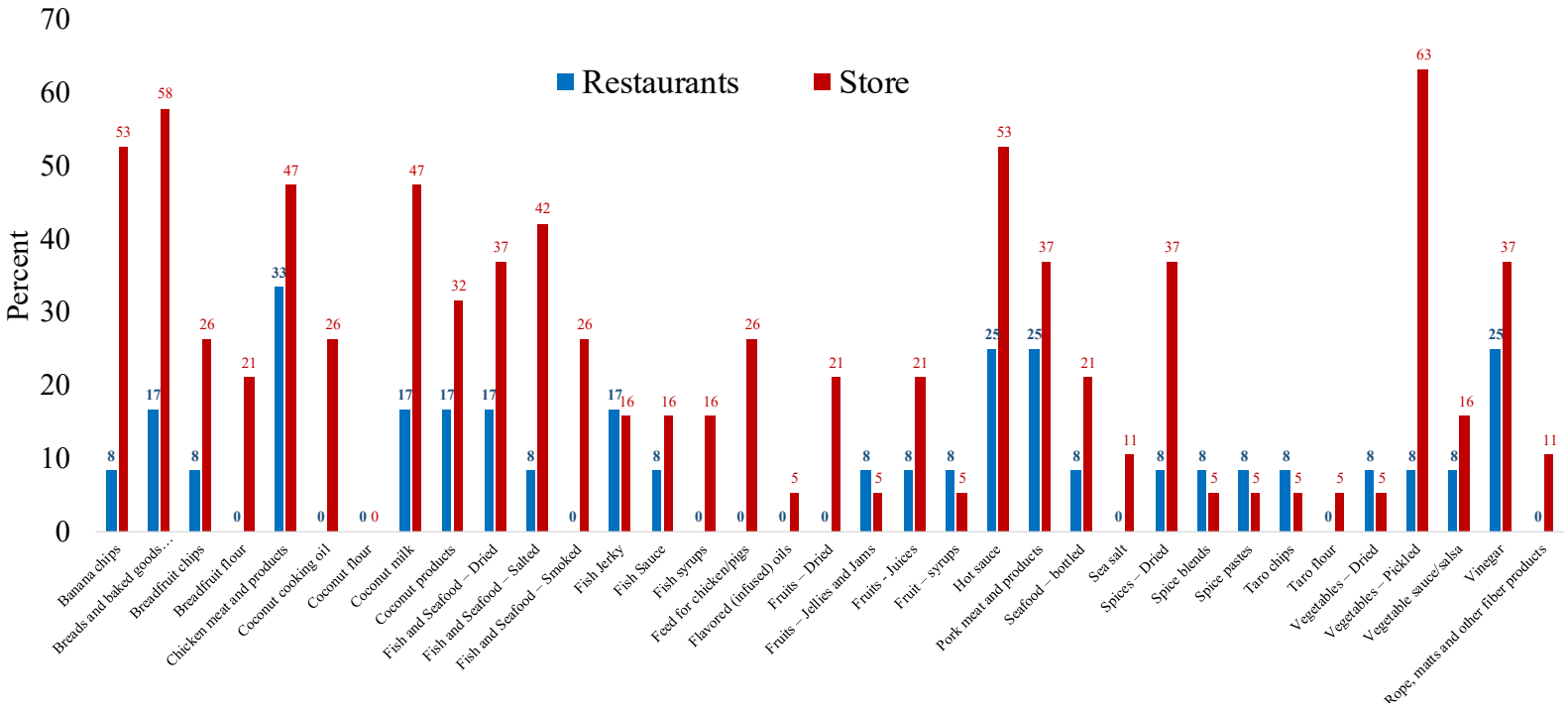


Pohnpei IIP and IT : Do you now use cloud-based solutions to enhance scalability and accessibility ?

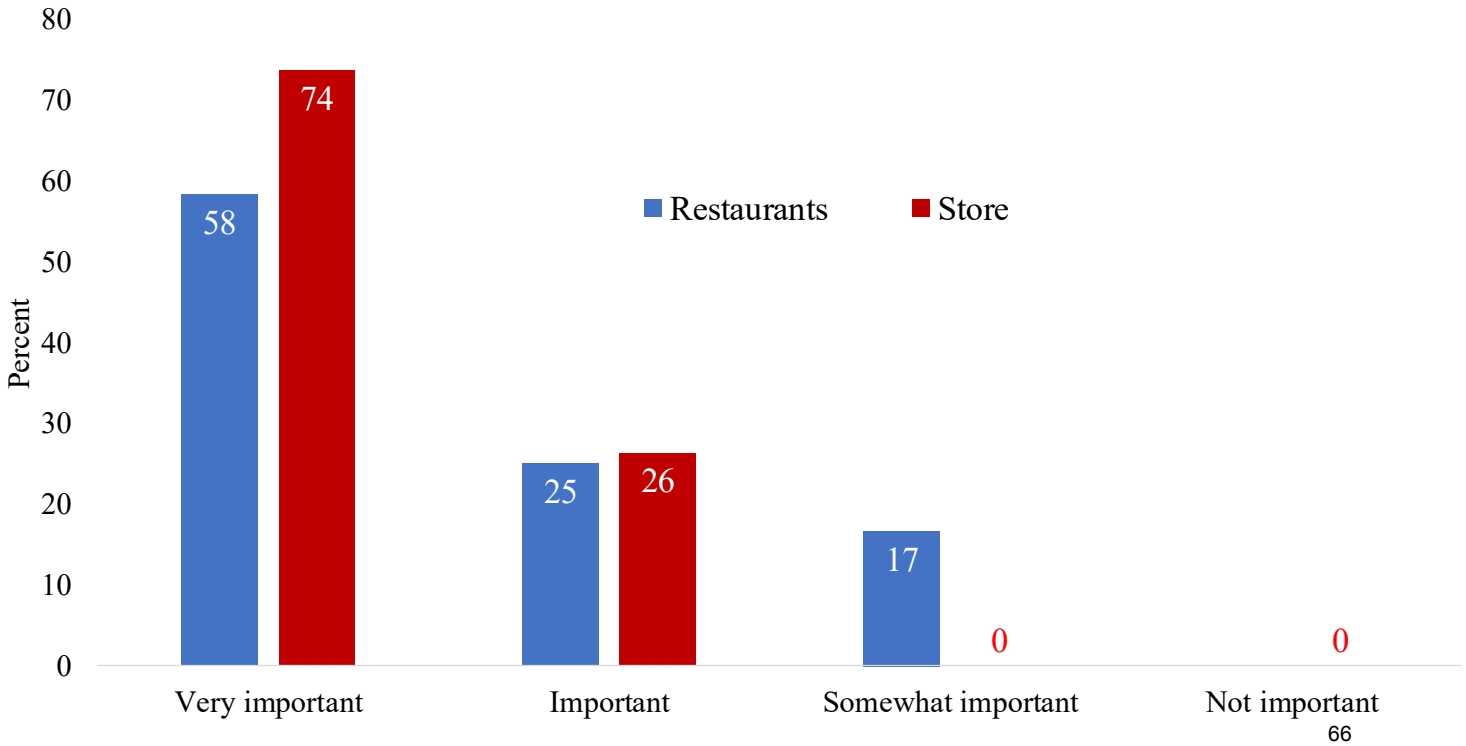


Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Pohnpei State
Restaurants and Stores

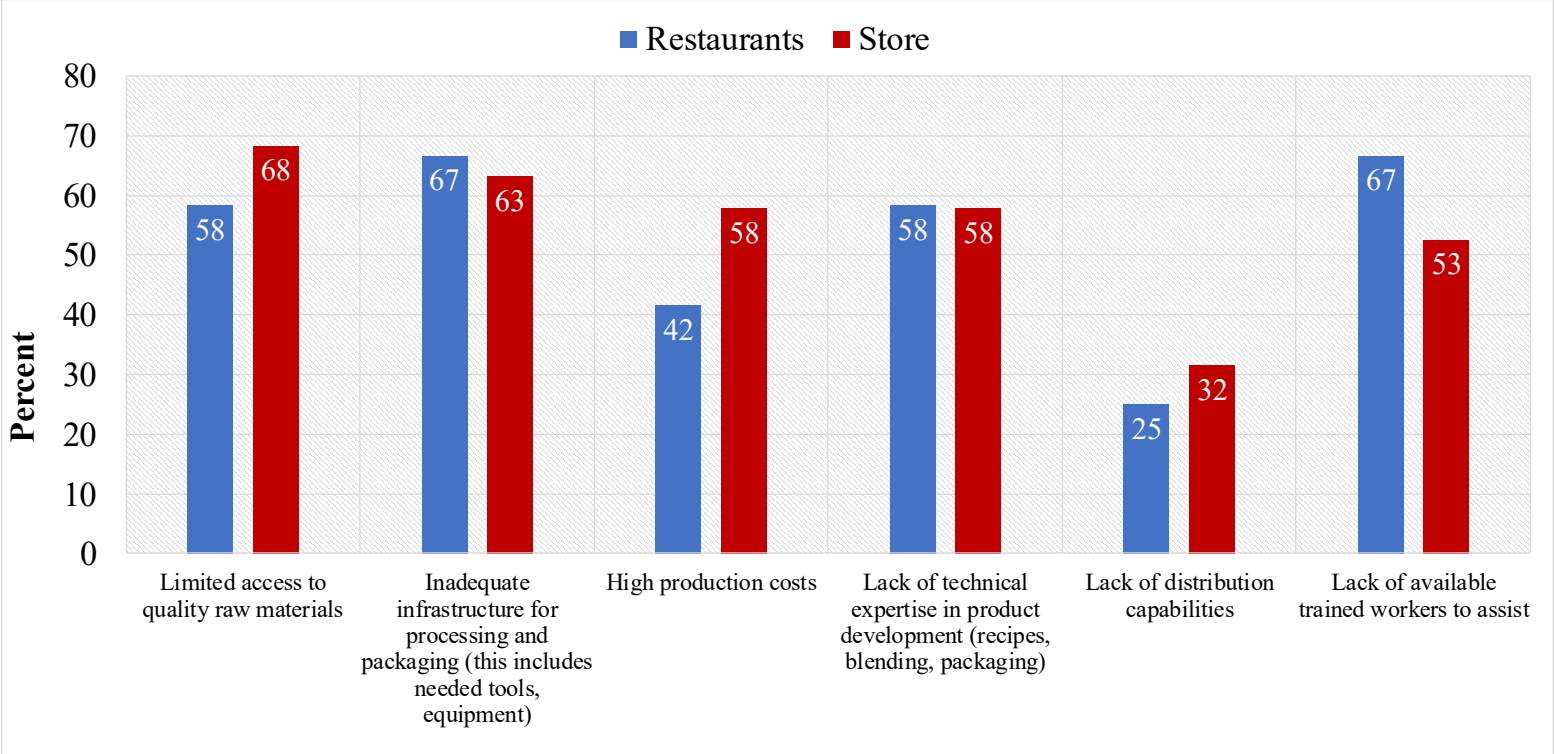
Restaurants and Store : What type of locally made processed food products does your business currently sell?



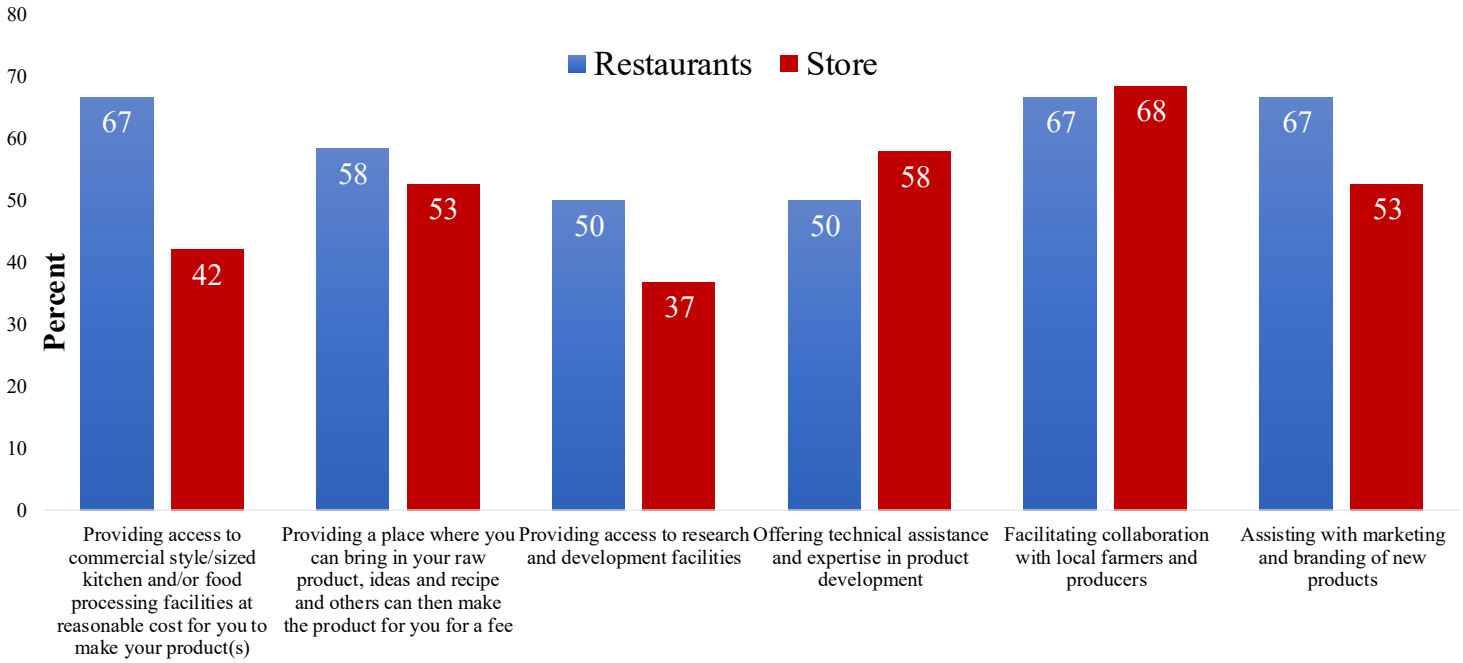
Restaurants and Store : How important do you believe making available locally made processed food products for the food industry in your state ?



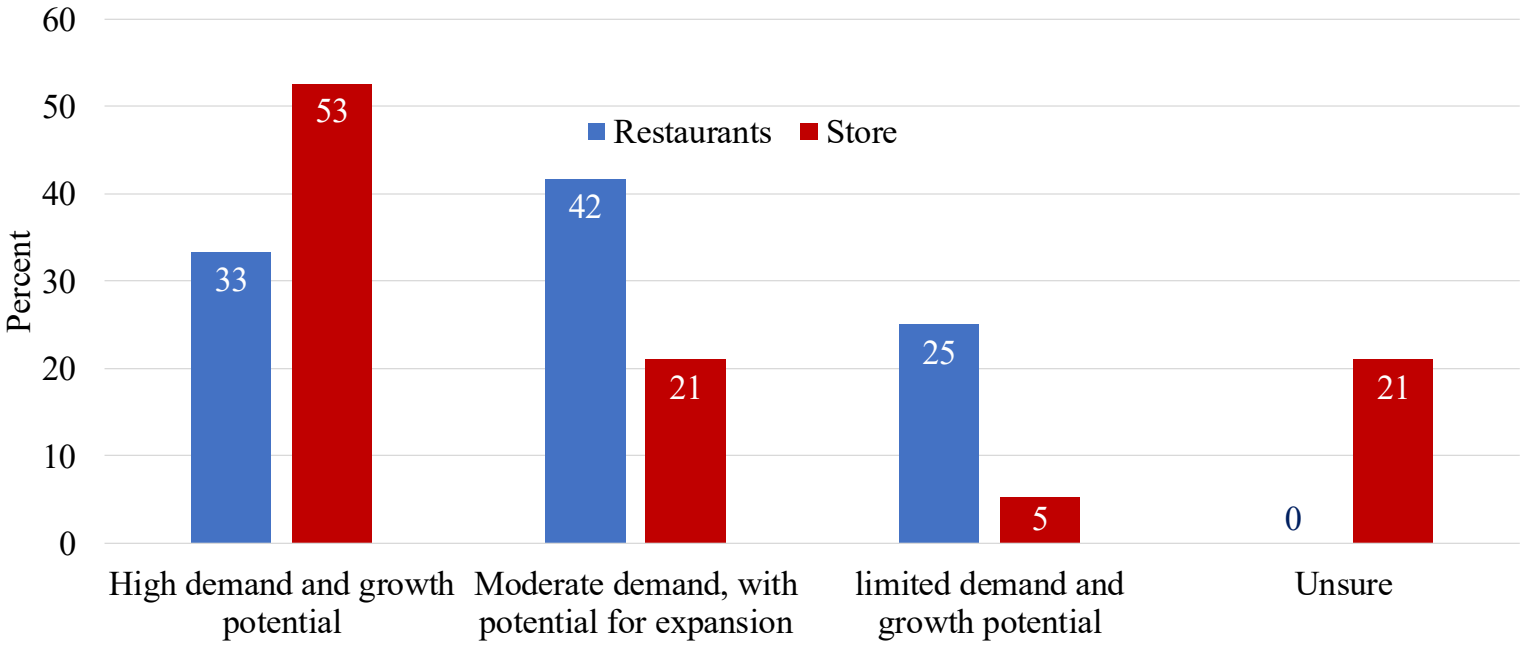
Restaurants and Store : What specific challenges do you face in sourcing or producing locally made processed food products in your state ?



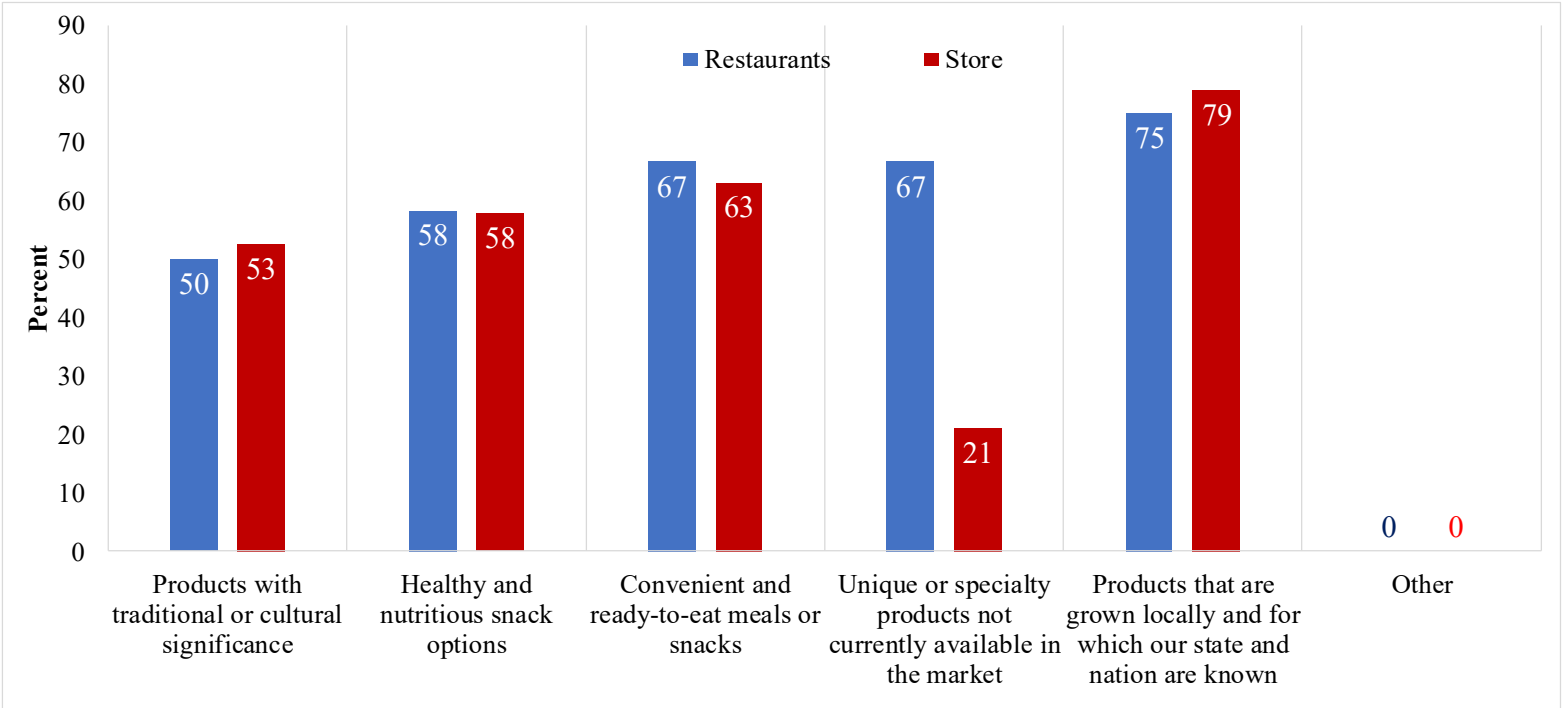
Restaurants and Store : How do you think a food innovation (or incubator) center could benefit your business and the food industry in your state ?



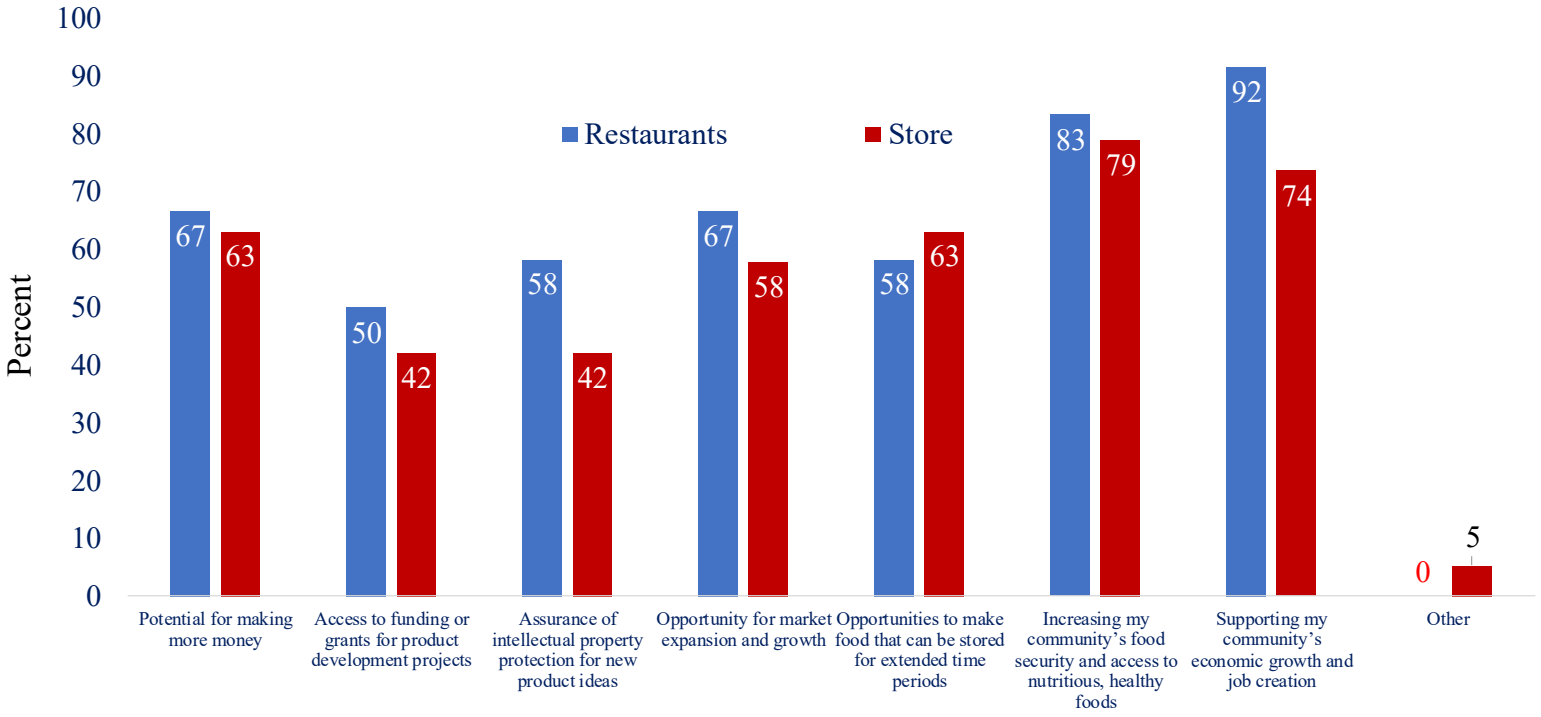
Restaurants and Store : How do you perceive the current demand for locally processed food products in your state and FSM ?



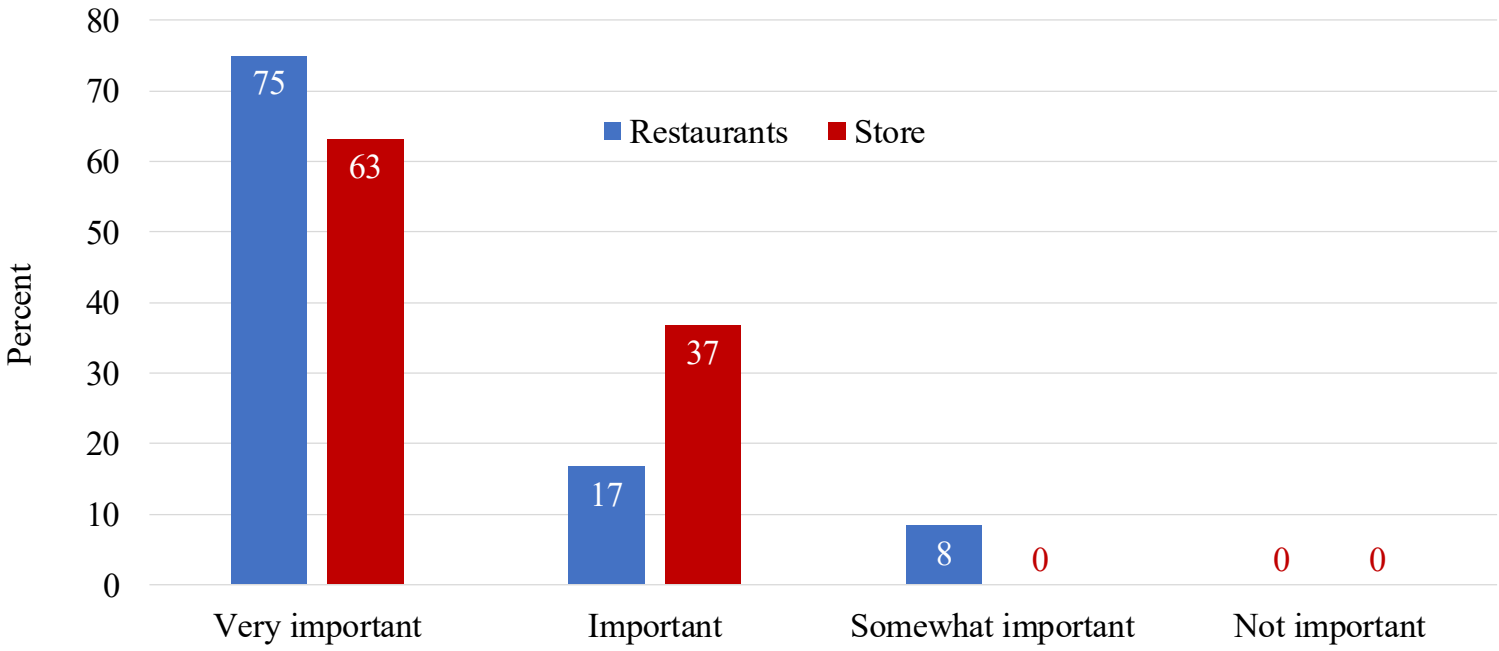
Restaurants and Store : What types of locally processed food products do you believe have the highest potential for success in your state and in the FSM market ?



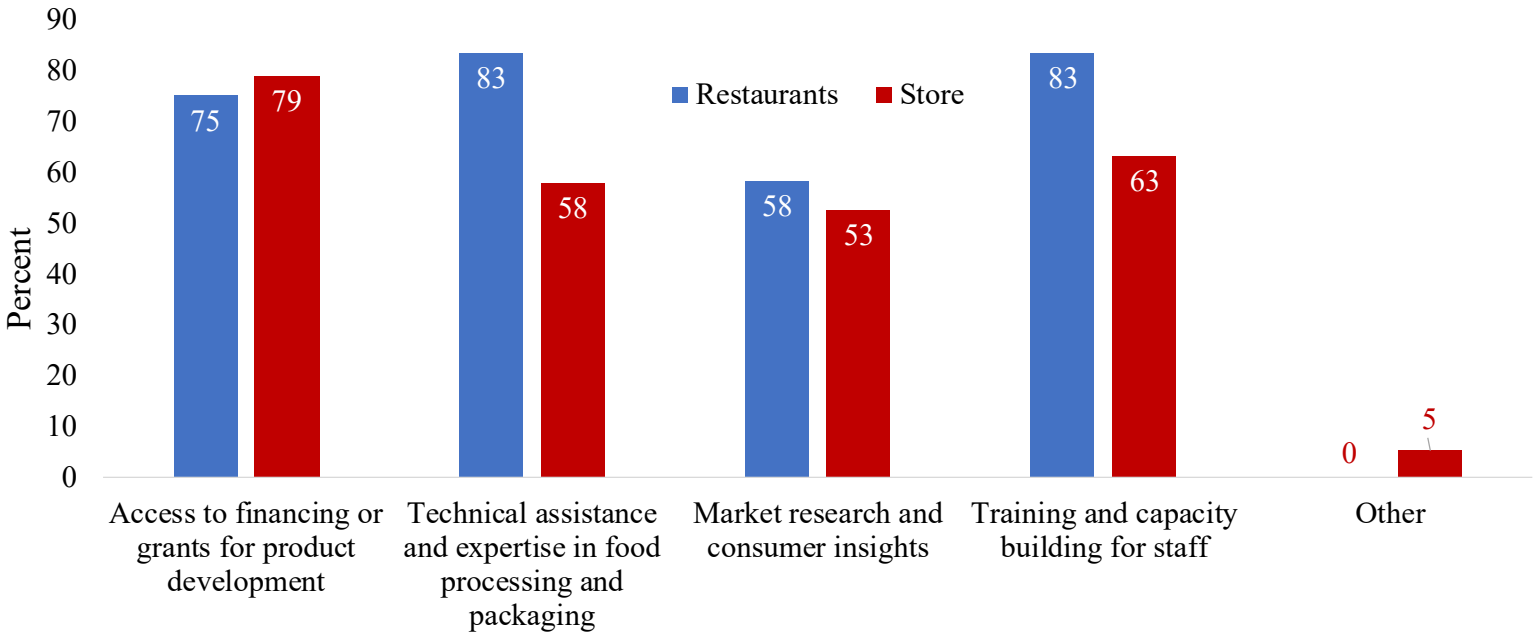
Restaurants and Store : Which factors would influence your willingness to collaborate with a food innovation center ?



Restaurants and Store : How important do you think it is for locally made processed food products to incorporate locally sourced ingredients or flavors ?



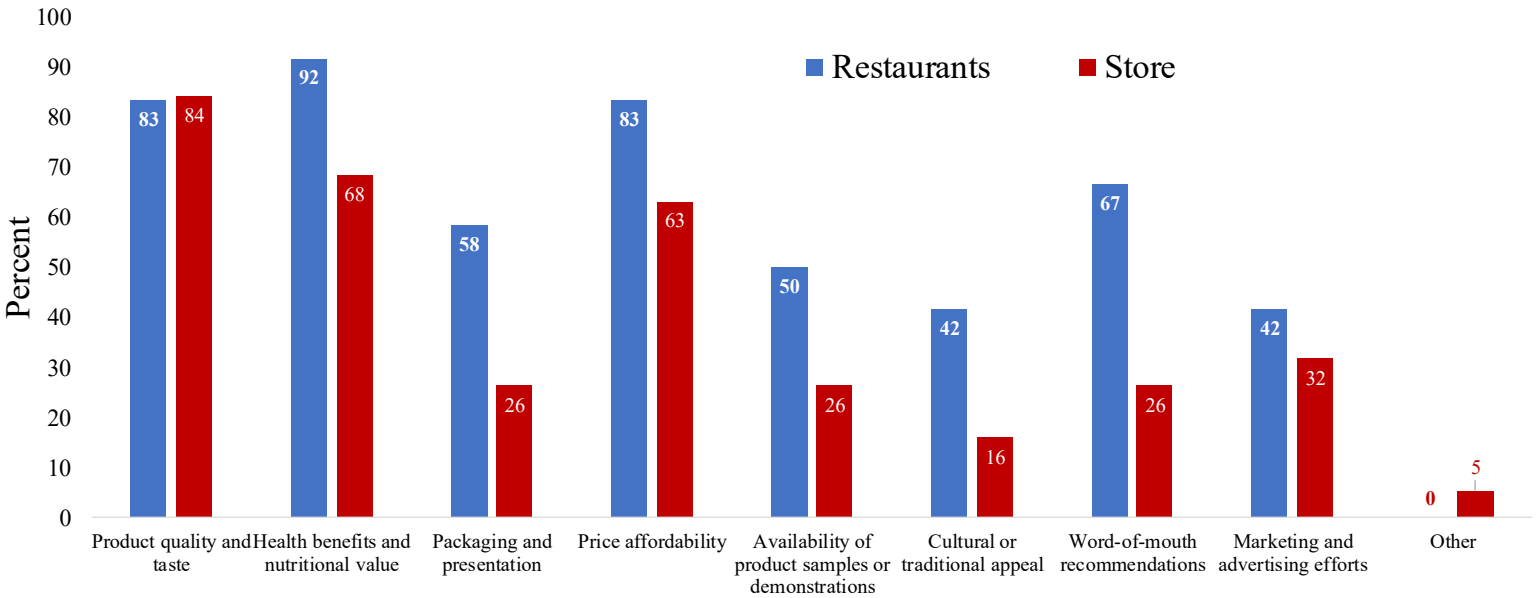
Restaurants and Store : What support or resources do you believe would be most beneficial for your business in developing and marketing new locally processed food products ?



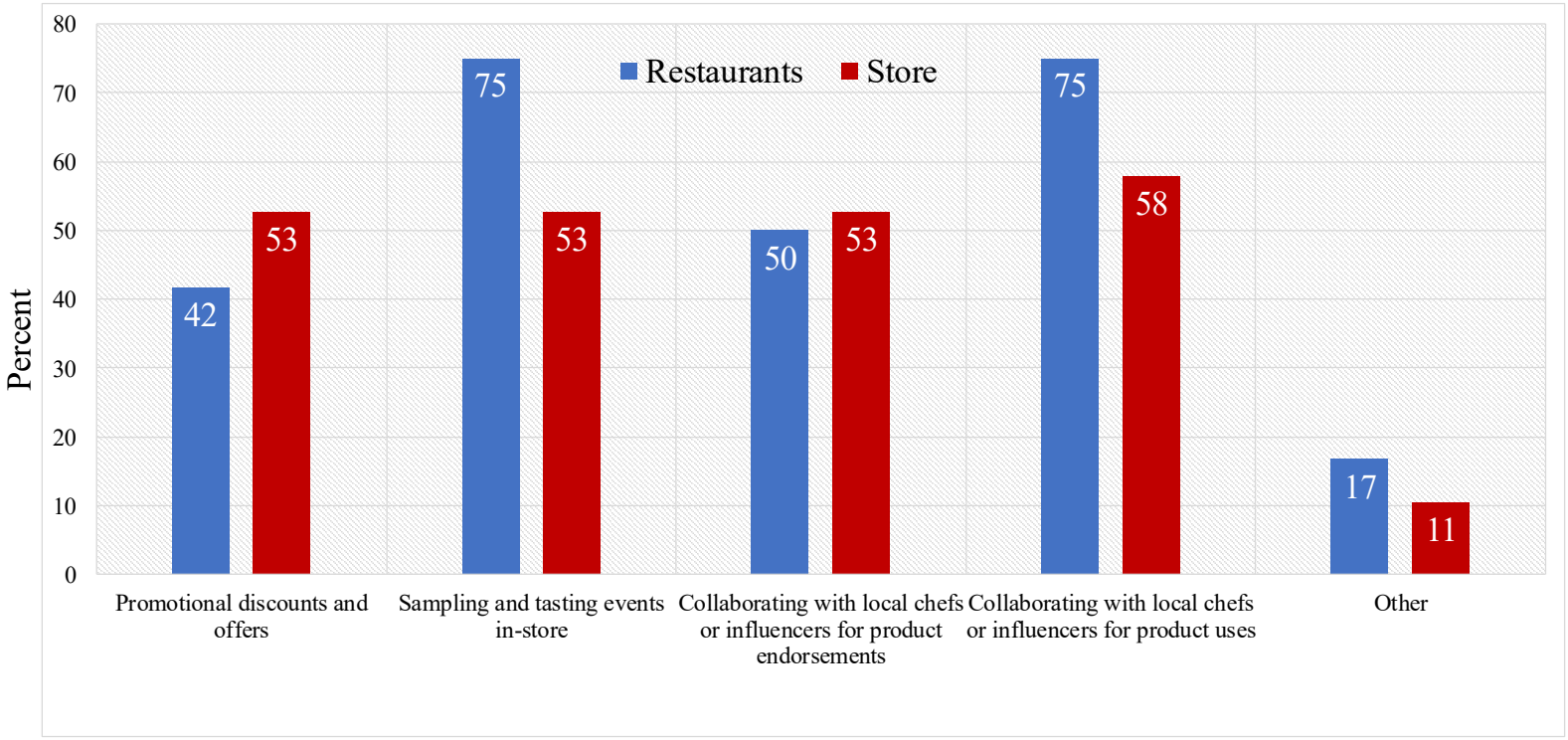
Restaurants and Store : On average, how frequently do your customers purchase locally processed food products from your store(s) ?

Restaurants and Store : How do you anticipate consumer demand for locally processed food products to change in the nex6t 2-3 years in your state and the FSM?

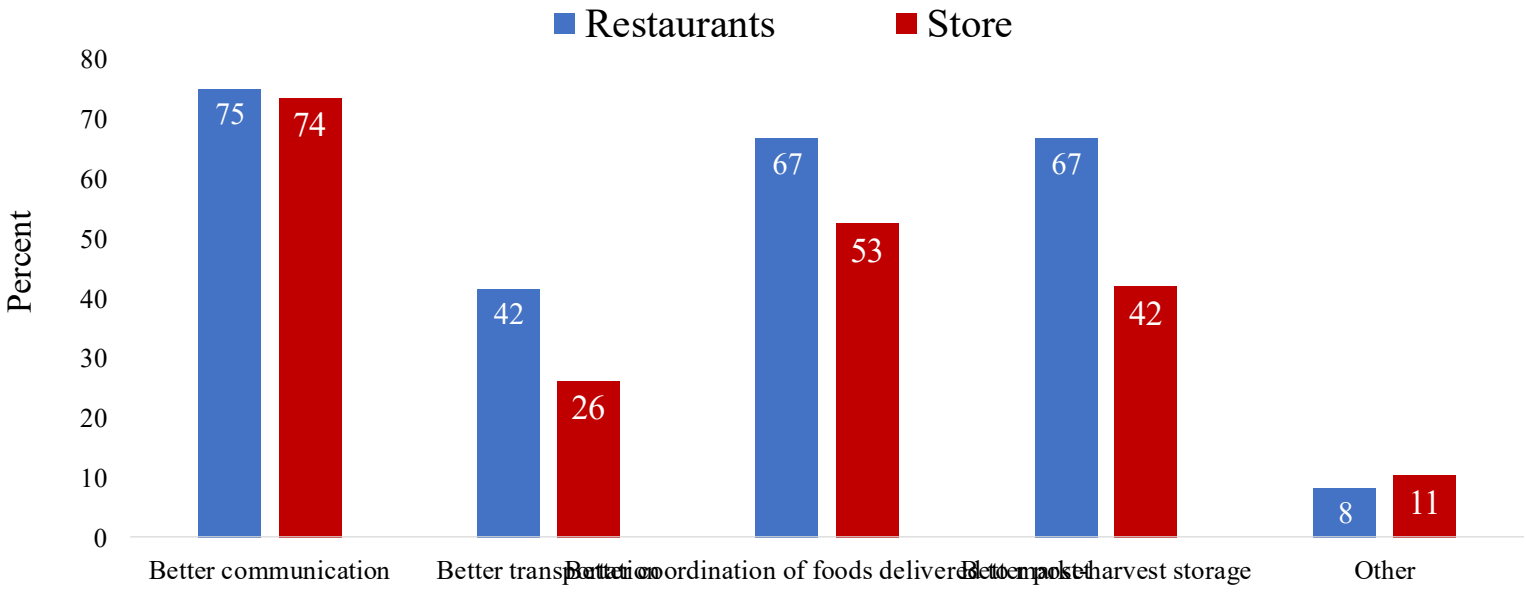
Restaurants and Store : What factors do you believe would influence consumers' willingness to try and purchase new locally processed food products ?



Restaurants and Store : What strategies would you recommend to increase consumer awareness and acceptance of new locally processed food products in FSM ?



Restaurants and Store : What do you feel would strengthen your partnership with local food producers?



Restaurants and Store : Would you support the establishment of a food innovation (or incubator/shared commercial kitchen) center in your state focused on developing new locally made processed food products and/or assisting you and others in processing and producing local food products ?

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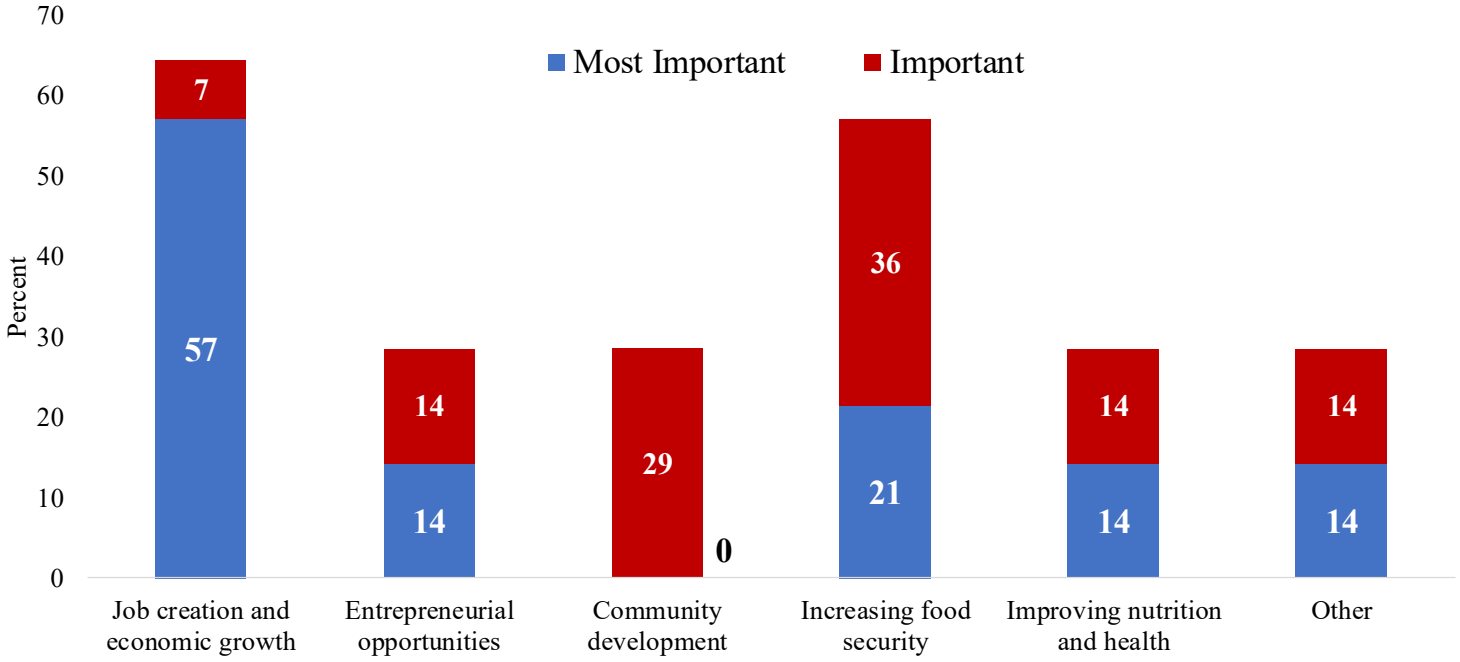
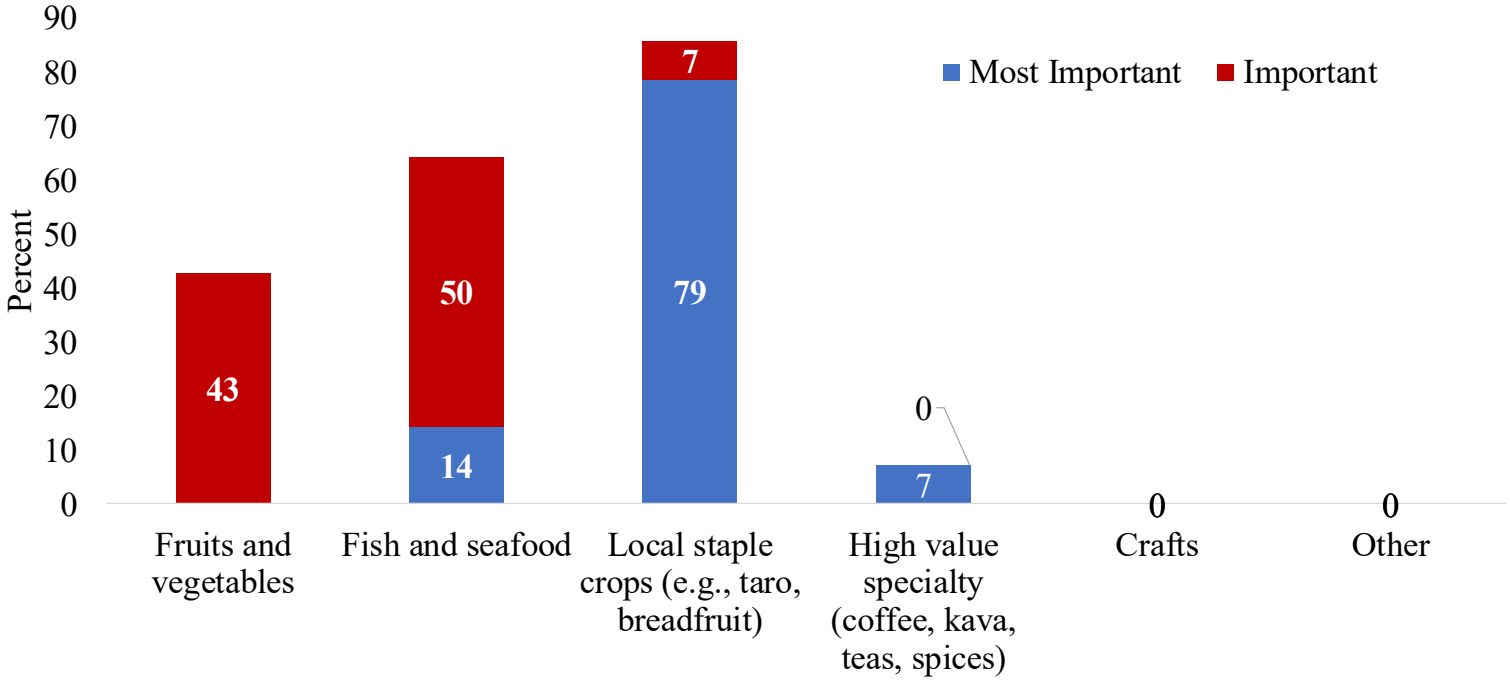
Pohnpei State
Policymakers

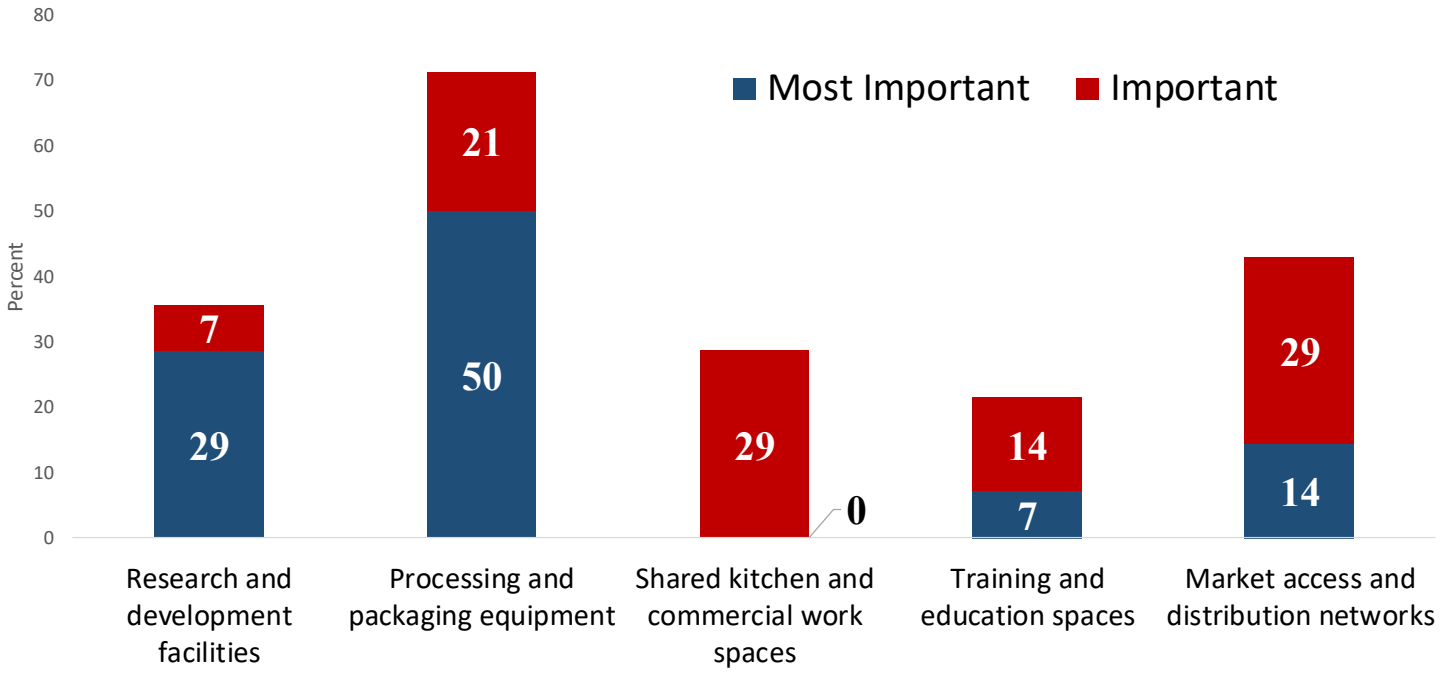
Pohnpei Policymakers : What do you perceive as the primary benefit of establishing a Food Innovation Center in FSM ?



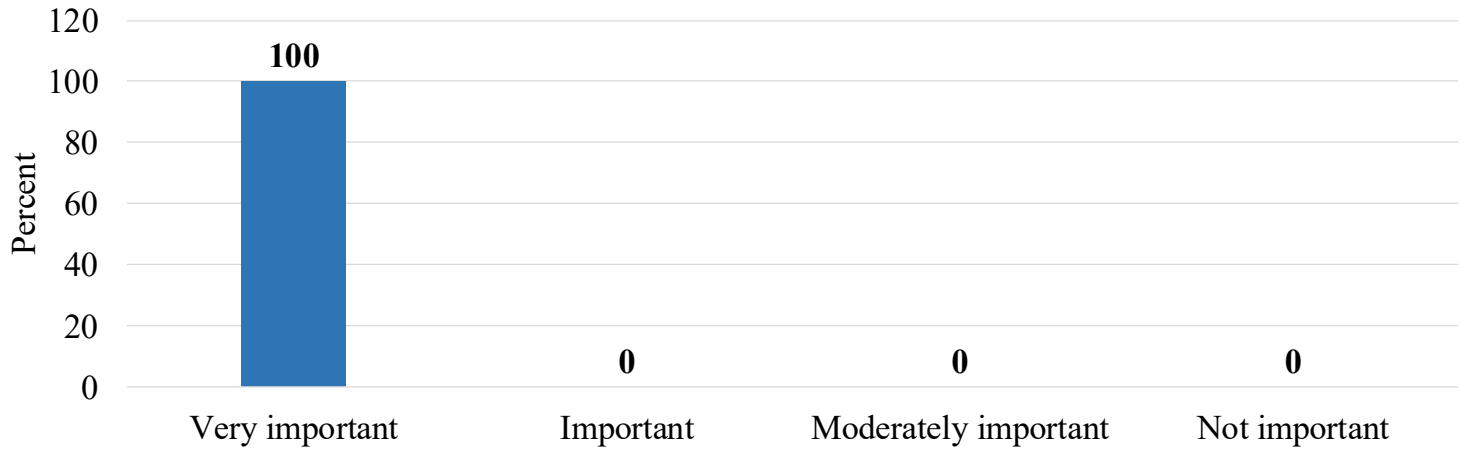
Pohnpei Policymakers : Which types of locally processed foods should the center focus on ?



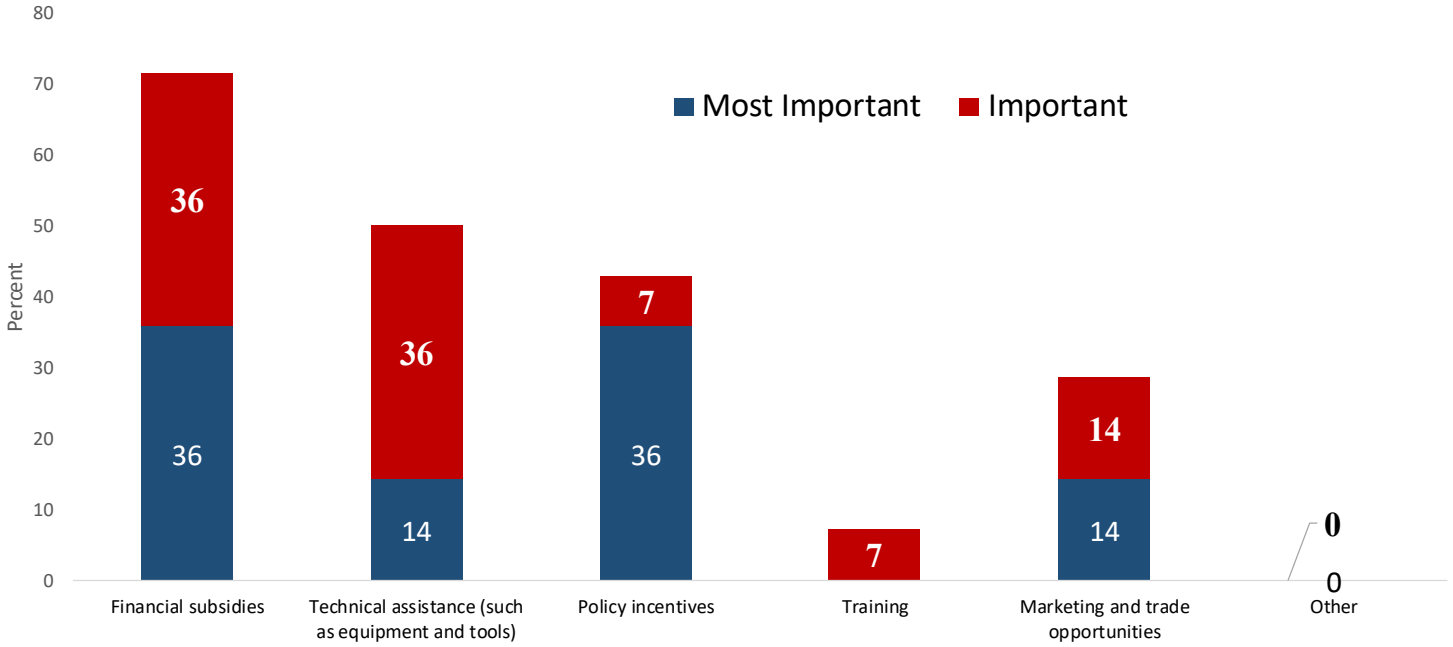
Pohnpei Policymakers : What should be the key features of the Food Innovation Center ?



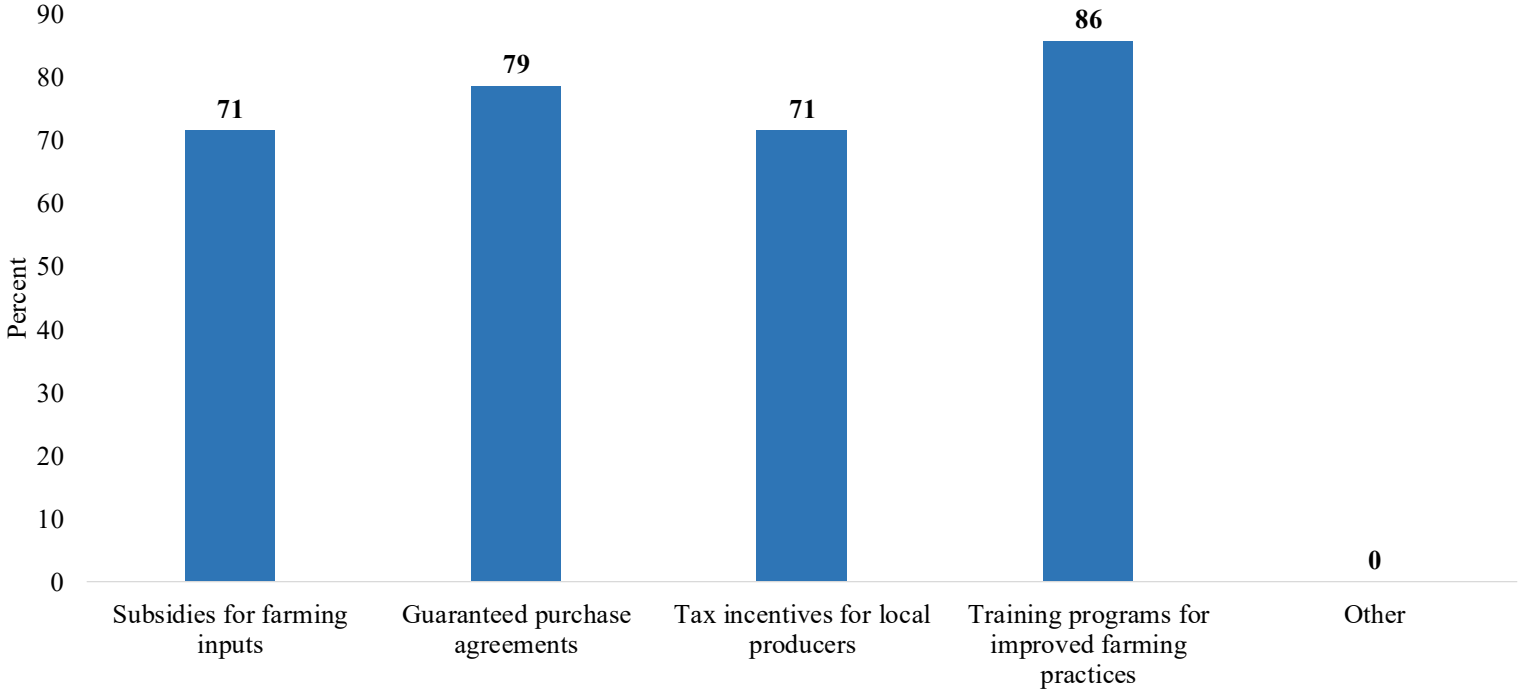
Pohnpei Policymakers : How important is it to involve local farmers and producers in the planning of a Food Innovation Center?



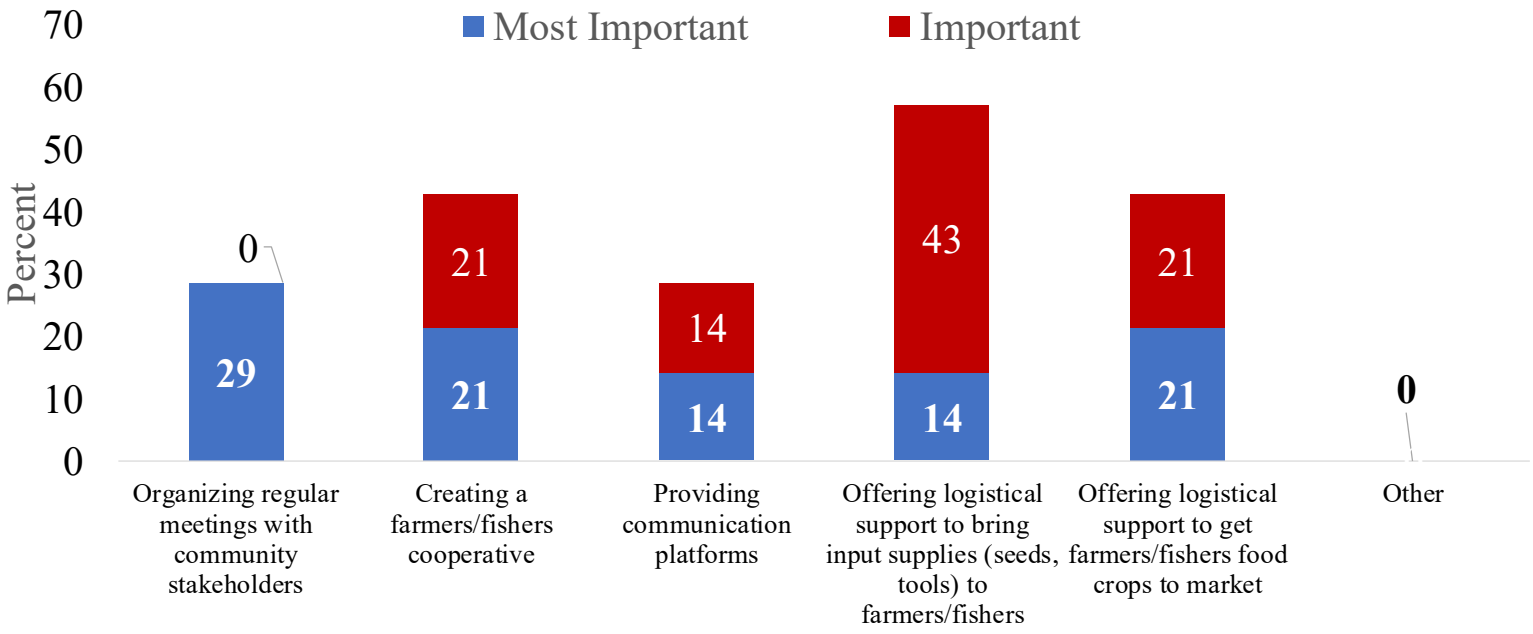
Pohnpei Policymakers : What kind of support do you believe the government should provide to a Food Innovation Center ?



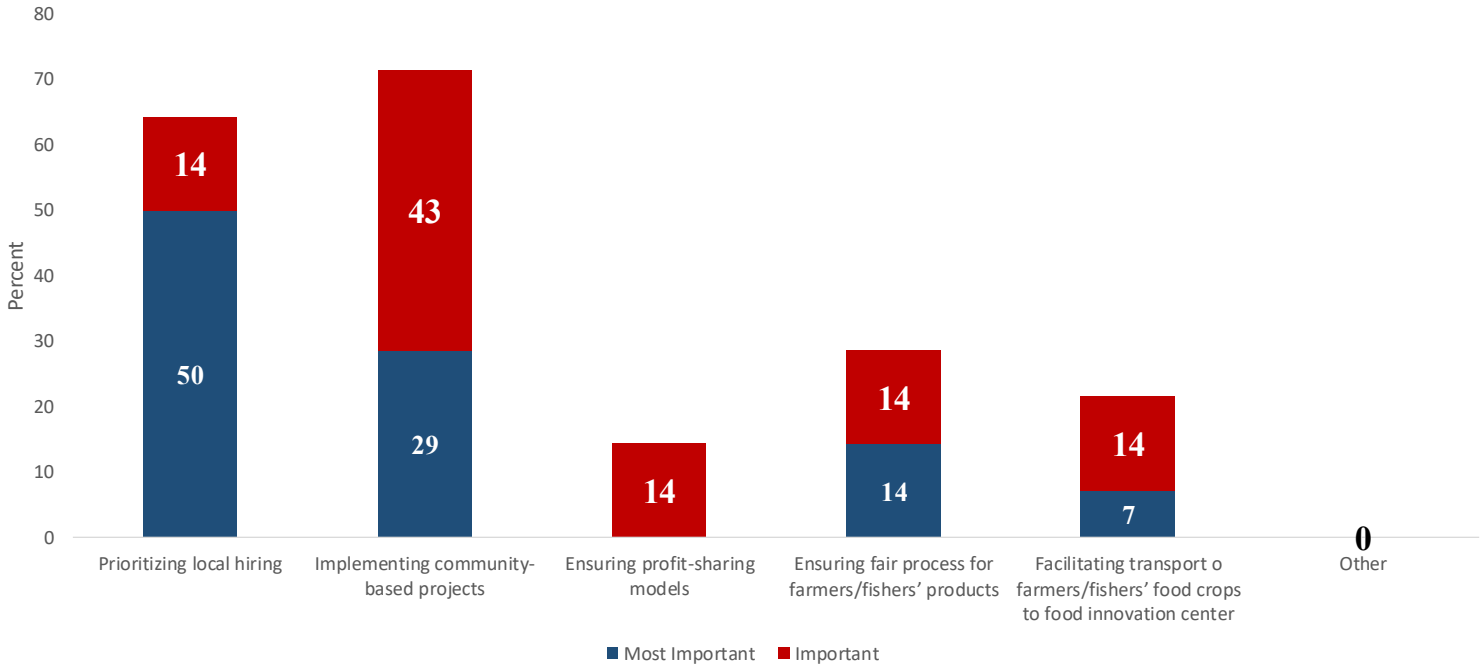
Pohnpei Policymakers : What specific policies can support farmers in supplying raw materials to a food innovation center ?



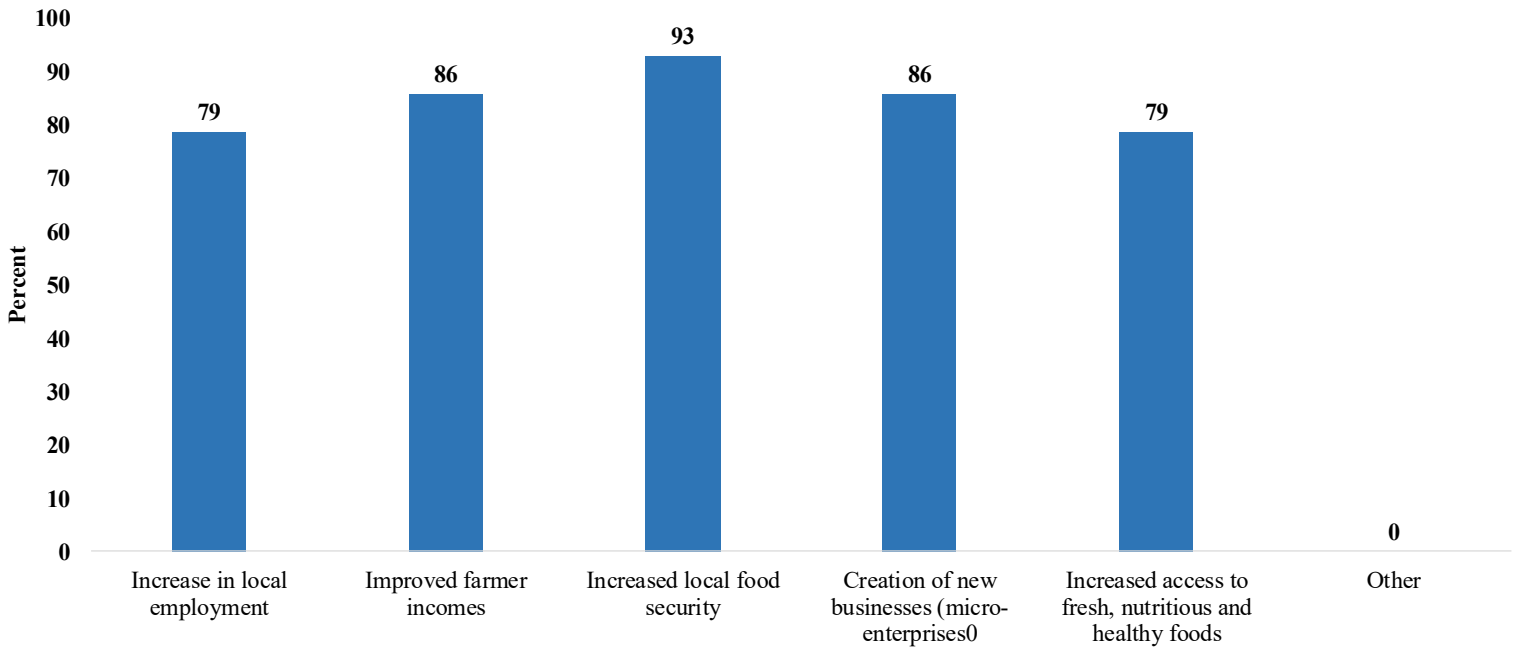
Pohnpei Policymakers : How can policymakers facilitate collaboration between farmers and a Food Innovation Center ?



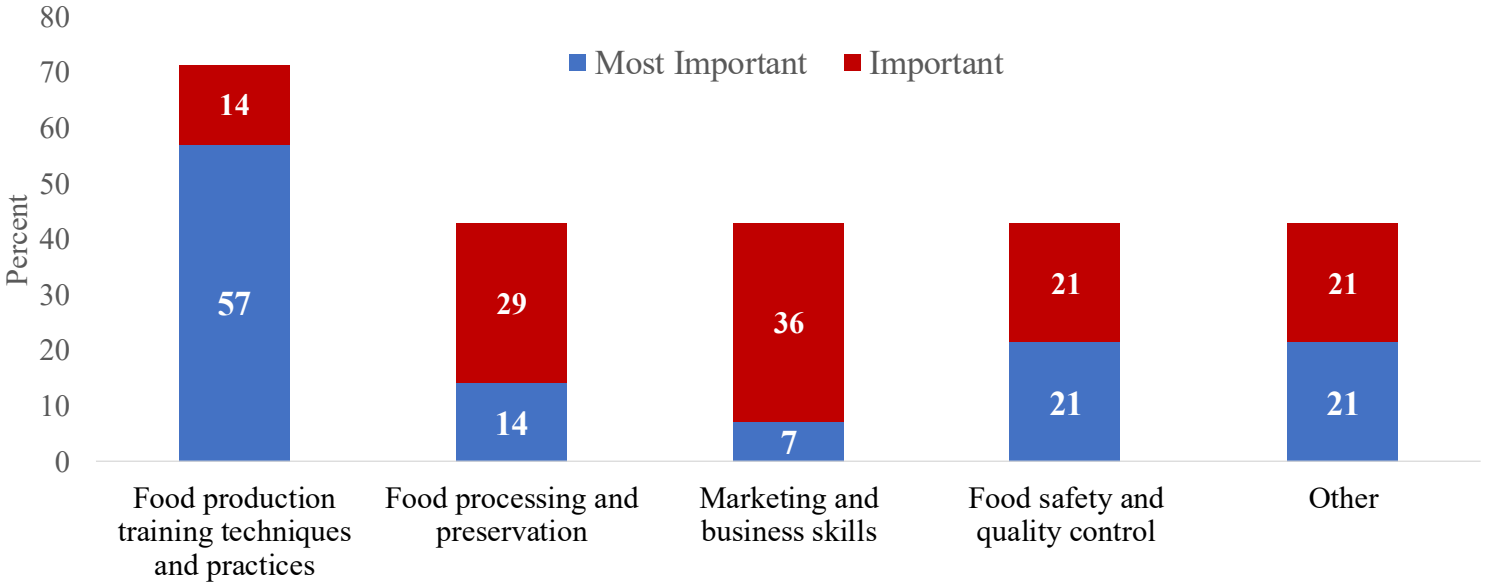
Pohnpei Policymakers : What measures can be taken to ensure a Food Innovation Center benefits local communities ?



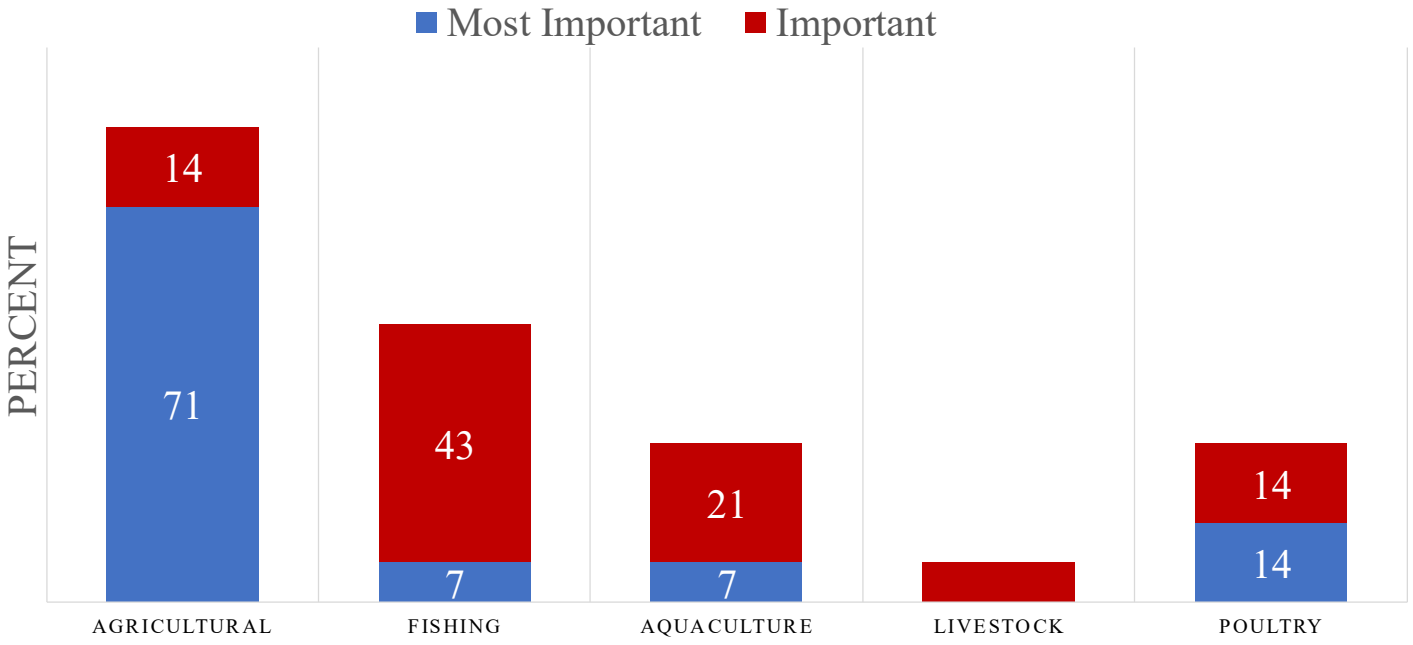
Pohnpei Policymakers : How should the success of a Food Innovation Center be evaluated in relation to farmer and community benefits?



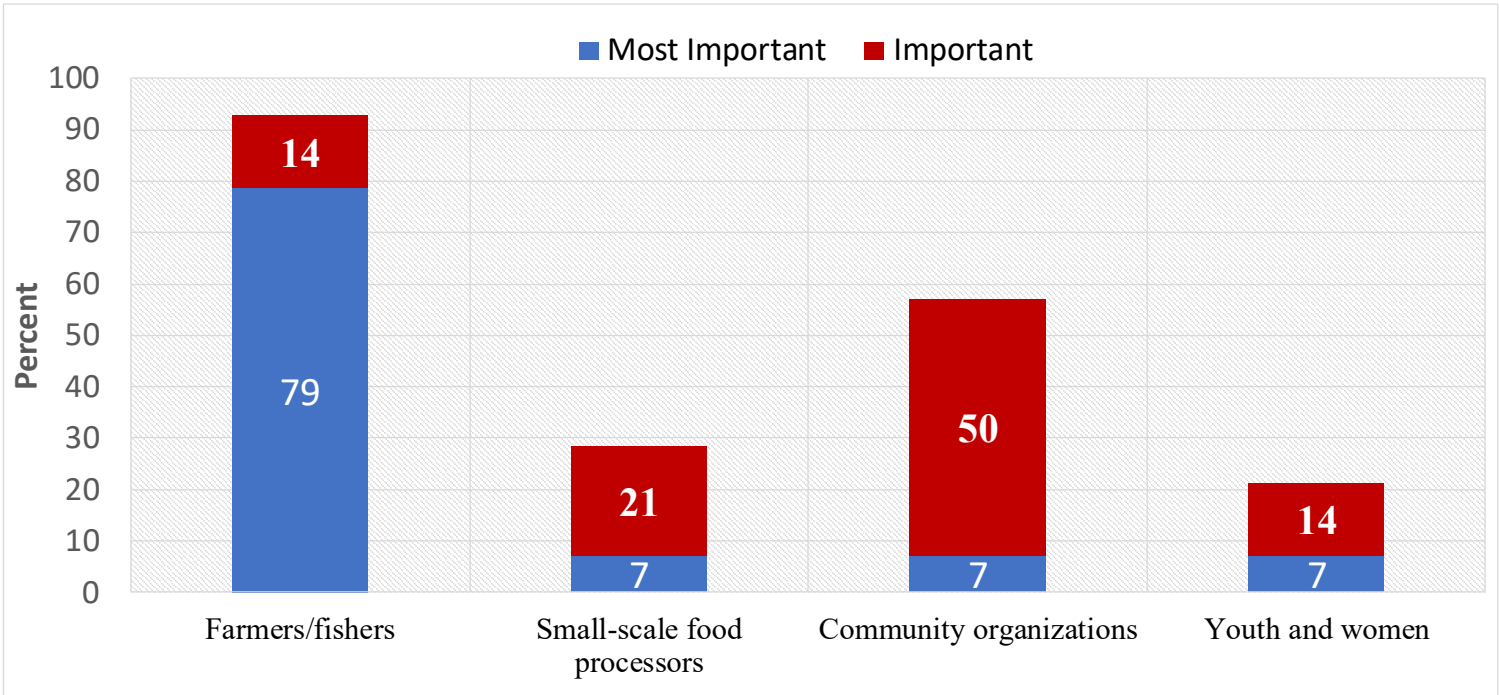
Pohnpei Policymakers : What are the most critical areas for capacity building in the local food system ?



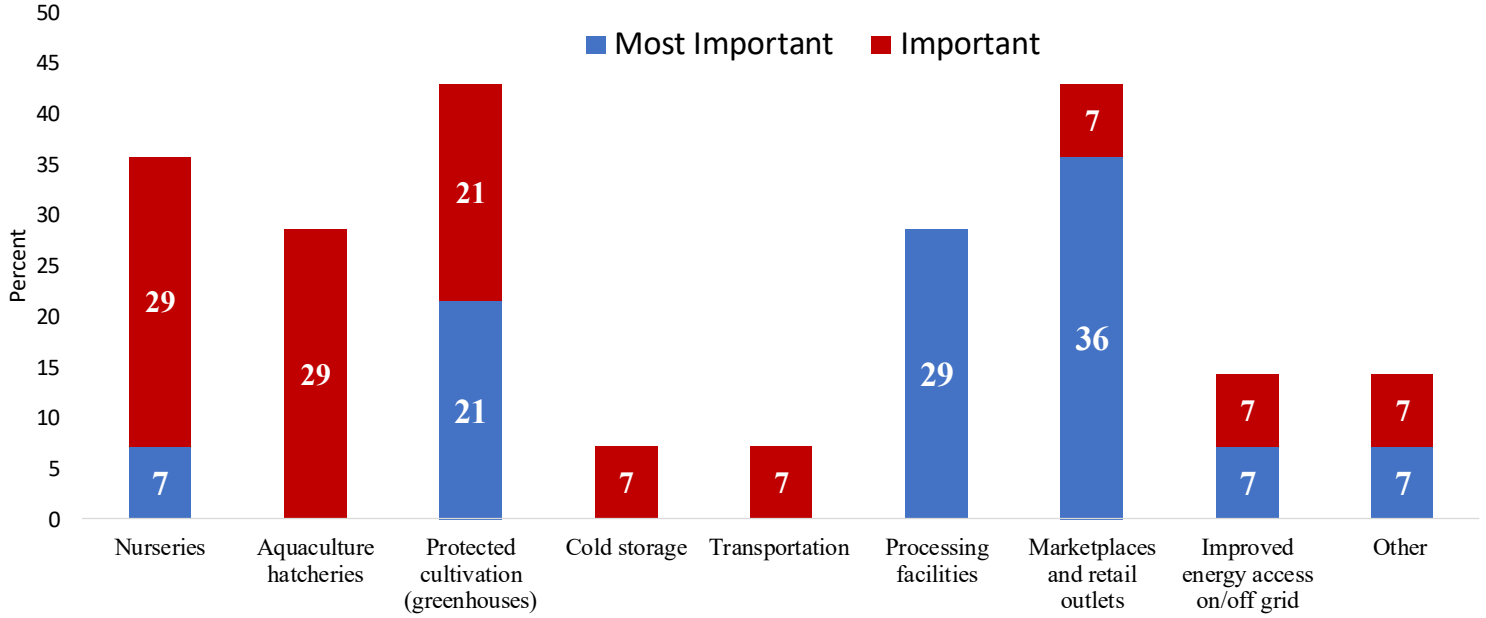
Pohnpei Policymakers : To strength your local food system, which areas need most training ?



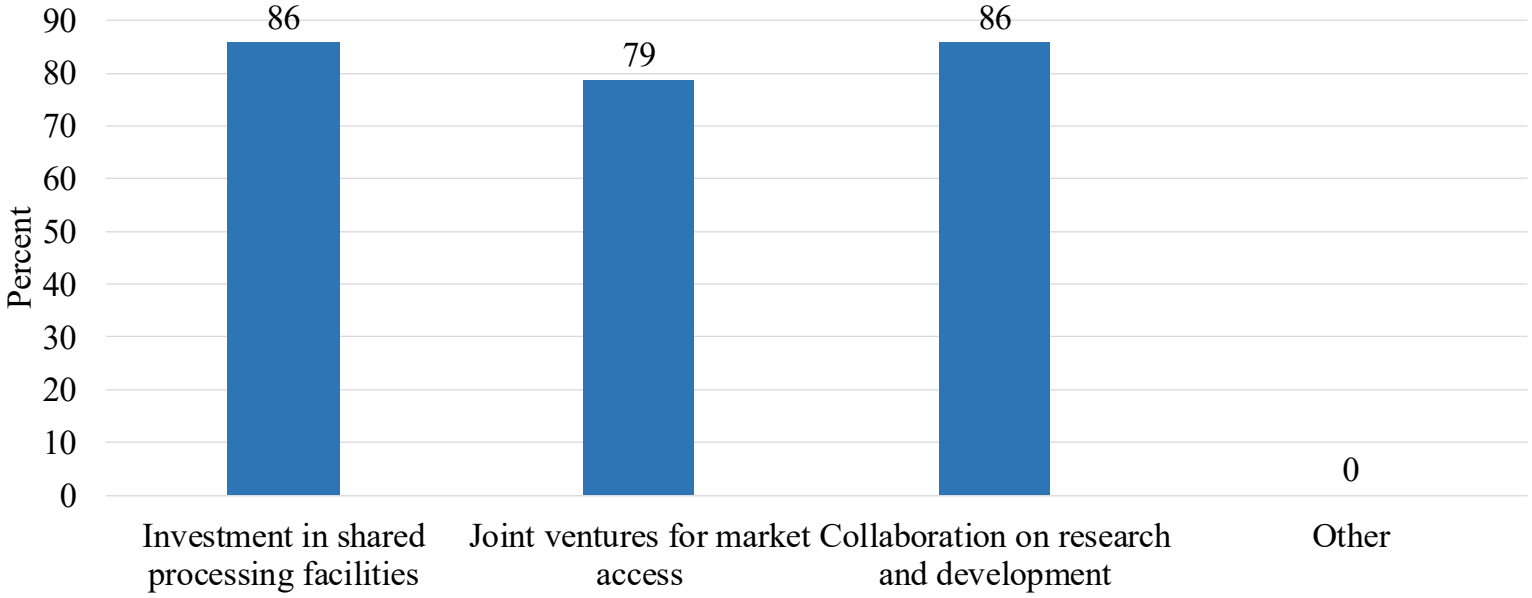
Pohnpei Policymakers : Which groups should be prioritized for capacity building initiatives?



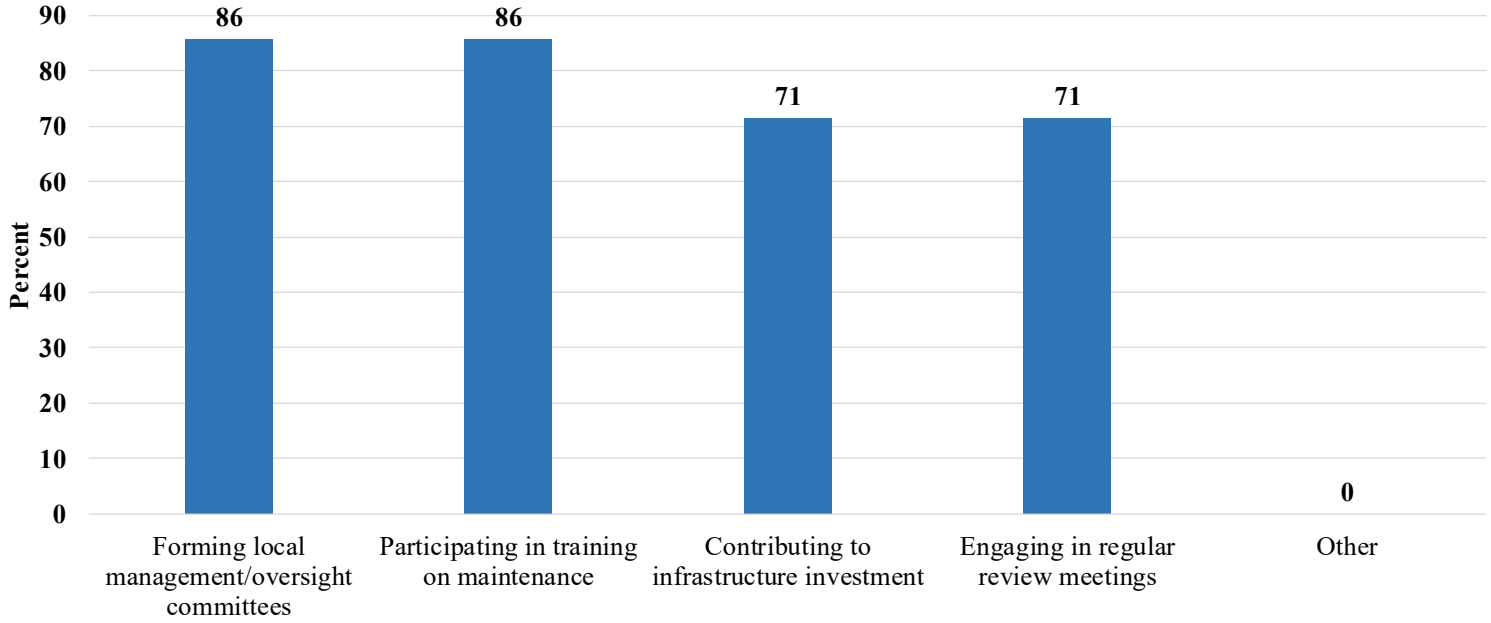
Pohnpei Policymakers : What type of infrastructure investments are most needed to support the local food system?



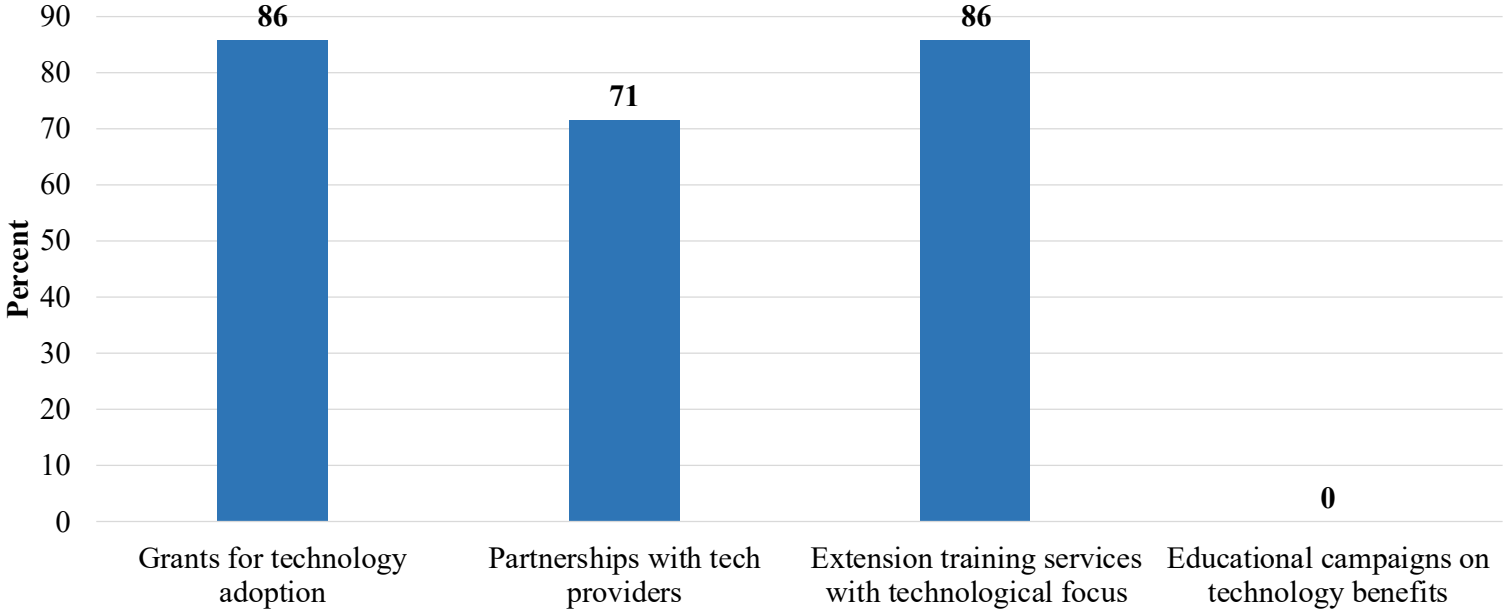
Pohnpei Policymakers : What kind of public-private partnerships do you think are necessary to enhance food system infrastructure ?



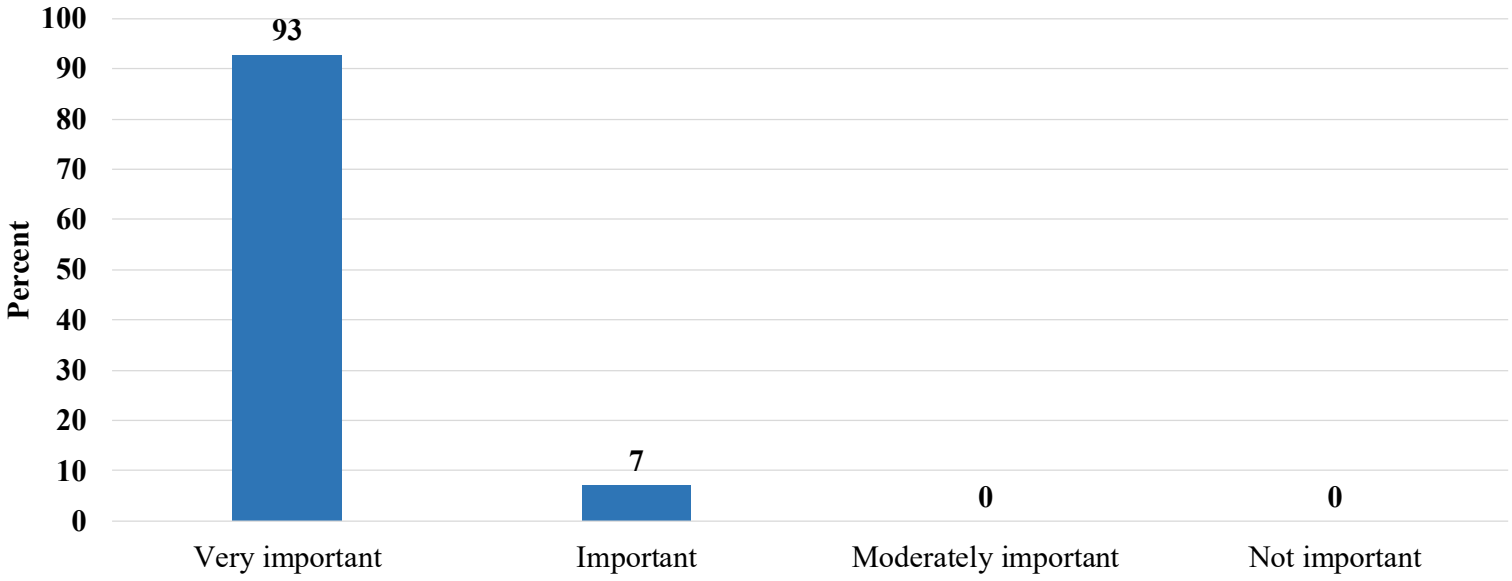
Pohnpei Policymakers : What role should local communities play in the maintenance and management of new infrastructure?



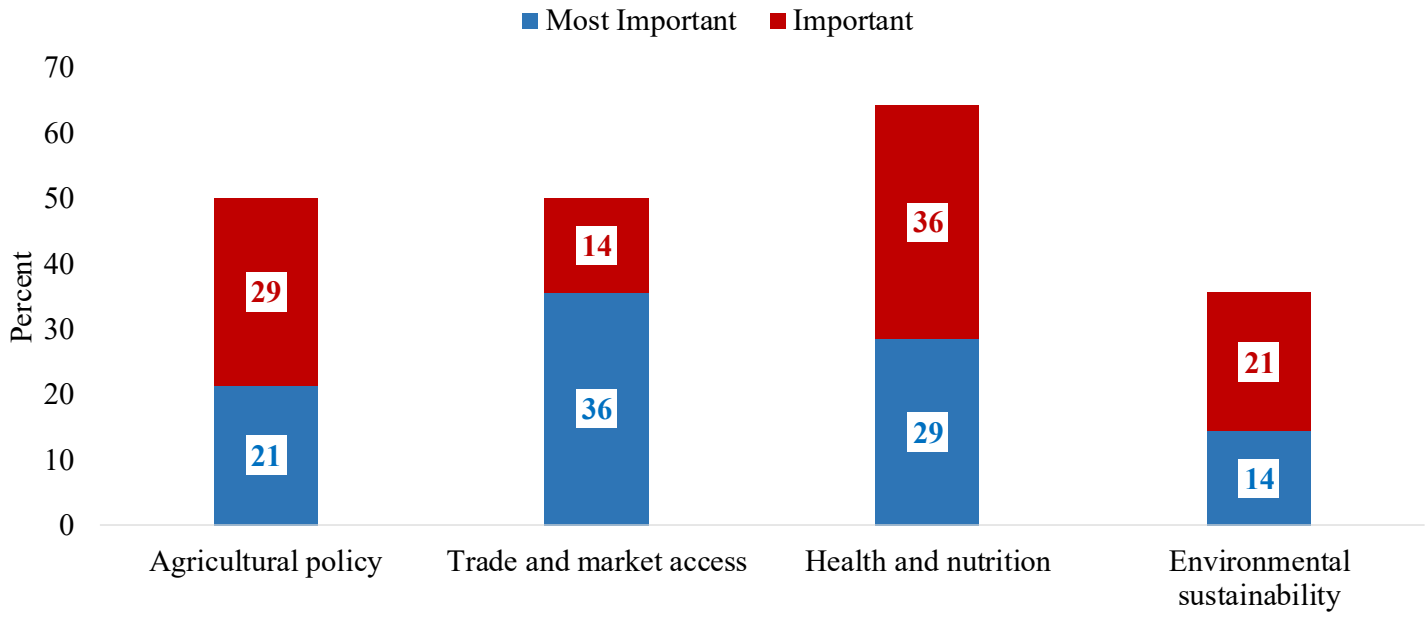
Pohnpei Policymakers :What policies can promote the use of technology and innovation among local farmers ?



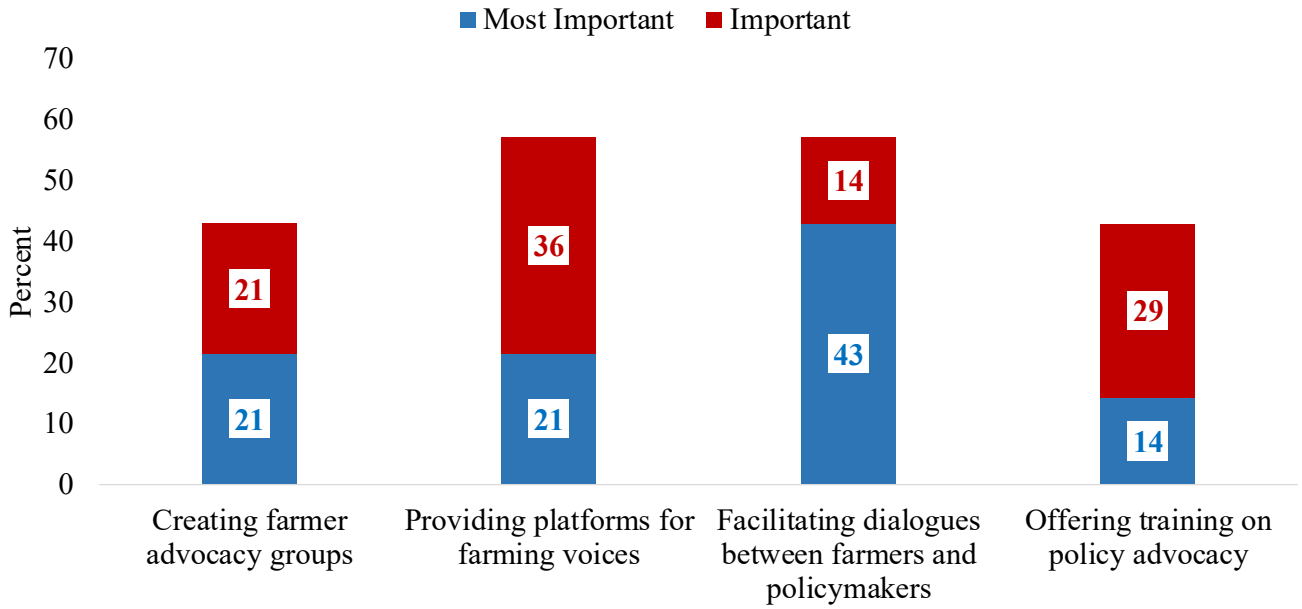
Pohnpei Policymakers : How important is policy advocacy for successful and sustainable food system development?



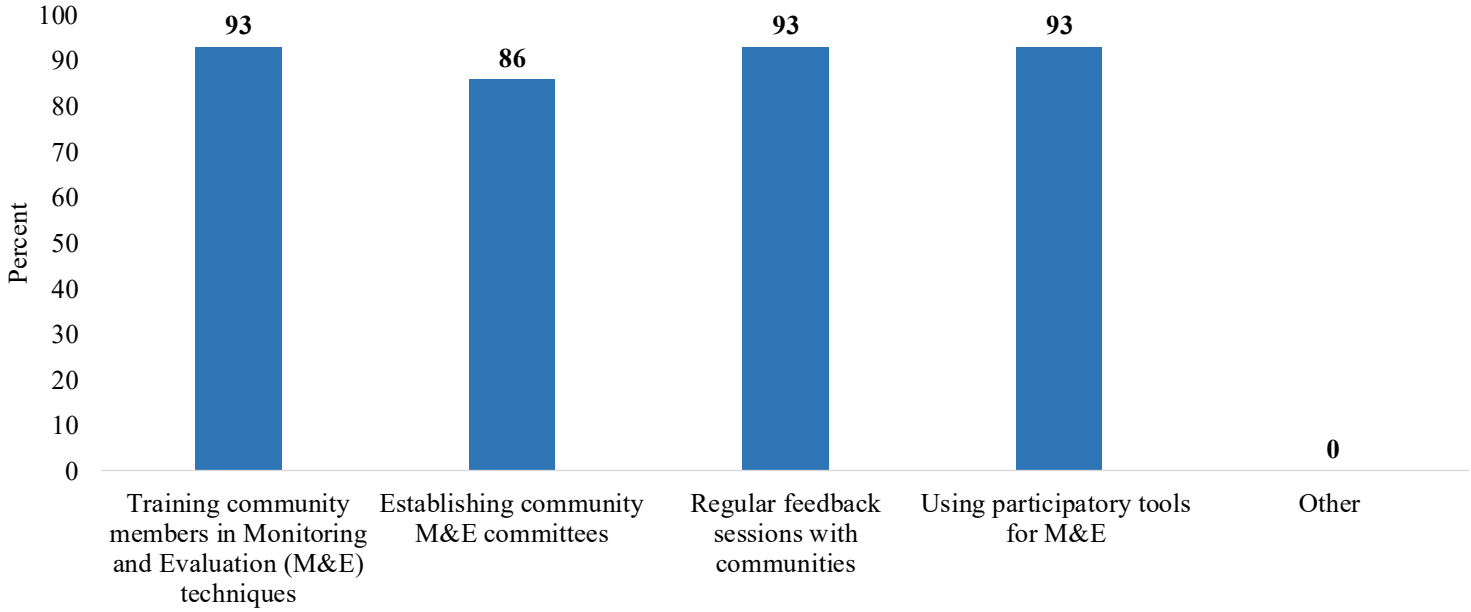
Pohnpei Policymakers : Which policy areas should be prioritized to support successful and sustainable food system development ?



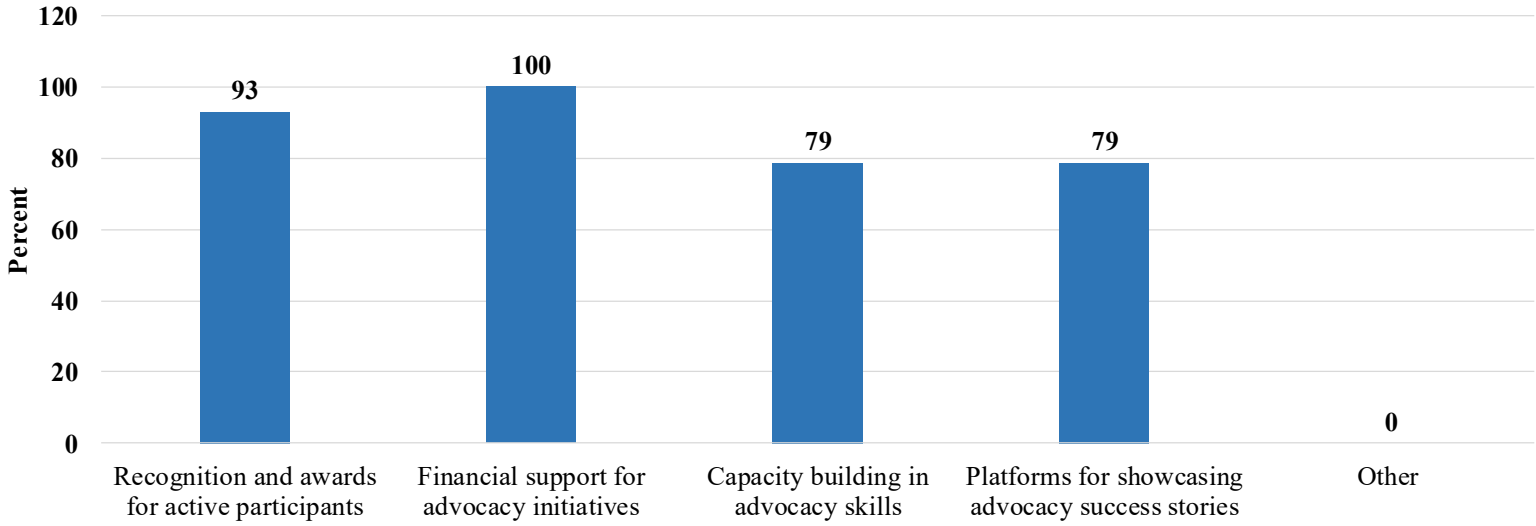
Pohnpei Policymakers : How can policymakers assist farmers in advocating for better agricultural policies ?



Pohnpei Policymakers : How can policymakers assist farmers in advocating for better agricultural policies ?



Pohnpei Policymakers : What incentives can encourage community participation in policy advocacy related to food systems ?



Federated States of Micronesia
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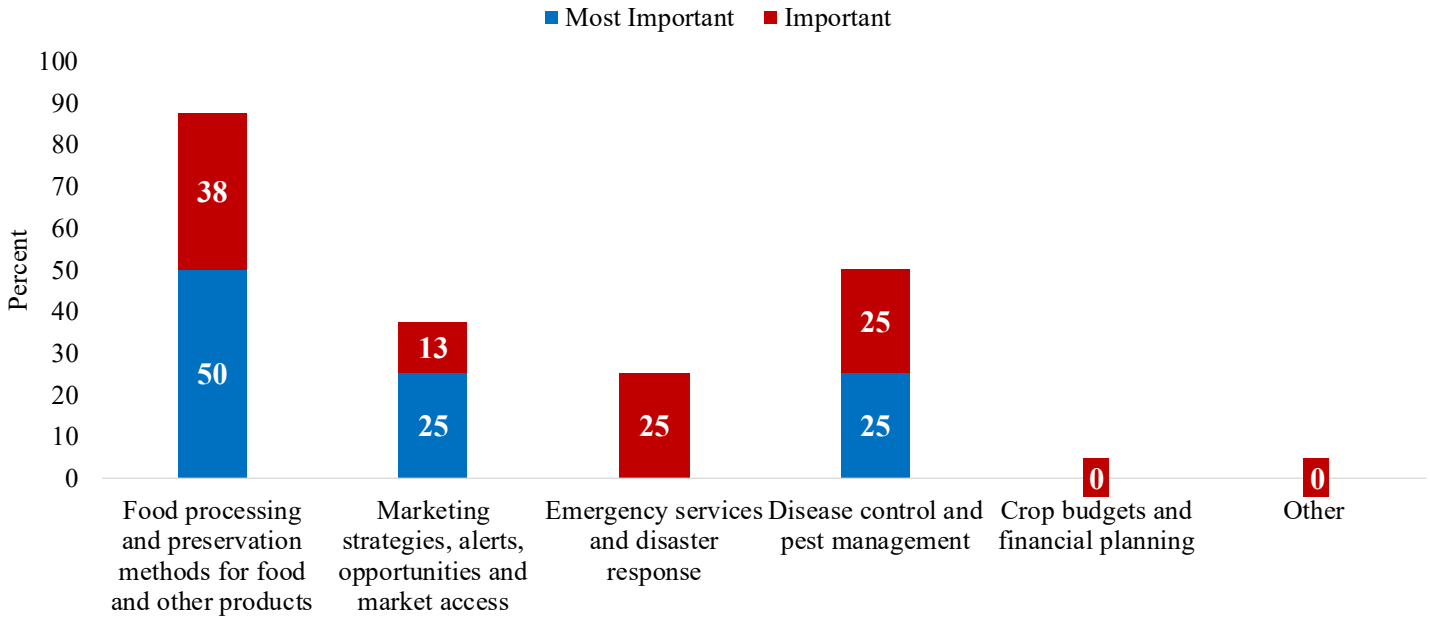
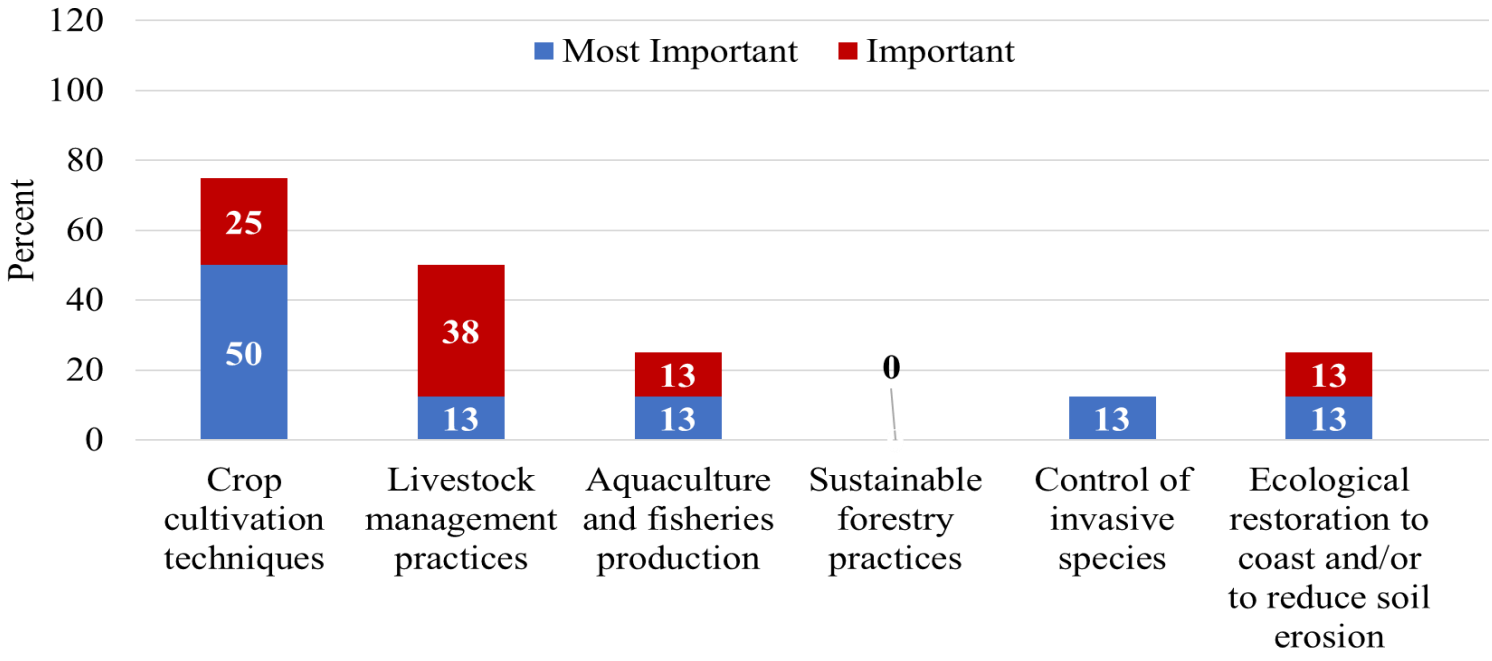
FSS Survey Data Tables and Charts
Pohnpei State
Information Content Providers

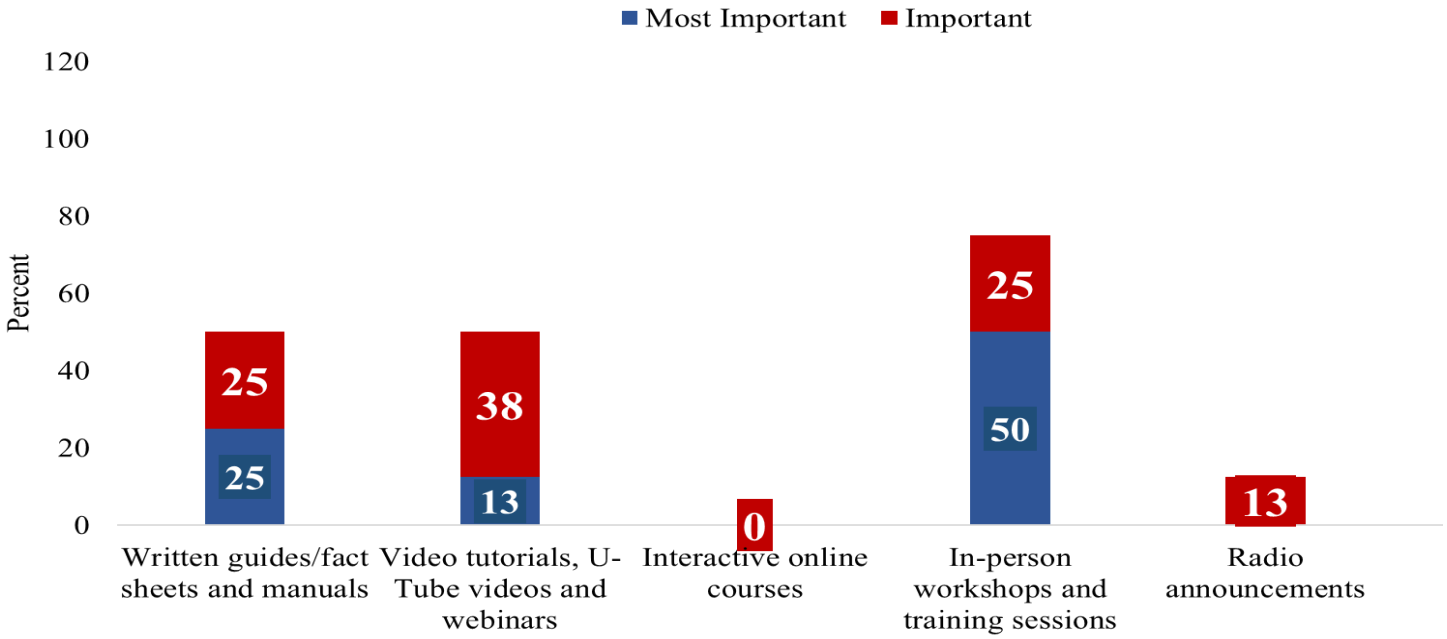
Pohnpei Information Content Providers : What type of information do you believe is most critical to include in an electronic-based food systems information hub ?



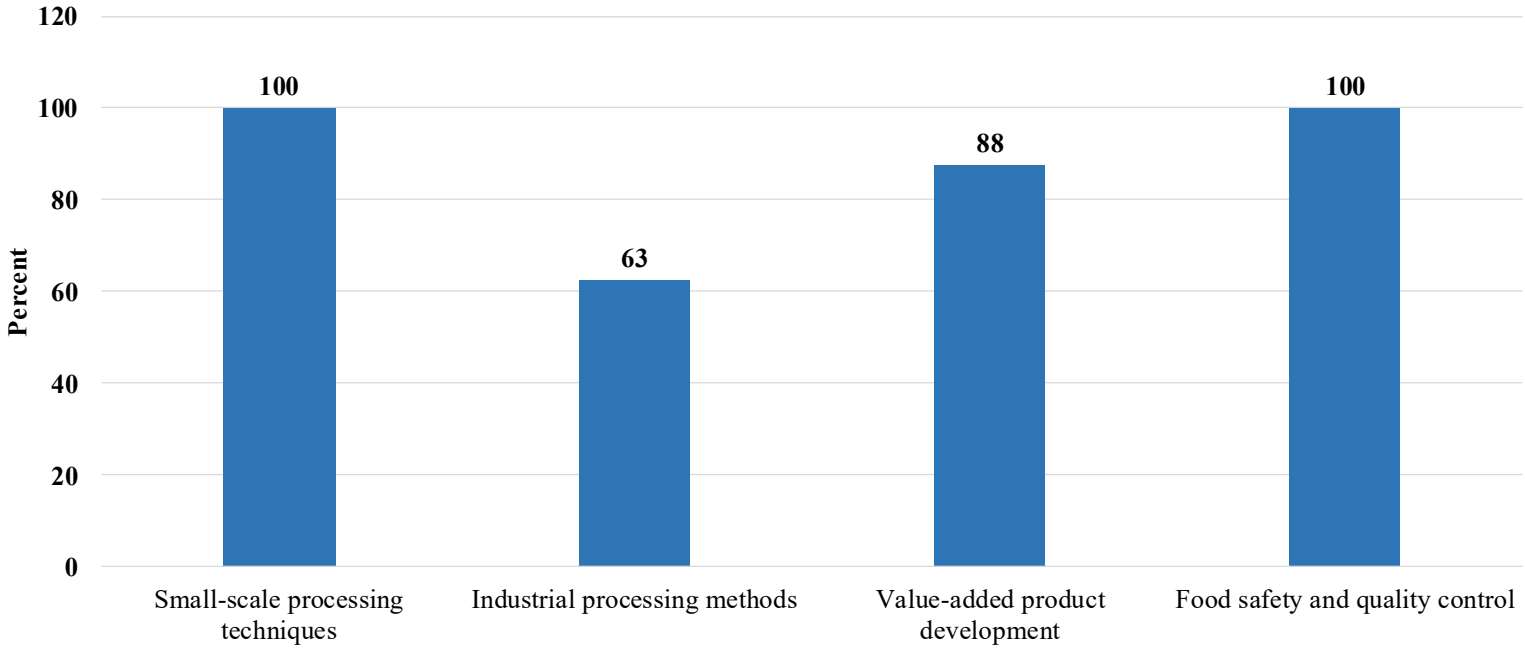
Pohnpei Information Content Providers : What types of production information would be most valuable for farmers and producers ?



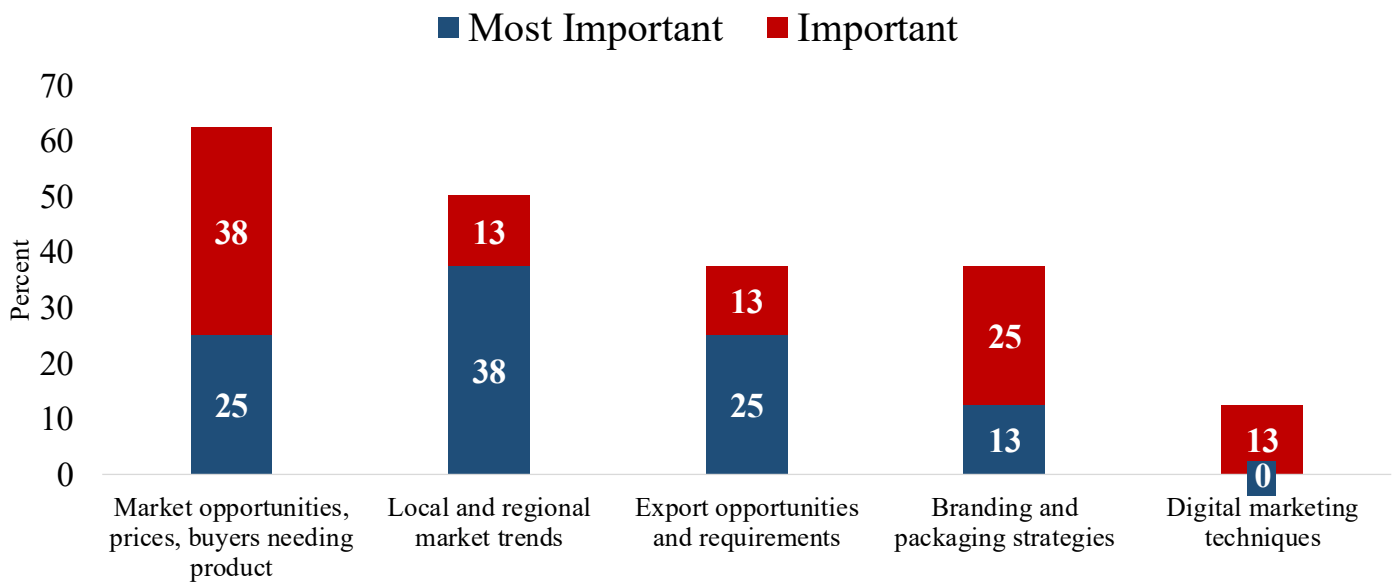
Pohnpei Information Content Providers : Which formats would be most effective for presenting production information ?



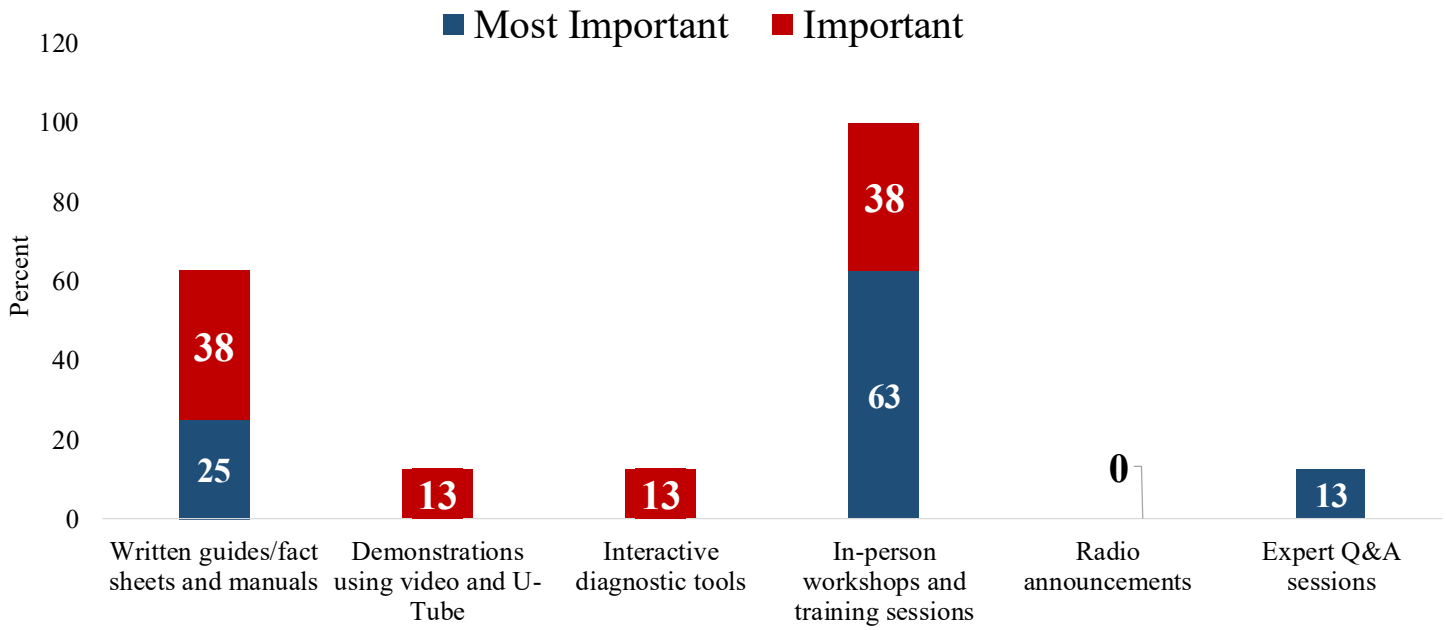
Pohnpei Information Content Providers : What aspects of food processing should the information hub focus on?



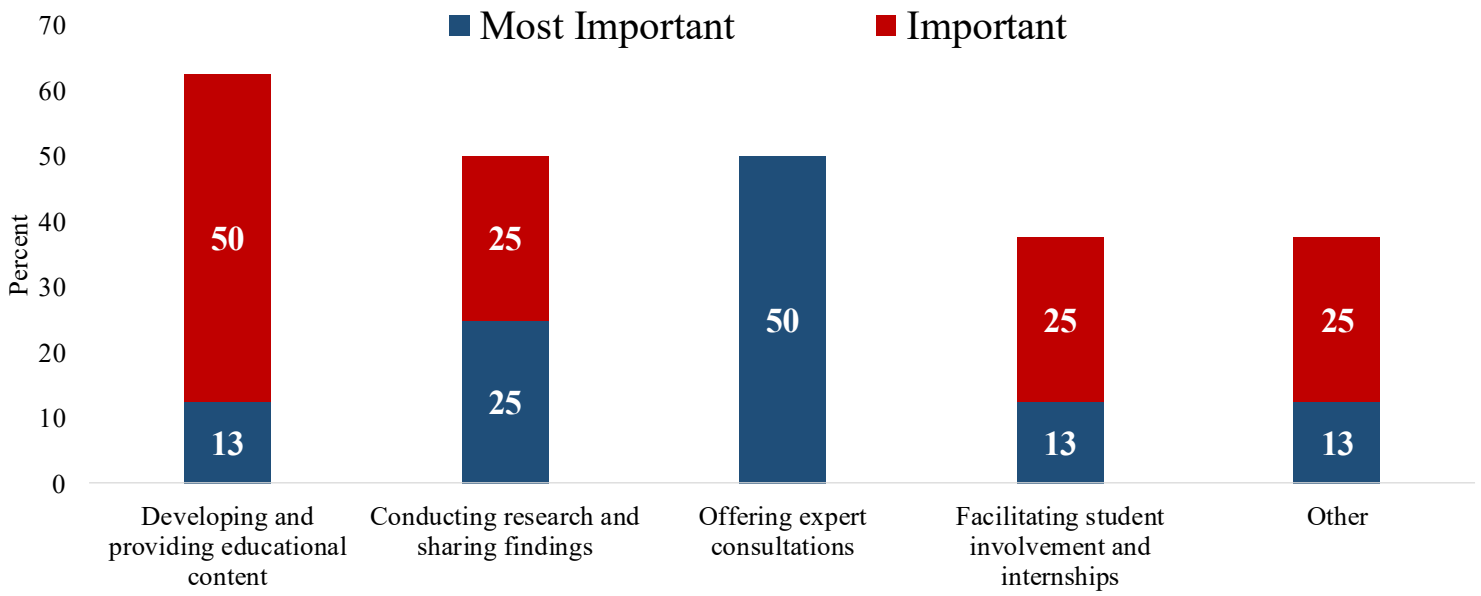
Pohnpei Information Content Providers : What marketing information would be most helpful to local producers ?



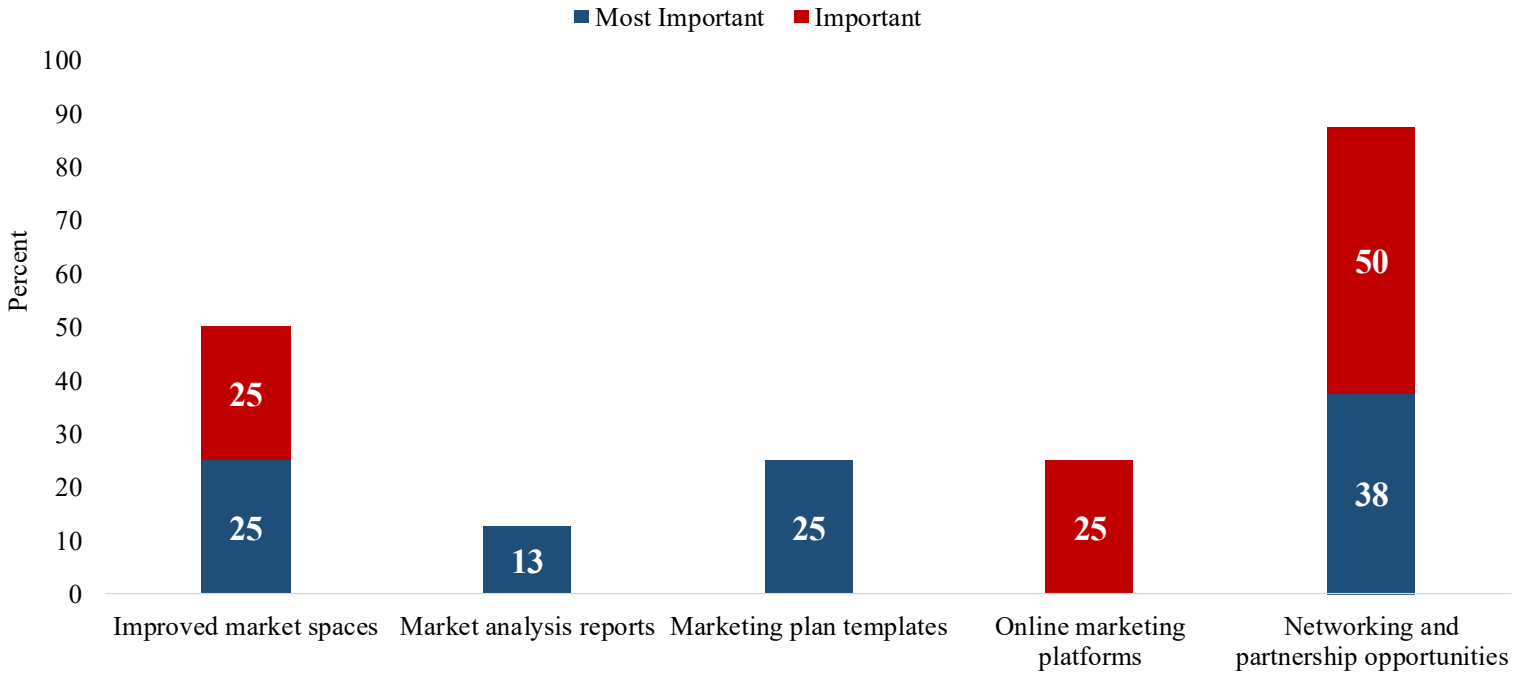
Pohnpei Information Content Providers : What formats should be used to present disease control information ?



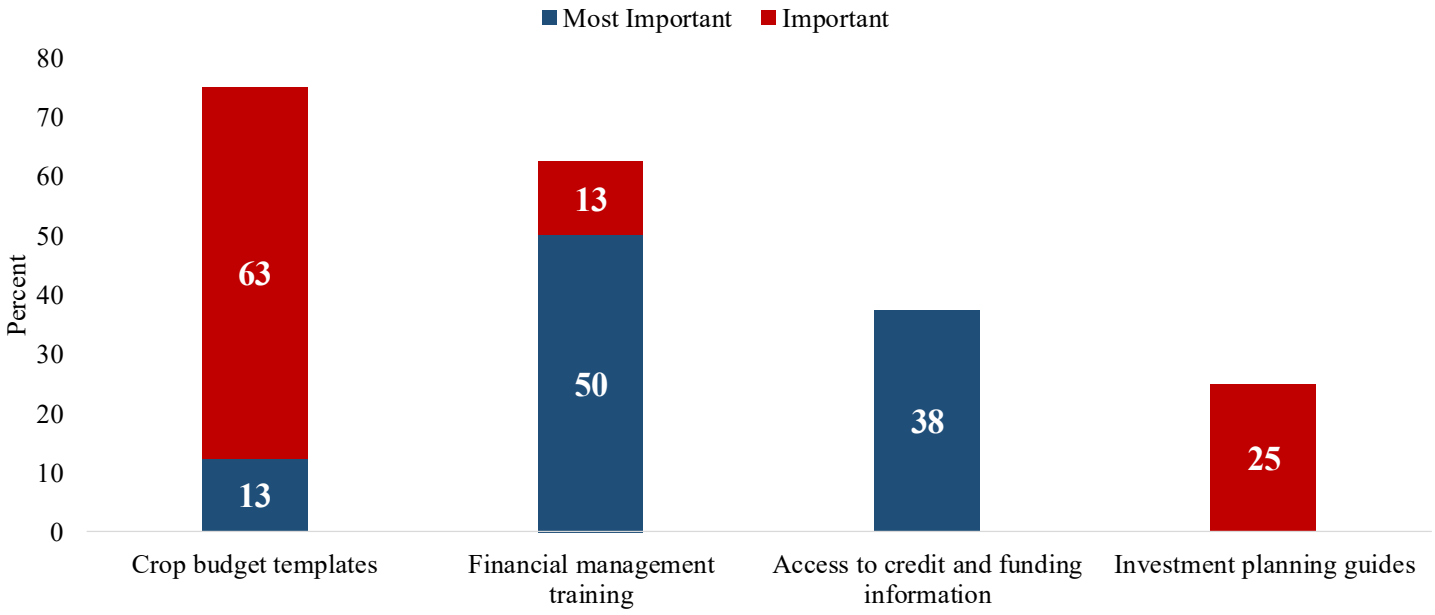
Pohnpei Information Content Providers :How can educational institutions like the College of Micronesia contribute to the information hub?



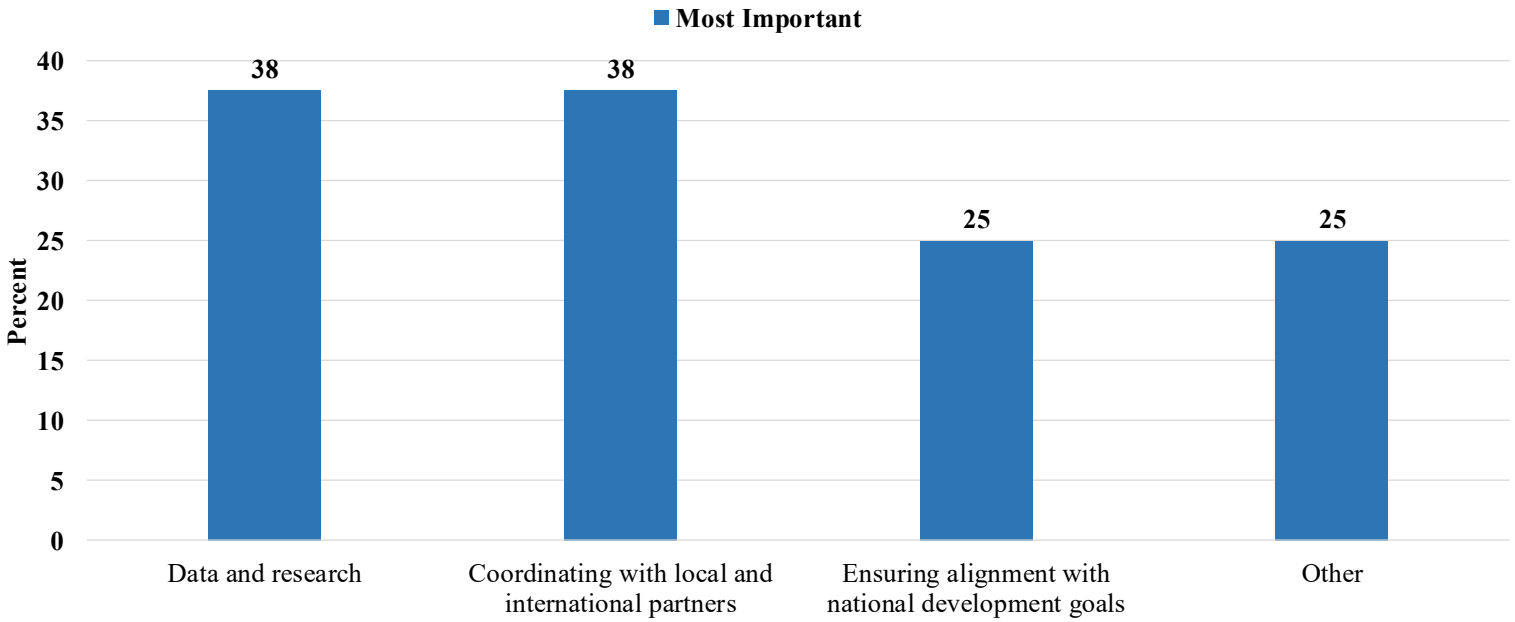
Pohnpei Information Content Providers : What tools or resources would assist producers in improving their marketing and sales efforts ?



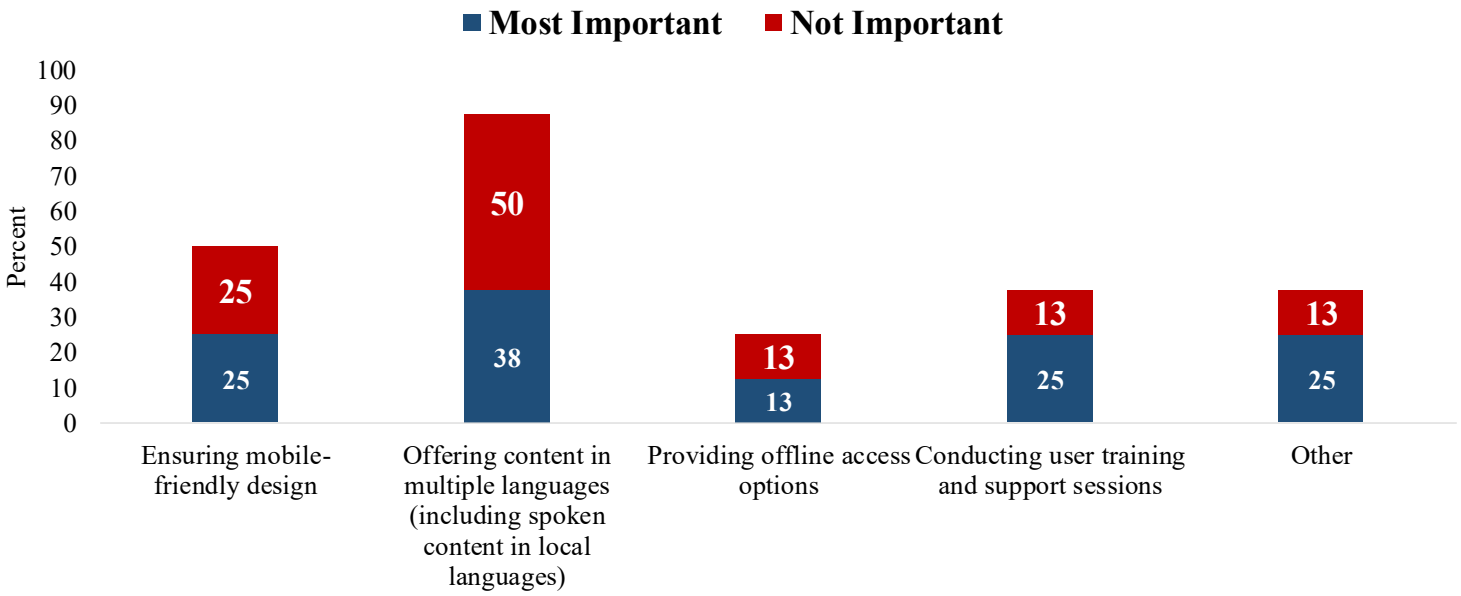
Pohnpei Information Content Providers :What financial planning resources would be most useful for producers ?



Pohnpei Information Content Providers :What role should state and national leaders in the departments of agriculture, marine, and forestry play in supporting the information hub ?

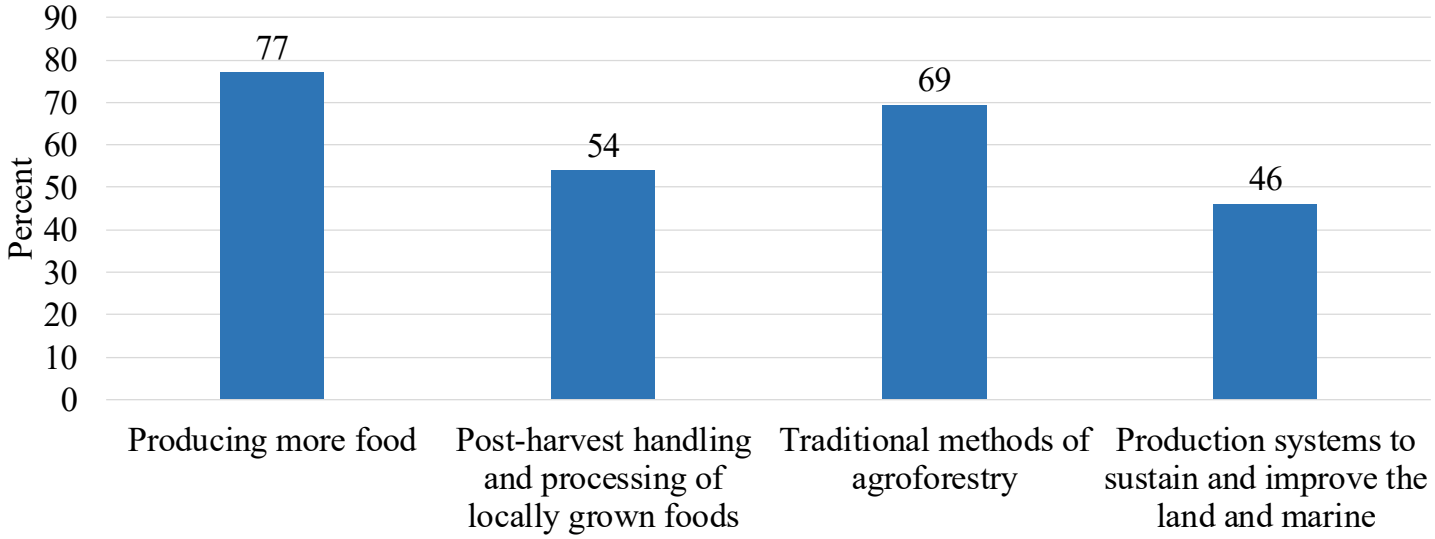


Pohnpei Information Content Providers : What measures should be taken to ensure the information hub is accessible and useful to all potential users ?

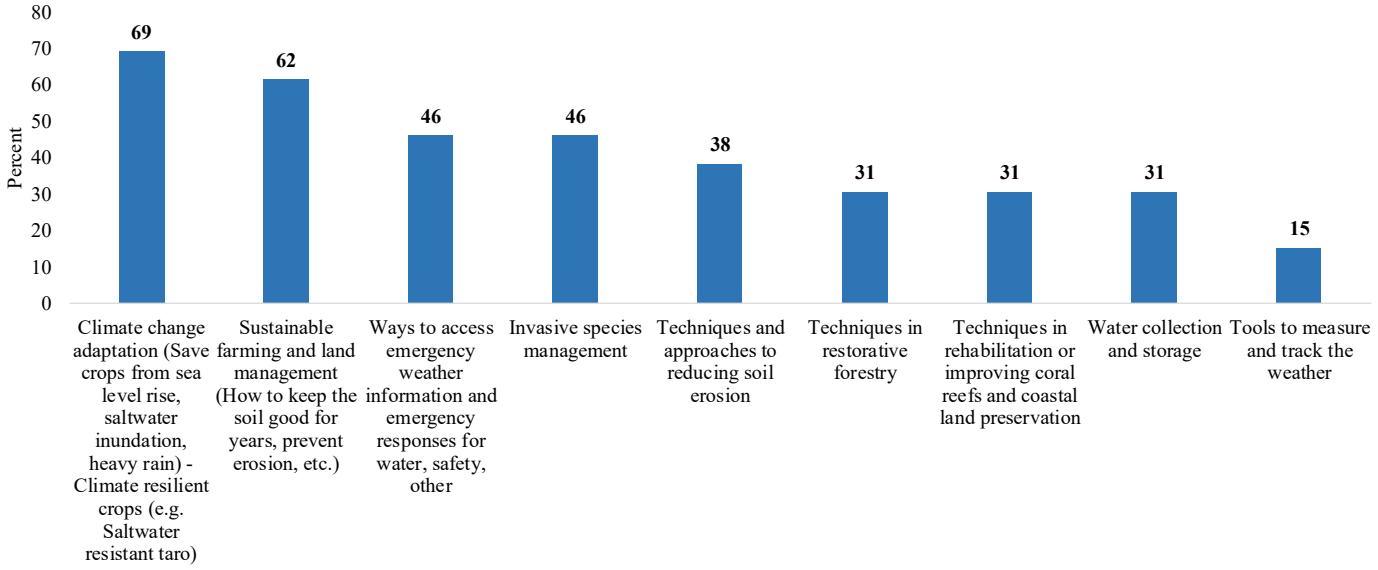


Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Pohnpei State
Trainers

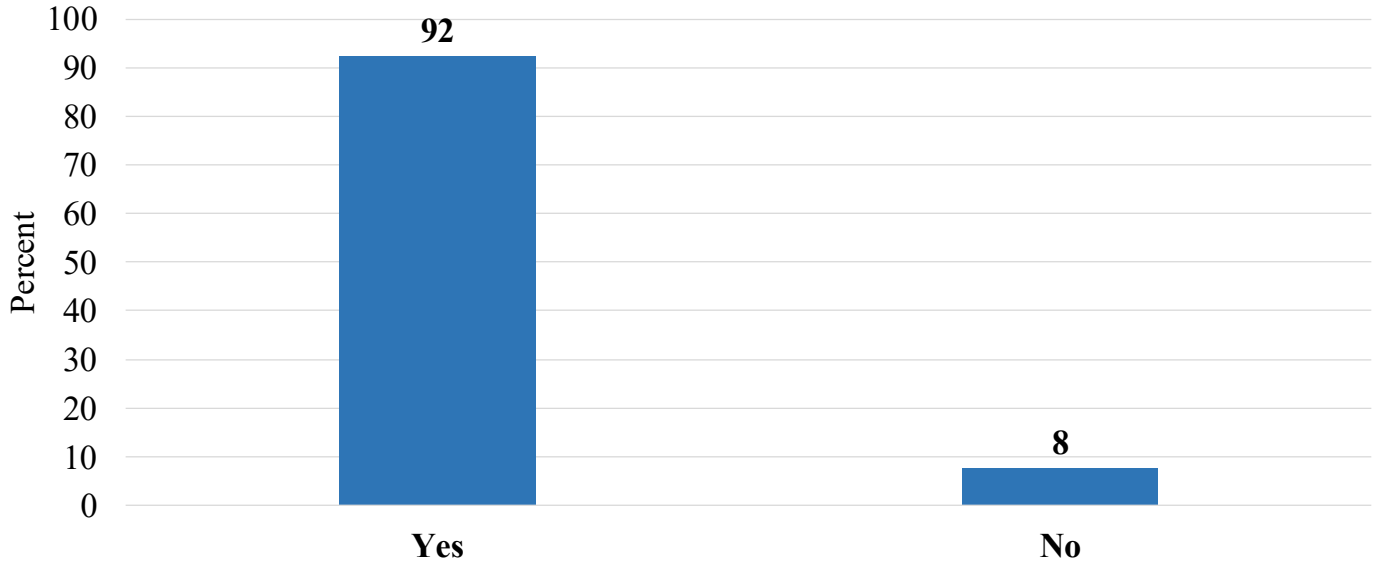
Pohnpei Trainers : Are you prepared and have the needed training to assist families and others on ?



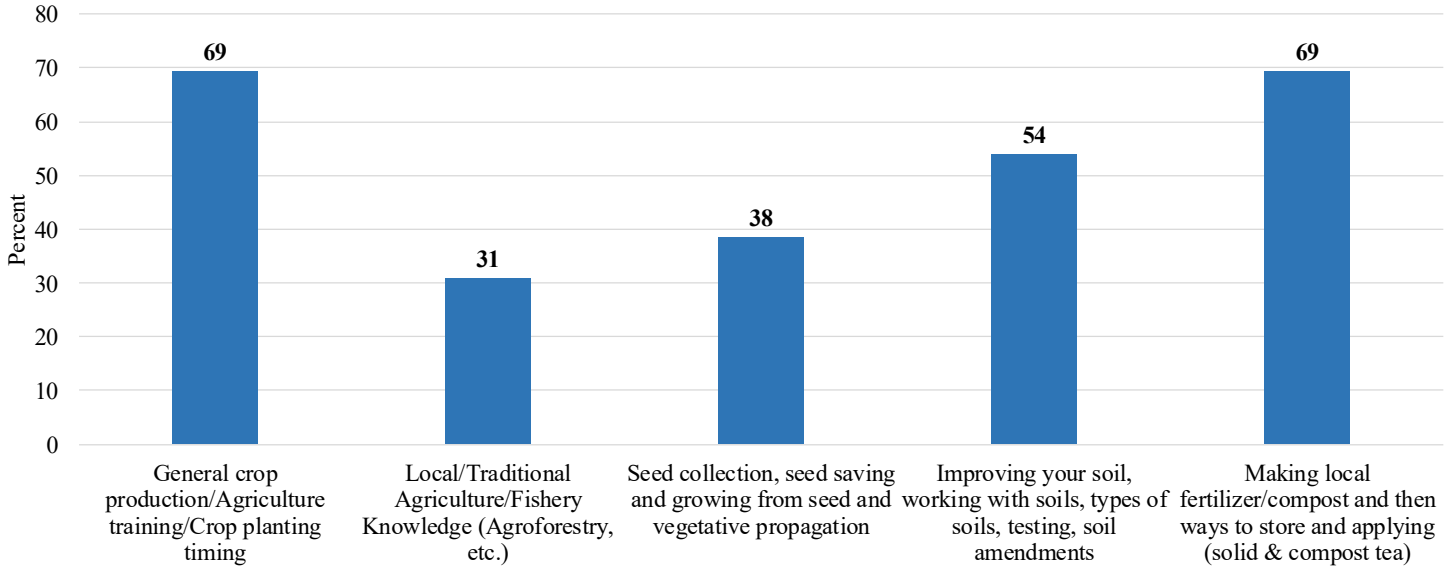
Pohnpei Trainers : Are you trained to teach and mentor others on CLIMATE CHANGE ?



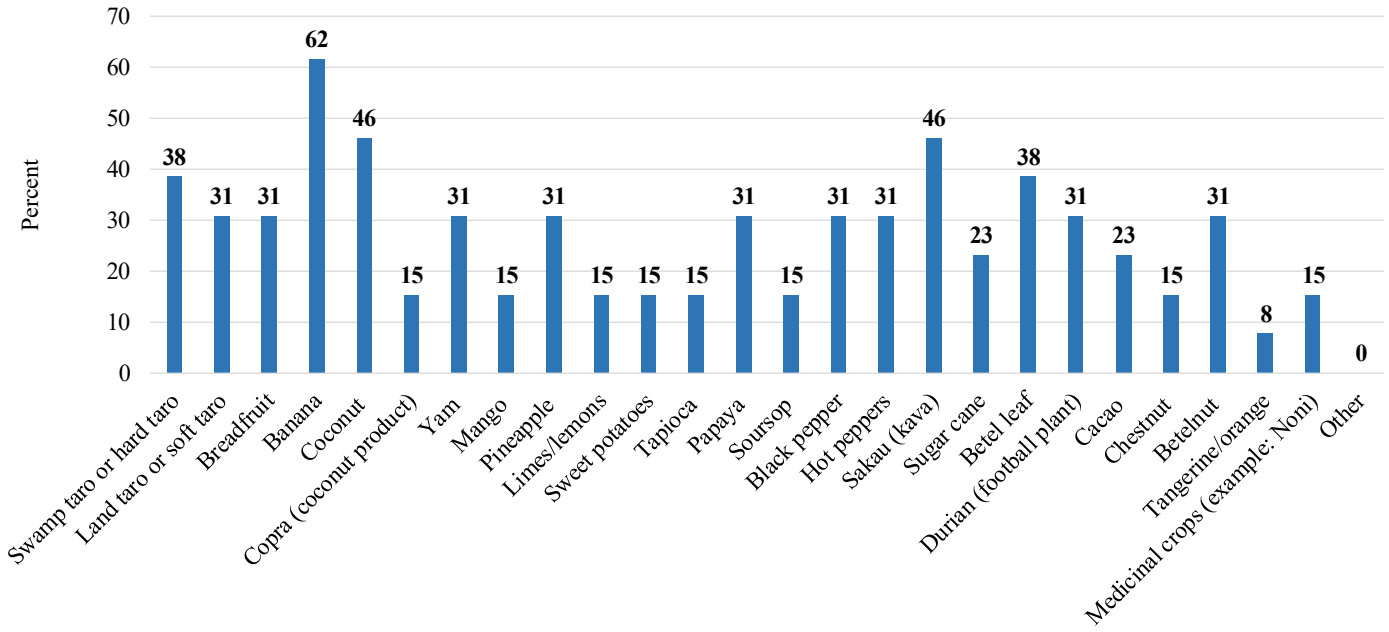
Pohnpei Trainers : Would you be interested in taking workshops and trainings to get up to speed or better trained ?



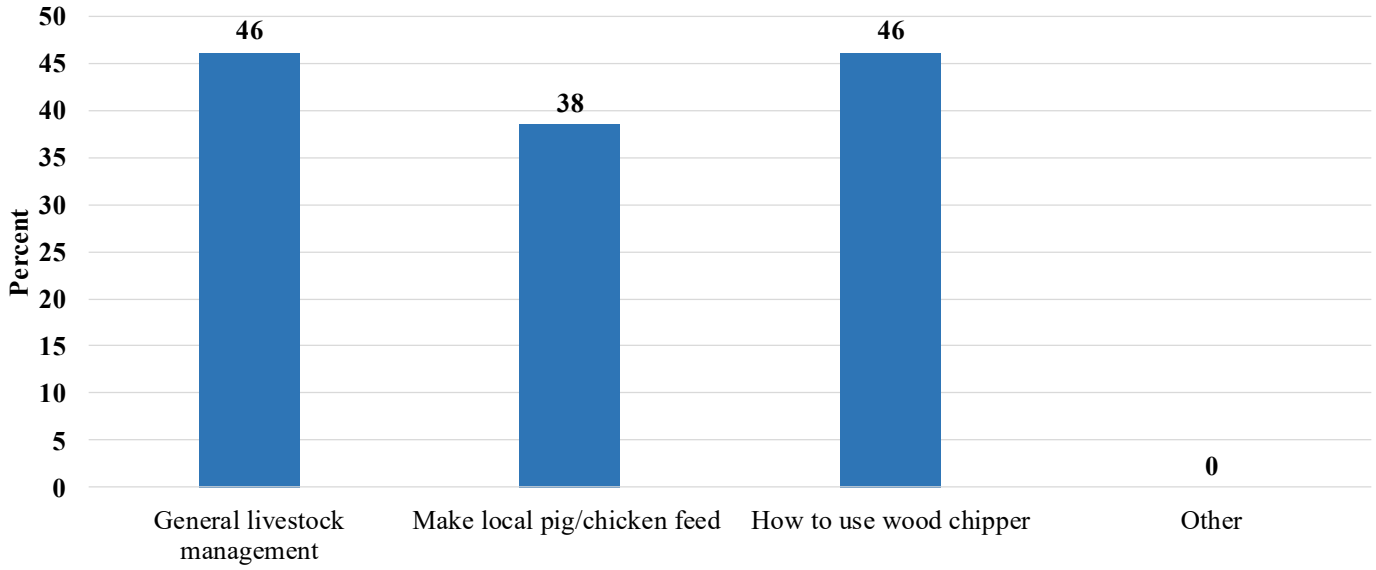
Pohnpei Trainers : Are you trained to teach and mentor others in basic AGRICULTURE for home consumption and/or commercial farming and fisheries?



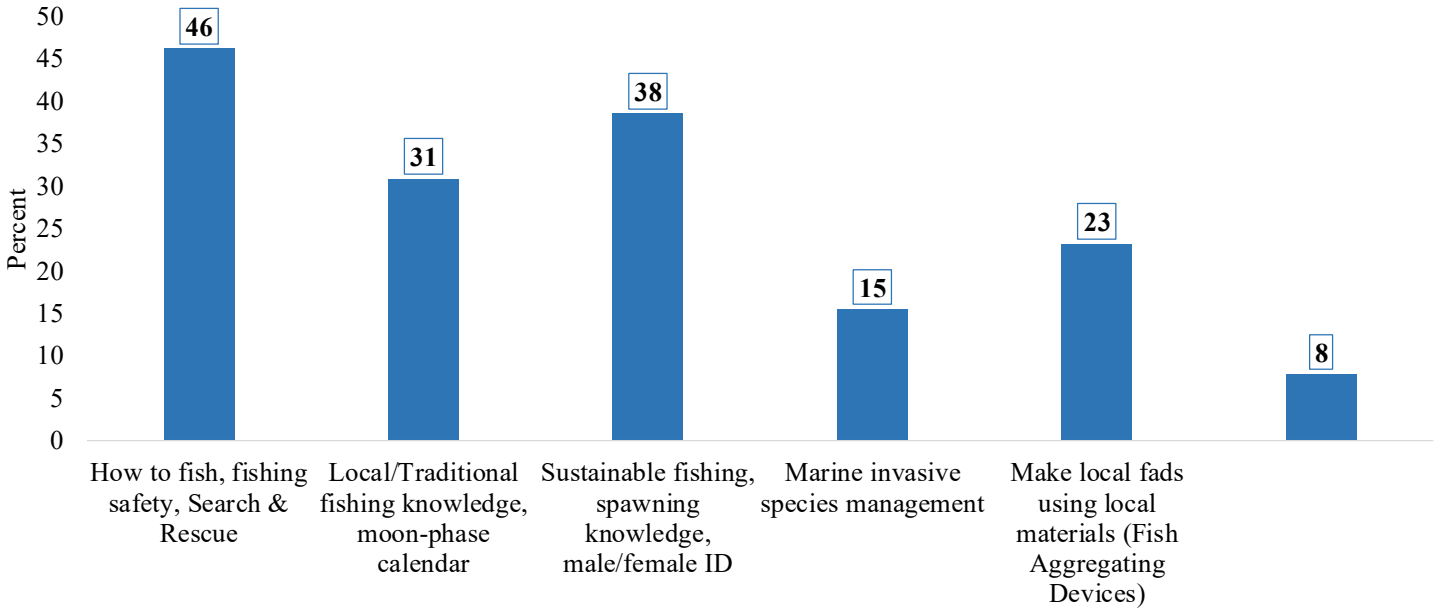
Pohnpei Trainers : Do you have sufficient expertise and hands-on experience with each of the following crops do you want/need more training and information on growing, harvesting, processing of these specific crops (check or circle each that is of interest) ?



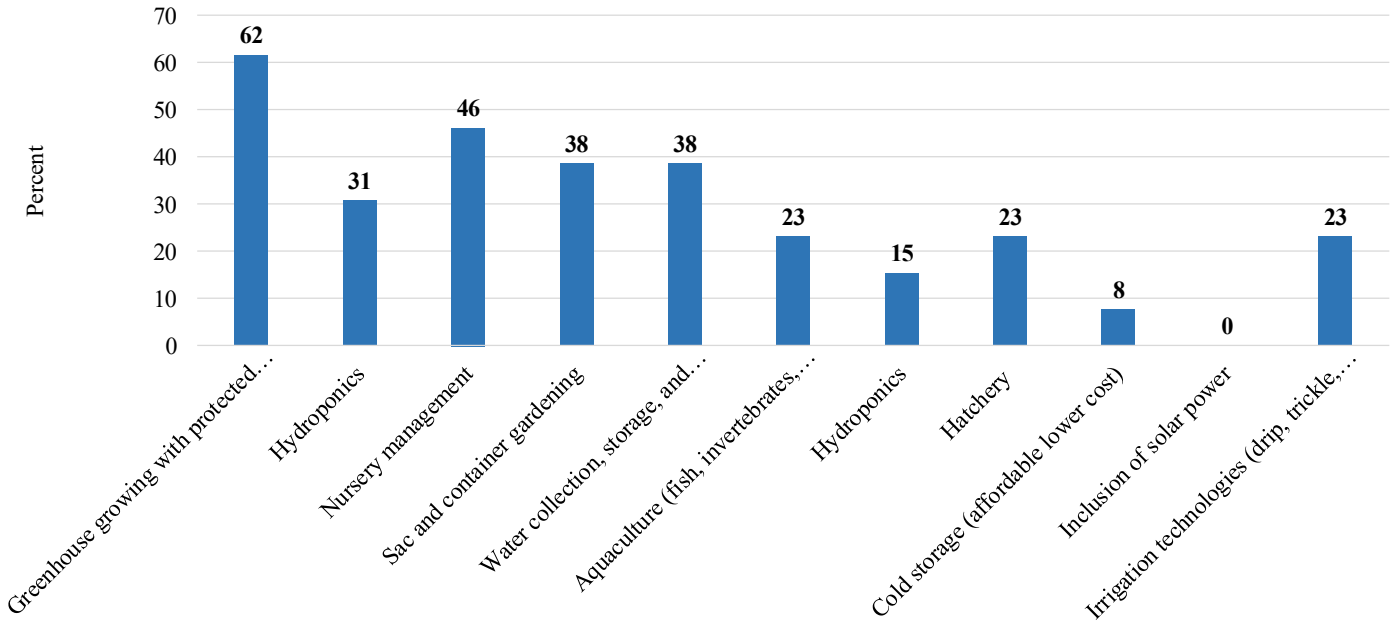
Pohnpei Trainers : Do you have sufficient expertise and hands-on experience with each of the following Livestocks?



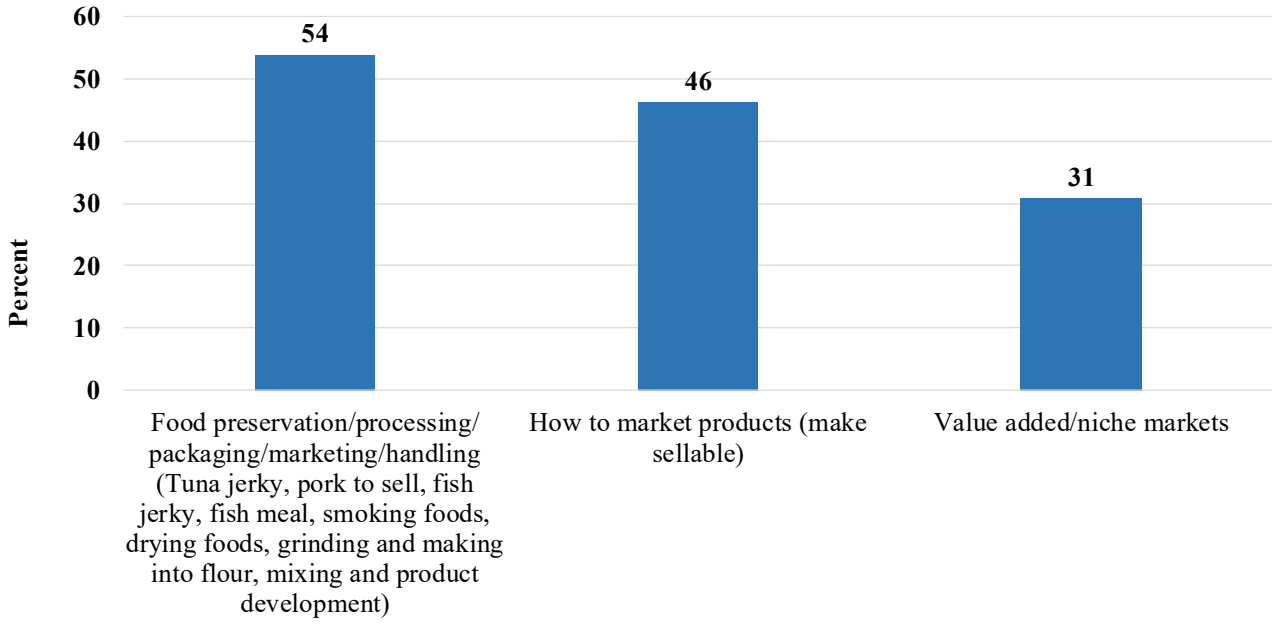
Pohnpei Trainers : Do you have sufficient expertise and hands-on experience with each of the following : MARINE / AQUACULTURE ?



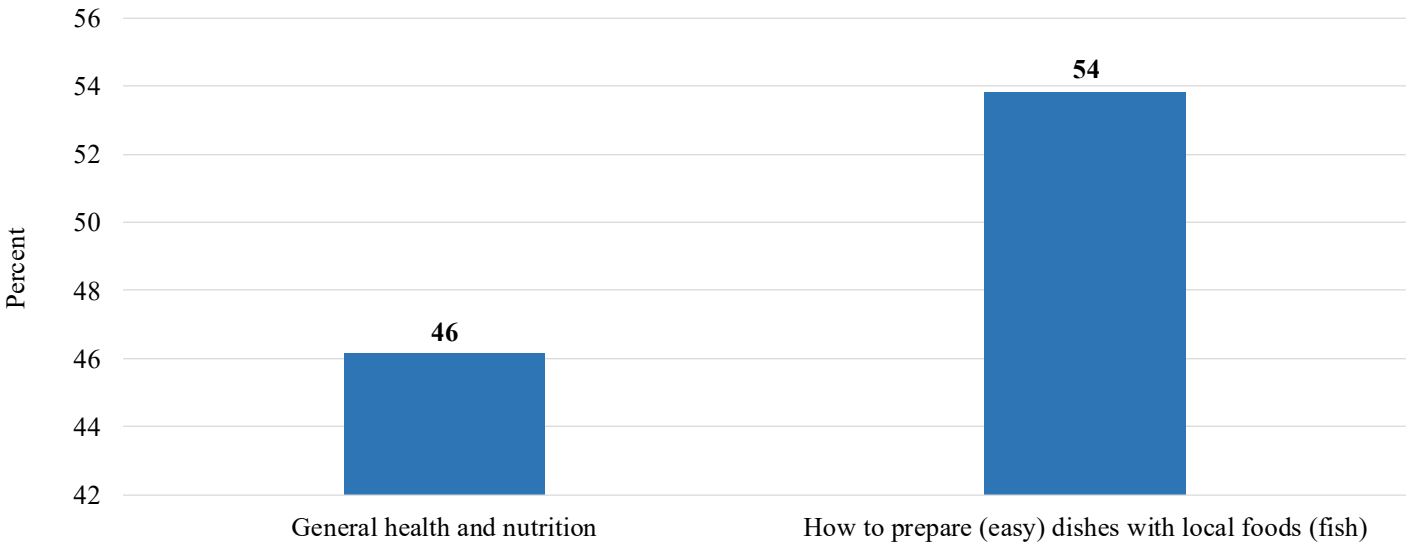
Pohnpei Trainers : Do you have sufficient expertise and hands-on experience with each of the following : TECHNOLOGIES?



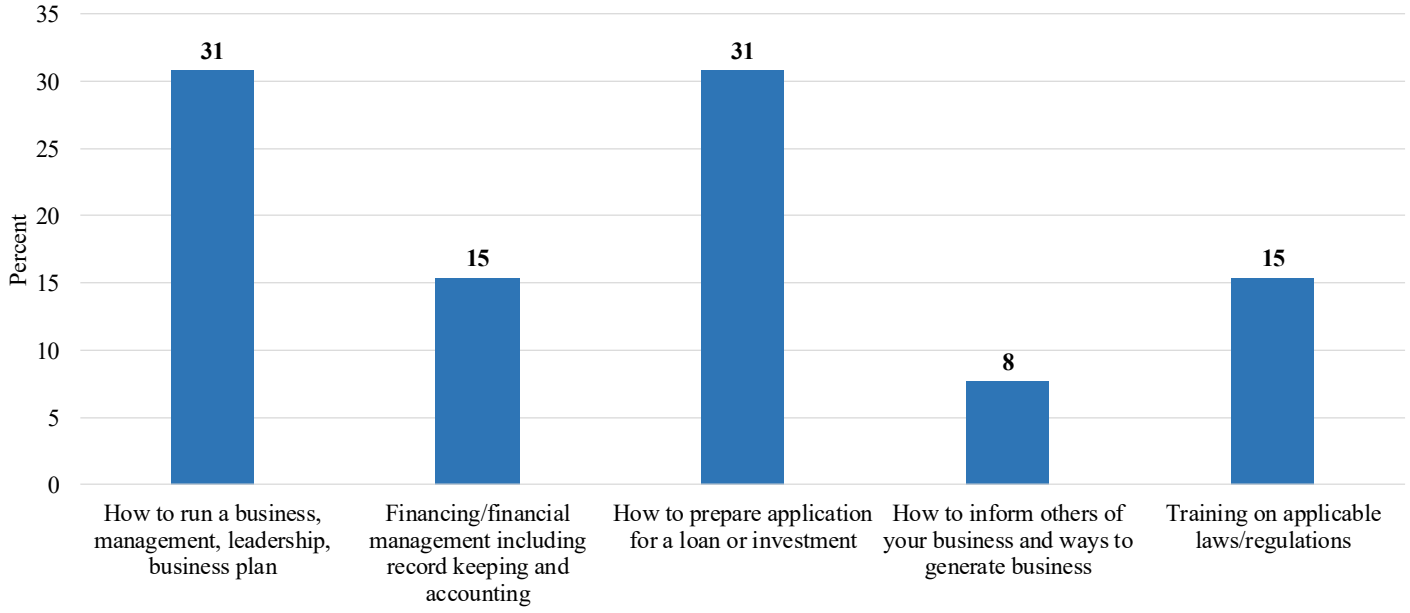
Pohnpei Trainers : Are you trained to teach and mentor others on marketing ?



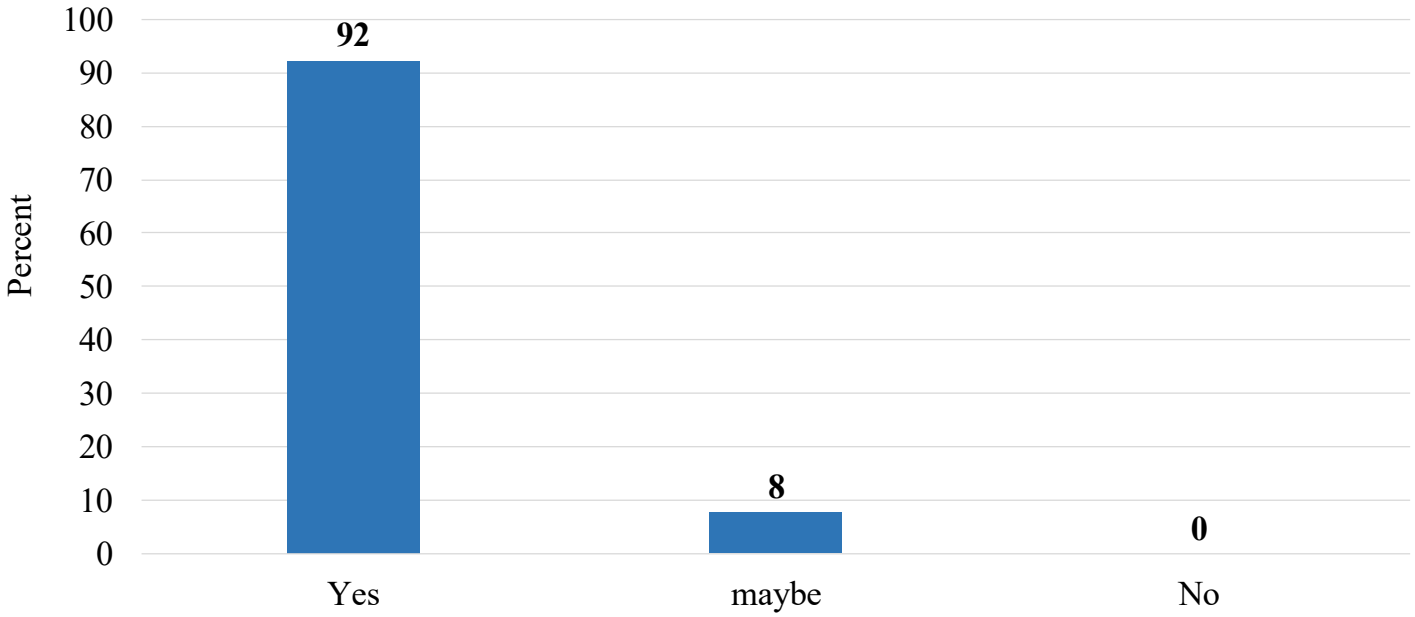
Pohnpei Trainers : Are you trained to teach and mentor others on HEALTH AND NUTRITION relative to people and/or animals/poultry ?



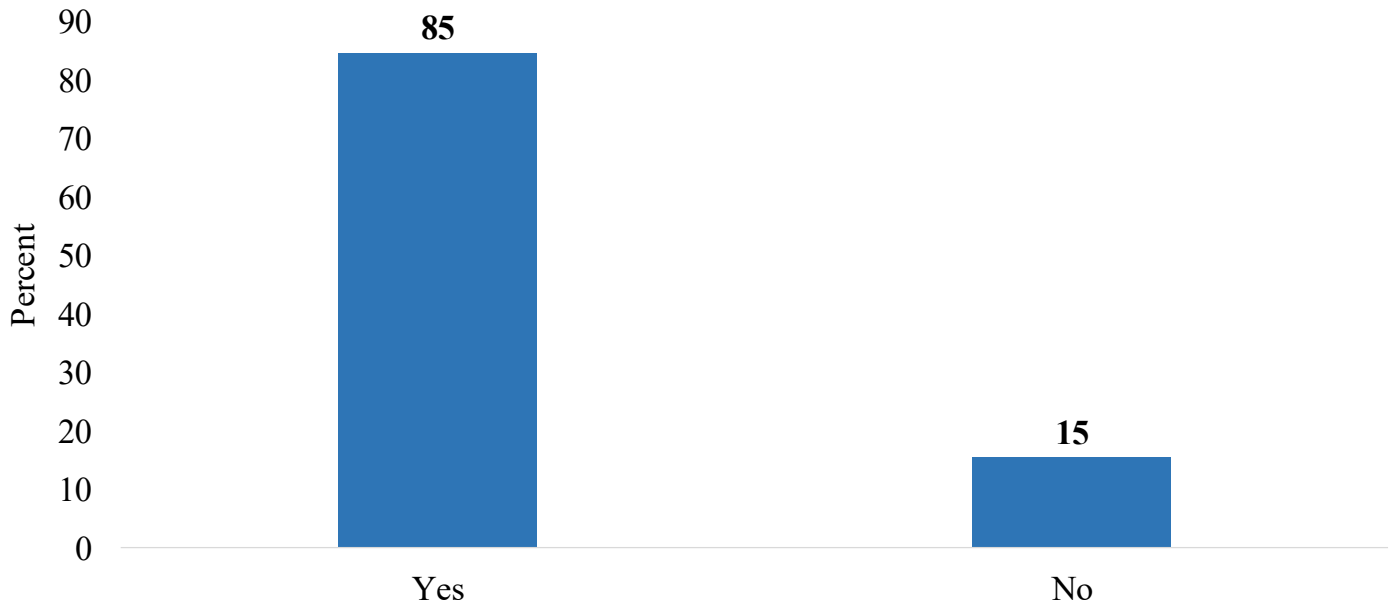
Pohnpei Trainers : Are you trained to teach and mentor others on BUSINESS MANAGEMENT ?



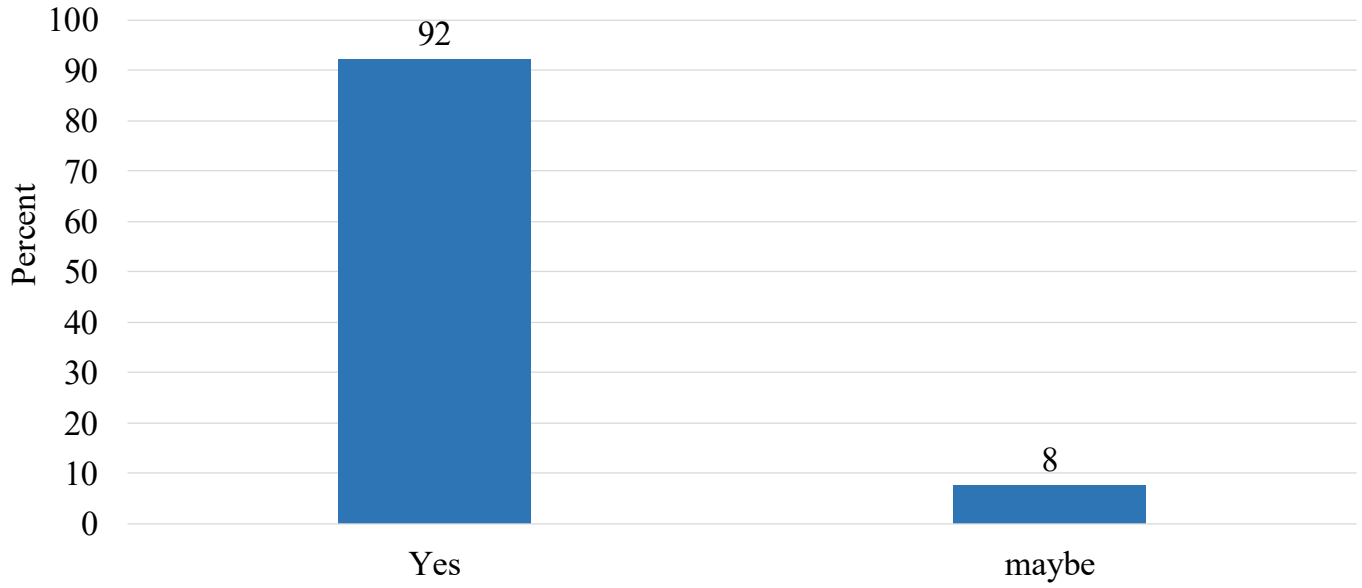
Pohnpei Trainers : Would you be interested in further graduate studies, if you can still keep your job ?



Pohnpei Trainers : Would you be willing to spend some time overseas for such training (or does your work/family preclude that opportunity) ?



Pohnpei Trainers : Would you be willing to pursue online trainings and even graduate programs and certification programs on-line?



Federated States of Micronesia
Food Systems Solutions Project
Survey Results
Pohnpei State

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Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Producer Survey Results

1. Food System Information

This section delves into the critical aspects of food system information among food producers in Pohnpei. It examines their access to and utilization of data on crop planning, weather conditions, pest and disease monitoring, market prices, and emergency notifications. These data points are pivotal for efficient decision-making, operational planning, and ensuring resilience in the face of agricultural challenges. The insights gathered through the survey provide a detailed view of current practices and gaps while identifying opportunities for improvement to support food producers' needs comprehensively. The section serves as a foundation for formulating strategies to optimize information access and application, thereby empowering producers to enhance productivity and sustainability.

Demographics

The survey for Pohnpei's food producers captured responses from 92 individuals actively engaged in diverse food production activities, including farming, agroforestry, fishing, aquaculture, and raising livestock or poultry for meat and eggs. This range of activities highlights the multidimensional nature of the food production sector in Pohnpei, underscoring its economic and cultural importance.

The gender distribution among respondents was 62% male and 38% female, demonstrating the vital contribution of both men and women to the sector. While the majority of producers were male, the significant proportion of female producers emphasizes the importance of gender-inclusive approaches when designing support systems and interventions for the agricultural sector.

The survey further revealed that producers aged 31 to 45 years were the largest demographic group, representing 45% of respondents. This age group is often associated with a balance of experience and adaptability, making them central to the sector's innovation and development. Younger producers aged 18 to 30 comprised 36% of respondents, reflecting a promising influx of new talent and perspectives into food production. Producers aged 56 to 60 made up 17%, indicating the presence of experienced individuals who bring valuable knowledge and expertise to the sector. Only 2% of respondents were over 60 years old, which may highlight challenges in sustaining long-term engagement of older producers or the potential retirement of seasoned professionals.

These demographic insights paint a picture of a dynamic and intergenerational food production community in Pohnpei. The significant involvement of younger and middle-aged producers,

combined with the active participation of women, presents an opportunity to leverage diverse strengths for building a resilient and inclusive food system.

1.1 Crop Planning and Production Data

Access to crop planning and production data is a cornerstone of effective agricultural management. It enables producers to make informed decisions on planting schedules, resource allocation, and yield forecasting, ultimately improving productivity and reducing waste. Despite its importance, the survey revealed that only 47% of producers in Pohnpei have access to crop planning and production data, leaving a substantial 53% without this crucial resource. This gap underscores the urgent need for initiatives that enhance accessibility to such data.

Producers who have access to crop planning data reported varied usage patterns. Sixty percent accessed this information on a monthly basis, indicating its alignment with typical production cycles and the planning needs of many producers. Nineteen percent accessed the data weekly, reflecting the needs of those who require more frequent updates to adapt to short-term changes. Fourteen percent used it seasonally, which may align with producers engaged in crops or activities dictated by long-term agricultural cycles. Only 5% accessed this information daily, highlighting a potential area for growth in real-time data provision.

When asked about their preferred frequency of access, producers demonstrated a clear demand for regular updates. Nearly half, or 47%, favored monthly updates, suggesting that this interval fits the operational rhythms of the majority. Meanwhile, 21% preferred daily updates, reflecting a subset of producers whose activities might benefit from more granular and immediate information. Another 21% opted for weekly updates, indicating a need for mid-range access to support tactical decision-making.

These findings highlight the critical role of timely and accessible data in enhancing the efficiency and resilience of Pohnpei's food producers. Bridging the gap between current access levels and producers' preferred frequencies will require investments in user-friendly tools, training, and infrastructure that cater to diverse operational needs.

1.2 Weather Information

Weather information plays a pivotal role in agricultural decision-making, as it allows producers to plan their activities around expected conditions and respond proactively to adverse events. The survey indicated that 61% of producers in Pohnpei currently have access to weather data, leaving 39% without access to this essential resource. Limited availability of weather information poses a significant risk to those producers, as unexpected weather changes can lead to crop or livestock losses.

Among producers with access, the reliance on different frequencies of weather updates was evident. Thirty-nine percent reported using monthly updates, which aligns with the long-term planning needs of certain crops or activities. Weekly updates were accessed by 25% of respondents, indicating their utility for medium-term adjustments in operations. Seasonal updates were utilized by 20%, likely reflecting producers whose activities are closely tied to seasonal

agricultural cycles. Only 16% of respondents accessed daily weather updates, suggesting that real-time data is underutilized or insufficiently available.

Producers expressed a strong demand for more frequent and detailed weather updates. Thirty-two percent indicated a preference for daily updates, emphasizing the need for real-time information to manage immediate risks and capitalize on favorable conditions. Another 30% preferred weekly updates, which provide a balanced approach to short- and medium-term planning. These preferences underscore the importance of improving the availability and frequency of weather information services in Pohnpei.

Investments in weather data accessibility, such as mobile applications, SMS-based alerts, and local weather monitoring systems, could significantly enhance producers' ability to anticipate and mitigate weather-related risks. Providing tailored updates that match the preferred frequencies of producers would ensure that this critical information is both practical and impactful, supporting the resilience and sustainability of Pohnpei's agricultural sector.

1.3 Pest and Disease Monitoring

Monitoring pests and diseases is essential for sustaining agricultural productivity and protecting both crops and livestock. The survey revealed that only 33% of producers in Pohnpei have access to pest and disease monitoring information, leaving a significant 67% without this critical resource. The absence of such access exposes producers to increased vulnerability, as outbreaks of pests and diseases can lead to significant crop losses, reduced yields, and diminished livestock health.

Among the producers with access to pest and disease monitoring data, patterns of usage varied significantly. Monthly usage was the most common, with 40% of respondents indicating they accessed this information at that frequency. Seasonal access followed, with 30% of producers relying on data that aligns with seasonal agricultural cycles. Twenty percent of respondents used pest and disease information weekly, reflecting a need for regular updates to manage ongoing risks. Daily usage was relatively uncommon, with only 7% of producers indicating they accessed pest and disease monitoring data at this frequency.

When producers were asked about their preferred intervals for receiving pest and disease monitoring updates, the responses showed varied needs. Twenty-seven percent expressed a preference for monthly updates, aligning with the usage patterns of many respondents who currently access the data. Weekly updates were preferred by 23% of producers, indicating a demand for more frequent and actionable information. Twenty percent of respondents expressed a need for daily updates, suggesting that a subset of producers seeks real-time data to promptly address emerging threats. Seasonal updates were less preferred but remain relevant for certain producers whose operations align with specific planting and harvesting periods.

The findings highlight the importance of developing accessible and consistent monitoring tools that cater to the diverse needs of producers. Tools that provide pest and disease data in real-time or at regular intervals could significantly enhance the capacity of producers to detect and address

threats early. Increasing access to such information through mobile platforms, community alerts, or centralized agricultural support services would help producers in Pohnpei mitigate risks and sustain agricultural productivity.

1.4 Market Prices

Access to accurate and timely market price information is critical for enabling producers to make informed decisions about when and where to sell their products, thereby maximizing profitability. The survey indicated that only 36% of producers in Pohnpei currently have access to market price data, leaving a substantial 64% without this vital resource. Producers without access to market prices face challenges in adapting to fluctuations, potentially resulting in lower earnings or missed opportunities to sell at optimal prices.

Among producers with access to market price information, the frequency of use reflected their diverse needs. Thirty-three percent of respondents reported using market price information monthly, making this the most common usage pattern. Weekly access was the second most common, with 27% of producers relying on this frequency to inform their sales strategies. Seasonal access accounted for 21%, likely reflecting producers who align their market engagement with specific harvest or production cycles. Daily access was less frequent, reported by 15% of producers, but it remains critical for those engaged in markets with highly volatile prices or rapid turnover.

Producers expressed a clear demand for more frequent and reliable market price updates. Twenty-seven percent indicated a preference for daily updates, while another 27% preferred monthly updates, demonstrating the relevance of both granular and periodic data. Weekly updates were favored by 24% of producers, reflecting their importance in short-term planning and decision-making. Seasonal updates were less commonly preferred, but they remain important for certain producers with cyclical production schedules.

Improving access to market price data in Pohnpei could have a transformative impact on producers' ability to optimize their sales strategies. Investments in user-friendly tools, such as mobile apps, online platforms, and community-based price boards, could bridge the current accessibility gap. By offering consistent and timely updates, producers would gain the insights needed to adapt to market dynamics and enhance profitability.

1.5 Online Market Forecasting for Food Product Outputs

Online market forecasting tools provide valuable insights that help producers align their production outputs with market demand, enabling them to optimize yields and minimize losses. Despite their importance, the survey revealed that only 41% of producers in Pohnpei have access to these tools, leaving 59% without this resource. The lack of access to market forecasting data limits producers' ability to anticipate demand fluctuations and plan their operations accordingly.

Among the producers who have access to market forecasting tools, monthly updates were the most common, used by 45% of respondents. This frequency aligns well with production cycles that require periodic adjustments based on market trends. Weekly usage was reported by 21% of producers, indicating that a portion of respondents requires more frequent updates to remain

agile in dynamic markets. Sixteen percent of respondents accessed forecasting data seasonally, reflecting the needs of producers whose outputs are tied to specific planting or harvesting periods. Daily usage was reported by 13%, highlighting the importance of real-time forecasting for a small but significant group of producers operating in rapidly changing market environments.

When asked about their preferred frequency for accessing market forecasting data, 42% of producers indicated a preference for monthly updates. This reflects the operational realities of many producers who benefit from forecasts that align with medium-term planning cycles. However, 26% expressed a need for daily updates, emphasizing the demand for real-time information that supports immediate decision-making and risk management. Weekly updates were preferred by 13% of respondents, demonstrating the importance of short-term forecasting for aligning production with demand fluctuations.

Expanding access to market forecasting tools in Pohnpei could significantly improve producers' ability to anticipate demand and optimize their production strategies. Tailored tools that deliver updates at diverse intervals, such as mobile notifications, online dashboards, or community workshops, could cater to the varying needs of producers. Ensuring that these tools are both accessible and user-friendly would empower producers to respond proactively to market trends, increasing their competitiveness and overall profitability.

1.6 Online Information on Food Production Inputs

Access to online information about food production inputs, including seeds, feed, fertilizers, and equipment, plays a pivotal role in supporting the efficient management of agricultural operations. The survey results show that 46% of producers in Pohnpei currently have access to this type of information, leaving 54% without this critical resource. The lack of access to information about inputs can hinder producers' ability to make timely decisions about procurement, potentially impacting productivity and operational efficiency.

Among producers with access to online information on food production inputs, usage frequency varies. Fifty percent of producers reported using this information monthly, making it the most common frequency. This trend indicates that many producers align their information needs with broader operational or planning cycles. Weekly access was reported by 19% of respondents, reflecting the requirements of producers who need more regular updates to adjust their input usage or inventory. Daily and seasonal usage were reported equally, with 17% and 14% of producers, respectively, accessing this data at these intervals. The daily usage reflects a smaller group of producers who require real-time data, possibly due to the dynamic nature of their operations, while seasonal access aligns with specific planting or harvesting schedules.

Producers expressed a range of preferences regarding how often they would like to access information about food production inputs. Thirty-six percent favored monthly updates, consistent with the most common current usage pattern, suggesting that monthly updates meet the needs of many producers. Twenty-four percent preferred daily updates, highlighting the demand for more

immediate access to information, especially during critical operational periods. Twenty-one percent of producers opted for weekly updates, indicating a balance between the need for frequent information and the ability to integrate it into medium-term planning.

These findings underscore the need to enhance access to online information about food production inputs in Pohnpei. Platforms offering tailored updates at diverse intervals, such as monthly reports for strategic planning and daily alerts for immediate needs, could support a broad spectrum of producers. Expanding access through mobile-friendly applications, community-based kiosks, or training programs on digital tools would empower producers to make informed decisions, optimize input usage, and improve their overall productivity.

1.7 Online Policy Updates

Staying informed about policy updates, including changes to regulations, subsidies, and market requirements, is essential for producers to remain compliant and capitalize on available opportunities. However, the survey revealed that only 36% of producers in Pohnpei have access to online policy updates, leaving 64% without this vital resource. The absence of access to timely policy information poses challenges for producers, as they may struggle to adapt to regulatory changes or take advantage of new programs.

Among the producers who have access to policy updates, monthly updates were the most common frequency, used by 30% of respondents. This suggests that many producers find monthly updates sufficient for staying informed about broader regulatory changes that do not require immediate action. Weekly access was reported by 24% of respondents, reflecting the needs of producers who prefer more frequent updates to track changes in real time. Seasonal updates were utilized by 21%, indicating that some producers rely on periodic access to align their operations with less frequent policy changes or requirements.

Producers also expressed clear preferences regarding how often they would like to receive policy updates. Twenty-seven percent favored monthly updates, consistent with the most common current usage pattern. Another 27% preferred weekly updates, highlighting the demand for more regular information to stay proactive in compliance and planning. The diverse preferences reflect the varying operational needs of producers, with some requiring frequent updates to manage dynamic regulatory environments and others preferring periodic information for strategic planning.

Expanding access to online policy updates in Pohnpei would help producers navigate regulatory requirements more effectively. Efforts to increase accessibility could include creating localized digital platforms, offering updates in user-friendly formats, or providing training on accessing online policy tools. Timely and consistent access to policy updates would empower producers to remain compliant, take advantage of available opportunities, and improve their overall operational efficiency.

1.8 Emergency Notifications

Emergency notifications play a critical role in ensuring that producers are prepared for disease outbreaks, environmental hazards, and other risks that could threaten their operations. The survey

revealed that 63% of producers in Pohnpei currently receive emergency notifications, while 37% lack access to this critical resource. Limited access to emergency alerts leaves a significant portion of producers vulnerable to unforeseen risks, potentially resulting in losses that could have been mitigated with timely information.

Among producers who receive emergency notifications, monthly updates were the most common frequency, utilized by 47% of respondents. This trend indicates that many producers rely on periodic updates to prepare for low-frequency events such as seasonal weather changes or planned interventions. Weekly updates were reported by 22%, reflecting the needs of producers who require more frequent information to manage ongoing risks or respond to dynamic conditions. Seasonal updates were used by 17%, aligning with producers who need notifications during specific agricultural cycles. Daily updates were less common, but they remain crucial for producers managing immediate threats or operating in high-risk environments.

When asked about their preferred frequency for receiving emergency notifications, producers expressed a clear demand for more regular updates. Forty-five percent of respondents indicated a preference for weekly notifications, emphasizing the need for timely and actionable information to address emerging risks. Twenty-four percent favored daily updates, reflecting the importance of real-time alerts for producers who must respond quickly to critical situations. Monthly updates were preferred by a slightly smaller group, highlighting that some producers find periodic notifications sufficient for their needs.

Improving access to emergency notifications in Pohnpei is essential for strengthening the resilience of the agricultural sector. Efforts to enhance accessibility could include implementing SMS-based alert systems, establishing community-based information hubs, and integrating emergency notifications into existing digital platforms. Providing real-time and frequent updates tailored to the needs of producers would help mitigate risks, protect resources, and ensure the stability of agricultural operations in the face of unexpected challenges.

1.9 Online Risk Management Training

Risk management training is a critical resource for equipping producers with the skills and knowledge necessary to navigate uncertainties in food production, including financial, operational, and environmental risks. The survey results indicate that 45% of producers in Pohnpei have access to online risk management training resources, while 55% lack access. This gap represents a significant barrier to enhancing the resilience and adaptive capacity of producers in the region.

Among those with access to risk management training, the frequency of usage reveals varying levels of engagement. Twenty-nine percent of producers reported using these resources weekly, highlighting the importance of regular updates and consistent support for managing ongoing risks. Monthly usage was slightly lower, with 24% of producers accessing training materials at this frequency. Daily usage was relatively rare, with only 10% of producers utilizing these resources for immediate and dynamic needs. Seasonal access accounted for another 29%, reflecting the preferences of producers whose risk management needs align with specific agricultural cycles.

When asked about their preferred frequency for accessing risk management training, producers expressed a strong demand for weekly updates, with 34% favoring this option. Weekly access aligns with the needs of producers seeking consistent and actionable training to manage short-term risks effectively. Twenty percent of respondents expressed a preference for daily updates, highlighting a subset of producers who require immediate and real-time access to training materials to address emerging challenges. Another 29% preferred monthly updates, suggesting that for some producers, periodic access to comprehensive training modules aligns better with their operational schedules.

These findings emphasize the value of accessible and practical risk management training programs tailored to the diverse needs of producers in Pohnpei. Expanding access through online platforms, mobile applications, and community training sessions could bridge the existing gaps. Investments in user-friendly resources, such as video tutorials, interactive webinars, and downloadable guides, would ensure producers can integrate risk management training into their daily practices, improving their overall resilience and efficiency.

1.10 Notifications for Training Opportunities

Notifications about training opportunities play a vital role in enabling producers to access skill-building sessions that enhance their knowledge and capabilities. In Pohnpei, the survey revealed that 47% of producers currently receive notifications about available training opportunities, while 53% do not. The lack of notifications for over half of the producers indicates a significant barrier to their participation in valuable training programs.

Among producers who receive notifications, usage patterns vary. Weekly notifications were the most common, with 33% of respondents accessing them at this frequency. Weekly notifications are likely aligned with producers' needs for timely updates that allow them to plan and participate in training sessions without disrupting their operational schedules. Monthly notifications accounted for 28%, reflecting a preference among some producers for periodic updates that align with longer-term planning cycles. Fourteen percent of producers received daily notifications, indicating that a smaller subset of producers values real-time updates for identifying and attending immediate training opportunities.

When asked about their preferences for receiving notifications, 40% of producers expressed a preference for weekly updates. Weekly notifications allow producers to remain consistently informed about upcoming training opportunities, balancing the need for regular information with operational demands. Monthly updates were preferred by 28% of producers, while daily notifications were favored by 21%. These preferences highlight the importance of providing flexible notification systems that cater to varying information needs.

Efforts to improve the dissemination of training notifications could include leveraging digital tools such as SMS alerts, mobile applications, and email newsletters. Community-based platforms, such as bulletin boards in agricultural cooperatives, could also enhance outreach to producers without reliable internet access. Consistent updates on training opportunities would enable producers in Pohnpei to build their skills, adopt innovative practices, and enhance their productivity and market competitiveness.

1.11 Cell Phone and Internet Access

Access to technology is fundamental for producers to connect with critical resources, including market data, weather updates, and training opportunities. The survey results show that 78% of producers in Pohnpei reported owning a cell phone, reflecting widespread access to mobile technology. Among these, many producers utilize their devices to access online resources, communicate with suppliers, and manage their operations. However, 26% of producers still lack cell phones, which limits their ability to participate in digital initiatives and access essential information.

Internet access was reported by 93% of producers, indicating high levels of connectivity among the surveyed group. This connectivity allows producers to leverage online platforms for crop planning, market analysis, and training. Despite this high percentage, challenges related to affordability and consistent connectivity remain significant barriers for some producers. Limited financial resources and unreliable internet service in certain areas constrain their ability to access and utilize digital tools effectively.

Improving connectivity and affordability would significantly enhance producers' ability to access essential tools and resources. Investments in digital infrastructure, such as expanding mobile networks and providing affordable data plans, would support broader access to online resources. Establishing community Wi-Fi hubs or shared technology centers could also help producers without personal internet access connect to critical information.

By addressing these technological gaps, the food production sector in Pohnpei could benefit from increased efficiency, better decision-making, and improved access to training and market opportunities. Strengthening digital inclusion would empower producers to integrate technology into their operations, fostering resilience and innovation across the agricultural landscape.

2. Food Innovation Center

The Food Innovation Center in Pohnpei is a cornerstone of efforts to support local producers in developing and processing a wide variety of food products. It serves as a hub for innovation and capacity building, helping producers enhance their product offerings, adopt efficient processing methods, and meet market demands. This section delves into the interests, preferences, and challenges of producers, offering insights that can guide the Center in tailoring its support services to the specific needs of the Pohnpei agricultural community.

2.1 Interest in Locally Processed Foods

Producers in Pohnpei have demonstrated a keen interest in diversifying and enhancing their processed food offerings, with certain products standing out as clear favorites. Banana chips emerged as the most popular product, with 63 producers, representing 68%, expressing interest in producing them. This overwhelming interest underscores the widespread availability of bananas in Pohnpei and their cultural significance as a staple food.

Breadfruit products also garnered considerable attention, with 58% of producers indicating interest in breadfruit chips and 48% showing interest in breadfruit flour. These products align well with local preferences for utilizing traditional crops in innovative ways. Breadfruit, being a key staple, provides an opportunity to produce shelf-stable, high-demand products that cater to both local and potentially regional markets.

Coconut-based products reflect another area of interest. Coconut cooking oil attracted the attention of 48% of producers, making it the most favored coconut derivative. Coconut milk was also popular, with 38% of producers showing interest, while 36% expressed interest in coconut flour. These figures highlight the producers' recognition of coconuts as a versatile and culturally important crop, although there is slightly less interest in processed forms like flour.

Fish and seafood products continue to be a vital part of Pohnpei's food culture. Forty-seven percent of producers expressed interest in salted fish, 40% in dried fish, and 35% in smoked fish. This interest reflects both the abundance of fish in Pohnpei and the producers' recognition of preserved fish as a valuable product for local and regional consumption.

Specialized products such as flavored oils and hot sauces received less interest. Only 11% of producers were interested in flavored oils, while 22% indicated interest in producing hot sauces. These figures suggest that while producers are exploring niche markets, their primary focus remains on staple foods with established demand.

Overall, these preferences indicate a strong inclination toward developing products rooted in local agriculture and cultural heritage. The Food Innovation Center can leverage this interest to support producers in scaling production and introducing value-added processes that enhance the marketability of these products.

2.2 Preferred Processing Methods

The survey findings reveal a clear preference among producers in Pohnpei for small-scale, localized processing methods. Sixty percent of producers indicated a preference for using traditional tools and techniques, reflecting a strong alignment with cultural practices and the feasibility of small-scale operations. This preference highlights producers' desire to maintain control over their processes while minimizing costs associated with large-scale industrial setups.

Additionally, 59% of producers expressed a preference for using their own equipment on personal land. This choice demonstrates a strong inclination toward self-reliance and flexibility, allowing producers to operate at their convenience without being tied to shared or centralized facilities. This method is particularly appealing to those who prefer to manage the entire production process independently.

Cooperative processing models also hold significant potential in Pohnpei. Forty-two percent of producers are willing to contribute fresh products to a shared facility, recognizing the cost-effectiveness and efficiency of shared resources. This approach allows producers to access high-quality equipment and processing technologies that may otherwise be financially out of reach for individual operations.

Conversely, only 10% of respondents expressed interest in using local or central processing facilities independently. This limited interest may stem from concerns about logistical challenges, costs, or a lack of familiarity with centralized systems. However, 42% showed interest in selling fresh produce to larger industrial processors. This group sees value in focusing on primary production while leveraging the capabilities of industrial processors for packaging, distribution, and marketing.

These findings suggest that while many producers are focused on small-scale, autonomous operations, there is also significant interest in collaborative and industrial models that can expand market reach and optimize resource use. The Food Innovation Center can play a pivotal role in supporting both traditional and modern aspirations by providing a range of processing options, from individual assistance to shared facilities and partnerships with industrial processors. This balanced approach would cater to the diverse needs of Pohnpei's producers, ensuring that each can achieve their unique production and market goals.

2.3 Consumer Price Expectations

Producers in Pohnpei have expressed clear expectations regarding the pricing of locally processed foods, with a significant emphasis on affordability. According to the survey, 45% of producers believe that the optimal price range for their products lies between $1 and $5 per unit. This price range likely reflects a desire to ensure accessibility for the majority of local consumers, many of whom may prioritize affordability when purchasing staple foods or basic processed items.

Another 43% of producers anticipate that consumers would be willing to pay between $6 and $10 per unit for higher-value or specialized products. These products might include items requiring additional processing or those catering to niche markets, such as gluten-free alternatives or premium packaged goods. This pricing bracket demonstrates a recognition of opportunities to capture consumers willing to pay slightly more for enhanced quality or specialized attributes.

A smaller portion, 7%, foresee pricing above $20 per unit, likely for luxury items or those requiring labor-intensive production processes. Products in this category could include specialty goods, artisanal creations, or items incorporating rare or imported ingredients. The limited interest in this price range underscores the producers' focus on targeting broader local markets rather than niche, high-income segments.

These pricing expectations illustrate the need for a careful balance between keeping prices affordable for consumers and covering production costs to ensure profitability for producers. The Food Innovation Center can support producers by providing cost-effective processing solutions, guidance on pricing strategies, and assistance with market research to identify optimal price points for various products. By addressing these factors, the Center can help producers position their products competitively while maintaining financial sustainability.

2.4 Packaging Preferences

Packaging preferences among producers in Pohnpei reflect a diverse range of priorities, including functionality, sustainability, and consumer appeal. Vacuum-sealed pouches are the most preferred option, with 46% of producers favoring this type of packaging. These pouches are valued for their ability to maintain freshness and extend the shelf life of processed foods, making them ideal for items like dried fruits, seafood, and other preserved goods.

Glass jars are another popular choice, favored by 42% of producers. Glass jars are often used for products such as jams, sauces, and pickled goods, where visibility and premium presentation are important. This preference highlights the producers' recognition of the importance of packaging that not only protects the product but also enhances its market appeal.

Eco-friendly packaging options, including biodegradable materials, are equally favored by 50% of producers, indicating a growing awareness of environmental sustainability. These materials, such as banana leaves or other plant-based alternatives, align with global trends toward reducing plastic usage and meeting consumer demand for sustainable options.

Plastic bags and containers remain practical and widely used, preferred by 43% and 39% of producers, respectively. These materials are valued for their affordability, versatility, and ease of use, particularly for items with shorter shelf lives or for quick consumption. While these options are less eco-friendly, their practicality ensures their continued use in certain segments.

The varied preferences indicate that producers in Pohnpei are looking for packaging solutions that balance cost, sustainability, and consumer expectations. The Food Innovation Center can support these needs by offering workshops on packaging innovation, facilitating access to a variety of packaging materials, and providing guidance on selecting the most suitable options based on the product type and target market. These efforts would ensure that producers can meet diverse packaging requirements while addressing environmental concerns and market trends.

2.5 Use of Local Ingredients

The commitment to using local ingredients is a defining characteristic of producers in Pohnpei, with 76% of respondents expressing a preference for locally sourced inputs. This strong preference underscores the producers' dedication to supporting the local economy, reducing reliance on imported goods, and preserving traditional flavors and practices. The use of local ingredients also strengthens the cultural connection between processed foods and Pohnpei's heritage, enhancing their appeal to both local consumers and potential external markets.

However, 21% of producers reported being unsure about their preference for local ingredients. This uncertainty may stem from concerns about the availability and consistency of local supplies, especially for producers looking to scale their operations or meet year-round demand. Variability in the quality and volume of local ingredients may present challenges, particularly for products requiring uniformity and high standards for market acceptance.

The Food Innovation Center can play a pivotal role in addressing these challenges by strengthening local supply chains, improving access to high-quality ingredients, and facilitating partnerships between producers and local farmers. By ensuring a steady and reliable supply of inputs, the Center can help producers fully embrace local sourcing, thereby fostering a

sustainable and resilient food processing sector in Pohnpei. Supporting initiatives that promote sustainable farming practices and enhance the productivity of local agriculture would further reinforce this commitment to local ingredients.

2.6 Perceived Market Potential

The producers in Pohnpei express a range of views regarding the market potential for locally processed foods, reflecting varying levels of optimism and caution. Forty-three percent of producers believe there is high demand with substantial growth opportunities. This optimism likely stems from the cultural significance and popularity of traditional foods, which appeal to both local and regional markets. Producers in this group may also recognize emerging trends favoring locally sourced and processed foods, providing confidence in market expansion.

Forty percent of respondents perceive moderate demand and steady growth potential. These producers likely understand the challenges of catering to niche markets, acknowledging the need for strategic marketing and product differentiation to maintain consumer interest. Their cautious outlook may reflect awareness of logistical or operational hurdles, such as the ability to scale production effectively or compete with imported alternatives.

Sixteen percent of producers foresee limited market potential for locally processed foods. This group likely bases its perspective on barriers such as limited consumer awareness, competition from well-established imported brands, or resource constraints that hinder competitiveness. Concerns about high production costs and pricing sensitivity among local consumers may also contribute to this cautious view. Addressing these concerns through targeted market research, improved distribution channels, and consumer education initiatives could help unlock untapped market potential and align producers' efforts with emerging opportunities.

2.7 Infrastructure and Equipment Needs

The survey data reveals critical gaps in infrastructure and equipment among producers in Pohnpei, highlighting the need for investment in processing facilities and tools. Walk-in coolers and freezers emerged as top priorities, with 62 percent of producers identifying coolers and 61 percent identifying freezers as essential. These facilities are vital for maintaining the freshness of raw ingredients and preserving perishable processed foods, ensuring that producers can meet both local and regional market demands.

Stainless steel tables, highlighted by 70 percent of respondents, are critical for hygienic food preparation and efficient workflows. These tables provide durable and easy-to-clean surfaces that are essential for meeting food safety standards. Food processors were deemed essential by 66 percent of producers, reflecting their importance in automating tasks like slicing, chopping, and blending ingredients. This equipment enables producers to maintain consistency and increase productivity.

Mixers and vertical cutter mixers were also identified as essential by 61 percent and 59 percent of producers, respectively. These tools are particularly important for creating value-added products such as baked goods and blended snacks. Kitchen utensils, required by 67 percent of

respondents, underscore the necessity of fully equipped preparation spaces to support diverse food production activities.

Packaging equipment such as heat sealers were marked as essential by 61 percent of respondents. Proper packaging is crucial for extending shelf life, improving product presentation, and protecting items during transport. Dehydrators and flash freeze dryers were each highlighted by 48 percent of producers, indicating their importance for creating dried and frozen products that cater to both local consumption and export markets.

While ovens were listed as essential by 48 percent of producers, these are particularly relevant for baked goods and other heat-processed items. The demand for community-based processing facilities equipped with shared resources reflects producers' recognition of the financial burden posed by individual ownership of equipment. By addressing these infrastructure needs, the Food Innovation Center can significantly enhance the productivity and scalability of Pohnpei's food production sector.

2.8 Challenges in Production and Processing

Producers in Pohnpei face a variety of challenges that hinder their ability to expand operations and improve efficiency. Many respondents cited limited access to infrastructure and equipment as a major constraint. This issue affects their ability to scale production, maintain product quality, and diversify product offerings. High operational costs further exacerbate these challenges, limiting the ability of producers to invest in essential tools, packaging materials, and advanced technologies.

The seasonal availability of raw materials creates additional obstacles for 36 percent of producers. Natural growing cycles and unpredictable weather patterns result in inconsistent ingredient supplies, disrupting production schedules and reducing the reliability of product availability in markets. This constraint is particularly challenging for producers who rely on fresh ingredients, as it limits their ability to meet consumer demand year-round.

Labor shortages were identified as a significant challenge, with 63 percent of respondents reporting insufficient skilled labor. This shortfall affects both production and harvesting activities, as 73 percent of producers highlighted labor constraints during peak harvesting seasons. The lack of trained personnel impacts the ability to meet production goals, maintain high standards, and expand operations.

Transportation challenges were reported by 47 percent of producers, indicating significant logistical hurdles in moving raw materials to processing sites and finished products to markets. These challenges are compounded by high transportation costs and limited infrastructure, which restrict market reach and increase the difficulty of competing with imported goods.

Addressing these challenges requires a comprehensive approach that includes financial assistance, improved infrastructure, and workforce development. Subsidies or low-interest loans could help producers invest in equipment and facilities, while training programs could alleviate labor shortages by equipping workers with the skills needed for advanced food processing. Enhancing transportation networks and creating centralized processing facilities would further

reduce operational burdens, enabling producers to focus on scaling their operations and meeting market demand effectively. The Food Innovation Center can play a transformative role by providing resources, expertise, and support to overcome these barriers, fostering a more resilient and competitive food production industry in Pohnpei.

2.9 Training and Technical Assistance

Producers in Pohnpei demonstrated a robust interest in various training and technical assistance programs, highlighting their commitment to improving their operational efficiency and product quality. Among the surveyed producers, 91 percent expressed a strong demand for training in commercial food processing. This high percentage reflects the recognition of value-added food processing as a critical area for expanding market opportunities and increasing profitability.

Food safety training emerged as a priority for 83 percent of respondents, emphasizing its role in ensuring compliance with health standards and maintaining product quality. Similarly, 83 percent of producers indicated interest in food preparation training, which encompasses techniques essential for creating appealing and market-ready food products. Training in food preservation methods also garnered significant interest, with 79 percent of producers recognizing its importance for extending shelf life and reducing waste, especially for perishable goods.

Packaging training was identified as a need by 60 percent of producers, underlining the critical role of professional and functional packaging in enhancing product appeal and durability. Cooking and baking training also featured prominently, with 68 percent and 52 percent of producers, respectively, expressing interest in acquiring these skills. These areas of training are vital for producers aiming to diversify their product lines and target different consumer segments.

Producers also highlighted the importance of technical assistance in regulatory compliance and marketing. These areas are crucial for navigating complex market standards and ensuring that their products meet both local and international requirements. Overall, the data suggests a strong appetite for capacity-building initiatives that address various facets of food production, from processing and packaging to marketing and regulatory adherence. Tailored programs that meet these diverse needs can significantly enhance the competitiveness of Pohnpei's food production sector.

2.10 Distribution and Marketing Channels

The survey data reveals a strong preference among producers in Pohnpei for local markets as their primary distribution channel, with 87 percent of respondents identifying them as viable outlets. This overwhelming interest underscores the importance of direct engagement with local consumers, which allows producers to build community ties and receive immediate feedback. Supermarkets and grocery stores were also highly favored, with 58 percent of producers viewing them as significant channels for reaching broader consumer bases through established retail networks.

Direct sales through farm stands were identified as a preferred distribution method by 52 percent of respondents. This approach highlights the producers' interest in maintaining close relationships with consumers while reducing reliance on intermediaries. Specialty food stores

attracted moderate interest, with 29 percent of producers expressing interest in this niche channel, suggesting that some producers are keen to explore more targeted markets that value unique and culturally significant products.

Online platforms were identified as viable distribution channels by 27 percent of respondents. While this number is relatively low compared to other methods, it indicates an emerging interest in digital sales channels. The limited uptake of online platforms may be attributed to challenges such as limited internet access, technical know-how, or lack of familiarity with e-commerce systems. Additionally, 3 percent of producers mentioned "other" distribution methods, suggesting minimal exploration of alternative strategies outside the mainstream options.

The data points to a need for enhanced marketing strategies and infrastructure support to help producers diversify their distribution channels. Training in online marketing, support for accessing supermarkets, and improvements in direct-to-consumer systems like farm stands could help producers reach a wider audience and increase sales.

2.11 Export Potential

The survey results reveal cautious interest among Pohnpei producers in exporting locally processed foods. Only 22 percent of respondents currently view export as a viable opportunity. This figure reflects the significant barriers producers face, such as meeting stringent regulatory requirements, achieving production scalability, and managing logistical challenges. Producers interested in exporting likely recognize the potential of regional and international markets for promoting culturally significant products and expanding revenue streams.

Another 28 percent of respondents indicated openness to exploring export opportunities but remain undecided. These producers may need additional information and support to understand the feasibility and benefits of entering export markets. Concerns about costs, certifications, and unfamiliarity with international trade regulations may contribute to this hesitancy.

Twenty-two percent of producers prefer to focus on the local market, emphasizing the strong ties and reliance on local consumer bases. This preference suggests that these producers prioritize fulfilling local demand over the complexities of scaling up for export. Additionally, 28 percent of producers were unsure about export potential, reflecting the need for targeted feasibility studies, market research, and education about export processes.

The survey data highlights the potential for growth in export interest if logistical, regulatory, and financial barriers are addressed. Producers would benefit from technical assistance in meeting export standards, improving production capacity, and navigating market entry strategies. With the right support, the Food Innovation Center could play a crucial role in equipping producers with the tools and confidence needed to explore and succeed in regional and international markets.

3. Training and Infrastructure Development

The Training and Infrastructure Development section for Pohnpei focuses on the skills and resources required to enhance productivity, sustainability, and market readiness among local food producers. This analysis captures key insights regarding training interests, infrastructure needs,

and barriers, providing a framework for strategic interventions that support the growth and resilience of Pohnpei's food production systems.

3.1 Interest in Commercial Food Processing Training

The survey results highlight a strong desire among Pohnpei's producers to engage in commercial food processing training, with 91 percent of respondents indicating their interest in developing these skills. This overwhelming enthusiasm reflects the producers' recognition of the transformative potential of value-added processing to enhance product appeal and extend market reach. Conversely, 9 percent of respondents reported no interest in such training, possibly due to a lack of resources, limited awareness of benefits, or perceived difficulties in implementation.

The demand for training spans a broad spectrum of skills. Among the respondents, food safety and food preparation training were jointly prioritized by 83 percent, underscoring the centrality of these skills to ensuring both product quality and compliance with health standards. Food preservation training followed closely, with 79 percent of producers emphasizing its importance in reducing waste, increasing shelf life, and catering to consumer demand for sustainable and long-lasting products. Cooking techniques, which enable producers to diversify their offerings with ready-to-eat or pre-prepared items, were identified by 68 percent of respondents as a key area for training. Additionally, 60 percent of producers expressed a need to develop expertise in food sorting and quality control, ensuring their products meet consistent standards that align with market expectations. Packaging training was equally significant for 60 percent of producers, indicating an awareness of the critical role packaging plays in maintaining product integrity, extending shelf life, and enhancing consumer appeal.

The distribution of interests across these skills highlights the producers' holistic approach to food processing. The emphasis on training that spans multiple stages of the value chain reflects a comprehensive understanding of the factors that contribute to the success of processed food products in local and regional markets.

3.2 Essential Skills for Food Safety

Food safety training is recognized as a top priority by 83 percent of Pohnpei's producers, reflecting its critical role in safeguarding consumer health, maintaining product quality, and ensuring market competitiveness. Producers understand that adhering to food safety standards is not only a regulatory requirement but also a fundamental component of building trust with consumers and sustaining demand for their products. The remaining 17 percent of respondents, who did not prioritize food safety training, may benefit from increased awareness campaigns that emphasize the risks and potential consequences of non-compliance, such as product recalls or loss of market access.

The interest in food safety training encompasses several key aspects, including preventing contamination, maintaining hygiene throughout the production process, and ensuring proper storage conditions. Producers are keen to learn best practices in handling raw materials, managing production environments, and adhering to guidelines that ensure their products meet both local and international safety standards. These skills are particularly relevant for producers

aiming to expand their market presence, as compliance with stringent food safety regulations is often a prerequisite for entering larger or export-oriented markets.

To effectively deliver food safety training, appropriate infrastructure is essential. Facilities should be equipped with stainless steel workstations that provide hygienic surfaces for food handling and preparation. Washing stations with ample water supply and drainage systems are crucial for maintaining cleanliness, while temperature-controlled storage rooms ensure that perishable items remain safe and fresh throughout the processing cycle. Training sessions conducted in such environments allow producers to gain hands-on experience in implementing safety protocols, bridging the gap between theoretical knowledge and practical application.

Investing in infrastructure that supports food safety training also has long-term benefits for Pohnpei's food production sector. Producers who are well-versed in food safety standards are better positioned to deliver high-quality products consistently, enhancing their reputation and competitiveness. Moreover, a strong focus on food safety fosters a culture of accountability and continuous improvement, ensuring that the sector evolves to meet changing consumer preferences and regulatory requirements. By addressing the producers' needs for comprehensive food safety training, Pohnpei can strengthen its local food systems, increase market access, and build a resilient foundation for future growth.

3.3 Quality Control and Food Sorting

Interest in quality control and food sorting training is significant among producers in Pohnpei, with 60 percent expressing a desire to develop these skills. This indicates a strong recognition of the importance of quality control in ensuring marketable and consistent products that meet consumer expectations. The remaining 40 percent who did not express interest might feel they lack the immediate need for this training or may not fully grasp its potential impact on enhancing product reliability and consumer trust.

For quality control to be implemented effectively, infrastructure plays a pivotal role. According to the survey data, 61 percent of producers identified cold storage as essential for preserving the quality of perishable items during sorting. This aligns with the need to maintain product freshness throughout the sorting and grading process, especially for fruits, vegetables, and seafood that are susceptible to spoilage. Another 19 percent considered cold storage to be convenient but not critical, reflecting a segment of producers who might operate with less perishable items or have alternative storage solutions. However, 20 percent saw no need for cold storage, suggesting their production may focus on non-perishable or less time-sensitive products.

Stainless steel sorting tables were identified as essential by 70 percent of producers, emphasizing the importance of clean and durable work surfaces that meet food safety standards. These tables are particularly beneficial for grading and sorting, as they provide a hygienic and organized environment for inspection. Sixteen percent of respondents regarded these tables as convenient, and 14 percent did not see the need for them, perhaps due to resource constraints or limited production scales. The clear demand for these tools underscores the need to provide access to shared facilities where producers can perform quality control tasks effectively.

By establishing infrastructure equipped with sorting tables, cold storage, and grading tools, producers can enhance their operational efficiency, minimize product wastage, and build trust with consumers through consistent quality. These investments would directly support the growing demand for market-ready products from Pohnpei.

3.4 Food Preparation and Preservation

Food preparation and preservation are essential for producers aiming to expand their market reach while minimizing losses from spoilage. Among producers in Pohnpei, 83 percent expressed interest in training for food preparation, demonstrating a strong desire to enhance their skills in creating appealing, processed products. Similarly, 79 percent showed interest in learning preservation techniques such as drying, pickling, and freezing, recognizing the value of extending product shelf life to reduce waste and cater to diverse consumer needs.

The infrastructure needed to support food preparation and preservation training is integral to achieving these goals. Food dehydrators, for instance, were deemed essential by 48 percent of producers, reflecting the importance of equipment for drying fruits, vegetables, and seafood. Another 22 percent considered dehydrators convenient, likely for occasional use or non-primary products, while 30 percent did not see them as necessary, possibly due to the nature of their production or existing preservation methods.

Package heat sealers emerged as a critical tool, with 61 percent of producers categorizing them as essential. This indicates the widespread recognition of vacuum sealing as a method to maintain product freshness and extend shelf life. An additional 14 percent found them convenient, and 25 percent did not consider them necessary, perhaps due to limited scale or focus on fresh product sales.

Flash freeze dryers, though more specialized, were considered essential by 48 percent of producers, highlighting their relevance for producers targeting niche or export markets. Freeze-drying is a method that ensures high-quality preservation while maintaining nutritional value and texture. The significant interest in these tools underscores the need for accessible training centers equipped with the necessary infrastructure, enabling producers to experiment with and adopt advanced preservation techniques effectively.

By addressing these needs, training programs can empower producers to transform raw products into high-value goods, expanding market opportunities while minimizing waste and ensuring food security in Pohnpei.

3.5 Cooking and Packaging Skills

Cooking and packaging are critical skill areas for producers seeking to diversify their offerings and enhance product presentation. In Pohnpei, 68 percent of producers expressed interest in developing cooking skills. This high interest reflects a shift toward catering to modern consumer preferences, such as ready-to-eat or convenience-focused products. Cooking training provides producers with the knowledge to create innovative and appealing items that align with these trends.

Packaging skills are equally important, with 60 percent of producers prioritizing this training. Effective packaging is vital for preserving product quality, extending shelf life, and creating visually appealing products that stand out in competitive markets. Producers recognize that professional and functional packaging not only protects their goods but also communicates value to consumers, influencing purchasing decisions.

The infrastructure required for this training includes industrial-grade cooking appliances such as ovens, grills, and steamers, which were identified as essential by 48 percent of respondents. Slicers and food processors were also crucial, with 66 percent of producers acknowledging their importance. These tools allow producers to refine their cooking techniques and explore diverse product formats.

For packaging, heat sealers were considered essential by 61 percent of producers, underlining their role in ensuring product safety and maintaining freshness. Labeling machines, while not explicitly highlighted in the tables, are indispensable for meeting market standards and enhancing product branding. These tools enable producers to practice and perfect packaging techniques, ensuring their products are both functional and attractive to consumers.

By providing training in cooking and packaging within facilities equipped with appropriate tools, producers in Pohnpei can elevate their product offerings, meet consumer demands, and establish a stronger presence in local and regional markets.

3.6 Additional Training in Agriculture and Sustainable Practices

The survey reveals a near-universal interest among producers in Pohnpei for agricultural training, with 98 percent expressing a desire to learn methods to increase food production. This overwhelming demand highlights the producers' recognition of the importance of sustainable practices in ensuring the longevity and productivity of their agricultural operations. Within this broad interest, specific areas stand out. Fifty-eight percent of respondents wish to gain expertise in sustainable land management, emphasizing techniques such as crop rotation, intercropping, and minimal tillage that enhance soil health and reduce environmental degradation. Additionally, 44 percent of producers identified climate adaptation strategies for crops as a priority. These strategies are vital in Pohnpei, where changing weather patterns and rising sea levels pose significant challenges to traditional farming systems.

Soil conservation and erosion management also rank highly, with 41 percent of producers indicating interest in training on these topics. This focus on soil health underscores the producers' commitment to addressing one of the most critical factors affecting agricultural productivity. Erosion control methods, such as contour farming and vegetative cover, are essential for maintaining arable land in areas prone to heavy rainfall and runoff.

To effectively deliver training in these areas, appropriate infrastructure is crucial. Demonstration plots allow producers to observe sustainable practices in real time, enabling them to understand the practical application of theoretical concepts. Greenhouses provide controlled environments where producers can experiment with climate-resilient crop varieties and innovative farming techniques. Soil testing laboratories are equally important, offering producers the ability to

analyze soil health and tailor their farming practices to optimize yields. These resources, combined with targeted training programs, would empower producers to adopt sustainable practices that enhance productivity while protecting the environment.

3.7 Local and Traditional Agricultural Knowledge

Preserving and integrating traditional agricultural practices remain essential for producers in Pohnpei, with 34 percent expressing interest in learning agroforestry and fishery methods. While this percentage is lower compared to other training areas, it reflects a dedicated segment of producers committed to upholding cultural heritage and incorporating traditional techniques into modern agricultural systems. Agroforestry, which integrates trees with crops and livestock, offers sustainable benefits such as improved biodiversity, soil fertility, and carbon sequestration. Similarly, traditional fishery methods support sustainable marine resource management, which is vital in an island community like Pohnpei.

To facilitate training in these traditional methods, dedicated facilities are required. Forested areas for agroforestry demonstrations allow producers to observe the integration of trees with other agricultural components, providing insights into optimizing land use while preserving biodiversity. Aquaculture setups for sustainable fishery practices serve as hands-on environments where producers can learn to manage fish stocks responsibly and maintain aquatic ecosystems. These training environments also promote the intergenerational transfer of knowledge, ensuring that traditional practices are not lost but adapted to meet contemporary challenges.

Integrating traditional agricultural knowledge with modern techniques can provide a holistic approach to food production in Pohnpei, supporting both cultural preservation and ecological sustainability.

3.8 Livestock Management and Feed Production

Livestock management and feed production are critical training areas for producers in Pohnpei, with 61 percent expressing a desire to learn about local feed production and 54 percent showing interest in general livestock care. These skills are essential for enhancing animal health, improving productivity, and reducing reliance on imported feed, which is often costly and less suited to local conditions. Local feed production enables producers to utilize available resources, such as agricultural by-products and locally grown crops, to create balanced and nutritious diets for their livestock.

Dedicated livestock facilities are necessary to support training in animal care, providing spaces where producers can practice feeding, breeding, and health management techniques. Feed processing equipment, such as grinders and mixers, is equally important, enabling producers to create high-quality feed tailored to the nutritional needs of their animals. These resources allow producers to gain hands-on experience in managing livestock and feed production, fostering self-reliance and sustainability.

Producers who develop skills in livestock management and feed production are better equipped to maintain healthy herds and flocks, reduce operational costs, and increase the overall productivity of their agricultural systems. Investments in training and infrastructure in these

areas would significantly enhance the resilience and profitability of livestock farming in Pohnpei.

3.9 Marine and Aquaculture Skills

Marine and aquaculture training is a cornerstone for sustaining and enhancing Pohnpei's fisheries sector. According to the survey, 36 percent of producers expressed interest in acquiring skills in sustainable fishing techniques and aquaculture practices. This interest highlights the importance of these training areas in optimizing yields while ensuring the conservation of aquatic ecosystems. With Pohnpei's reliance on marine resources for both livelihood and food security, this focus on sustainability is critical for balancing economic and ecological priorities.

Training in hatchery management also garnered notable attention, with 30 percent of producers expressing the need for knowledge in breeding and raising fish in controlled environments. These practices are essential for increasing production efficiency and reducing pressure on wild fish stocks.

To meet these training needs, specialized infrastructure is essential. Coastal training facilities provide a real-world environment for producers to practice sustainable fishing methods, including the use of non-destructive equipment and techniques that minimize bycatch. Fish ponds and hatcheries are equally critical, offering hands-on experience in breeding, feeding, and managing aquatic organisms under controlled conditions. These resources not only facilitate skill development but also support the expansion of aquaculture operations, ensuring that Pohnpei's marine practices remain viable and sustainable for future generations.

Investment in marine and aquaculture training infrastructure enables producers to adopt innovative and eco-friendly practices, fostering a resilient fisheries sector that aligns with global sustainability standards.

4. Community Management and Policy Advocacy

The section on Community Management and Policy Advocacy for Pohnpei emphasizes the critical role of community engagement, sustainable practices, government involvement, and collective initiatives in strengthening the food production sector. The data from the survey provides insights into current participation rates, resource needs, and opportunities for building a cooperative and sustainable system.

4.1 Community Involvement in Food Production

Community involvement plays a vital role in Pohnpei's food production sector. The survey indicates that only 17 percent of producers are actively involved in local community groups, while a significant 83 percent report no such participation. This low engagement rate highlights the need for strategies to encourage broader involvement, potentially by demonstrating the tangible benefits of collective action. Among those who participate, the frequency of engagement varies. Six percent of respondents attend meetings daily, while 19 percent engage on a weekly basis. Monthly participation is the most common, reported by 56 percent, whereas seasonal and yearly attendance rates stand at 6 percent and 13 percent, respectively.

Faith-based groups exhibit slightly higher levels of participation, with 29 percent of respondents reporting membership, compared to 71 percent who are not involved in these groups. This difference suggests that faith-based organizations may serve as valuable conduits for fostering community engagement. Within this group, 15 percent of members participate daily, 65 percent weekly, and 19 percent monthly. These patterns indicate that such organizations already play an active role in connecting individuals and could potentially be leveraged to disseminate agricultural resources and training more effectively.

The overall data underscores a need to strengthen community networks and promote the advantages of collective initiatives in resource management and knowledge sharing. By addressing barriers to participation, such as time constraints or perceived lack of benefits, stakeholders can foster a more interconnected food production sector.

4.2 Sustainable Practices and Environmental Responsibility

Sustainability is a priority for the overwhelming majority of producers in Pohnpei, with 96 percent expressing interest in becoming more active in preserving land and water resources. This strong commitment reflects a recognition of the importance of sustainable practices for the long-term viability of food production. However, only 16 percent of respondents have received training in managerial skills, and just 22 percent have experience in organizational leadership. These gaps suggest a pressing need for targeted training programs that combine sustainability education with leadership and management development.

The integration of sustainability-focused training with managerial skill development offers producers the tools to implement eco-friendly practices effectively. Training could include waste reduction strategies, resource conservation techniques, and sustainable crop rotation systems. Infrastructure such as demonstration sites for sustainable practices, composting facilities, and rainwater collection systems would be essential to support this training. Producers could use these resources to observe and apply sustainable techniques in real-world scenarios, ensuring practical learning and long-term adoption.

Incorporating sustainability into food production not only promotes environmental stewardship but also enhances productivity and marketability. Eco-conscious consumers increasingly value products made with environmentally responsible methods, providing an added incentive for producers to adopt and showcase sustainable practices. Expanding access to infrastructure and training would bridge existing gaps, empowering producers to lead the way in environmental responsibility and economic resilience within the Pohnpei food sector.

4.3 Government Support and Policy Advocacy

Producers in Pohnpei demonstrate a significant reliance on government support to address the challenges inherent in the food production sector. The survey data reveals that 54 percent of respondents view financial assistance as a critical need. This emphasis on financial support underscores the high costs associated with acquiring equipment, meeting compliance standards, and scaling production. Producers seek government-provided grants, subsidies, or low-interest

loans to alleviate these financial barriers, enabling them to invest in essential tools and infrastructure.

Technical training is another priority, with 14 percent of respondents highlighting the need for government-led programs. These training initiatives should focus on areas such as food safety, regulatory compliance, marketing strategies, and operational efficiency. By enhancing producers' technical capacities, these programs would empower them to improve product quality, meet market standards, and compete more effectively both locally and regionally.

Improved market access is also a significant concern, with 26 percent of producers calling for government facilitation in connecting with buyers and distributors. This includes establishing partnerships with retailers, supporting trade fairs, and developing digital platforms for direct-to-consumer sales. Producers recognize that consistent access to markets is essential for sustaining operations and expanding their reach. The survey data highlights the need for a multifaceted support system that integrates financial aid, training opportunities, and infrastructure development to meet the diverse needs of Pohnpei’s producers.

4.4 Feedback Mechanisms and Market Insights

Producers in Pohnpei rely primarily on direct consumer feedback to gather market insights, with 73 percent engaging in surveys, face-to-face interactions, and community events to understand customer preferences. These traditional methods enable producers to build trust with consumers, gain real-time insights into product satisfaction, and identify areas for improvement. However, while these strategies are effective for local engagement, they may limit producers’ ability to reach broader markets and adapt to dynamic consumer trends.

Digital platforms, such as social media, are significantly underutilized, with only 17 percent of respondents using these channels for feedback. Social media platforms like Facebook and Instagram offer cost-effective ways to connect with wider audiences, gather real-time feedback, and promote products. Expanding access to digital tools and training producers in leveraging these platforms could enhance their market responsiveness and broaden their consumer base.

The analysis of sales data is another underused feedback mechanism, with only 5 percent of respondents employing this method. Sales data can provide valuable insights into purchasing trends, product popularity, and seasonal demand fluctuations, enabling producers to make data-driven decisions. Participation in fairs and competitions is similarly limited, with 3 percent of producers using these events as opportunities to showcase their products and gauge consumer interest. These activities offer a unique platform for producers to interact with potential buyers, test new products, and build their brand presence.

Investing in training programs focused on market analysis, digital marketing, and consumer engagement would enhance producers’ ability to gather and act on feedback. By developing more robust feedback mechanisms, Pohnpei’s producers could refine their product offerings, adapt to market demands, and increase competitiveness in both local and regional markets.

4.5 Shared Resources: Storage Facilities and Equipment

Access to shared storage facilities is a pressing need for Pohnpei producers, with 75 percent expressing interest in utilizing communal resources. The survey data reveals a strong preference for cold storage solutions, with 57 percent of respondents identifying this as their primary need. Cold storage is particularly vital for preserving the quality and freshness of perishable items such as fruits, vegetables, seafood, and dairy products, ensuring they remain market-ready for longer periods.

Frozen storage options are also in demand, with 83 percent of respondents highlighting this as a requirement. Frozen storage is essential for products such as meat, seafood, and processed goods that benefit from extended shelf life through freezing. Additionally, 70 percent of producers express interest in dry storage facilities, which are crucial for maintaining the integrity of grains, dried fruits, and other shelf-stable products. The availability of dry storage would reduce losses caused by moisture, pests, and spoilage, enabling producers to manage inventory more effectively.

Investments in multi-functional storage facilities equipped with refrigeration, freezing, and drying capabilities would address these diverse needs. Shared storage facilities not only reduce post-harvest losses but also foster collaboration among producers by lowering individual costs and providing equitable access to critical resources. By enabling producers to store products safely and efficiently, these facilities contribute to stabilizing supply chains, enhancing product quality, and improving market readiness.

Developing shared infrastructure for storage and processing represents a transformative opportunity for Pohnpei’s food production sector, creating a resilient and cooperative foundation for future growth.

4.6 Interest in Collaborations and Joint Processing Initiatives

Collaboration is viewed positively by 62 percent of producers in Pohnpei, who express a willingness to engage in joint processing or marketing initiatives. This substantial interest highlights producers' recognition of the benefits of shared resources, reduced costs, and enhanced market reach. By pooling expertise and labor, producers can achieve efficiencies that would otherwise be difficult to attain independently. Collaborative efforts are particularly beneficial for small-scale producers, enabling them to compete more effectively in larger markets.

However, 29 percent of respondents remain hesitant about collaboration, often citing concerns about resource sharing, decision-making responsibilities, and potential conflicts in shared ventures. These reservations underline the need for structured agreements and shared governance models that clearly delineate roles, responsibilities, and profit-sharing mechanisms. Transparent processes can foster trust and encourage participation among hesitant producers.

A smaller group, 9 percent, is uncertain about the potential benefits of collaboration. This uncertainty indicates a need for awareness campaigns and success stories that demonstrate the tangible advantages of joint initiatives. Establishing community-based processing centers equipped with shared resources, such as industrial-grade processing equipment, storage facilities,

and packaging tools, could provide a practical platform for collaboration. These centers would enable producers to scale operations, enhance product quality, and collectively expand their market presence.

4.7 Challenges in Sourcing Local Ingredients

Ingredient sourcing presents significant challenges for producers in Pohnpei, with 61 percent citing limited availability as a major barrier. Seasonal fluctuations exacerbate this issue, impacting 36 percent of respondents. These fluctuations often limit the availability of key ingredients, forcing producers to adjust production schedules or explore alternative ingredients. Such disruptions hinder producers' ability to maintain consistent product quality and meet market demand throughout the year.

Transportation difficulties further complicate ingredient sourcing, with 27 percent of respondents facing logistical challenges in moving ingredients from farms to processing facilities or markets. Producers in remote areas are particularly affected, as poor infrastructure and high transportation costs delay production and increase operational expenses. Limited storage facilities worsen these challenges, with 40 percent of producers struggling to preserve surplus ingredients. Without adequate storage, producers face increased spoilage and waste, which reduce revenue and operational efficiency.

Addressing these challenges requires coordinated efforts to improve supply chains and infrastructure. Developing robust storage facilities, such as cold storage units and dry warehouses, would enable producers to stockpile surplus ingredients during peak seasons, reducing dependency on external suppliers. Investments in transportation networks, including better road infrastructure and affordable logistics services, would further ease the movement of ingredients. Financial support, in the form of grants or subsidies, could assist producers in acquiring and maintaining storage solutions, ensuring consistent access to high-quality ingredients year-round.

4.8 Openness to Innovation and Consumer Preferences

Pohnpei producers exhibit a strong openness to innovation, with 61 percent consistently exploring new methods, products, and techniques. This willingness to adapt demonstrates a forward-looking approach among producers, who recognize the importance of aligning with evolving consumer preferences. Producers’ interest in innovation spans various areas, including alternative ingredients, novel recipes, and advanced processing technologies. This proactive mindset positions Pohnpei’s food production sector to remain competitive in both local and regional markets.

Another 25 percent of respondents are cautiously open to innovation, carefully weighing feasibility, costs, and market demand before implementing changes. This pragmatic approach reflects producers’ desire to balance risk and reward, ensuring that investments in new methods or products yield tangible benefits. For these producers, targeted support in the form of pilot projects, market analysis, and access to research facilities could help bridge the gap between interest and implementation.

Conversely, 14 percent of producers prioritize traditional methods, valuing cultural authenticity and established practices over modernization. These producers often focus on maintaining consistency and upholding local traditions, which resonate with certain consumer segments seeking authenticity. While traditional methods remain an important part of Pohnpei's food culture, integrating elements of innovation alongside these practices can create opportunities to diversify offerings without losing cultural identity.

Encouraging innovation requires a supportive ecosystem, including favorable policy frameworks, access to research and development facilities, and funding for product development. Infrastructure such as test kitchens and pilot processing facilities would enable producers to experiment with new techniques in a controlled environment, fostering creativity and confidence. Grants or subsidies aimed at innovation and product differentiation could further incentivize producers to explore novel approaches. By nurturing a culture of experimentation and adaptability, Pohnpei's food production sector can remain dynamic, responsive, and competitive.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Consumer Survey Results

Consumer Preferences and Willingness to Pay for Locally Processed Products

Introduction

The proposed Food Innovation Center in Pohnpei aims to invigorate the local food economy by emphasizing the development of products that resonate with consumer preferences and cultural values. This report presents findings from a detailed survey of 82 respondents, covering demographic trends, product preferences, packaging choices, pricing expectations, and purchasing behaviors. These insights offer valuable guidance for fostering a sustainable and culturally significant food processing sector in Pohnpei. By aligning production with the demand for fresh, affordable, and locally sourced products, the Center can significantly contribute to economic growth and community well-being. Key themes explored include the preferences for traditional food items, sustainability in packaging, and the willingness to support socially responsible initiatives.

1. Demographic Profile of Respondents

The survey captured a balanced gender representation among respondents, with 46 individuals (56%) identifying as male and 36 individuals (44%) as female. This almost equal distribution provides a robust foundation for understanding consumer behavior across genders.

In terms of age distribution, the largest group consisted of respondents aged 31 to 45 years, accounting for 31 individuals (38%). The 18 to 30-year age group followed, comprising 28 respondents (34%). Respondents aged 56 to 60 years made up 20 individuals (24%), and those over the age of 60 represented the smallest group, with 3 respondents (4%). These statistics indicate that the primary market consists of younger and middle-aged individuals, likely to have higher purchasing power and a stronger inclination toward health-conscious and convenient food options.

These demographics underscore the importance of targeting products and marketing strategies toward a predominantly younger and middle-aged audience while considering opportunities to cater to older consumers through products that emphasize traditional flavors and ease of use.

2. Consumer Interest in Locally Processed Food Products

The survey revealed diverse and distinct preferences for locally processed food products. Among the 36 product categories analyzed, banana chips and baked goods (donuts and muffins) emerged

as the most favored, with 57 respondents (70%) expressing interest in these items. Traditional snack foods like breadfruit chips were also popular, appealing to 47 respondents (57%).

Seafood products displayed a strong market potential, particularly salted fish, which garnered interest from 62 respondents (76%). Other seafood items, such as dried fish and bottled seafood, attracted 44 respondents (54%) and 48 respondents (59%), respectively. These figures emphasize the importance of including seafood products in future processing and marketing plans.

Coconut-based products, including coconut cooking oil and chicken meat products, were highly regarded, with 49 respondents (60%) indicating interest in these categories. However, certain items, such as fish syrups and spice blends, appealed to fewer than 25% of respondents, highlighting potential challenges in promoting niche products.

Additionally, the data revealed moderate enthusiasm for items like coconut milk, with 40 respondents (49%) expressing interest, and hot sauce, favored by 40 respondents (49%). Less interest was shown in products such as vegetable sauces, spice pastes, and dried fruits, which were preferred by fewer than one-third of respondents.

The findings indicate a strong market for traditional snacks, seafood, and versatile ingredients, while niche products may require targeted innovation and marketing to expand their appeal. These insights reinforce the value of prioritizing well-loved items like banana chips and salted fish while exploring strategies to boost the popularity of less mainstream offerings.

3. Packaging Preferences and Important Packaging Features

Packaging preferences highlight significant trends among Pohnpei consumers. Bottled packaging was favored by 77% of respondents, making it the most popular choice. This strong preference indicates a demand for secure, durable, and visually appealing packaging that also ensures product freshness. Vacuum-sealed pouches followed with 66% approval, emphasizing the importance of tamper-proof and airtight options that extend shelf life and maintain product quality.

Jarred packaging, chosen by 56%, reflects its dual utility in storage and reuse, aligning with the global trend toward sustainable and practical solutions. Bagged packaging, which was less popular, was preferred by 46% of respondents, while sachets, with 37%, garnered the least interest among major packaging options. These lower percentages suggest that while sachets and bags have their place, they may not fully meet consumer expectations for functionality and convenience.

Environmentally friendly packaging materials were deemed the most critical feature, with 50% of respondents rating this as their top priority. A further 26% considered it important, and 20% rated it as moderately important. This strong preference for sustainable practices underscores the growing consumer awareness of environmental issues.

Convenience ranked as the second most important packaging feature, with 11% of respondents considering it most important and 24% rating it as important. A larger group, 38%, viewed

convenience as moderately important, suggesting that while it is valued, it is not the highest priority for most consumers.

Attractiveness of packaging was less influential, with only 12% rating it as most important and 23% as important. The majority placed more emphasis on functionality and sustainability over visual appeal, indicating that while design matters, it does not overshadow practical concerns.

4. Pricing Expectations and Factors Affecting Purchase Decisions

Affordability is a key consideration, with 41% of respondents favoring prices of $5 or less per unit. This significant segment of the population emphasizes the need for competitively priced products to meet consumer budgets. A slightly larger group, 44%, found prices between $5 and $10 acceptable, suggesting some flexibility among consumers willing to pay more for higher value or quality.

Beyond the $10 mark, willingness to pay decreases substantially, with only 12% considering prices between $10 and $20 reasonable. Just 2% were willing to pay over $20 per unit, highlighting a strong aversion to high-price points for locally processed products.

Price was identified as the most critical factor influencing purchase decisions by 39% of respondents, emphasizing the primary role affordability plays in consumer behavior. Quality followed closely, rated as most important by 26%, indicating that consumers are willing to balance price with product excellence.

Other factors, such as brand reputation and nutritional value, were rated less critically. Brand reputation, for example, was considered most important by a mere 1%, while nutritional value was prioritized by 7%. These results highlight the need to position products as affordable and high-quality while gradually building awareness around branding and health benefits.

5. Importance of Fresh, Locally Sourced Ingredients and Health Benefits

Freshness and local sourcing were overwhelmingly valued, with 79% of respondents rating these attributes as very important. An additional 16% considered them important, culminating in a combined 95% prioritizing these features. This near-universal preference demonstrates the alignment of local production with consumer values, emphasizing sustainability and cultural significance.

Health benefits were also strongly prioritized, with 74% of respondents identifying nutritional value as very important and another 24% considering it important. Together, these figures underscore the widespread consumer demand for wholesome, nutrient-rich food products.

A smaller segment, 5%, viewed freshness and local sourcing as somewhat important, while only 1% rated health benefits at this level. Importantly, no respondents rated either attribute as unimportant, indicating consensus on their significance.

These preferences highlight a clear opportunity for producers to emphasize freshness, local origins, and health benefits in marketing and product development. Such positioning is likely to resonate strongly with the majority of the Pohnpei market.

6. Purchase Likelihood Based on Convenience, Accessibility, and Flavor Preferences

Convenience and accessibility were critical factors influencing purchase likelihood. Among respondents, 72% indicated they were very likely to purchase locally processed foods if these were easy to access. An additional 20% expressed that they were likely to do so, bringing the total to 92% of respondents who valued accessibility in their purchasing decisions. These findings underscore the necessity of ensuring local products are widely available and easy to obtain to maximize consumer engagement.

When it comes to flavor preferences, 82% of respondents expressed a strong preference for traditional or local flavors, highlighting the importance of cultural resonance in food production. Spicy flavors also held significant appeal, with 63% of respondents indicating a liking for these varieties. Sweet flavors, while less popular than traditional or spicy options, were still preferred by 52% of respondents. These results reveal opportunities for producers to innovate within traditional flavor profiles while also experimenting with spicier and sweeter options to cater to diverse consumer tastes.

Exotic or imported flavors were less favored, with only 30% of respondents showing interest. This lower percentage suggests that while there is room for innovation, local preferences dominate the market. These insights collectively emphasize the importance of flavor development that aligns with cultural preferences while incorporating occasional novelty.

7. Frequency and Location of Purchase

Respondents demonstrated strong purchasing commitment, with 61% reporting that they would buy locally processed foods on a weekly basis. This indicates a consistent demand for these products, making frequent availability essential. 26% of respondents reported daily purchases, suggesting a smaller yet highly engaged segment of consumers with regular needs for local products.

Monthly purchases were indicated by 7%, while occasional purchases were cited by 5% of respondents. Rare buyers represented only 1%, underscoring that the majority of respondents engage with locally processed products frequently.

In terms of preferred purchasing locations, 63% favored local markets as their primary source for locally processed foods. This finding emphasizes the importance of maintaining robust distribution channels within these community hubs. Supermarkets followed as the second-most preferred location, chosen by 27% of respondents, indicating an opportunity to expand retail partnerships to reach a broader audience.

Less popular purchasing locations included roadside stands, favored by 9%, and online platforms, preferred by only 1%. The low percentage for online purchasing highlights a potential area for development, especially as digital commerce grows globally. Producers can consider strategies to enhance the visibility and accessibility of locally processed foods through e-commerce initiatives.

8. Willingness to Support Social Causes and Pay Extra

Support for socially responsible initiatives was overwhelmingly strong among respondents, with 84% expressing a willingness to support locally processed foods that contribute to community development or social causes. Only 9% were opposed to this idea, and 7% were undecided. These findings highlight the market potential for products that align with social responsibility and community-focused branding.

In terms of price sensitivity, 73% of respondents stated they would be willing to pay up to 10% more for products supporting social causes, while 25% indicated they would pay more than 10% extra. This significant willingness to pay a premium demonstrates a strong consumer alignment with ethical and community-oriented values. Only 1% of respondents were unwilling to pay any extra, indicating minimal resistance to price adjustments tied to social responsibility.

These results provide a clear opportunity for producers to position their products as socially impactful and community-driven. Messaging that emphasizes the support of local farmers, women's groups, and sustainability initiatives is likely to resonate well with the majority of consumers and justify moderate price premiums.

9. Payment Preferences and Importance of Product Shelf Life

Payment preferences among respondents overwhelmingly favored cash, with 80% indicating it as their preferred method. This high percentage reflects the accessibility and familiarity of cash transactions within the Pohnpei community. The second-most popular payment method was credit or debit cards, preferred by 12% of respondents, suggesting limited but growing acceptance of electronic payment systems. Mobile payment apps, chosen by 5%, and food exchange, at 2%, were far less common, indicating that digital and barter-based systems have yet to gain significant traction in this market.

Shelf life emerged as a critical consideration for locally processed foods, with 63% of respondents rating it as very important. An additional 29% deemed it important, bringing the combined total to 92% of respondents who value durability and longevity in food products. Only 8% of respondents considered shelf life to be somewhat or not important, emphasizing the widespread demand for products that can be stored for extended periods without spoilage. These findings highlight the importance of developing processing and packaging solutions that prioritize extended shelf life to meet consumer expectations.

10. Awareness and Preference for Local Over Imported Products

Awareness of locally processed food products was moderate among respondents, with 66% indicating they were very aware of such products. Another 21% reported being somewhat aware, reflecting a combined 87% of respondents with some level of familiarity. However, 11% stated they were not very aware, and 2% indicated they were not aware at all. These figures suggest a need for enhanced consumer education and outreach to increase awareness and visibility of locally processed products.

Preferences for local over imported products were strong, with 49% of respondents always prioritizing local items and another 37% often doing so. This combined 86% shows a significant inclination toward supporting locally produced goods. However, 9% of respondents occasionally

prioritized local products, and 6% rarely did. These lower percentages highlight an opportunity to strengthen consumer loyalty to local products through targeted marketing and communication strategies that emphasize the economic, cultural, and sustainability benefits of buying local.

Conclusion

The survey findings provide valuable insights into consumer preferences for locally processed foods in Pohnpei. Key preferences included affordability, freshness, local sourcing, and traditional flavors, alongside a significant demand for sustainable packaging. Payment trends revealed a strong reliance on cash transactions, while shelf life emerged as a critical product attribute.

Local markets were the dominant distribution channel, though opportunities exist to expand retail partnerships and explore digital platforms. Furthermore, there was overwhelming support for socially responsible products and a willingness to pay price premiums for items aligned with community and environmental initiatives.

By addressing these consumer preferences, the Food Innovation Center in Pohnpei can develop a sustainable model that supports economic growth, enhances cultural values, and improves community well-being. Expanding outreach, improving awareness, and investing in innovative packaging and product solutions will further align local food production with consumer needs and preferences, ensuring long-term success in this market.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Community Management and Development Survey Results

Community Management and Development in Kosrae: An In-Depth Needs Assessment

Introduction

This report provides a comprehensive analysis of community management and development in Pohnpei, focusing on governance structures, organizational dynamics, and challenges faced by farming families and food producers. Based on survey data, it explores inclusivity, leadership, and operational needs, highlighting critical areas for intervention. The findings serve as a foundation for implementing sustainable practices that strengthen food security, foster economic growth, and build resilience to environmental challenges. The results also underscore the importance of addressing gaps in representation, meeting frequency, and organizational support to advance development efforts in Pohnpei.

1. Demographic Profile and Organizational Representation

The survey captured a detailed demographic profile of respondents, revealing a significant gender imbalance. Men constituted 83 percent of respondents, while women accounted for 17 percent, indicating the need to promote gender inclusivity in leadership roles. Age distribution reflected a concentration in the middle age ranges, with 33 percent of respondents each falling into the 31-45 and 56-60 age groups. Young adults aged 18-30 represented 25 percent, and respondents over 60 made up only 8 percent. These results suggest that leadership is dominated by experienced individuals, but there is limited participation from both younger and older age groups.

In terms of organizational representation, municipal officials overwhelmingly dominated, accounting for 92 percent of respondents. Traditional leadership groups contributed 8 percent, but there was no representation from agricultural producer organizations, aquaculture groups, small-scale fishing organizations, faith-based leaders, underrepresented groups, or other NGOs. This lack of diversity in organizational representation underscores a critical gap, particularly in sectors directly related to food production, traditional practices, and community support. These findings highlight the need for targeted efforts to engage a broader range of stakeholders to ensure that governance structures are inclusive and responsive to the diverse needs of Pohnpei's communities.

2. Frequency and Regularity of Meetings

Meeting frequency among organizations varied, reflecting different levels of engagement and operational intensity. Monthly meetings were the most common, reported by 42 percent of respondents. Weekly meetings followed at 33 percent, indicating a subset of organizations engaging in more frequent interactions. Quarterly meetings were less common, reported by 17 percent, while only 8 percent of respondents indicated their organizations met annually. This distribution highlights a general preference for regular interaction, with most organizations meeting at least monthly to coordinate activities and address community needs.

The data suggests that while many organizations are committed to consistent engagement, others may face challenges that limit their ability to meet regularly. The relatively high percentage of weekly and monthly meetings demonstrates a strong organizational commitment to maintaining communication and addressing issues promptly. However, the smaller percentages for quarterly and annual meetings may point to resource constraints or logistical difficulties that hinder more frequent collaboration. These findings emphasize the importance of providing support to ensure organizations can maintain effective communication and decision-making processes, which are critical for advancing community management and development in Pohnpei.

3. Identified Needs for Effective Community Management

The survey highlighted several critical needs for enhancing community management in Pohnpei. Leadership training emerged as a priority for 67 percent of respondents, reflecting a widespread recognition of the importance of equipping leaders with the skills necessary to address complex community challenges. An even higher proportion, 83 percent, emphasized the necessity for technical assistance in farming and fishing techniques, underscoring the demand for expertise to support sustainable food production practices.

Similarly, 83 percent of respondents identified value chain development as a critical area of need. This includes improving transportation, packaging, and food storage, which are essential for increasing the efficiency and profitability of local food systems. Environmental conservation practices and support for economic or business management were both identified as priorities by 67 percent of respondents. These findings highlight the interconnected nature of governance, resource management, and economic sustainability in effective community management. Only 8 percent of respondents pointed to other specific needs, which included interest in seafood farming as a niche area of focus. These responses collectively underscore the need for a multi-faceted approach to address the diverse challenges faced by organizations in Pohnpei.

4. Food Production Challenges and Community Needs

The survey revealed a range of pressing challenges affecting food production in Pohnpei. The most significant issue, identified by 92 percent of respondents, was access to essential production inputs such as seeds, tools, and plants. This highlights a critical barrier to scaling up agricultural activities and improving productivity. Access to climate-resilient crops was identified as a priority by 75 percent of respondents, emphasizing the importance of adapting to changing environmental conditions. Clean water availability was noted as a challenge by 67 percent, reflecting the need for investments in water infrastructure to support both farming and household needs.

Food production training was identified as a need by 67 percent of respondents, mirroring the demand for technical assistance highlighted in other parts of the survey. Road maintenance and affordable transportation were each emphasized by 58 and 42 percent of respondents, pointing to the infrastructural gaps that hinder access to markets and reduce the efficiency of supply chains. Communication gaps and post-harvest storage were recognized by 42 percent and 50 percent of respondents, respectively. These findings highlight the systemic barriers that limit the efficiency and resilience of food production systems in Pohnpei. The survey results point to the necessity of comprehensive solutions that address infrastructure, training, and resource availability to improve food security and community well-being.

5. Perceptions of Good Governance

Respondents offered diverse definitions of good governance, reflecting varied perspectives on leadership and community management. Each response accounted for 10 percent of the total perspectives. Transparency and accountability were consistently emphasized as foundational principles of good governance, suggesting that communities value open and honest leadership. Several respondents highlighted equitable resource distribution as a key feature of good governance, pointing to the importance of ensuring that community resources are allocated fairly and sustainably.

Proactive problem-solving and community-centered leadership were also recurring themes, reflecting a desire for governance practices that are responsive to local needs and priorities. Inclusivity in decision-making processes was another key element, demonstrating the community's aspiration for participatory governance that allows all voices to be heard. These definitions collectively underscore a shared vision for governance practices that align with local priorities, foster community trust, and promote sustainable development in Pohnpei. The responses reveal a nuanced understanding of governance, emphasizing the interconnectedness of transparency, inclusivity, and resource management in achieving effective leadership.

6. Supporting Local Food Producers and Addressing Community Challenges

The survey revealed a variety of challenges faced by local organizations in supporting food producers, highlighting areas requiring immediate attention. Transportation difficulties were identified as a challenge by 9 percent of respondents, emphasizing the critical need for improved infrastructure to facilitate market access and reduce logistical constraints. Similarly, storage issues were cited by 9 percent, underscoring the importance of post-harvest solutions to minimize food spoilage and enhance production efficiency. Lack of technical support was also reported by 9 percent, pointing to the necessity for expert guidance in modern farming and fishing practices.

Other challenges included limited resources, environmental impacts such as climate change, and declining interest in local food production, each identified by 9 percent of respondents. The recurring mention of these barriers reflects systemic issues within the food production ecosystem. For instance, environmental factors such as droughts and unpredictable weather patterns were noted to impact productivity, while the younger generation’s shift away from farming was attributed to technological advancements and urban migration. These findings

illustrate the need for comprehensive strategies to address infrastructure gaps, provide technical assistance, and create incentives to revitalize interest in local food production.

7. Community Interest in Producing for a Food Processing Plant

The survey indicated unanimous interest in producing food for a local processing plant, with all respondents expressing enthusiasm for the initiative. Among these, 75 percent stated they would require training to effectively participate, highlighting the need for capacity-building programs to ensure that farming families are adequately equipped for commercial production. The strong interest demonstrates the community's recognition of the economic potential associated with such a facility.

None of the respondents viewed farming as solely a subsistence activity or an undesirable vocation. This finding underscores the willingness of farmers and food producers in Pohnpei to engage in value-added activities that contribute to the broader economic development of the region. With adequate training and support, these producers could play a pivotal role in supplying a food processing plant, thereby boosting local employment opportunities and fostering economic resilience.

8. Anticipated Benefits of a Local Food Processing Plant

The potential benefits of establishing a food processing plant in Pohnpei were universally acknowledged by the survey respondents. All participants agreed that such a facility would improve food security, enhance health and nutrition, and create job opportunities within the community. This unanimous consensus reflects the perceived importance of the plant in addressing fundamental community needs.

Additionally, all respondents recognized the plant's ability to reduce reliance on imported foods and strengthen the local economy. By fostering self-reliance and enhancing the value of locally produced goods, the plant is seen as a transformative project for Pohnpei. Traditional practices were also expected to benefit, with the facility providing a platform for the preservation and commercialization of culturally significant food items. No respondents viewed the project as having any negative implications, reflecting overwhelming support for the initiative as a cornerstone of sustainable development in the region.

9. Barriers to Market Access and Participation in Decision-Making

Barriers to market access and participation in decision-making processes were significant themes in the survey findings. Limited transportation infrastructure was cited as a challenge by 92 percent of respondents, highlighting a critical obstacle to connecting local producers with broader markets. Similarly, 92 percent pointed to a lack of market connections as another significant barrier, emphasizing the need for strategic partnerships and networking to enable producers to reach potential buyers effectively.

Insufficient supply to meet market demand was identified by 67 percent of respondents, reflecting challenges in scaling production to meet the needs of consumers. Quality standards

compliance was noted as an issue by 50 percent, underscoring the importance of training and resources to ensure that locally produced goods meet regulatory and market expectations. These barriers collectively illustrate systemic issues within the food production and distribution chain that limit the ability of producers to fully capitalize on market opportunities.

Community participation in decision-making processes was another area of concern. A combined 83 percent of respondents rated community participation as moderate or lower, with 42 percent describing it as moderate, 25 percent as low, and 17 percent as very low. This finding reflects the need for more inclusive and participatory approaches that engage diverse stakeholders, particularly in agricultural and aquatic production activities. Enhancing transparency and communication channels can help empower communities to play a more active role in decision-making processes.

10. Inclusivity, Educational Programs, and Climate Resilience Efforts

Inclusivity in leadership roles was reported as high by 67 percent of respondents, demonstrating considerable progress in ensuring representation in decision-making processes. Youth engagement was reported as inclusive by 50 percent of respondents, though 25 percent described it as somewhat inclusive, and another 25 percent indicated it was not inclusive. These findings suggest that while strides have been made, there is room for improvement in engaging younger generations in leadership and community development initiatives.

Educational programs on sustainable food production were reported as occasional by 58 percent of respondents, while 42 percent noted the absence of regular programs. These findings underscore a need for more consistent and structured educational opportunities to build community capacity in sustainable practices. Disaster preparedness plans and water conservation practices were each reported by 33 percent of respondents, reflecting ongoing efforts to address climate resilience. However, crop diversification and the use of marine protected areas were reported by only 17 percent each, highlighting opportunities for expanding these strategies.

Despite these efforts, 75 percent of respondents described their readiness for climate-related disasters as moderate, with only 8 percent feeling very prepared and 17 percent reporting that they were not prepared. These findings emphasize the importance of further capacity building, training, and infrastructure development to enhance climate resilience and ensure that communities can effectively respond to environmental challenges.

Conclusions

The survey results underscore both significant opportunities and pressing challenges in community management and development in Pohnpei. Leadership training, technical assistance, and infrastructure investments emerge as key needs, particularly in addressing barriers related to food production and market access. A local food processing plant stands out as a transformative solution, with unanimous support for its potential to enhance food security, create jobs, and reduce dependence on imported goods.

Inclusion remains a critical focus area, with ongoing efforts to involve women, youth, and underrepresented groups in leadership and decision-making processes. Expanding educational initiatives, particularly those focused on sustainable practices, will be essential in building community capacity. Climate resilience also requires more robust support, including disaster preparedness training, infrastructure improvements, and the promotion of diversified agricultural and aquatic practices. By addressing these challenges holistically, Pohnpei can establish a strong foundation for sustainable development, empowering its communities to thrive in the face of economic and environmental changes.

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Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Information Infrastructure Providers & IT Specialists Survey Results

1. Introduction and Demographics of Information Providers

The development and maintenance of information infrastructure in Pohnpei present considerable challenges, shaped by the island's geographical isolation and resource limitations. The survey included three respondents, all of whom were male, indicating a lack of gender diversity within the IT and infrastructure sector. This gender imbalance highlights a need for targeted initiatives to bridge the gap, such as creating educational and professional opportunities that encourage women to pursue careers in IT and information infrastructure. Fostering inclusive participation could help address these disparities and contribute to a more diverse workforce.

In terms of age demographics, the survey revealed that 67 percent of respondents were between the ages of 18 and 30, representing younger professionals who bring innovation and adaptability to the field. The remaining 33 percent fell within the 56 to 60 age group, reflecting seasoned professionals with significant experience. However, there were no respondents in the 31 to 45 age range, which suggests a potential gap in mid-career professionals. This absence may result from migration in search of better opportunities or limited local pathways for professional advancement. Additionally, the lack of representation from individuals over 60 highlights the absence of elder professionals who could provide leadership and mentorship. The overall demographic profile illustrates a workforce with promising youthful energy but notable gaps in diversity and continuity across age groups.

2. Expected Impact of Underwater Cable on Connectivity and Affordability

The underwater cable is anticipated to bring transformative benefits to connectivity and affordability in Pohnpei. According to the survey, all three respondents acknowledged its potential impact, offering unique perspectives on its contributions. One respondent, accounting for 33 percent, emphasized the cable's ability to provide stable accessibility with significantly greater bandwidth. This enhanced capacity is expected to improve the reliability and efficiency of communication services across the region.

Another 33 percent highlighted the underwater cable's secure and reliable nature, suggesting that it will offer a dependable alternative to existing connectivity solutions. The remaining 33 percent noted that pricing could vary due to the presence of only one internet service provider in the area, raising concerns about equitable access. These responses collectively underscore the underwater cable's potential to bridge the digital divide in Pohnpei, provided that issues of affordability and competitive pricing are addressed. To fully leverage the cable's capabilities, efforts must focus on ensuring that its benefits are accessible to all residents, particularly in underserved areas.

3. Connectivity Gaps Affecting Outer Island Communities

Connectivity gaps remain a significant challenge for outer island communities in Pohnpei, stemming from a combination of infrastructure, funding, and logistical constraints. Thirty-three percent of respondents attributed these gaps to a lack of adequate infrastructure, which limits the deployment of reliable connectivity solutions in remote areas. Another 33 percent highlighted funding shortages and resource constraints as key obstacles, emphasizing the need for sustained financial support to bridge these divides.

Additionally, 33 percent pointed to the remoteness and distances of the outer islands, coupled with a lack of reliable power services, as critical barriers to connectivity. These geographic and logistical challenges exacerbate the digital divide, leaving many communities without access to essential communication tools. The absence of reliable connectivity has far-reaching implications, particularly for education, healthcare, and economic development in these regions. Addressing these gaps will require a multi-faceted approach that combines infrastructure development, financial investment, and innovative solutions tailored to the unique needs of Pohnpei's outer island communities.

4. Planned Solutions for Improving Connectivity in Remote Areas

Efforts to improve connectivity in remote areas of Pohnpei involve multiple strategies aimed at addressing existing gaps. According to the survey, 33 percent of respondents emphasized the deployment of Starlink as a key initiative to extend internet access to remote islands. This technology offers the potential to provide high-speed, low-latency internet services to underserved regions, thereby overcoming some of the geographical barriers faced by the state. Another 33 percent of respondents highlighted plans to expand cellular networks as a means of enhancing connectivity, particularly in areas where wired infrastructure is not feasible. This approach aligns with broader efforts to ensure consistent coverage across both main and outer islands.

The remaining 33 percent of respondents focused on securing additional funding and donations to support these initiatives. These efforts aim to bridge financial gaps and ensure the successful implementation of connectivity projects. The proposed solutions reflect a multi-faceted approach that combines advanced technologies, infrastructure expansion, and financial resource mobilization to tackle connectivity challenges. However, achieving these goals will depend heavily on overcoming logistical and funding constraints, particularly in hard-to-reach areas where infrastructure deployment is inherently complex and resource-intensive.

5. Assessment of Current Internet Infrastructure and Quality

The state of internet infrastructure in Pohnpei reveals a mix of progress and ongoing challenges. Thirty-three percent of respondents reported that all inhabited islands either have or are in the process of accessing fiber optic cable, supported by funding from USDA and World Bank grants. This marks a significant step toward improving connectivity in the region, as fiber optic technology offers higher speeds and greater reliability compared to traditional solutions. Another 33 percent noted that while geographical challenges limit coverage in certain areas, services have

already been extended to the main islands, with plans to expand cellular networks to reach more remote locations.

The remaining 33 percent described the current infrastructure on the main islands as adequate but expressed a need for higher speeds to support modern workflows and demands. This indicates that while progress has been made, the existing infrastructure may not yet be sufficient to meet the growing expectations of residents and businesses. These findings underscore the importance of continued investments in both infrastructure expansion and technological upgrades to ensure consistent, high-quality internet services across Pohnpei.

6. Internet Service Barriers and Strategies for Bandwidth Optimization

Barriers to internet service in Pohnpei highlight the uneven quality of connectivity and the need for technological upgrades. Fifty percent of respondents identified the necessity to update technologies in areas with slow or no internet connections, pointing to the critical need for modern equipment and infrastructure improvements. The remaining 50 percent did not specify particular barriers but suggested gaps in data-driven planning and resource allocation.

These barriers suggest that addressing connectivity issues will require a dual focus on upgrading physical infrastructure and implementing effective bandwidth optimization strategies. Investments in advanced technologies, such as load balancing and network optimization tools, can help improve the reliability of existing services. Additionally, data-driven approaches to planning and resource allocation will be essential in identifying and addressing specific connectivity challenges, ensuring that improvements are targeted where they are most needed. These efforts are critical to meeting the increasing demand for reliable and high-speed internet across Pohnpei.

7. Challenges in Specific Locations and Planned Connectivity Improvements

Connectivity challenges persist in specific areas of Pohnpei, as identified in the survey. Temwen in Madolenihmw was highlighted by 33 percent of respondents as a region struggling with connectivity due to the lack of fiber optic access. This limitation underscores the need for targeted infrastructure projects to bring reliable internet to underserved locations within Pohnpei.

Another 33 percent of respondents pointed to connectivity issues in outer islands such as Nukuoro and Kapingamarangi, where geographical isolation exacerbates the challenges of extending infrastructure. These regions often lack the necessary power and telecommunications services, making consistent connectivity difficult to achieve. Additionally, 33 percent of respondents noted similar connectivity problems in other areas such as Chuuk and Kosrae. These issues reflect broader regional disparities in internet access, influenced by both physical and logistical barriers. Addressing these challenges will require tailored strategies, such as deploying satellite technologies, expanding cellular networks, and ensuring adequate funding to support infrastructure development in these remote locations.

8. Hardware, Software, and Data Management Needs

The survey revealed significant gaps in hardware and software infrastructure critical for effective data management in Pohnpei. Fifty percent of respondents emphasized the need for a centralized cloud server to support data collection, storage, analysis, and dissemination. This infrastructure is vital for streamlining information management and enabling efficient communication between different sectors and regions. However, another 50 percent did not specify requirements, suggesting either a lack of clarity about current capabilities or an unaddressed need for assessment to identify infrastructure priorities.

This split response highlights a fragmented approach to hardware and software development in Pohnpei. Coordinated strategies are necessary to address these disparities, including fostering collaboration between state and national governments to standardize IT systems and ensure comprehensive data management capabilities. Investments in modern technologies and expert consultation will be crucial for creating a robust information infrastructure that supports Pohnpei's growing connectivity demands.

9. Cloud-Based Solutions and Traffic Management for Prioritizing Data

The adoption of cloud-based solutions is gradually improving data accessibility and scalability in Pohnpei. Sixty-seven percent of respondents reported using cloud technologies, reflecting progress in modernizing data management practices. These solutions enhance the efficiency of operations by allowing seamless access to information across different locations. However, 33 percent of respondents indicated that they do not yet use cloud-based systems, highlighting an opportunity to expand adoption and ensure that all organizations can benefit from these advancements.

When it comes to traffic management, 33 percent of respondents supported the implementation of Quality of Service (QoS) techniques to prioritize critical data, such as agricultural and healthcare information. These methods ensure that limited bandwidth is allocated efficiently, allowing essential services to operate without interruptions. However, 67 percent of respondents did not recommend such measures, possibly due to a lack of familiarity with QoS or challenges in implementing these technologies. These findings suggest that there is significant room to promote awareness and adoption of traffic management strategies that prioritize essential data while optimizing existing resources. Expanding the use of cloud technologies and QoS techniques can improve operational efficiency and address key connectivity challenges in Pohnpei.

10. Content Delivery Networks, Caching, and Additional Infrastructure Challenges

The survey highlighted considerable gaps in Pohnpei's information infrastructure, particularly in advanced technologies like content delivery networks (CDNs) and local caching servers. CDNs, which are crucial for distributing content efficiently across multiple servers closer to users, were reported as not in use by 67 percent of respondents. This absence represents a significant missed opportunity to enhance data accessibility and reduce latency for users in remote areas. However, 33 percent of respondents recognized the potential benefits of implementing CDNs, emphasizing their role in improving the efficiency of data delivery across Pohnpei.

Similarly, local caching servers, which store frequently accessed content to reduce dependency on external networks, were noted as unavailable by 67 percent of respondents. Only 33 percent indicated some capability or awareness of caching infrastructure. The lack of local caching servers highlights a critical barrier to optimizing bandwidth usage and ensuring faster access to essential information. Addressing these gaps will require targeted investments in modern infrastructure, along with technical expertise to implement and manage these systems effectively. Collaboration between public and private entities is essential to overcome these challenges, as partnerships can provide the resources and innovation needed to establish reliable and efficient data delivery mechanisms across Pohnpei.

Conclusions

Pohnpei's information infrastructure is showing signs of progress, particularly with developments such as the expansion of fiber optic networks and the introduction of Starlink services. These advancements hold the potential to significantly improve connectivity and accessibility for residents across the state. However, the survey findings reveal persistent challenges that need to be addressed to fully realize the benefits of these technological developments. Funding shortages, infrastructural limitations, and technological gaps continue to hinder equitable access and service quality in many areas.

To overcome these challenges, coordinated efforts are required to expand coverage, improve affordability, and ensure consistent service reliability. Investments in cloud-based solutions and data management systems can enhance scalability and operational efficiency, while the adoption of content delivery networks and local caching servers can optimize resource utilization and improve user experiences. Collaboration among government entities, private organizations, and international partners will be crucial in mobilizing the resources and expertise necessary to build a robust digital ecosystem in Pohnpei. By prioritizing infrastructure upgrades and fostering inclusivity in digital access, Pohnpei can support economic growth, enhance social development, and bridge the digital divide for its residents.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Food Retailer Survey - Stores Results

1. Demographics of Survey Respondents

The Pohnpei food retailer survey reveals insights into the gender and age composition of those involved in the retail food sector. Among respondents, 63 percent are male and 37 percent are female, illustrating a more balanced representation of genders compared to other Pacific states, though the industry in Pohnpei remains predominantly male-driven. This male majority may influence aspects of decision-making, operational management, and the strategic direction of retail businesses, particularly in a cultural and economic context where gender roles can affect business practices.

The age distribution of survey participants underscores a significant concentration of older individuals in the food retail workforce. A majority, 53 percent, are aged 56-60, indicating a wealth of experience among key industry players. This suggests that the retail sector in Pohnpei relies heavily on older individuals, who bring stability and long-standing knowledge but may be less inclined toward innovation or adopting modern retail practices. The second largest age group, comprising 26 percent of respondents, is aged 31-45. This middle-aged group represents a balance of experience and adaptability, potentially positioning them as key drivers of any efforts to modernize or diversify the sector. Only 16 percent of respondents fall into the 18-30 age range, suggesting that the younger generation is underrepresented in food retail, which could have implications for the future workforce and succession planning. The smallest group, individuals over 60, makes up 5 percent of respondents, indicating that while there is some participation by older veterans of the sector, their presence is minimal.

This distribution reveals a skewed workforce dynamic that is heavily reliant on senior and middle-aged individuals, raising concerns about sustainability and innovation in the sector. Encouraging more participation from younger individuals could help to balance this dynamic, ensuring a blend of innovation and experience in shaping the future of Pohnpei's food retail industry.

2. Availability of Locally Made Processed Foods

The availability of locally made processed foods in Pohnpei is uneven, with some products being commonly stocked while others are scarce or entirely absent. Bread and baked goods, including items such as donuts and muffins, are the most widely available, stocked by 58 percent of stores. This reflects both consumer demand for such products and their relative ease of production. Banana chips and hot sauce, both present in 53 percent of stores, also highlight items with a combination of cultural relevance and market popularity. However, many other locally processed foods are less prevalent or missing altogether.

Pickled vegetables, available in 63 percent of stores, represent another relatively common product, likely due to the ease of preparation and preservation. Coconut milk, stocked in 47 percent of stores, and salted seafood, found in 42 percent, also show moderate availability. These staples reflect Pohnpei's reliance on traditional food sources and their alignment with local dietary preferences. On the other hand, breadfruit flour and dried fruits, both stocked by 21 percent of stores, are less commonly available, despite their potential for higher utilization. Products such as coconut flour, dried vegetables, and flavored oils are almost entirely absent, available in 0 to 5 percent of stores.

Fish-based products such as smoked fish, fish jerky, and fish syrups are scarce, with only 16-26 percent or fewer of stores offering them. This underrepresentation highlights significant gaps in leveraging local agricultural and marine resources for processed food production. The limited presence of specialty items like syrups and jams, stocked in just 5 percent of stores, further underscores the underutilization of Pohnpei's rich natural resources.

These findings reflect both challenges and opportunities for Pohnpei's food industry. The moderate availability of certain staple products suggests a base of consumer demand, while the near absence of others indicates barriers in production, supply chain logistics, or market development. Expanding the range of locally made processed foods could meet untapped demand, support local producers, and contribute to food security.

3. Importance of Local Processed Foods in Pohnpei

The survey demonstrates overwhelming support for locally made processed foods in Pohnpei, with 74 percent of respondents identifying them as "very important" and 26 percent rating them as "important." Not a single respondent regarded these products as unimportant, emphasizing a universal acknowledgment of their value. This strong support is likely rooted in the multiple roles that local processed foods play in the community.

Local foods contribute significantly to preserving cultural traditions by incorporating traditional ingredients and flavors into modern diets. These products also promote economic sustainability by creating opportunities for local farmers, food processors, and retailers. Moreover, the production and consumption of locally processed foods enhance food security by reducing dependency on imports, which are often subject to global price fluctuations and supply chain disruptions. Retailers recognize that locally processed foods not only fulfill consumer demand but also align with broader societal goals, such as fostering self-sufficiency and supporting community resilience.

The emphasis on the importance of local processed foods suggests that there is a strong foundation for initiatives aimed at expanding and improving their production. Efforts to address existing challenges in infrastructure, raw material availability, and technical expertise could help to capitalize on this robust community support, further integrating locally processed foods into Pohnpei's retail landscape.

4. Support for a Food Innovation Center

The survey results reveal a substantial level of support for establishing a food innovation center in Pohnpei. Sixty-three percent of respondents expressed strong support for the initiative, while an additional 21 percent indicated general support. This combined support of 84 percent reflects a strong consensus on the need for infrastructure that can address the challenges faced by local food producers and retailers. Sixteen percent of respondents remained neutral, suggesting some reservations or uncertainty, but there was no recorded opposition to the concept of a food innovation center.

This widespread endorsement underscores the community's recognition of the potential benefits such a facility could bring. The proposed center could tackle critical issues, including the lack of technical expertise in product development and the absence of adequate infrastructure for processing and packaging. Retailers are particularly keen on resources such as shared commercial kitchens and training programs, which would allow small businesses and entrepreneurs to develop and market new products more effectively. Additionally, the center could serve as a hub for innovation and collaboration, offering opportunities for local farmers and producers to connect with retailers and enhance the supply chain. This high level of support illustrates a shared vision for strengthening Pohnpei's food system and unlocking the economic and cultural potential of its local food industry.

5. Challenges in Local Food Production and Sourcing

Retailers in Pohnpei face a range of challenges in sourcing and producing locally made foods, many of which reflect broader systemic issues. The most frequently cited obstacle was limited access to quality raw materials, identified by 68 percent of respondents. This shortage hampers the ability of producers to create high-quality products consistently and highlights gaps in the supply chain. Inadequate infrastructure for processing and packaging was another major issue, reported by 63 percent of participants. This deficiency restricts producers' capacity to scale their operations or maintain the quality and safety of their products.

High production costs, mentioned by 58 percent of respondents, pose a significant financial barrier to local food businesses. These costs are exacerbated by inefficiencies in the supply chain and the lack of economies of scale. Similarly, 58 percent of participants noted a lack of technical expertise in product development, which limits innovation and the ability to compete with imported products. The absence of knowledge in areas such as recipe formulation, blending, and packaging further complicates efforts to diversify the local food market.

Other challenges include a shortage of trained workers, affecting 53 percent of respondents. This workforce gap not only limits production capacity but also hampers efforts to implement quality control measures and introduce innovative practices. Distribution capabilities are also insufficient, with 32 percent identifying this as an issue. This limitation affects the availability of locally made products across different markets, reducing their accessibility to consumers.

Additional concerns raised by respondents include the high cost of energy and local produce, which were noted in qualitative responses. These systemic barriers highlight the need for targeted interventions, including improved infrastructure, capacity-building initiatives, and

policy support to address the economic and logistical hurdles that constrain the growth of Pohnpei's local food industry.

6. Potential Benefits of a Food Innovation Center

The establishment of a food innovation center in Pohnpei is perceived as offering numerous benefits to both businesses and the broader food industry. Sixty-eight percent of respondents identified collaboration with local farmers and producers as a key advantage. Such partnerships could strengthen the supply chain, enhance the availability of raw materials, and foster economic growth within the community. The center could also provide technical assistance in product development, an aspect supported by 58 percent of participants. This assistance would address skill gaps and enable businesses to innovate by developing new recipes, blending ingredients, and improving packaging designs.

Access to commercial-grade kitchens and processing facilities was seen as another significant benefit, with 42 percent of respondents highlighting this need. Affordable and accessible infrastructure would allow small and medium-sized enterprises to scale their operations and meet market demands more effectively. Additionally, 53 percent of respondents noted the importance of marketing and branding support, emphasizing the role of the innovation center in helping businesses position their products competitively in the market.

The innovation center could also serve as a platform for research and development, offering businesses insights into consumer preferences and market trends. By fostering collaboration, providing technical expertise, and addressing infrastructure gaps, the center could help Pohnpei’s food industry diversify its offerings, improve product quality, and reach new markets. This vision aligns with the strong community support for the initiative, highlighting its potential to transform Pohnpei's food system and contribute to economic sustainability.

7. Collaboration with a Food Innovation Center

The survey highlights several key incentives for collaborating with a food innovation center in Pohnpei. Increasing community food security was identified as a priority by 79 percent of respondents, emphasizing the role of locally produced foods in addressing nutritional needs and reducing dependence on imported products. Supporting economic growth and job creation was noted by 74 percent of participants, reflecting a shared recognition of the broader societal benefits that such collaboration could yield. Retailers see these incentives as aligning with both their business interests and the community's welfare.

Market expansion opportunities were identified as a motivating factor by 58 percent of respondents. Expanding market access is particularly critical for local producers aiming to increase the visibility and competitiveness of their products both within and outside Pohnpei. The opportunity to produce foods with extended shelf lives, mentioned by 63 percent of participants, also emerged as a significant incentive. Extended shelf life not only improves product viability for export but also reduces food waste and increases profitability for producers and retailers.

Access to funding or grants for product development was highlighted by 42 percent of respondents, while 42 percent also emphasized the importance of intellectual property protection for their new product ideas. These findings suggest that financial and legal considerations play a role in shaping businesses' willingness to engage with the innovation center. The survey findings reflect a strong inclination toward collaboration, provided that the center offers tangible benefits such as market access, financial support, and the resources needed to produce competitive, sustainable products.

8. Demand and Market Potential for Local Food Products

The demand for locally processed foods in Pohnpei shows significant promise. Fifty-three percent of respondents observed high demand with clear potential for growth. Another 21 percent noted moderate demand, indicating that while the market is not fully saturated, there is considerable room for expansion. Only 5 percent of participants reported limited demand, while 21 percent were unsure, reflecting variability in perceptions of market readiness.

Products with traditional or cultural significance are seen as having strong potential, with 53 percent of respondents identifying these items as key drivers of market growth. This preference underscores the importance of preserving cultural heritage through food while catering to consumer nostalgia and identity. Locally grown products, cited by 79 percent of participants, were viewed as having the highest market potential. This preference aligns with a growing consumer focus on supporting local economies and minimizing the environmental impact associated with imports.

Conversely, unique or specialty products remain underdeveloped, with only 21 percent of respondents perceiving them as having significant market potential. This gap suggests untapped opportunities for businesses to innovate and offer differentiated products that cater to niche markets. These findings highlight both the strengths and limitations of the current market, suggesting that while traditional and locally sourced items dominate consumer preferences, there is significant potential for diversification and innovation within the local food industry.

9. Factors Influencing Consumer Acceptance and Preferences

The survey identifies quality and taste as the most critical factors influencing consumer acceptance of locally processed foods, with 84 percent of respondents recognizing these attributes as essential. This finding underscores the importance of delivering products that meet high standards of flavor and consistency to attract and retain customers. Consumers prioritize taste and quality as benchmarks of value, making these non-negotiable aspects for businesses aiming to succeed in the local market.

Health benefits and nutritional value were also significant, with 68 percent of respondents noting their importance. This aligns with a growing awareness among consumers about the role of diet in overall well-being. Products marketed as healthy and nutritious are likely to resonate with consumers seeking alternatives to heavily processed imports. Affordability was cited by 63 percent of participants, highlighting the need to balance quality with competitive pricing to ensure accessibility across diverse income groups.

Factors such as packaging and cultural appeal were less influential, with only 26 percent and 16 percent of respondents, respectively, identifying these as priorities. This suggests that while these aspects can enhance product marketability, they are secondary to core attributes such as taste, quality, and affordability. These findings indicate that consumers in Pohnpei are primarily motivated by practical considerations rather than aesthetic or novelty-driven factors when choosing local products. Addressing these preferences through targeted improvements in product quality, health benefits, and pricing could significantly enhance consumer acceptance and loyalty to locally processed foods.

10. Strategies to Promote Local Products

The survey identifies several strategies that could effectively increase consumer awareness and acceptance of locally processed foods in Pohnpei. Sampling and tasting events emerged as a key approach, supported by 53 percent of respondents. These events allow consumers to experience the quality and taste of local products firsthand, reducing uncertainty and building trust. Sampling not only provides an opportunity for feedback but also encourages repeat purchases by introducing potential buyers to new and unfamiliar products.

Collaborations with local chefs and influencers were seen as even more impactful, with 58 percent of respondents endorsing this strategy. Partnerships with prominent community figures can showcase the versatility and appeal of local products, demonstrating their integration into traditional and modern recipes. This approach leverages the credibility of respected individuals to boost consumer confidence and drive interest in locally made goods.

Promotional discounts were also identified as an effective strategy by 53 percent of respondents, offering an immediate incentive for consumers to choose local products over imported alternatives. While specific figures were not given, the acknowledgment of discounts indicates their importance in addressing price sensitivity, which was a concern for 63 percent of respondents when discussing consumer preferences. Such promotions could particularly appeal to first-time buyers, encouraging them to experiment with local foods.

These strategies reflect a multi-faceted approach to enhancing the visibility and competitiveness of locally processed foods. They emphasize the importance of direct consumer engagement, trusted endorsements, and value-driven incentives. By implementing these approaches, retailers and producers can strengthen the local market, foster consumer loyalty, and support the long-term growth of Pohnpei's food industry.

11. Conclusion

The Pohnpei food retailer survey highlights a vibrant but underdeveloped local food sector with immense potential for growth and diversification. The findings reveal strong community support for initiatives such as a food innovation center, which could address existing challenges in infrastructure, technical expertise, and workforce development. Despite the barriers identified, including limited access to quality raw materials, high production costs, and a lack of trained workers, the enthusiasm for collaboration and innovation suggests a readiness to tackle these obstacles.

Local processed foods are not only a means of preserving cultural heritage but also a vital component of economic and food security. With 74 percent of respondents emphasizing the importance of such products and strong interest in market expansion, the foundations for a robust local food industry are in place. However, strategic investments in key areas such as training, infrastructure, and marketing are essential to fully realize this potential.

Efforts to enhance consumer acceptance, such as improving product quality, affordability, and health benefits, align closely with the preferences expressed by the community. Additionally, promoting local products through sampling events, collaborations with chefs, and promotional discounts can increase visibility and trust in these foods, creating a stronger connection between producers and consumers.

Pohnpei’s local food industry stands at a crossroads, offering opportunities to reduce dependency on imports, strengthen the local economy, and preserve cultural identity. By addressing the identified challenges and leveraging community support, the industry can emerge as a cornerstone of Pohnpei's economic and cultural landscape. Sustained efforts in innovation, collaboration, and investment will be critical to transforming this vibrant but underutilized sector into a thriving and resilient component of the state's economy.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Food Retailer Survey - Restaurants Results

1. Introduction to Pohnpei’s Food Retail Industry

The restaurant sector in Pohnpei is a cornerstone of community life, catering to the population's dietary needs while playing a vital role in preserving cultural identity and fostering economic activity. The Food System Solutions (FSS) survey sheds light on the industry's current state, highlighting critical deficiencies in the availability of locally processed foods and systemic challenges that hinder growth and innovation. These challenges include limited access to quality raw materials, inadequate infrastructure for production and distribution, and workforce shortages, all of which constrain the sector's ability to meet consumer demand effectively.

Despite these challenges, the survey indicates robust consumer interest in locally made foods, reflecting their deep connection to Pohnpei's cultural traditions and culinary practices. The findings emphasize the urgent need for targeted interventions to bridge existing gaps. Initiatives such as establishing a food innovation center hold transformative potential by addressing infrastructure deficiencies, enhancing technical expertise, and fostering collaboration among stakeholders. Such a center could serve as a hub for innovation, enabling producers, distributors, and restaurant operators to expand their offerings, improve product quality, and better meet market demands.

This report provides a detailed analysis of Pohnpei’s food retail landscape, identifying opportunities for sustainable growth and strategies to strengthen the local food system. By addressing the barriers identified in the survey, the sector can unlock significant economic and cultural potential, contributing to food security and resilience in the face of global challenges.

2. Demographic Insights of Survey Respondents

The demographic profile of respondents reflects the unique dynamics of Pohnpei’s restaurant sector. An overwhelming 92 percent of respondents are male, while only 8 percent are female. This striking gender imbalance contrasts with trends in other Pacific states where women play a more significant role in the food and restaurant industries. The male dominance in Pohnpei's sector likely shapes operational structures, management practices, and the types of services offered, potentially influencing the strategic direction of the industry.

Age distribution reveals a workforce that skews older, with 42 percent of respondents aged 56-60. This group brings a wealth of experience and stability to the sector but may also indicate a reliance on senior operators, raising concerns about succession planning and the integration of innovative practices. Respondents aged 31-45 make up 33 percent, representing a critical balance of experience and adaptability. This age group is likely driving operational efficiency while being

receptive to new market trends and practices. Meanwhile, younger individuals aged 18-30 account for 25 percent of respondents, suggesting a moderate entry of new talent into the sector. However, the absence of respondents aged over 60 points to limited long-term continuity and the potential for a leadership vacuum as the current workforce ages.

The demographic trends underscore the need for initiatives to attract and integrate younger individuals into the sector, ensuring a sustainable and innovative workforce. These findings also highlight opportunities to enhance gender diversity, potentially unlocking new perspectives and approaches within the industry.

3. Types of Locally Processed Food Products Sold

The availability of locally processed foods in Pohnpei's restaurants is notably constrained, with significant gaps across various product categories. Staples such as breadfruit flour, coconut cooking oil, and coconut flour are entirely absent, as none of the respondents reported selling these items. This lack of availability highlights missed opportunities to utilize Pohnpei's abundant agricultural resources to produce culturally significant foods.

Banana chips, breadfruit chips, and fish sauce are present in only 8 percent of establishments, reflecting minimal market penetration. These products, deeply rooted in Pohnpei's culinary traditions, remain underrepresented due to production and distribution challenges. Similarly, salted seafood, pickled vegetables, and taro chips are nearly absent, further emphasizing the limited diversity of locally processed offerings in restaurants.

More commonly available items include breads and baked goods, sold by 17 percent of respondents, and chicken meat and products, found in 33 percent of establishments. These items, while slightly more prevalent, still indicate a constrained market for locally processed staples. Other items like hot sauce, pork, and vinegar are available in 25 percent of restaurants, suggesting moderate representation of condiments and protein products. However, the absence of key categories, such as flavored oils, dried fruits, and spice blends, points to systemic barriers in production and market development.

This limited availability of locally processed foods underscores the challenges faced by producers and distributors in scaling operations, ensuring consistent quality, and meeting the demand for culturally significant products. Addressing these gaps could not only enhance consumer access to local foods but also strengthen the economic foundation of Pohnpei's food industry by capitalizing on its rich agricultural and cultural assets.

4. Importance of Locally Made Processed Food Products

Locally made processed foods are deeply valued within Pohnpei's restaurant sector, as evidenced by the survey results. Fifty-eight percent of respondents regard these products as "very important," reflecting their critical role in sustaining cultural heritage and supporting the local economy. Another 25 percent of respondents consider locally processed foods "important," further emphasizing their significance. Only 17 percent of participants expressed a neutral stance, and none rated these products as unimportant. This broad consensus underscores the vital

role that locally made foods play in preserving traditional culinary practices, promoting economic resilience, and enhancing food security.

The reliance on locally processed foods reduces dependency on imported goods, which are subject to unpredictable price fluctuations and supply chain disruptions. By producing foods locally, the restaurant sector can mitigate these risks and ensure a more stable supply of culturally relevant products. Moreover, the local production and sale of processed foods generate economic benefits that circulate within the community, supporting farmers, producers, and retailers.

These products also offer a platform for showcasing Pohnpei's unique cultural identity through traditional recipes and ingredients. Their strong support among respondents highlights the multifaceted value of investing in their availability and development. By addressing barriers to production and market access, locally processed foods can play an even greater role in supporting the community's cultural, economic, and dietary needs.

5. Support for a Food Innovation Center

The concept of a food innovation center has garnered widespread support among Pohnpei's restaurant operators. Half of the respondents expressed strong support for establishing such a center, while 33 percent indicated general support. Sixteen percent remained neutral, and no opposition was recorded, highlighting a unified acknowledgment of the potential benefits this initiative could bring to the food industry.

A food innovation center could provide access to commercial-grade kitchens, which would enable restaurants and producers to scale their operations efficiently and improve product quality. The center could also offer technical training in areas such as recipe development, packaging, and marketing, equipping businesses with the skills needed to compete effectively in both local and regional markets. Additionally, the center could act as a collaborative hub, bringing together farmers, producers, and restaurants to create integrated supply chains that enhance the availability and diversity of locally processed foods.

The overwhelming support for this initiative reflects the industry's readiness to embrace innovation and invest in sustainable solutions. By addressing critical challenges in infrastructure and technical expertise, a food innovation center could transform Pohnpei's food industry, enabling it to meet growing consumer demand and strengthen its economic foundations.

6. Challenges in Sourcing and Producing Local Food Products

Pohnpei's restaurant sector faces a range of challenges in sourcing and producing locally made foods, many of which are deeply entrenched in systemic issues. Limited access to quality raw materials was identified as a significant barrier by 58 percent of respondents. This challenge highlights gaps in the agricultural supply chain, where inconsistent availability of high-quality inputs undermines the ability of producers to create reliable and market-ready products.

Inadequate infrastructure for processing and packaging was cited by 67 percent of respondents, making it the most frequently reported challenge. The lack of proper facilities, such as

commercial kitchens and packaging equipment, restricts the ability of restaurants and producers to scale operations, maintain product consistency, and extend shelf life. This infrastructure gap is a major bottleneck for the local food industry, limiting its capacity to compete with imported products.

Workforce shortages are another pressing issue, with 67 percent of respondents reporting a lack of trained workers. This deficiency hampers production capacity and innovation, as businesses struggle to implement quality control measures or experiment with new product offerings. High production costs, reported by 42 percent of respondents, further exacerbate these challenges by straining financial resources and limiting the ability of businesses to invest in expansion.

Technical expertise in product development is also lacking, as noted by 58 percent of participants. This gap prevents businesses from creating diverse and high-quality offerings that appeal to consumer preferences. Additionally, distribution capabilities were highlighted as a challenge by 25 percent of respondents, reflecting difficulties in ensuring consistent product availability across different markets.

Addressing these challenges is critical to unlocking the potential of Pohnpei's local food sector. Investments in infrastructure, workforce training, and technical assistance are essential for overcoming these barriers and enabling the industry to thrive. By tackling these systemic issues, Pohnpei's restaurant sector can better support the local economy, enhance food security, and preserve its cultural heritage.

7. Perceived Benefits of a Food Innovation Center

The establishment of a food innovation center is widely regarded as a transformative opportunity for Pohnpei's restaurant sector. Sixty-seven percent of respondents emphasized the critical importance of access to commercial-grade kitchens and processing facilities. Such access would empower local businesses to scale their production processes, improve efficiency, and enhance the quality of their offerings. These facilities would address one of the most significant infrastructural gaps in the local food industry, enabling producers to meet market demands with greater consistency and reliability.

Marketing and branding support was also cited as a crucial benefit by 67 percent of respondents. This underscores the need for professional expertise in enhancing product visibility and appeal, especially in an increasingly competitive market. Effective marketing and branding strategies would allow local products to better compete with imported goods, both within Pohnpei and in external markets, thereby expanding the reach and profitability of locally made foods.

Collaboration with local farmers and producers was another key benefit highlighted by 67 percent of respondents. Such partnerships would strengthen the supply chain, ensuring a steady and sustainable flow of raw materials to restaurants and processors. This collaborative approach would not only support local agriculture but also promote community-wide economic growth by fostering synergies between different stakeholders in the food industry.

Additional benefits mentioned include technical assistance and expertise in product development, each supported by 50 percent of respondents. These services would address

existing gaps in skills and knowledge, helping businesses innovate and diversify their product offerings. By addressing these multifaceted needs, a food innovation center could serve as a hub for addressing systemic challenges, fostering collaboration, and driving sustainable growth in Pohnpei's food industry.

8. Consumer Demand and Market Potential

The demand for locally processed foods in Pohnpei presents a promising growth opportunity for the restaurant sector. Thirty-three percent of respondents reported high demand for these products, while an additional 42 percent noted moderate demand. Together, these figures indicate a substantial and expanding market for local foods, driven by consumer preferences for culturally significant and locally sourced products. Only 25 percent of respondents perceived limited demand, highlighting the overall positive sentiment about the market's potential.

Products with traditional or cultural significance are viewed as having the high market potential, with 50 percent of respondents identifying these items as key growth areas. Foods that align with Pohnpei's rich culinary traditions and incorporate locally grown ingredients resonate strongly with consumers, reflecting a broader desire to preserve and celebrate cultural identity. Similarly, 75 percent of respondents highlighted the appeal of products made with local ingredients, which not only offer a distinct flavor profile but also support sustainable agriculture and economic resilience.

Despite these positive indicators, the limited availability of locally processed foods underscores the need for targeted efforts to meet consumer preferences. Expanding the range and accessibility of these products requires addressing challenges in production, distribution, and marketing. By capitalizing on the existing demand and enhancing the market presence of locally made foods, Pohnpei's food industry can unlock significant economic and cultural benefits.

9. Factors Influencing Consumer Preferences

The primary factors influencing consumer acceptance of locally processed foods in Pohnpei are quality and taste, cited by 83 percent of respondents. These attributes are essential for building trust and loyalty among consumers, as they directly affect satisfaction and repeat purchases. High-quality products with superior taste not only differentiate local foods from imported alternatives but also reinforce the cultural and culinary identity of Pohnpei.

Health benefits were another significant consideration, noted by 92 percent of respondents. This reflects a growing awareness among consumers about the importance of nutrition and wellness in their food choices. Locally processed foods that emphasize health and nutrition are likely to appeal to a broader audience, especially as consumers become more conscious of the quality of their diets.

Affordability was also a critical factor, identified by 83 percent of respondents. Price sensitivity is a major determinant of purchasing decisions, particularly in markets where consumers face financial constraints. Ensuring that locally made products are competitively priced relative to imported goods is essential for gaining and maintaining market share.

Packaging and cultural appeal were less influential, cited by smaller portions of respondents. This suggests that while attractive presentation and traditional elements can enhance product appeal, they are secondary to core attributes such as quality, taste, and affordability. These findings highlight the practical considerations that drive consumer behavior and provide a clear roadmap for businesses seeking to increase the acceptance and popularity of locally processed foods in Pohnpei.

10. Strategies to Promote Local Products

Promoting locally processed foods in Pohnpei requires multifaceted strategies to boost visibility, consumer trust, and market acceptance. The survey highlights sampling events as one of the most effective methods, with 75 percent of respondents supporting this approach. Sampling events allow consumers to experience the quality and taste of local products firsthand, reducing hesitation and fostering confidence in the offerings. By providing direct interactions with the products, sampling creates an opportunity to build loyal customers who might otherwise be hesitant to switch from imported goods.

Collaborations with local chefs and influencers were also endorsed by 75 percent of respondents, showcasing their potential to amplify the appeal of locally processed foods. Chefs and influencers can use their platforms to demonstrate the versatility of these products, integrating them into traditional and modern recipes that highlight their unique qualities. This strategy leverages the influence and credibility of trusted figures to encourage adoption among consumers who value expert recommendations.

Respondents also emphasized the importance of in-store promotions and discounts as part of the promotional strategy. Price sensitivity, identified as a significant factor affecting consumer decisions, makes promotional pricing an effective way to attract first-time buyers and encourage trial purchases. By temporarily lowering the financial barrier, producers and retailers can introduce their products to a wider audience, building a foundation for long-term market growth.

These strategies collectively underscore the importance of experiential marketing and strategic partnerships in promoting locally processed foods. Direct engagement with consumers through sampling, collaborations with respected figures in the community, and value-driven promotions can significantly enhance the profile of Pohnpei’s local products. By fostering stronger connections between producers, retailers, and consumers, these efforts can support the sustainable growth of the local food industry, ultimately positioning it as a cornerstone of the state’s economic and cultural identity.

Conclusion

The Pohnpei Food Retailer Survey presents a comprehensive overview of a vibrant but underdeveloped local food sector, characterized by strong potential for growth and significant opportunities for improvement. The findings reveal systemic challenges, including limited infrastructure, workforce shortages, and high production costs, that constrain the sector's ability to meet the robust consumer demand for locally processed foods. Despite these barriers, there is widespread support for transformative initiatives such as the establishment of a food innovation

center, which could address these challenges by providing technical expertise, shared facilities, and collaborative opportunities.

The survey underscores the critical importance of aligning business objectives with community needs. Locally processed foods are not only a source of economic growth but also a means of preserving Pohnpei's cultural heritage and enhancing food security. By investing in infrastructure, training, and collaboration, the local food industry can reduce reliance on imports, expand its market offerings, and meet consumer preferences for quality, taste, and affordability.

Targeted promotional strategies such as sampling events, collaborations with chefs, and promotional discounts further highlight the pathways to increasing consumer awareness and acceptance of locally processed foods. These approaches emphasize the importance of direct consumer engagement and trust-building in fostering a resilient and thriving food industry.

With sustained efforts to address the identified barriers and capitalize on the opportunities presented, Pohnpei's food industry is well-positioned to thrive. A revitalized local food sector would not only benefit the economy but also reinforce cultural continuity and resilience, ensuring a sustainable and prosperous future for the state and its people.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Policymaker Survey Results

1. Demographics of Policymakers

The demographic composition of policymakers in Pohnpei provides critical insights into the dynamics shaping governance in the region. Seventy-nine percent of respondents identify as male, underscoring a significant gender imbalance in leadership roles. Only 21 percent of respondents are female, highlighting the underrepresentation of women in policymaking positions. This disparity limits the diversity of perspectives brought to decision-making processes, potentially affecting the inclusivity and comprehensiveness of governance outcomes. Addressing this gap through leadership development programs, mentorship opportunities, and targeted initiatives for women can help create a more balanced and representative policymaking body.

Age distribution data further reveals a heavy reliance on older, experienced individuals in policymaking roles. Forty-three percent of respondents are aged 56–60, while an equal percentage are over 60. This dominance of senior age groups ensures a wealth of institutional knowledge, historical perspective, and stability in governance. However, the data also reveals a stark lack of younger voices. There is only 1 respondent under the age of 30, and only 7 percent fall within the 31–45 age range. This absence of younger policymakers highlights a critical gap in generational diversity and raises concerns about the sustainability of leadership in Pohnpei.

The underrepresentation of younger individuals suggests a need for initiatives that encourage youth participation in governance. Programs aimed at building leadership skills, fostering civic engagement, and providing mentorship opportunities for emerging leaders could bridge this gap. By diversifying the age and gender composition of the policymaking body, Pohnpei can ensure that its leadership reflects the full spectrum of its population, fostering innovation and long-term sustainability in governance.

2. Perceived Benefits of a Food Innovation Center

The establishment of a Food Innovation Center in Pohnpei is widely recognized by policymakers as a transformative initiative with the potential to address pressing challenges in food security, economic development, and community health. Fifty-seven percent of respondents identified job creation and economic growth as the most critical benefit. Policymakers emphasized the center's potential to generate employment opportunities across the food production, processing, and distribution sectors. These new jobs would not only stimulate economic growth but also provide livelihoods for local residents, contributing to broader community stability.

Improving food security was identified as the most important benefit by 21 percent of respondents, with another 36 percent ranking it as important. Policymakers highlighted the center's role in reducing dependence on imported goods by promoting the production and distribution of locally sourced foods. By strengthening local food systems, the center could enhance Pohnpei's resilience to external disruptions, ensuring consistent access to affordable and nutritious food for its population.

Fourteen percent of respondents viewed entrepreneurial opportunities as a top benefit, reflecting the center's potential to empower small-scale producers and foster innovation. The creation of new business ventures in food processing and product development aligns with policymakers' goals of promoting economic diversification and self-sufficiency. However, improving nutrition and health received relatively lower prioritization, with only 14 percent ranking it as the most important benefit and 43 percent deeming it less critical. This disparity suggests that while economic and food security outcomes are prioritized, there is room to integrate public health objectives more prominently into the center's mission.

Overall, the responses underscore the importance of a balanced focus on both economic and social outcomes. By addressing job creation, food security, entrepreneurial development, and community health, the Food Innovation Center can serve as a comprehensive solution to Pohnpei's food system challenges.

3. Priorities for Locally Processed Foods

Policymakers in Pohnpei have identified clear priorities for the types of locally processed foods that should be the focus of the Food Innovation Center. Local staples, including taro and breadfruit, were overwhelmingly ranked as the top priority, with 79 percent of respondents emphasizing their importance. These crops hold deep cultural significance and serve as dietary staples for the population. Policymakers highlighted their potential to enhance food security by reducing dependency on imported staples, while also preserving Pohnpei's traditional food systems and culinary heritage.

Fish and seafood were another key area of focus, with 14 percent of respondents ranking them as the most important and 50 percent considering them important. These resources play a dual role in the local food system, serving as both essential components of the diet and valuable economic commodities. Policymakers noted opportunities for sustainable fisheries and value-added seafood products, such as smoked fish or seafood-based sauces, to support economic growth while preserving marine ecosystems.

Fruits and vegetables were identified as important by 43 percent of respondents, reflecting an awareness of their role in promoting balanced diets and supporting local agriculture. Policymakers noted the potential for value-added processing, such as pickling, drying, or juicing, to increase the marketability and shelf life of these products. However, high-value specialty products, including coffee and spices, were deemed less important, with 57 percent ranking them as a low priority. This practical approach reflects a focus on staples and essential foods over luxury items, ensuring that efforts to develop the local food system align with immediate cultural, nutritional, and economic needs.

By prioritizing staples like taro and breadfruit alongside fish, seafood, fruits, and vegetables, policymakers have outlined a clear strategy for the Food Innovation Center to support food security and economic resilience. These priorities align with the broader goals of preserving cultural heritage, promoting sustainable agriculture, and meeting the nutritional needs of Pohnpei's population.

4. Key Features of a Food Innovation Center

Policymakers in Pohnpei highlight several critical features required for the success of a Food Innovation Center, ensuring it effectively addresses the systemic challenges in the local food system. Processing and packaging equipment was identified as the most vital feature by 50 percent of respondents. These tools would enable local producers to meet stringent food safety standards, improve the overall quality of their products, and extend shelf life. By equipping the center with advanced processing technologies, producers could create competitive, market-ready products that appeal to both local and international consumers.

Research and development facilities were also deemed important by 29 percent of respondents. These facilities would foster innovation, allowing producers to experiment with new recipes, refine traditional products, and develop unique offerings that reflect Pohnpei's rich culinary heritage. Policymakers underscored the importance of these facilities in diversifying the range of local food products and increasing their market appeal.

Shared kitchen and commercial spaces received moderate support, with 29 percent of respondents considering them important. These spaces would provide small-scale producers and entrepreneurs with affordable access to essential infrastructure, removing barriers to entry for new businesses. Startups and individual producers could benefit from the shared resources, enabling them to scale operations without incurring prohibitive costs.

Market access and distribution networks were highlighted by 14 percent of respondents as critical features for the center. These networks would connect producers with consumers more effectively, ensuring locally processed foods reach broader markets. Policymakers emphasized the importance of robust distribution systems in enhancing the visibility and accessibility of local products, thus amplifying their economic impact. Collectively, these features form a comprehensive framework for the Food Innovation Center to address the existing gaps in production, innovation, and market connectivity.

5. Importance of Involving Local Farmers and Producers

The involvement of local farmers and producers is universally recognized as a cornerstone of the Food Innovation Center's success. All respondents rated this engagement as very important, underscoring a shared belief that the center's programs and operations must align closely with the needs and challenges of the agricultural community. Policymakers highlighted the invaluable insights that farmers can provide regarding crop selection, sustainable farming practices, and traditional food preparation methods. These perspectives are critical for ensuring that the center's initiatives are relevant and effective.

Collaboration with farmers fosters a sense of ownership, encouraging their active participation in the center's planning and operations. This engagement not only strengthens trust between stakeholders but also enhances the center's ability to deliver practical solutions that address the realities of farming in Pohnpei. Policymakers emphasized that such collaboration would ensure the center's resources—whether training modules, equipment, or marketing strategies—are tailored to the specific requirements of the local agricultural sector.

The mutual benefits of this collaboration are significant. Farmers gain access to essential resources such as training programs, advanced tools, and stable markets for their crops, enhancing their productivity and income. In return, the center benefits from a reliable supply of high-quality raw materials, which are essential for producing market-ready products. This dynamic ensures the long-term sustainability of both the Food Innovation Center and the agricultural sector, creating a resilient and interconnected food system in Pohnpei.

6. Types of Government Support for the Food Innovation Center

Government support is crucial for the successful establishment and operation of the Food Innovation Center, with policymakers identifying several key forms of assistance. Financial subsidies were ranked as the most critical, with 36 percent of respondents emphasizing their importance. These subsidies would offset the operational costs of the center, making its facilities and resources more accessible to small-scale producers and entrepreneurs. By reducing financial barriers, subsidies ensure that the center can serve as an inclusive platform for local food production and innovation.

Technical assistance was also highlighted by 36 percent of respondents as important for the center's success. This support includes access to modern processing equipment, packaging tools, and expertise in food safety standards. Policymakers stressed that technical assistance would empower local producers to improve the quality and competitiveness of their products, enabling them to meet market requirements and expand their reach.

Policy incentives, such as tax benefits for local producers and processors, were deemed essential by 36 percent of respondents. These incentives would encourage investment in food production and processing, fostering innovation and economic growth within the sector. Policymakers noted that such measures could attract more participants to the local food industry, enhancing its capacity to meet consumer demand and drive economic development.

Collectively, these forms of government support create a robust framework for the Food Innovation Center to thrive. By providing financial relief, technical resources, and policy-driven incentives, the government can address key barriers faced by local producers and ensure the center fulfills its potential as a transformative force in Pohnpei's food system.

7. Policies Supporting Farmers in Supplying Raw Materials

Policymakers in Pohnpei overwhelmingly support targeted policies to empower farmers in supplying raw materials to the Food Innovation Center effectively. Guaranteed purchase agreements were endorsed by 79 percent of respondents as a critical policy measure. These agreements provide financial security and stability for farmers by ensuring consistent demand for

their crops, regardless of market fluctuations. Policymakers emphasized that this stability encourages farmers to invest in expanding production, improving crop quality, and adopting sustainable agricultural practices.

Subsidies for farming inputs, such as seeds, fertilizers, and equipment, were supported by 71 percent of respondents. These subsidies play a vital role in reducing production costs, which is a significant barrier for many farmers. By alleviating financial burdens, these subsidies enable farmers to focus on enhancing yield and efficiency, ensuring a steady supply of high-quality raw materials for processing.

Training programs for improved farming practices received the strongest endorsement, with 86 percent of respondents emphasizing their importance. These programs are seen as essential for equipping farmers with the skills and knowledge needed to adopt modern, sustainable techniques. Topics such as pest management, soil health, crop diversification, and post-harvest handling were highlighted as areas where training can significantly enhance productivity and reduce waste. Policymakers stressed that such programs would not only improve individual farmers' outcomes but also strengthen the overall agricultural sector, ensuring long-term sustainability and resilience.

The alignment of these policies reflects a comprehensive approach to addressing the challenges faced by Pohnpei's farmers. By combining financial support, guaranteed markets, and capacity-building initiatives, policymakers aim to create an enabling environment that empowers farmers to meet the demands of the Food Innovation Center and contribute to a robust local food system.

8. Strategies to Facilitate Collaboration Between Farmers and the Center

Policymakers identified several key strategies to foster effective collaboration between farmers and the Food Innovation Center, ensuring alignment of goals and mutual benefits. Regular stakeholder meetings were highlighted by 29 percent of respondents as a vital mechanism for facilitating communication and engagement. These meetings provide a structured platform for farmers to share feedback, express concerns, and contribute to decision-making processes related to the center's operations. Policymakers noted that consistent and transparent communication through these forums is critical for building trust and ensuring the center's initiatives reflect farmers' needs and priorities.

The creation of cooperatives was seen as another essential strategy, endorsed by 21 percent of respondents. Cooperatives enhance collective bargaining power, reduce individual costs, and streamline logistics for members. By pooling resources, cooperatives can improve access to inputs, transportation, and marketing opportunities, allowing farmers to engage with the center more effectively. Policymakers also stressed that cooperatives facilitate knowledge-sharing among members, fostering innovation and best practices in farming and resource management.

Logistical support for transporting crops to the center was emphasized as important by 43 percent of respondents. Policymakers recognized that transportation challenges, particularly for farmers in remote areas, often limit their ability to participate in large-scale initiatives. Providing transportation infrastructure and services would remove this barrier, ensuring that all farmers,

regardless of location, can access the center's resources and contribute raw materials. This logistical support is critical for creating an inclusive and efficient supply chain that benefits both farmers and the center.

Together, these strategies provide a comprehensive framework for strengthening collaboration between farmers and the Food Innovation Center. By addressing communication, organization, and logistical challenges, policymakers aim to foster a cooperative and mutually beneficial relationship that supports the success of both stakeholders.

9. Indicators of Success for the Food Innovation Center

Policymakers identified several measurable indicators to evaluate the success of the Food Innovation Center, reflecting its multifaceted impact on the local food system and economy. Job creation was considered the most critical indicator by 79 percent of respondents. Policymakers emphasized the center's potential to generate employment across various stages of the food supply chain, including farming, processing, packaging, and distribution. These new jobs would provide stable livelihoods for residents, contributing to broader economic stability and community development.

Improved farmer incomes were highlighted as a priority by 86 percent of respondents. This indicator reflects the center's ability to transform farming into a viable and profitable enterprise. By providing access to better resources, training, and guaranteed markets, the center ensures that farmers can increase productivity and receive fair compensation for their efforts. This financial empowerment not only improves the standard of living for farmers and their families but also encourages reinvestment in agricultural activities, creating a positive feedback loop for the local economy.

Increased access to fresh and nutritious foods was another critical indicator, identified by 79 percent of respondents. Policymakers noted that the center's role in promoting the production and availability of high-quality, locally sourced foods directly supports public health objectives. By reducing reliance on imported goods and enhancing the nutritional value of available food products, the center contributes to improved dietary health and food security for the community.

These indicators collectively highlight the center's potential to drive economic growth, enhance community well-being, and strengthen food system resilience. Policymakers stressed the importance of regular monitoring and evaluation to ensure the center remains aligned with these goals, adapting its initiatives as needed to maximize its impact. By focusing on these outcomes, the Food Innovation Center can serve as a transformative force in Pohnpei, creating lasting benefits for its people and economy.

10. Infrastructure and Capacity Building for the Local Food System

Policymakers in Pohnpei emphasize the importance of robust infrastructure and capacity-building initiatives as essential foundations for a resilient and sustainable local food system. Processing facilities were identified as important by 29 percent of respondents. These facilities are essential for enabling local producers to scale their operations, improve efficiency, and meet quality and safety standards. With modern processing capabilities, producers can transform raw

materials into high-quality, market-ready products, extending shelf life and enhancing market appeal.

Food production training emerged as the most important capacity-building initiative, highlighted by 57 percent of respondents. Policymakers stressed the need to equip producers with advanced techniques in cultivation, harvesting, processing, and quality control. Training programs focused on sustainable farming practices, post-harvest handling, and value-added processing would empower farmers and producers to increase productivity, reduce waste, and meet evolving consumer demands. By fostering technical expertise, these programs lay the groundwork for innovation and diversification within the local food industry.

Cold storage infrastructure was also emphasized as a priority for reducing post-harvest losses and ensuring the availability of perishable goods such as fruits, vegetables, and seafood. Policymakers highlighted the challenges producers face in preserving fresh produce, particularly in Pohnpei's tropical climate. Investments in cold storage would address this issue, maintaining the quality of harvested products and enhancing their marketability both locally and regionally.

Transportation and marketplace development were further identified as critical components of the food system's infrastructure. Policymakers recognized that efficient transportation networks are vital for connecting producers with processing facilities and markets. Improved roads, logistics systems, and distribution channels would ensure that products reach consumers promptly and in good condition. Similarly, marketplace development would create dedicated spaces for selling locally processed foods, increasing their visibility and accessibility to the public. By enhancing these systems, policymakers aim to integrate rural producers into the broader food economy and expand opportunities for market engagement.

Together, these investments in infrastructure and capacity building reflect a comprehensive strategy for strengthening Pohnpei's food system. By addressing logistical and technical barriers, policymakers seek to create an environment where local producers can thrive, contributing to economic growth, food security, and community well-being.

Conclusion

The Pohnpei Policymaker Survey underscores the transformative potential of establishing a Food Innovation Center as a cornerstone for addressing systemic challenges in the local food system. The findings reveal that targeted investments in infrastructure, capacity building, and collaborative approaches can unlock significant opportunities for economic growth, food security, and cultural preservation. By focusing on locally significant staples such as taro, breadfruit, and seafood, the center can promote sustainability while preserving Pohnpei's culinary heritage.

Policymakers recognize the importance of engaging farmers and producers as active participants in the center's planning and operation. This collaboration ensures that the center's initiatives align with the needs of the agricultural community, fostering a sense of ownership and mutual benefit. Government support, through financial subsidies, technical assistance, and policy

incentives, emerges as a critical pillar for the center's success. These measures enable producers to overcome barriers, access resources, and compete effectively in the marketplace.

The survey highlights infrastructure and capacity-building initiatives, such as processing facilities, training programs, cold storage, and transportation networks, as vital for creating a robust and resilient food system. These investments address key logistical and technical challenges, ensuring that producers can meet market demands while reducing waste and post-harvest losses.

The Food Innovation Center is also envisioned as a catalyst for economic resilience and community development. By fostering job creation, increasing farmer incomes, and improving access to nutritious, locally sourced foods, the center can enhance the overall well-being of Pohnpei's residents. Regular evaluation of success indicators, such as employment rates, income levels, and food security, will ensure that the center remains aligned with its goals and adapts to evolving needs.

In conclusion, the Food Innovation Center represents a transformative opportunity for Pohnpei. Through strategic planning, sustained investments, and active community engagement, the center can serve as a model for sustainable development, strengthening Pohnpei's food system and ensuring a prosperous and culturally rich future for its people.

Federated States of Micronesia

Food Systems Solutions Project

Pohnpei Information Content Provider Survey Results

1. Demographics of Information Content Providers

The demographic composition of information content providers in Pohnpei sheds light on the gender and age dynamics within the region's food systems information ecosystem. Seventy-five percent of respondents were male, emphasizing a pronounced male majority in roles that focus on the dissemination of agricultural and food systems knowledge. This significant male representation suggests a continuation of traditional male dominance in technical and public-facing roles, where their presence has historically shaped the region's information delivery framework. However, the 25 percent representation of female respondents underscores a notable contribution by women, highlighting their growing involvement in the sector. This increasing diversity offers opportunities for integrating different perspectives, fostering innovation, and enriching the approaches taken to address challenges in Pohnpei's food systems.

Age distribution among the respondents points to a workforce dominated by older and more experienced individuals. Fifty percent of the information content providers were aged 56–60, underlining the critical role that seasoned professionals play in shaping and leading information dissemination efforts. Another 25 percent of respondents were over 60, further demonstrating the sector's reliance on senior experts whose extensive knowledge and historical insights are invaluable for addressing complex issues in food systems.

On the other hand, younger demographics are significantly underrepresented. Respondents aged 18–30 and 31–45 each accounted for just 12 percent of the total, highlighting a gap in the inclusion of younger voices. This lack of generational diversity indicates potential challenges in integrating modern perspectives and innovative practices into information-sharing processes. Bridging this gap will require targeted initiatives to attract younger talent, such as mentorship programs, capacity-building workshops, and opportunities for leadership development. Such efforts would ensure that the sector benefits from both the wisdom of seasoned professionals and the fresh ideas of younger contributors, fostering a more balanced and sustainable information-sharing ecosystem.

2. Priority Information for an Electronic Food Systems Hub

Information content providers in Pohnpei have identified several critical priorities for inclusion in an electronic food systems hub, emphasizing areas that address immediate needs and support long-term development. Food processing and preservation methods emerged as the most critical focus, with 50 percent of respondents ranking it as "most important." This prioritization reflects widespread recognition of the challenges posed by post-harvest losses and the necessity of enhancing food quality and shelf life. Effective processing and preservation methods are pivotal

for reducing waste, improving marketability, and ensuring food security in Pohnpei's agricultural and food systems.

Marketing strategies, alerts, and opportunities were considered "most important" by 25 percent of respondents, while 37 percent viewed them as "moderately important." These findings highlight the demand for actionable and timely market insights to help producers optimize profitability and build stronger buyer connections. Producers need accurate information on pricing, demand trends, and marketing techniques to navigate competitive and evolving markets effectively.

Emergency services and disaster response were rated as "important" by 25 percent of respondents, reflecting the vulnerabilities of Pohnpei's food systems to natural and human-made disruptions. The need for a robust hub that can provide preparedness and response information is evident in the context of frequent climatic challenges such as typhoons and heavy rainfall. Disease control and pest management, another significant area of concern, saw mixed prioritization. While 25 percent of respondents rated it as "most important," an equal percentage considered it "moderately important," indicating that its relevance varies depending on specific contexts within Pohnpei's food systems. These findings underline the necessity of a well-rounded hub capable of addressing both immediate challenges and long-term sustainability goals.

3. Preferred Update Frequency for the Information Hub

Respondents expressed diverse preferences regarding the update frequency of an electronic food systems hub, reflecting their varied reliance on dynamic and static information. Weekly updates emerged as the preferred choice for 63 percent of respondents, highlighting the need for regular yet manageable streams of information. Weekly updates would be particularly beneficial for tracking market trends, monitoring pest and disease developments, and receiving timely agricultural advice. Such a frequency balances the need for actionable insights with the capacity of users to process and apply the information effectively.

Quarterly updates were favored by 25 percent of respondents, who likely value in-depth and comprehensive reporting on topics such as seasonal agricultural patterns, market performance analyses, and policy updates. Quarterly updates allow for more detailed and reflective content, providing a strategic overview that informs long-term planning and decision-making.

Thirteen percent of respondents preferred daily updates, emphasizing the importance of immediate access to rapidly changing information such as weather forecasts, emergency alerts, and market price fluctuations. This group likely includes users whose work is highly time-sensitive, requiring real-time data to make critical operational decisions.

These preferences suggest that a one-size-fits-all approach may not be suitable for the hub. Instead, designing a flexible update system that combines daily, weekly, and quarterly updates could ensure that the hub effectively meets the diverse needs of its users. By catering to both dynamic and static information demands, the hub can serve as a comprehensive and responsive resource for Pohnpei's agricultural and food systems stakeholders.

4. Essential Production Information for Farmers and Producers

The survey revealed several critical areas of production information deemed essential for farmers and producers in Pohnpei. Crop cultivation techniques emerged as the top priority, with 50 percent of respondents identifying this area as "most important." This result underscores the fundamental role of agriculture in Pohnpei's food systems and the importance of improving cultivation practices to enhance productivity and sustainability. Topics such as optimizing planting schedules, improving soil health, and adopting pest-resistant crop varieties were frequently highlighted as vital for boosting yields and addressing environmental challenges.

Livestock management practices were also recognized as significant, with 37 percent of respondents rating this information as "important." This reflects the role of livestock in Pohnpei's mixed farming systems, where enhancing animal health, feeding practices, and sustainable breeding techniques could directly contribute to improved food security and household incomes.

Aquaculture ranked similarly, with 38 percent of respondents considering it "moderately important." Policymakers and content providers recognized the potential of aquaculture to supplement traditional fishing practices and create opportunities for economic growth through value-added seafood products. Sustainable fish farming techniques and the management of marine resources were identified as areas requiring focused attention.

Sustainable forestry practices and the control of invasive species were less emphasized, with 63 percent of respondents considering these areas "less moderately important." While these topics may not directly impact food production, they remain relevant for maintaining ecological balance and supporting long-term agricultural productivity. Policymakers noted that while immediate agricultural needs take precedence, broader ecological challenges should not be overlooked. This prioritization suggests a balanced approach, addressing urgent agricultural concerns while maintaining an awareness of environmental sustainability.

5. Preferred Formats for Presenting Production Information

The survey highlighted diverse preferences among respondents regarding the formats for presenting production information. In-person workshops and training sessions were the most favored, with 50 percent of respondents rating them as "most important." This preference reflects the value placed on practical, hands-on learning opportunities that allow producers to engage directly with experts, ask questions, and receive tailored guidance. Such sessions are particularly effective for skill development in areas like pest management, crop diversification, and sustainable farming practices.

Written guides and fact sheets were equally valued, with 25 percent of respondents identifying them as "most important" and another 25 percent as "important." These formats provide concise and portable reference materials that producers can consult as needed. Respondents emphasized the importance of clear and well-structured documentation tailored to the local context, ensuring that critical information is accessible to all stakeholders.

Digital formats, including video tutorials and interactive online courses, were moderately preferred. This reflects the growing reliance on technology among younger producers and those

with access to internet resources. Digital tools offer dynamic and engaging ways to present complex concepts, making them particularly appealing for visual learners and tech-savvy individuals.

Radio announcements, while rated lower, remain relevant for reaching remote communities with limited access to digital technology. Policymakers noted that radio remains a reliable and widely accessible medium for disseminating time-sensitive information such as weather updates, pest outbreaks, and market alerts. These findings indicate the need for a multimodal approach to content delivery, ensuring that information is accessible and actionable for a diverse audience across Pohnpei.

6. Food Processing and Safety Information Needs for the Hub

Food safety and quality control were universally recognized as critical, with all respondents emphasizing their importance. This unanimous prioritization reflects the fundamental role of food safety in protecting public health and maintaining consumer trust in local products. Respondents highlighted the need for information on proper handling, storage, and processing techniques to minimize contamination risks and ensure compliance with health standards.

Small-scale processing techniques were identified as essential by all respondents, emphasizing their accessibility for Pohnpei's predominantly small-scale producers. Topics such as drying, fermenting, and basic packaging methods were frequently mentioned as practical solutions to improve the shelf life and marketability of local products. These methods enable producers to add value to raw materials without requiring significant capital investments, making them suitable for small-scale operations.

Industrial processing methods and value-added product development were prioritized by 63 percent and 88 percent of respondents, respectively. Policymakers and content providers noted the importance of these approaches for scaling operations and diversifying product offerings. Industrial processing techniques could enable producers to meet higher-volume demands, improve product consistency, and access broader markets. Value-added product development, such as creating flavored oils, canned goods, or artisanal snacks, was identified as a key opportunity for increasing profitability and appealing to niche markets.

These findings underscore the importance of designing the hub to address a range of processing and safety needs. By providing resources and training on both small-scale and industrial techniques, the hub can empower producers to enhance product quality, expand their market reach, and contribute to a more robust and sustainable food system in Pohnpei.

7. Marketing and Sales Information for Local Producers

The survey identified several critical types of marketing and sales information essential for empowering local producers in Pohnpei. Market opportunities, pricing information, and buyer connections were highlighted as the most beneficial types of guidance, with 25 percent of respondents rating these as "most important" and 38 percent as "important." These findings underscore the need for timely and actionable data that helps producers align their products with consumer demand, secure competitive pricing, and establish robust buyer networks. Access to

such information enables producers to optimize their market strategies, ensuring their products meet current demands and reach appropriate audiences effectively.

Branding and packaging strategies were also emphasized, with 25 percent of respondents rating them as "important." These strategies play a crucial role in enhancing the visibility and appeal of local products, particularly in competitive markets. Effective branding helps producers establish a distinct identity for their products, while thoughtful packaging can attract specific consumer segments and improve shelf appeal. Policymakers noted that while branding and packaging may not be as critical as pricing or buyer connections, they are vital for producers seeking to differentiate their products and expand into new markets, including export opportunities.

Overall, the findings highlight the importance of providing comprehensive, market-oriented guidance tailored to the diverse needs of local producers. By equipping producers with tools to navigate both local and export markets effectively, the hub can help enhance the profitability and sustainability of Pohnpei’s food sector.

8. Tools and Resources to Support Marketing and Sales Efforts

Policymakers and information providers identified several tools and resources essential for supporting marketing and sales efforts in Pohnpei. Networking opportunities and partnerships emerged as the most important, with 88 percent of respondents emphasizing their value as “most important” or “important”. These collaborations enable producers to build connections with buyers, distributors, and fellow producers, creating a more integrated and supportive market ecosystem. Partnerships with other stakeholders, such as local chefs, influencers, and retailers, were noted as particularly beneficial for expanding market reach and boosting product visibility.

Improved market spaces were also prioritized, with 25 percent of respondents rating them as "most important." Accessible and well-equipped markets provide producers with a platform to showcase their products directly to consumers, fostering stronger relationships and generating trust. These spaces also enable producers to engage with customers, gather feedback, and adapt their offerings to meet consumer preferences more effectively.

Market analysis reports were another tool deemed relatively important, with 12.5 percent of respondents highlighting their importance. These reports provide valuable insights into market trends, consumer behavior, and pricing dynamics, empowering producers to make informed decisions about production and marketing strategies. By understanding demand fluctuations and emerging opportunities, producers can optimize their operations and enhance their competitiveness.

Together, these tools and resources create a robust framework for supporting local producers in Pohnpei. By providing access to networking opportunities, market insights, and improved sales platforms, the hub can help producers strengthen their market presence, increase profitability, and build sustainable businesses.

9. Emergency Services and Disease Management Information

The survey underscored the critical importance of emergency services and disease management information in supporting the resilience of Pohnpei's food systems. Natural disaster preparedness, public health emergencies, and food safety were universally deemed essential, with all respondents highlighting their significance. Policymakers emphasized the region's vulnerability to natural disasters such as typhoons and heavy rains, which frequently disrupt agricultural operations and food supply chains. Equipping producers with resources to prepare for and respond to these events is critical for maintaining stability and minimizing losses during crises.

Climate adaptation strategies and pest management techniques were also highly prioritized, with 75 and 100 percent of respondents emphasizing their importance, respectively. Policymakers noted the growing impacts of climate variability on Pohnpei's agricultural systems, including changes in rainfall patterns, increased pest prevalence, and shifts in growing seasons. Adaptation strategies, such as water management practices, pest-resistant crop varieties, and agroforestry, were highlighted as necessary tools for mitigating these challenges.

Pest management was identified as a key focus area, reflecting the need to address immediate threats to crop productivity. Respondents stressed the importance of integrating traditional knowledge with modern techniques to develop effective and sustainable pest control methods.

The findings demonstrate the hub's potential to serve as a central repository for critical information on disaster preparedness, food safety protocols, and climate adaptation measures. By providing producers with comprehensive and actionable resources, the hub can enhance resilience, safeguard food security, and support the long-term sustainability of Pohnpei's agricultural and food systems.

10. Financial Planning and Support Resources for Producers

The survey results highlighted financial planning and support as critical components for empowering Pohnpei's producers to build sustainable and profitable businesses. Financial management training was rated as "most important" by 50 percent of respondents. This overwhelming endorsement underscores the need for producers to acquire essential skills in budgeting, cost optimization, and financial planning. These competencies are vital for helping producers navigate fluctuating costs, manage resources efficiently, and ensure long-term financial stability.

Access to credit and funding information was identified as critical by 38 percent of respondents. This emphasis reflects the significant barriers small-scale producers face in securing the financial resources needed to expand their operations or adopt new technologies. Policymakers highlighted the role of accessible credit in enabling investments in modern equipment, infrastructure, and workforce development. With improved access to funding, producers can increase productivity, diversify their offerings, and compete more effectively in local and export markets.

Crop budget templates and personalized financial advice were valued by 63 and 88 percent of respondents, respectively, demonstrating their relevance in addressing individual financial needs

and challenges. Crop budget templates provide structured frameworks for producers to plan expenses and anticipate returns, ensuring a more systematic approach to resource allocation. Personalized financial advice was particularly noted for its ability to cater to unique situations, such as managing debt, optimizing investments, or accessing specific grants and incentives. Respondents stressed the importance of tailored support that aligns with the varied contexts and scales of production in Pohnpei.

These findings highlight the necessity of integrating comprehensive financial planning and support services into the proposed electronic hub. By providing producers with training, tools, and access to funding opportunities, the hub can empower them to achieve financial independence, invest in growth, and contribute to the resilience of Pohnpei's food systems.

Conclusion

The Pohnpei Information Content Provider Survey underscores the transformative potential of a well-designed electronic food systems hub in addressing the region's unique agricultural and food system challenges. The survey findings highlight critical areas of focus, including food safety, marketing, financial planning, and emergency preparedness. Each of these priorities aligns with the broader goals of promoting food security, economic resilience, and sustainable development.

The need for investments in infrastructure and tailored training programs emerged as a recurring theme. The hub's ability to provide timely and actionable information, combined with flexible content delivery formats, ensures accessibility for a diverse range of producers. By equipping producers with practical skills, resources, and tools, the hub can enhance their capacity to navigate market demands, adapt to environmental changes, and build financially sustainable operations.

The survey also emphasizes the importance of integrating traditional knowledge with modern innovation. By addressing generational gaps and fostering collaboration among stakeholders, the hub has the potential to bridge critical divides and create a cohesive approach to food system development. Policymakers and information providers alike recognize the hub's capacity to safeguard Pohnpei's cultural heritage while advancing economic and ecological sustainability.

In conclusion, the proposed electronic food systems hub represents a pivotal opportunity for Pohnpei. Through strategic investments, community engagement, and a focus on empowering local producers, the hub can drive transformative change across the region. It offers a pathway to strengthen local economies, enhance food security, and preserve the cultural and environmental integrity of Pohnpei for generations to come.

Federated States of Micronesia

Food System Solutions Project

Pohnpei Technical Contacts and IT Personnel Survey Results

Introduction

This report provides a comprehensive examination of the technical infrastructure and practices of technical contacts and IT personnel in Pohnpei. The survey explores various critical aspects, including workforce demographics, communication systems, server performance, and user feedback, while identifying the strengths and challenges present in the region's IT landscape. By thoroughly analyzing these areas, the report outlines actionable recommendations aimed at improving Pohnpei's digital infrastructure. These enhancements aim to ensure equitable access to reliable information systems, ultimately supporting the region's economic and social development.

1. Demographic Profile of Technical Contacts and IT Personnel

The technical workforce in Pohnpei is entirely male, with all three respondents identifying as men. This complete absence of female representation reflects a significant gender disparity in the IT sector. Such an imbalance limits the diversity of perspectives, which is crucial for fostering innovation and effectively addressing the wide range of challenges that arise in technology-based solutions. Promoting initiatives that encourage women to participate in IT-related roles could diversify viewpoints and lead to more inclusive and community-driven strategies.

Age distribution among the respondents indicates that two, representing 67 percent, are young professionals aged 18 to 30 years. These individuals are likely at the forefront of adapting to emerging technologies and are capable of driving change in the sector. The remaining one respondent, or 33 percent, is a mid-career professional aged 31 to 45 years. This group brings valuable experience and stability to the workforce. However, the complete absence of individuals over the age of 45 reveals a notable gap in the availability of institutional knowledge and long-term expertise, which could be vital for mentorship and sustaining legacy systems. Conversely, the lack of representation among individuals below 18 years indicates that younger generations have not yet entered this specialized workforce, suggesting opportunities for targeted education and skill-building programs to cultivate future professionals.

2. Communication Systems in Use and Monitoring Practices

Communication systems in Pohnpei demonstrate diversity in their application. The survey results reveal that each of the three respondents utilizes a different combination of systems. One relies solely on an Internet Service Provider (ISP), one integrates both ISP and cellular providers, and the third utilizes ISP in conjunction with cellular services. This distribution highlights flexibility and the ability to adapt to various operational contexts. However, the lack of standardization

across communication systems might lead to inconsistencies in service delivery and system reliability.

The monitoring of communication systems is universally practiced among the respondents, with all three confirming that they actively track performance metrics such as latency, download speeds, and user feedback. Despite this, specific challenges emerge. One-third of the respondents report experiencing slow internet speeds as a recurring issue, while another third highlight fluctuating usage patterns during peak and low-demand times. The remaining respondent utilizes the PRTG monitoring system to ensure system efficiency and gather insights into network performance. These varied findings emphasize the importance of implementing robust and scalable solutions to optimize connectivity and address these challenges systematically.

By leveraging monitoring tools like PRTG more extensively and focusing on performance data, Pohnpei's IT personnel can better address system inefficiencies. This proactive approach would ensure that critical services operate smoothly, even as demand increases. However, given the variability in reported system setups and performance issues, further efforts to standardize communication infrastructure could lead to more consistent and reliable outcomes.

3. Continuous Network Monitoring and Security Recommendations

Continuous network monitoring is a critical component of Pohnpei's IT practices. Among the respondents, two out of three, representing 67 percent, indicated that they rely on the PRTG monitoring system to oversee network operations. Half of these respondents emphasized the importance of continuing with the PRTG system, which demonstrates confidence in its ability to deliver real-time performance analysis. The other half recommended managing the system independently, signifying a growing interest in in-house monitoring solutions.

In terms of security, there is unanimous consensus among all three respondents that upgrading hardware and software is essential. This shared focus reflects an understanding of the need to mitigate vulnerabilities, enhance system stability, and protect against emerging cyber threats. These improvements are fundamental for maintaining a robust network infrastructure that can support both current and future technological demands.

4. Server Performance Assessment and Suggestions for Improvement

Server performance assessments are conducted by 67 percent of respondents, reflecting the efforts of two out of three IT personnel to ensure optimal functionality. The tools employed for this purpose include the PRTG system and ESXi, which facilitate detailed performance monitoring and diagnostics. However, one respondent, accounting for 33 percent, does not currently assess server performance, highlighting a gap in monitoring practices. This discrepancy indicates an opportunity to standardize server evaluation protocols and promote broader engagement in performance assessments across the board.

Suggestions for improving server functionality are centered on the need for upgrades. Half of the respondents recommend simultaneous upgrades to hardware and software, while the other half suggest a focus on software and server enhancements. This division underscores the interconnected nature of hardware and software improvements in achieving better server

reliability and efficiency. Comprehensive upgrades are necessary to ensure the seamless delivery of critical information and maintain the stability of communication networks.

5. Offline Data Synchronization and Distribution of Content

Offline data synchronization is not a widely practiced strategy among Pohnpei's IT personnel, with only 33 percent of respondents indicating its use. This single respondent relies on local data storage solutions to address connectivity challenges, enabling continuous access to essential information during periods of internet disruption. The limited adoption of offline synchronization highlights an area for potential improvement, as broader implementation could enhance system resilience and accessibility.

The methods of distributing updated content are more diverse and robust. Two-thirds of respondents, representing 67 percent, utilize a state-wide website to share information. This centralized platform ensures that users across the region can access essential resources, including data on agriculture, weather, and food security. The remaining 33 percent rely on physical media, such as USB drives or DVDs, to disseminate information. This approach ensures that updates reach users in remote or internet-inaccessible areas. While these distribution strategies are effective, expanding the use of offline synchronization and integrating additional methods could further enhance the reach and reliability of information-sharing initiatives in Pohnpei.

6. User Feedback Collection and Communication Challenges

User feedback is a vital tool for improving communication systems, and two out of three respondents, representing 67 percent, actively collect feedback. This feedback focuses on key system performance metrics such as latency, download speeds, and user satisfaction. The collected insights enable IT personnel to identify service gaps and implement targeted improvements. However, one respondent, accounting for 33 percent, does not engage in feedback collection, which presents a significant opportunity to broaden these efforts. Expanding feedback mechanisms could provide a more comprehensive understanding of user experiences and better inform system upgrades.

Communication challenges in Pohnpei are multifaceted and include significant constraints such as budget limitations and inadequate infrastructure. These issues directly impact the reliability and reach of communication systems. For example, insufficient funds limit the ability to upgrade systems or expand connectivity to underserved areas. Addressing these challenges will require strategic investments in both physical infrastructure and human resources to ensure resilient and equitable communication networks.

7. Government Support and Training Needs for IT Personnel

There is a unanimous lack of clarity regarding government support for IT initiatives in Pohnpei, as all three respondents indicate uncertainty about state or national contributions. This reflects a critical gap in transparency and coordination between government agencies and IT personnel. Without clear communication or visible support, it becomes challenging to align resources and efforts toward the development of robust communication systems.

Training needs for IT personnel are significant and varied. Two respondents, representing 67 percent, identify troubleshooting connectivity issues as a key skill required for effective system management. Additionally, one respondent, accounting for 33 percent, highlights the importance of developing expertise in hardware maintenance and managing offline content. This emphasis on foundational and advanced skills reflects the broad scope of responsibilities faced by IT personnel in Pohnpei. Addressing these training demands through comprehensive programs would equip the workforce with the capabilities needed to maintain and enhance communication systems, ensuring long-term operational stability and efficiency.

8. SMS, Data Optimization, and Use of Voice-Based Hotlines

SMS-based systems are utilized by two respondents, representing 67 percent, to disseminate agricultural information, market updates, and weather forecasts. This reflects the widespread recognition of SMS as a reliable and efficient communication tool, particularly in areas with limited internet access. However, one respondent, or 33 percent, does not use SMS, suggesting that there is room for expansion in its application to ensure broader outreach.

Voice-based hotlines with interactive voice response (IVR) systems are employed by 33 percent of respondents. This method offers an additional channel for providing critical information, particularly to individuals with limited access to digital platforms. However, the relatively low adoption rate indicates that this tool has not been fully leveraged to meet the communication needs of all residents.

Data optimization practices are universally adopted by all three respondents, reflecting a strong commitment to efficient communication under constrained bandwidth conditions. These practices include compressing message sizes to minimize the impact of slow internet connections, ensuring that essential information can be delivered promptly. Expanding the use of SMS systems and voice-based hotlines, alongside ongoing data optimization efforts, could significantly enhance information accessibility for underserved communities, ensuring that critical updates reach all residents effectively.

9. Bandwidth Management, Data Compression, and CDNs

Bandwidth management is a significant focus for IT personnel in Pohnpei. All three respondents confirm the use of data compression techniques, such as gzip and deflate, to optimize communication efficiency. These methods are essential for minimizing the impact of slow internet connections, ensuring that large files and critical information can be transmitted with reduced latency. This universal adoption underscores a commitment to maximizing the limited bandwidth resources available in the region.

Content Delivery Networks (CDNs) also play a pivotal role in enhancing content accessibility. All respondents report utilizing CDNs, which reduce the distance data must travel by leveraging distributed server networks. This approach enables faster delivery of static resources like documents and tutorials. Furthermore, all three respondents confirm the use of CDN caching capabilities, which store frequently accessed content closer to the end user. This ensures quicker access to essential information and significantly improves user experiences. The widespread use

of CDNs demonstrates an advanced understanding of network optimization techniques, positioning Pohnpei's IT framework to better meet the needs of its residents.

10. Information Dissemination Channels and Future Opportunities

Centralized web platforms are the cornerstone of information dissemination in Pohnpei. All three respondents report using these platforms to consolidate and distribute essential data, such as agricultural updates, weather forecasts, and food security information. This method ensures that residents with internet access can retrieve vital resources reliably. Traditional media, including television and newspapers, are utilized by 67 percent of respondents. These channels provide an additional layer of outreach, particularly for individuals who may not regularly access digital platforms. The dual reliance on centralized web platforms and traditional media highlights a balanced strategy aimed at maximizing the reach of information dissemination efforts.

Despite these strengths, there are notable gaps in the use of other communication tools. None of the respondents currently develop tailored communication strategies or use mobile applications to distribute updates. These untapped opportunities could significantly enhance the scope and efficiency of information dissemination. Mobile applications, in particular, offer an avenue for delivering timely, user-specific updates, while tailored strategies, such as stakeholder-specific bulletins and alerts, could address the unique needs of various community groups. Additionally, mapping offline content distribution points across the islands would further improve accessibility for residents in areas with inconsistent internet connectivity.

Conclusion

The survey reveals that Pohnpei's IT landscape demonstrates considerable technical proficiency but is constrained by limited resources and infrastructure challenges. The workforce reflects a technological adeptness that prioritizes practices such as bandwidth management, data compression, and the strategic use of CDNs to optimize content delivery. However, the absence of gender diversity and a reliance on a relatively young workforce indicate the need for broader inclusion and mentorship opportunities to build long-term resilience.

Priorities for improvement include enhancing connectivity through investments in infrastructure, such as upgrading hardware and expanding offline content synchronization capabilities. Addressing training needs, particularly in areas like troubleshooting, hardware maintenance, and advanced communication systems, is vital to empower IT personnel to manage and innovate effectively. Strengthening collaboration between government agencies and IT stakeholders will also be critical in creating a unified approach to communication and technological development.

Expanding communication channels to include mobile applications, tailored strategies, and further leveraging traditional media will ensure that information dissemination is more inclusive and accessible to all residents. Mapping and implementing additional offline distribution points will further bridge the digital divide, particularly for underserved communities. Through strategic planning and sustained investment, Pohnpei can create a robust, equitable, and adaptive IT framework that meets the evolving needs of its population, enabling them to thrive in a rapidly digitizing world.

Federated States of Micronesia
Food Systems Solutions Project
Pohnpei Trainer Survey Results

Introduction

This report examines the results of a comprehensive survey conducted among trainers in Pohnpei. The study delves into multiple dimensions, including demographic characteristics, preparedness in food production, post-harvest handling, climate change adaptation, and technical expertise. Additionally, it identifies gaps in training resources, equipment, and professional development opportunities. By analyzing these findings, the report aims to enhance the capacity of trainers to support sustainable agricultural systems, improve community resilience, and promote economic growth in Pohnpei. The insights provide a pathway for targeted interventions that address existing challenges and foster a robust training framework in the region.

1. Demographics of Trainers

The demographic composition of trainers in Pohnpei indicates a significant gender imbalance, with 11 of the 13 respondents identifying as male, representing 85 percent of the workforce, while only 15 percent are female. This disproportion highlights a lack of inclusivity in the training sector. Female participation is vital for integrating diverse perspectives, particularly in addressing the unique challenges faced by women in agricultural and educational initiatives. Efforts to increase female representation in training roles could lead to more holistic and innovative solutions.

The age distribution of trainers reveals a concentration of younger professionals, with 7 out of 13, or 54 percent, falling in the 18 to 30 age group. This demographic brings youthful energy, adaptability, and a willingness to engage with modern technologies and methodologies. Four trainers, or 31 percent, are aged between 31 and 45, providing a balance of innovation and experience essential for leadership and mentoring roles. Meanwhile, one trainer each, representing 8 percent, is in the 56 to 60 age bracket and over 60 years old. This limited representation of older professionals suggests a potential underutilization of institutional knowledge and traditional expertise, which could be invaluable in areas such as sustainable practices and cultural preservation. Bridging the generational gap through mentorship programs and collaborative initiatives could strengthen the training workforce.

2. Trainer Preparedness in Food Production and Handling

Trainer preparedness in food production reflects a strong foundation, with 10 out of 13 respondents, or 77 percent, expressing confidence in assisting families to increase food production. This demonstrates that the majority of trainers possess the requisite skills to address fundamental agricultural challenges, such as enhancing yields and improving food security.

However, 3 trainers, accounting for 23 percent, lack adequate preparedness, indicating a gap that requires targeted training programs to ensure all trainers are equipped to meet the growing needs of Pohnpei's communities.

Post-harvest handling and processing, a critical component in reducing food waste and improving food quality, presents a more uneven preparedness profile. Seven trainers, or 54 percent, report being adequately prepared to teach and mentor in this area, while 6 trainers, or 46 percent, lack confidence. This disparity highlights the need for specialized training focused on post-harvest technologies, preservation methods, and value-added processes to bolster local food systems.

Traditional agroforestry methods are an area of strength for 9 trainers, or 69 percent, who feel prepared to teach these culturally significant practices. This reflects a strong understanding of sustainable and integrated land-use practices that combine agricultural productivity with ecological conservation. However, 4 trainers, or 31 percent, require additional support to effectively impart this knowledge. Given the importance of traditional agroforestry in Pohnpei's cultural and environmental context, closing this gap is essential for preserving and leveraging these time-tested practices.

Production systems that sustain and integrate land and marine resources present challenges for the majority of trainers. Only 6 respondents, or 46 percent, feel adequately prepared to guide communities in this area. The remaining 7 trainers, or 54 percent, express a need for further training to develop competencies in sustainable practices that balance terrestrial and aquatic resource management. This significant gap underscores the importance of incorporating integrated systems training into professional development programs to ensure sustainable use of Pohnpei's diverse natural resources.

By addressing these areas of disparity in preparedness, trainers in Pohnpei can better support communities in achieving sustainable food production, reducing waste, and preserving cultural practices. A targeted approach to filling these gaps will enhance the overall effectiveness of training programs and contribute to the resilience and sustainability of local food systems.

3. Training in Climate Change Adaptation and Environmental Management

Training in climate change adaptation among trainers in Pohnpei reveals a mixed level of preparedness across various critical areas. Nine trainers, representing 69 percent of respondents, report confidence in teaching strategies for climate-resilient crops, including saltwater-resistant taro. This indicates a solid foundation for addressing the agricultural challenges posed by rising sea levels, saltwater intrusion, and extreme weather conditions. However, four trainers, or 31 percent, lack this expertise, highlighting the need for targeted training programs to achieve uniform readiness across the training workforce.

Preparedness in sustainable farming and land management techniques reflects similar trends. Eight trainers, or 62 percent, are equipped to teach methods for maintaining soil health and preventing erosion. These practices are vital for ensuring long-term agricultural productivity in the face of environmental changes. The remaining five trainers, accounting for 38 percent,

require additional training to effectively mentor communities on sustainable land management strategies.

Emergency weather response remains a significant challenge, with only six trainers, or 46 percent, prepared to guide communities in accessing critical weather information and responding to emergencies. This gap leaves seven trainers, or 54 percent, unprepared to support communities during extreme weather events, underscoring the need for comprehensive training on weather tracking and emergency preparedness tools.

Advanced topics such as invasive species management and soil erosion prevention show limited preparedness. Six trainers, or 46 percent, report confidence in addressing invasive species, while five trainers, or 38 percent, feel adequately equipped to prevent soil erosion. These gaps could compromise efforts to preserve biodiversity and prevent land degradation, both of which are critical for maintaining ecological balance and agricultural productivity in Pohnpei.

More complex areas, including coral reef rehabilitation, restorative forestry, and water collection techniques, present the most significant challenges. Only four trainers, or 31 percent, express confidence in teaching these topics, while nine trainers lack the necessary expertise. Weather tracking tools, which are essential for predicting and mitigating climate impacts, are familiar to only two trainers, or 15 percent, reflecting an urgent need for technological training. Addressing these gaps through focused programs that integrate advanced environmental management techniques will enable trainers to better equip communities to adapt to climate challenges.

4. Equipment and Resources for Effective Training

The survey highlights a diverse range of equipment needs essential for enhancing the effectiveness of training programs in Pohnpei. Respondents consistently emphasize the importance of basic tools such as laptops, projectors, and farming equipment, each identified as critical by 10 percent of trainers. These resources are fundamental for conducting interactive and informative training sessions, allowing trainers to effectively convey technical knowledge and engage with their audience.

In addition to these basic tools, trainers identify specialized equipment as essential for addressing specific agricultural and environmental challenges. Items such as soil testers, wood chippers, salinity testers, and water sprayers were each prioritized by 10 percent of respondents. These tools support hands-on training sessions that focus on practical applications, such as soil health analysis, organic material processing, and efficient water use.

Funding for supplies and infrastructure was also a recurring theme among respondents. Multiple trainers stressed the importance of financial support to acquire necessary equipment and establish training facilities. Addressing these financial and resource gaps will empower trainers to provide comprehensive and practical education, aligning training programs with the evolving needs of Pohnpei’s agricultural and environmental sectors.

By ensuring that trainers have access to the tools and resources they need, training programs can be more impactful and better tailored to address both the immediate and long-term challenges faced by communities in Pohnpei.

5. Expertise in Agriculture and Crop Management

Trainer expertise in agriculture varies across specific practices, with general crop production emerging as a strength. Nine trainers, or 69 percent, report confidence in teaching basic agricultural techniques, such as crop planting timing and overall production practices. This indicates a strong capacity to guide communities in foundational agricultural skills. However, four trainers, or 31 percent, lack this expertise, underscoring the need for additional training to ensure all trainers are equipped to support the region's agricultural productivity.

Traditional agriculture and seed-saving practices present more significant challenges. Only four trainers, or 31 percent, feel prepared to teach local agricultural techniques rooted in traditional knowledge, while five trainers, or 38 percent, are confident in seed-saving methods. These areas are critical for preserving biodiversity, cultural heritage, and long-term agricultural sustainability. The lack of preparedness among the majority of trainers suggests an opportunity to integrate traditional practices and modern techniques into training programs.

Soil management is another critical area with mixed levels of preparedness. Seven trainers, or 54 percent, report being equipped to guide communities in improving soil health through testing, amendments, and sustainable management practices. However, six trainers, or 46 percent, lack confidence in this area, reflecting a need for targeted training in soil management techniques to ensure the longevity of Pohnpei's agricultural systems.

The production of local fertilizers, including compost and compost tea, is a notable strength among trainers, with nine respondents, or 69 percent, expressing confidence in their ability to teach these techniques. This proficiency supports sustainable farming practices that reduce reliance on imported fertilizers. Nonetheless, four trainers, or 31 percent, require additional training to fully engage in this practice, indicating a need for enhanced education and resources in organic fertilizer production.

Addressing these gaps in expertise will ensure that trainers in Pohnpei are fully prepared to guide communities in sustainable agriculture, promote environmental conservation, and enhance food security across the region. Expanding training programs to include a blend of traditional knowledge and modern agricultural practices will be essential for meeting the diverse needs of Pohnpei's communities.

6. Knowledge and Training Needs in Crop-Specific Practices

Trainers in Pohnpei exhibit varying degrees of confidence when it comes to teaching techniques for different crops. Staple crops such as bananas stand out as an area of relative strength, with 8 out of 13 trainers, or 62 percent, feeling prepared to guide communities in their cultivation. In contrast, only 4 trainers, or 31 percent, feel equipped to teach techniques for soft taro and breadfruit, which are culturally and nutritionally significant crops in the region. This disparity highlights the need for targeted training to address foundational gaps in these critical areas.

Specialized crops, including pineapple, papaya, and hot peppers, reveal similar challenges. Only 4 trainers, or 31 percent, express confidence in teaching practices for these crops. These findings suggest that while trainers may excel in certain staple crops, there is limited capacity to guide

farmers in diversifying their agricultural output with high-value crops that could open opportunities for local and export markets.

The challenges are more pronounced for niche crops such as cacao, medicinal plants, and citrus fruits. Only 1 to 3 trainers, or 7 to 23 percent, report being equipped to teach techniques for these crops, indicating significant gaps in expertise. These crops hold potential for economic diversification and income generation, particularly in specialized markets. The limited confidence levels underscore the need for specialized training programs to empower trainers with the knowledge and skills necessary to support the cultivation, harvesting, and processing of these high-value crops. Addressing these gaps will allow Pohnpei to better meet market demands, promote food security, and strengthen its agricultural economy.

7. Competence in Livestock and Marine Resource Management

The survey highlights challenges in livestock management among trainers, with only 6 out of 13 respondents, or 46 percent, expressing confidence in this area. This indicates that the majority of trainers lack the skills necessary to guide communities in livestock practices that are vital for food security and economic stability. Specific practices such as feed-making present similar challenges, with just 5 trainers, or 38 percent, reporting confidence in their ability to teach these techniques. Similarly, knowledge of using tools like wood chippers for feed preparation is limited, with only 6 trainers, or 46 percent, expressing confidence. These findings highlight the urgent need for expanded training to strengthen the capacity of trainers to support livestock management effectively.

Marine resource management reveals additional gaps. Sustainable fishing practices and traditional methods, such as using the moon-phase calendar, are areas where only 4 to 5 trainers, or 31 to 38 percent, feel equipped to provide guidance. Invasive species management is an even more significant challenge, with only 2 trainers, or 15 percent, expressing confidence in this area. Additionally, only 3 trainers, or 23 percent, feel prepared to teach the construction of fish aggregating devices, which are essential for promoting sustainable fishing practices and supporting local fisheries.

These gaps underscore the necessity of integrated training programs that address both livestock and marine resource management. Such initiatives will empower trainers to guide communities in implementing sustainable practices, thereby enhancing food security and promoting biodiversity conservation in Pohnpei.

8. Technology Use and Training in Innovative Farming Methods

The survey reveals limited confidence among trainers in using and teaching advanced farming technologies. Greenhouse farming is the most accessible of these technologies, with 8 out of 13 trainers, or 62 percent, reporting preparedness. This indicates a moderate capacity to guide communities in controlled-environment agriculture, which can help overcome challenges like limited arable land and changing weather patterns. However, confidence drops significantly for other advanced techniques. Only 4 trainers, or 31 percent, feel equipped to teach hydroponics or aquaculture methods, which are crucial for increasing productivity in resource-scarce settings.

Irrigation technologies such as drip and overhead systems present similar challenges, with only 3 trainers, or 23 percent, expressing confidence in teaching these techniques. Solar power integration, which is increasingly vital for sustainable farming systems, is entirely unrepresented, as none of the trainers report confidence in this area. This gap reflects a lack of exposure to renewable energy solutions that could significantly enhance the efficiency and environmental sustainability of agricultural practices in Pohnpei.

These findings highlight the need for comprehensive training programs focused on innovative farming methods. By equipping trainers with the skills to implement and teach advanced technologies, Pohnpei can modernize its agricultural systems, optimize resource use, and ensure food security in a changing climate.

9. Skills in Marketing, Food Processing, and Business Management

The survey reveals a mixed level of preparedness among trainers in Pohnpei when it comes to marketing, food processing, and business management. Food processing and preservation emerge as a relatively strong area, with 7 out of 13 trainers, or 54 percent, expressing confidence in their ability to teach these skills. This indicates that a majority of trainers are equipped to guide communities in techniques such as drying, smoking, and grinding foods to enhance their shelf life and marketability. However, 6 trainers, or 46 percent, lack expertise in this domain, indicating room for improvement to achieve uniform competence among all trainers.

In the area of marketing, only 6 trainers, or 46 percent, feel prepared to teach strategies for making products sellable, such as identifying target markets and developing packaging. Even fewer, 4 trainers, or 31 percent, are confident in teaching value-added marketing techniques, which are essential for creating niche products that can command higher prices in the market. These gaps highlight the need for specialized training programs to enhance trainers' capacity to support producers in developing competitive and market-ready products.

Business management presents significant challenges. Only 4 trainers, or 31 percent, feel equipped to teach essential business planning skills, including leadership, and only 2 trainers, 15 percent, feel comfortable with record-keeping, and financial management. Similarly, the ability to guide others in preparing loan applications and securing investments is limited, with only 4 trainers, or 31 percent, expressing confidence. The lack of preparedness in these critical areas can hinder efforts to transition local producers from subsistence practices to sustainable and profitable enterprises.

The absence of expertise in these areas emphasizes the importance of targeted training initiatives to strengthen the entrepreneurial development skills of trainers. Equipping trainers with these competencies will empower them to guide communities in building successful businesses, enhancing economic stability, and fostering long-term growth in Pohnpei.

10. Professional Development Opportunities and Identified Knowledge Gaps

Access to professional development opportunities among trainers in Pohnpei is uneven. While 6 trainers, or 46 percent, report having access to training opportunities, 7 trainers, or 54 percent, lack such access. This lack of professional development represents a significant barrier to

building a resilient and knowledgeable training workforce. Those with access to opportunities benefit from programs such as workshops, certifications, and training in research and consultation. However, those without access are left without critical tools to enhance their expertise.

Respondents highlight several key areas where professional development is needed. Grant writing emerges as a priority, as it is essential for securing funding to implement large-scale projects and improve training infrastructure. Similarly, environmental management and climate change adaptation are frequently cited as areas requiring additional training. These skills are particularly relevant for addressing the pressing environmental challenges faced by Pohnpei, including soil erosion, invasive species management, and climate-resilient agriculture.

The survey also identifies gaps in knowledge related to project management, sustainable development, and advanced research techniques. Addressing these deficiencies through structured professional development programs will ensure that all trainers have the tools and resources they need to meet the diverse and evolving needs of their communities.

Conclusion

The Trainer Survey results for Pohnpei underscore both the strengths and challenges within the region's training workforce. Many trainers exhibit strong capabilities in foundational agricultural practices and food processing, which are critical for enhancing local food systems and supporting community development. However, significant gaps remain in areas such as advanced agricultural technologies, climate resilience strategies, and business management skills.

Addressing these gaps requires a multi-faceted approach. Targeted training programs should focus on equipping trainers with advanced skills in innovative farming methods, sustainable resource management, and financial planning. Additionally, resource allocation, including the provision of essential tools and equipment, will empower trainers to deliver more effective and comprehensive training sessions. Expanding access to professional development opportunities is also critical, ensuring that all trainers can benefit from programs that build their capacity to address both current and future challenges.

By investing in these areas, Pohnpei can cultivate a robust and adaptable training workforce capable of driving sustainable food systems, fostering economic growth, and building resilient communities. Such efforts will position the region to meet the complex demands of a changing world while empowering its residents to thrive.

Federated States of Micronesia
Food Systems Solutions
Project Survey Tools
Pohnpei State

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RUTGERS

Food Systems Solutions Food Producer Survey

INFORMED CONSENT FORM

Your insights are crucial to informing the plans for increasing food security and job creation through the development of a sustainable local food system that includes the establishment of Food Innovation Centers in the states of the Federated States of Micronesia (FSM) that provide value addition to locally processed food products from local staple crops, fish, marine, animal, poultry and/or other local plants, vegetables, fruits and seeds.

Project Title: Strengthening Food Security in the Federated States of Micronesia: An Innovative Approach to Enhancing Information Systems, Establishing an FSM Food Innovation Center and Supporting Local Capacity Building.

You are invited to participate in a research study that is being conducted by Rutgers University on behalf of the Federated States of Micronesia (FSM)'s Department of Resources and Development led by Dr Ramu Govindasamy, a Professor in the Department of Agricultural, Food and Resource Economics at Rutgers University, Rutgers Researchers and Faculty with collaborating NGO's and other local partners in each of the four states. The purpose of this research is to gather information from food-system participants in the FSM regarding their specific needs for enhanced Information Systems, a Food Innovation Center, and Capacity Building to strengthen food security in the FSM to best inform the national and state governments as they invest in sustainable local food system development.

Approximately 270 farming households and 270 consumers and 196 professionals involved in food production and food security from the state, national and educational communities will participate in the study across the four FSM states, and each individual's participation will last approximately 30-45 minutes. From each household selected, surveys will be conducted for men and women (ages 18-65 years).

The study procedures include responding to an in-person survey about Improved Food System Information Systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. within all four FSM states. The objective is to understand better your state's current situation relative to food system information systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. The FSM Department of R&D, the FSM Federal Government, in concert with your state government, will use this data and your responses to better invest in strategies that improve peoples' livelihoods and food security.

This research is anonymous. Anonymous means that I will record no information about you that could identify you. This means that I will not record your name, address, phone number, date of birth, etc. If you agree to take part in the study, you will be assigned a random code number that will be used on each test and the questionnaire. There will be no way to link your responses back to you. Therefore, data collection is anonymous.

The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for at least three years. Responses may be used or distributed to investigators for other research without obtaining additional informed consent from you.

There are no foreseeable risks to participation in this study. You may receive $10 for taking part in this study. Participation in this study is voluntary. You may choose not to participate, and you may withdraw at any time during the study procedures. In addition, you may choose not to answer any questions with which you are not comfortable.

RUTGERS

Food Systems Solutions Food Producer Survey

If you have any questions about the study or study procedures, you may contact either of us at:

Principal Investigator:
Ramu Govindasamy, Professor and Chair, Dept. of Agricultural, Food and Resource Economics
Food Distribution Research Society (FDRS) Past President
Associate Director, New Use Agriculture and Natural Plant Products
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OR:
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If you have questions, concerns, problems, information or input about the research or would like to know your rights as a research participant, you can contact the Rutgers IRB/Human Research Protection Program via phone at (973) 972-3608 or (732) 235-9806 OR via email irboffice@research.rutgers.edu, or you can write us at 335 George Street, Liberty Plaza Suite 3200, New Brunswick, NJ 08901.

By beginning this research, you acknowledge that you are 18 years of age or older, have read the information and agree to take part in the research, with the knowledge that you are free to withdraw your participation without penalty.

Signature of Investigator/Individual Obtaining Consent:

To the best of my ability, I have explained and discussed all the important details about the study including all the information contained in this consent form.

Investigator/Person Obtaining Consent from Respondent: (Print)

Signature:_____Date:_____

Food Systems Solutions Food Producer Survey

Thank you for participating in this survey.

Please select the most appropriate answer for each question provided.

1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
1.2	Date of Interview	
1.3	Location (State/City)	**CIRCLE ONE AND WRITE ISLAND NAME (IF APPLIES)** 1 = Chuuk City_____ 2 = Kosrae City_____ 3 = Pohnpei City_____ 4 = Yap City_____ 5 = Other (Please specify) _____

2. DEMOGRAPHIC INFORMATION

Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

SECTION: FOOD SYSTEM INFORMATION

Q 3.1 What types of information is/would be useful for your food production activities? Please also consider your needs if you want to produce, store, process and/or sell more food.

	Type of Online information	**Currently access (0 = No, 1 = Yes) (if No, skip next column)**	**Current Frequency** **1 = Daily** **2 = Weekly** **3 = Monthly** **4 = Seasonal** **5 = Yearly** **6 = Other_____**	**Needed Frequency** **1 = Daily** **2 = Weekly** **3 = Monthly** **4 = Seasonal** **5 = Yearly** **6 = Other_____**
3.1.1	Crop Planning and Production Data from internet (ie inputs and yield)			
3.1.2	Weather information			
3.1.3	Pest and Disease Monitoring			
3.1.4	Market Prices			
3.1.5	Online Market Forecasting for Food Product Outputs - demand for food from a variety of buyers or opportunities to sell such as Market Days including calls for when products will be needed and are needed for processing (coconuts, taro, breadfruit, fish, eggs etc.)			
3.1.6	Online Information on food production Inputs (including all agricultural/			

	forestry and fishery inputs, seed/feed availability); where and when to get live plants chicks, seeds, etc.			
3.1.7	Online Policy Updates (state and national) including notifications on new regulations and opportunities			
3.1.8	Emergency Notifications- disease epidemic, safety/food borne illness, storms, other adverse environmental events such as invasive species			
3.1.9	Online Risk Management Training: Ongoing training in business and other topics to reduce your risk and increase your knowledge			
3.1.10	Online Notification for trainings opportunities (example cooking, seedling training etc.)			

	Question	**Response**

3.2	Would you pay to get additional food production information?	**CIRCLE ONE** 1 = Yes 2 = No
3.2.1	Do you have a credit card?	**CIRCLE ONE** 1 = Yes **2 =** No
3.2.2	If no, does a lack of credit card limit your access to tools and information you need?	**CIRCLE ONE** 1 = Yes 2 = No **3 =** Not Applicable

	Question	**Response**
4.1	Who gives you, or can give you the information you need? (source person/agency/organization)	**CIRCLE ALL THAT APPLY** 1= Family member 2= Community members 3= Traditional leader 4= Religious organization 5= Local groups/organization (please specify) _____ 6= Extension agent or others from COM/CRE 7= Government Agency (please specify) _____ 8= Other Agency/website (please specify) _____ 9= Social Media (specify) _____ 10= Other (please specify) _____ 11= Don't know

5.1	How do you currently access the information you need?	**CIRCLE ALL THAT APPLY** 1 = Word-of-mouth 2 = Print (specify)_____ 3 = Radio 4 = TV 5 = Public Electronic Bulletin Board 6 = Computer

		a. Website b. Social media c. Email Updates e.g. Newsletter 7 = Cellphone a. Website b. Social media c. Email Updates e.g. Newsletter d. Text alert from an organization (specify)_____ e. App (specify)_____ 8 = Other (specify) _____
5.2	Do you need better access to information?	**CIRCLE ONE** 1 = Yes 2 = No
6	Do you have your own cell phone?	**CIRCLE ONE (if No, skip to Q6.2)** 1 = Yes 2 = No
6.1	(If YES to Q6) How much do you spend per month on cellular data? (Skip Q6.2)	**CIRCLE ONE** 1 = $0 2 = Less than $5 3 = $5 – less than $10 4 = $10 – less than $20 5 = $20 - less than $30 6 = $30 - less than $40 7 = $40 - less than $50 8 = $50 or more
6.2	(If NO to Q6) Do you have access to someone else's cell phone?	**CIRCLE ONE** 1 = Yes 2 = No

7	Do you have access to the internet?	**CIRCLE ONE (if No, skip to Q7.4)** 1 = Yes 2 = No
7.1	(If YES to Q7) How much do you spend per month on WIFI?	**CIRCLE ONE** 1 = $0 2 = Less than $5 3 = $5 – less than $10 4 = $10 – less than $20 5 = $20 - less than $30 6 = $30 - less than $40 7 = $40 - less than $50 8 = $50 or more

7.2	(If YES to Q7) How do you access the internet?	**CIRCLE ALL THAT APPLY** 1 = Personal Cell phone 2 = Community/family cell phone 3 = Personal computer 4 = Work computer 5 = Library/School computer 6 = Community/family computer 7 = Computer center 8 = Other (please specify) _____
7.3	(If YES to Q7) How often do you get food system related information from the internet? (Skip Q7.4)	**CIRCLE ONE** 1 = At least 1/day 2 = Few times a week 3 = Few times/month 4 = Few times/year 5 = Never
7.4	(If NO to Q7) Why not?	**CIRCLE ONE** 1 = Don't have access 2 = Can't afford 3 = Don't know how to use 4 = No need 5 = Limited or no connection where I live
7.5	Do you need training on how to use the internet, such as accessing government sites?	**CIRCLE ONE** 1 = Yes 2 = No

	Question	**Response**
8	Would you like to participate in a local healthy food contest?	**CIRCLE ONE (If No, Skip Q 8.1)** 1 = Yes 2 = No
8.1	(If Yes to Q8) What types of competition categories would interest you?	**CIRCLE ALL THAT APPLY** 1 = Best local produce presentation 2 = Healthiest recipe taste test 3 = Most innovative recipe taste test 4 = Recipe most able to scale for commercial production taste test 5 = Recipes for children's diets taste test 6 = All of the above **7 =** Other (specify) _____

SECTION: FOOD INNOVATION CENTER

9	Which locally processed foods would you be interested in producing for processing?	**CIRCLE ALL THAT APPLY** 1= Banana chips 2= Breads and baked goods (donuts/muffins) 3= Breadfruit chips 4= Breadfruit flour 5= Chicken meat and products 6= Coconut cooking oil 7= Coconut flour 8= Coconut milk 9= Coconut products 10= Fish and Seafood - Dried 11= Fish and Seafood – Salted 12= Fish and Seafood – Smoked 13= Fish Jerky 14= Fish Sauce 15= Fish Spreads 16= Feed for chicken/pigs 17= Flavored (infused) oils 18= Fruits – Dried 19= Fruits – Jellies and Jams 20= Fruits - Juices 21= Fruit – syrups 22= Hot sauce 23= Pork meat and products 24= Seafood – bottled 25= Sea salt 26= Spices – Dried 27= Spice blends 28= Spice pastes 29= Taro chips 30= Taro flour 31= Vegetables – Dried 32= Vegetables – Pickled 33= Vegetable sauces/salsa 34= Vinegar 35= Rope, matts and other fiber products 36= Other (please specify)
10	How would you prefer to process these locally processed foods?	**CIRCLE ALL THAT APPLY** 1 = Using small-scale methods with traditional tools and by hand 2 = At my farm or on my own land with my own processing equipment and tools

		3 = Using someone else's equipment or processing equipment at a local/central processing facility but for me to then sell and market 4 = Providing and selling my fresh products to another larger industrial-scale processor for them to process and sell 5 = Working with others in a cooperative structure in which I would be able to provide some of the fresh products that go into processing 6 = Other (please specify)
11	What price range do you expect consumers would be willing to pay for locally processed foods? (per unit)	**CIRCLE ONE** 1 = less than $1 2 = $1 - $5 3 = $6 - $10 4 = $11 - $20 5 = Above $20
12	What type of packaging do you think would best suit the locally processed foods?	**CIRCLE ALL THAT APPLY** 1 = Plastic bags 2 = Plastic containers including bottles 3 = Glass jars 4 = Vacuum-sealed pouches 5 = Eco-friendly packaging (e.g., biodegradable materials such as banana leaves) 6 = Other (please specify) _____
13	Would you prioritize using local ingredients for the production of locally processed foods?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Maybe
14	How do you perceive the market potential for locally processed foods in the FSM and potentially beyond?	**CIRCLE ONE** 1 = High demand and growth potential 2 = Moderate demand with steady growth 3 = Limited demand and growth potential
15	What infrastructure and equipment do you believe would be necessary for processing local foods efficiently? (Please specify any equipment or facilities and for what end product(s))	**PLEASE DESCRIBE:**

16	What is limiting you now to process what you collect, catch, grow and/or harvest and make locally processed foods to sell?	**PLEASE DESCRIBE:**
17	Would you require any technical or financial support or assistance in terms of training, access to technology, marketing, or other aspects?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Maybe
18	Are you aware of the regulatory requirements and standards for processing and selling local food products in the FSM? [NOTE: there are differences in regulatory compliance issues for fish, meat, poultry, juices, foods]	**CIRCLE ONE** 1 = Yes 2 = No
19	Do you require assistance with the regulatory requirements and standards?	**CIRCLE ONE** 1 = Yes 2 = No
20	Would you be interested in collaborating with other producers or stakeholders in your community, or locality or state for joint processing or marketing initiatives?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Maybe
21	What are the challenges you face in sourcing local ingredients to ensure you have enough materials for processing local foods?	**CIRCLE ALL THAT APPLY** 1= Limited availability of certain ingredients 2= Seasonal fluctuations in ingredient availability 3= Limited/no storage 4= Transportation issues 5= Quality consistency of raw materials 6= Lack of cash to purchase and then store products 7= Other (please specify): _____
22	Are you open to exploring innovative techniques or recipes for locally processed foods to cater to evolving consumer preferences?	**CIRCLE ONE** 1= Yes, always open to innovation 2= No, prefer to stick to traditional methods 3= Maybe, depends on feasibility and market demand

23	Have you conducted any market research or feasibility studies to assess the demand for locally processed foods in the FSM market?	**CIRCLE ONE** 1 = Yes, extensive research conducted 2 = Yes, some research conducted 3 = No, not conducted yet 4 = Not applicable
23.1	If yes to Q23, please provide insights.	**PLEASE DESCRIBE:**
24	Do you have plans for branding and packaging design for your locally processed foods?	**CIRCLE ONE** 1 = Yes, already have branding plans 2 = Yes, planning to develop branding 3 = No, branding is not a priority 4 = Not sure about branding importance
25	What distribution channels do you envision for selling locally processed foods?	**CIRCLE ALL THAT APPLY** 1 = Local markets 2 = Supermarkets/grocery stores 3 = Specialty food stores 4 = Online platforms 5 = Direct sales (e.g., farm stands) 5 = Other (please specify): _____
26	Do you see potential for exporting locally processed foods into other states in the FSM or beyond the FSM?	**CIRCLE ONE** 1= Yes, potential for export 2= Maybe, need to explore further 3= No, prefer to focus on local market 4= Not sure about export potential (If 3 or 4, skip next question)
27	Would you participate in training programs or workshops offered by the Food Innovation Center to enhance your skills in traditional food processing techniques, quality control, or business management?	**CIRCLE ONE** 1 = Yes, definitely interested 2 = No, not interested 3 = Maybe, depends on the topics covered
28	Besides raw materials and processing equipment, what other costs do you anticipate in the production of locally	**CIRCLE ALL THAT APPLY** 1 = Facility 2 = Labor costs

	processed foods? (e.g., labor, utilities, packaging)	3 = Utilities (electricity, water) 4 = Packaging materials 5 = Marketing and promotion 6 = Other (please specify): _____
29	How important is community involvement and support in your vision for producing locally processed foods?	**CIRCLE ONE** 1 = Very important, prioritize community involvement 2 = Important, but not a top priority 3 = Not important, focus solely on production 4 = Not sure about community involvement importance
30	Are there any community-based initiatives you would like to explore? eg. microfinancing, etc.	**PLEASE DESCRIBE:**
31	Do you prioritize sustainable practices in your production processes, such as minimizing waste, conserving resources, or supporting local ecosystems?	**CIRCLE ONE** 1 = Yes, sustainability is a top priority 2 = Somewhat, but not a primary focus 3 = No, sustainability is not a priority 4 = Not sure about sustainability practices importance
32	What are your long-term goals and aspirations for your involvement in producing locally processed foods? How do you see your role evolving in the future?	**CIRCLE ONE** 1 = Expand production and market reach 2 = Preserve traditional food culture 3 = Contribute to local economic development 4 = Other (please specify): _____
33	What kind of support or incentives from the government would be most beneficial to you for promoting the production and marketing of locally processed foods in the FSM?	**CIRCLE ONE** 1 = Financial assistance/grants/loans 2 = Technical support and training 3 = Market access facilitation 4 = Regulatory simplification 5 = Other (please specify): _____
34	How do you plan to gather feedback from possible buyers/consumers/users of your locally value-added products?	**CIRCLE ONE** 1 = Direct consumer feedback through in person or surveys or focus groups 2 = Social media monitoring and engagement 3 = Sales data analysis 4 = Fairs and Cooking Competition 6 = Other (please specify): _____

35	How often do you anticipate using the shared kitchen?	**CIRCLE ONE** 1 = One time per week. 2 = Multiple times per week. (Specify how many) _____ Times/Week 3 = Twice a month. 4 = Once a month. 5 = Only during certain weeks/months of year.
36	Would you use a food storage facility if one was provided to your municipality/community?	**CIRCLE ONE** 1 = Yes (please answer Q36.1) 2 = No
36.1	If Yes, which kind?	**CIRCLE ALL THAT APPLY** 1 = Dry Storage 2 = Cold Storage 3 = Frozen Storage
37	Would you be interested in selling the food you produce to a local food processing plant?	**CIRCLE ONE** 1 = Yes (please answer Q 37.1) 2 = No
37.1	If Yes, what local foods do you feel you could regularly provide to a food processing plant?	**CIRCLE ALL THAT APPLY** 1 = Taro 2 = Coconut 3 = Bananas 4 = Breadfruit 5 = Tapioca/Cassava 6 = Fish (wild caught and/or farmed) 7 = Farm raised seafood 8 = Vegetables (such as: leafy greens, melons, squash) 9 = Fruits (such as Pineapple, Mango, Papaya, Lemons, Tangerines) 10 = Livestock: Chickens, pigs 11 = Eggs 12 = Other (please specify):
38	Would you be interested in having your raw food products purchased directly from your farm/island? (So you do not have to transport them to market?)	**CIRCLE ONE** 1 = Yes 2 = No

39. Rate your level of need for the following types of equipment:

	Question	**Response** **1 = Essential** **2 = Convenient** **3 = Don't need it**
39.1	Standard range/oven	
39.2	Commercial mixer	
39.3	Vertical Cutter Mixer	
39.4	Walk-in Cooler	
39.5	Walk-in Freezer	
39.6	Stainless steel table	
39.7	Kitchen utensils	
39.8	Forced Air Oven	
39.9	Slicer	
39.10	Package heat sealer	
39.11	Food processor	
39.12	Dish washer	
39.13	Steam Kettle	
39.14	Pressure Cooker	
39.15	Microwave boiler pressure canner	
39.16	Fruit Dryer	
39.17	Deep Fryer	
39.18	Dehydrator	

39.19	Flash Freeze Dryer	
39.20	Other (please specify): _____	

40. For your existing or potential business:

40.1	Do you have a business plan?	**CIRCLE ONE** 1 = Yes 2 = No
40.2	How much production space do you need?	_____**sq. ft.**
40.3	Would you be willing to work with business advisors to create or improve an existing business plan?	**CIRCLE ONE** 1 = Yes 2 = No
40.4	Do you have the necessary financing to pursue your business goals?	**CIRCLE ONE** 1 = Yes 2 = No
40.5	Please rate your level of interest in pursuing outside funding for your business	**CIRCLE ONE** 1 = Very interested 2 = Possibly interested 3 = Not Interested

	Question	**Response**
41	Is transportation of your food products and food crops to market a serious constraint?	**CIRCLE ONE (If No, Skip Q40.1)** **1 =** Yes **2 =** No
41.1	(If Yes to Q40) How is transportation a constraint?	**RANK IN ORDER FROM 1-7, WITH 1 BEING THE GREATEST CONSTRAINT** a) __cost of fuel b) __access to fuel c) __lack of vehicle d) __unable to transport due to weather conditions e) __family obligation

		f) __ no driver g) __other (specify)
42	Is lack of labor a serious constraint to your food harvesting?	**CIRCLE ONE** **1 =** Yes **2 =** No
43	Is lack of labor a serious constraint to your food production and packaging?	**CIRCLE ONE** 1 = Yes 2 = No
44	Do you also sell your food products directly to customers?	**CIRCLE ONE (If No, Skip Q45)** 1 = Yes 2 = No
45	If so, is lack of labor a serious constraint to the selling of your food products?	**CIRCLE ONE** 1 = Yes 2 = No

SECTION: TRAINING

	Question	**Response** **(If No, skip Q47)**
46	Would you be interested in being trained in commercial food processing?	**CIRCLE ONE** 1 = Yes 2 = No
46.1	If so, which skills are you interested in developing?	**CIRCLE ALL THAT APPLY** 1 = Food safety 2 = Food sorting and quality control 3 = Food preparation 4 = Food preservation 5 = Cooking 6 = Baking 7 = Packaging
47	Would you like any training to help you produce more food?	**CIRCLE ONE** 1 = Yes 2 = No

47.1	**(If yes to Q47) What training would you like?**
	CIRCLE ALL THAT APPLY 1 - CLIMATE CHANGE 1 - a - Climate change adaptation (Save crops from sea level rise, saltwater inundation, heavy rain) - Climate resilient crops (e.g. Saltwater resistant taro) 1 - b - Sustainable farming and land management (How to keep the soil good for years, etc.) 1 - c - Ways to access emergency weather information and emergency responses for water, safety, other 1 - d - Invasive species management 1 - e - Techniques and approaches to reducing soil erosion 1 - f - Techniques in restorative forestry 1 - g - Techniques in rehabilitation or improving coral reefs and coastal land preservation 1 - h - Water collection and storage 2 - AGRICULTURE 2 - a - General crop production/Agriculture training/Crop planting timing 2 - b - Local/Traditional Agriculture/Fishery Knowledge (Agroforestry, etc.) 2 - c - Seed collection, seed saving and growing from seed and vegetative propagation 2 - d - Improving your soil, working with soils, types of soils, testing, soil amendments 2 - e - Making local fertilizer/compost and then ways to store and applying (solid & compost tea) 2 - f - Growing, harvesting, processing of specific crops: 2 - f - i - Swamp taro or hard taro 2 - f - ii - Land taro or soft taro 2 - f - iii - Breadfruit 2 - f - iv - Banana 2 - f - v - Coconut 2 - f - vi - Copra (coconut product) 2 - f - vii - Yam 2 - f - viii - Mango 2 - f - ix - Pineapple 2 - f - x - Limes/lemons 2 - f - xi - Sweet Potatoes 2 - f - xii - Tapioca 2 - f - xiii - Papaya 2 - f - xiv - Soursop 2 - f - xv - Black Pepper 2 - f - xvi - Hot peppers 2 - f - xvii - Sakau (Kava) 2 - f - xviii - Sugar cane 2 - f - xix - Betel Leaf 2 - f - xx - Durian (football plant) 2 - f - xxi - Cacao 2 - f - xxii - Chestnut 2 - f - xxiii - Betelnut 2 - f - xxiv - Tangerine/Orange 2 - f - xxv - Medicinal crops (example: Noni) 2 - f - xxvi - Other (please specify) _____

	3 - LIVESTOCK 3 - a - General livestock management 3 - b - Make local pig/chicken feed 3 - c - How to use wood chipper 3 - d - Other (please specify) _____ 4 - MARINE 4 - a - How to fish, fishing safety, Search & Rescue 4 - b - Local/Traditional fishing knowledge, moon-phase calendar 4 - c - Sustainable fishing, spawning knowledge, male/female ID 4 - d - Marine invasive species management 4 - e - Make local FADs using local materials (Fish Aggregating Devices) 4 - f - Other (please specify) _____ 5 - RELEVANT TECHNOLOGIES 5 - a - Greenhouse growing with protected systems 5 - b - Hydroponics 5 - c - Nursery management 5 - d - Sac and container gardening 5 - e - Aquaculture (fish, invertebrates, mangrove crabs, turtles, shrimp/eel) 5 - f - Hydroponics 5 - g - Hatchery 5 - h - Cold storage (affordable lower cost) 5 - i - Inclusion of solar power 5 - j - Irrigation technologies (drip, trickle, overhead) 5 - k - Other _____ 6 - MARKETING 6 - a - Food preservation/processing/ packaging/marketing/handling (Tuna jerky, pork to sell, fish jerky, fish meal, smoking foods, drying foods, grinding and making into flour, mixing and product development) 6 - b - How to market products (make sellable) 6 - c - Value added/niche markets 7 - HEALTH AND NUTRITION 7 - a - General health and nutrition 7 - b - How to prepare (easy) dishes with local foods (fish) 8 - BUSINESS MANAGEMENT 8 - a - How to run a business, management, leadership, business plan 8 - b - Financing/financial management including record keeping and accounting 8 - c - How to prepare application for a loan or investment 8 - d - How to inform others of your business and ways to generate business 8 - e - Training on applicable laws/regulations 8 - f - Other (please specify): _____

	Question	**Response**
48	Would it be helpful to offer agriculture and farming training for women?	**CIRCLE ONE** 1 = Yes 2 = No 3 = No Opinion

49	Would it be helpful to offer agribusiness training for women?	**CIRCLE ONE** 1 = Yes 2 = No 3 = No Opinion

FARMER-TO-FARMER EXTENSION

	Question	**Response**
50	Would you like to teach other food producers from your own experiences?	**CIRCLE ONE** 1 = Yes 2 = No

SECTION: COMMUNITY MANAGEMENT AND POLICY ADVOCACY

Q51. Do you belong to any local group?

	Group	**Member (0 = No, 1 = Yes) (If No, skip rest of this row)**	**How often do you attend group meetings?** 1 = Daily 2 = Weekly 3 = Monthly 4 = Seasonal 5 = Yearly 6 = Other (Fill in)
Q51.1	Do you belong to any local Community group (please specify)		
Q51.2	Do you belong to any local Faith-based group (please specify)		
Q52	How often do you meet your traditional leader?	<BLANK>	

Q53. Do you belong to any local organization/association?

	Type of organization	**Member? (0 = No, 1 = Yes) (If No, move to next row)**	**How often do you attend/meet?** **1 = Daily** **2 = Weekly** **3 = Monthly** **4 = Seasonal** **5 = Yearly** **6 = Other (Fill in)**	**Do they have bylaws?** **1 = Yes, I am familiar with the bylaws** **2 = Yes, I don't know the bylaws** **3 = Unsure** **4 = No**
Q53.1	Farmer association (please specify) _____			
Q53.2	Fishing association (please specify) _____			
Q53.3	Is there a livestock growers association? (please specify) _____			
Q53.4	Marketing association (please specify) _____			
Q53.5	Working group (please specify) _____			
Q53.6	NGO (please specify) _____			

	Question	**Response**
Q54	Are you familiar with the State and National laws and policies that affect your food production?	**CIRCLE ONE** 1 = Yes 2 = No
Q55	If you need information about the State and National laws and	**CIRCLE ALL THAT APPLY** 1 = Family member 2 = Community members

	policies, where would you go?	3 = Traditional leader 4 = Religious organization 5 = Local groups/organization (please specify): _____ 6 = Extension agent 7 = Government Agency (please specify): _____ 8 = Other Agency or web site (please specify): _____ 9 = Mobile App (please specify): _____ 10= Other (please specify)
Q56	If you need to communicate with the government leaders responsible for making laws/policies, where would you go?	**CIRCLE ALL THAT APPLY** 1= Family member 2= Community members 3= Traditional leader 4= Religious organization 5= Local groups/organization (please specify): _____ 6= Extension agent 7= Government Agency (please specify): _____ 8= Other Agency or web site (please specify): _____ 9= Mobile App (please specify): _____ 10= Other (please specify):

	Question	**Response**
Q57	Would you be interested in being more active in your community relative to preserving land, water resources?	**CIRCLE ONE** 1 = Yes 2 = No

Q58	Have you been trained in or have managerial experience?	**CIRCLE ONE** 1 = Yes 2 = No
Q59	Have you been trained in or have organizational experience?	**CIRCLE ONE** 1 = Yes 2 = No
Q60	Would you be interested/willing to participate in trainings and workshops that provide those skills?	**CIRCLE ONE** 1 = Yes, definitely 2 = Maybe, depending on the specifics 3 = No, prefer others in my community to take such leadership

End of survey script

We thank you for taking the time to spend with us, answering the survey.

RUTGERS

Food Systems Solutions Consumer Survey

INFORMED CONSENT FORM

Your insights are crucial to informing the plans for increasing food security and job creation through the development of a sustainable local food system that includes the establishment of Food Innovation Centers in the states of the Federated States of Micronesia (FSM) that provide value addition to locally processed food products from local staple crops, fish, marine, animal, poultry and/or other local plants, vegetables, fruits and seeds.

Project Title: Strengthening Food Security in the Federated States of Micronesia: An Innovative Approach to Enhancing Information Systems, Establishing an FSM Food Innovation Center and Supporting Local Capacity Building.

You are invited to participate in a research study that is being conducted by Rutgers University on behalf of the Federated States of Micronesia (FSM)'s Department of Resources and Development led by Dr Ramu Govindasamy, a Professor in the Department of Agricultural, Food and Resource Economics at Rutgers University, Rutgers Researchers and Faculty with collaborating NGO's and other local partners in each of the four states. The purpose of this research is to gather information from food-system participants in the FSM regarding their specific needs for enhanced Information Systems, a Food Innovation Center, and Capacity Building to strengthen food security in the FSM to best inform the national and state governments as they invest in sustainable local food system development.

Approximately 270 farming households and 270 consumers and 196 professionals involved in food production and food security from the state, national and educational communities will participate in the study across the four FSM states, and each individual's participation will last approximately 30-45 minutes. From each household selected, surveys will be conducted for men and women (ages 18-65 years).

The study procedures include responding to an in-person survey about Improved Food System Information Systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. within all four FSM states. The objective is to understand better your state's current situation relative to food system information systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. The FSM Department of R&D, the FSM Federal Government, in concert with your state government, will use this data and your responses to better invest in strategies that improve peoples' livelihoods and food security.

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RUTGERS

Food Systems Solutions Consumer Survey

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Food Distribution Research Society (FDRS) Past President
Associate Director, New Use Agriculture and Natural Plant Products
Extension Specialist, Rutgers Cooperative Extension
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Tel: 848-932-6239; Fax: 732-932-9377

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Signature of Investigator/Individual Obtaining Consent:

To the best of my ability, I have explained and discussed all the important details about the study including all the information contained in this consent form.

Investigator/Person Obtaining Consent from Respondent: (Print)

Signature:_____Date:_____

Food Systems Solutions Consumer Survey

Thank you for participating in this survey.

Please select the most appropriate answer for each question provided.

1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
1.2	Date of Interview	
1.3	Location (State/City)	**CIRCLE ONE AND WRITE ISLAND NAME (IF APPLIES)** 1 = Chuuk City_____ 2 = Kosrae City_____ 3 = Pohnpei City_____ 4 = Yap City_____ 5 = Other (Please specify) _____

2. DEMOGRAPHIC INFORMATION

Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

	Question	Response
3	Which locally processed food products would you be interested in purchasing?	**CIRCLE ALL THAT APPLY** 1 = Banana chips 2 = Breads and baked goods (donuts/muffins) 3 = Breadfruit chips 4 = Breadfruit flour 5 = Chicken meat and products 6 = Coconut cooking oil 7 = Coconut flour 8 = Coconut milk 9 = Coconut products 10 = Fish and Seafood - Dried 11 = Fish and Seafood – Salted 12 = Fish and Seafood – Smoked 13 = Fish Jerky 14 = Fish Sauce 15 = Fish Spreads 16 = Feed for chicken/pigs 17 = Flavored (infused) oils 18 = Fruits – Dried 19 = Fruits – Jellies and Jams 20 = Fruits - Juices 21 = Fruit – syrups 22 = Hot sauce 23 = Pork meat and products 24 = Seafood – bottled 25 = Sea salt 26 = Spices – Dried 27 = Spice blends 28 = Spice pastes 29 = Taro chips 30 = Taro flour 31 = Vegetables – Dried 32 = Vegetables – Pickled 33 = Vegetable sauces/salsa 34 = Vinegar 35 = Rope, matts and other fiber products 36 = Other (please specify) _____

4	What type of packaging would you prefer?	**CIRCLE ALL THAT APPLY** 1 = Bottled 2 = Jarred 3 = Bagged 4 = Vacuum-sealed pouches 5 = Packets/sachets 6 = Other (please specify): _____
5	What features of the packaging do you consider most important?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Environmentally friendly packaging (e.g., biodegradable materials) b:____ Convenient packaging (e.g., easy-to-open, resealable) c:____ Attractive packaging and labeling (e.g., aesthetically pleasing and culturally relevant labels) d:____ Least expensive e:____ Other (please specify): _____
6	What price range would you consider reasonable for locally processed foods? (per unit)	**CIRCLE ONE** 1 = $5 or less 2 = $5 - $10 3 = $10 - $20 4 = Above $20
7	How important is it for you that these locally processed foods are made from fresh, locally sourced ingredients?	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Somewhat important 4 = Not important
8	How likely are you to purchase locally processed foods if they are convenient, accessible and available?	**CIRCLE ONE** 1 = Very likely 2 = Likely 3 = Neutral 4 = Unlikely
9	How likely are you to purchase locally processed food products if they are the same price and the same quality, as comparable imported products?	**CIRCLE ONE** 1 = Very likely 2 = Likely 3 = Neutral

	(example: local coconut oil versus imported cooking oils)	4 = Unlikely
10	Which flavors or varieties of locally processed foods would you be most interested in?	**CIRCLE ALL THAT APPLY** 1 = Traditional/Local flavors 2 = Exotic/Imported flavors 3 = Sweet 4 = Spicy 5= Hot spicy (e.g. from hot peppers) 6 = Savory 7 = Other (please specify): _____
11	How important is it for you that locally processed foods are nutritious and contribute to a healthy diet?	**CIRCLE ONE** 1= Very important 2= Important 3= Somewhat important 4= Not important
12	How often would you likely purchase locally processed foods?	**CIRCLE ONE** 1 = Daily 2 = Weekly 3 = Monthly 4 = Occasionally 5 = Rarely
13	Where do you prefer to purchase locally processed foods?	**CIRCLE ONE** 1 = Local markets 2 = Supermarkets/grocery stores 3 = Roadside stand 4 = Online platforms 5 = Other (please specify): _____
14	Would you support the purchasing of locally processed foods that contribute to community development or social causes (e.g., supporting local farmers, empowering women's groups)?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Maybe (If No, skip next question)

15	Would you be willing to pay more for products that support community/social causes?	**CIRCLE ONE** 1 = Yes, up to 10% more 2 = Yes, more than 10% more 3 = No
16	Would you participate in educational programs or workshops offered by the Food Innovation Center on local food processing techniques, cooking contests, nutrition programs, or culinary skills?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Maybe
17	What payment methods would you prefer when purchasing locally processed foods?	**CIRCLE ONE** 1= Cash 2= Credit/debit card 3= Mobile payment apps 4= Food exchange 5= Other (please specify) _____
18	How important is it for you that locally processed foods have a long shelf life (does not easily spoil)?	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Somewhat important 4 = Not important
19	How important is it for you to have clear information on the nutritional content, ingredients, of your locally processed foods (labeling)? (Example: How many calories, how much sugar, how much salt)	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Somewhat important 4 = Not important
20	Approximately, how much money do you spend each bi-weekly on imported food?	**PLEASE FILL IN THE AMOUNT YOU SPEND EVERY 2 WEEKS** **_____ $**
21	Approximately, how much money do you spend each bi-weekly on local food?	**PLEASE FILL IN THE AMOUNT YOU SPEND EVERY 2 WEEKS** **_____ $**

22	When it comes to purchasing food products, which of the following factors influence your spending decisions the most?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Price b:____ Quality c:____ Brand reputation d:____ Nutritional value e:____ Locally sourced products f:____ Convenience g:____ Store Preference h:____ Other (please specify):
23	What factors would influence your willingness to pay more for local processed products?	**CIRCLE ALL THAT APPLY** 1 = Perception of quality 2 = Perceived health benefits 3 = Supporting local economy 4 = Environmental sustainability 5 = Community impact 6 = Great taste and flavor 7= Store Preference 8 = Other (please specify):
24	How much of a price difference would deter you from purchasing locally processed products over an imported alternative?	**CIRCLE ONE** 1 = None 2 = Less than 10% difference 3 = 11% - 20% difference 4 = 21% - 30% difference 5 = More than 30% difference
25	To what extent do you prioritize purchasing local products instead of imported products?	**CIRCLE ONE** 1 = Always prioritize local products 2 = Often prioritize local products 3 = Occasionally prioritize local products 4 = Rarely prioritize local products

		5 = Don't really ever think about it
26	How aware are you of locally produced processed products currently available in your town, state and the FSM? (example: pounded taro, bottled sea cucumber)	**CIRCLE ONE** 1 = Very aware 2 = Somewhat aware 3 = Not very aware 4 = Not aware at all
27	How important is it for you to know the origin of the ingredients used in locally processed food products?	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Somewhat important 4 = Not important
28	What type of products that we did not include do you feel need to be more represented in the marketplace?	**Please specify:**

End of survey script

We thank you for taking the time to spend with us, answering the survey.

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Food Systems Solutions Community Management Survey

INFORMED CONSENT FORM

As your state moves forward in developing strategies for strengthening food production, food security and the value chain from collecting, to harvest, to production, post-harvest handling, storage, processing and distribution for food production, food preservation and food consumption, local food producers will continue to need support. This survey is for community leaders that support and assist organizations/communities with establishing and maintaining appropriate community management and policy advocacy capabilities, allowing them to participate effectively in ongoing community-level dialogue and effectively manage local and sustainable production according to good governance practices, including transparency and accountability

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Signature:_____Date:_____

Food Systems Solutions Community Management Survey

Thank you for participating in this survey.

Please select the most appropriate answer for each question provided.

1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
1.2	Date of Interview	
1.3	Location (State/City)	**CIRCLE ONE AND WRITE ISLAND NAME (IF APPLIES)** 1 = Chuuk City_____ 2 = Kosrae City_____ 3 = Pohnpei City_____ 4 = Yap City_____ 5 = Other (Please specify) _____

2. DEMOGRAPHIC INFORMATION

Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

SECTION: Community Management and Governance

3	What type of organization/group (NGOs) do you represent?	**CIRCLE ONE** 1= Agricultural producer organization 2= Aquaculture producer organization 3= Small-scale fishing organization 4= Traditional leadership group 5= Municipal officials (mayors, council, etc.) 6= Faith-based Leaders (church, etc.) 7= Underrepresented (Women's, Youth, Disability) Group 8= Other NGOs 9= Other (specify):
4	How often does your organization/community meet?	**CIRCLE ONE** 1 = Weekly 2 = Monthly 3 = Quarterly 4 = Yearly
5	What areas do you think your organization/community may need support for more effective management of your farming families and food producers?	**CIRCLE ALL THAT APPLY** 1= Governance training (leadership) 2= Technical food production assistance in farming/fishing techniques 3= Value chain development (transportation/packaging/food storage etc.) 4= Environmental conservation practices 5= Economic, Marketing and Business management 6= Other (specify):

6	What food production challenges/needs are your organization/community members bringing to you seeking assistance?	**CIRCLE IS ALL THAT APPLY** 1. Need for increased communication 2. Access to affordable feed 3. Access to clean water 4. Access to food production inputs (seeds/eggs/chicks/tools/plants, ect) 5. Access to climate resilient plants/crops 6. Affordable transportation 7. Food production (agriculture/fishing) training 8. Road Maintenance 9. Post-Harvest Storage 10. We don't need food security assistance 11. Other (specify):

7	How would you define good governance?	**PLEASE DESCRIBE:**
8	What specific challenges do you face supporting your local food producers?	**PLEASE DESCRIBE:**
9	Do you feel the farming families in your organization/community would be interested in making money producing food for a processing plant?	**CHOOSE ONE** **1.** Yes 2. Yes, but need they training 3. No, they farm only for home consumption 4. No, farming is not a desirable vocation 5. Not sure what our farmers want
10	In what ways do you feel a local food processing plant (Food Innovation Center) supports the goals and needs of your organization/community?	**CIRCLE ALL THAT APPLY** 1. Increases food security 2. Increases health and nutrition 3. Job Creation 4. Increases traditional practices 5. Strengthens local economy 6. Reduces dependence on imported foods 7. I do not think a local Food Processing Plant would benefit my community 8. Other (specify):
11	What challenges does your organization/community face in accessing markets for your agricultural or aquatic products?	**CIRCLE ALL THAT APPLY** 1 = Limited transportation infrastructure 2 = Lack of market to sell my products 3 = Lack of my own supply to sell my products 4 = Lack of connections to market relative to demand 5 = Quality standards compliance issues 6 = Other (specify): 7 = Not applicable to my organization

12	Rate the level of participation of local community members in decision-making processes related to agricultural or aquatic production activities.	**CIRCLE ONE** 1= Very low 2= Low 3= Moderate 4= High 5= Very high
13	Does your organization/community provide educational programs or training opportunities for members on sustainable food production practices?	**CIRCLE ONE** 1 = Yes, regularly 2 = Yes, occasionally 3 = No 4 = Not applicable
14	How best can monitoring and evaluation be implemented in your organization/community's activities and projects?	**PLEASE DESCRIBE:**
15	What mechanisms do you feel helps ensure transparency in your organization/community?	**PLEASE DESCRIBE:**

SECTION: Sustainable Practices, Environment and Climate Change

16	Does your organization/community actively work to preserve and promote traditional knowledge related to farming or fishing practices?	**CIRCLE ONE** 1 = Yes, actively (please answer Q 16.1) 2 = Yes, to some extent 3 = No, not a focus
16.1	If Yes, please explain:	**PLEASE DESCRIBE:**
18	What strategies does your organization/community employ to mitigate the impacts of climate change on your food production activities?	**CIRCLE ONE** 1 = Crop diversification 2 = Water conservation practices 3 = Disaster preparedness plans (including planting trees) 4 = Relocation of crop fields 5 = Using MPAs (Marine Protected Areas) 6. Other (specify) _____

19	How prepared is your organization/community to respond to natural and climate disasters or emergencies that could affect food production activities?	**CIRCLE ONE** 1 = Very prepared 2 = Moderately prepared 3 = Not prepared
20	What climate smart strategies would you be interested in employing to best support the needs of your organization/community?	**CIRCLE ONE** 1 = Introduce climate resilient food crops, animals, fish, etc. 2 = Irrigation systems 3 = Protected cultivation (IE greenhouses) 4 = Training in pest and disease management 5 = Other (specify)
21	Do you need support to implement more environmentally conscious initiatives in your organization/community?	**CIRCLE ONE** 1 = Yes 2 = No If yes, please describe:
22	What would help ensure long-term sustainability of your organization/community's management efforts?	**PLEASE DESCRIBE:**

SECTION: Policy Advocacy (representative from your community/group communicates your group's needs to elected officials to ensure that State policy is designed to address and meet your needs):

	Question	**Response**
22	What does policy advocacy mean to you?	**PLEASE DESCRIBE:**
23	How knowledgeable is your organization/community about existing laws and regulations related	**CIRCLE ONE** 1 = Highly knowledgeable 2 = Moderately knowledgeable

	to agriculture, fishing and/or aquaculture resources management?	3 = Not knowledgeable
24	How often does your organization/community collaborate with government agencies on issues related to agriculture, fishing and/or aquaculture resources management?	**CIRCLE ONE** 1 = Regularly 2 = Occasionally 3 = Rarely 4 = Never
25	How many collaborative projects has your organization/community undertaken with other stakeholders (e.g., government agencies, NGOs) in the past three years?	**CIRCLE ON** 1 = None 2 = 1-2 3 = 3-5 4 = More than 5 5 = Not Applicable
26	Does your organization/community face challenges accessing resources such as land, water, or fishing grounds?	**CIRCLE ONE** 1 = Yes, frequently (please answer Q 26.1) 2 = Occasionally (please answer Q 26.1) 3 = No
26.1	What challenges accessing resources are you experience?	**PLEASE DESCRIBE:**
27	What type of support do you feel would be most helpful to your food producers?	**RANK IN ORDER OF PRIORITY 1 BEING MOST IMPORTANT** 1 = Food production workshops and training 2 = Business/accounting workshops and training 3 = Access to production resources (tools and inputs) 4 = Access to funding 5 = Assistance/training in how to apply for funding (e.g. write a proposal) 6 = Networking opportunities with other organizations 7 = Guidance from experts 8 = Other (specify) _____

28	How do members of your organization/community share their food production needs with you?	**PLEASE DESCRIBE:**
29	How do you communicate the needs of your organization/community to policy makers?	**PLEASE DESCRIBE:**
30	Are you experiencing challenges advocating for your organization/community?	**CIRCLE ONE** 1 = Yes (please answer Q 30.1) 2 = No
30.1	If yes, what are those challenges:	**PLEASE DESCRIBE:**

SECTION: Inclusivity

	Question	**Response**
31	Does gender equality relate to decision-making process and leadership roles in your organization/community?	**CIRCLE ONE** 1 = Yes 2 = No 3 = Not applicable
32	Do you feel your organization/community is inclusive to differently-abled and senior citizens in decision-making processes and leadership roles?	**CIRCLE ONE** 1 = Yes, Very inclusive 2 = Somewhat inclusive 3 = Not inclusive 4 = Not applicable
33	Does your organization/community engage youth (ages 13-35) in training and participation?	**CIRCLE ONE** 1 = Very inclusive 2 = Somewhat inclusive 3 = Not inclusive 4 = Not applicable

Q 34: What do you feel is the most important initiative to support food production and food security for members of your organization/ community?

End of survey script

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RUTGERS

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Director, Center for Agricultural Food Ecosystems (RUCAFE), The New Jersey Institute of Food, Nutrition & Health, Rutgers University, Department of Plant Biology-Foran Hall
59 Dudley Road New Brunswick, New Jersey 08901
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Investigator/Person Obtaining Consent from Respondent: (Print)

Signature:_____Date:_____

Food Systems Solutions Information Infrastructure Provider Survey

Thank you for participating in this survey.

Please select the most appropriate answer for each question provided.

1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
1.2	Date of Interview	
1.3	Location (State/City)	**CIRCLE ONE AND WRITE ISLAND NAME (IF APPLIES)** 1 = Chuuk City_____ 2 = Kosrae City_____ 3 = Pohnpei City_____ 4 = Yap City_____ 5 = Other (Please specify) _____

2. DEMOGRAPHIC INFORMATION

Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

	Question	Response
3	How will underwater cable alter access and affordability to each state in the FSM.	
4	What are the current gaps in reaching all state citizens including outer island communities?	**PLEASE DESCRIBE:**
5	What plans are in the works to overcome these shortcomings?	**PLEASE DESCRIBE:**
6	Would you share with us your assessment of your existing internet infrastructure across the multiple islands of Micronesia?	**PLEASE DESCRIBE:**
7	As the only internet service provider (ISPs), can you identify the gaps and barriers in internet service and explore ways you can optimize bandwidth allocation and increase available bandwidth in slow areas?	**PLEASE DESCRIBE:**
8	Would you identify areas (specific ones with GPS coordinates) with the slowest internet connectivity and what are the underlying causes, and your plans timelines to overcome and take corrective action?	**PLEASE DESCRIBE:**

9	Relative to technological infrastructure: What are the state and national hardware and software infrastructure needs to support data collection, storage, analysis, and dissemination.	**PLEASE DESCRIBE:**
10	Do you now use cloud-based solutions to enhance scalability and accessibility?	**CIRCLE ONE** 1 = Yes 2 = No
11	What role do you play in developing communication systems for growers and residents across Micronesia's islands given the often slow and limited internet. What is needed relative to infrastructure enhancement, lightweight platforms, offline capabilities, localized data centers, data optimization, training programs, and continuous monitoring?	**PLEASE DESCRIBE:**
12	Does your company have plans to recommend the implementation of traffic management techniques, such as quality of service (QoS), to prioritize agricultural information dissemination over non-critical data?	**CIRCLE ONE** 1= Yes 2= No
13	What steps and resources do you need to establish local networks on each island to facilitate faster internal data transfer?	**PLEASE DESCRIBE:**
14	And, are there any plans to get this done?	**CIRCLE ONE** 1 = Yes 2 = No If Yes, can you share them? (get copies)
15	Can you identify local caching servers to store frequently accessed content, reducing the need for external internet access?	**CIRCLE ONE** 1 = Yes 2 = No
16	Do you have capability and interest in SMS-based systems to deliver agricultural information, market updates, and weather forecasts to growers and residents.	**CIRCLE ONE** 1= Yes, we have capability 2= No, but we are interested 3= Not interested

17	How can you help to optimize message size and compress data to minimize the impact of slow internet connections?	**PLEASE DESCRIBE:**
18	Do you already have or can you set-up voice-based hotlines with interactive voice response (IVR) systems to provide agricultural information and guidance?	**CIRCLE ONE** 1= Yes 2= No
19	Do you now or could you utilize low-bandwidth codecs to test the transmission of voice data efficiently over slow internet connections?	**CIRCLE ONE** 1= Yes 2= No
20	Is it your role to assist in optimize data transmission by using compressed data formats such as gzip or deflate?	**CIRCLE ONE** 1= Yes 2= No If Yes, skip next question
21	If you know who can provide this service, please specify.	**PLEASE DESCRIBE:**
22	Do you now or can you with your platform compress large files, including images and videos, before transmission to reduce data size and enhance download speed?	**CIRCLE ONE** 1= Yes 2= No
23	Is there now (using Emergency Responders or other specialized means) a way to utilize content delivery networks (CDNs), for example to distribute agricultural content across servers closer to the islands, reducing the distance data needs to travel?	**CIRCLE ONE** 1= Yes 2= No
24	Can the nation and state leverage CDNs' caching capabilities to deliver content faster to users, especially for static information like guides and tutorials?	**PLEASE DESCRIBE:**

25	Is there an area of challenges that we did not cover and you feel is important to include?	**PLEASE DESCRIBE:**
26	Its our understanding that if content if provided on food security, health, nutrition- that is information for the public good, it can be submitted to your HQ and then transmitted at no cost to targeted groups via SMS and/or other means. Can you describe this process and how the state and national can take better advantage of such an opportunity?	**PLEASE DESCRIBE:**

End of survey script

We thank you for taking the time to spend with us, answering the survey.

RUTGERS

Food Systems Solutions Food Distributors and Retailers Survey

INFORMED CONSENT FORM

Your insights are crucial to informing the plans for increasing food security and job creation through the development of a sustainable local food system that includes the establishment of Food Innovation Centers in the states of the Federated States of Micronesia (FSM) that provide value addition to locally processed food products from local staple crops, fish, marine, animal, poultry and/or other local plants, vegetables, fruits and seeds.

Project Title: Strengthening Food Security in the Federated States of Micronesia: An Innovative Approach to Enhancing Information Systems, Establishing an FSM Food Innovation Center and Supporting Local Capacity Building.

You are invited to participate in a research study that is being conducted by Rutgers University on behalf of the Federated States of Micronesia (FSM)'s Department of Resources and Development led by Dr Ramu Govindasamy, a Professor in the Department of Agricultural, Food and Resource Economics at Rutgers University, Rutgers Researchers and Faculty with collaborating NGO's and other local partners in each of the four states. The purpose of this research is to gather information from food-system participants in the FSM regarding their specific needs for enhanced Information Systems, a Food Innovation Center, and Capacity Building to strengthen food security in the FSM to best inform the national and state governments as they invest in sustainable local food system development.

Approximately 270 farming households and 270 consumers and 196 professionals involved in food production and food security from the state, national and educational communities will participate in the study across the four FSM states, and each individual's participation will last approximately 30-45 minutes. From each household selected, surveys will be conducted for men and women (ages 18-65 years).

The study procedures include responding to an in-person survey about Improved Food System Information Systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. within all four FSM states. The objective is to understand better your state's current situation relative to food system information systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. The FSM Department of R&D, the FSM Federal Government, in concert with your state government, will use this data and your responses to better invest in strategies that improve peoples' livelihoods and food security.

This research is anonymous. Anonymous means that I will record no information about you that could identify you. This means that I will not record your name, address, phone number, date of birth, etc. If you agree to take part in the study, you will be assigned a random code number that will be used on each test and the questionnaire. There will be no way to link your responses back to you. Therefore, data collection is anonymous.

The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for at least three years. Responses may be used or distributed to investigators for other research without obtaining additional informed consent from you.

There are no foreseeable risks to participation in this study. You may receive $10 for taking part in this study. Participation in this study is voluntary. You may choose not to participate, and you may withdraw at any time during the study procedures. In addition, you may choose not to answer any questions with which you are not comfortable.

RUTGERS

Food Systems Solutions Food Distributors and Retailers Survey

If you have any questions about the study or study procedures, you may contact either of us at:

Principal Investigator:
Ramu Govindasamy, Professor and Chair, Dept. of Agricultural, Food and Resource Economics
Food Distribution Research Society (FDRS) Past President
Associate Director, New Use Agriculture and Natural Plant Products
Extension Specialist, Rutgers Cooperative Extension
Rutgers-The State University of New Jersey
55 Dudley Road
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Food Systems Solutions Food Distributors and Retailers Survey

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	Question	Response
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4	How important do you believe making available locally made processed food products for the food industry in your state?	**CIRCLE ONE** 1= Very important 2= Important 3= Somewhat important 4= Not important

5	Would you support the establishment of a food innovation (or incubator/shared commercial kitchen) center in your state focused on developing new locally made processed food products and/or assisting you and others in processing and producing local food products?	**CIRCLE ONE** 1= Strongly Support 2= Support 3= Neutral 4= Oppose 5= Strongly Oppose
6	What specific challenges do you face in sourcing or producing locally made processed food products in your state?	**CIRCLE ALL THAT APPLY** 1= Limited access to quality raw materials 2= Inadequate infrastructure for processing and packaging (this includes needed tools, equipment) 3= High production costs 4= Lack of technical expertise in product development (recipes, blending, packaging) 5= Lack of distribution capabilities 6= Lack of available trained workers to assist 7= Other (please specify):
7	How do you think a food innovation (or incubator) center could benefit your business and the food industry in your state?	**CIRCLE ALL THAT APPLY** 1= Providing access to commercial style/sized kitchen and/or food processing facilities at reasonable cost for you to make your product(s) 2= Providing a place where you can bring in your raw product, ideas and recipe and others can then make the product for you for a fee 3= Providing access to research and development facilities 4= Offering technical assistance and expertise in product development 5= Facilitating collaboration with local farmers and producers 6= Assisting with marketing and branding of new products 7= Other (please specify):

8	Which factors would influence your willingness to collaborate with a food innovation center?	**CIRCLE ALL THAT APPLY** 1= Potential for making more money 2= Access to funding or grants for product development projects 3= Assurance of intellectual property protection for new product ideas 4= Opportunity for market expansion and growth 5= Opportunities to make food that can be stored for extended time periods 6= Increasing my community's food security and access to nutritious, healthy foods 7= Supporting my community's economic growth and job creation 8= Other (please specify):
9	How do you perceive the current demand for locally processed food products in your state and FSM?	**CIRCLE ONE** 1= High demand and growth potential 2= Moderate demand, with potential for expansion 3= Limited demand and growth potential 4= Unsure
10	What types of locally processed food products do you believe have the highest potential for success in your state and in the FSM market?	**CIRCLE ALL THAT APPLY** 1= Products with traditional or cultural significance 2= Healthy and nutritious snack options 3= Convenient and ready-to-eat meals or snacks 4= Unique or specialty products not currently available in the market 5= Products that are grown locally and for which our state and nation are known 6= Other (please specify):
11	How important do you think it is for locally made processed food products to incorporate locally sourced ingredients or flavors?	**CIRCLE ONE** 1= Very important 2= Important 3= Somewhat important 4= Not important

12	What support or resources do you believe would be most beneficial for your business in developing and marketing new locally processed food products?	**CIRCLE ALL THAT APPLY** 1= Access to financing or grants for product development 2= Technical assistance and expertise in food processing and packaging 3= Market research and consumer insights 4= Training and capacity building for staff 5= Other (please specify):
13	What is the average volume of value-added products (e.g., dried fruits, fish, spices, etc.) that your business sells monthly?	**CIRCLE ONE** 1= Less than 100 pounds 2= 100 - 500 pounds 3= 500 - 1,000 pounds 4= More than 1,000 pounds 5= Not applicable/I don't know
14	How would you describe the price sensitivity of consumers in your state and the FSM towards locally processed food products?	**CIRCLE ONE** 1= Highly price-sensitive, price significantly impacts purchasing decisions 2= Moderately price-sensitive, price is a consideration but not the sole factor 3= Somewhat price-sensitive, but quality and uniqueness are more important 4= Not very price-sensitive, willing to pay premium for quality or specialty items 5= Not applicable/I don't know
15	On average, how frequently do your customers purchase locally processed food products from your store(s)?	**CIRCLE ONE** 1= Daily 2= Weekly 3= Monthly 4= Occasionally 5= Rarely/never
16	What price range do you typically sell locally processed food products for in your state? (Per unit)	**CIRCLE ONE** 1= $1 - $5 2= $6 - $10 3= $11 - $20 4= Above $20 5= Don’t know

17	How do you anticipate consumer demand for locally processed food products to change in the next 2-3 years in your state and the FSM?	**CIRCLE ONE** 1= Increase significantly 2= Increase moderately 3= Remain relatively stable 4= Decrease moderately 5= Decrease significantly 6= Not applicable/I don't know
18	What factors do you believe would influence consumers' willingness to try and purchase new locally processed food products?	**CIRCLE ALL THAT APPLY** 1= Product quality and taste 2= Health benefits and nutritional value 3= Packaging and presentation 4= Price affordability 5= Availability of product samples or demonstrations 6= Cultural or traditional appeal 7= Word-of-mouth recommendations 8= Marketing and advertising efforts 9= Other (please specify):
19	How important do you think it is for locally processed food products to align with dietary preferences and cultural tastes of consumers in FSM?	**CIRCLE ONE** 1= Very important 2= Important 3= Somewhat important 4= Not important
20	What strategies would you recommend to increase consumer awareness and acceptance of new locally processed food products in FSM?	**CIRCLE ALL THAT APPLY** 1= Promotional discounts and offers 2= Sampling and tasting events in-store 3= Collaborating with local chefs or influencers for product endorsements 4= Educational campaigns highlighting product benefits and uses 5= Other (please specify):

21	How likely are you to actively promote and market new value-added food products developed through a food innovation center to your customers?	**CIRCLE ONE** 1= Very Likely 2= Likely 3= Neutral 4= Unlikely 5= Very Unlikely
22	What do you feel would strengthen your partnership with local food producers?	**CIRCLE ALL THAT APPLY** 1= Better Communication 2= Better Transportation 3= Better Coordination of Foods Delivered to Market 4= Better Post Harvest Storage 5= Other (please specify):
23	Do you have any suggestions for increasing the availability of local food products in your state?	**Please describe:**

End of survey script

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RUTGERS

Food Systems Solutions Food Distributors and Retailers Survey

INFORMED CONSENT FORM

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19	How important do you think it is for locally processed food products to align with dietary preferences and cultural tastes of consumers in FSM?	**CIRCLE ONE** 1= Very important 2= Important 3= Somewhat important 4= Not important
20	What strategies would you recommend to increase consumer awareness and acceptance of new locally processed food products in FSM?	**CIRCLE ALL THAT APPLY** 1= Promotional discounts and offers 2= Sampling and tasting events in-store 3= Collaborating with local chefs or influencers for product endorsements 4= Educational campaigns highlighting product benefits and uses 5= Other (please specify):

21	How likely are you to actively promote and market new value-added food products developed through a food innovation center to your customers?	**CIRCLE ONE** 1= Very Likely 2= Likely 3= Neutral 4= Unlikely 5= Very Unlikely
22	What do you feel would strengthen your partnership with local food producers?	**CIRCLE ALL THAT APPLY** 1= Better Communication 2= Better Transportation 3= Better Coordination of Foods Delivered to Market 4= Better Post Harvest Storage 5= Other (please specify):
23	Do you have any suggestions for increasing the availability of local food products in your state?	**Please describe:**

End of survey script

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Food Systems Solutions Policymaker Survey

INFORMED CONSENT FORM

Your insights are crucial to informing the plans for increasing food security and job creation through the development of a sustainable local food system that includes the establishment of Food Innovation Centers in the states of the Federated States of Micronesia (FSM) that provide value addition to locally processed food products from local staple crops, fish, marine, animal, poultry and/or other local plants, vegetables, fruits and seeds.

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Food Systems Solutions Survey for Policymakers

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1. ENUMERATOR INFORMATION

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Q2	Question	Response (Enumerator may fill this in without asking)
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SECTION: PLAN FOR A FOOD INNOVATION CENTER

3	What do you perceive as the primary benefit of establishing a Food Innovation Center in FSM?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Job creation and economic growth b:____ Entrepreneurial opportunities c:____ Community development d:____ Increasing food security e:____ Improving nutrition and health f:____ Other (please specify)
4	Which types of locally processed foods should the center focus on?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Fruits and vegetables b:____ Fish and Seafood c:____ Local staple crops (e.g., taro, breadfruit) d:____ High value specialty (coffee, kava, teas, spices) e:____ Crafts f:____ Other (please specify)
5	What should be the key features of the Food Innovation Center?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Research and development facilities b:____ Processing and packaging equipment c:____ Shared kitchen and commercial workspace d:____ Training and education spaces e:____ Market access and distribution networks
6	How important is it to involve local farmers and producers in the planning of a Food Innovation Center?	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Moderately important 4 = Not important
7	What kind of support do you believe the government should provide to a Food Innovation Center?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Financial subsidies b:____ Technical assistance (such as equipment and tools) c:____ Policy incentives d:____ Training e:____ Marketing and trade opportunities f:____ Other (please specify)

8	What specific policies can support farmers in supplying raw materials to a Food Innovation Center?	**CIRCLE ALL THAT APPLY** 1 = Subsidies for farming inputs 2 = Guaranteed purchase agreements 3 = Tax incentives for local producers 4 = Training programs for improved farming practices 5 = Other (please specify)
9	How can policymakers facilitate collaboration between farmers and a Food Innovation Center?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Organizing regular meetings with community stakeholders b:____ Creating a farmers/fishers cooperative c:____ Providing communication platforms d:____ Offering logistical support to bring input supplies (seeds, tools) to farmers/fishers e:____ Offering logistical support to get farmers/fishers food crops to market f:____ Other (please specify)
10	What measures can be taken to ensure a Food Innovation Center benefits local communities?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Prioritizing local hiring b:____ Implementing community-based projects c:____ Ensuring profit-sharing models d:____ Ensuring fair prices for farmers/fishers' products e:____ Facilitating transport of farmers/fishers' food crops to Food Innovation Center f:____ Other (please specify)
11	How should the success of a Food Innovation Center be evaluated in relation to farmer and community benefits?	**CIRCLE ALL THAT APPLY** 1 = Increase in local employment 2 = Improved farmer incomes 3 = Increased local food security 4 = Creation of new businesses (micro-enterprises) 5 = Increased access to fresh, nutritious and healthy foods 6 = Other (please specify)

SECTION: CAPACITY BUILDING AND INFRASTRUCTURE

12	What are the most critical areas for capacity building in the local food system?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Food production training techniques and practices b:____ Food processing and preservation c:____ Marketing and business skills d:____ Food safety and quality control e:____ Other (please specify)
13	To strength your local food system, which areas need most training?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Agricultural b:____ Fishing c:____ Aquaculture d:____ Livestock e:____ Poultry
14	Which groups should be prioritized for capacity building initiatives?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Farmers/Fishers b:____ Small-scale food processors c:____ Community organizations d:____ Youth and women
15	What type of infrastructure investments are most needed to support the local food system?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Nurseries b:____ Aquaculture hatcheries c:____ Protected cultivation (greenhouses) d:____ Cold storage e:____ Transportation f:____ Processing facilities g:____ Marketplaces and retail outlets h:____ Improved energy access on/off grid i:____ Other (please specify)
16	How do you rate the current level of infrastructure available to support food processing in FSM?	**CIRCLE ONE** 1 = Excellent 2 = Good 3 = Fair 4 = Poor 5 = No comment

17	What kind of public-private partnerships do you think are necessary to enhance food system infrastructure?	**CIRCLE ALL THAT APPLY** 1 = Investment in shared processing facilities 2 = Joint ventures for market access 3 = Collaboration on research and development 4 = Other (please specify)
18	What role should local communities play in the maintenance and management of new infrastructure?	**CIRCLE ALL THAT APPLY** 1 = Forming local management/oversight committees 2 = Participating in training on maintenance 3 = Contributing to infrastructure investment 4 = Engaging in regular review meetings 5 = Other (please specify)
19	What policies can promote the use of technology and innovation among local farmers?	**CIRCLE ALL THAT APPLY** 1 = Grants for technology adoption 2 = Partnerships with tech providers 3 = Extension training services with technological focus 4 = Educational campaigns on technology benefits

SECTION: COMMUNITY MANAGEMENT AND POLICY ADVOCACY

20	How important is policy advocacy for successful and sustainable food system development?	**CIRCLE ONE** 1 = Very important 2 = Important 3 = Moderately important 4 = Not important
21	Which policy areas should be prioritized to support successful and sustainable food system development?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Agricultural policy b:____ Trade and market access c:____ Health and nutrition d:____ Environmental sustainability
22	How can policymakers assist farmers in advocating for better agricultural policies?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Creating farmer advocacy groups b:____ Providing platforms for farmer voices c:____ Facilitating dialogues between farmers and policymakers d:____ Offering training on policy advocacy e:____ Other (please specify)

23	What initiatives can strengthen the leadership and management skills of local community leaders?	**CHOOSE ALL THAT APPLY RANKED IN ORDER OF IMPORTANCE WITH 1 BEING MOST IMPORTANT:** a:____ Leadership development programs b:____ Exchange programs with successful communities c:____ Workshops on governance and management d:____ Mentorship by experienced leaders e:____ Other (please specify)
24	How can community-based monitoring and evaluation be integrated into the project?	**CIRCLE ALL THAT APPLY** 1 = Training community members in Monitoring and Evaluation (M&E) techniques 2 = Establishing community M&E committees 3 = Regular feedback sessions with communities 4 = Using participatory tools for M&E 5 = Other (please specify)
25	What incentives can encourage community participation in policy advocacy related to food systems?	**CIRCLE ALL THAT APPLY** 1 = Recognition and awards for active participants 2 = Financial support for advocacy initiatives 3 = Capacity building in advocacy skills 4 = Platforms for showcasing advocacy success stories 5 = Other (please specify)
26	How can policymakers ensure that food policies are inclusive and consider the needs of all community members?	**CIRCLE ALL THAT APPLY** 1 = Conducting inclusive policy consultations 2 = Implementing gender-sensitive policies 3 = Prioritizing marginalized groups in policy design 4 = Monitoring and evaluating policy impacts on different community segments 5 = Other (please specify)
27	What types of communication channels should be used to keep farmers and communities informed about policy changes?	**CIRCLE ALL THAT APPLY** 1 = Community radio programs 2 = Mobile SMS alerts 3 = Social media platforms 4 = Local newspaper bulletins 6 = Other (please specify)

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	Question	Response
3	What type of information do you believe is most critical to include in an electronic-based food systems information hub?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** Production techniques and best practices for raw/fresh products a:____ Food processing and preservation methods for food and other products b:____ Marketing strategies, alerts, opportunities and market access c:____ Emergency services and disaster response d:____ Disease control and pest management e:____ Crop budgets and financial planning f:____ Other (please specify):
4	How frequently should an electronic information hub be updated to remain relevant and useful?	**CIRCLE ONE** 1 = Daily 2 = Weekly 3 = Monthly 4 = Quarterly 5 = Only as needed
5	What types of production information would be most valuable for farmers and producers?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Crop cultivation techniques b:____ Livestock management practices c:____ Aquaculture and fisheries production d:____ Sustainable forestry practices e:____ Control of invasive species f:____ Ecological restoration to coast and/or to reduce soil erosion g:____ Other (please specify):
6	Which formats would be most effective for presenting production information?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Written guides/fact sheets and manuals

		b:____ Video tutorials, U-Tube videos and webinars c:____ Interactive online courses d:____ In-person workshops and training sessions e:____ Radio announcements f:____ Other (please specify):
7	What aspects of food processing should the information hub focus on?	**CIRCLE ALL THAT APPLY** 1 = Small-scale processing techniques 2 = Industrial processing methods 3 = Value-added product development 4 = Food safety and quality control
8	What marketing information would be most helpful to local producers?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Market opportunities, prices, buyers needing product b:____ Local and regional market trends c:____ Export opportunities and requirements d:____ Branding and packaging strategies e:____ Digital marketing techniques
9	What tools or resources would assist producers in improving their marketing and sales efforts?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Improved market spaces b:____ Market analysis reports c:____ Marketing plan templates d:____ Online marketing platforms e:____ Networking and partnership opportunities
10	What types of emergency services information should be included in the hub?	**CIRCLE ALL THAT APPLY** 1 = Natural disaster preparedness and response 2 = Food supply chain disruptions 3 = Public health emergencies 4 = Climate change adaptation strategies 5 = Water issues 6 = Food safety 7 = Presence and notification of serious pests and diseases 8 = Other (please specify):

11	What information on disease control and pest management is most needed?	**CIRCLE ALL THAT APPLY** 1 = Identification and diagnosis of common diseases 2 = Notification when a serious pest or disease is identified in any of the states 3 = Preventative measures and best practices 4 = Treatment options and resources 5 = Integrated pest management techniques for its control
12	What formats should be used to present disease control information?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Written guides/fact sheets and manuals b:____ Demonstrations using video and U-Tube c:____ Interactive diagnostic tools d:____ In-person workshops and training sessions e:____ Radio announcements f:____ Expert Q&A sessions
13	What financial planning resources would be most useful for producers?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Crop budget templates b:____ Financial management training c:____ Access to credit and funding information d:____ Investment planning guides e:____ Other (please specify): f:____ Not needed
14	How can the information hub best support producers in financial planning?	**CIRCLE ALL THAT APPLY** 1 = Offering personalized financial advice 2 = Providing assistance in making a business plan 3 = Providing case studies and success stories 4 = Developing online budgeting tools 5 = Hosting financial planning workshops 6 = Other (please specify):

		7 = Not needed
15	How can educational institutions like the College of Micronesia contribute to the information hub?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Developing and providing educational content b:____ Conducting research and sharing findings c:____ Offering expert consultations d:____ Facilitating student involvement and internships e:____ Other (please specify):
16	What role should state and national leaders in the departments of agriculture, marine, and forestry play in supporting the information hub?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** **RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ data and research b:____ Coordinating with local and international partners c:____ Ensuring alignment with national development goals d:____ Other (please specify):
17	What measures should be taken to ensure the information hub is accessible and useful to all potential users?	**RANK IN ORDER OF IMPORTANCE WITH 1= Most Important; 2= 2nd in importance etc.:** a:____ Ensuring mobile-friendly design b:____ Offering content in multiple languages (including spoken content in local languages) c:____ Providing offline access options d:____ Conducting user training and support sessions e:____ Other (please specify):

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Food Systems Solutions Technical Contacts and/or IT Personnel Survey

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Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

	Question	Response
3	In your capacity as communication officer, how would you describe your communication systems?	**PLEASE DESCRIBE:**
4	Do you now monitor your information systems to track the performance of communication systems, including latency, download speeds, and user feedback?	**CIRCLE ONE** 1 = Yes (please answer 4.1) 2 = No (please answer 4.2)
4.1	If yes, what have you learned?	**PLEASE DESCRIBE:**
4.2	If no, why not?	**PLEASE DESCRIBE:**
5	How do you suggest that your network be continuously monitored? Who does it now?	**PLEASE DESCRIBE:**
6	Do you assess your server performance?	**CIRCLE ONE** 1 = Yes (please answer 6.1) 2 = No. (please answer 6.2)
6.1	If yes, how?	**PLEASE DESCRIBE:**
6.2	If no, do you think it should?	**PLEASE DESCRIBE:**
7	How can your server be improved?	**PLEASE DESCRIBE:**

8	Have you collected data on user feedback regarding their experiences with the communication systems? If yes, what data and can you share?	**CIRCLE ONE** 1 = Yes 2 = No
9	When you are preparing information to share, do you test features such as pre-downloading content, local data storage, and offline data synchronization when internet connectivity is available?	**CIRCLE ONE** 1 = Yes 2 = No
10	Have you done any stakeholder mapping as to where you believe your customers/clients reside and thus Identify such distribution points across the islands where growers and residents could access offline content updates?	**CIRCLE ONE** 1 = Yes 2 = No
11	How do you distribute updated information?	**CIRCLE ONE** 1= Use physical media (e.g., USB drives, DVDs) 2= Create or link to a state-wide website that allows free access to all FSM users to access information on agriculture, weather and other critical information on food production systems and food security. 3= Other_____
12	What support does the state or national government provide?	**PLEASE DESCRIBE:**

SECTION: COMMUNICATION

	Question	Response
13	Do you now use SMS-based systems to deliver agricultural information, market updates, and weather forecasts to growers and residents?	**CIRCLE ONE** 1= Yes 2= No
14	Do you now optimize message size and compress data to minimize the impact of slow internet connections?	**CIRCLE ONE** 1= Yes 2= No
15	Do you now use voice-based hotlines with interactive voice response (IVR) systems to provide agricultural information and guidance?	**CIRCLE ONE** 1= Yes 2= No
16	Can you modify the bandwidth codecs?	**CIRCLE ONE** 1 = Yes 2 = No
17	Can you utilize low-bandwidth codecs to test the transmission of voice data efficiently over slow internet connections?	**CIRCLE ONE** 1 = Yes 2 = No
18	Do you optimize data transmission by using compressed data formats such as ***gzip*** or ***deflate***?	**CIRCLE ONE** 1 = Yes 2 = No 3= I don't know
19	Are you able to compress large files, including images and videos, before transmission to reduce data size and enhance download speed?	**CIRCLE ONE** 1 = Yes 2 = No
20	Can you utilize content delivery networks (CDNs) to distribute agricultural content across servers closer to the islands, reducing the distance data needs to travel?	**CIRCLE ONE** 1 = Yes 2 = No

21	Can you leverage CDNs' caching capabilities to deliver content faster to users, especially for static information like guides and tutorials?	**CIRCLE ONE** 1 = Yes 2 = No
22	What type of dissemination methods do you now use to make information available to others?	**CIRCLE ALL THAT APPLY** 1= Use a centralized information platform that consolidates data and analytical products, accessible through web portals 2= Or through mobile applications 3= Do you now develop tailored communication strategies, including regular reports, bulletins, and alerts, to reach different stakeholder groups 4= Radio 5= TV 6= Newspapers, bulletins (hard print) 7= Other (please specify):
23	What kinds of trainings are needed for those involved in preparing information?	**CIRCLE ALL THAT APPLY** 1= Maintaining and operating communication systems 2= Skills to troubleshoot connectivity issues 3= Perform hardware maintenance 4= Manage local data centers 5= Ways growers and residents can effectively utilize the communication systems. 6= Accessing offline content, using mobile applications, and understanding SMS and voice-based services. 7= Other (please specify):

24	What would you consider your biggest challenge and how would you resolve it?	**PLEASE DESCRIBE:**

End of survey script

We thank you for taking the time to spend with us, answering the survey.

RUTGERS
School of Environmental and Biological Sciences

Food Systems Solutions Trainer Survey

INFORMED CONSENT FORM

As your state moves forward in developing strategies for strengthening food production, food security and the value chain from collecting, to harvest, to production, postharvest handling, storage, processing and distribution for food production, food preservation and food consumption, your communities will rely on you to provide them with the information they need directly or through the training of students via a vocational school or through COM. Thus, this series of questions is to ask you what are the gaps and training needs that are missing relative to you, your colleagues, your institutions from human capacity to infrastructure and facilities (labs in fields, greenhouse, marinas, hatcheries etc.) that are needed to training the younger generation in food production and to keep you informed as a teacher/trainer.

Project Title: Strengthening Food Security in the Federated States of Micronesia: An Innovative Approach to Enhancing Information Systems, Establishing an FSM Food Innovation Center and Supporting Local Capacity Building.

You are invited to participate in a research study that is being conducted by Rutgers University on behalf of the Federated States of Micronesia (FSM)'s Department of Resources and Development led by Dr Ramu Govindasamy, a Professor in the Department of Agricultural, Food and Resource Economics at Rutgers University, Rutgers Researchers and Faculty with collaborating NGO's and other local partners in each of the four states. The purpose of this research is to gather information from food-system participants in the FSM regarding their specific needs for enhanced Information Systems, a Food Innovation Center, and Capacity Building to strengthen food security in the FSM to best inform the national and state governments as they invest in sustainable local food system development.

Approximately 270 farming households and 270 consumers and 196 professionals involved in food production and food security from the state, national and educational communities will participate in the study across the four FSM states, and each individual's participation will last approximately 30-45 minutes. From each household selected, surveys will be conducted for men and women (ages 18-65 years).

The study procedures include responding to an in-person survey about Improved Food System Information Systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. within all four FSM states. The objective is to understand better your state's current situation relative to food system information systems, development of a flexible and responsive Food Innovation Center, Food System capacity building infrastructure including technical and management capacity and employment opportunities, and community management and policy advocacy capability. The FSM Department of R&D, the FSM Federal Government, in concert with your state government, will use this data and your responses to better invest in strategies that improve peoples' livelihoods and food security.

This research is anonymous. Anonymous means that I will record no information about you that could identify you. This means that I will not record your name, address, phone number, date of birth, etc. If you agree to take part in the study, you will be assigned a random code number that will be used on each test and the questionnaire. There will be no way to link your responses back to you. Therefore, data collection is anonymous.

The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for at least three years. Responses may be used or distributed to investigators for other research without obtaining additional informed consent from you.

There are no foreseeable risks to participation in this study. You may receive $10 for taking part in this study. Participation in this study is voluntary. You may choose not to participate, and you may withdraw at any time during the study procedures. In addition, you may choose not to answer any questions with which you are not comfortable.

RUTGERS
School of Environmental and Biological Sciences

Food Systems Solutions Trainer Survey

If you have any questions about the study or study procedures, you may contact either of us at:

Principal Investigator:
Ramu Govindasamy, Professor and Chair, Dept. of Agricultural, Food and Resource Economics
Food Distribution Research Society (FDRS) Past President
Associate Director, New Use Agriculture and Natural Plant Products
Extension Specialist, Rutgers Cooperative Extension
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OR:
James E. Simon, Distinguished Professor of Plant Biology
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Director, Center for Agricultural Food Ecosystems (RUCAFE), The New Jersey Institute of Food, Nutrition & Health, Rutgers University, Department of Plant Biology-Foran Hall
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If you have questions, concerns, problems, information or input about the research or would like to know your rights as a research participant, you can contact the Rutgers IRB/Human Research Protection Program via phone at (973) 972-3608 or (732) 235-9806 OR via email irboffice@research.rutgers.edu, or you can write us at 335 George Street, Liberty Plaza Suite 3200, New Brunswick, NJ 08901.

By beginning this research, you acknowledge that you are 18 years of age or older, have read the information and agree to take part in the research, with the knowledge that you are free to withdraw your participation without penalty.

Signature of Investigator/Individual Obtaining Consent:

To the best of my ability, I have explained and discussed all the important details about the study including all the information contained in this consent form.

Investigator/Person Obtaining Consent from Respondent: (Print)

Signature:_____Date:_____

Food System Solutions Trainer Survey

Thank you for participating in this survey.

Please select the most appropriate answer for each question provided.

1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
1.2	Date of Interview	
1.3	Location (State/City)	**CIRCLE ONE AND WRITE ISLAND NAME (IF APPLIES)** 1 = Chuuk City_____ 2 = Kosrae City_____ 3 = Pohnpei City_____ 4 = Yap City_____ 5 = Other (Please specify) _____

2. DEMOGRAPHIC INFORMATION

Q2	Question	Response (Enumerator may fill this in without asking)
2.1	Gender of informant	**CIRCLE ONE** 1 = Male 2 = Female
2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

	Question	Response
Q3	Are you prepared and have the needed training to assist families and others on:	**CIRCLE ALL THAT APPLY** 1 = Producing more food 2 = Post-harvest handling and processing of locally grown foods 3 = Traditional methods of agroforestry 4 = Production systems to sustain and improve the land and marine

	Question	Response
Q4	Are you trained to teach and mentor others on CLIMATE CHANGE?	**CIRCLE ALL THAT APPLY** 1 = Climate change adaptation (Save crops from sea level rise, saltwater inundation, heavy rain) - Climate resilient crops (e.g. Saltwater resistant taro) 2 = Sustainable farming and land management (How to keep the soil good for years, prevent erosion, etc.) 3 = Ways to access emergency weather information and emergency responses for water, safety, other 4 = Invasive species management 5 = Techniques and approaches to reducing soil erosion 6 = Techniques in restorative forestry 7 = Techniques in rehabilitation or improving coral reefs and coastal land preservation 8 = Water collection and storage 9 = Tools to measure and track the weather
Q4.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1 = Yes 2 = No
Q4.2	What equipment or supplies would you like to have available in order to address this topic?	

	Question	Response
Q5	Are you trained to teach and mentor others in basic AGRICULTURE for home consumption and/or commercial farming and fisheries?	**CIRCLE ALL THAT APPLY** AGRICULTURE 1 = General crop production/Agriculture training/Crop planting timing 2 = Local/Traditional Agriculture/Fishery Knowledge (Agroforestry, etc.) 3 = Seed collection, seed saving and growing from seed and vegetative propagation 4 = Improving your soil, working with soils, types of soils, testing, soil amendments 5 = Making local fertilizer/compost and then ways to store and applying (solid & compost tea) 6 = Do you have sufficient expertise and hands-on experience with each of the following crops do you want/need more training and information on growing, harvesting, processing of these specific crops (check or circle each that is of interest): 6 - A - Swamp taro or hard taro 6 - B - Land taro or soft taro 6 - C - Breadfruit 6 - D - Banana 6 - E - Coconut 6 - F - Copra (coconut product) 6 - G - Yam/Sweet Potato 6 - H - Mango 6 - I - Pineapple 6 - J - Limes/lemons 6 - K - Watermelon and other Melons 6 - L - Tapioca 6 - M - Papaya 6 - N - Soursop 6 - O - Black Pepper 6 - P - Hot peppers 6 - Q - Sakau (Kava) 6 - R - Sugar cane 6 - S - Cucumber and Squash 6 - T - Vegetables (Cabbage, Green Beans, Spinach) 6 - U - Eggplant and Tomatoes 6 - V - Chestnut 6 - W - Betelnut/Betel Leaf 6 - X - Tangerine/Orange

		6 - Y - Medicinal crops (example: Noni) 6 - Z - Other (please specify) _____ LIVESTOCK 7 = General livestock management 8 = Make local pig/chicken feed 9 = How to use wood chipper 10 = Other (please specify) _____ MARINE/ACQUACULTIURE 11 = How to fish, fishing safety, Search & Rescue 12 = Local/Traditional fishing knowledge, moon-phase calendar 13 = Sustainable fishing, spawning knowledge, male/female ID 14 = Marine invasive species management 15 = Make local FADs using local materials 16 = Other (please specify) _____
Q5.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1 = Yes 2 = No
Q5.2	What equipment or supplies would you like to have available in order to address this topic?	**PLEASE DESCRIBE:**

	Question	**Response**
Q6	Are you trained to teach and mentor others on these TECHNOLOGIES:	**CIRCLE ALL THAT APPLY** 1= Greenhouse growing with protected systems 2= Hydroponics 3= Nursery management 4= Sac and container gardening 5= Water collection, storage, and management 6= Aquaculture (fish, invertebrates, mangrove crabs, turtles, shrimp/eel) 7= Hydroponics

		8= Hatchery 9= Cold storage (affordable lower cost) 10= Inclusion of solar power 11= Irrigation technologies (drip, trickle, overhead)
Q6.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1 = Yes 2 = No
Q6.2	What equipment or supplies would you like to have available in order to address this topic?	**PLEASE DESCRIBE:**

Q7	Are you trained to teach and mentor others on MARKETING?	**CIRCLE ALL THAT APPLY** 1 = Food preservation/processing/ packaging/marketing/handling (Tuna jerky, pork to sell, fish jerky, fish meal, smoking foods, drying foods, grinding and making into flour, mixing and product development) 2 = How to market products (make sellable) 3 = Value added/niche markets
Q7.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1= Yes 2= No
Q7.2	What equipment or supplies would you like to have available in order to address this topic?	**PLEASE DESCRIBE:**

	Question	Response
Q8	Are you trained to teach and mentor others on HEALTH AND NUTRITION relative to people and/or animals/poultry?	**CIRCLE ALL THAT APPLY** 1 = General health and nutrition 2 = How to prepare (easy) dishes with local foods (fish)
Q8.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1 = Yes 2 = No
Q8.2	What equipment or supplies would you like to have available in order to address this topic?	

	Question	Response
Q9	Are you trained to teach and mentor others on BUSINESS MANAGEMENT?	**CIRCLE ALL THAT APPLY** 1 = How to run a business, management, leadership, business plan 2 = Financing/financial management including record keeping and accounting 3 = How to prepare application for a loan or investment 4 = How to inform others of your business and ways to generate business 5 = Training on applicable laws/regulations 6 = Other Technologies (please specify): _____
Q9.1	Would you be interested in taking workshops and trainings to get up to speed or better trained in any/all of the above?	**CIRCLE ONE** 1 = Yes 2 = No

Q9.2	What equipment or supplies would you like to have available in order to address this topic?	

Q10	Does your employer (national, state, local government, private sector, educational institution) provide opportunities for your personal and professional training and development?	**CIRCLE ONE** 1 = Yes 2 = No
Q10.1	If YES to Q10 Please state what they are.	
Q10.2	If NO to Q10 Please indicate what opportunities would further your professional development.	

Q11	Are you trained in internet searching of data bases?	**CIRCLE ONE** 1 = Yes 2 = No
Q12	Are you comfortable in using computers and software?	**CIRCLE ONE** 1 = Yes 2 = No
Q13	Are you comfortable preparing reports and documenting your work and outputs?	**CIRCLE ONE** 1 = Yes 2 = No
Q14	Do you have access to computers and the internet?	**CIRCLE ALL THAT APPLY** 1 = Yes, at work 2 = Yes, at home 3 = No

Q15	Would you be interested in further graduate studies, if you can still keep your job?	**CIRCLE ONE** 1 = Yes, definitely 2 = Maybe 3 = No
Q16	Would you be willing to spend some time overseas for such training (or does your work/family preclude that opportunity)?	**CIRCLE ONE** 1= Yes 2= No
Q17	Would you be willing to pursue on-line trainings and even graduate programs and certification programs on-line?	**CIRCLE ONE** 1 = Yes 2 = No

Q18	What facilities including equipment would help you in training your students?	**PLEASE DESCRIBE:**
Q19	Have you conducted lab and/or field/marine research?	**CIRCLE ONE** 1 = Yes 2 = No
Q19.1	If YES to Q19: Please provide an example.	
Q19.2	If NO to Q19: Are you interested in learning this?	**CIRCLE ONE** 1 = Yes 2 = No

Q20) What do you see as the biggest gaps in expertise and knowledge in this sector?

End of survey script. We thank you for taking the time to spend with us, answering the survey.