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 Yap State:

Food Systems Solutions Data Collection

Methods and Results

RUTGERS

Acknowledgements:

This addendum is part of the US Department of Commerce's Economic Development Administration (EDA) funded project to the national Government of the Federated States of Micronesia: *"Food Systems Solutions: 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"* (Grant # ED22SEA3070014).

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 Yap 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 in local languages. 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 Yap State, the surveys were implemented through a partnership with the State of Yap and with the Yap Catholic High School (YCHS) with Michael Wiencek, Principal of the YCHS serving as the core contact and project implementer. **A team of seven enumerators conducted a total of 216 surveys covering 10 survey tools designed for specific targeted participants/audiences across the 10 municipalities of Yap Proper, namely Dalipebinaw, Fanif, Gagil, Gilman, Kanifay, Maap, Rull, Rumung, Tamil, and Weloy.** These surveys were conducted from August 1, 2024 to September 16, 2024. Residents from Yap's inhabited neighboring islands, often referred to as the Outer Islands, and from the villages of Ruu, Makiy, Daboch, Gargey, Gitam, and Madrich were also surveyed. Many Outer Island residents of Yap State have chosen to live on main island Yap. We prepared a specific survey tool to capture the voices of the Satawal and Ablul communities on main island Yap.

Study population and sample selection:
We conducted 70 producer surveys with enumerators identifying at least 20 producers in three regions of Yap. In the South, producers were surveyed in Gilman, Kanifay, Dalipebinaw, and Southern Rull. In the Central region, producers were surveyed in Weloy, Rull, Fanif, and among Rumung residents in Weloy. In the North, producers were surveyed in Tamil, Gagil, Maap, and Rumung. Food producers were identified as anyone who fished, raised livestock or chickens, or farmed or harvested for sale to others. There were a limited number of commercial producers on Yap, so many of the producers surveyed were not relying solely on food production for their livelihood but with food production as a supplemental source of income.

Sixty-seven consumer surveys were conducted with enumerators identifying at least twenty consumers in each of the three regions of Yap. In the South, consumers were surveyed in Gilman, Kanifay, Dalipebinaw, and Southern Rull. In the Central region, consumers were

surveyed in Weloy, Rull, Fanif, and among Rumung residents in Weloy. In the North, consumers were surveyed in Tamil, Gagil, Maap, and Rumung. Consumers who were surveyed were not also surveyed as producers. Enumerators noted that the consumption habits of those without vehicles could differ from those with vehicles, so special consideration was given to include at least 20 surveys from consumers without their own vehicles.

Sixteen community management surveys were completed. Those surveyed included Traditional Chiefs, women's group leaders, community group leaders, and leaders of nongovernmental organizations. Enumerators ensured that the different stakeholders of Yap were represented by those taking the community management survey, including the different municipalities of Yap, with particular focus on ensuring diversity that included the traditional systems of Yap.

Three information infrastructure providers and information technology specialist surveys were conducted. There are only two major telecommunications companies on Yap, FSM Telecom and iBoom, and each were surveyed. A local representative for Starlink was also surveyed, though this service is still new to Yap and is used minimally by customers at this time.

Ten restaurant and caterer surveys were completed ensuring that all major ones were surveyed. Three bakeries were also surveyed despite not utilizing local products at this time, and they were open to the idea of using local products, such as local flour, if available.

Fifteen store surveys were conducted. All stores that participated in the survey sold some form of local food products. In all cases, the individual at the store or business who was responsible for food orders or sales completed the survey.

Seventeen policymaker surveys were conducted. These surveys included members of the Executive Branch of the Yap State Government, namely the Governor's Office and the Department of Resources and Development, the Legislative Branch comprised of Yap State Senators, and the Traditional Branch, specifically the Council of Pilung for Yap Proper and the Council of Tamol for the neighboring islands.

Nine information content provider surveys were completed. These included representatives from the College of Micronesia Cooperative Research and Extension program, the Yap and FSM Sanitation Offices, various other government offices involved with providing information content, and local nongovernmental organizations or community groups.

Three technical contacts and information technology personnel surveys were conducted. Due to the limited number of technical contacts and information technology personnel in Yap State, three specific individuals were recommended by local contacts to complete the survey, representing FSM Telecom, iBoom, and the Bank of the FSM.

Ten trainer surveys were completed. These included representatives from the College of Micronesia Cooperative Research and Extension program, Yap State Resources and Development with Agriculture and Marine Resources, and local nongovernmental organizations and community groups.

Questionnaire and interview of study participants:
Enumerators conducted the 10 survey types across main island Yap and among Outer Islanders living on main island, ensuring an inclusive coverage of producers, consumers, community management, policymakers, information content providers, information infrastructure providers and information technology specialists, technical contacts and information technology personnel, trainers, restaurants and caterers, and stores. For producers, enumerators identified individuals who fished, raised livestock or chickens, or farmed or harvested for sale and ensured at least twenty producers were captured in each of the three regions. For consumers, enumerators maintained a clear separation from producer status and purposefully included at least 20 respondents without personal vehicles to account for transportation effects on consumption habits. For community management, enumerators prioritized inclusion of Traditional Chiefs, women's leaders, community organizers, and leaders from nongovernmental organizations to reflect the breadth of leadership within Yap's traditional and municipal structures. For information infrastructure and information technology, the surveys engaged FSM Telecom, iBoom, and a local Starlink representative in order to reflect the limited but evolving telecommunications landscape. For restaurants, caterers, and bakeries, the enumerators engaged all major providers and documented current use of local products and openness to adopt locally sourced inputs. For stores, the surveys were completed by the individuals responsible for ordering and sales to ensure accurate reflection of purchasing patterns and local product availability. For policymakers, the surveys included executive, legislative, and traditional branches to capture the perspectives that influence policy related to food systems. For information content providers, the surveys included government offices and local organizations that create and disseminate information relevant to food, health, and agriculture. For technical contacts and information technology personnel, enumerators relied on locally recommended specialists to represent the technical environment. For trainers, the surveys engaged institutions and groups that provide capacity building in agriculture and marine resources and through community-based programs.

Data limitation:
The survey in Yap faced constraints related to the small population and the correspondingly limited number of commercial producers, restaurants, caterers, telecommunications providers, and technical personnel. Many producers engaged in food production as a supplemental source of income rather than as a full livelihood, which may influence the scale and frequency of production data reported. Transportation access for consumers varied, and while enumerators included consumers without vehicles to address this factor, mobility differences may still affect comparisons of consumption habits. The telecommunications landscape included the two major providers and a new Starlink service with minimal current use, which limited the depth of infrastructure perspectives available. Despite these constraints, the survey achieved representation across municipalities, leadership systems, and key stakeholder groups and captured the perspectives necessary to understand Yap's food system across main island Yap and Satawal and Ablul communities living on main island.

2024 Yap State Food Systems Solutions Survey Summary:
Producer Survey: 70 surveys conducted
Consumer Survey: 67 surveys conducted
Community Management Leader Survey: 16 surveys conducted

Food Distributors and Retailers Survey: 25 surveys conducted

- Local markets: 15 surveys conducted
- Restaurants: 10 surveys conducted

Trainer Surveys: 10 surveys conducted
Information Content Providers Survey: 9 surveys conducted
Information Infrastructure Provider Survey: 3 surveys conducted
Technical IT Survey: 3 surveys conducted
Policymaker Survey: 17 surveys conducted
Ablul and Satawal Outer Island Communities on Main Island Yap: 40 surveys conducted

Federated States of Micronesia
Food Systems Solutions Project
Tables and Charts Reflecting Data Results
Yap State

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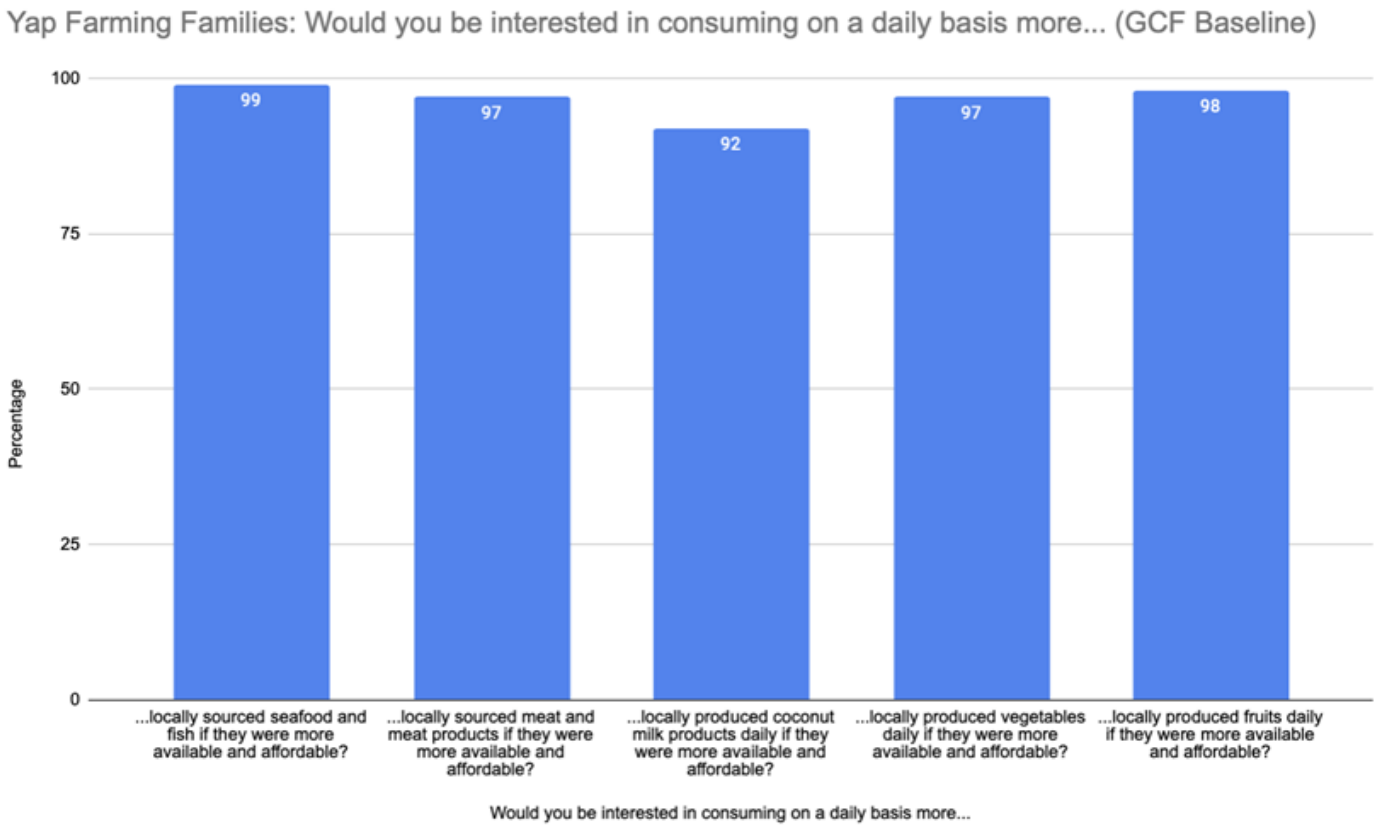
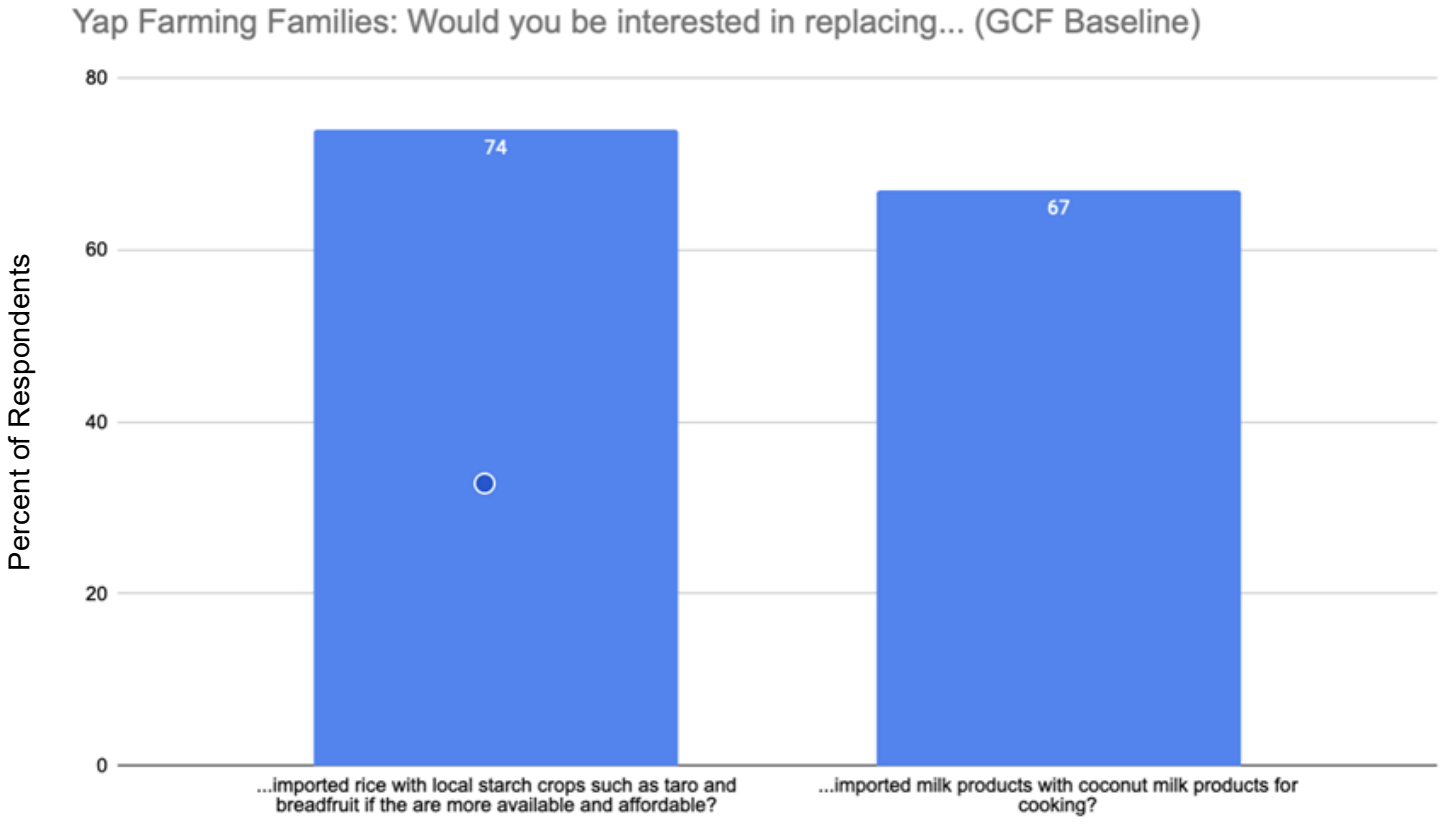
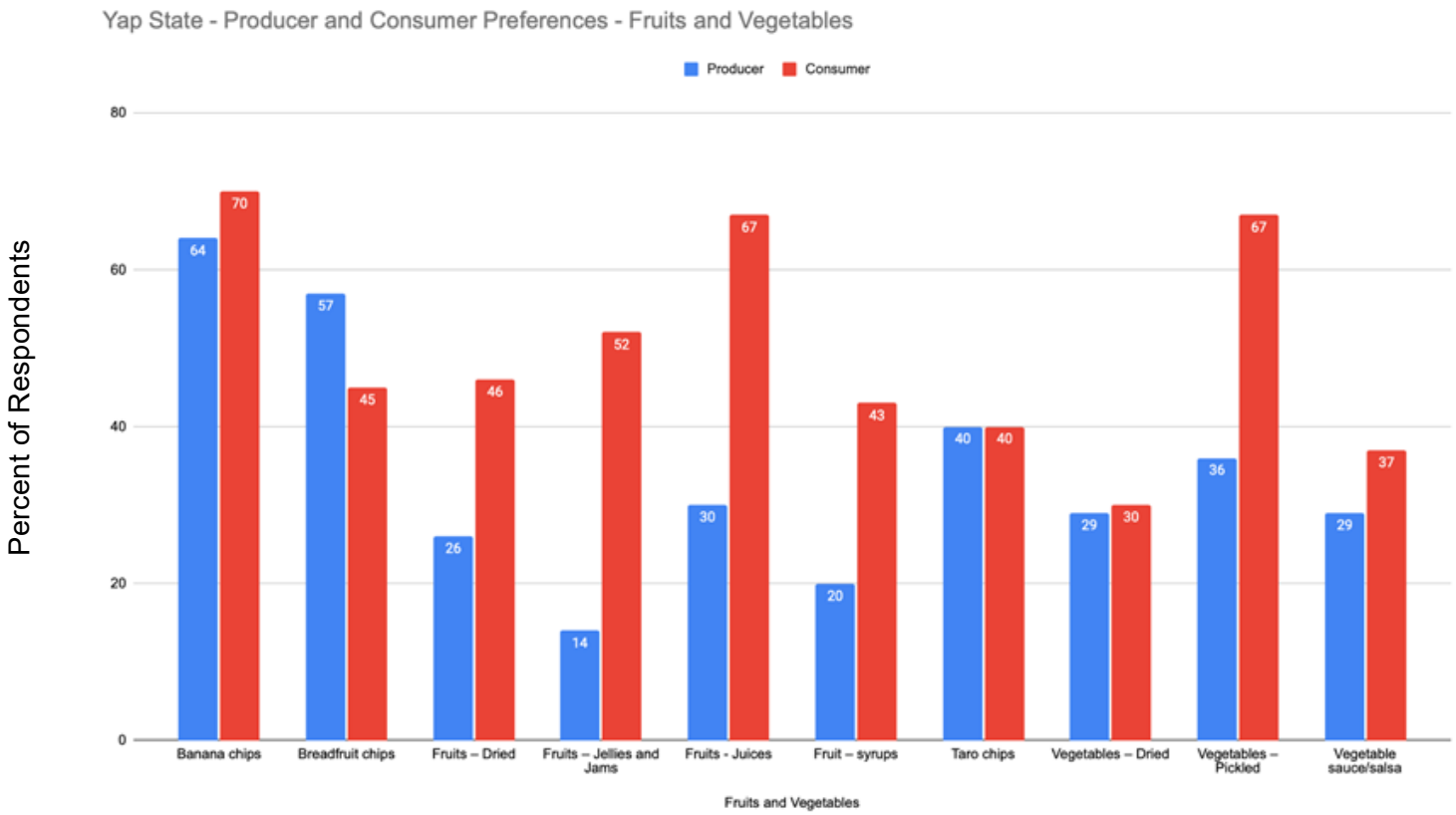
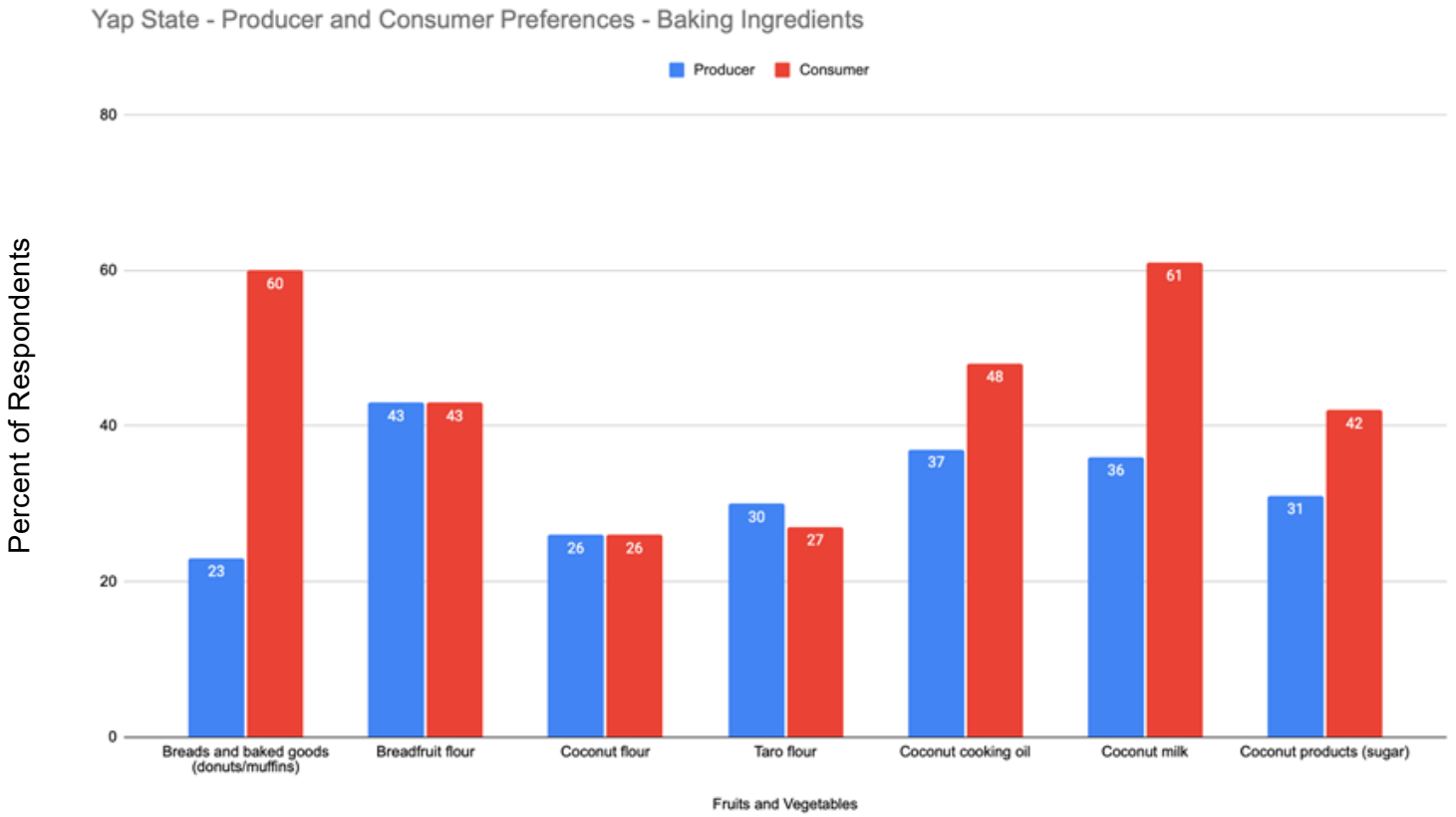
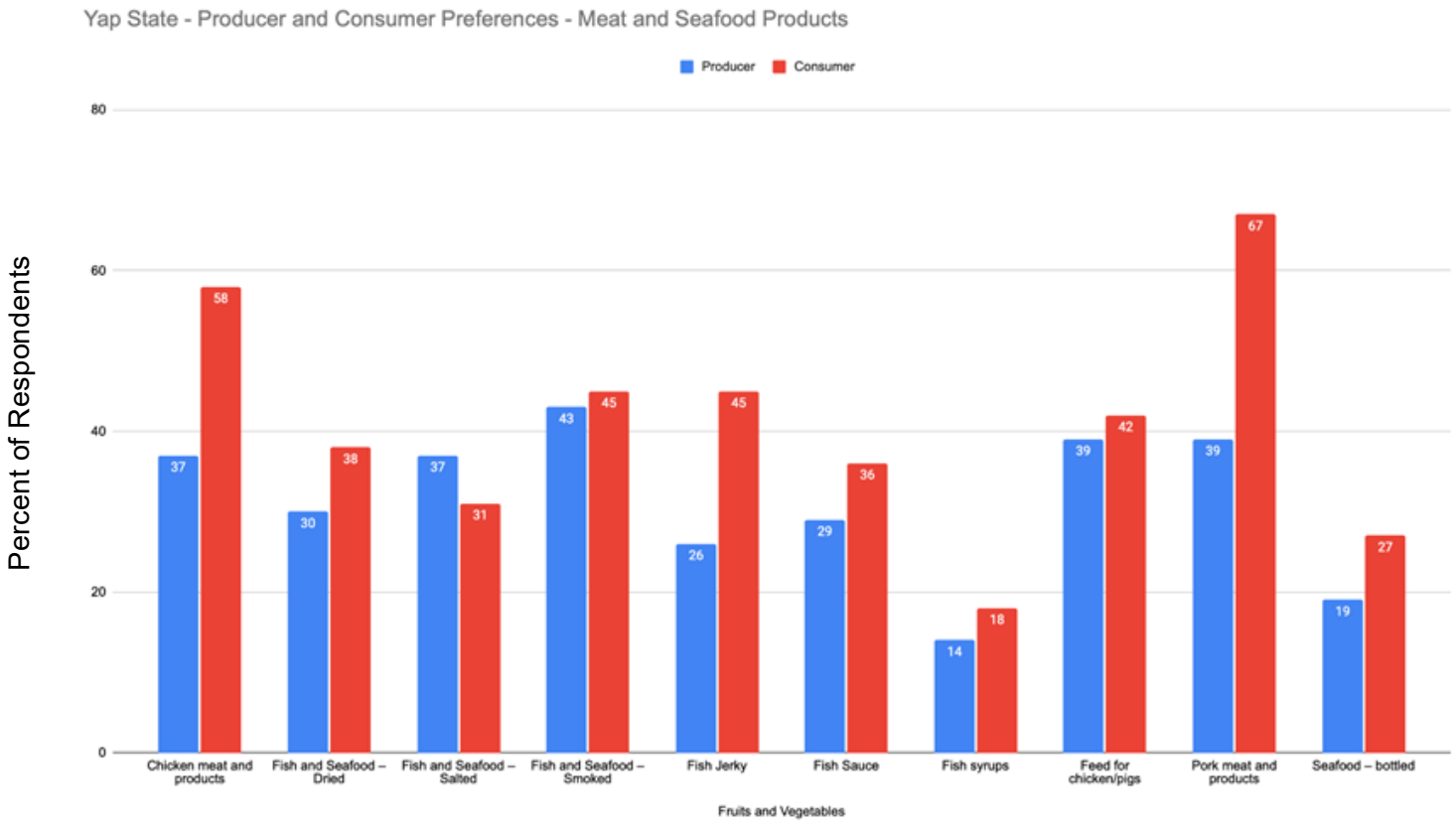
Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
General and Combined
Stakeholders

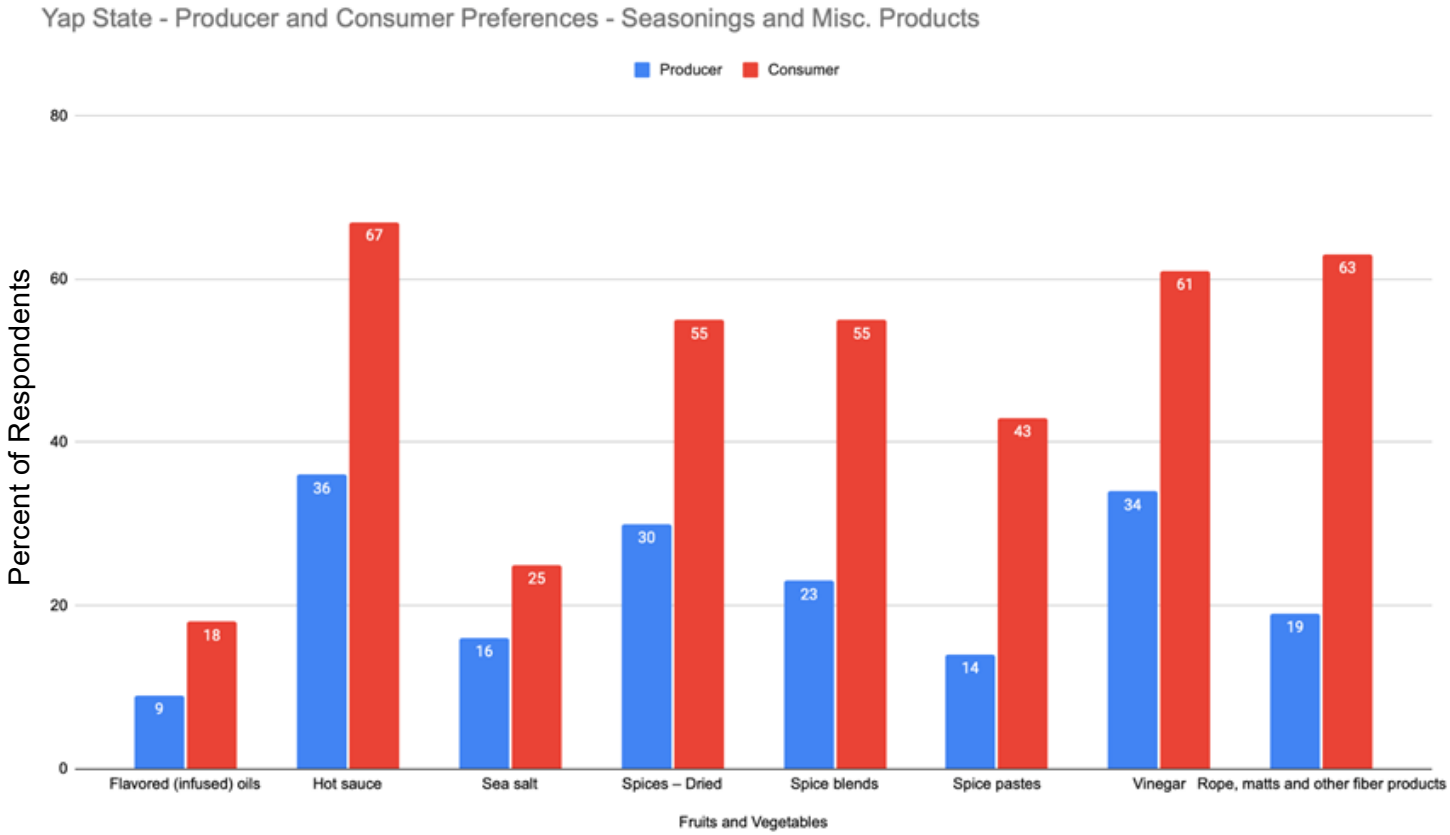

Yap Farming Families: Would you be interested in consuming on a daily basis more... (GCF Baseline)
100
75
50
25
0
Percentage
99
97
92
97
98
...locally sourced seafood and fish if they were more available and affordable?
...locally sourced meat and meat products if they were more available and affordable?
...locally produced coconut milk products daily if they were more available and affordable?
...locally produced vegetables daily if they were more available and affordable?
...locally produced fruits daily if they were more available and affordable?
Would you be interested in consuming on a daily basis more...


Yap Farming Families: Would you be interested in replacing... (GCF Baseline)
Percent of Respondents
80
60
40
20
0
74
67
...imported rice with local starch crops such as taro and breadfruit if the are more available and affordable?
...imported milk products with coconut milk products for cooking?

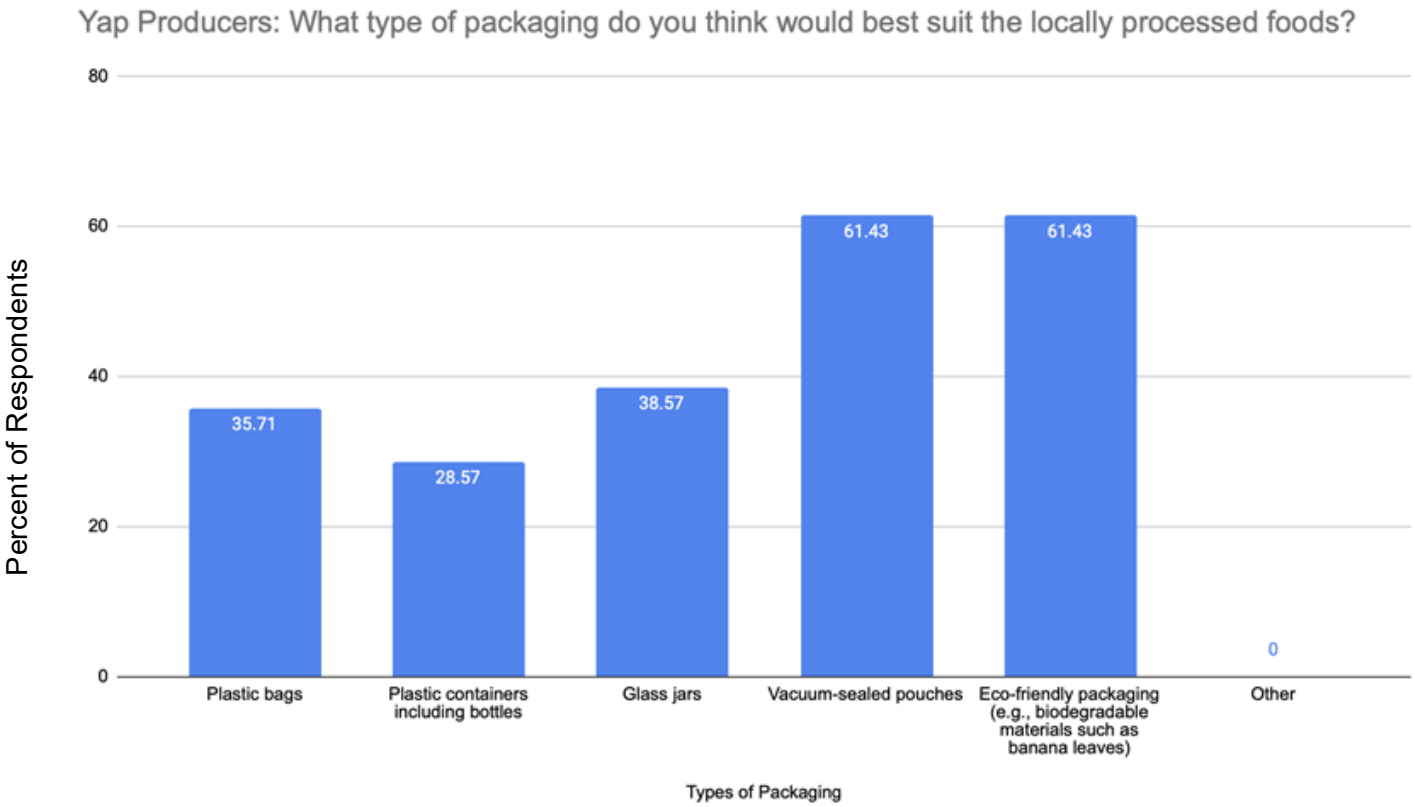

Yap State - Producer and Consumer Preferences - Fruits and Vegetables
Producer
Consumer
Percent of Respondents
80
60
40
20
0
64
70
57
45
26
46
14
52
30
67
20
43
40
40
29
30
36
67
29
37
Banana chips
Breadfruit chips
Fruits – Dried
Fruits – Jellies and Jams
Fruits - Juices
Fruit – syrups
Taro chips
Vegetables – Dried
Vegetables – Pickled
Vegetable sauce/salsa
Fruits and Vegetables

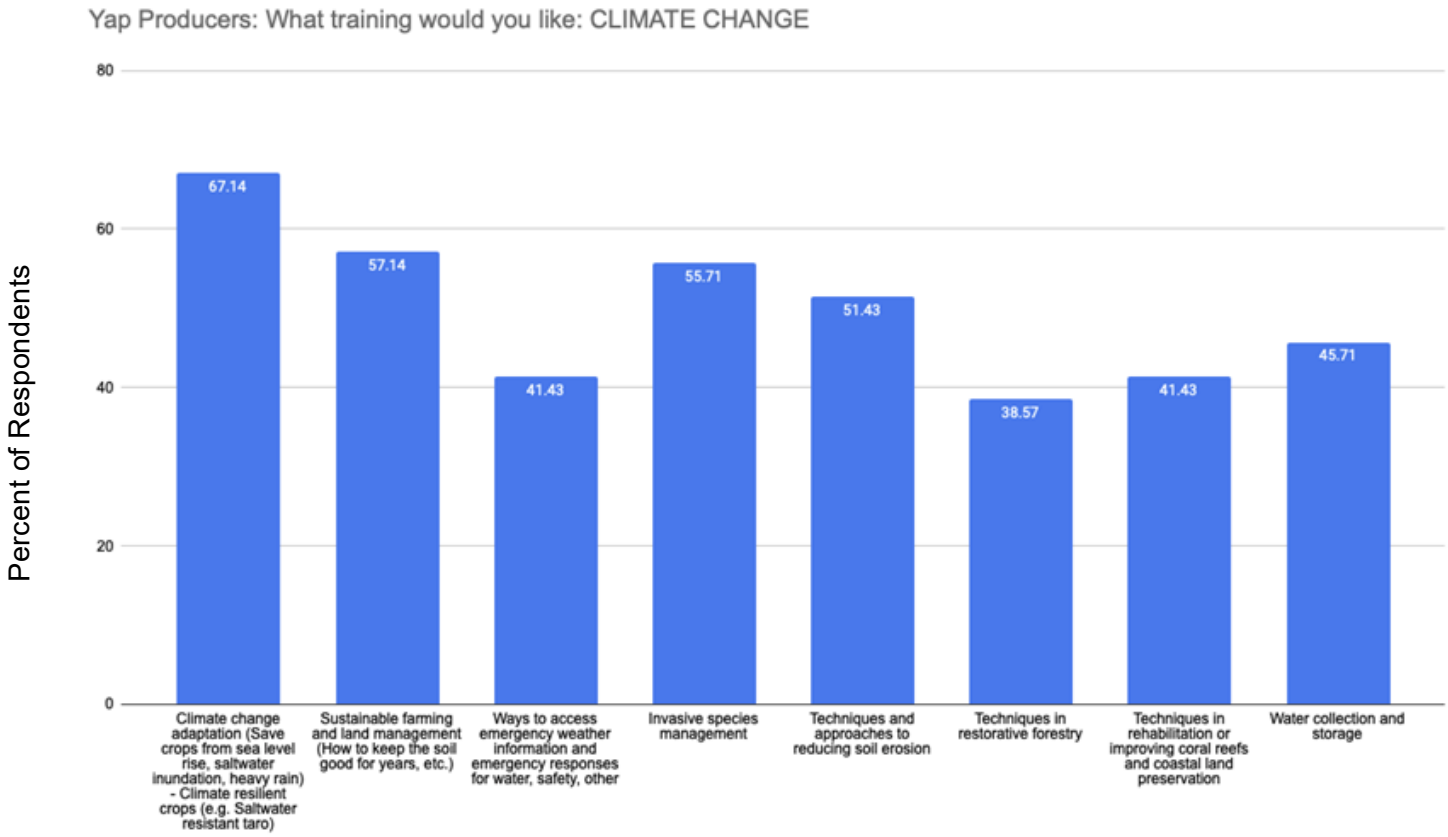

Yap State - Producer and Consumer Preferences - Baking Ingredients
Producer
Consumer
Percent of Respondents
80
60
40
20
0
23
60
43
43
26
26
30
27
37
48
36
61
31
42
Breads and baked goods (donuts/muffins)
Breadfruit flour
Coconut flour
Taro flour
Coconut cooking oil
Coconut milk
Coconut products (sugar)
Fruits and Vegetables

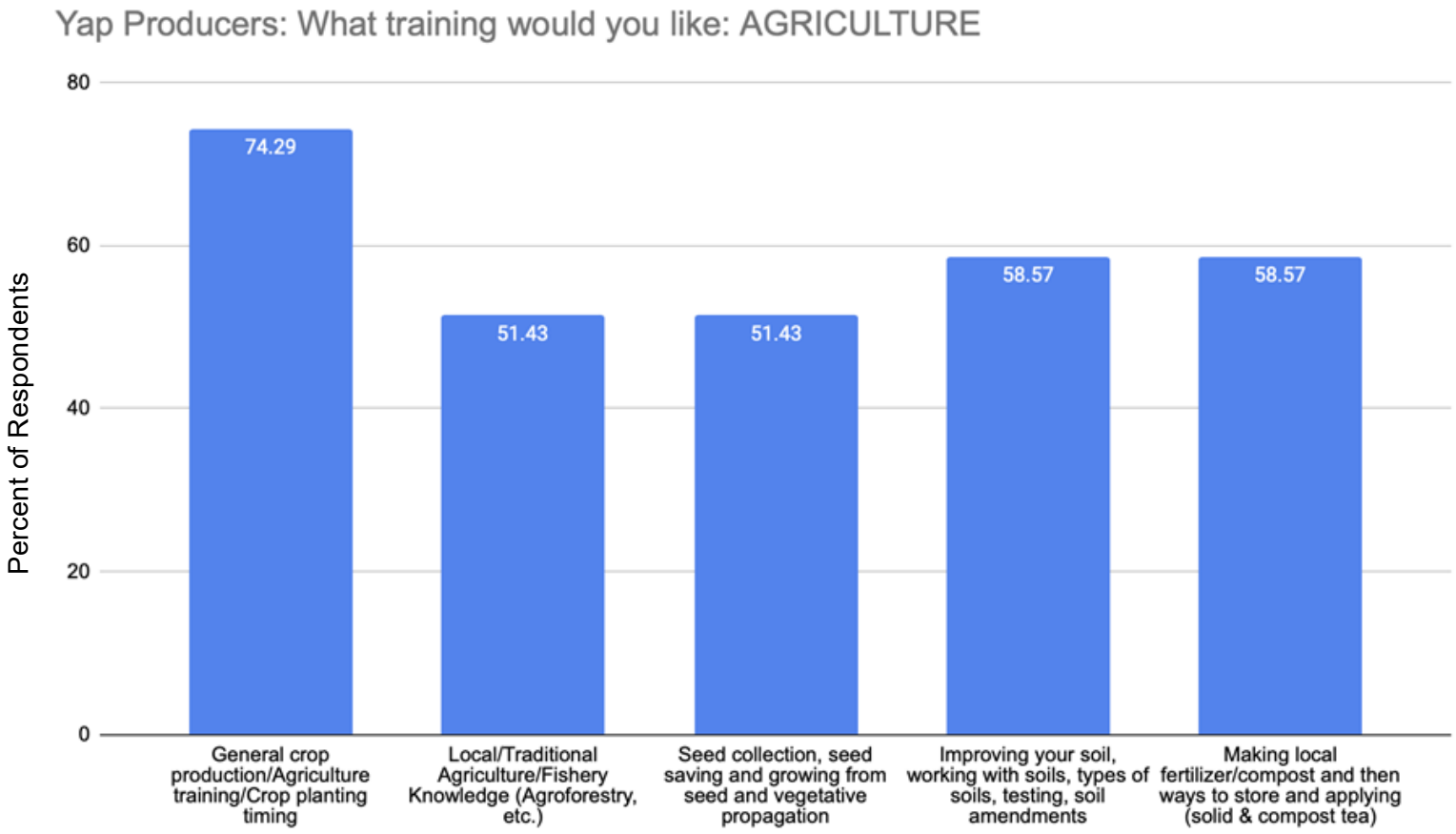

Yap State - Producer and Consumer Preferences - Meat and Seafood Products
Producer
Consumer
Percent of Respondents
80
60
40
20
0
37
58
30
38
37
31
43
45
26
45
29
36
14
18
39
42
39
67
19
27
Chicken meat and products
Fish and Seafood – Dried
Fish and Seafood – Salted
Fish and Seafood – Smoked
Fish Jerky
Fish Sauce
Fish syrups
Feed for chicken/pigs
Pork meat and products
Seafood – bottled
Fruits and Vegetables


Yap State - Producer and Consumer Preferences - Seasonings and Misc. Products
Producer
Consumer
Percent of Respondents
80
60
40
20
0
9
18
36
67
16
25
30
55
23
55
14
43
34
61
19
63
Flavored (infused) oils
Hot sauce
Sea salt
Spices – Dried
Spice blends
Spice pastes
Vinegar
Rope, matts and other fiber products
Fruits and Vegetables

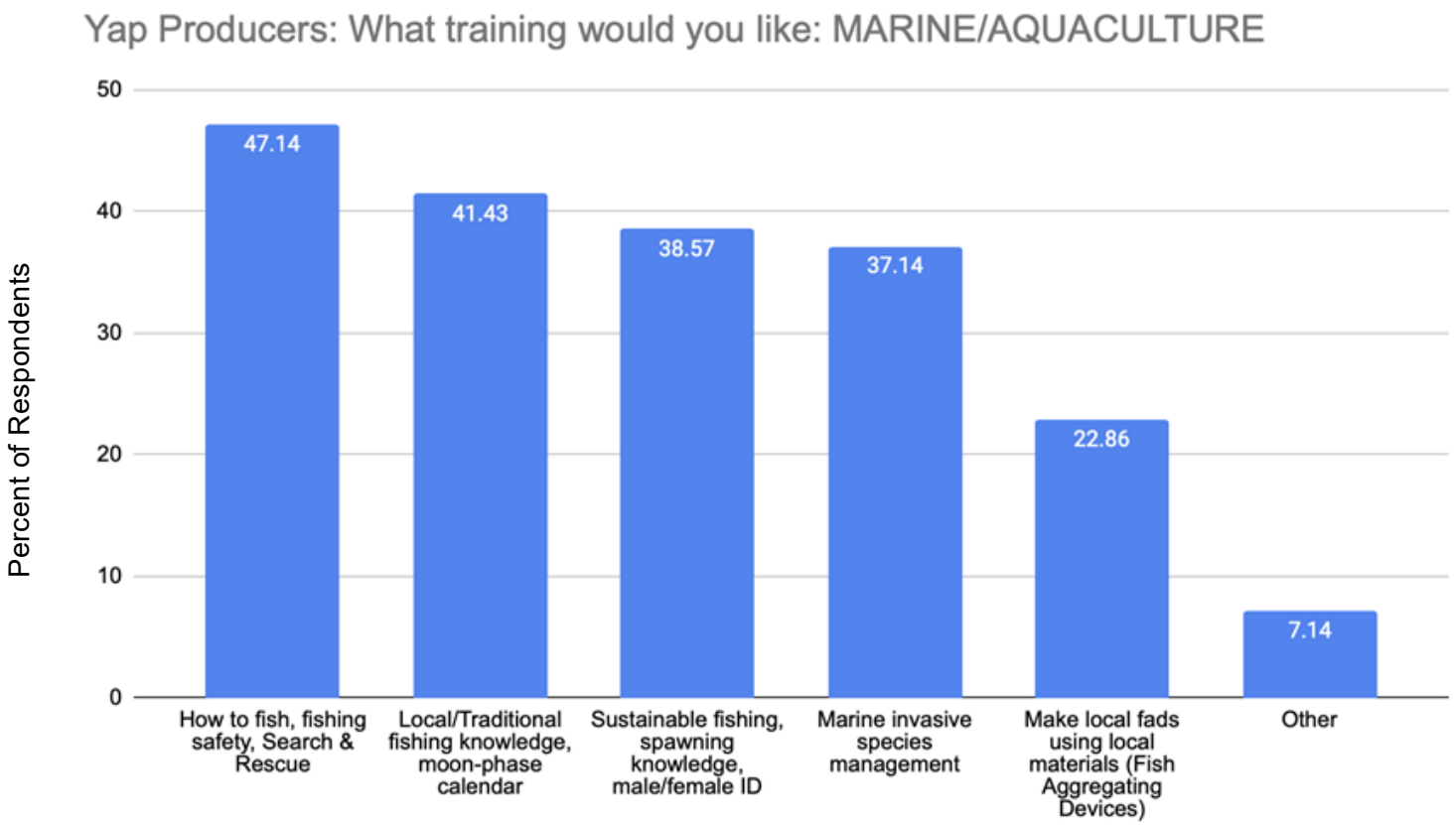
Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
Producers

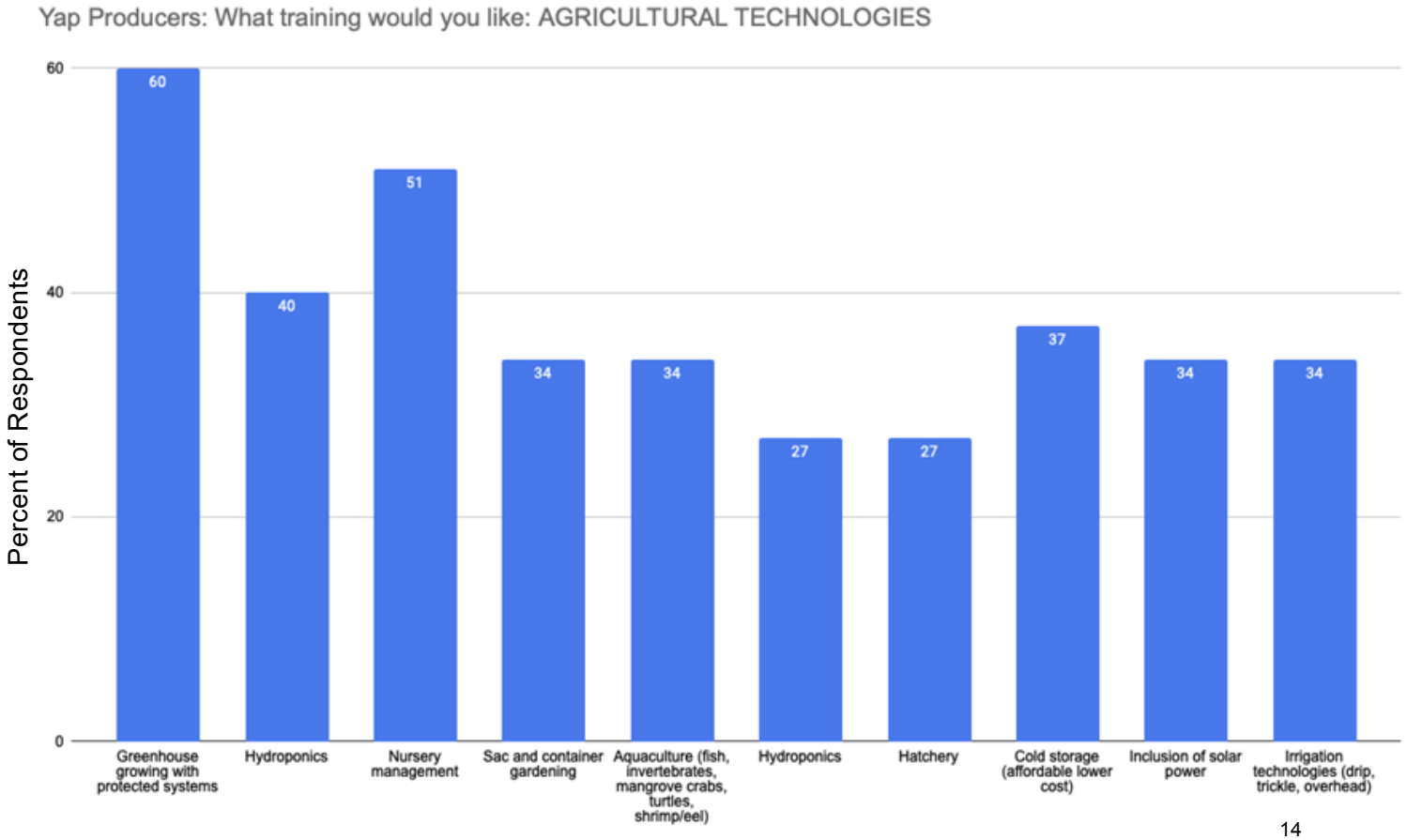

Yap Producers: What type of packaging do you think would best suit the locally processed foods?
Percent of Respondents
80
60
40
20
0
35.71
28.57
38.57
61.43
61.43
0
Plastic bags
Plastic containers including bottles
Glass jars
Vacuum-sealed pouches
Eco-friendly packaging (e.g., biodegradable materials such as banana leaves)
Other
Types of Packaging

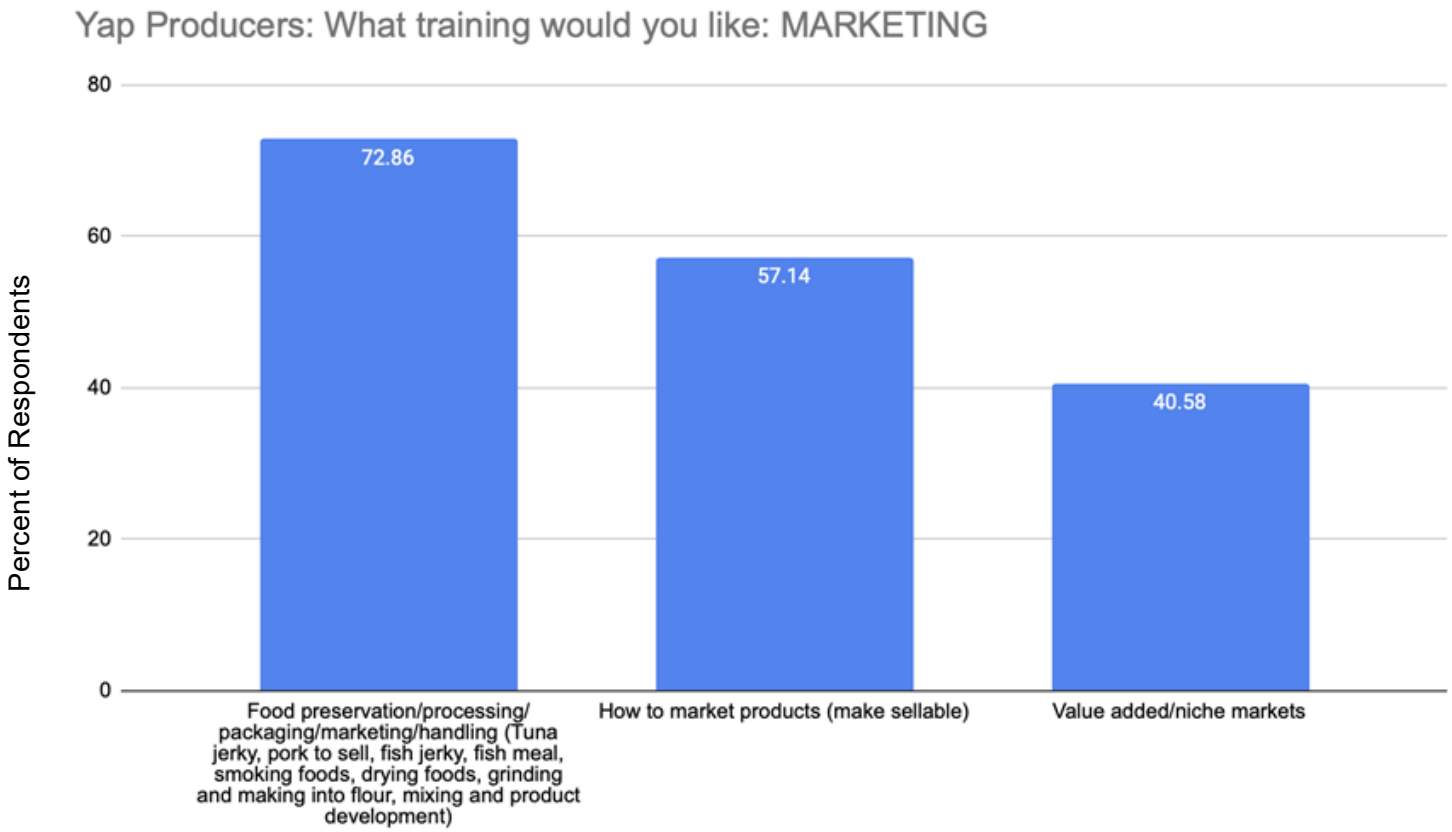

Yap Producers: What training would you like: CLIMATE CHANGE
Percent of Respondents
80
60
40
20
0
67.14
57.14
41.43
55.71
51.43
38.57
41.43
45.71
Climate change adaptation (Save crops from sea level rise, saltwater inundation, heavy rain) - Climate resilient crops (e.g. Saltwater resistant taro)
Sustainable farming and land management (How to keep the soil good for years, etc.)
Ways to access emergency weather information and emergency responses for water, safety, other
Invasive species management
Techniques and approaches to reducing soil erosion
Techniques in restorative forestry
Techniques in rehabilitation or improving coral reefs and coastal land preservation
Water collection and storage

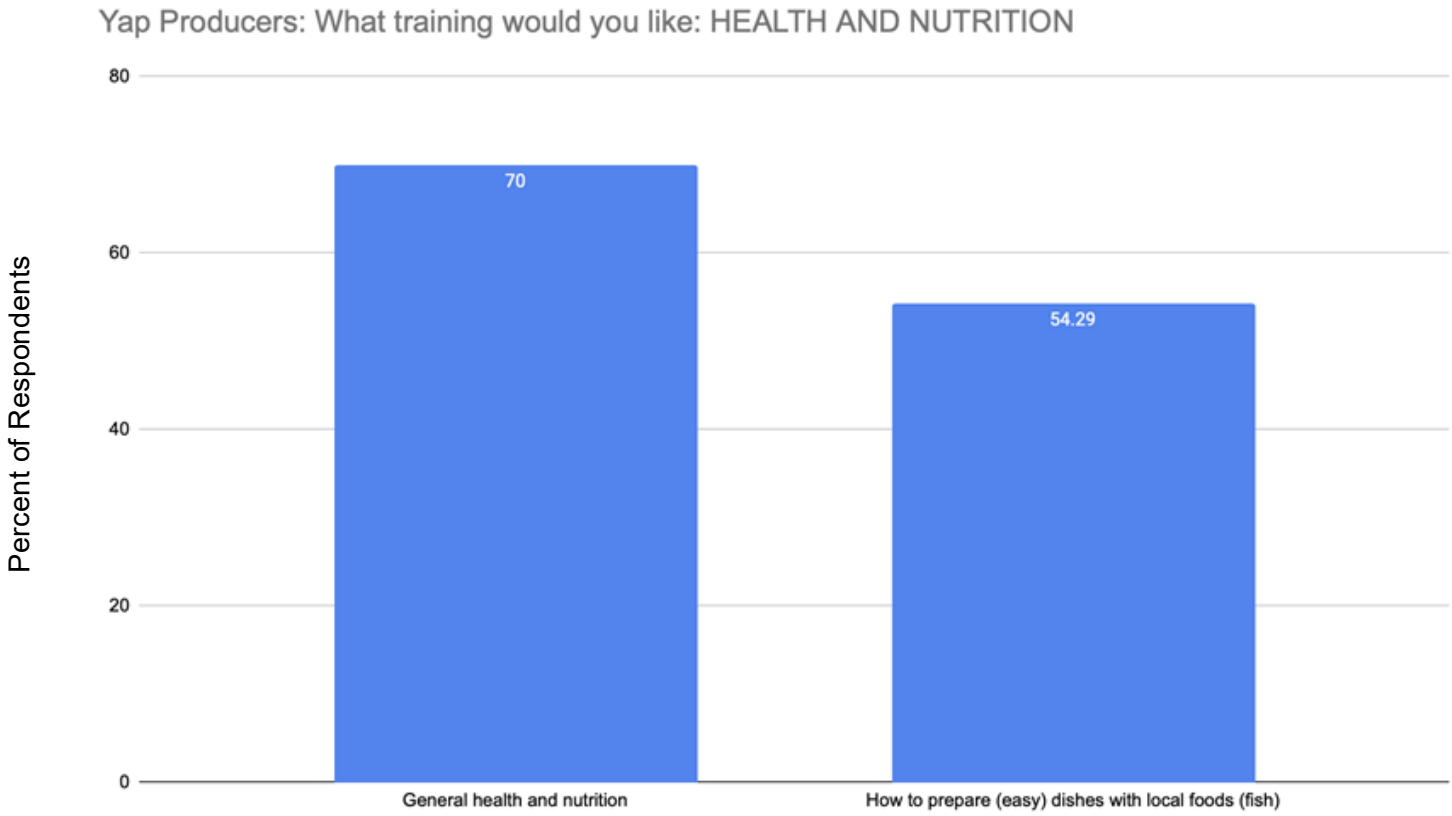

Yap Producers: What training would you like: AGRICULTURE
Percent of Respondents
80
60
40
20
0
74.29
51.43
51.43
58.57
58.57
General crop production/Agriculture training/Crop planting timing
Local/Traditional Agriculture/Fishery Knowledge (Agroforestry, etc.)
Seed collection, seed saving and growing from seed and vegetative propagation
Improving your soil, working with soils, types of soils, testing, soil amendments
Making local fertilizer/compost and then ways to store and applying (solid & compost tea)


Yap Producers: What training would you like: LIVESTOCK
Percent of Respondents
80
60
40
20
0
47.14
62.86
34.29
4.29
General livestock management
Make local pig/chicken feed
How to use wood chipper
Other

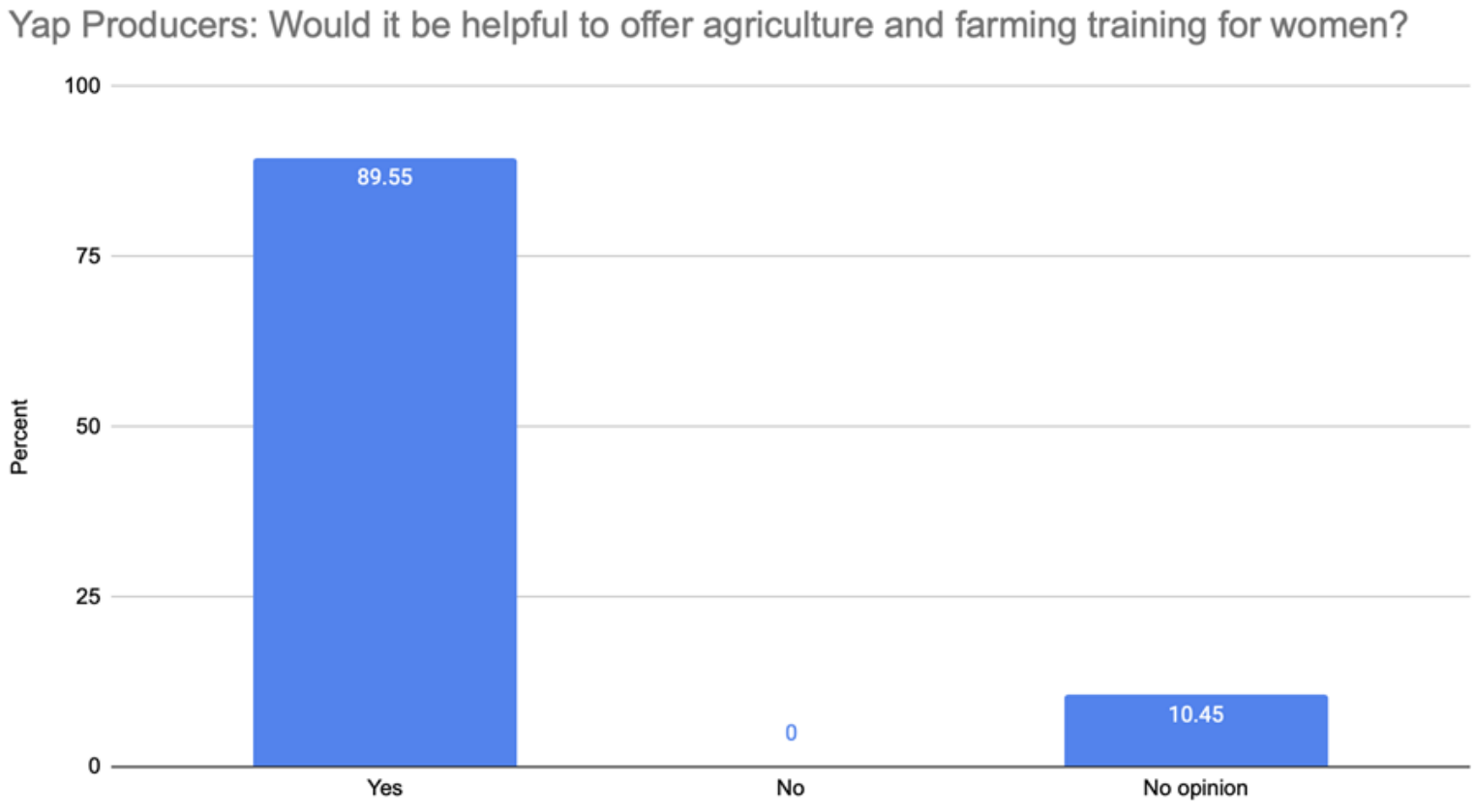

Yap Producers: What training would you like: MARINE/AQUACULTURE
Percent of Respondents
50
40
30
20
10
0
47.14
41.43
38.57
37.14
22.86
7.14
How to fish, fishing safety, Search & Rescue
Local/Traditional fishing knowledge, moon-phase calendar
Sustainable fishing, spawning knowledge, male/female ID
Marine invasive species management
Make local fads using local materials (Fish Aggregating Devices)
Other


Yap Producers: What training would you like: AGRICULTURAL TECHNOLOGIES
Percent of Respondents
60
40
20
0
60
40
51
34
34
27
27
37
34
34
Greenhouse growing with protected systems
Hydroponics
Nursery management
Sac and container gardening
Aquaculture (fish, invertebrates, mangrove crabs, turtles, shrimp/eel)
Hydroponics
Hatchery
Cold storage (affordable lower cost)
Inclusion of solar power
Irrigation technologies (drip, trickle, overhead)

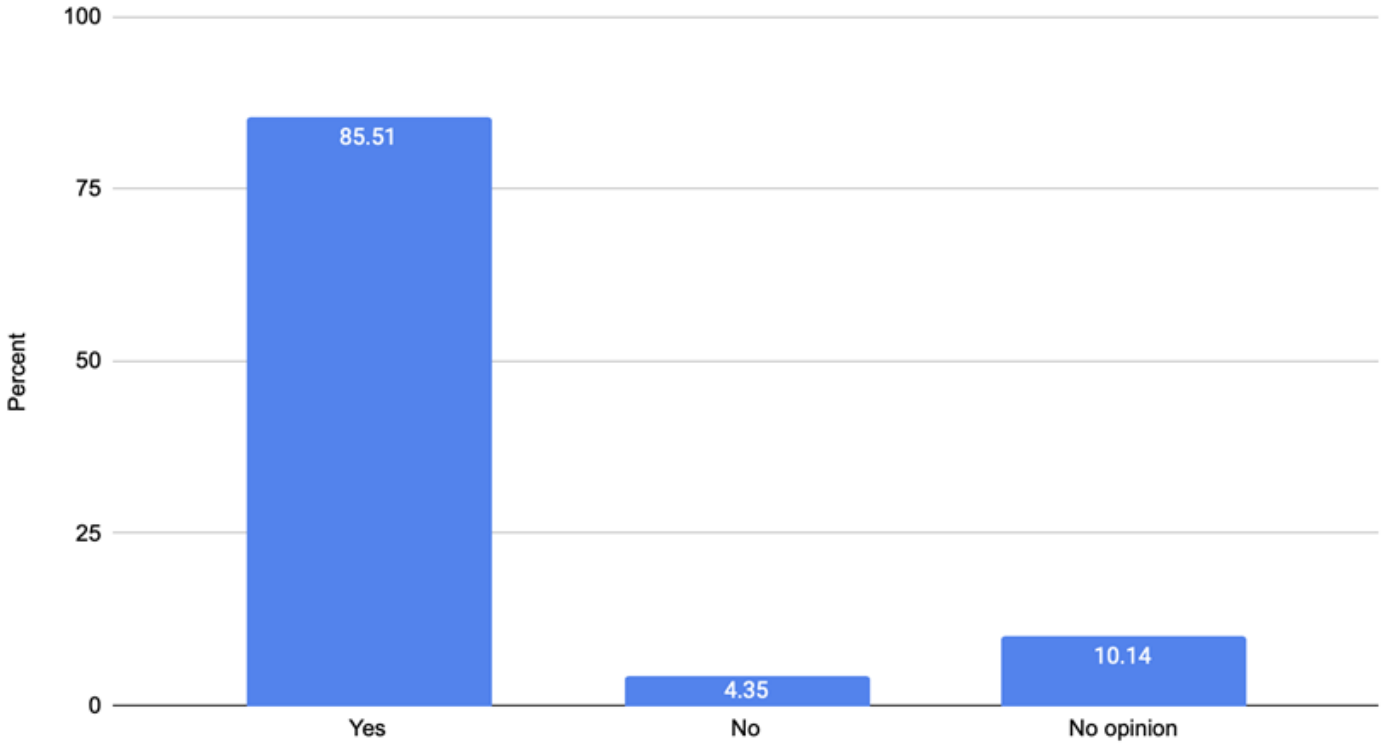

Yap Producers: What training would you like: MARKETING
Percent of Respondents
80
60
40
20
0
72.86
57.14
40.58
Food preservation/processing/ packaging/marketing/handling (Tuna jerky, pork to sell, fish jerky, fish meal, smoking foods, drying foods, grinding and making into flour, mixing and product development)
How to market products (make sellable)
Value added/niche markets


Yap Producers: What training would you like: HEALTH AND NUTRITION
Percent of Respondents
80
60
40
20
0
70
54.29
General health and nutrition
How to prepare (easy) dishes with local foods (fish)

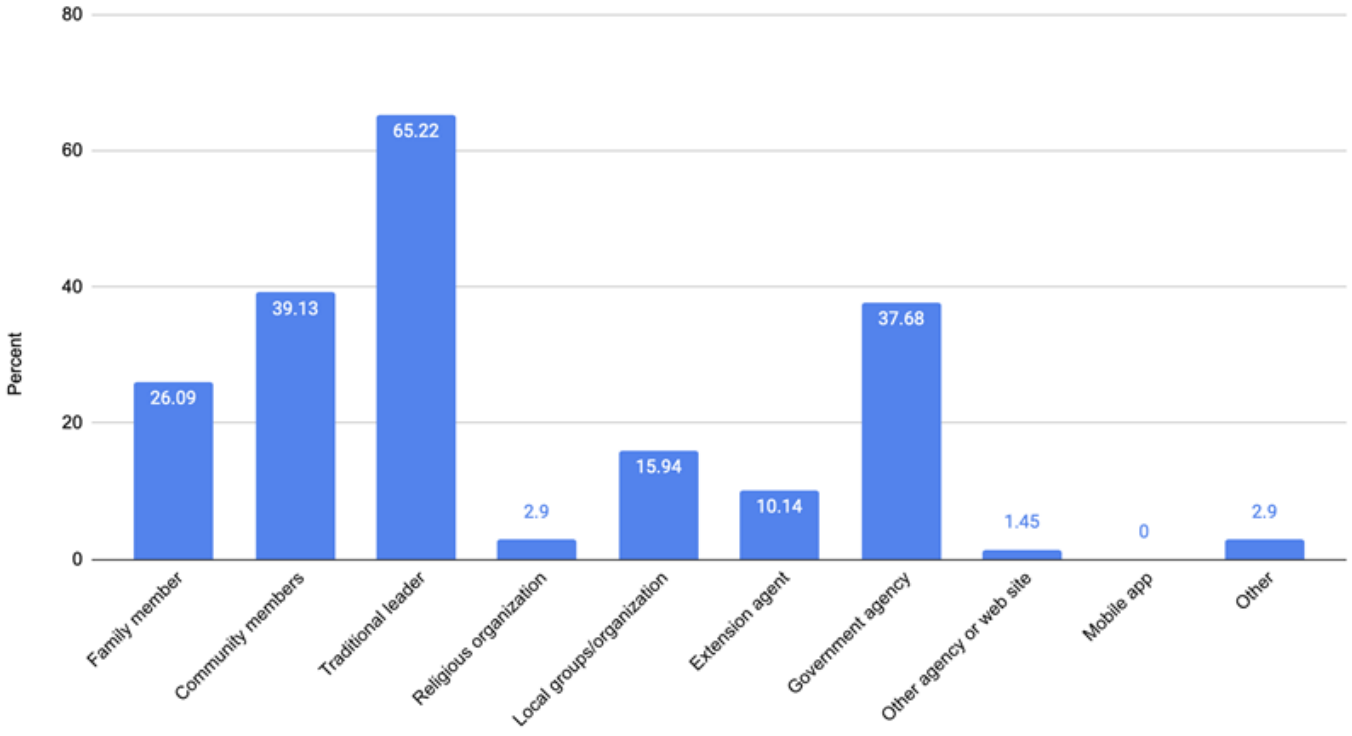

Yap Producers: What training would you like: BUSINESS MANAGEMENT
Percent of Respondents
80
60
40
20
0
65.71
57.14
41.43
48.57
40
7.14
How to run a business, management, leadership, business plan
Financing/financial management including record keeping and accounting
How to prepare application for a loan or investment
How to inform others of your business and ways to generate business
Training on applicable laws/regulations
Other

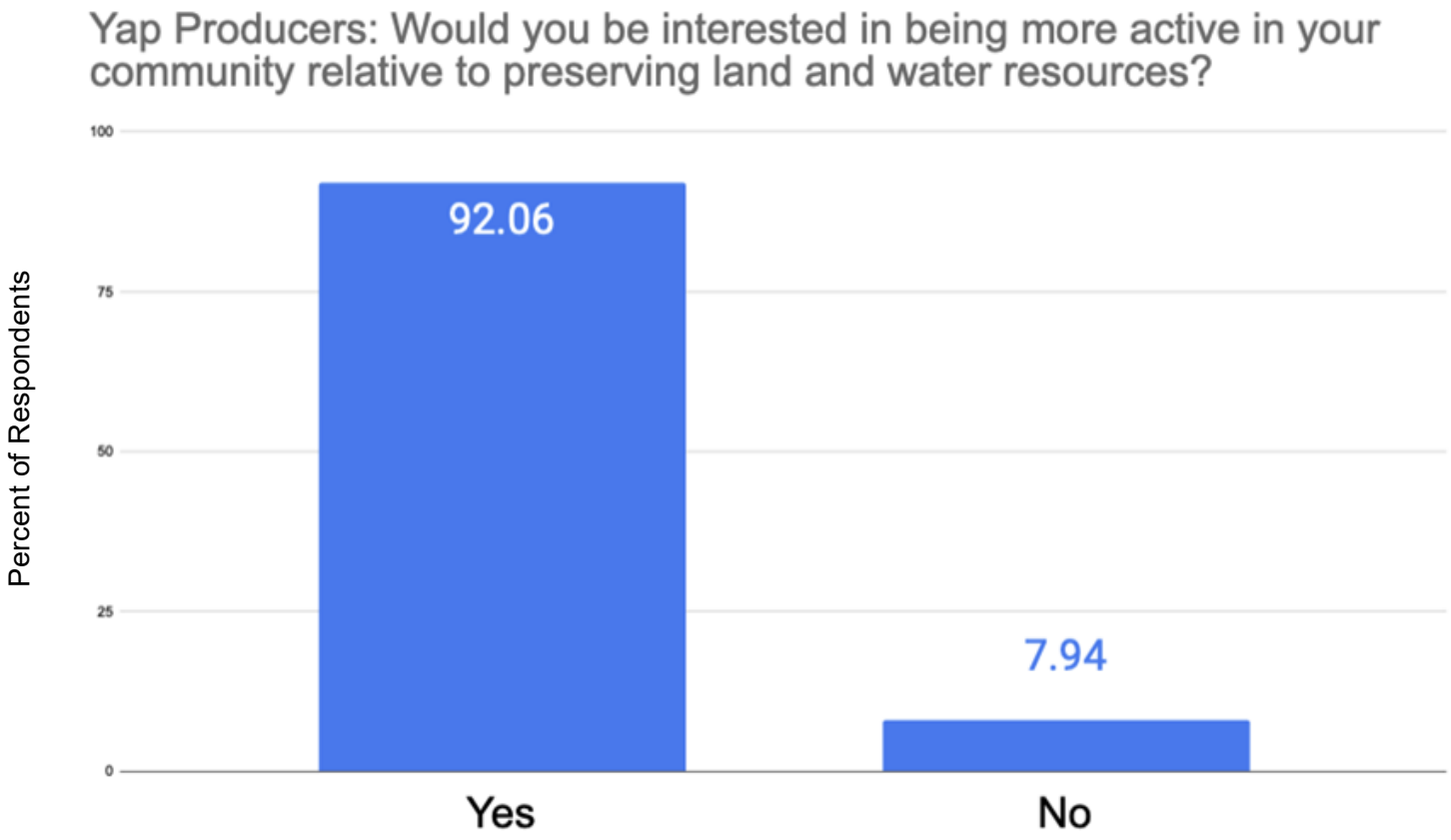

Yap Producers: Would it be helpful to offer agriculture and farming training for women?
Percent
100
75
50
25
0
89.55
0
10.45
Yes
No
No opinion

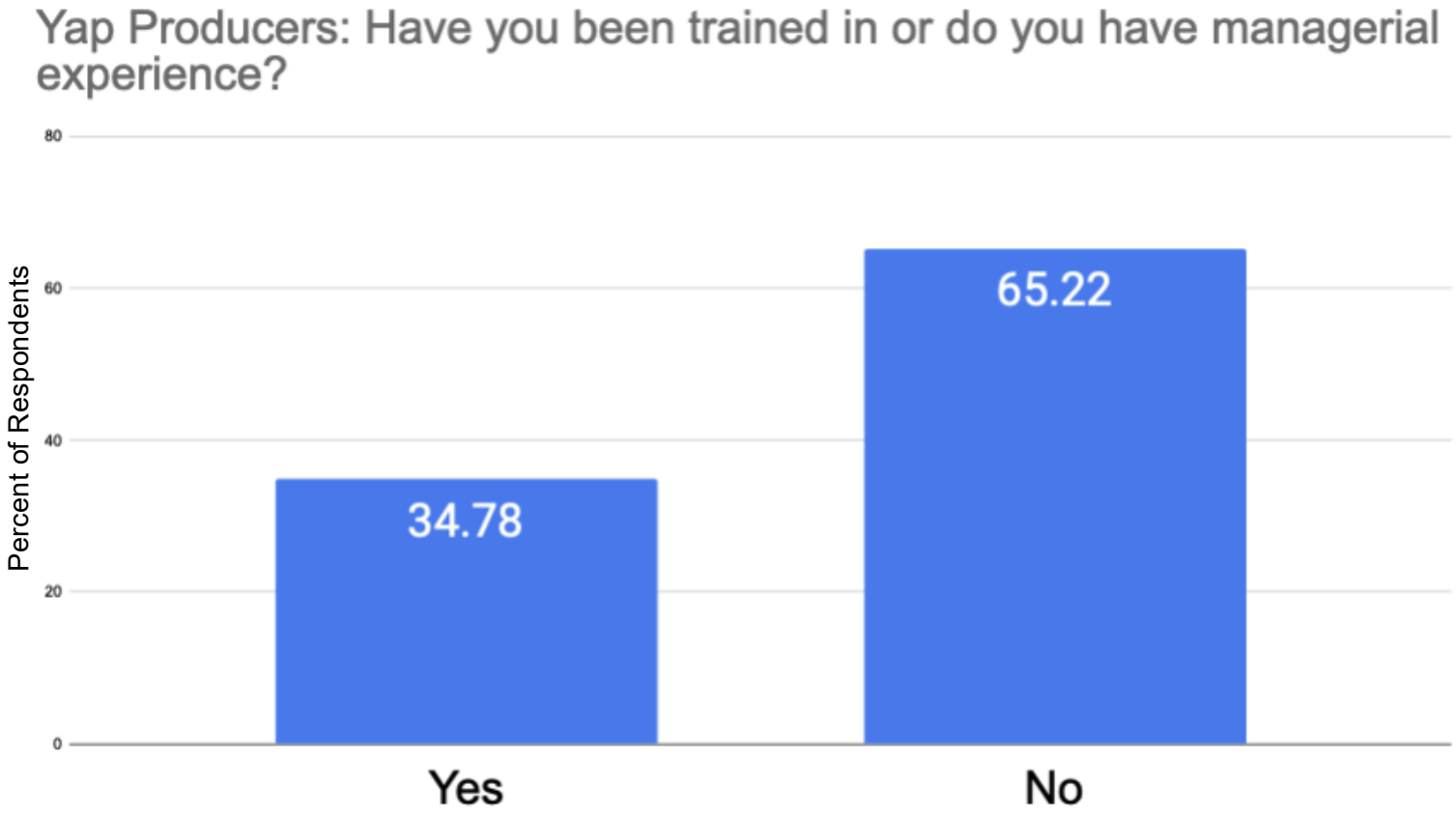
Yap Producers: Would it be helpful to offer agribusiness training for women?



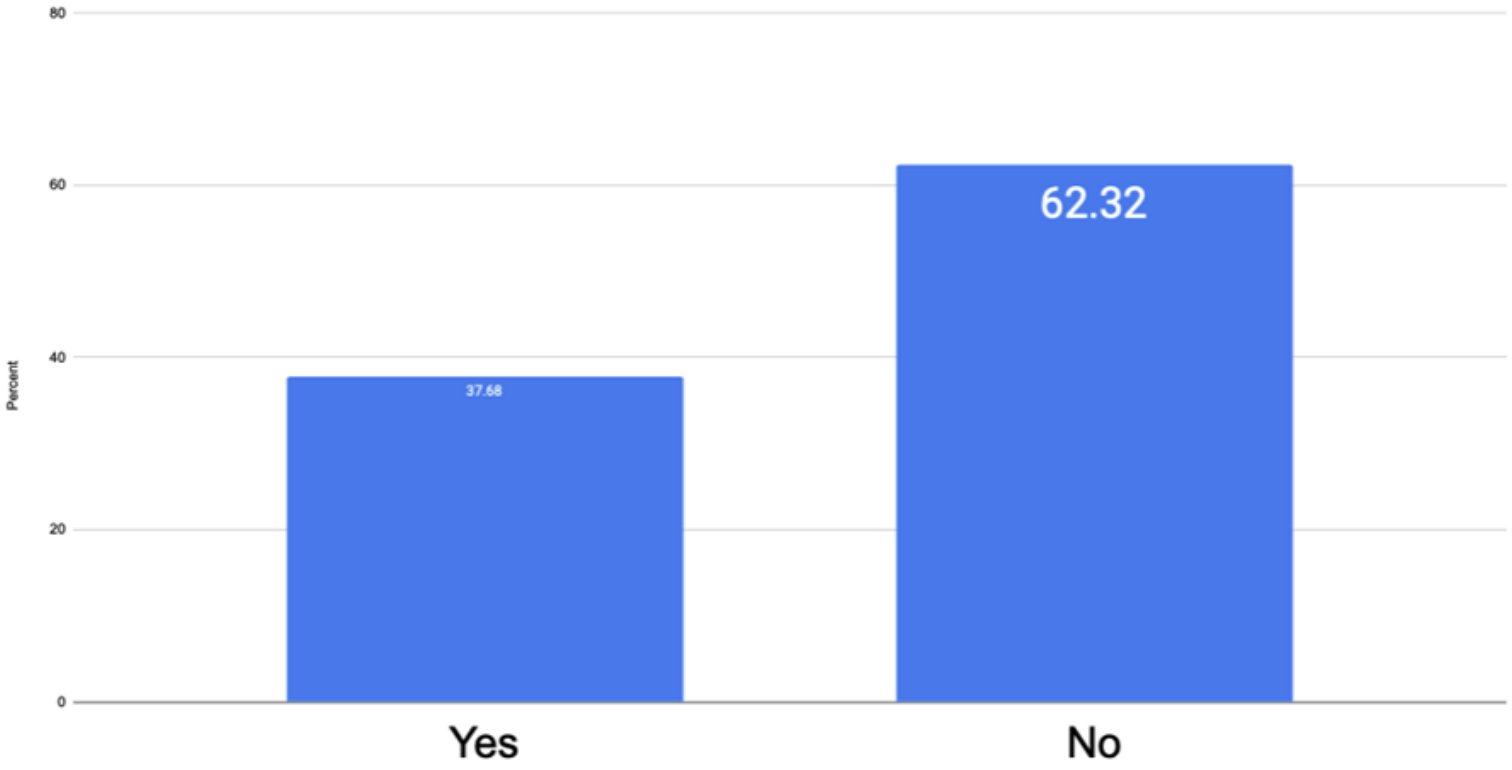
Yap Producers: If you need to communicate with the government leaders responsible for making laws/policies, where would you go?



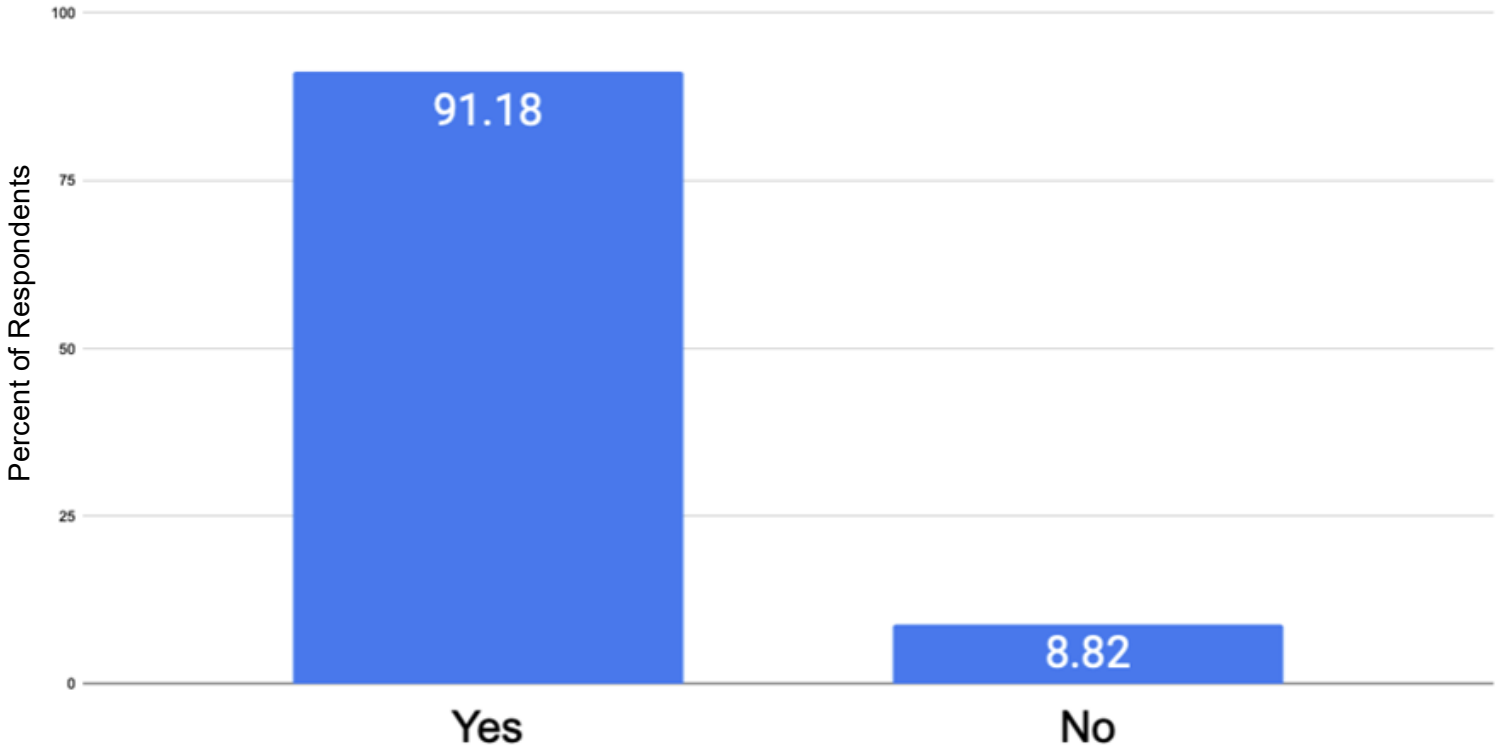

Yap Producers: Would you be interested in being more active in your community relative to preserving land and water resources?
Percent of Respondents
100
75
50
25
0
92.06
7.94
Yes
No

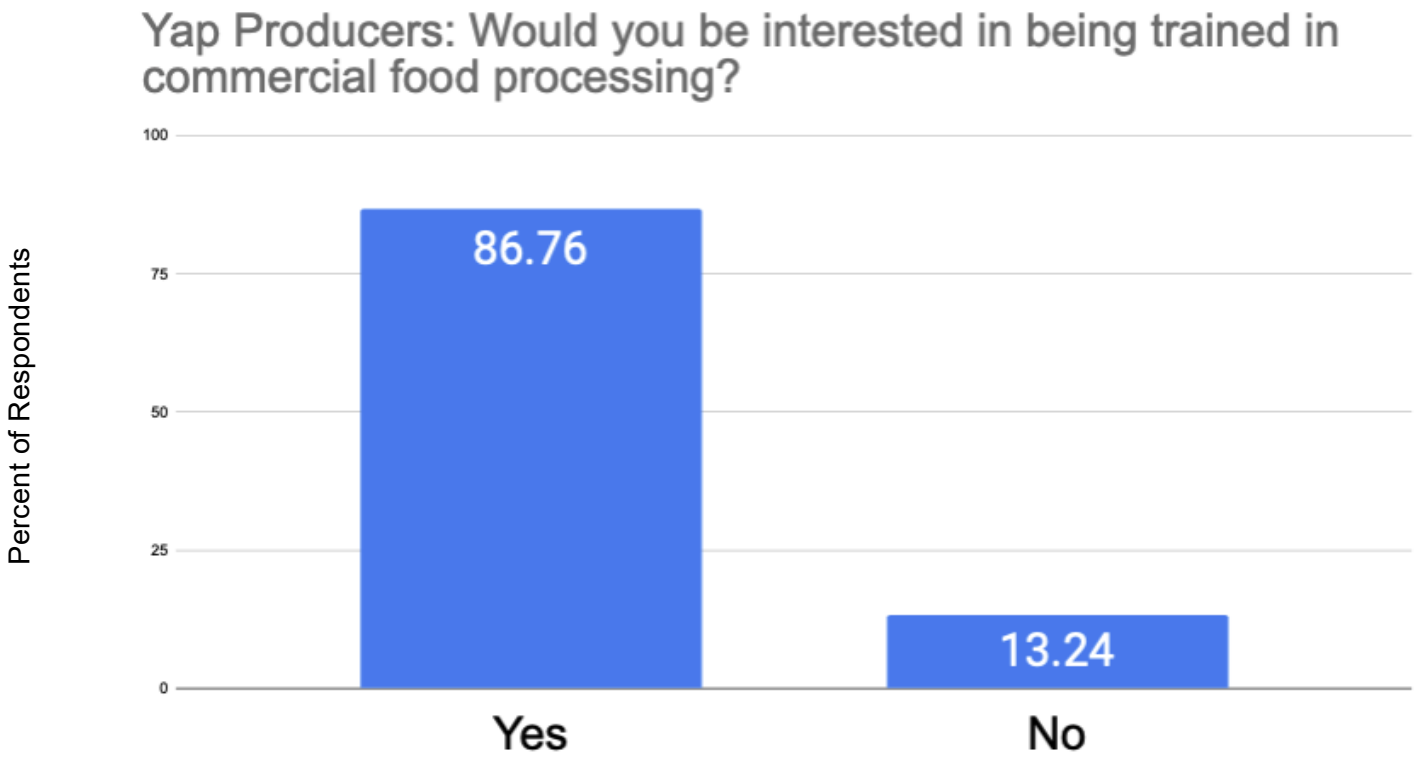

Yap Producers: Have you been trained in or do you have managerial experience?
Percent of Respondents
80
60
40
20
0
34.78
65.22
Yes
No

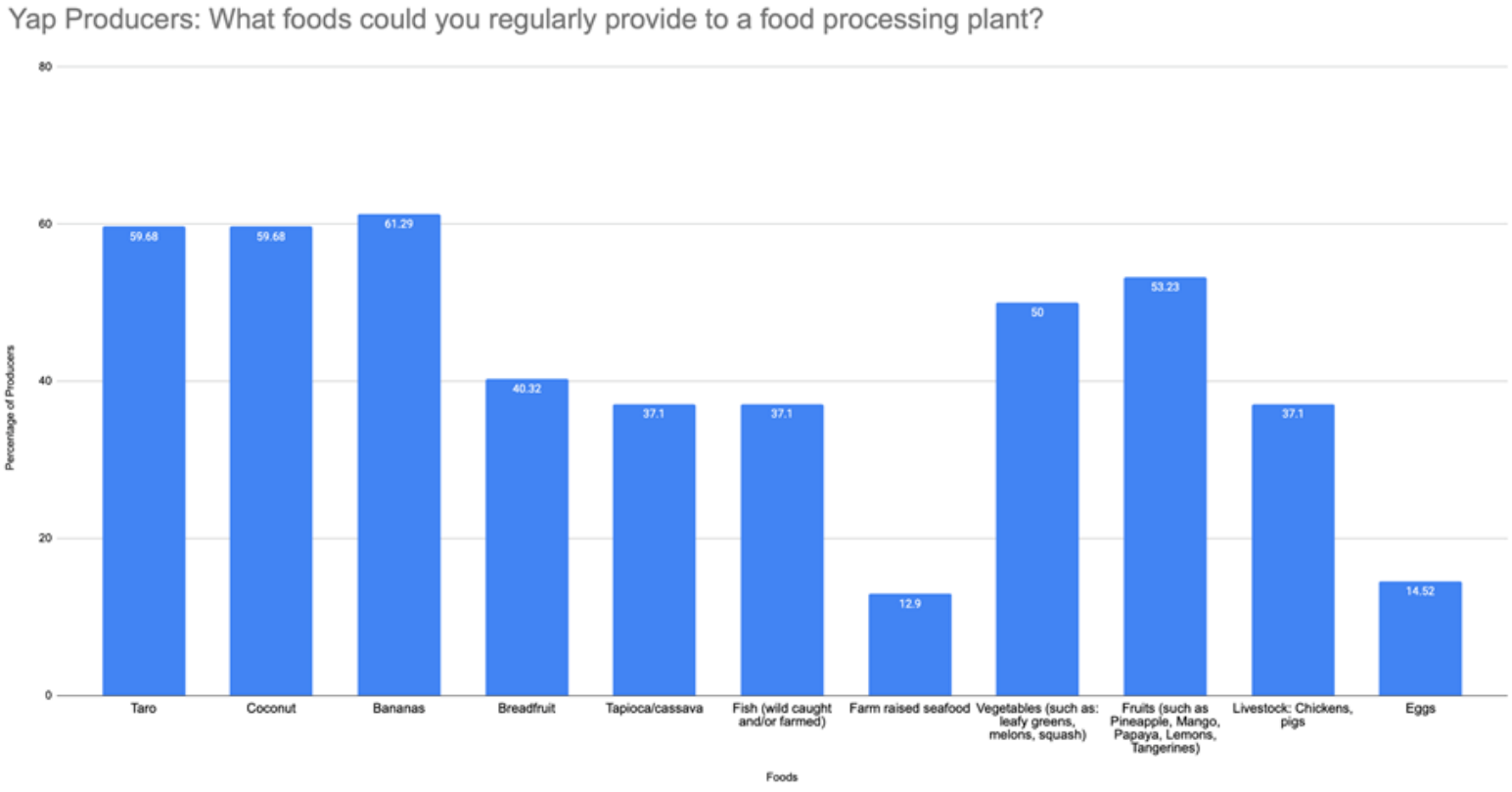
Yap Producers: Have you been trained in or do you have organizational experience?

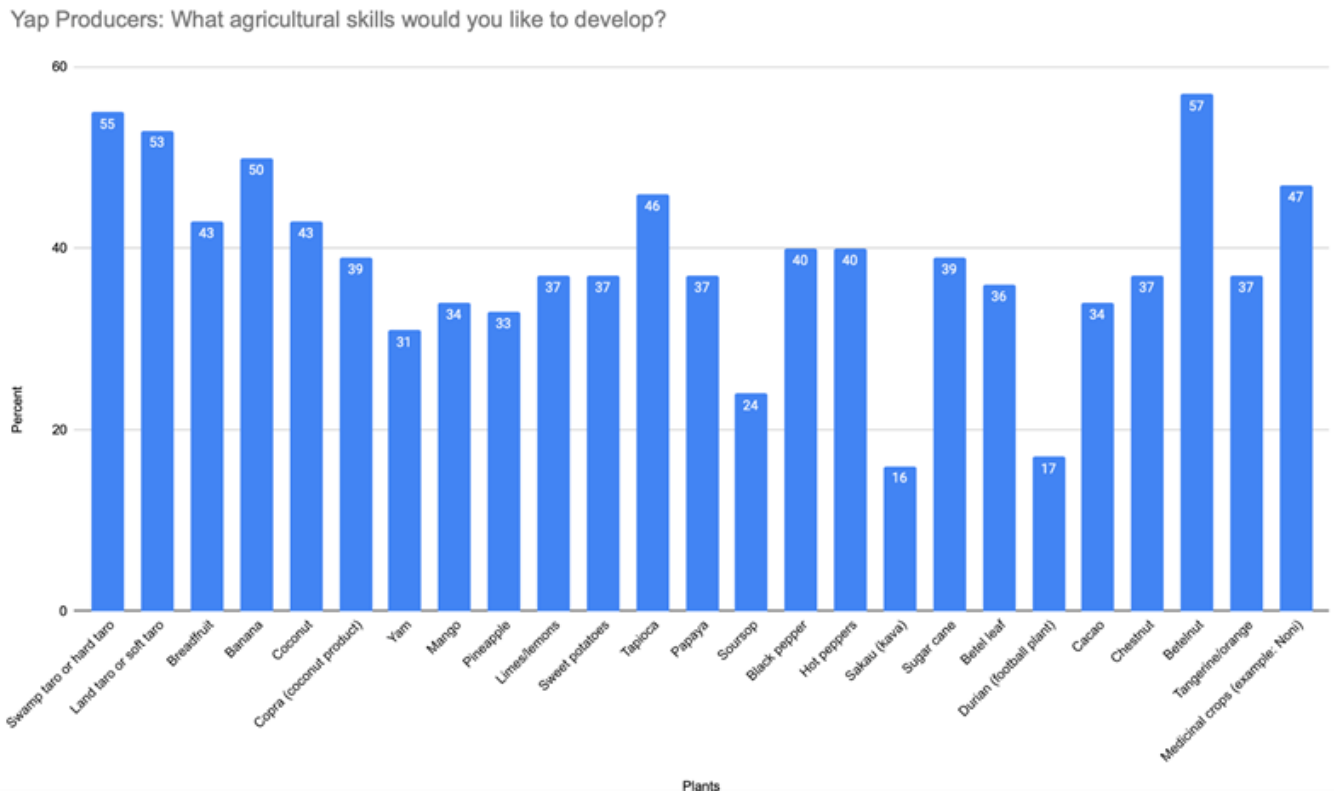


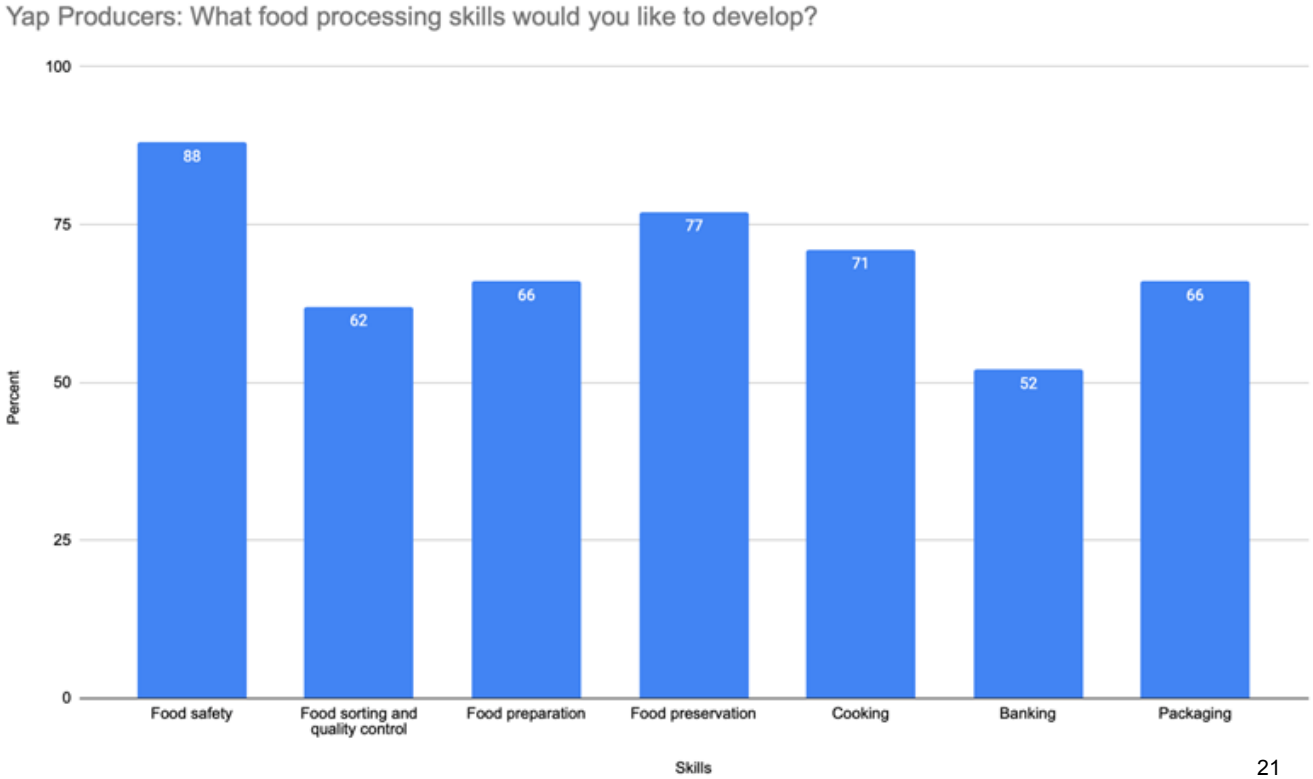
Yap Producers: Would you like any training to help you produce more food?



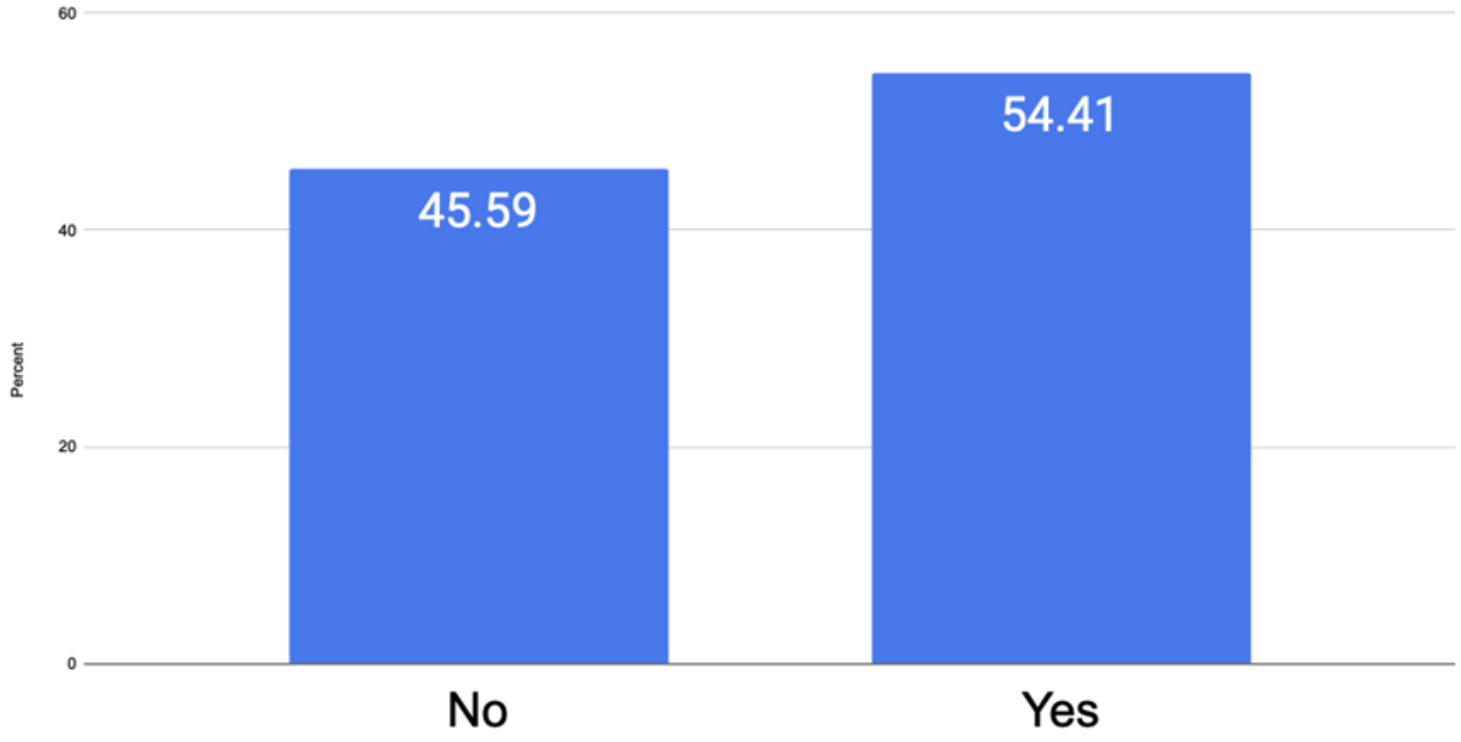

Yap Producers: Would you be interested in being trained in commercial food processing?
Percent of Respondents
100
75
50
25
0
86.76
13.24
Yes
No


Yap Producers: What foods could you regularly provide to a food processing plant?
Percentage of Producers
80
60
40
20
0
59.68
59.68
61.29
40.32
37.1
37.1
12.9
50
53.23
37.1
14.52
Taro
Coconut
Bananas
Breadfruit
Tapioca/cassava
Fish (wild caught and/or farmed)
Farm raised seafood
Vegetables (such as: leafy greens, melons, squash)
Fruits (such as Pineapple, Mango, Papaya, Lemons, Tangerines)
Livestock: Chickens, pigs
Eggs
Foods

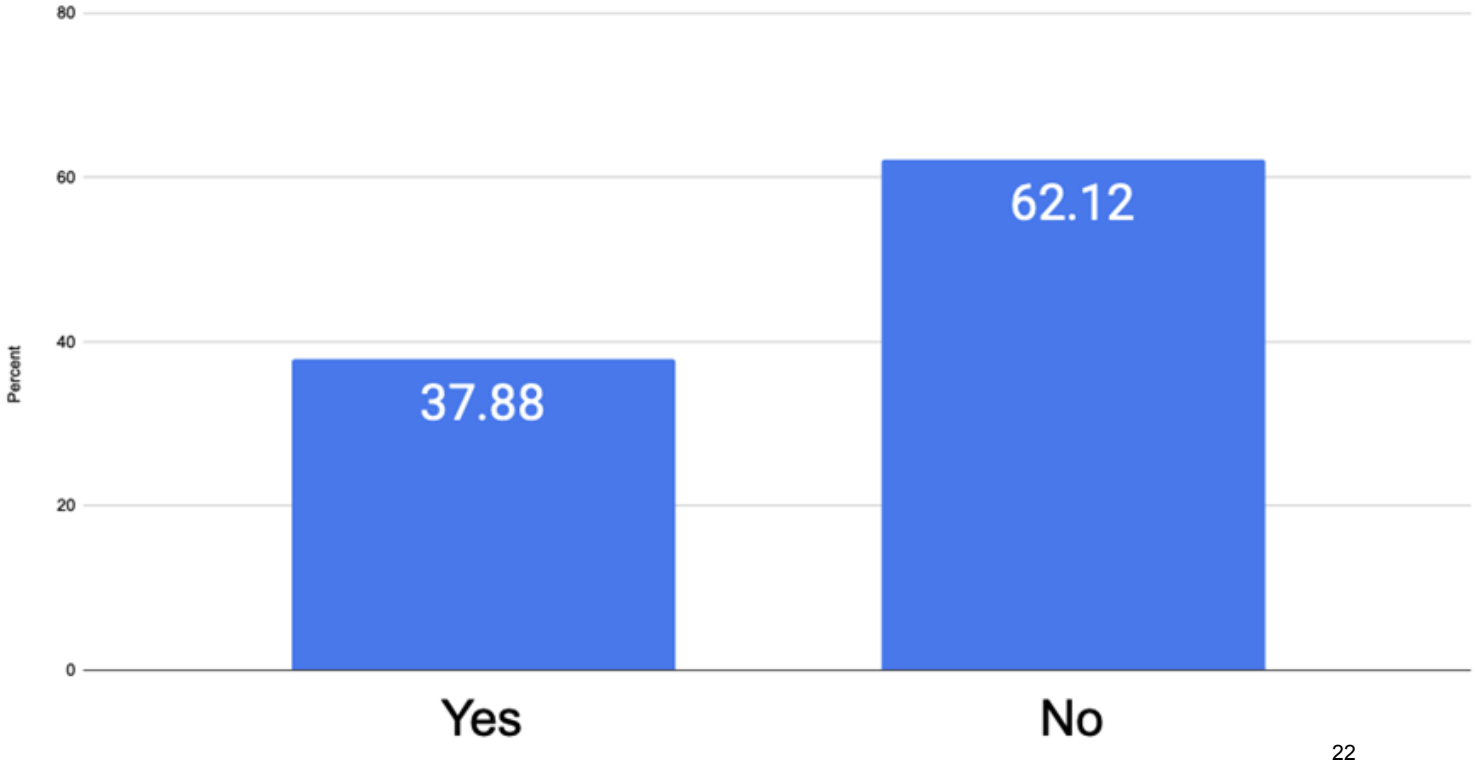

Yap Producers: What agricultural skills would you like to develop?
Percent
Plants
0
20
40
60
55
53
43
50
43
39
31
34
33
37
37
46
37
24
40
40
16
39
36
17
34
37
57
37
47
Swamp taro or hard taro
Land taro or soft taro
Breadfruit
Banana
Coconut
Copra (coconut product)
Yam
Mango
Pineapple
Limes/lemons
Sweet potatoes
Tapioca
Papaya
Soursop
Black pepper
Hot peppers
Sakau (kava)
Sugar cane
Betel leaf
Durian (football plant)
Cacao
Chestnut
Betelnut
Tangerine/orange
Medicinal crops (example: Noni)


Yap Producers: What food processing skills would you like to develop?
Percent
Skills
0
25
50
75
100
88
62
66
77
71
52
66
Food safety
Food sorting and quality control
Food preparation
Food preservation
Cooking
Banking
Packaging

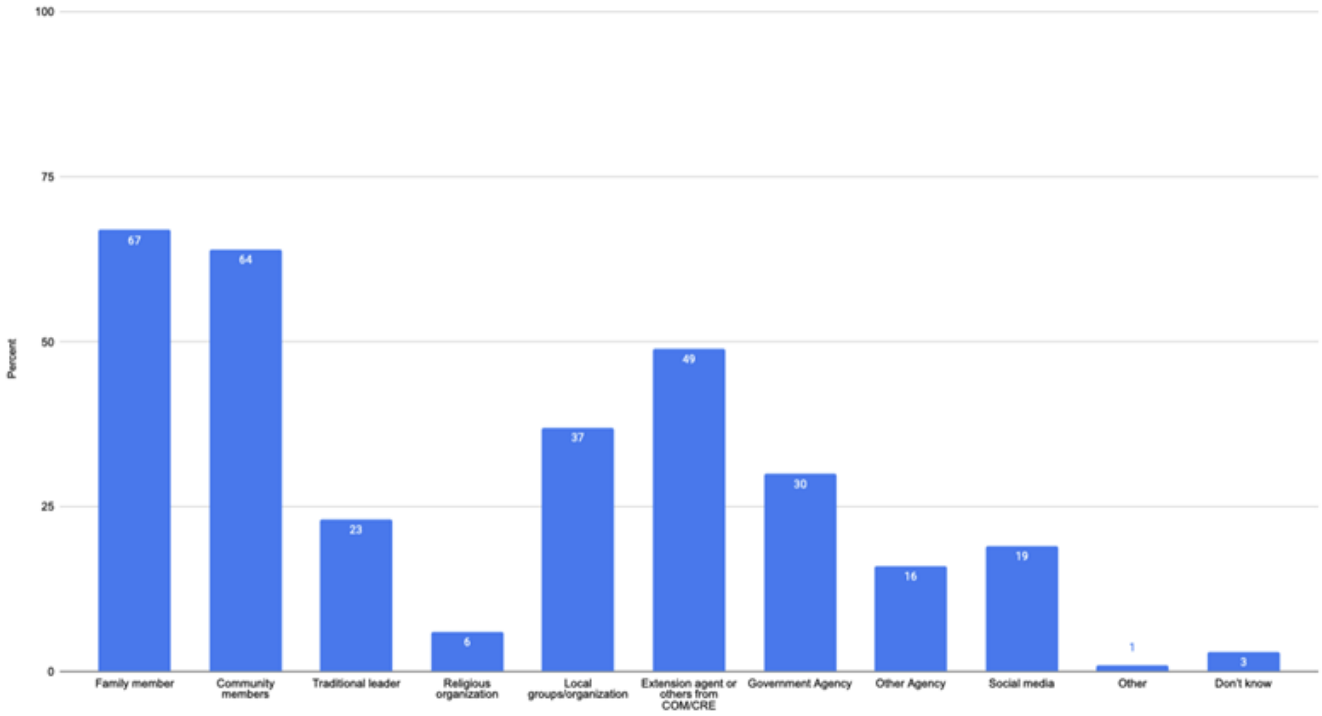
Yap Producers: Can you currently access online notifications for trainings opportunities (example cooking, seedling training etc.)?



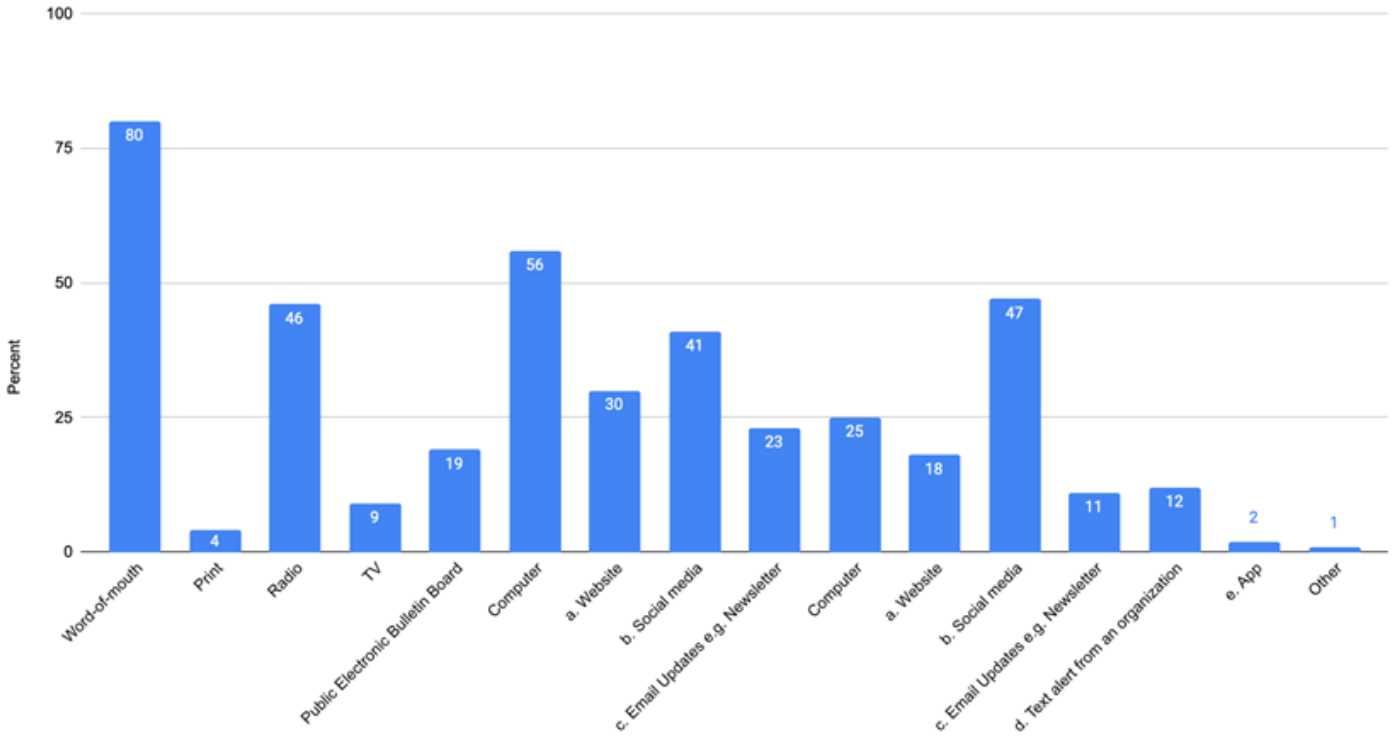
Yap Producers: Would you pay to get additional food production information?



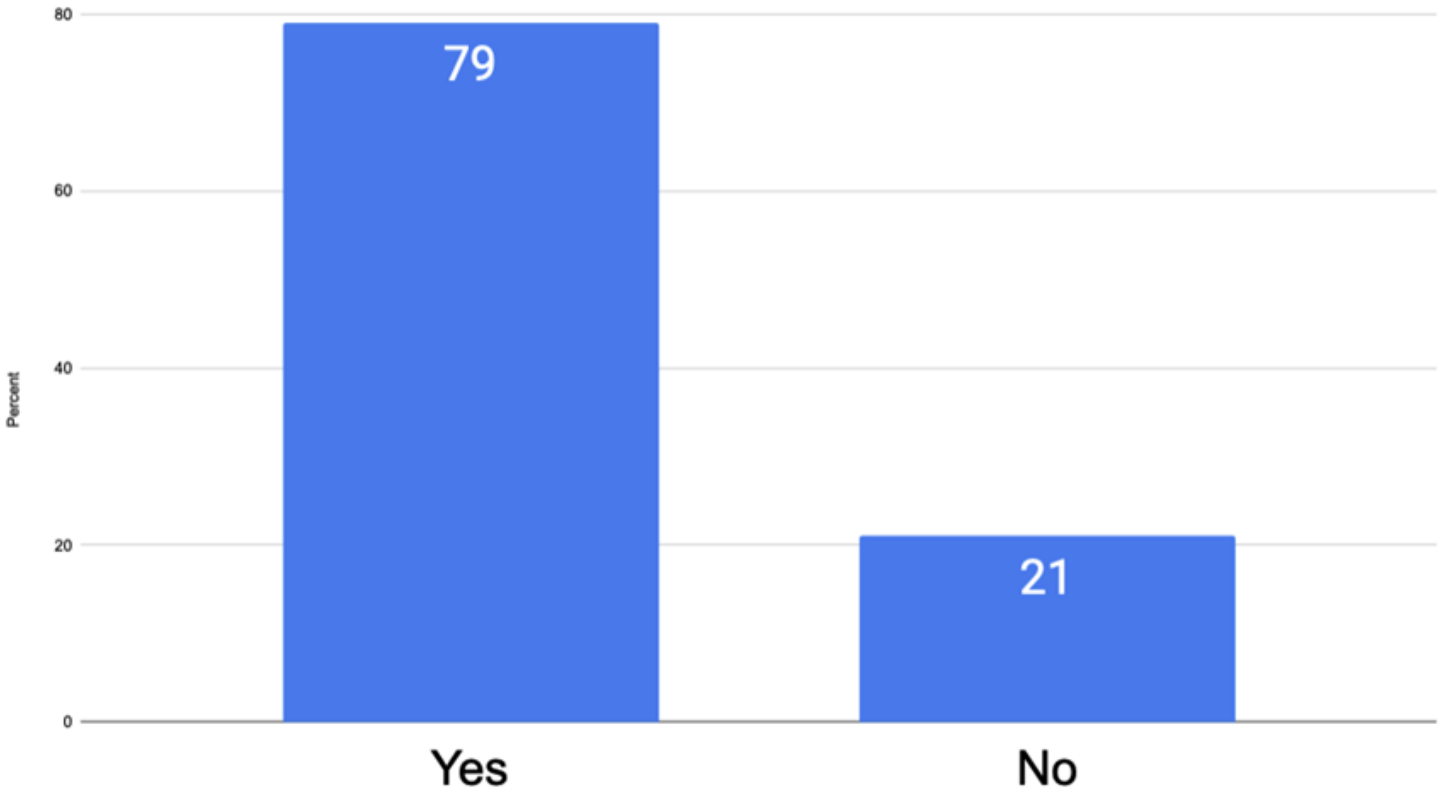
Yap Producers: Who gives you, or can give you the information you need (source person/agency/ organization)?



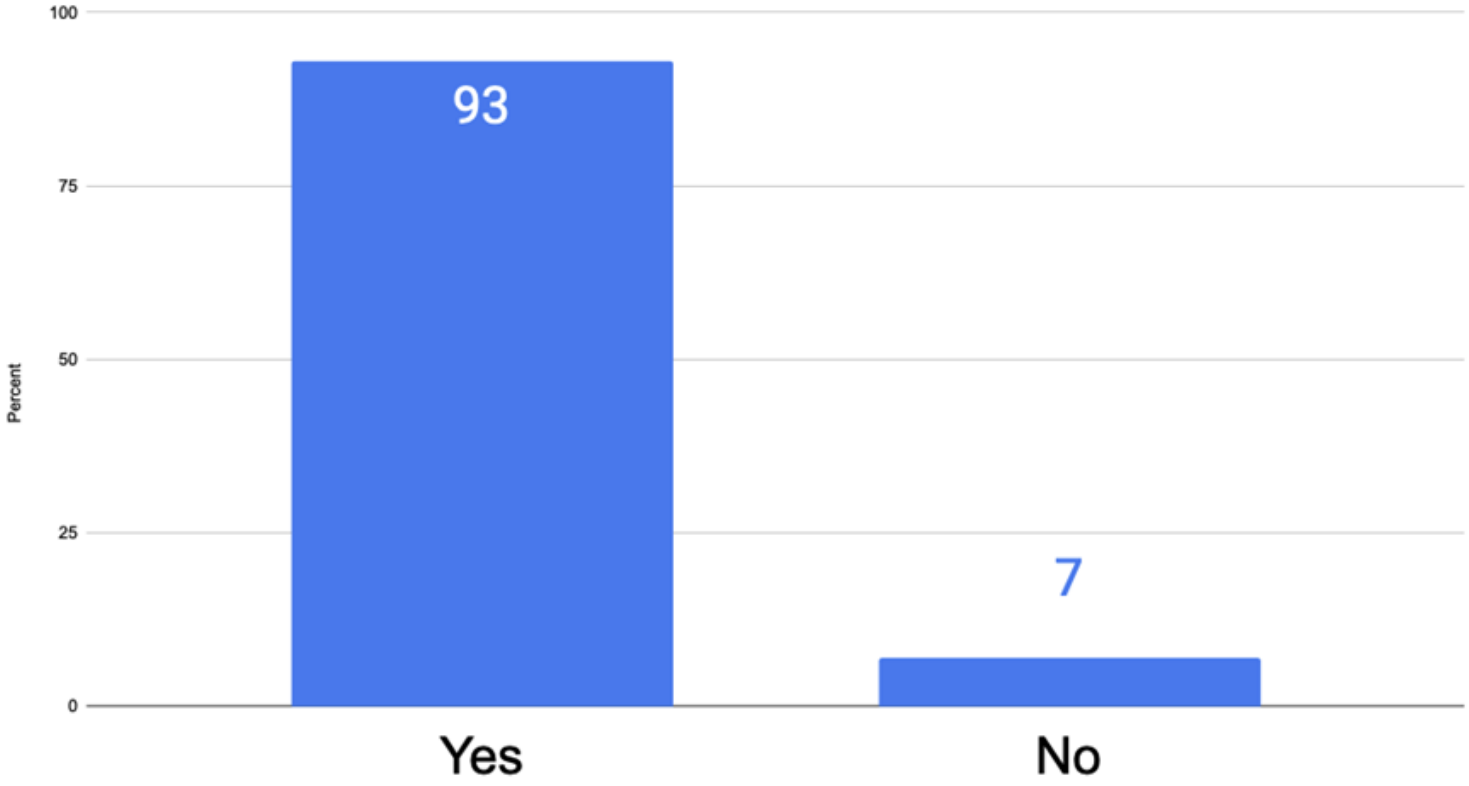
Yap Producers: How do you currently access the information you need?

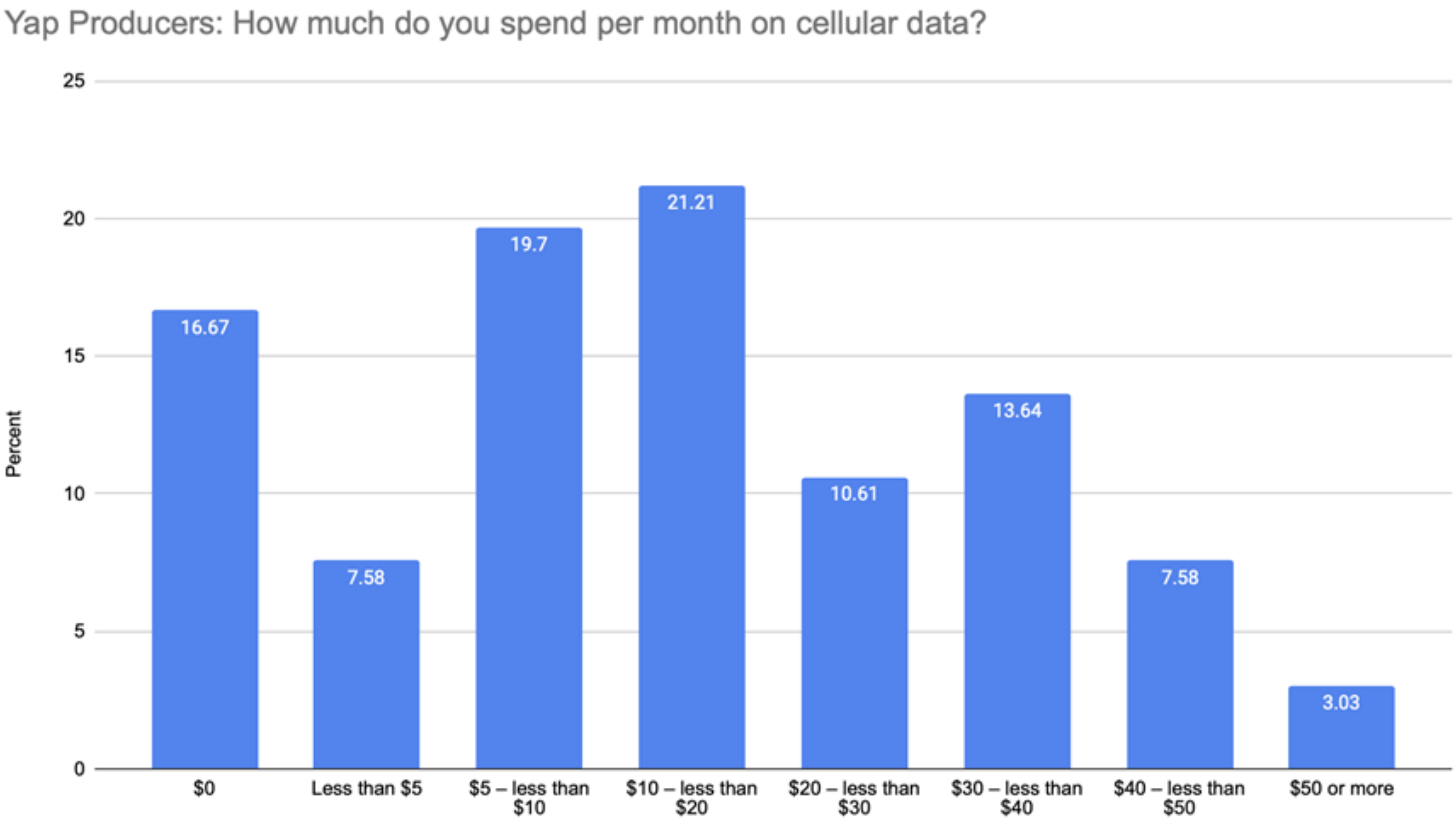


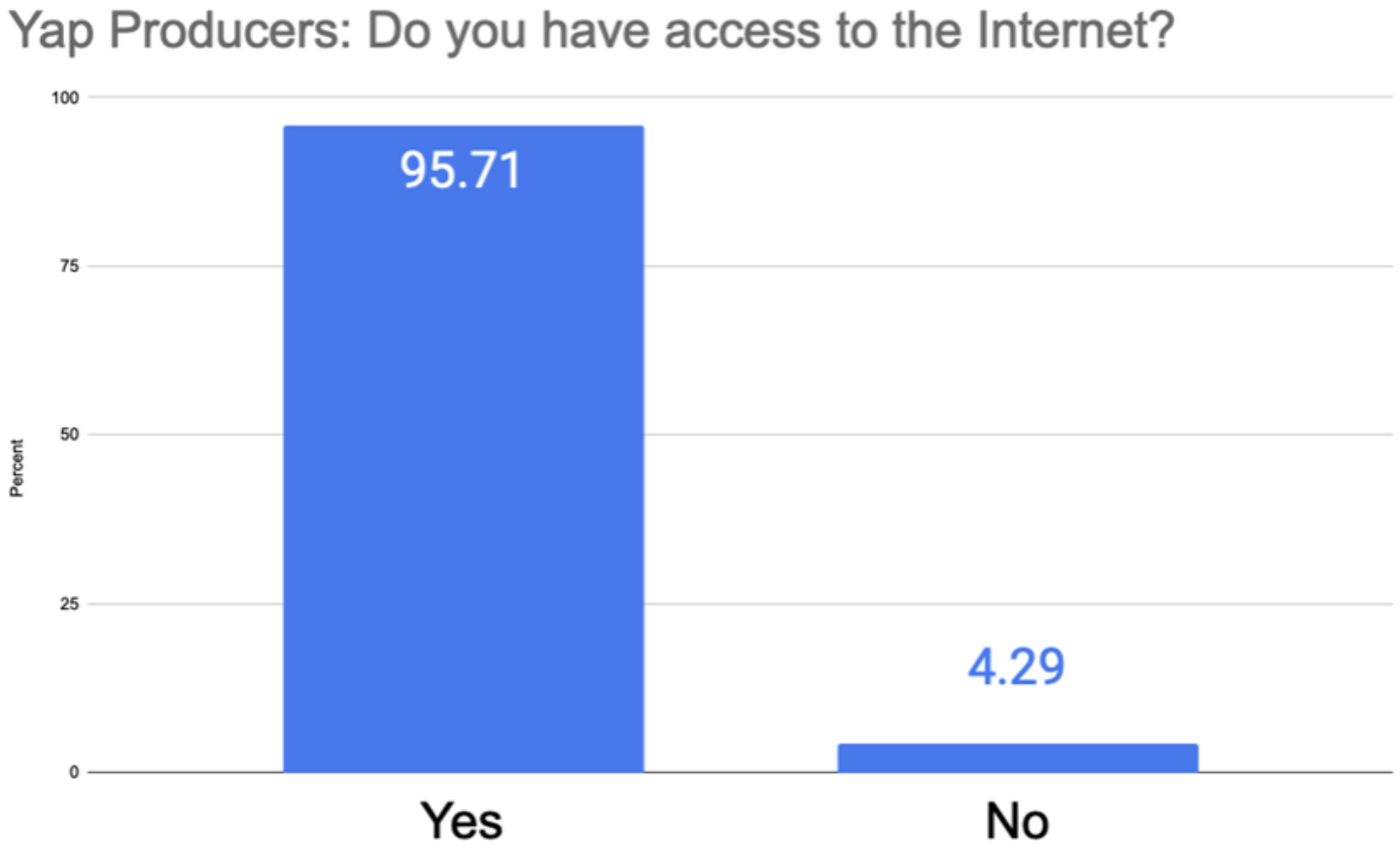
Yap Producers: Do you need better access to information?



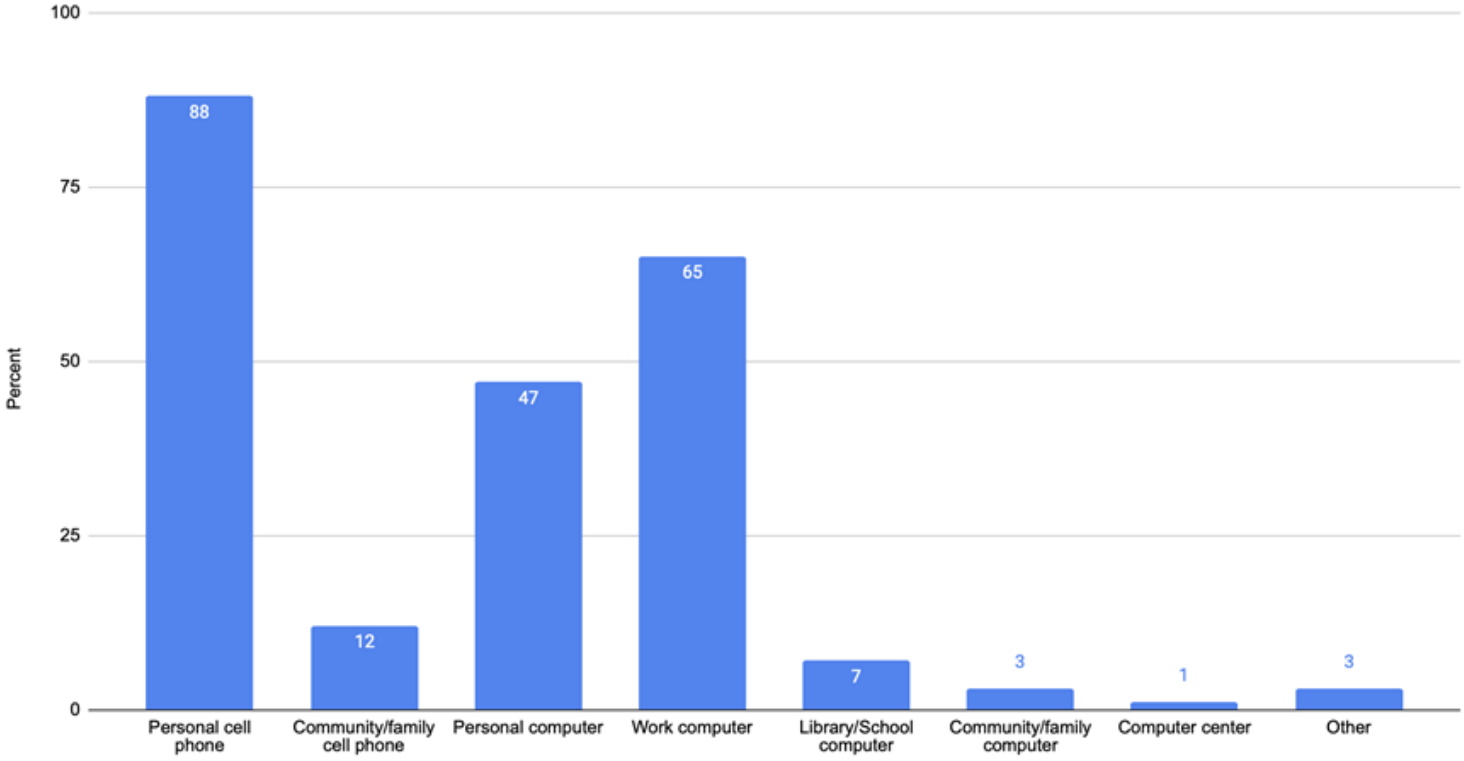
Yap Producers: Do you have your own cellphone?



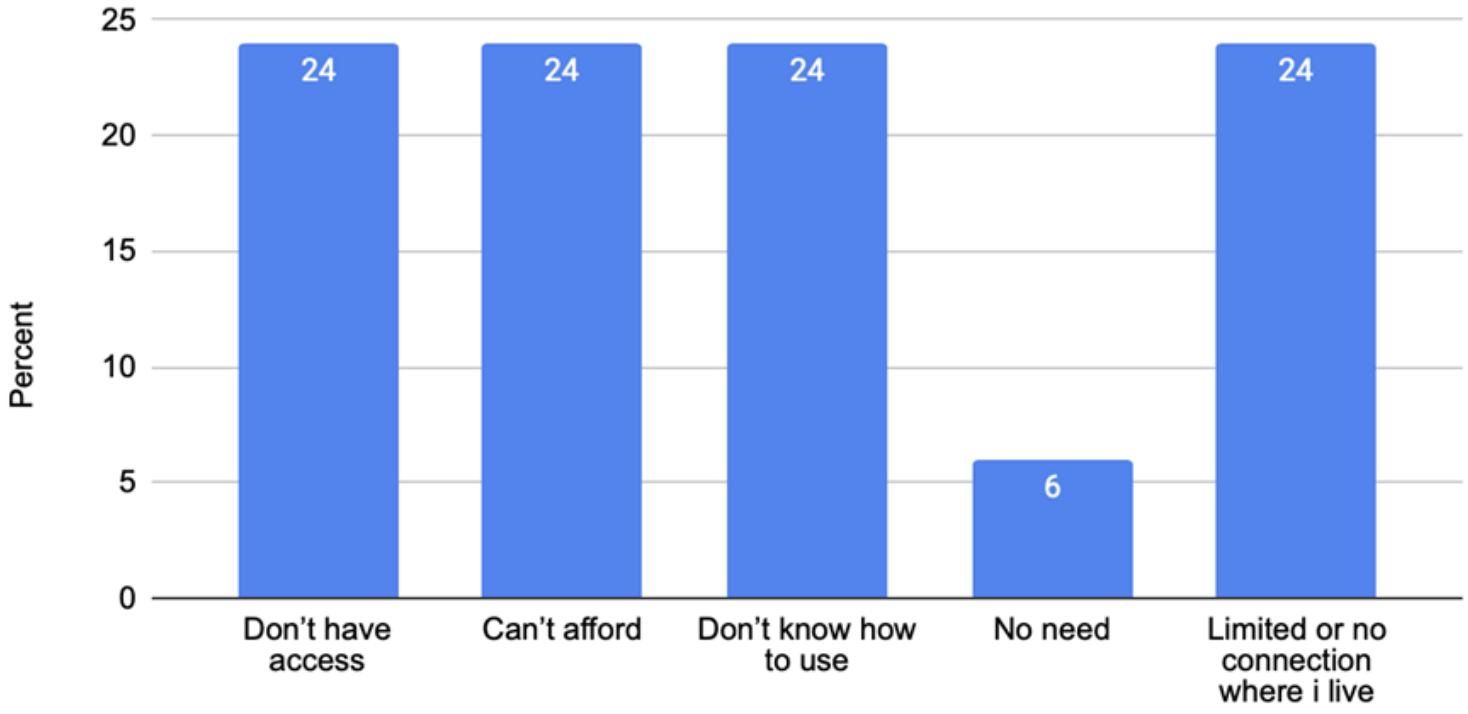

Yap Producers: How much do you spend per month on cellular data?
Percent
25
20
15
10
5
0
16.67
7.58
19.7
21.21
10.61
13.64
7.58
3.03
$0
Less than $5
$5 – less than $10
$10 – less than $20
$20 – less than $30
$30 – less than $40
$40 – less than $50
$50 or more

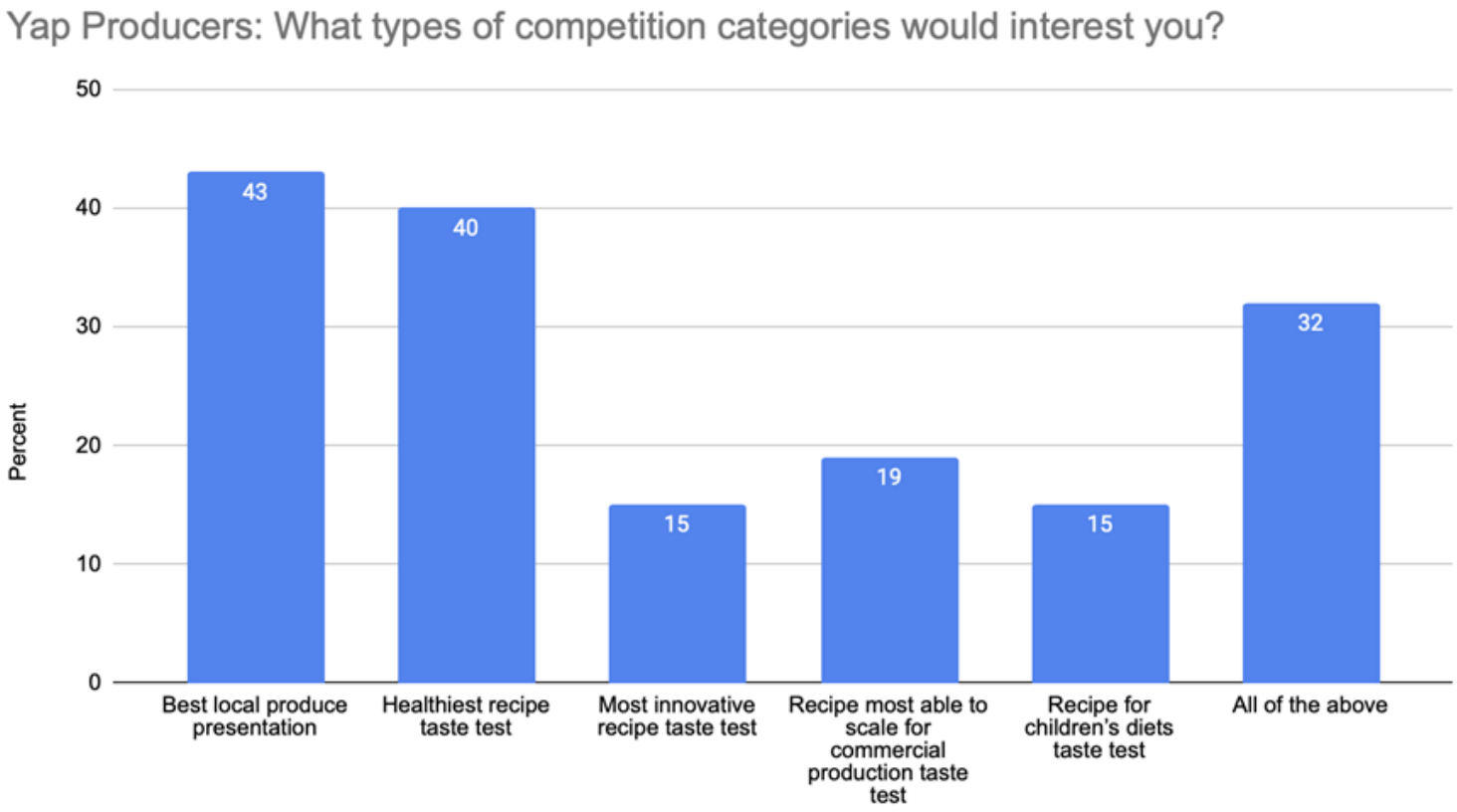

Yap Producers: Do you have access to the Internet?
Percent
100
75
50
25
0
95.71
4.29
Yes
No

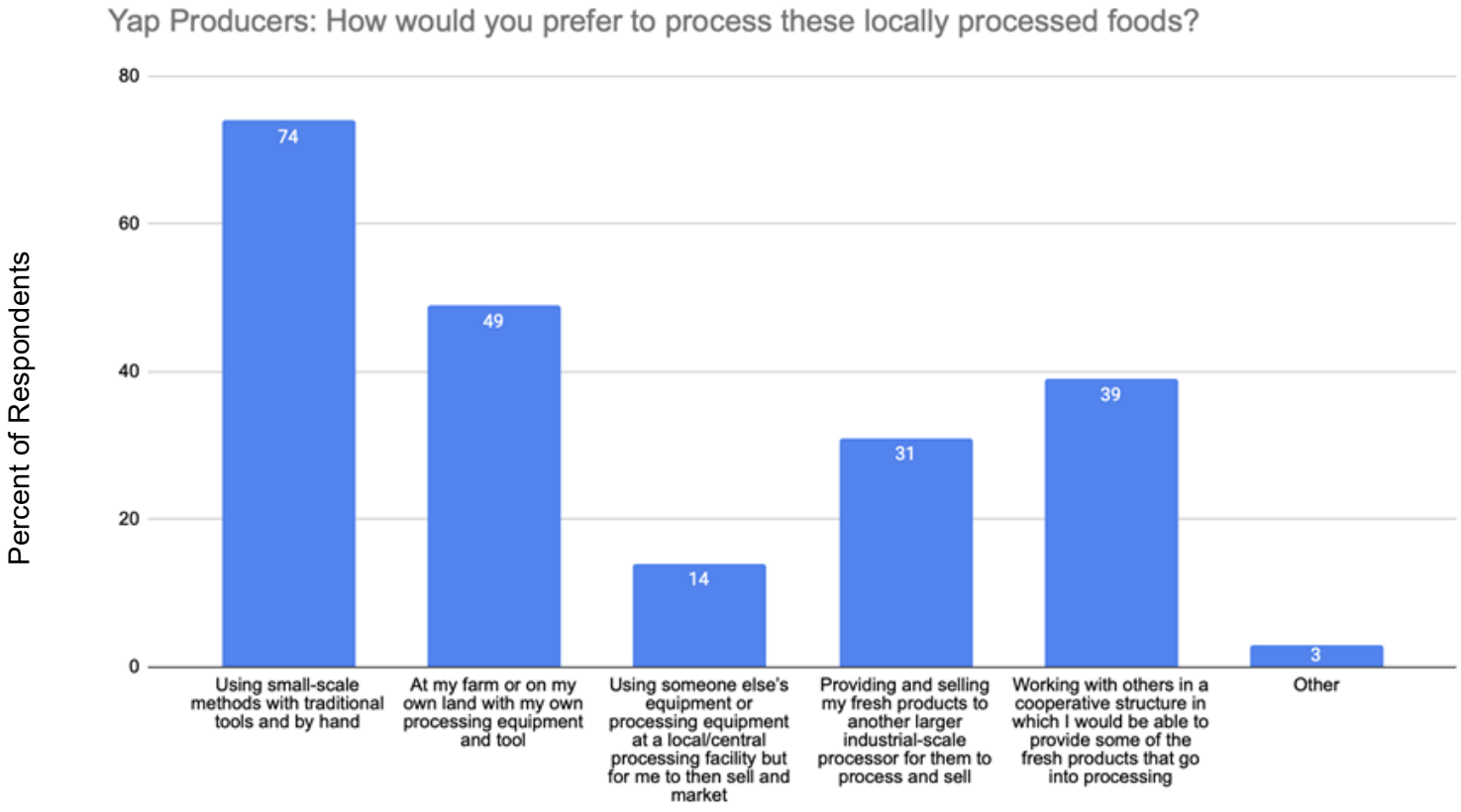
Yap Producers: How do you access the Internet?



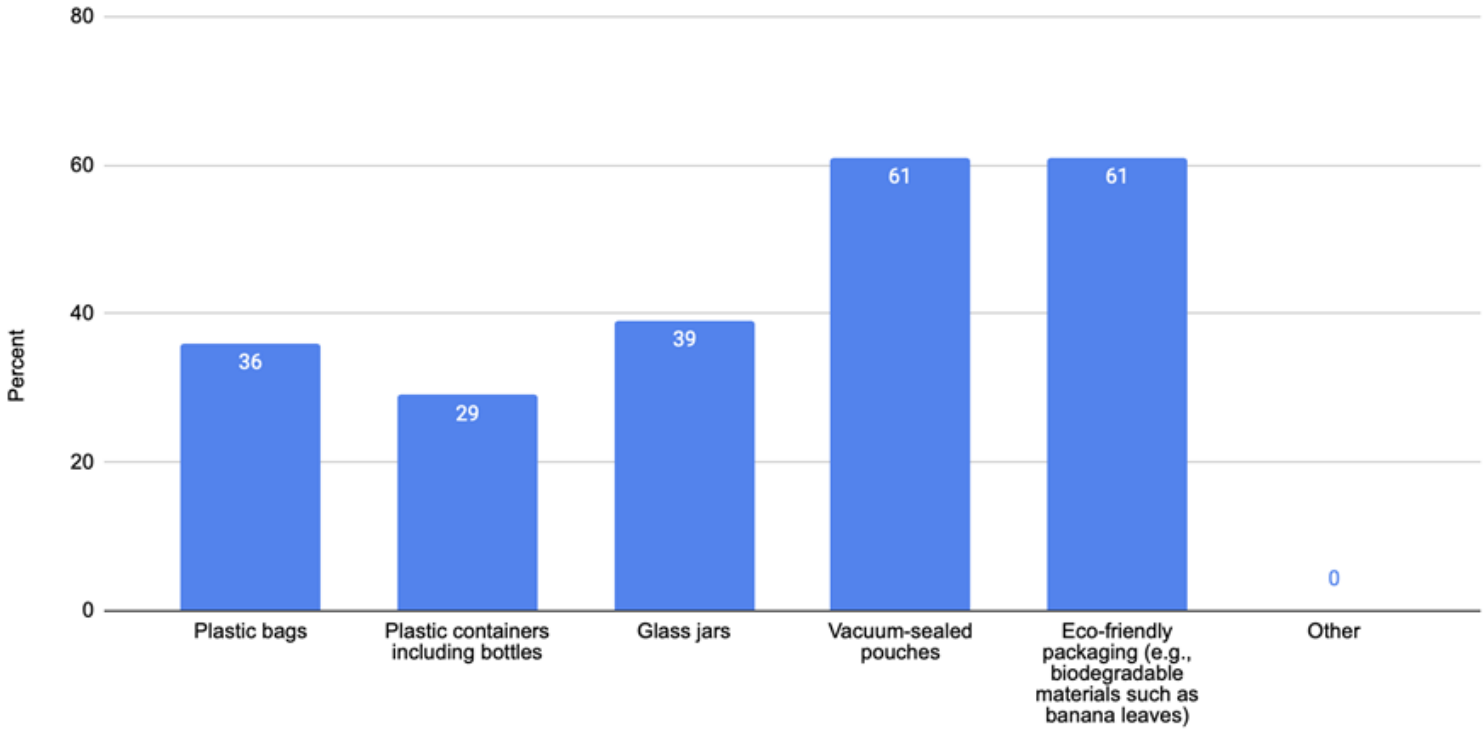
Yap Producers: If you don't have Internet access, why not?



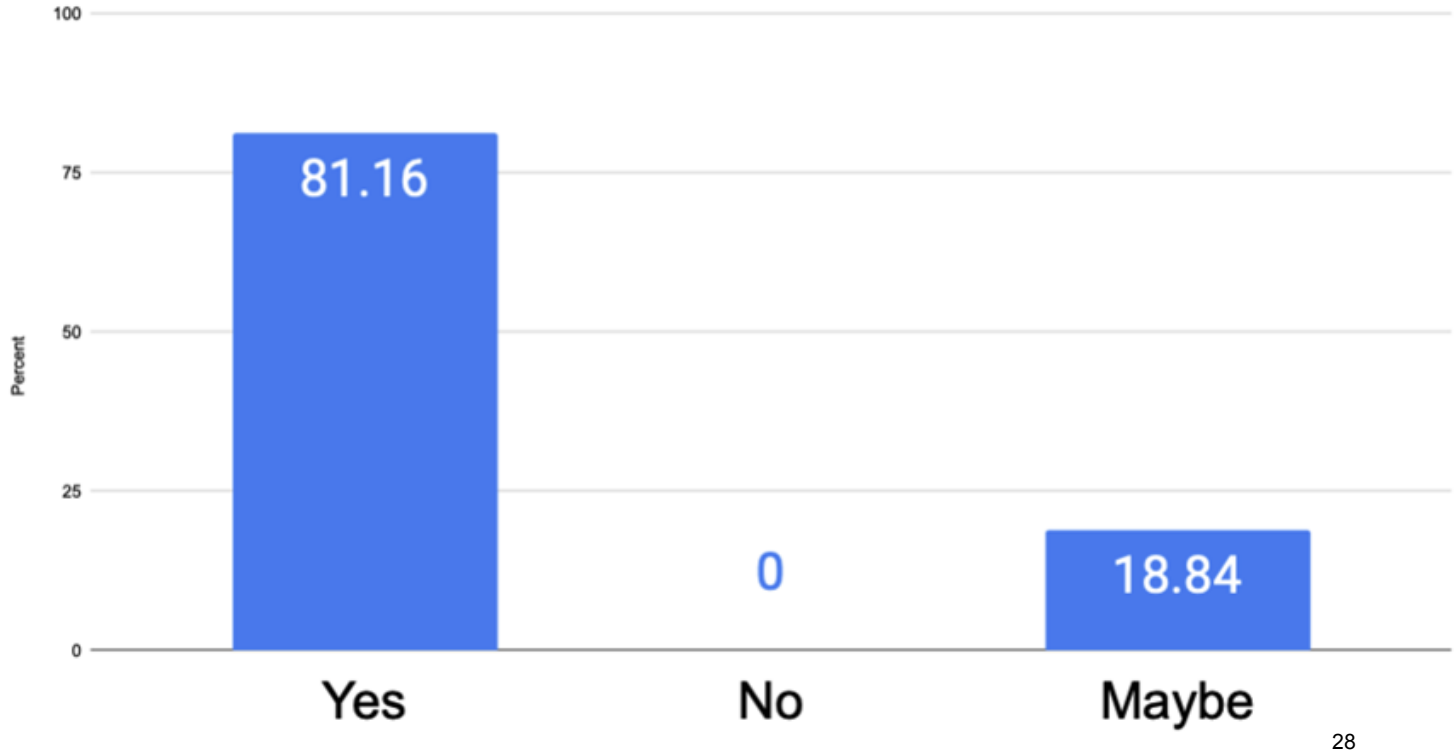

Yap Producers: What types of competition categories would interest you?
Percent
50
40
30
20
10
0
43
40
15
19
15
32
Best local produce presentation
Healthiest recipe taste test
Most innovative recipe taste test
Recipe most able to scale for commercial production taste test
Recipe for children's diets taste test
All of the above


Yap Producers: How would you prefer to process these locally processed foods?
Percent of Respondents
80
60
40
20
0
74
49
14
31
39
3
Using small-scale methods with traditional tools and by hand
At my farm or on my own land with my own processing equipment and tool
Using someone else's equipment or processing equipment at a local/central processing facility but for me to then sell and market
Providing and selling my fresh products to another larger industrial-scale processor for them to process and sell
Working with others in a cooperative structure in which I would be able to provide some of the fresh products that go into processing
Other

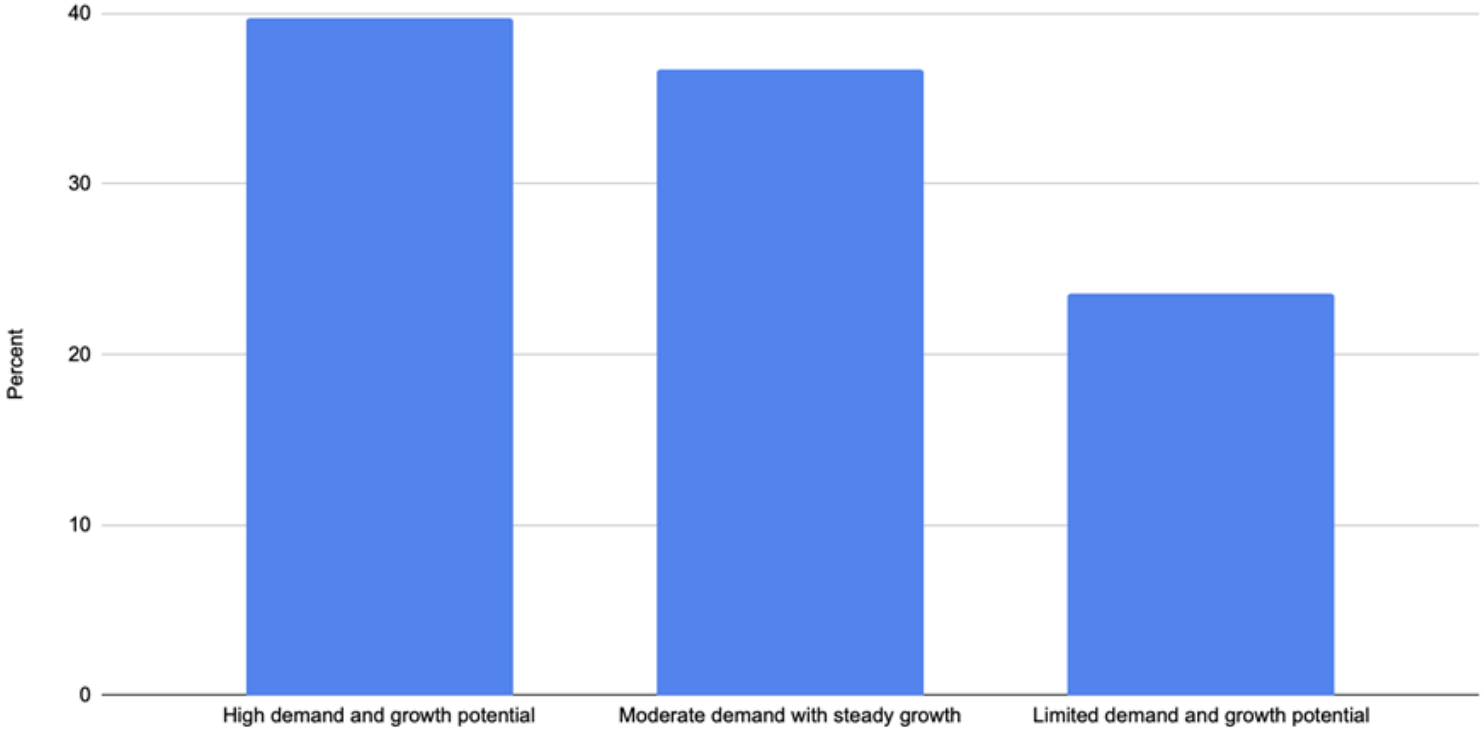
Yap Producers: What type of packaging do you think would best suit the locally processed foods?



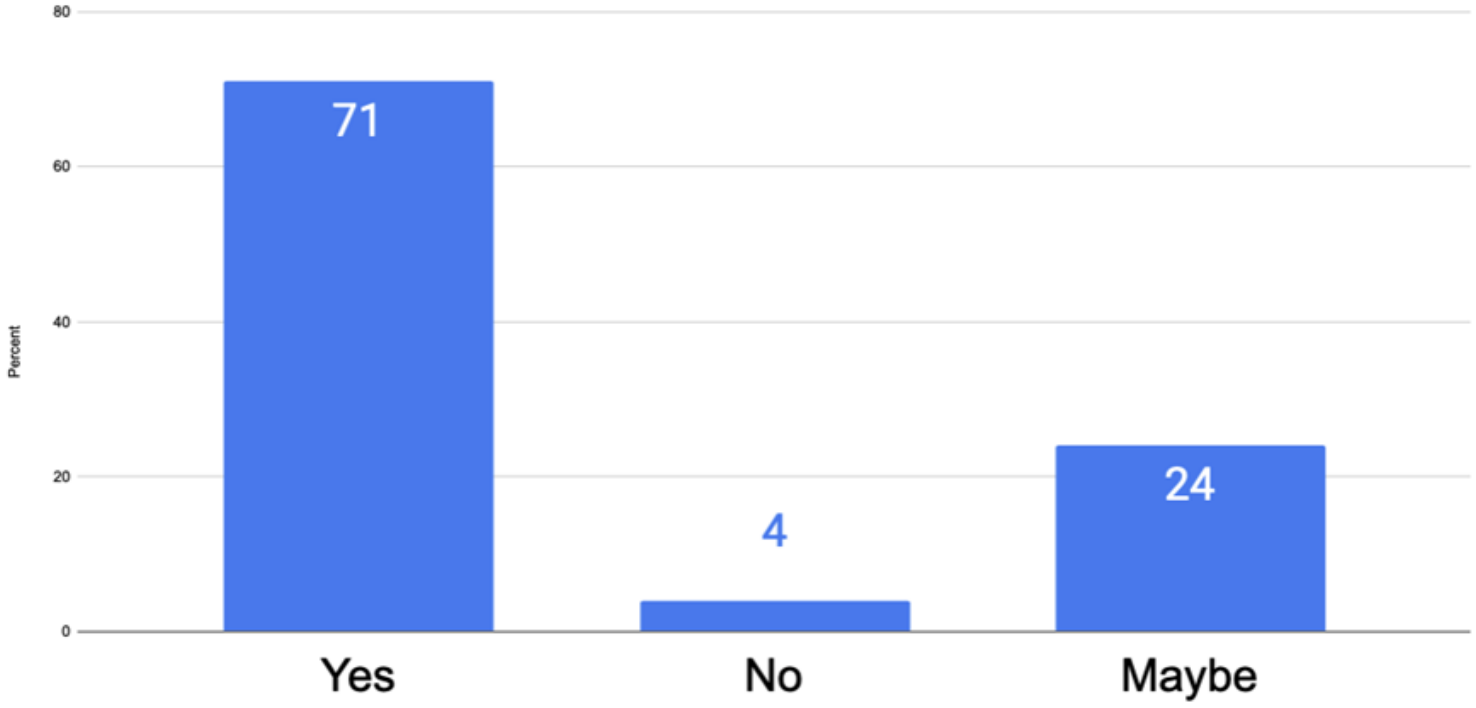
Yap Producers: Would you prioritize using local ingredients for the production of locally processed foods?



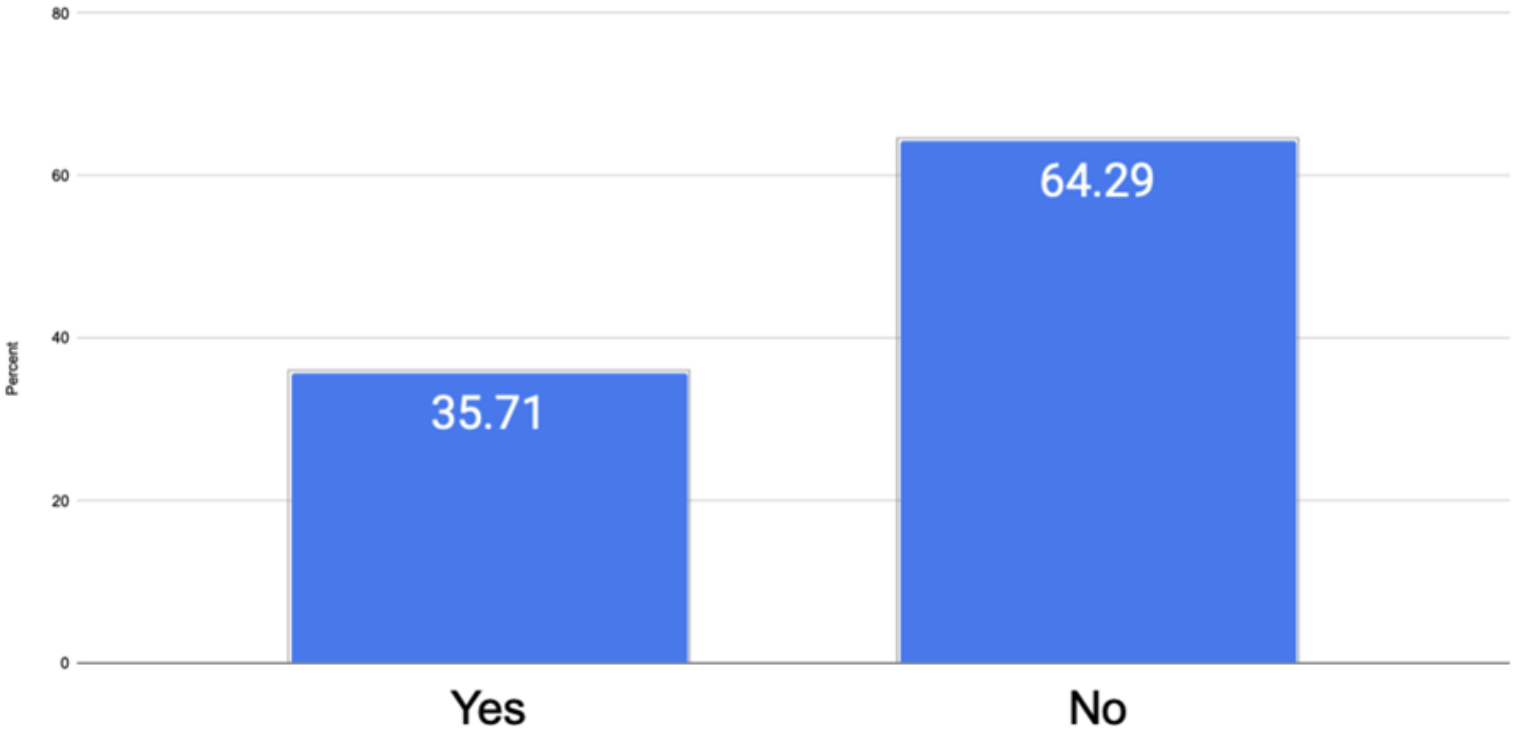
Yap Producers: How do you perceive the market potential for locally processed foods in the FSM and potentially beyond?



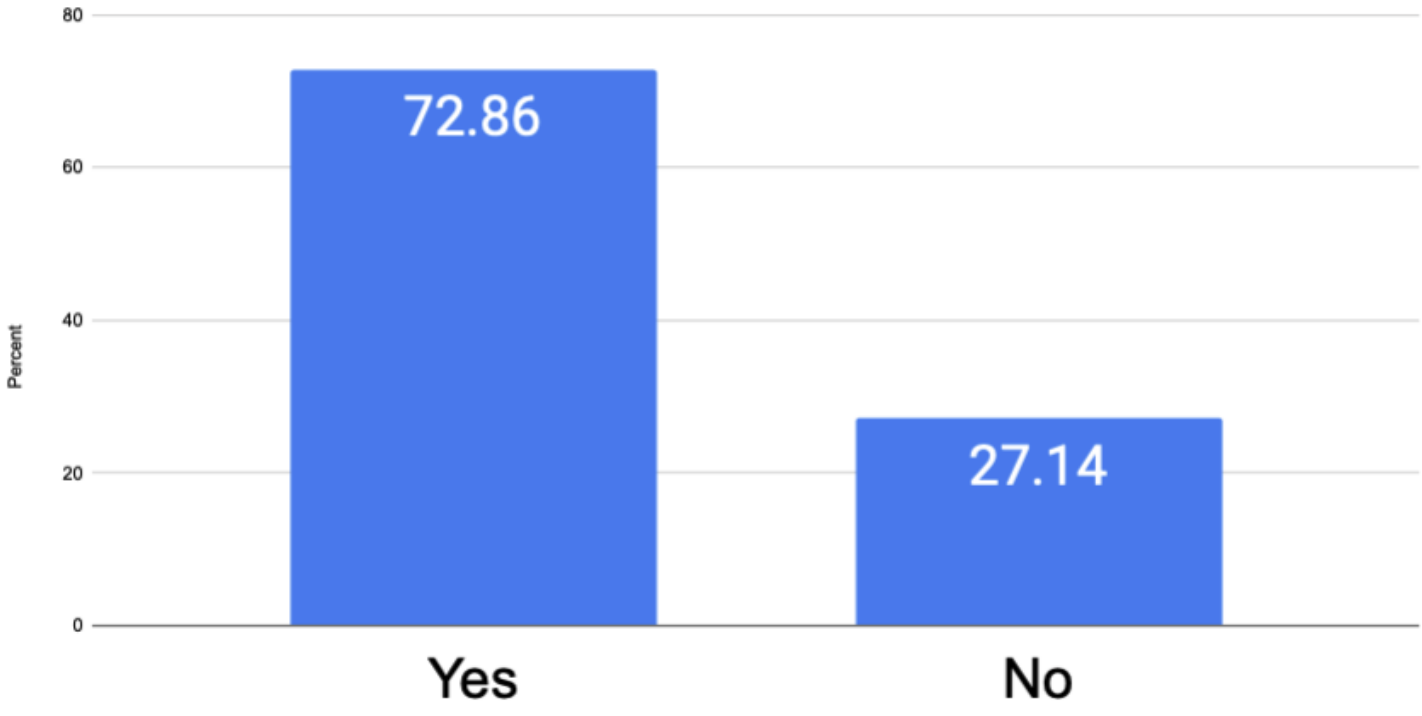
Yap Producers: Would you require any technical or financial support or assistance in terms of training, access to technology, marketing, or other aspects?



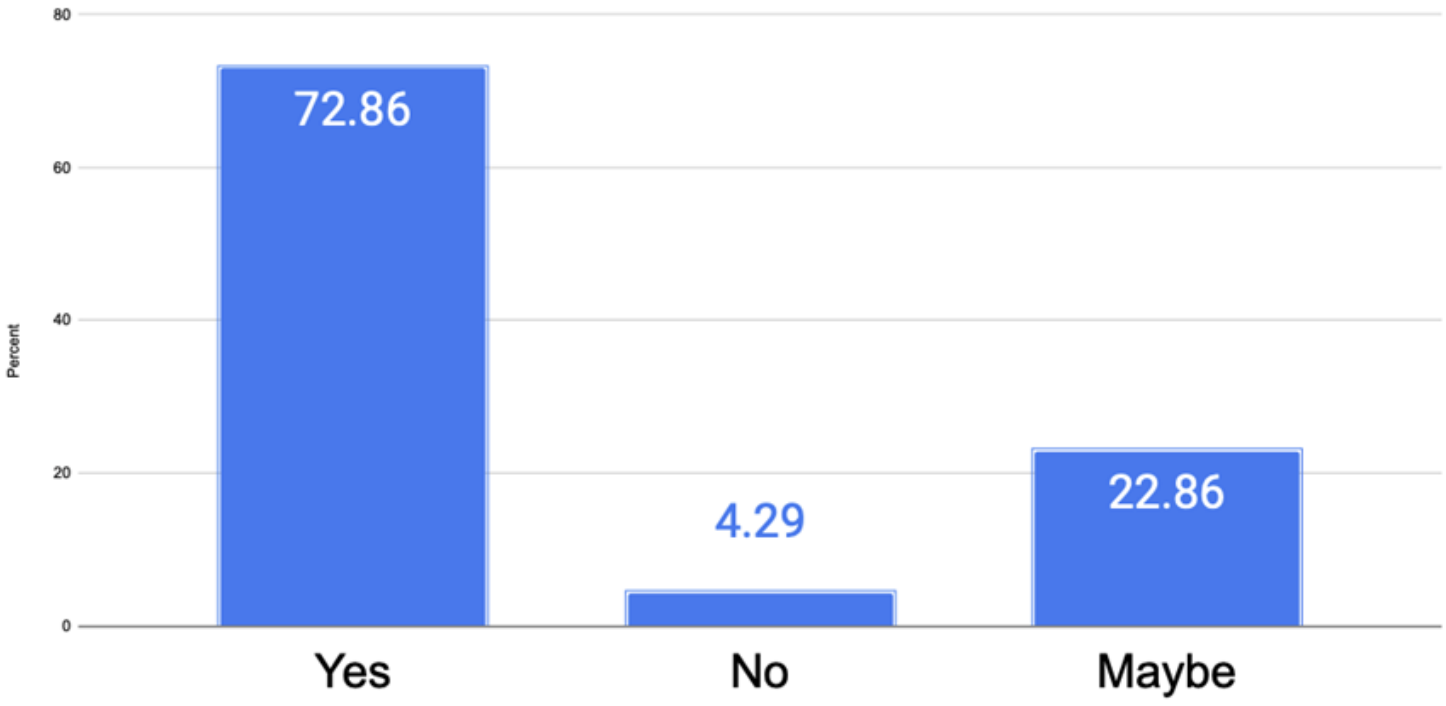
Yap Producers: Are you aware of the regulatory requirements and standards for processing and selling local food products in the FSM [NOTE: there are differences in regulatory compliance issues for fish, meat, poultry, juices, foods]?



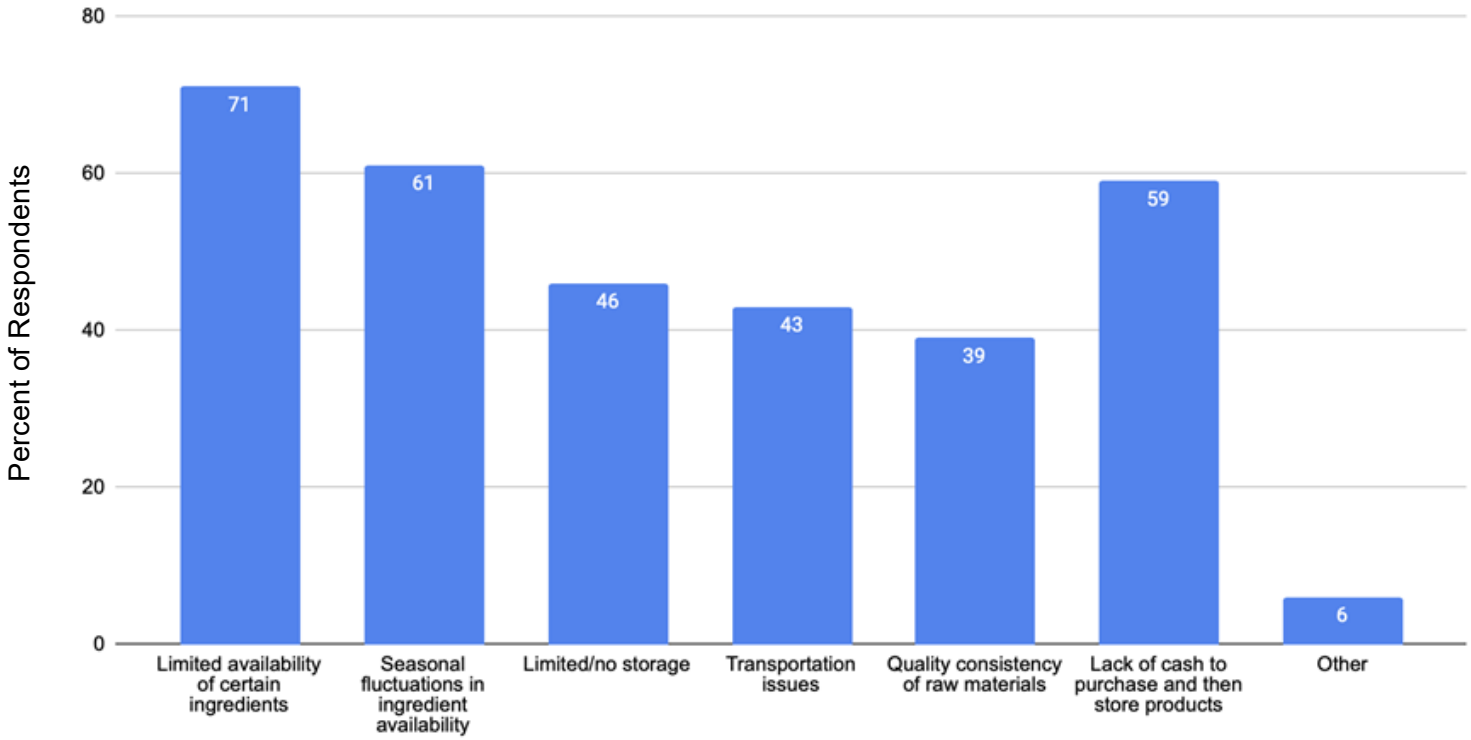
Yap Producers: Do you require assistance with the regulatory requirements and standards?



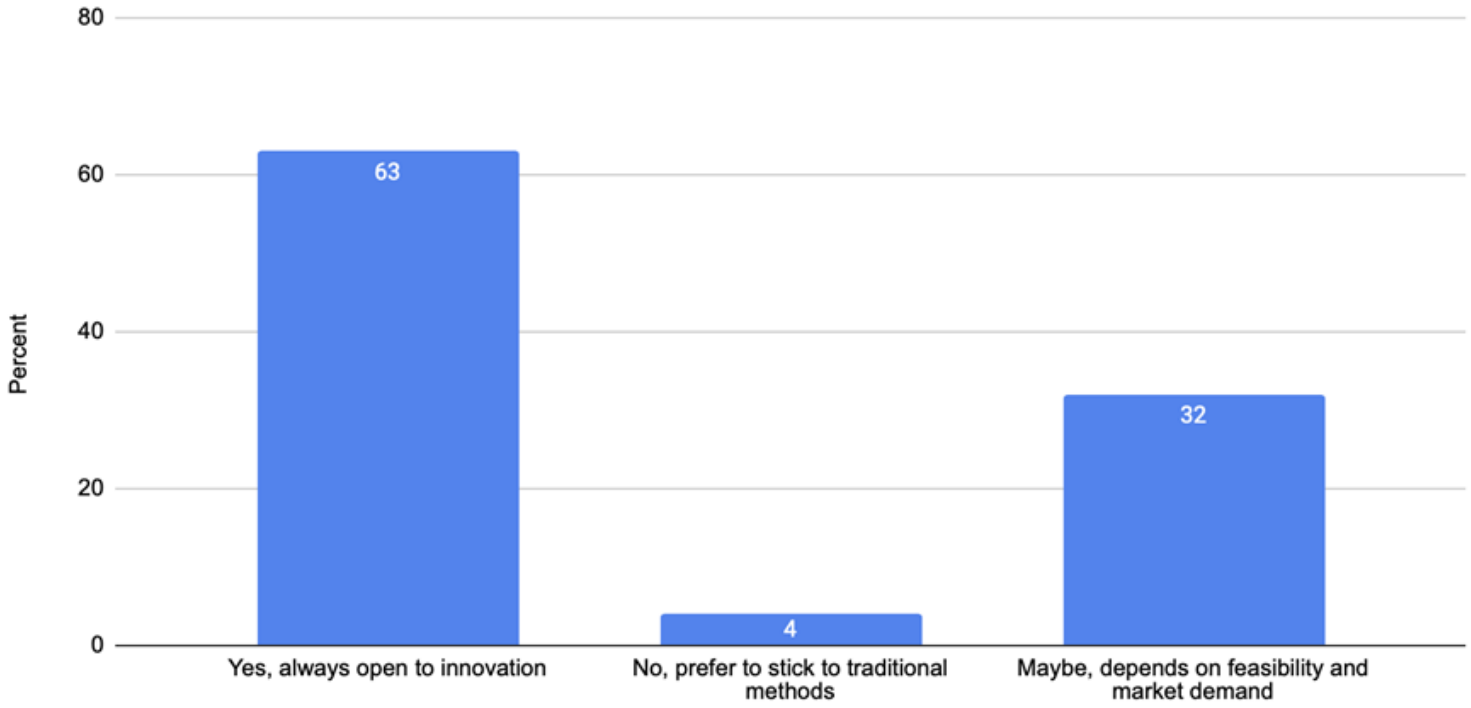
Yap Producers: Would you be interested in collaborating with other producers or stakeholders in your community, or locality or state for joint processing or marketing initiatives?



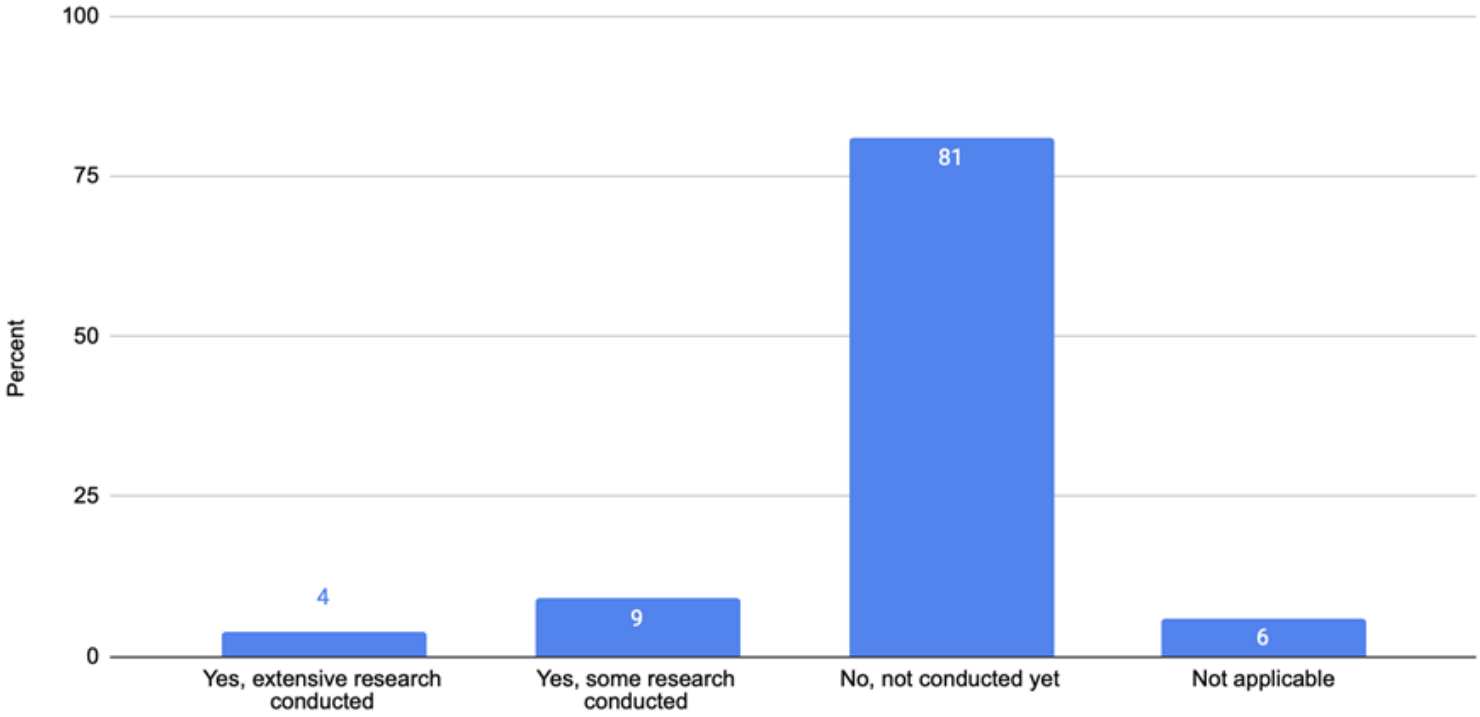
Yap Producers: What are the challenges you face in sourcing local ingredients to ensure you have enough materials for processing local foods?



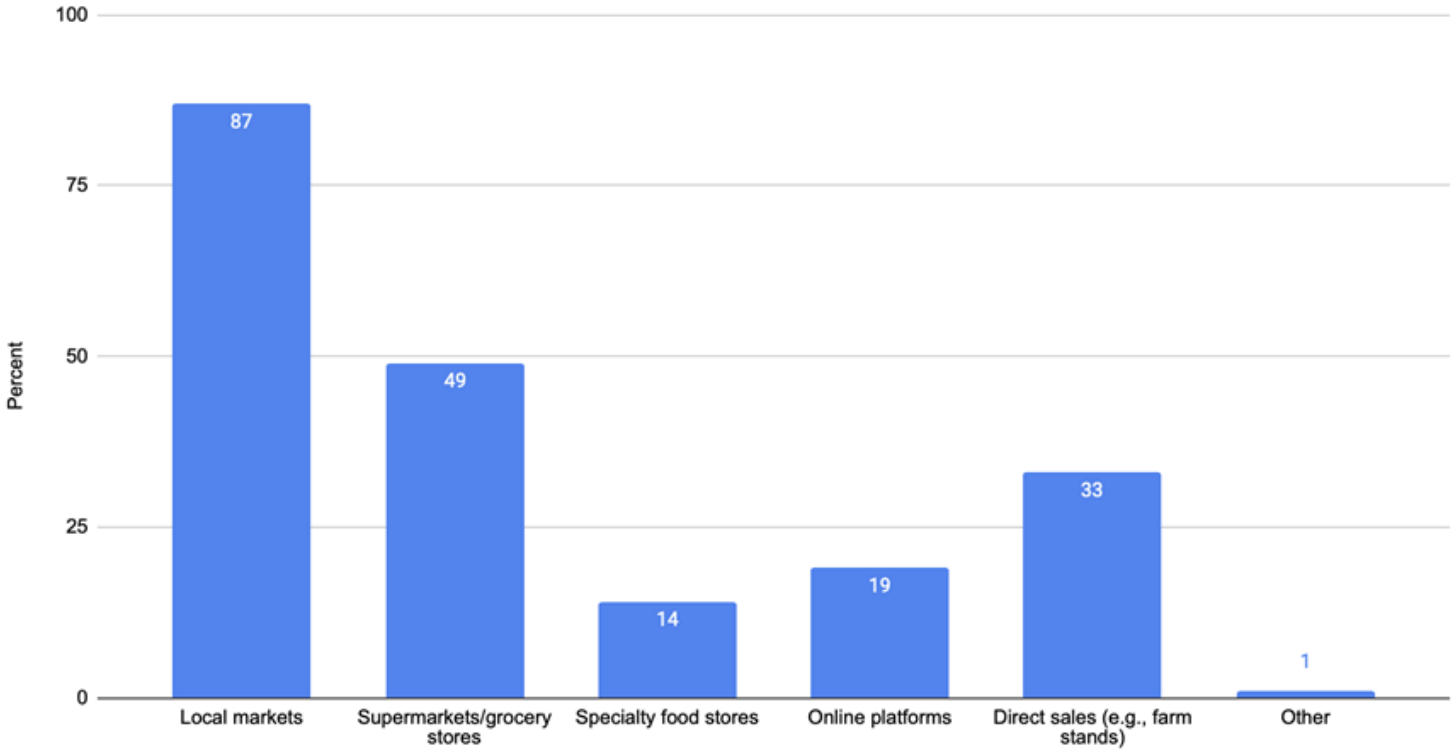
Yap Producers: Are you open to exploring innovative techniques or recipes for locally processed foods to cater to evolving consumer preferences?



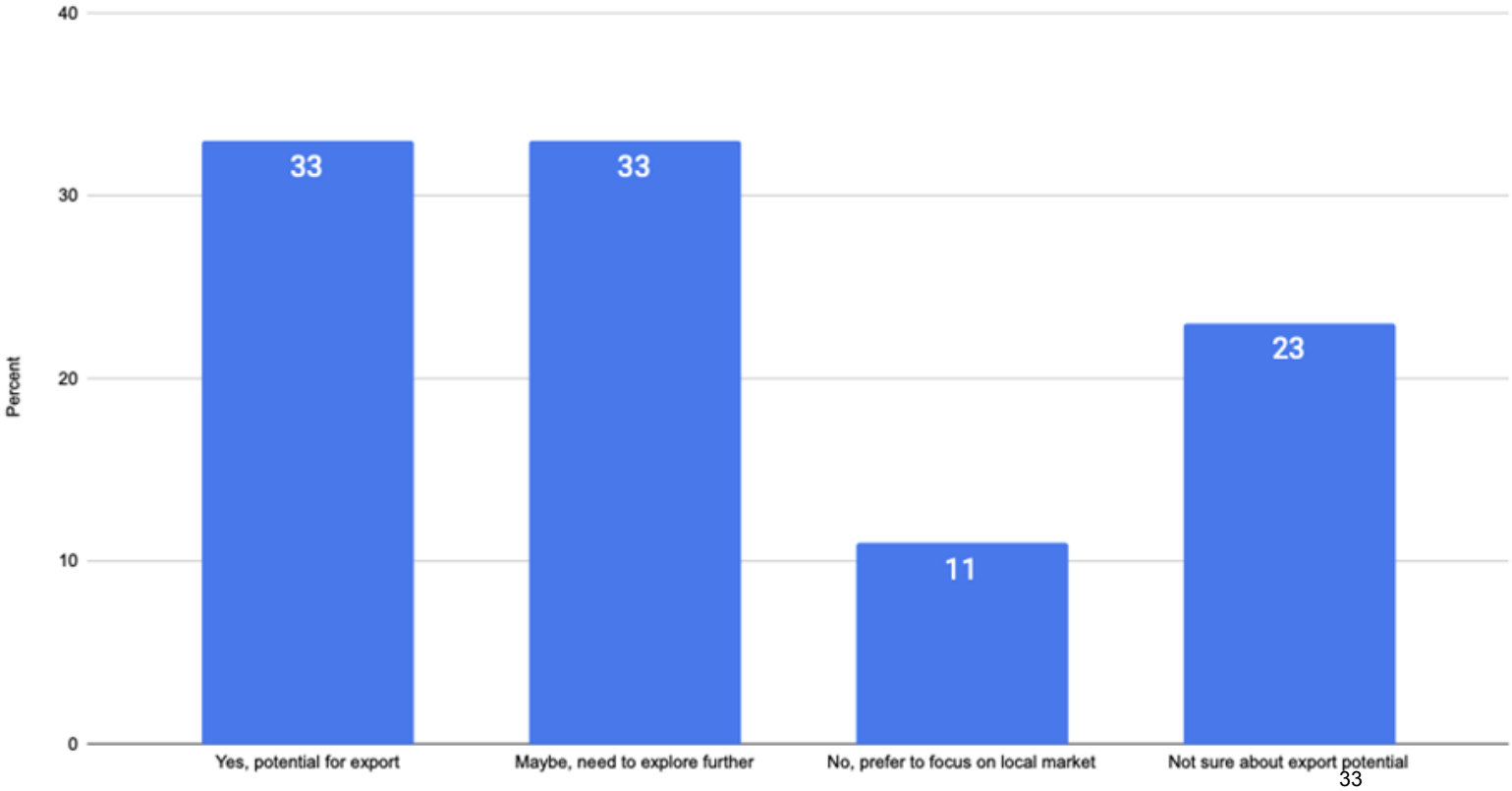
Yap Producers: Have you conducted any market research or feasibility studies to assess the demand for locally processed foods in the FSM market?



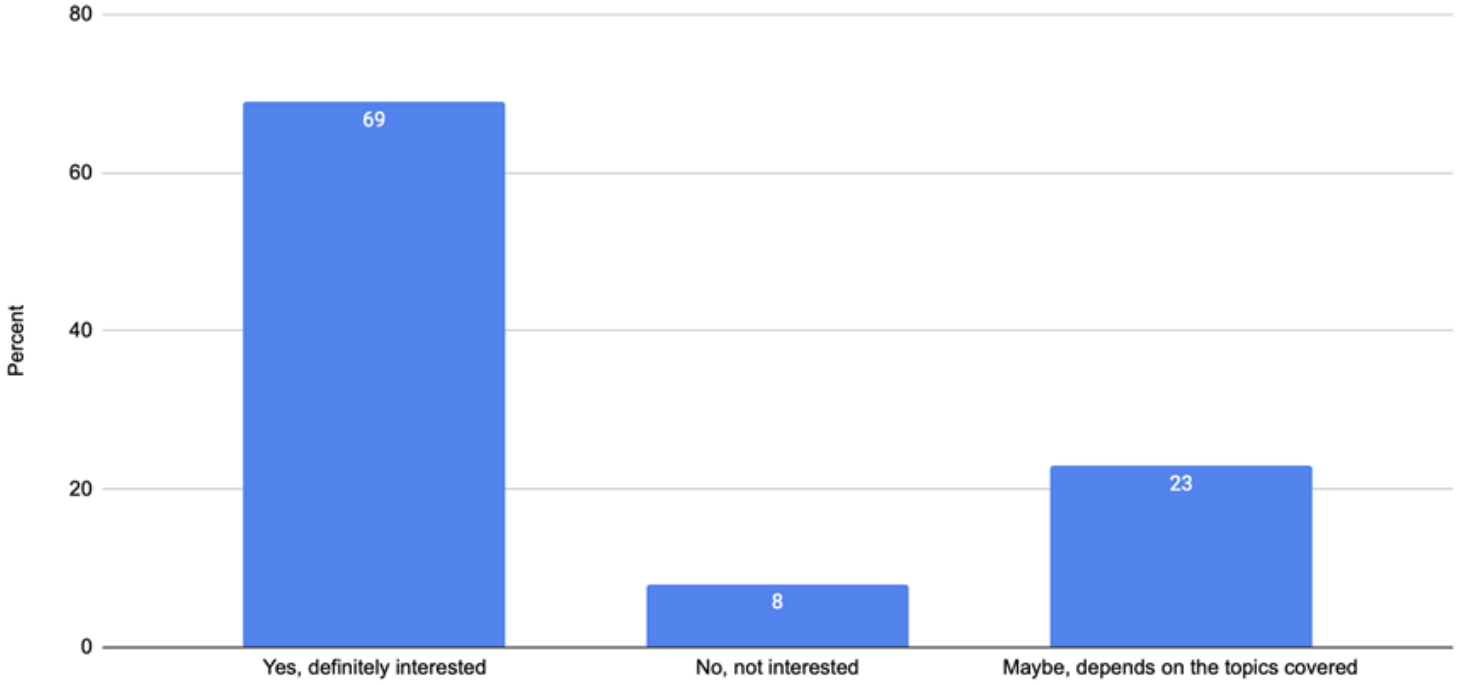
Yap Producers: What distribution channels do you envision for selling locally processed foods?



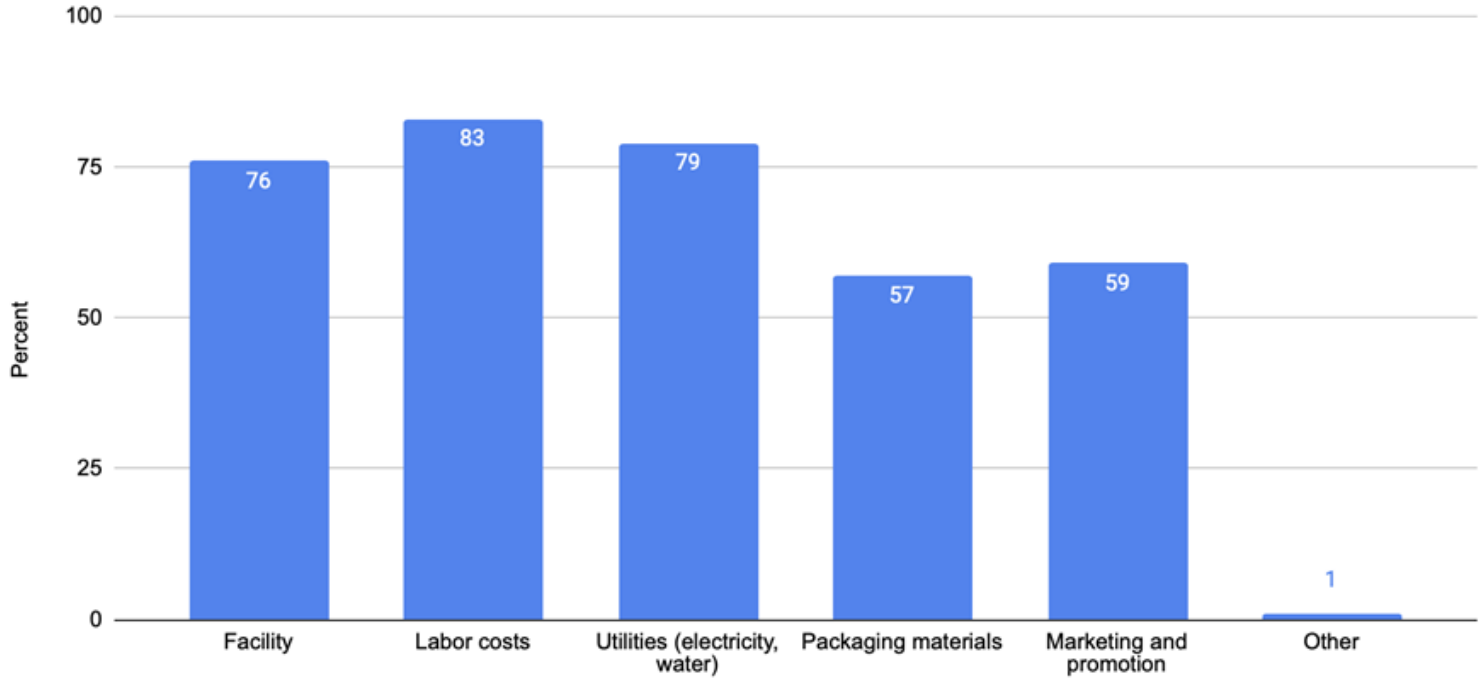
Yap Producers: Do you see potential for exporting locally processed foods into other states in the FSM or beyond the FSM?



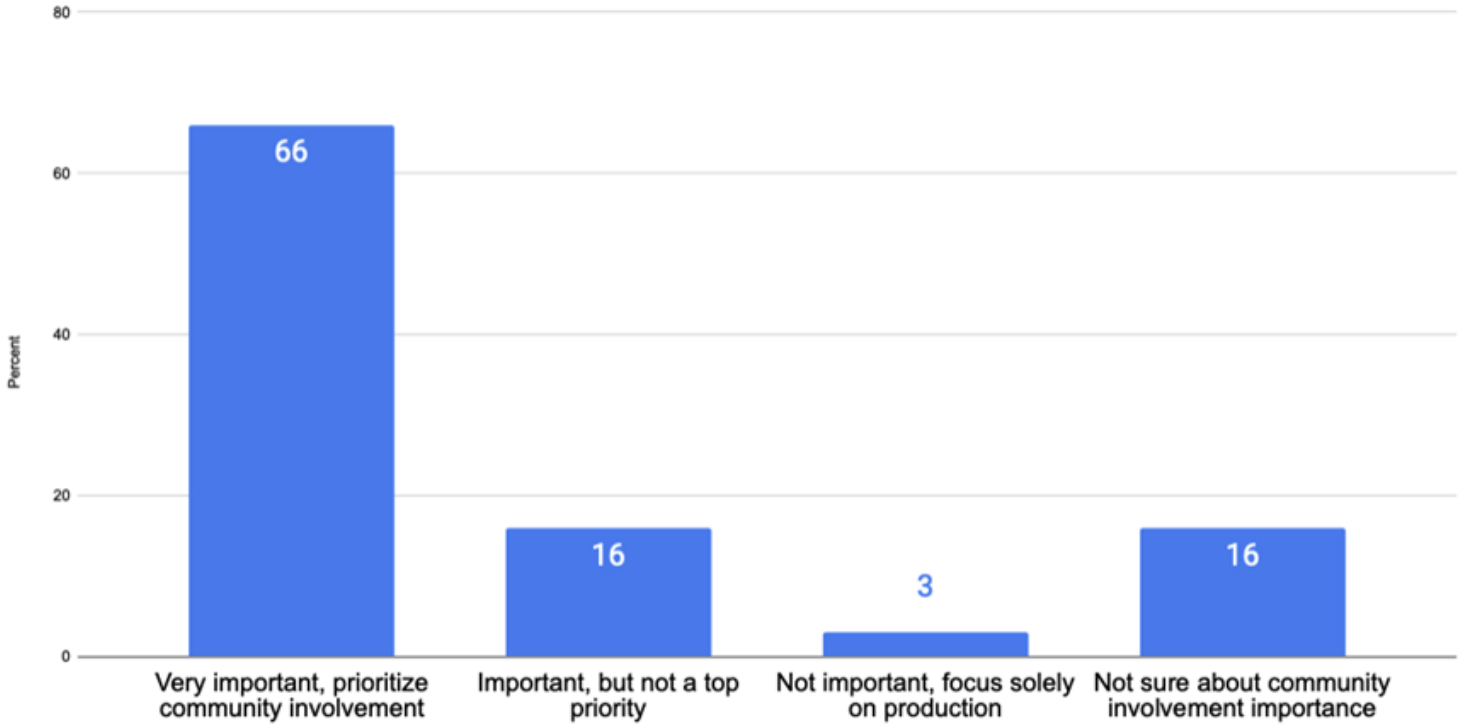
Yap Producers: Would you participate in training programs or workshops offered by the Food Innovation Center to enhance your skills in traditional food processing techniques, quality control, or business management?



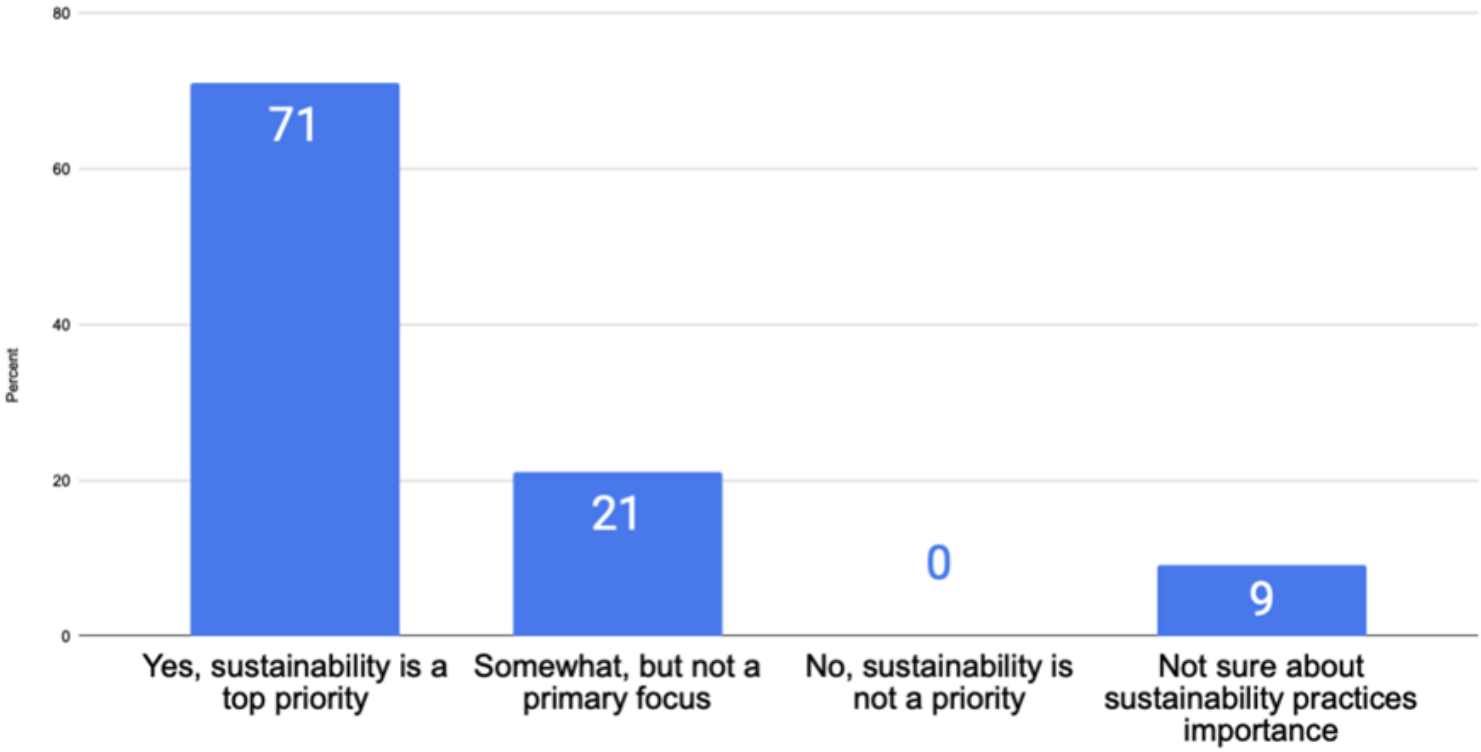
Yap Producers: Besides raw materials and processing equipment, what other costs do you anticipate in the production of locally processed foods? (e.g., labor, utilities, packaging)?



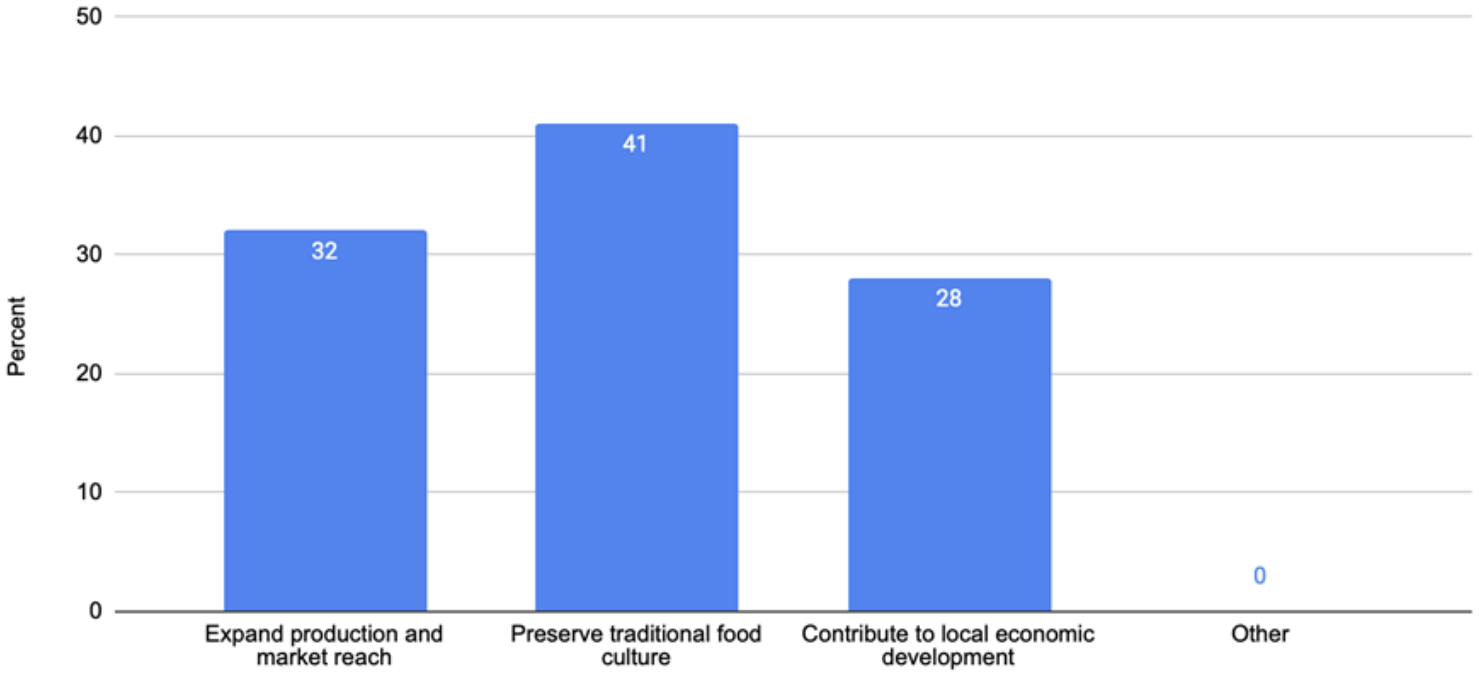
Yap Producers: How important is community involvement and support in your vision for producing locally processed foods?



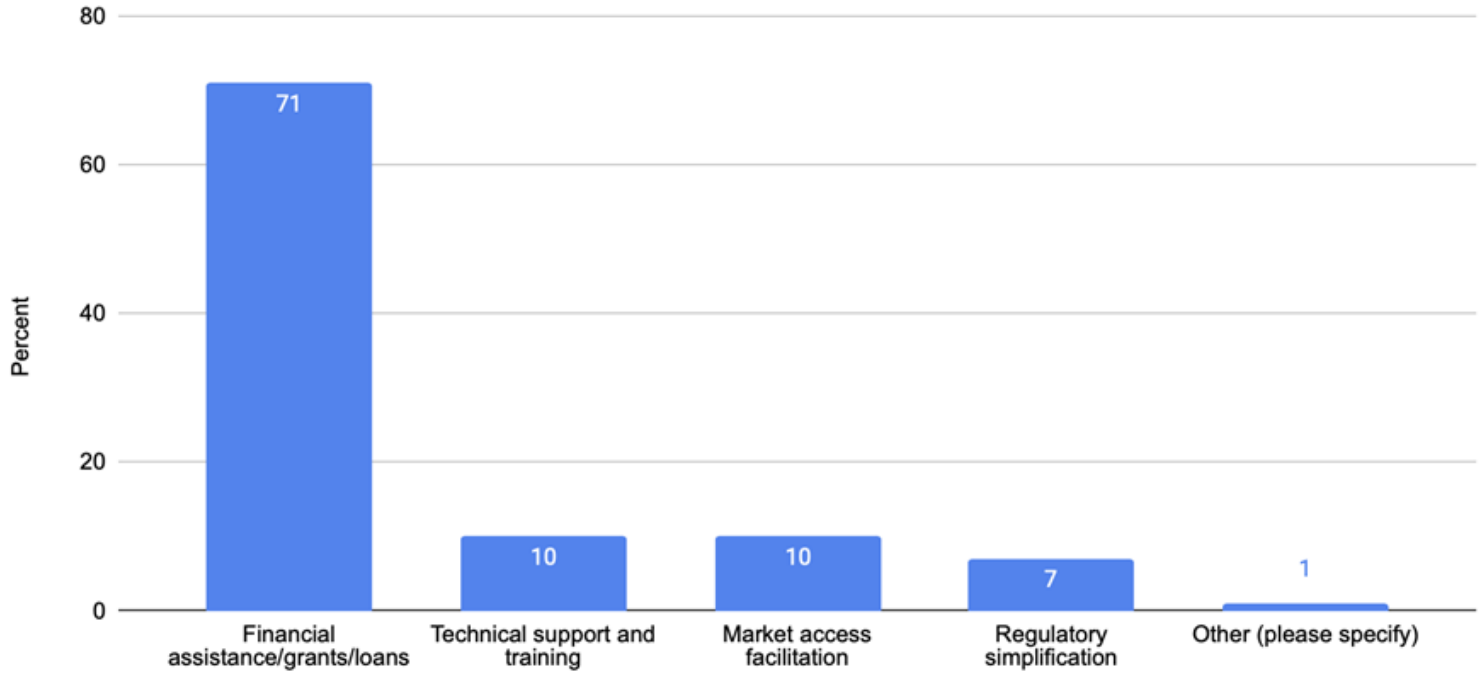
Yap Producers: Do you prioritize sustainable practices in your production processes, such as minimizing waste, conserving resources, or supporting local ecosystems?

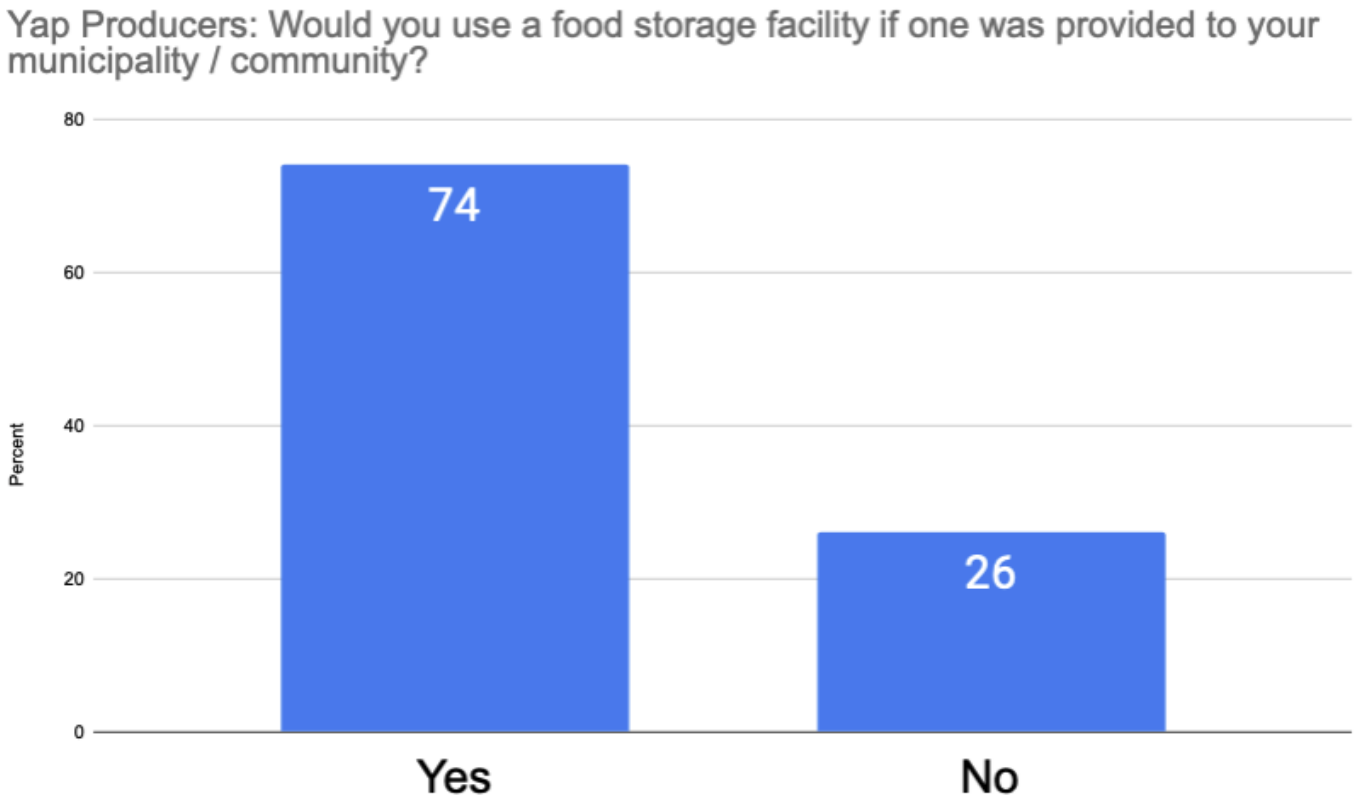


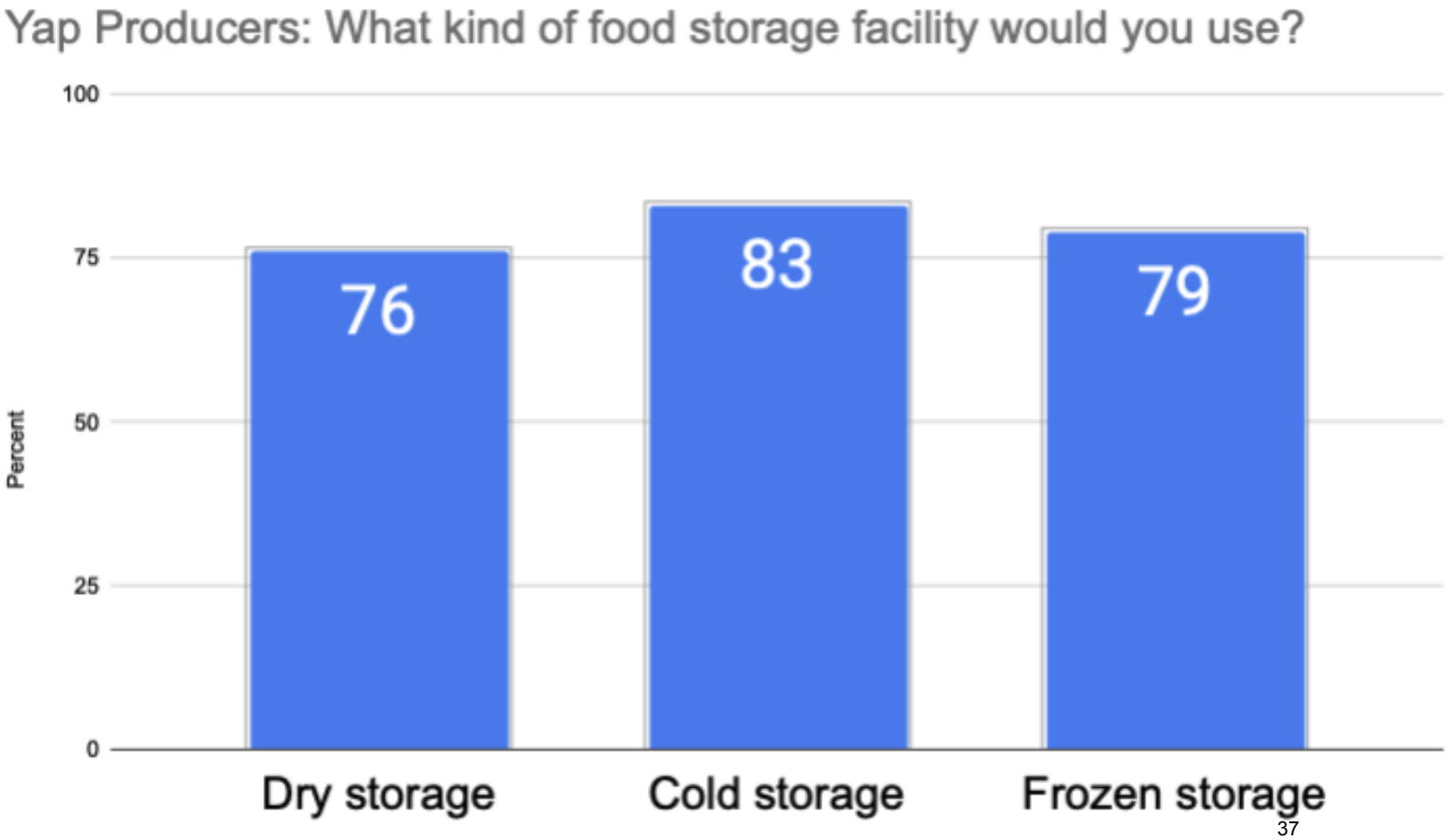
Yap Producers: What are your long-term goals and aspirations for your involvement in producing locally processed foods. How do you see your role evolving in the future?



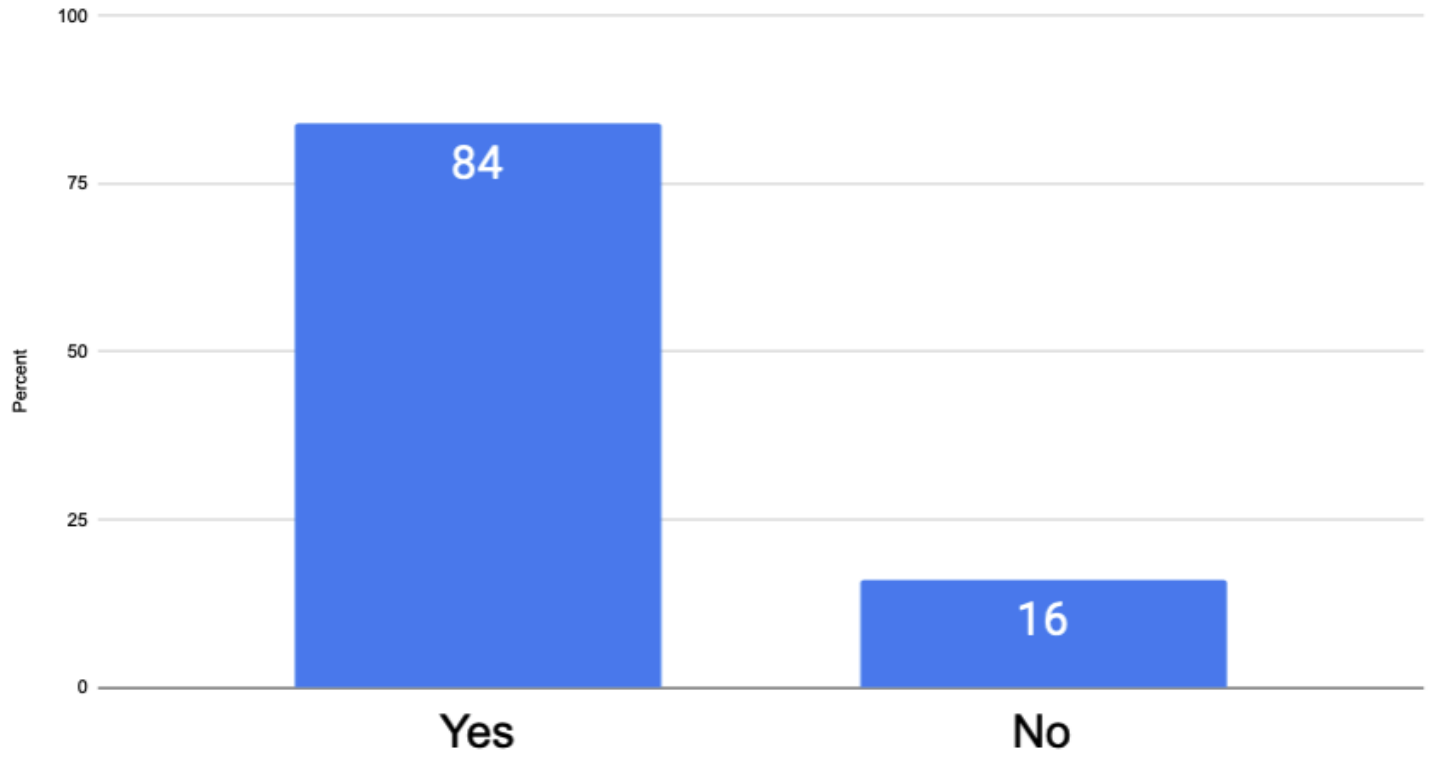
Yap Producers: What kind of support or incentives from the government would be most beneficial to you for promoting the production and marketing of locally processed foods in the FSM?



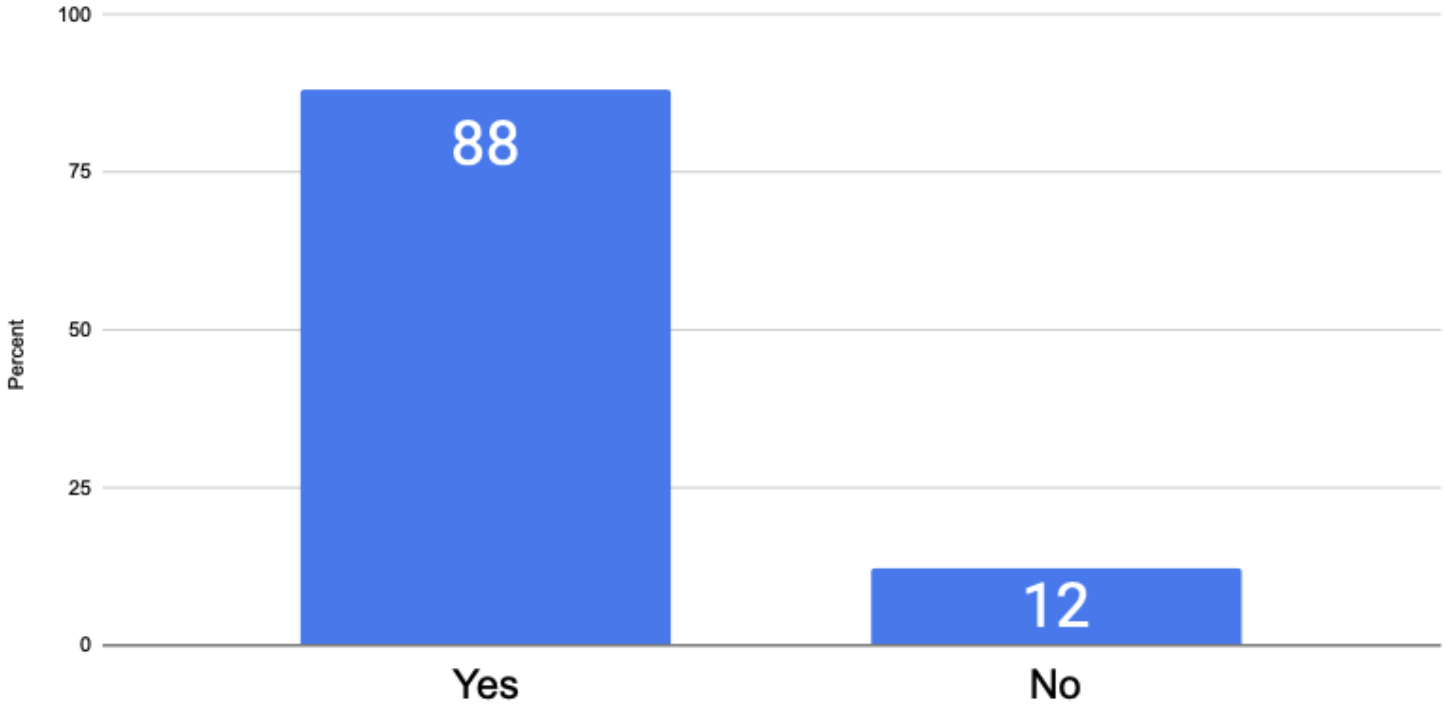

Yap Producers: Would you use a food storage facility if one was provided to your municipality / community?
80
60
40
20
0
Percent
74
26
Yes
No

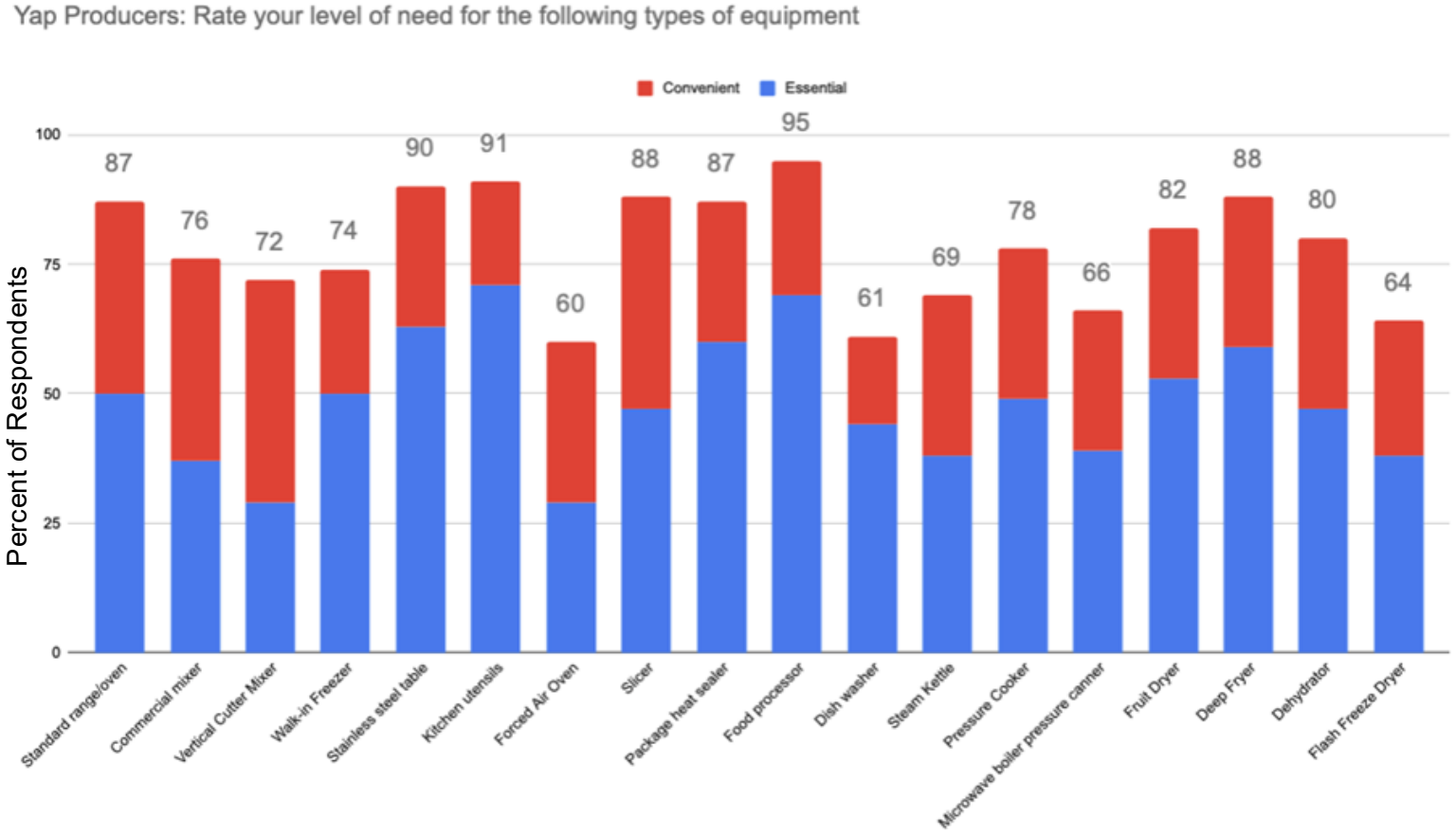

Yap Producers: What kind of food storage facility would you use?
100
75
50
25
0
Percent
76
83
79
Dry storage
Cold storage
Frozen storage

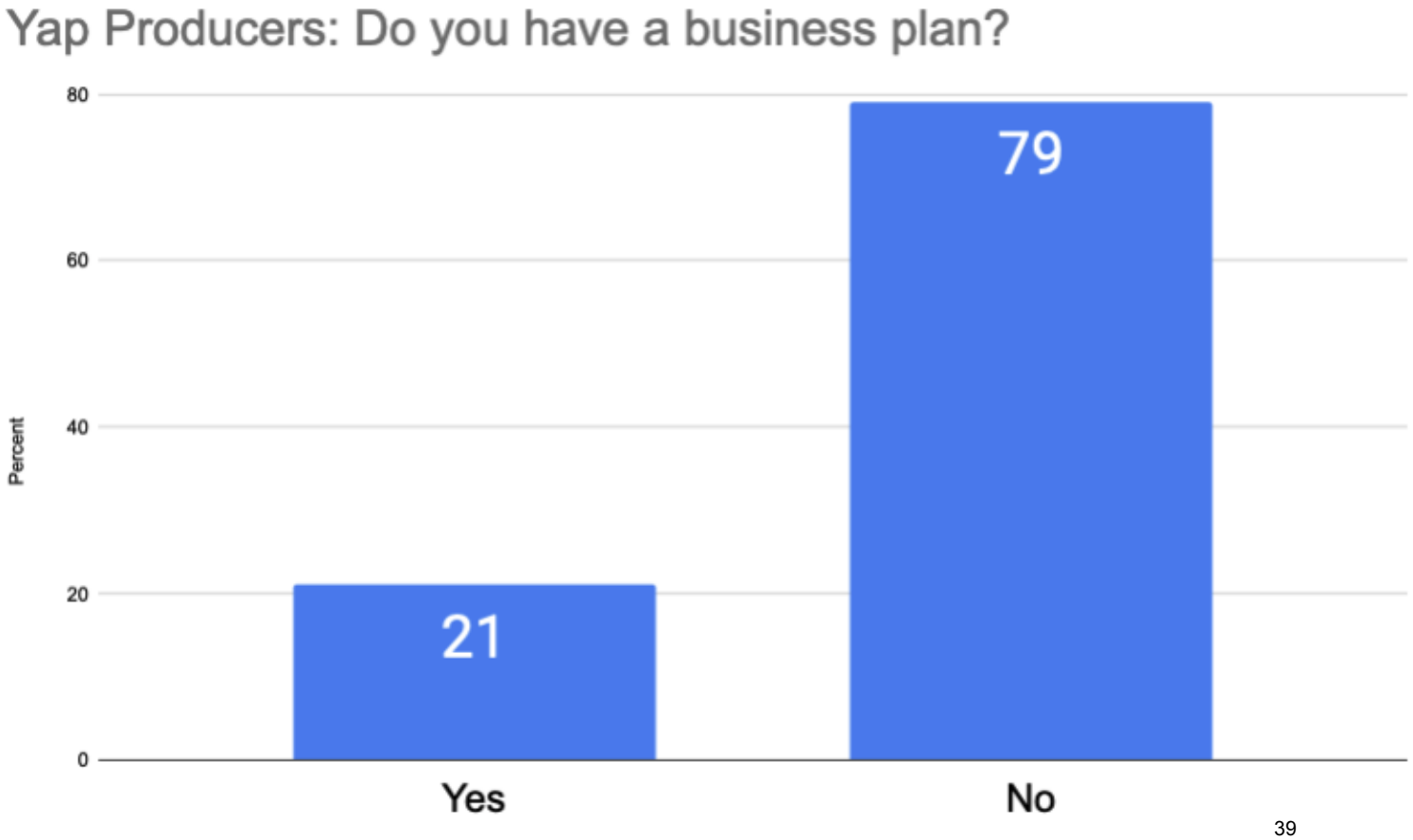
Yap Producers: Would you be interested in selling the food you produce to a local food processing plant?



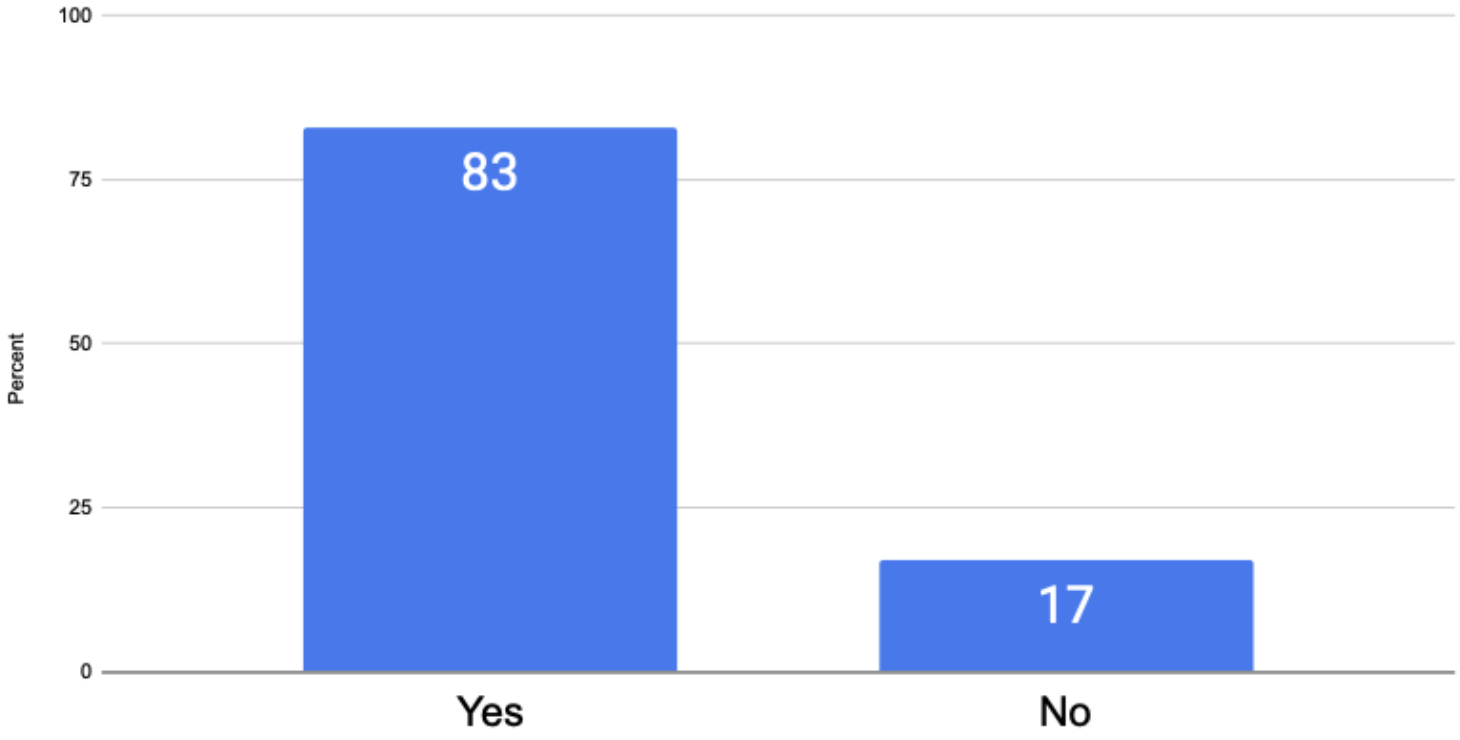
Yap Producers: Would you be interested in having your raw food products purchased directly from your farm/island (So, you do not have to transport them to market)?



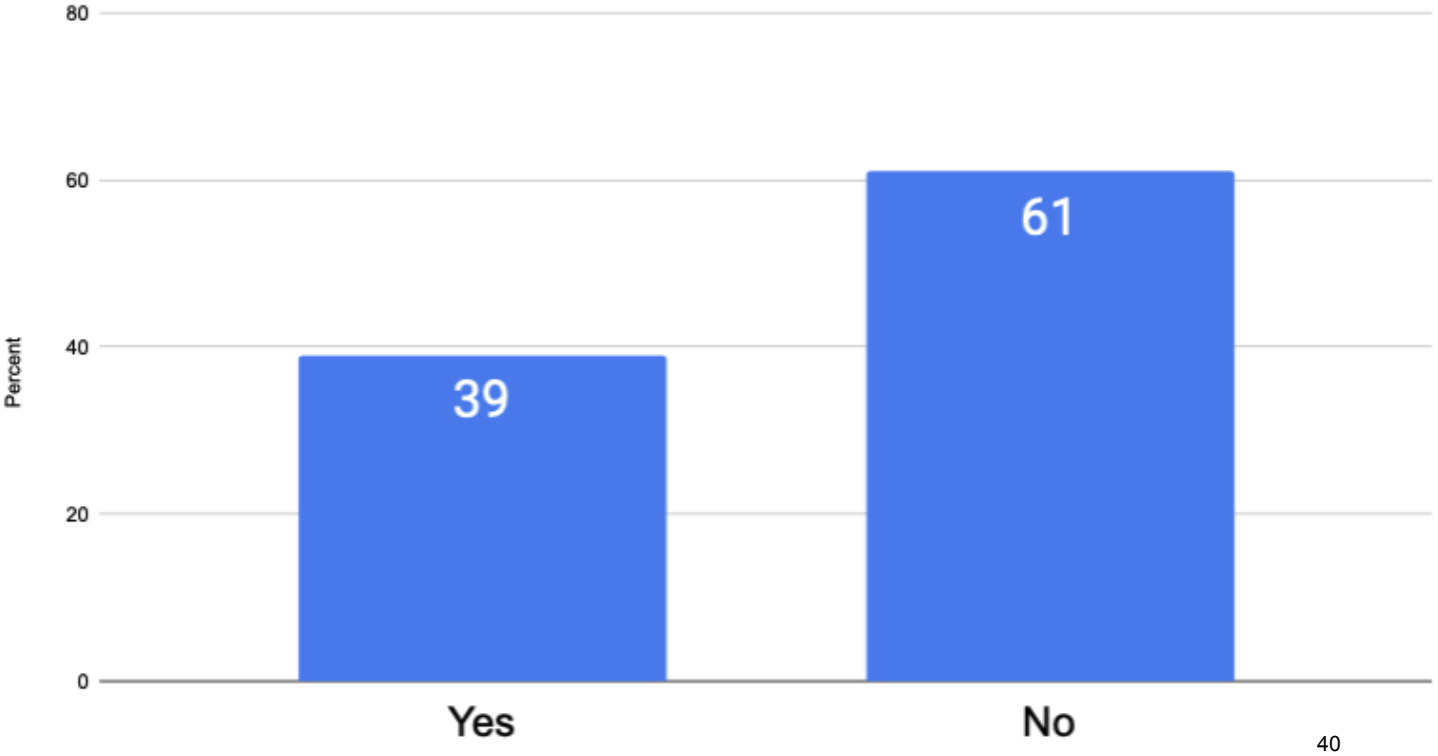

Yap Producers: Rate your level of need for the following types of equipment
Convenient
Essential
Percent of Respondents
100
75
50
25
0
87
76
72
74
90
91
60
88
87
95
61
69
78
66
82
88
80
64
Standard range/oven
Commercial mixer
Vertical Cutter Mixer
Walk-in Freezer
Stainless steel table
Kitchen utensils
Forced Air Oven
Slicer
Package heat sealer
Food processor
Dish washer
Steam Kettle
Pressure Cooker
Microwave boiler pressure canner
Fruit Dryer
Deep Fryer
Dehydrator
Flash Freeze Dryer

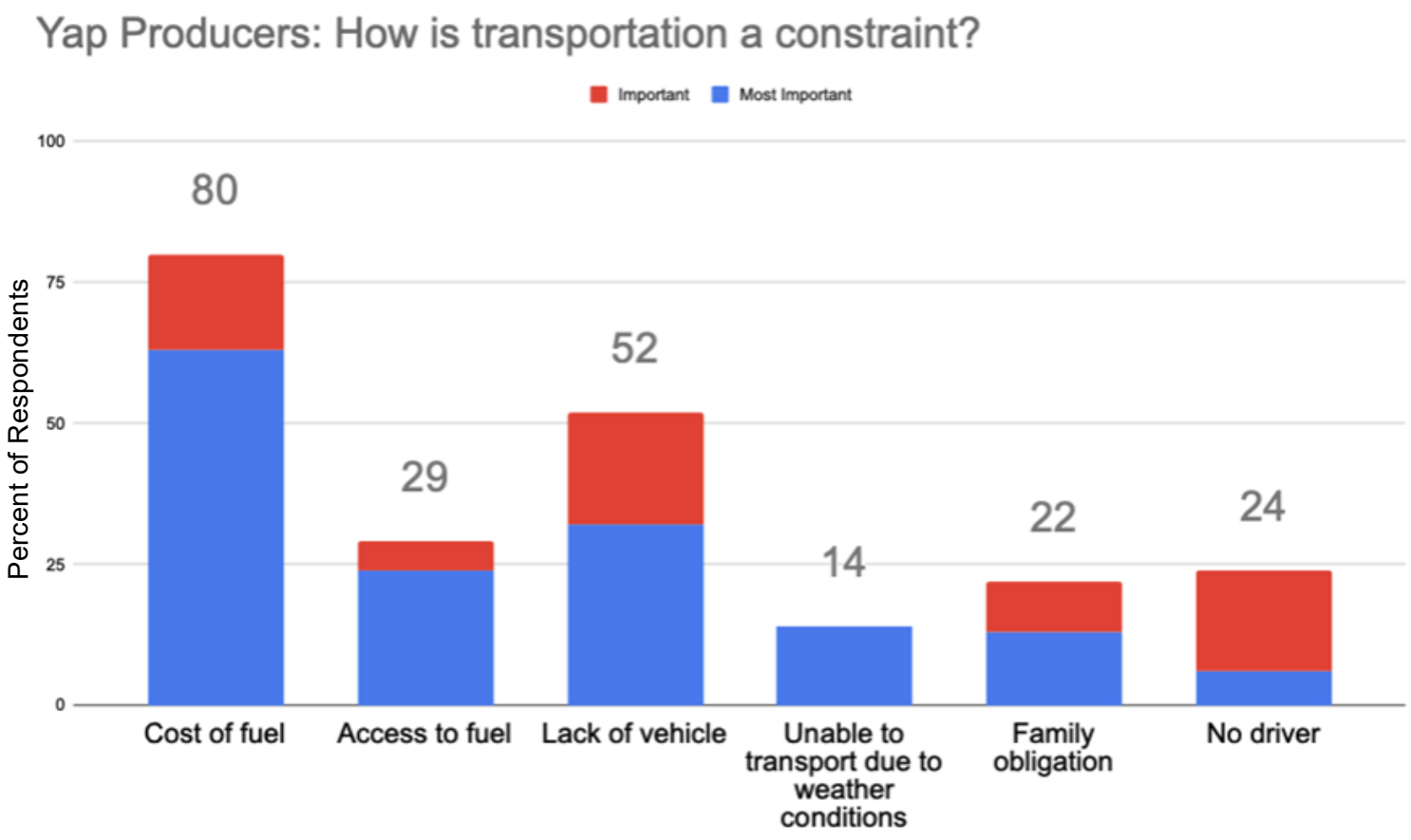

Yap Producers: Do you have a business plan?
Percent
80
60
40
20
0
21
79
Yes
No

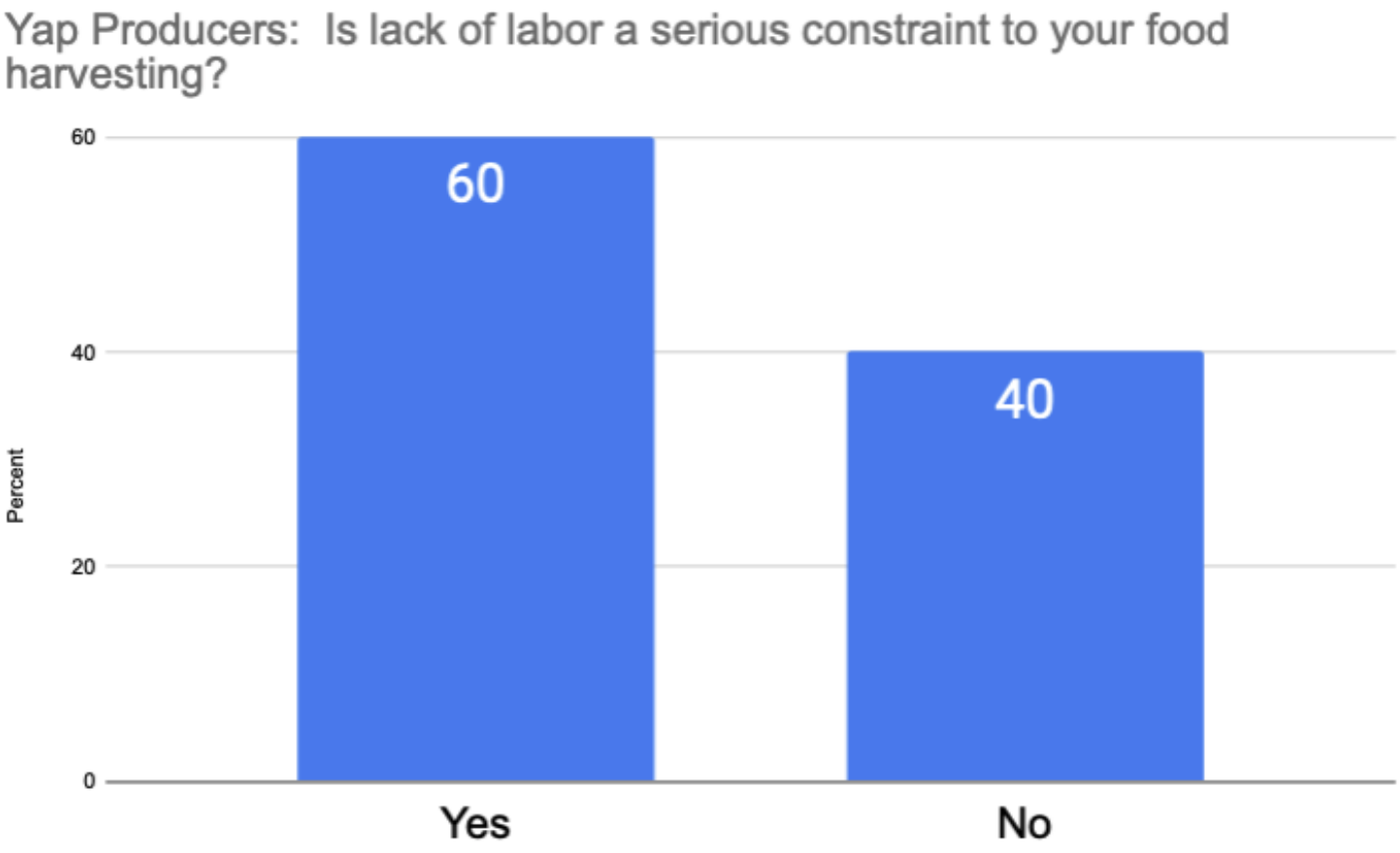
Yap Producers: Would you be willing to work with business advisors to create or improve an existing business plan?



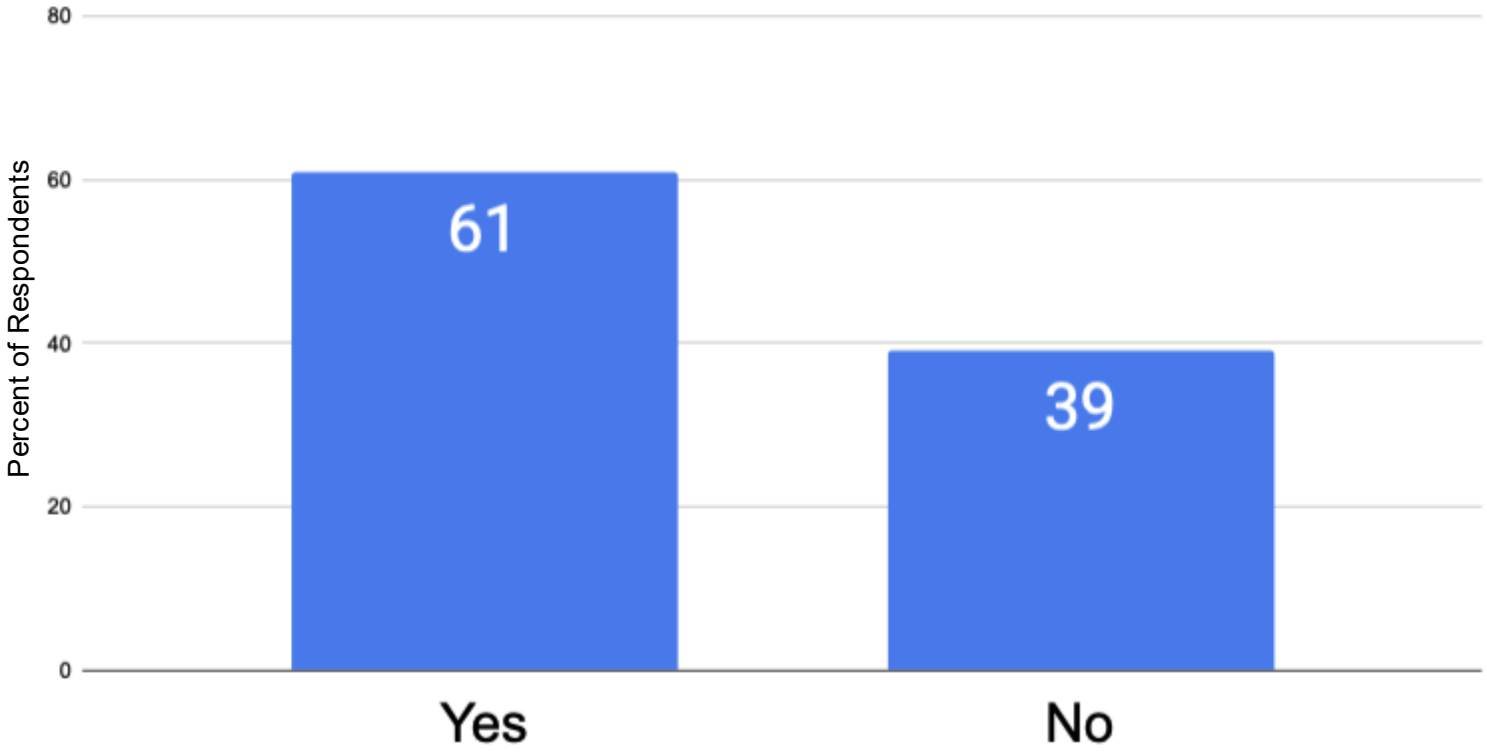
Yap Producers: Is transportation of your food products and food crops to market a serious constraint?



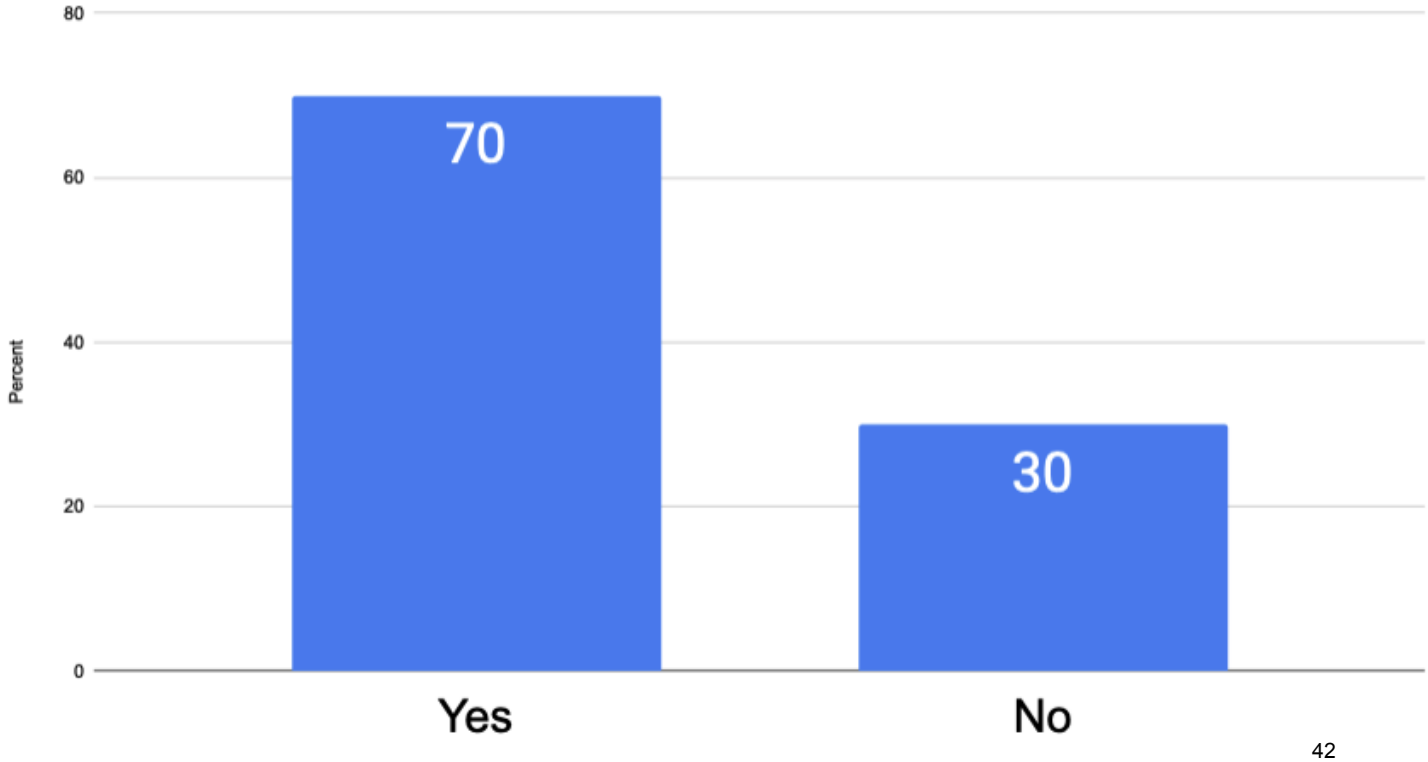

Yap Producers: How is transportation a constraint?
Important
Most Important
Percent of Respondents
100
75
50
25
0
80
29
52
14
22
24
Cost of fuel
Access to fuel
Lack of vehicle
Unable to transport due to weather conditions
Family obligation
No driver

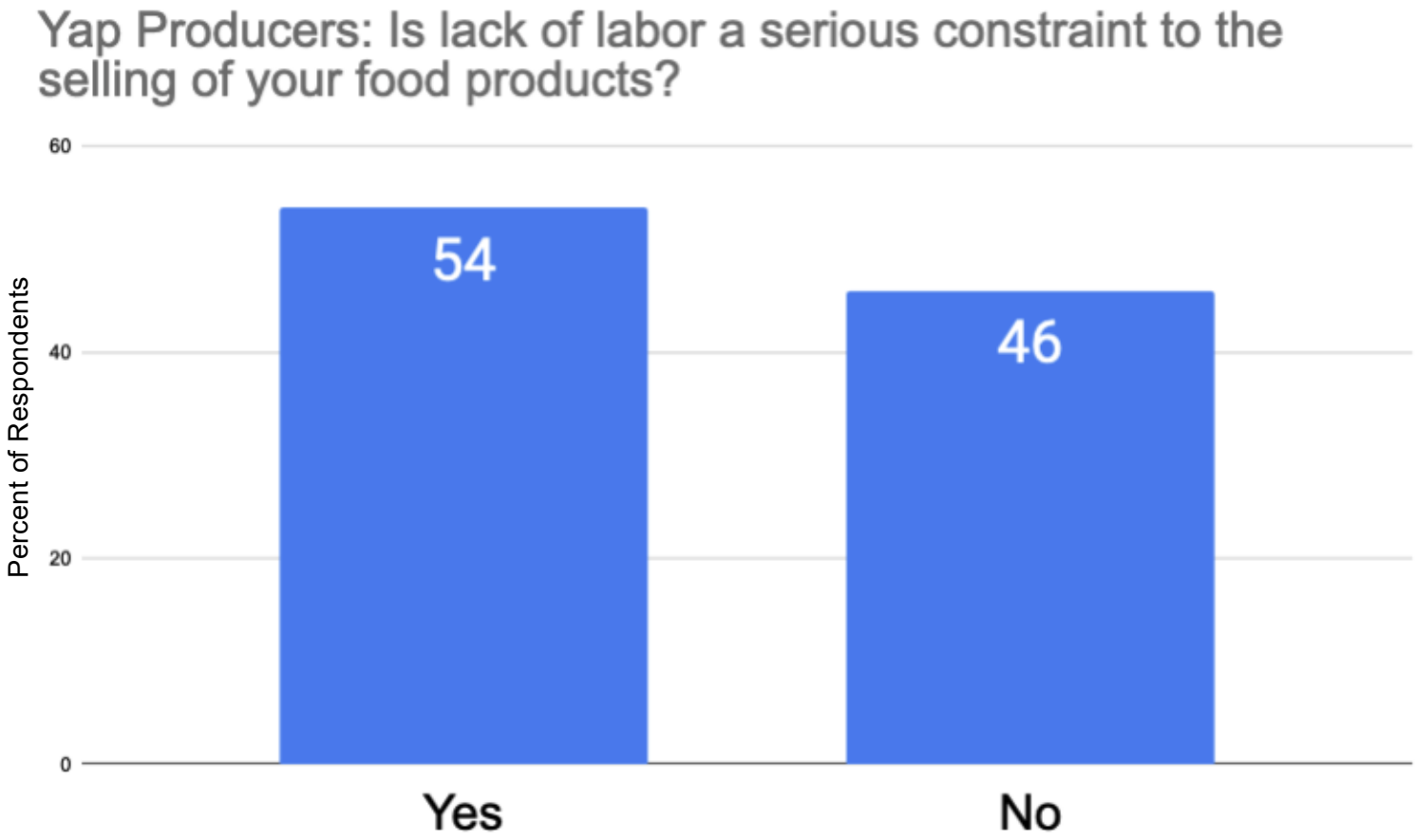

Yap Producers: Is lack of labor a serious constraint to your food harvesting?
Percent
60
40
20
0
60
40
Yes
No

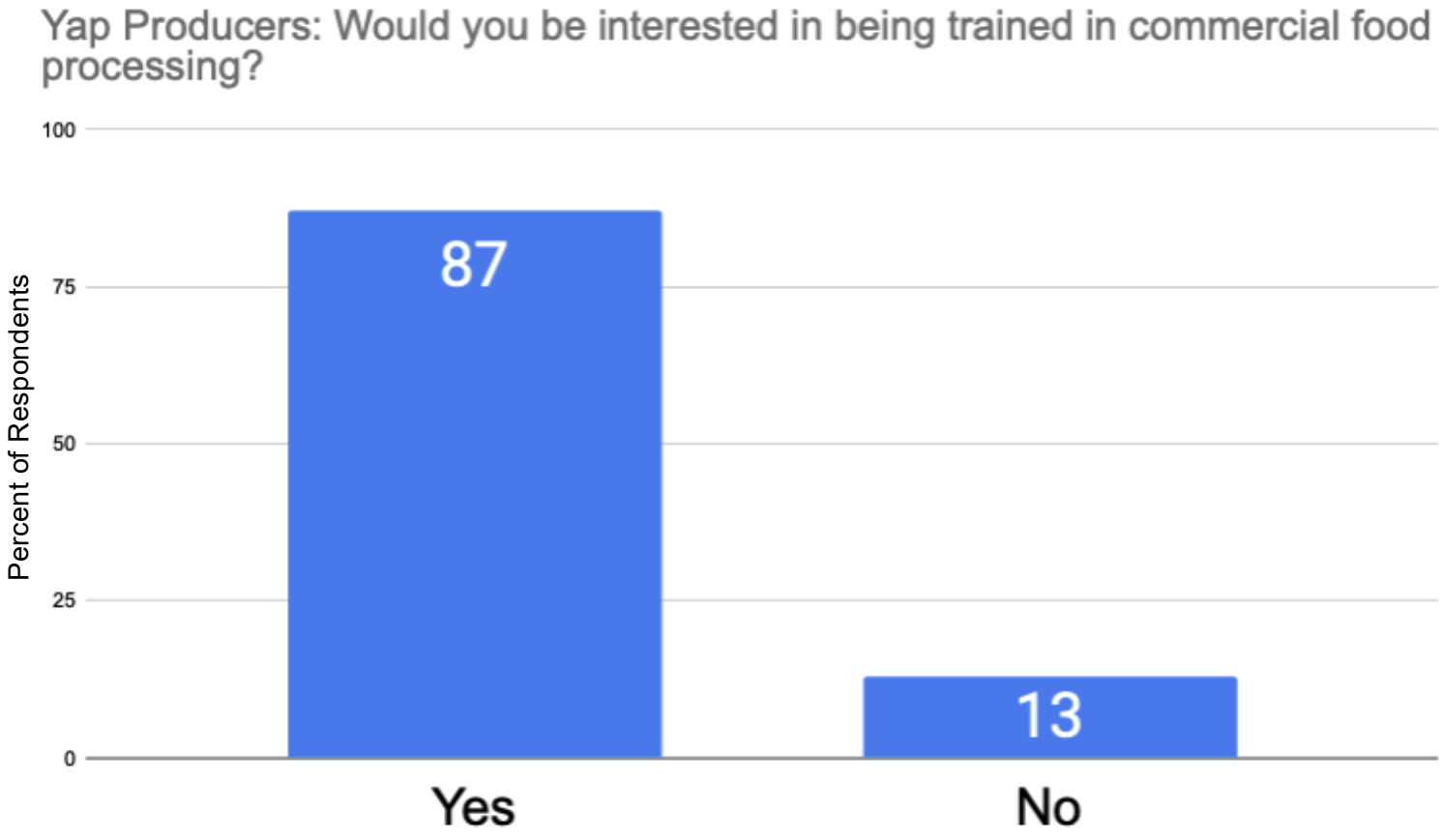
Yap Producers: Is lack of labor a serious constraint to your food production and packaging?



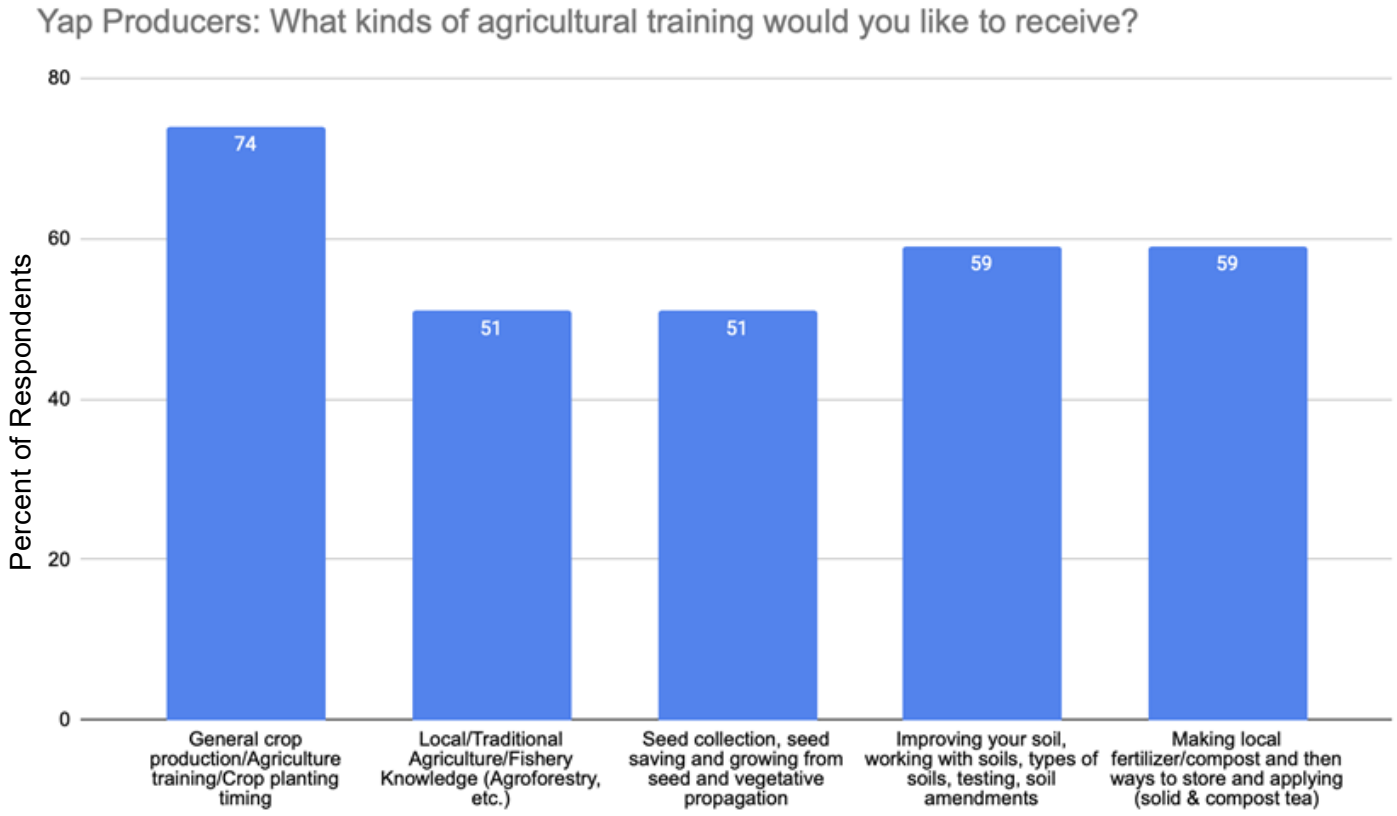
Yap Producers: Do you also sell your food products directly to customers?

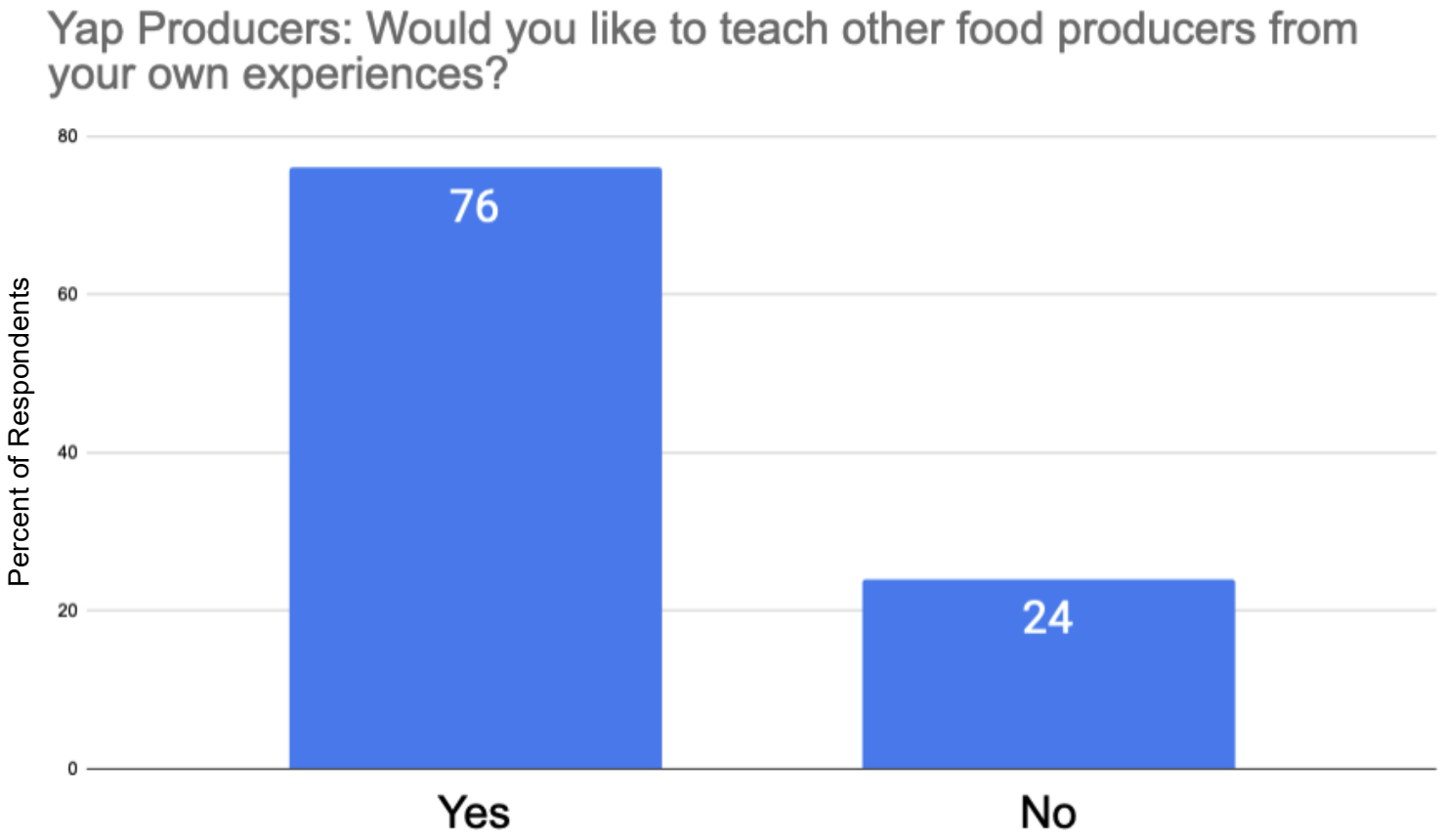


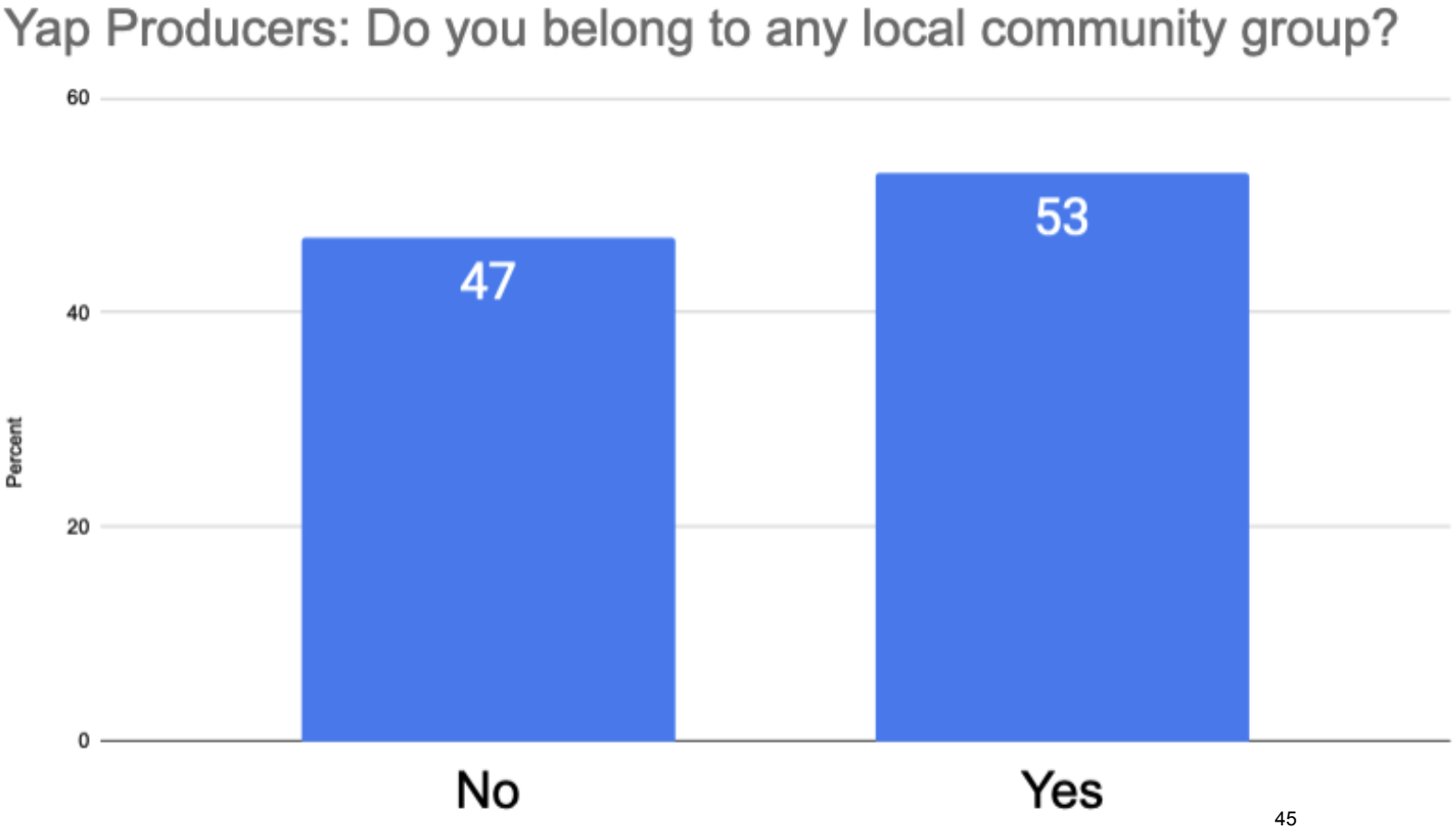

Yap Producers: Is lack of labor a serious constraint to the selling of your food products?
Percent of Respondents
60
40
20
0
54
46
Yes
No


Yap Producers: Would you be interested in being trained in commercial food processing?
Percent of Respondents
100
75
50
25
0
87
13
Yes
No

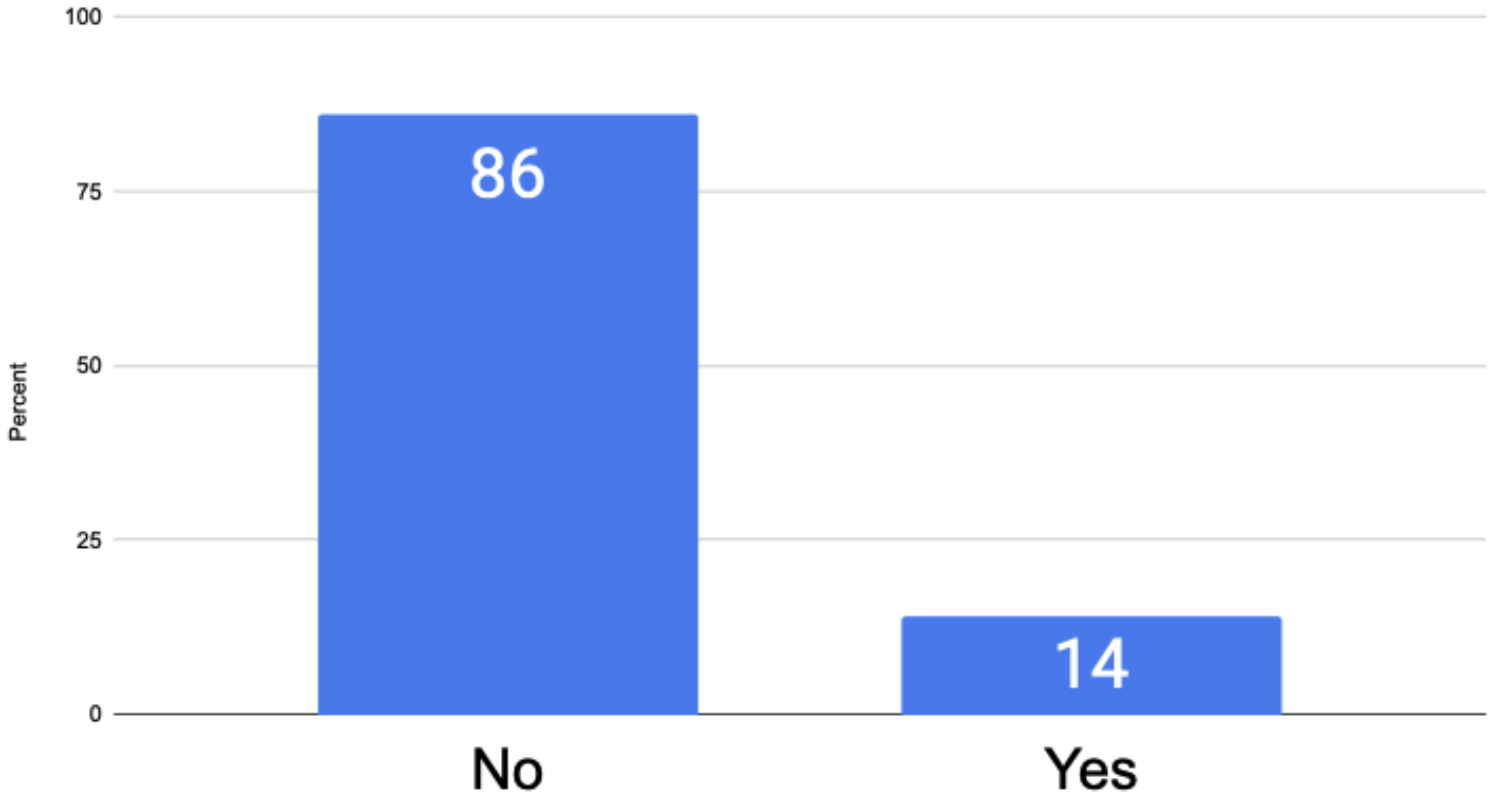

Yap Producers: Would you like any training to help you produce more food?
Percent of Respondents
100
75
50
25
0
91
9
Yes
No


Yap Producers: What kinds of agricultural training would you like to receive?
Percent of Respondents
80
60
40
20
0
74
51
51
59
59
General crop production/Agriculture training/Crop planting timing
Local/Traditional Agriculture/Fishery Knowledge (Agroforestry, etc.)
Seed collection, seed saving and growing from seed and vegetative propagation
Improving your soil, working with soils, types of soils, testing, soil amendments
Making local fertilizer/compost and then ways to store and applying (solid & compost tea)

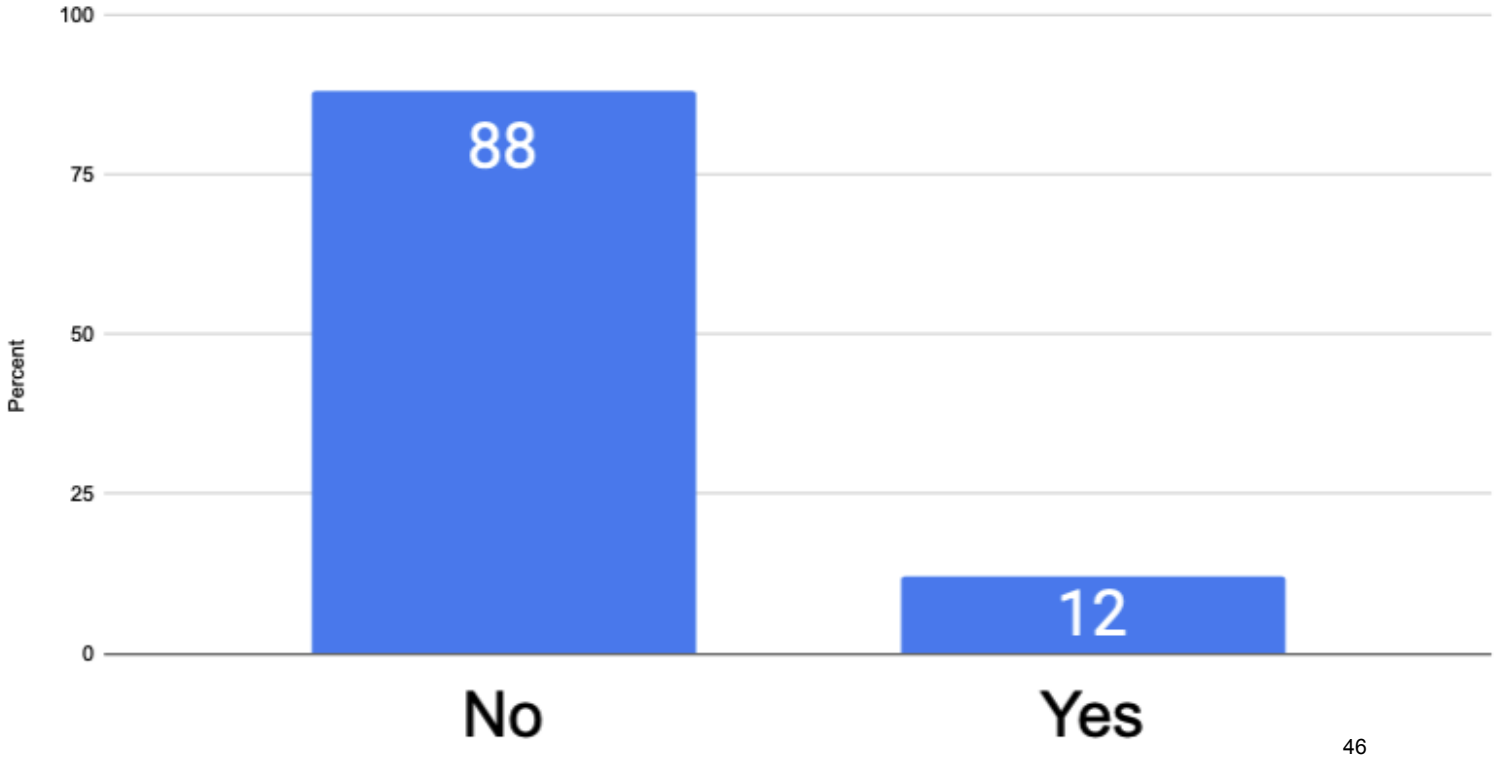

Yap Producers: Would you like to teach other food producers from your own experiences?
Percent of Respondents
80
60
40
20
0
76
24
Yes
No


Yap Producers: Do you belong to any local community group?
Percent
60
40
20
0
47
53
No
Yes

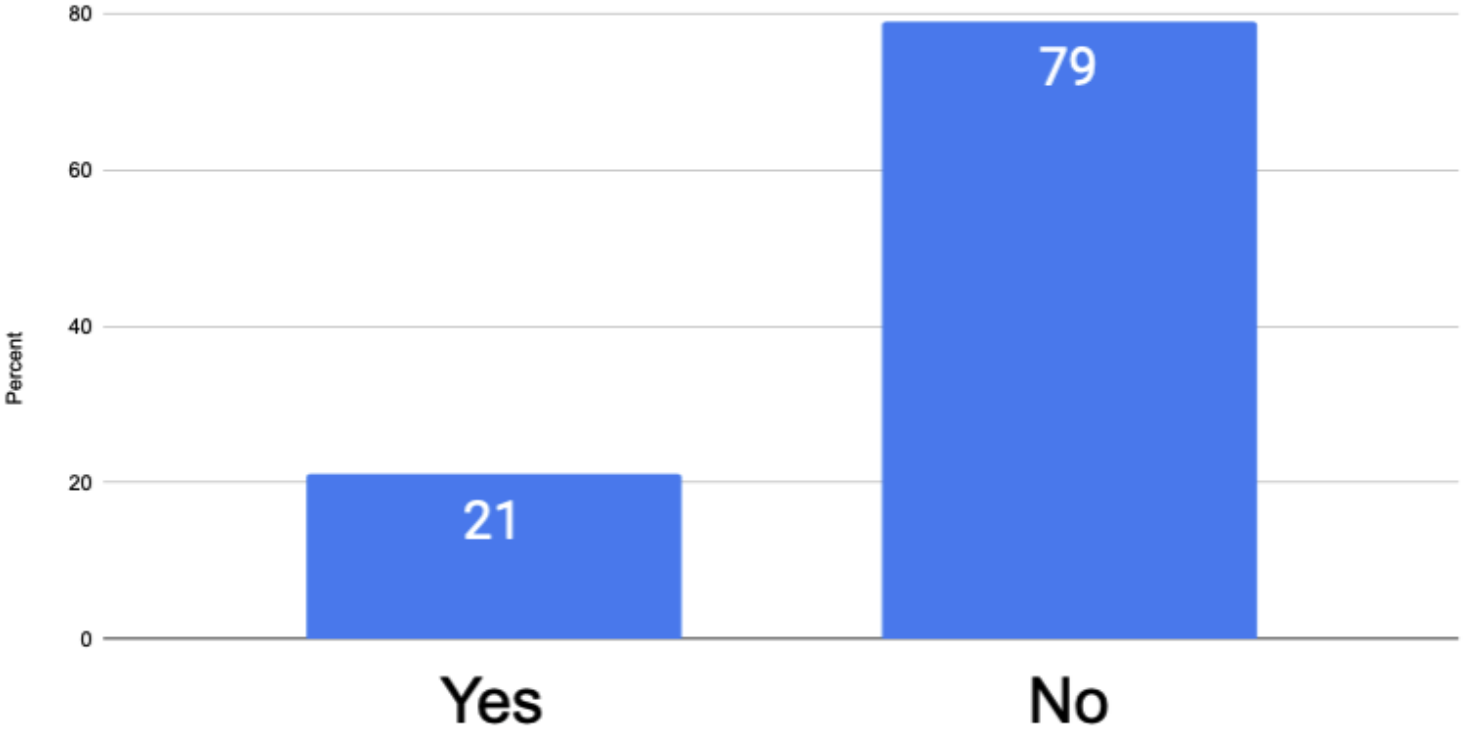
Yap Producers: Do you belong to any local farmer association?



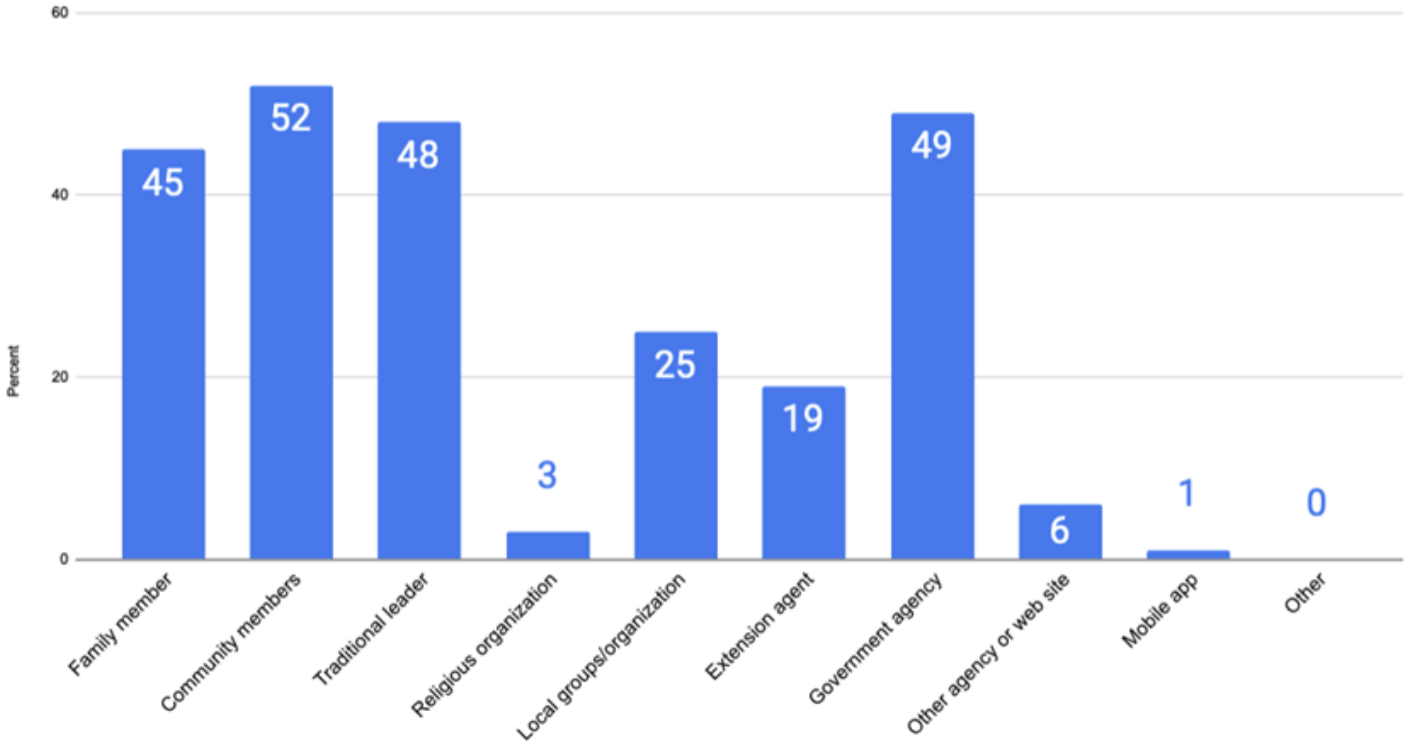
Yap Producers: Do you belong to any local fishing organization?



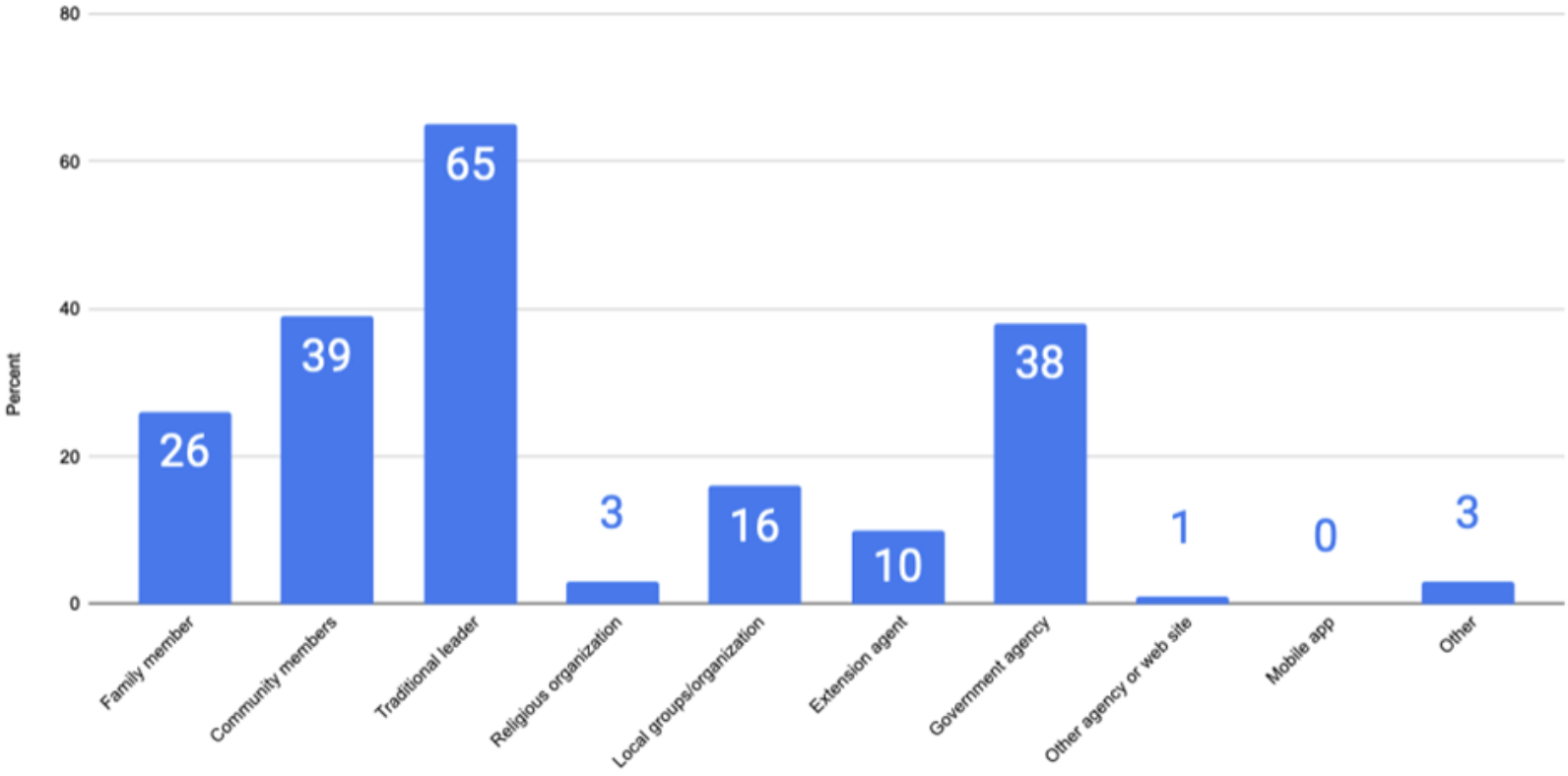
Yap Producers: Are you familiar with the State and National laws and policies that affect your food production?



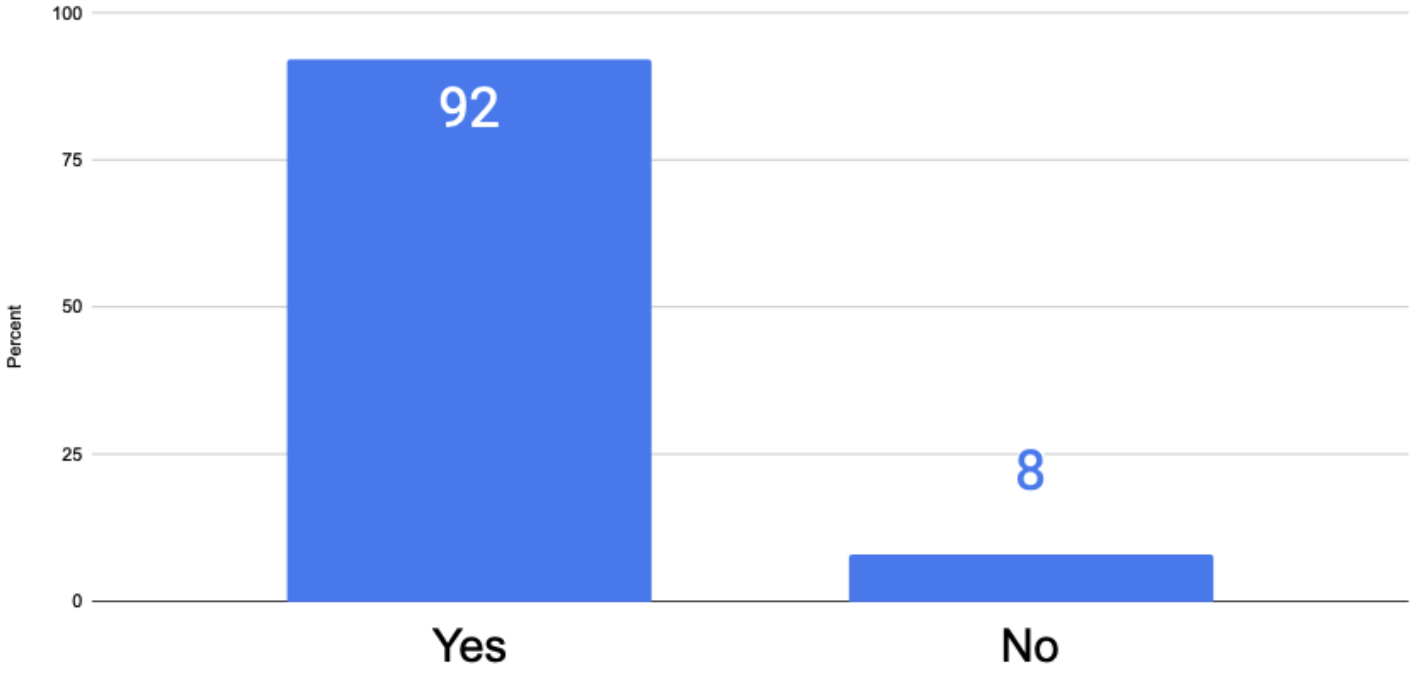
Yap Producers: If you need information about the State and National laws and policies, where would you go?



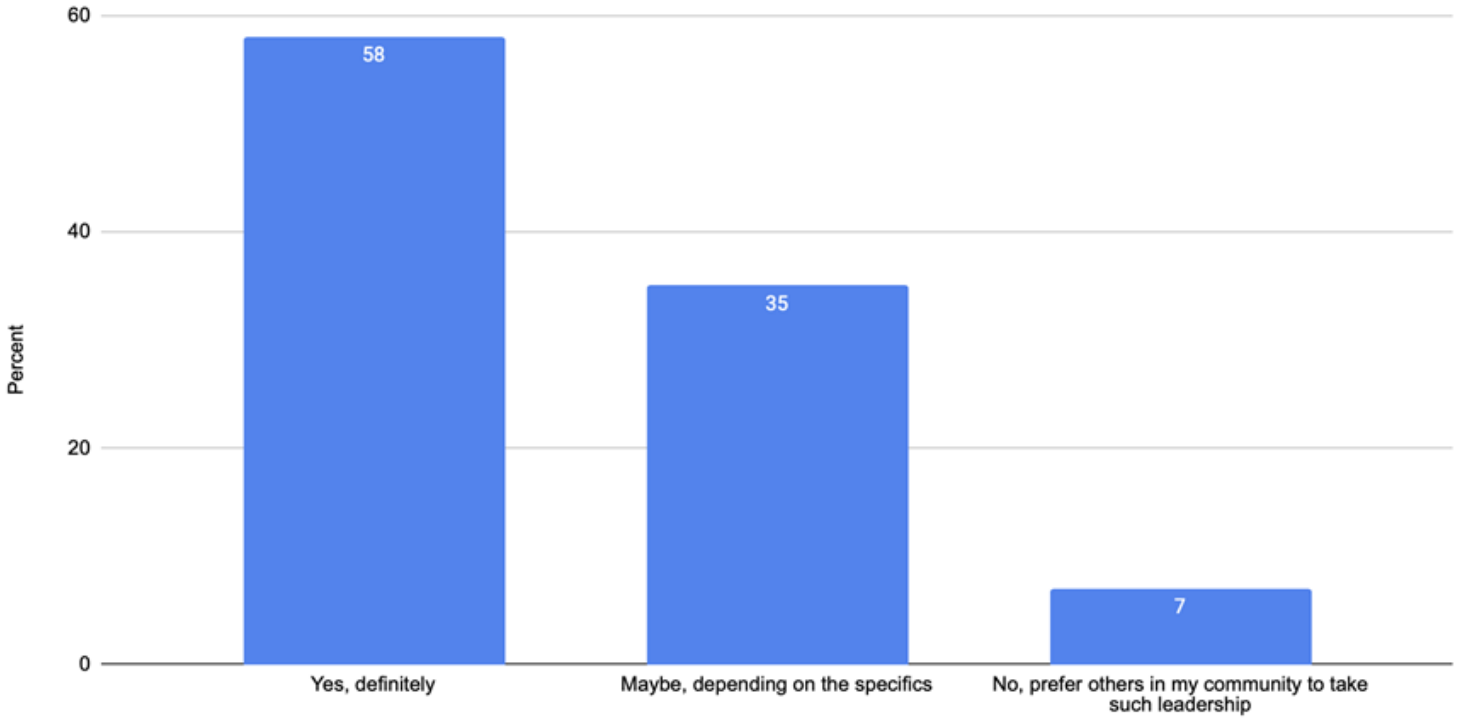
Yap Producers: If you need to communicate with the government leaders responsible for making laws/policies, where would you go?



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



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



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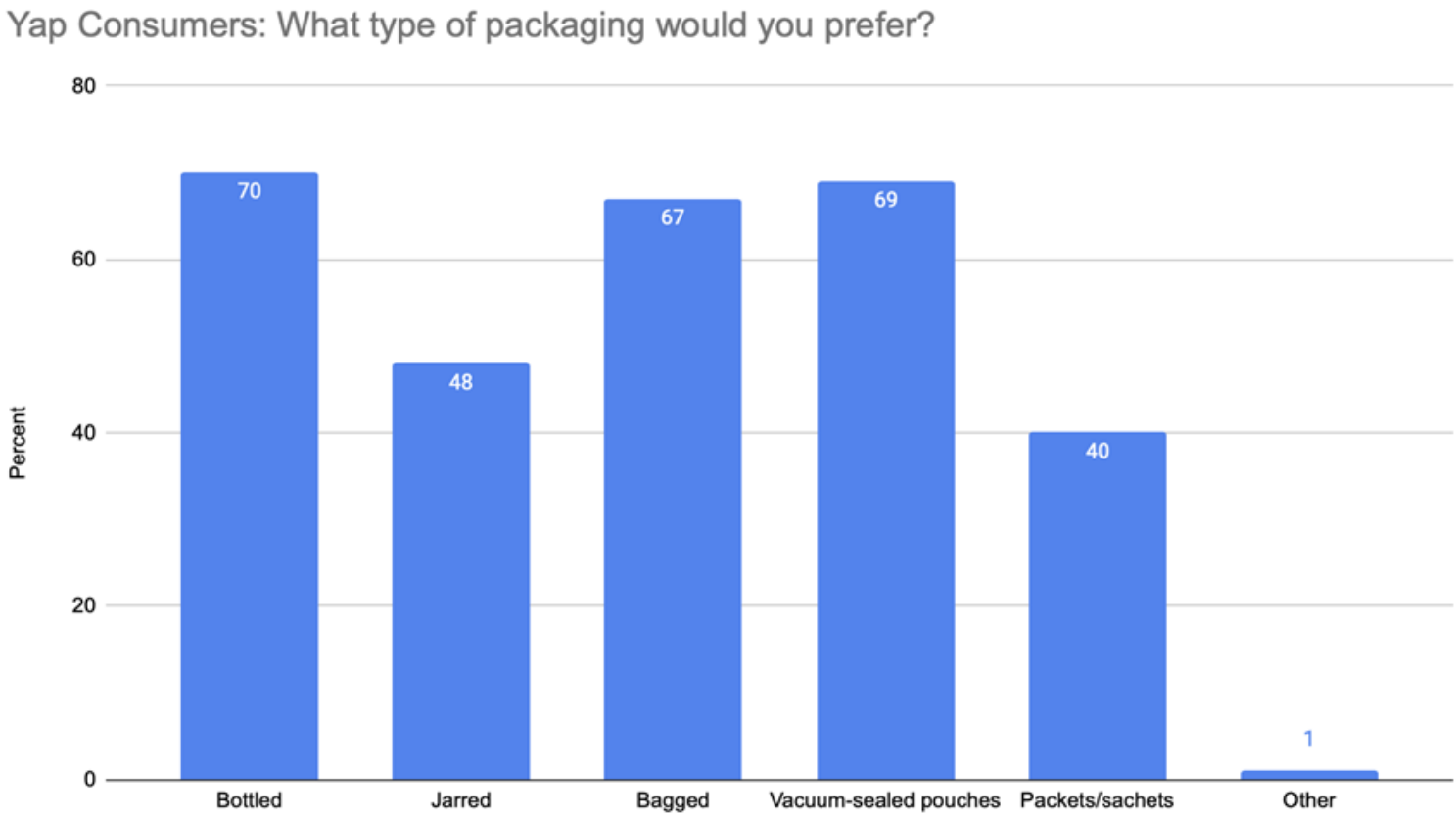
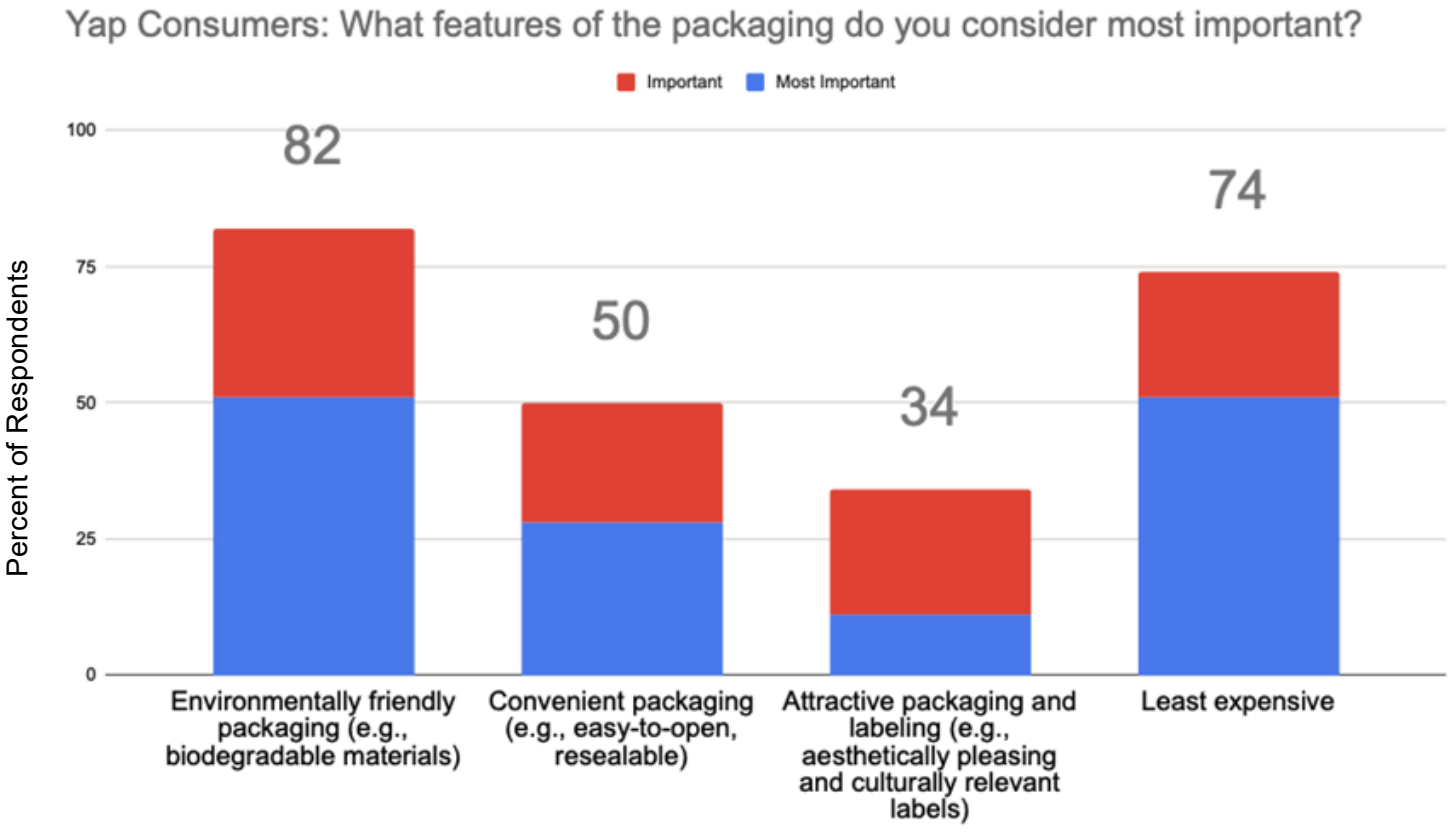
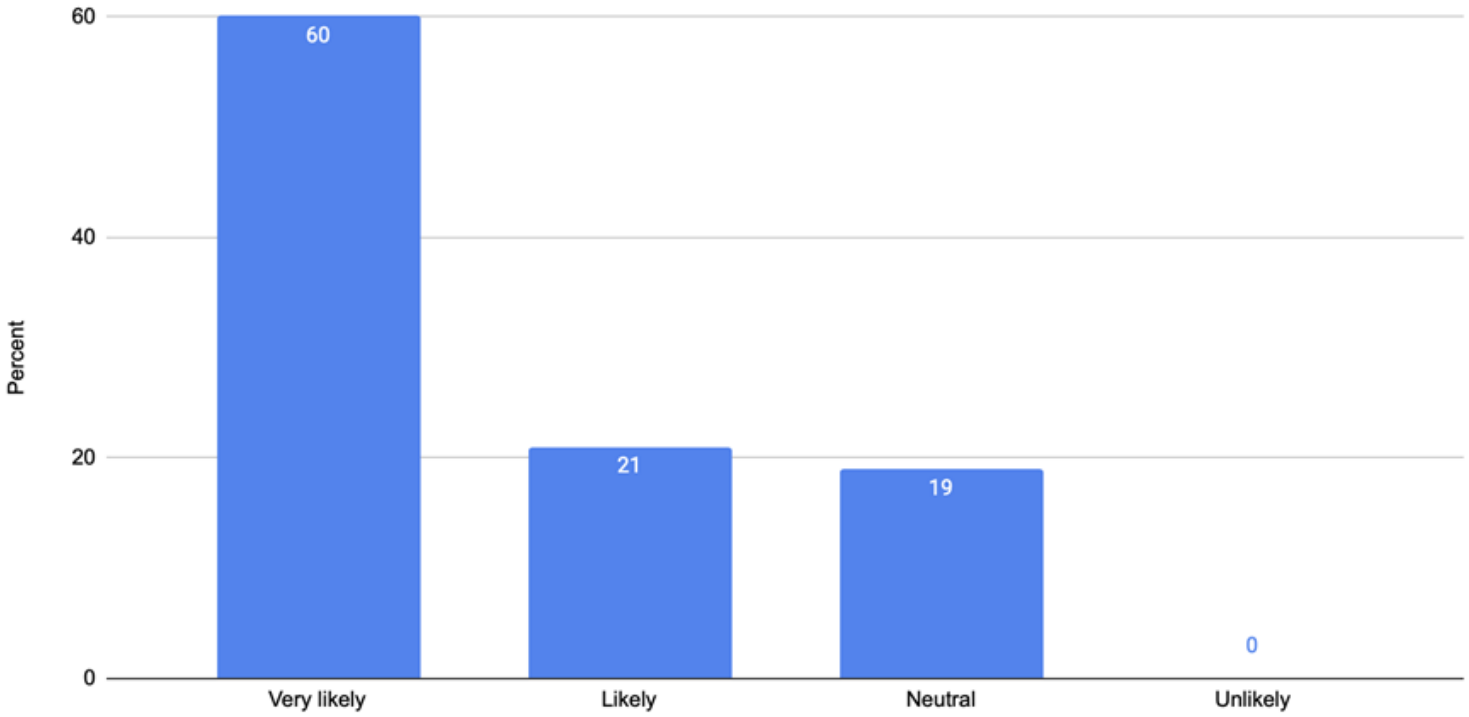
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
Consumers

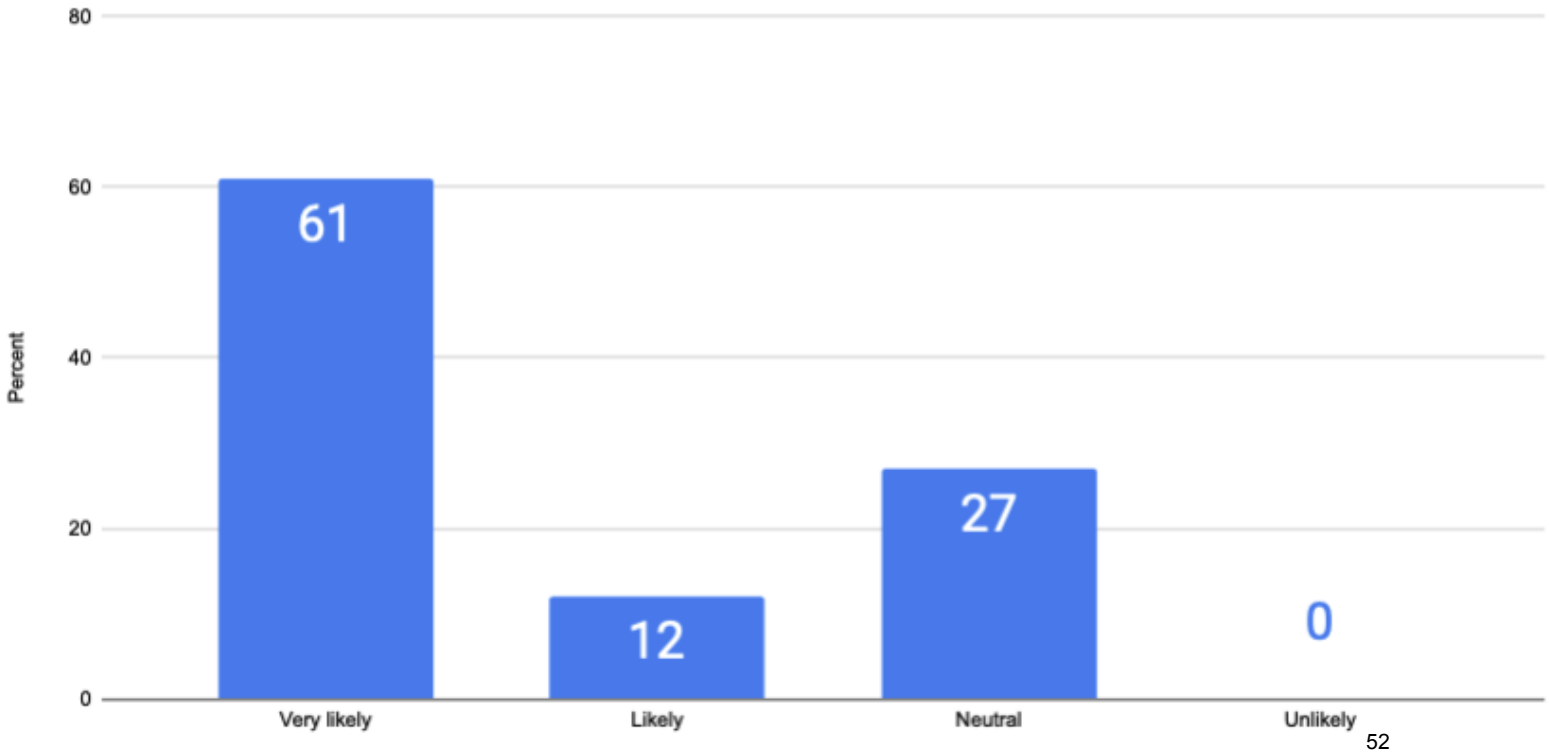

Yap Consumers: What type of packaging would you prefer?
Percent
80
60
40
20
0
70
48
67
69
40
1
Bottled
Jarred
Bagged
Vacuum-sealed pouches
Packets/sachets
Other

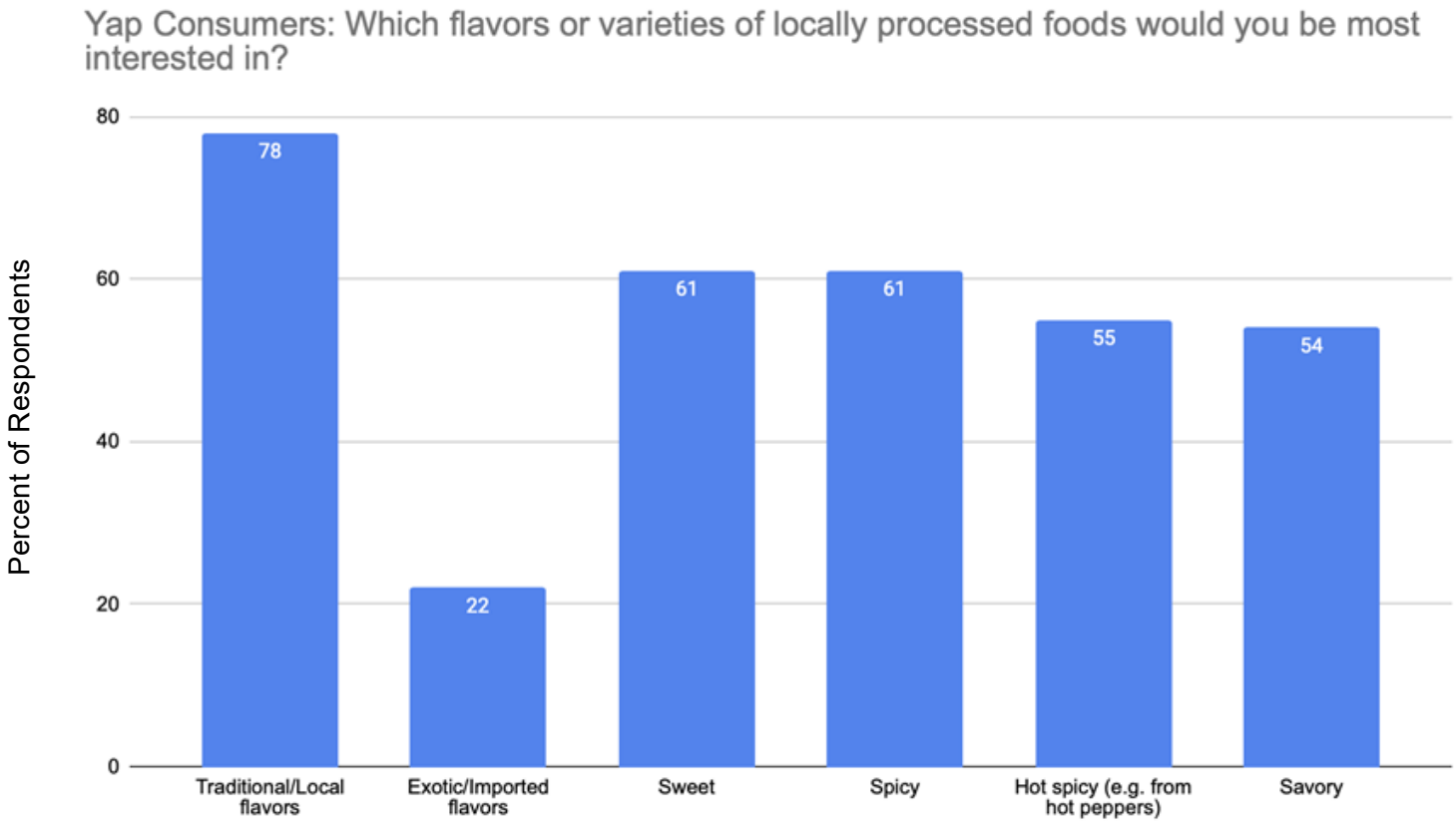

Yap Consumers: What features of the packaging do you consider most important?
Important
Most Important
Percent of Respondents
100
75
50
25
0
82
50
34
74
Environmentally friendly packaging (e.g., biodegradable materials)
Convenient packaging (e.g., easy-to-open, resealable)
Attractive packaging and labeling (e.g., aesthetically pleasing and culturally relevant labels)
Least expensive

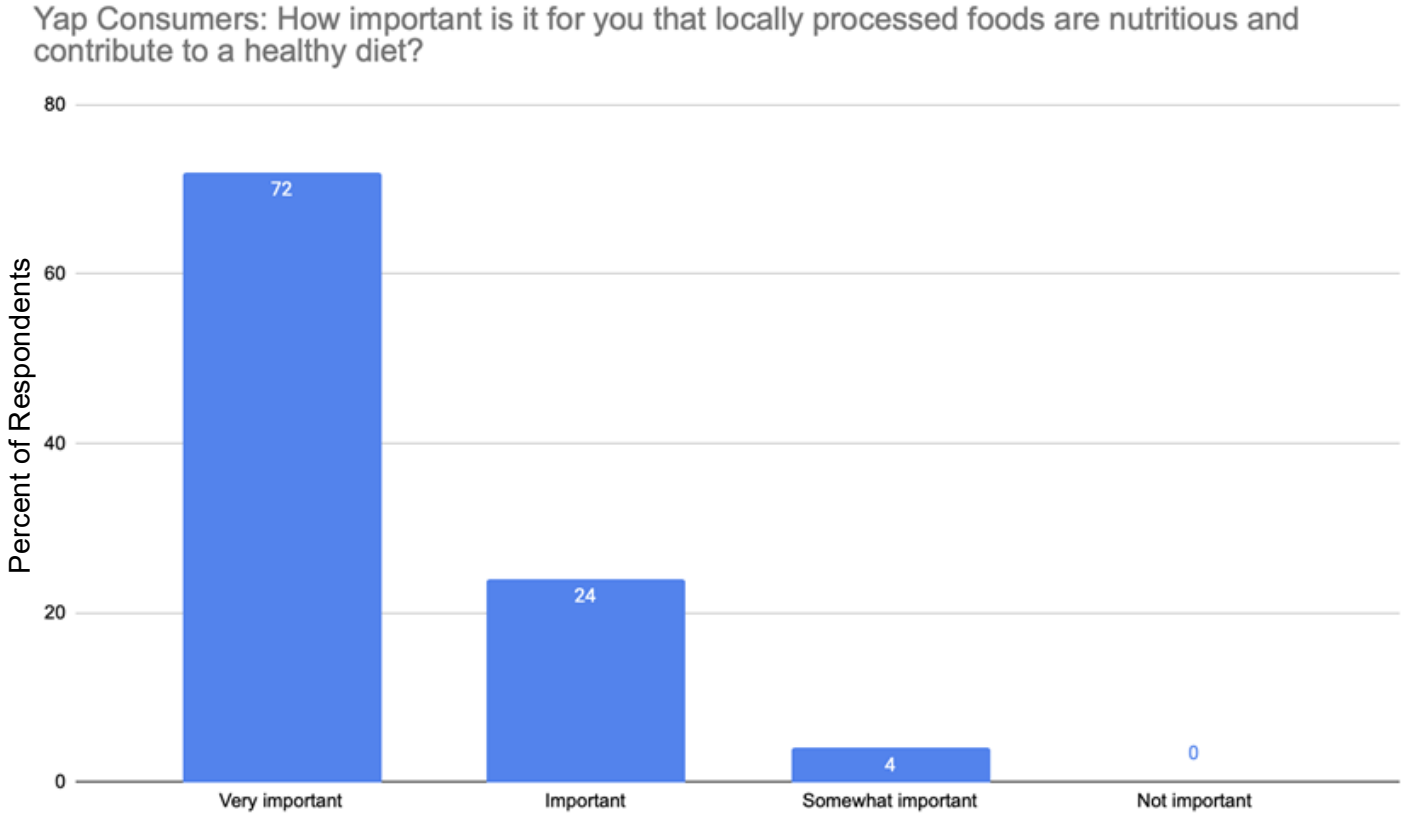
Yap Consumers: How likely are you to purchase locally processed foods if they are convenient, accessible and available?



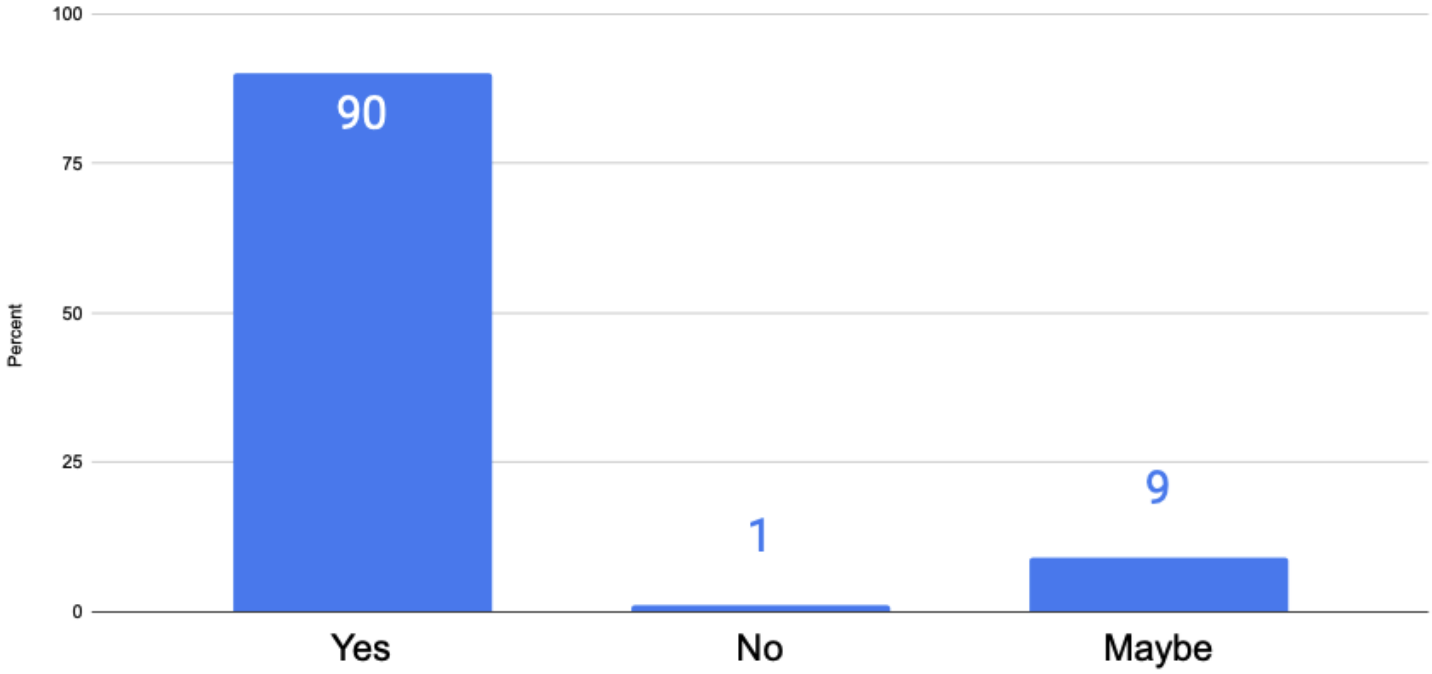
Yap Consumers: How likely are you to purchase locally processed food products if they are the same price and the same quality, as comparable imported products (example: local coconut oil versus imported cooking oils)?



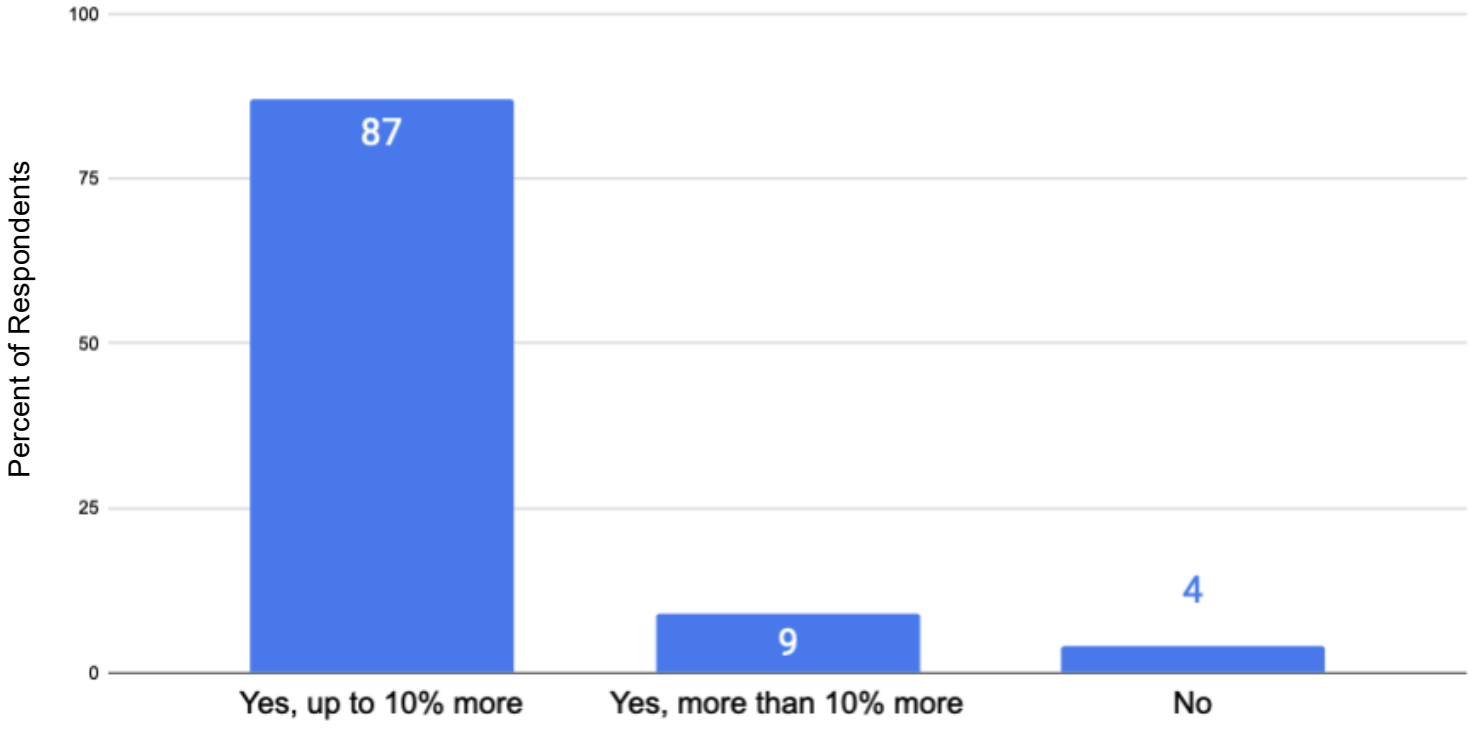

Yap Consumers: Which flavors or varieties of locally processed foods would you be most interested in?
Percent of Respondents
80
60
40
20
0
78
22
61
61
55
54
Traditional/Local flavors
Exotic/Imported flavors
Sweet
Spicy
Hot spicy (e.g. from hot peppers)
Savory


Yap Consumers: How important is it for you that locally processed foods are nutritious and contribute to a healthy diet?
Percent of Respondents
80
60
40
20
0
72
24
4
0
Very important
Important
Somewhat important
Not important

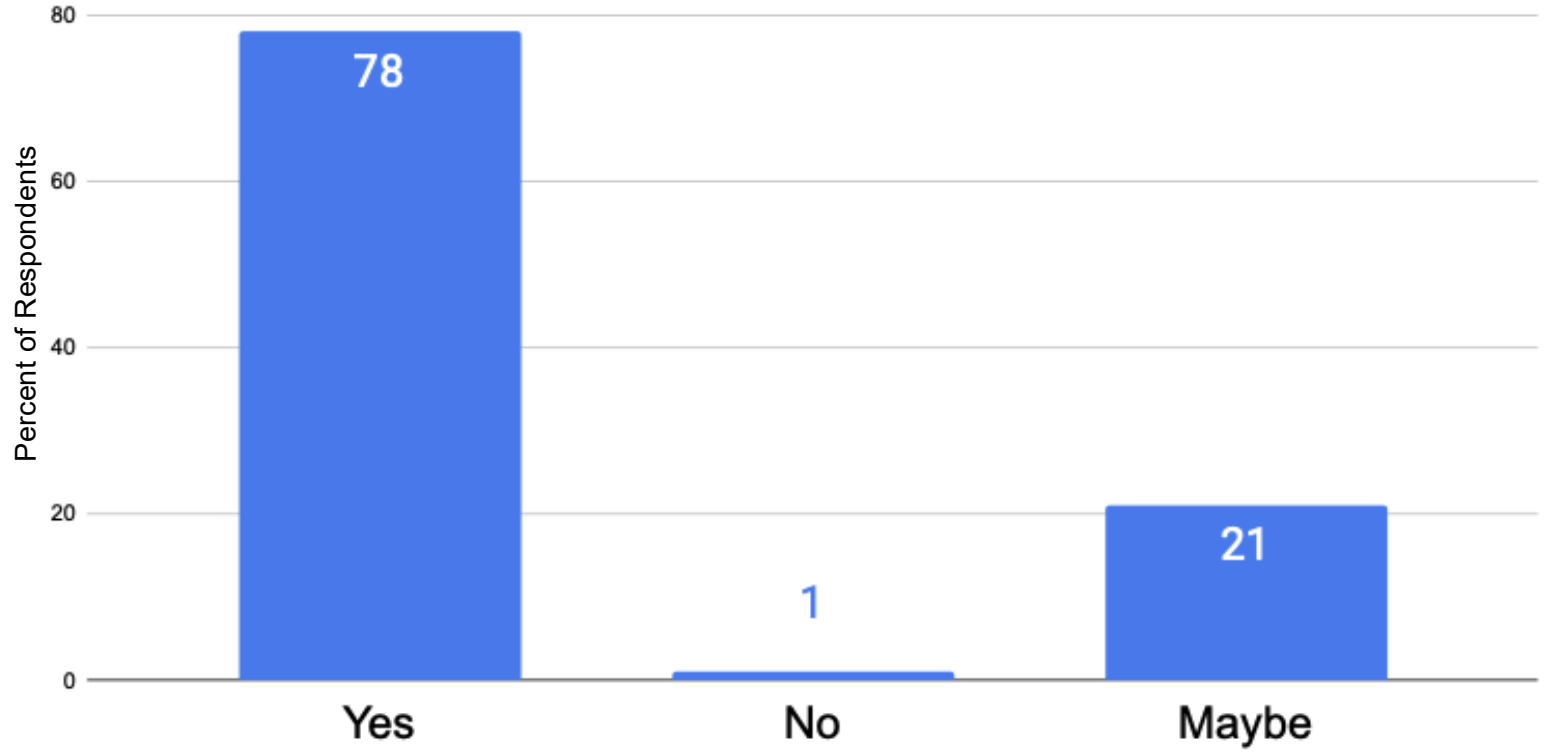
Yap Consumers: Would you support the purchasing of locally processed foods that contribute to community development or social causes (e.g., supporting local farmers, empowering women's groups)?



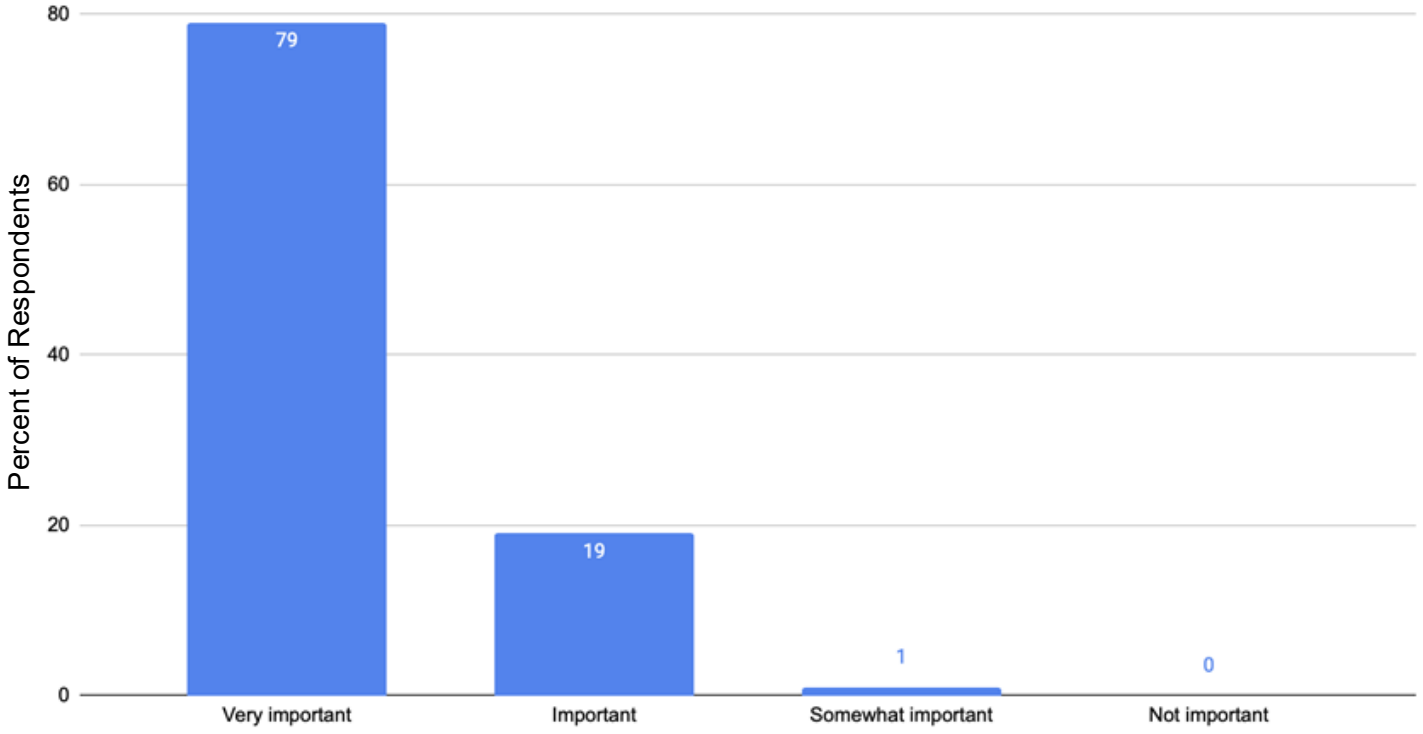
Yap Consumers: Would you be willing to pay more for products that support community/social causes?

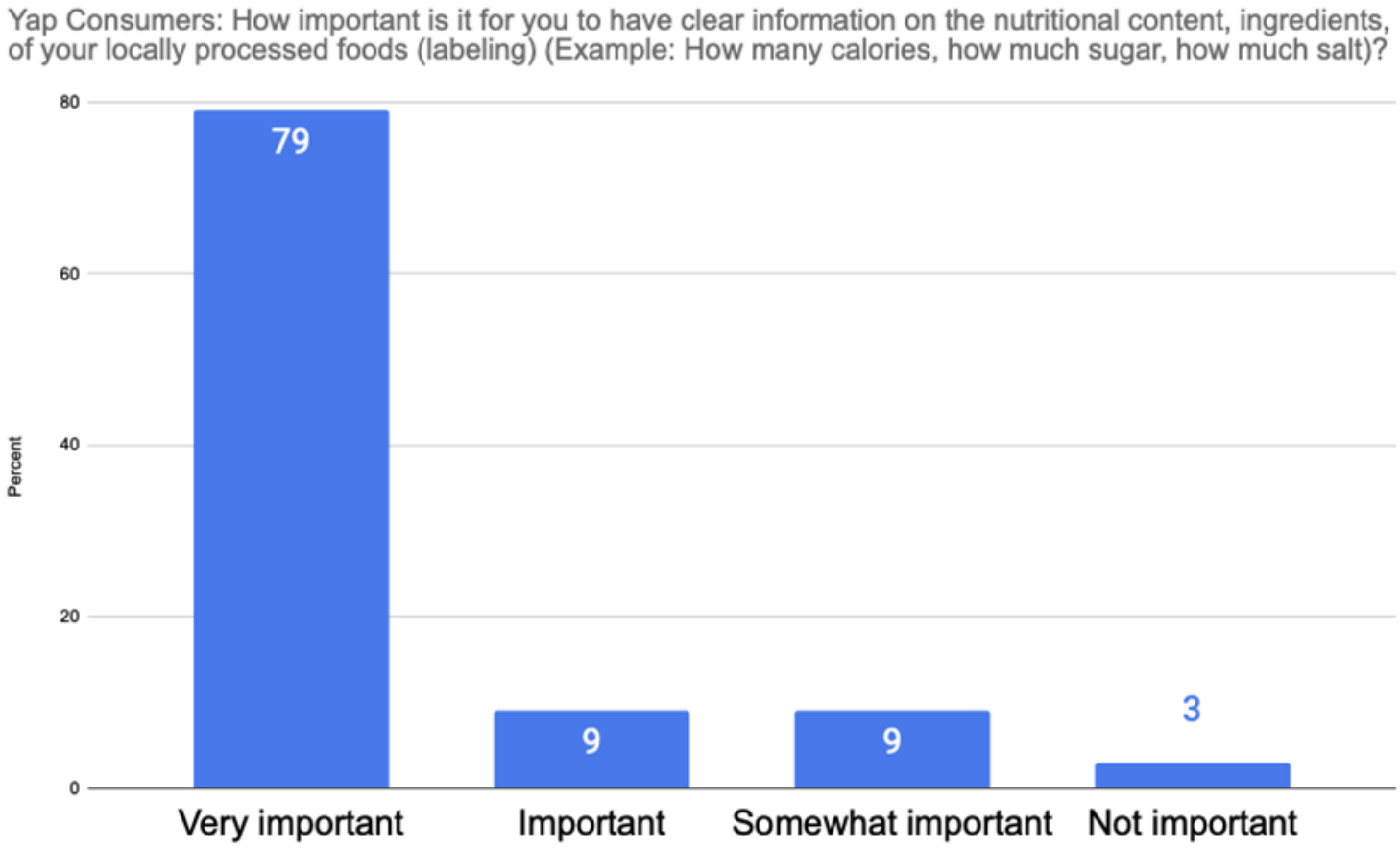


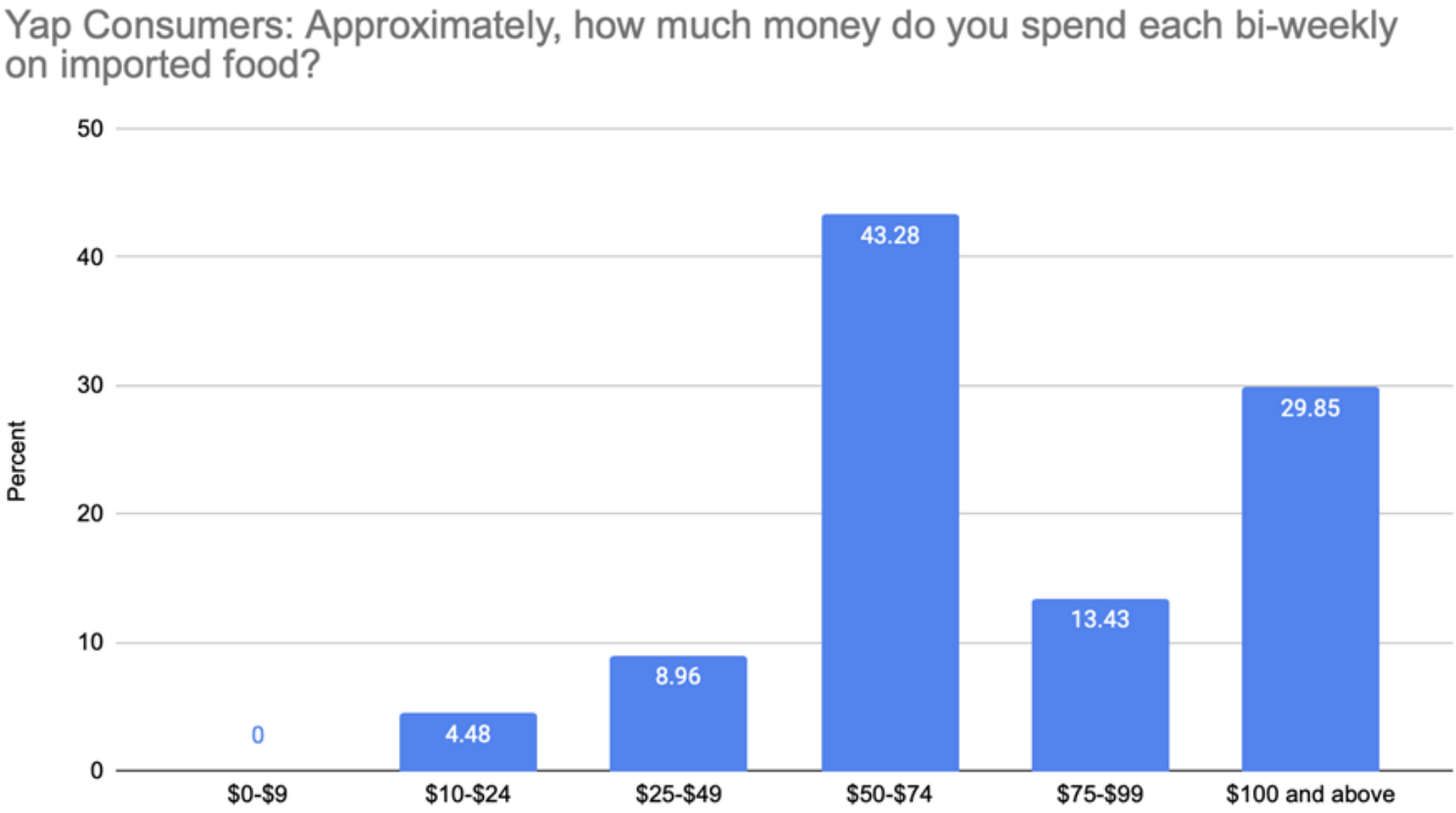
Yap Consumers: Would you participate in educational programs or workshops offered by the Food Innovation Center on local food processing techniques, cooking contests, nutrition programs, or culinary skills?

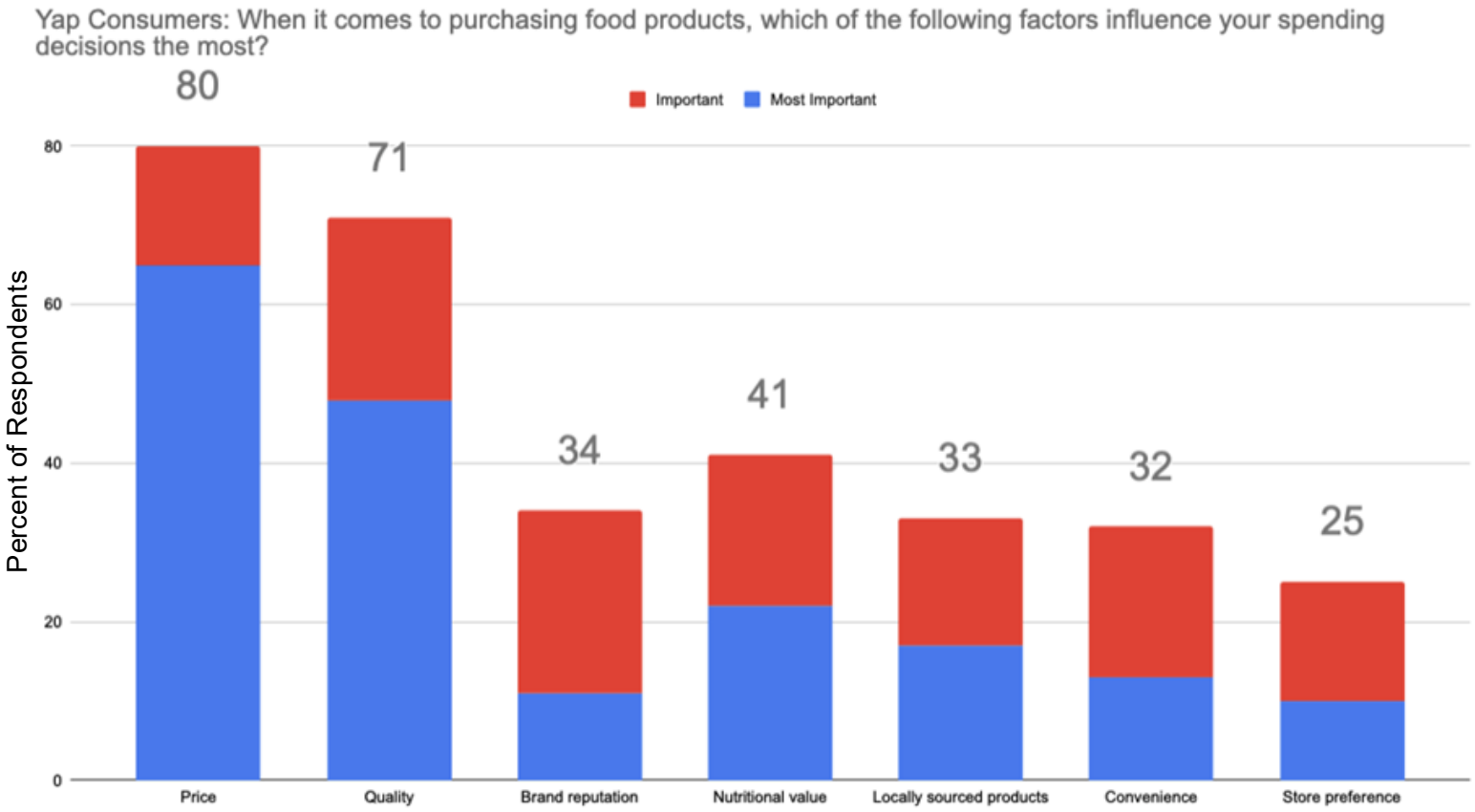


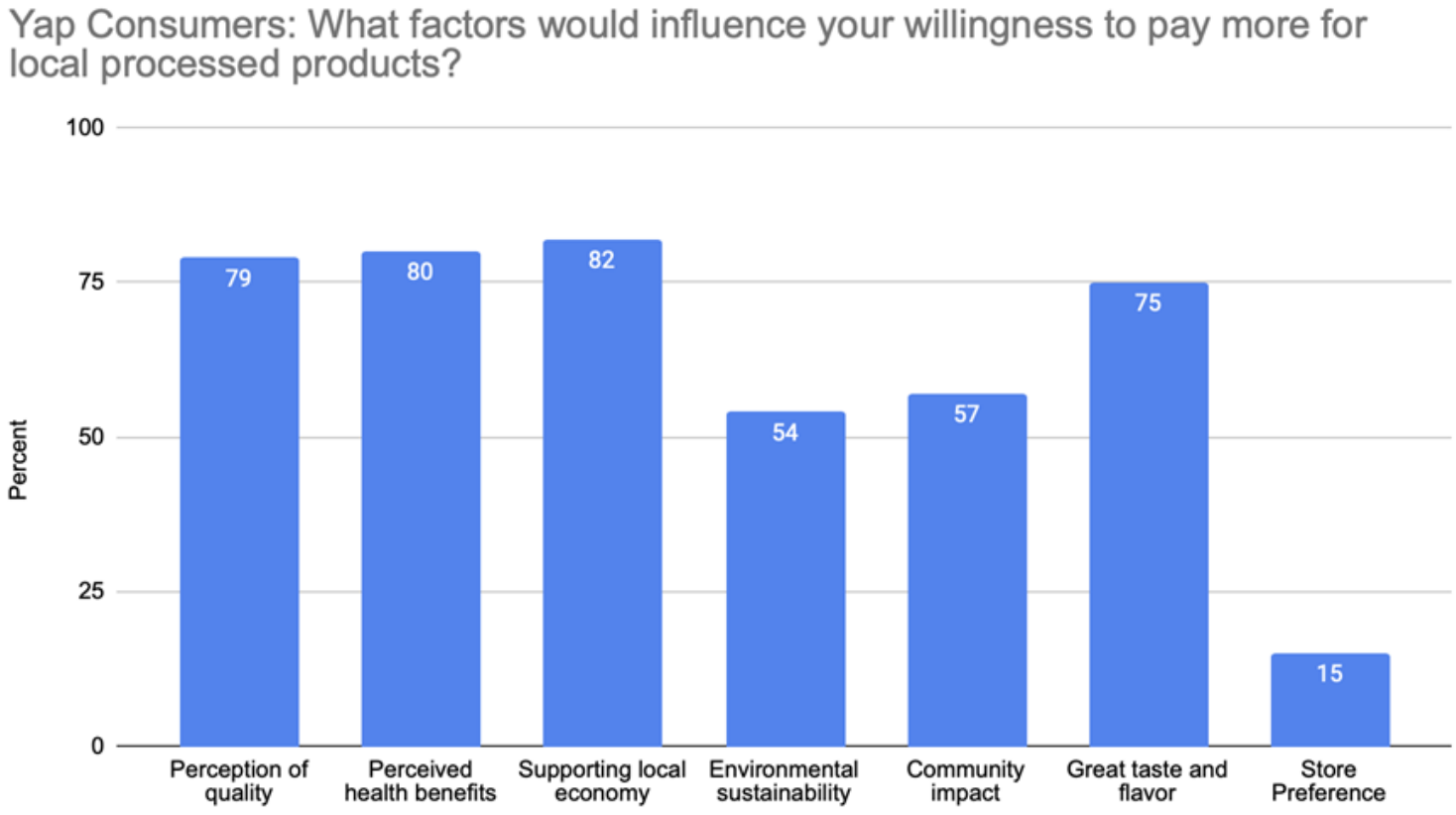
Yap Consumers: How important is it for you that locally processed foods have a long shelf life (does not easily spoil)?



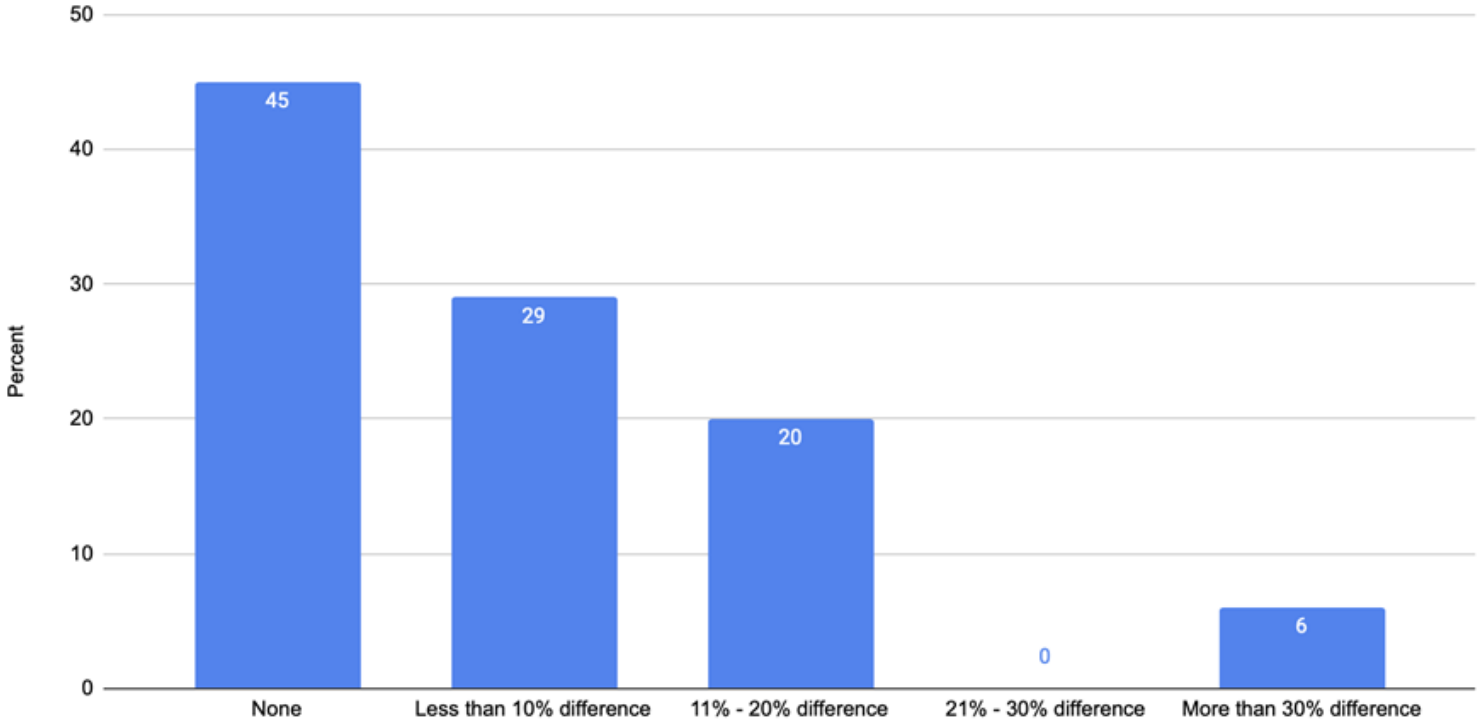

Yap Consumers: How important is it for you to have clear information on the nutritional content, ingredients, of your locally processed foods (labeling) (Example: How many calories, how much sugar, how much salt)?
Percent
80
60
40
20
0
79
9
9
3
Very important
Important
Somewhat important
Not important


Yap Consumers: Approximately, how much money do you spend each bi-weekly on imported food?
Percent
50
40
30
20
10
0
0
4.48
8.96
43.28
13.43
29.85
$0-$9
$10-$24
$25-$49
$50-$74
$75-$99
$100 and above

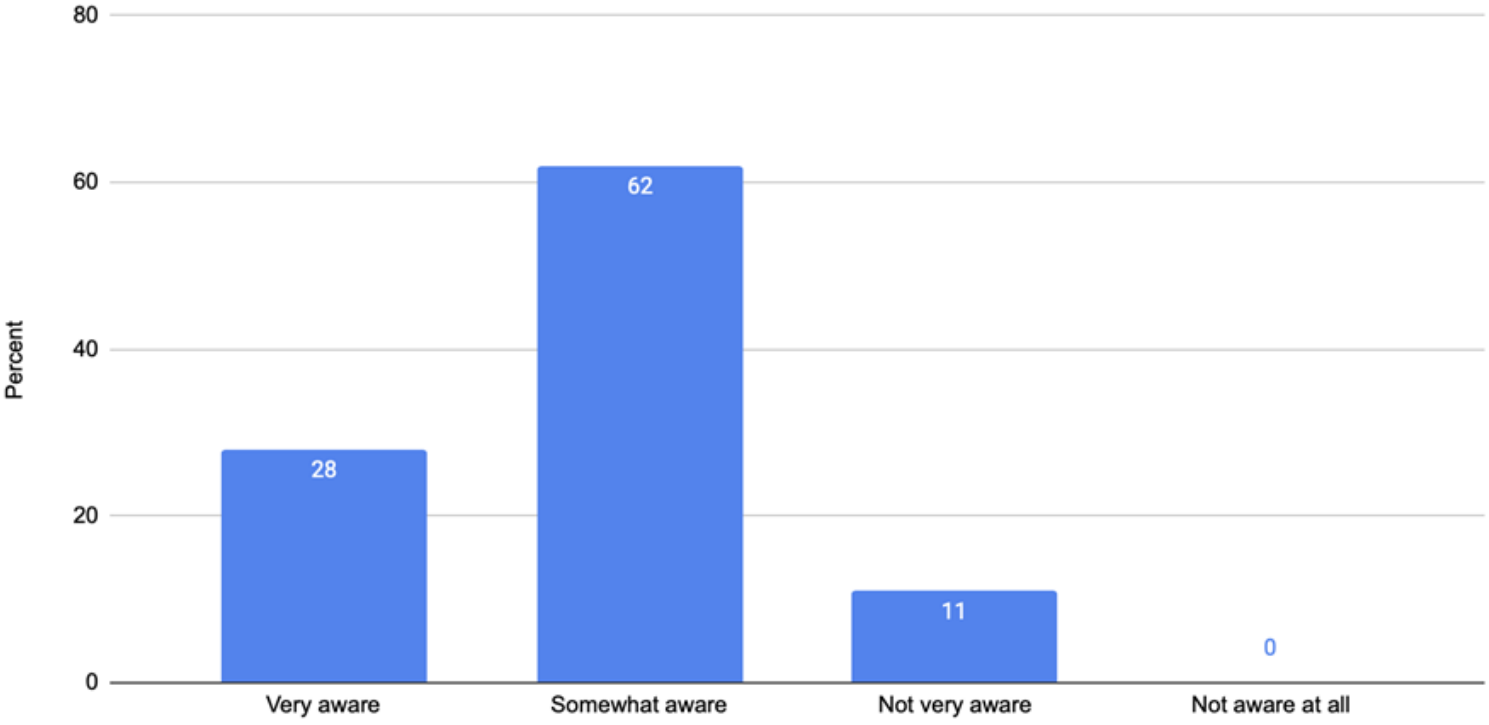

Yap Consumers: When it comes to purchasing food products, which of the following factors influence your spending decisions the most?
Important
Most Important
Percent of Respondents
80
71
34
41
33
32
25
Price
Quality
Brand reputation
Nutritional value
Locally sourced products
Convenience
Store preference


Yap Consumers: What factors would influence your willingness to pay more for local processed products?
Percent
79
80
82
54
57
75
15
Perception of quality
Perceived health benefits
Supporting local economy
Environmental sustainability
Community impact
Great taste and flavor
Store Preference

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



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



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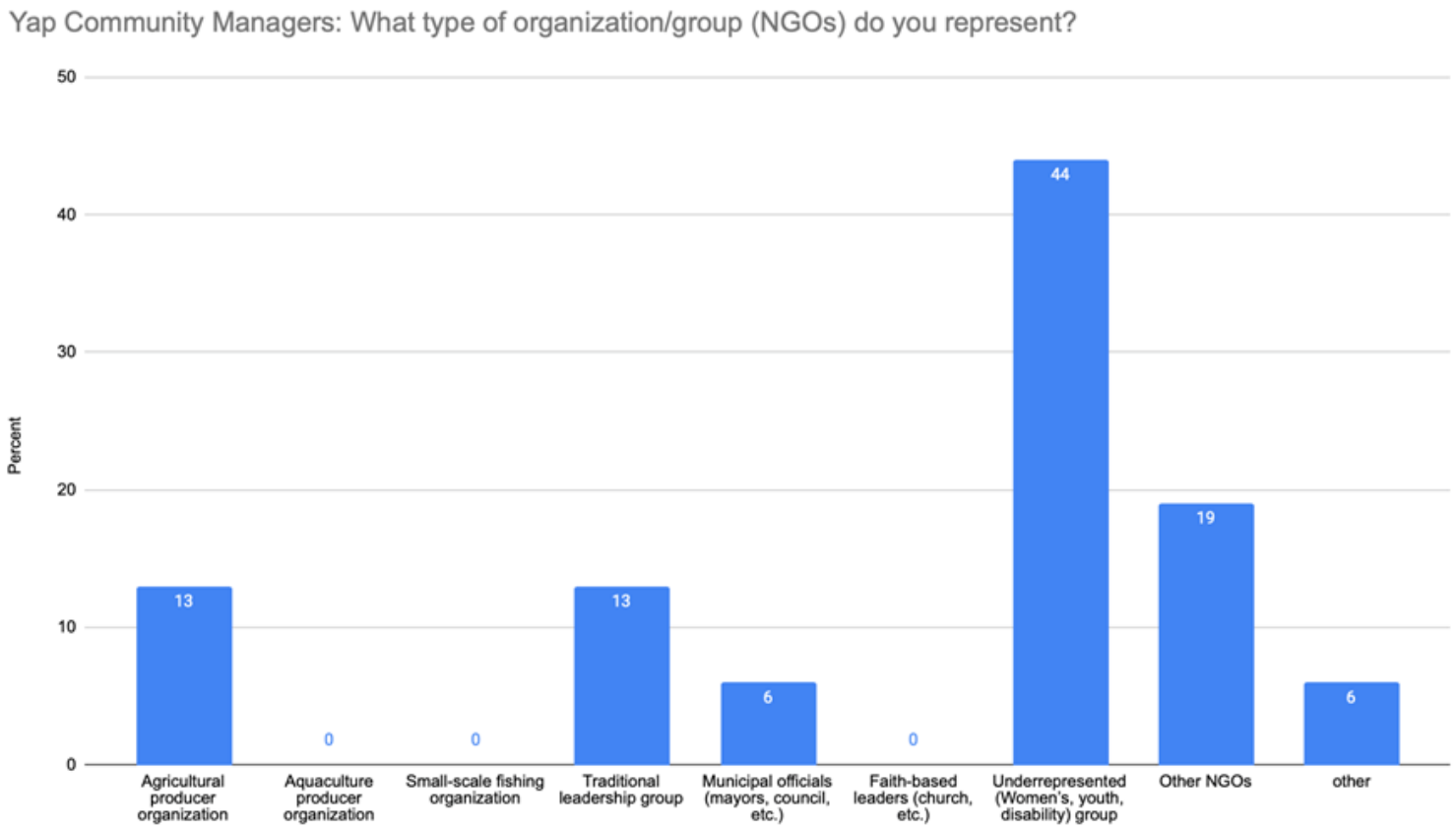
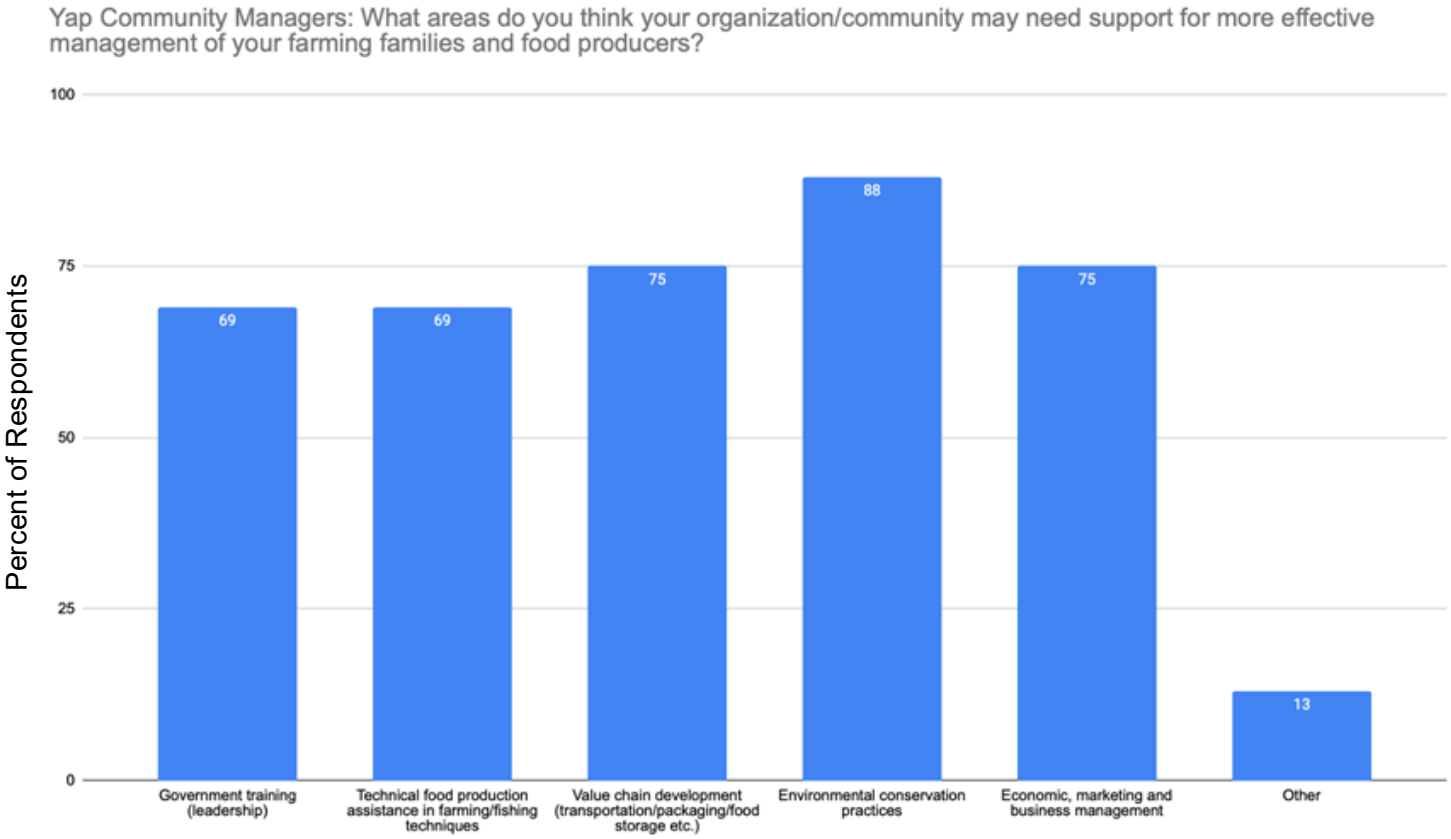
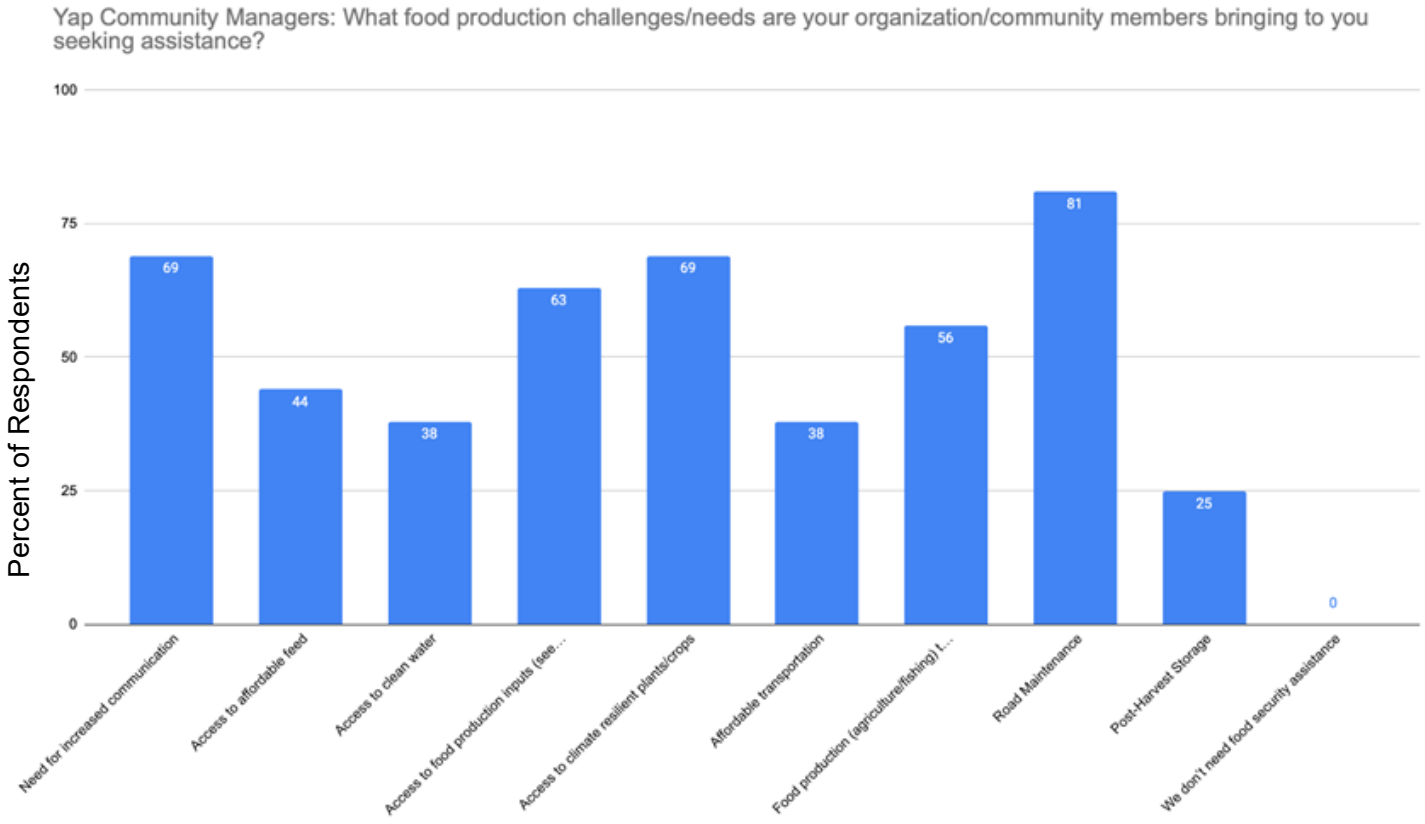
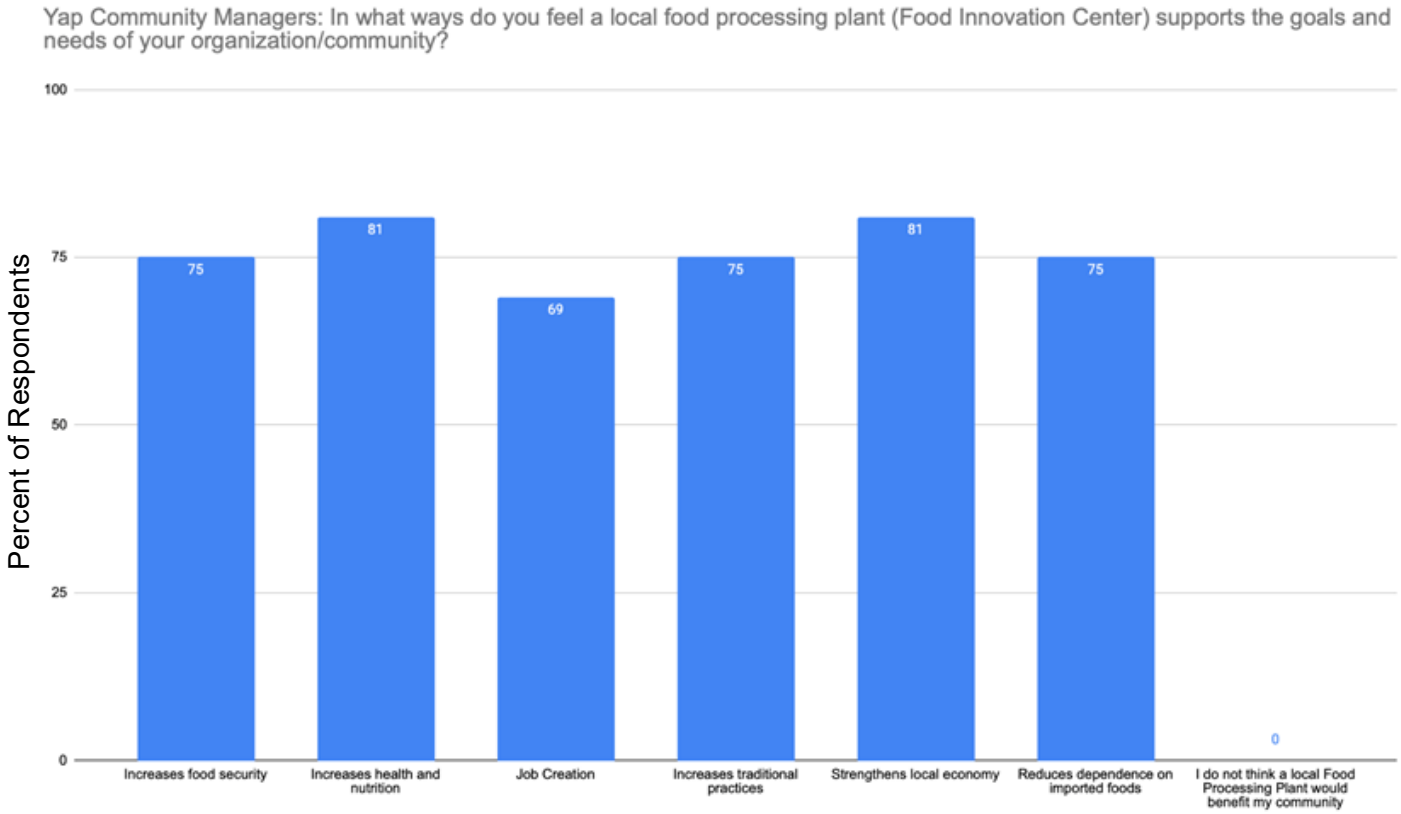
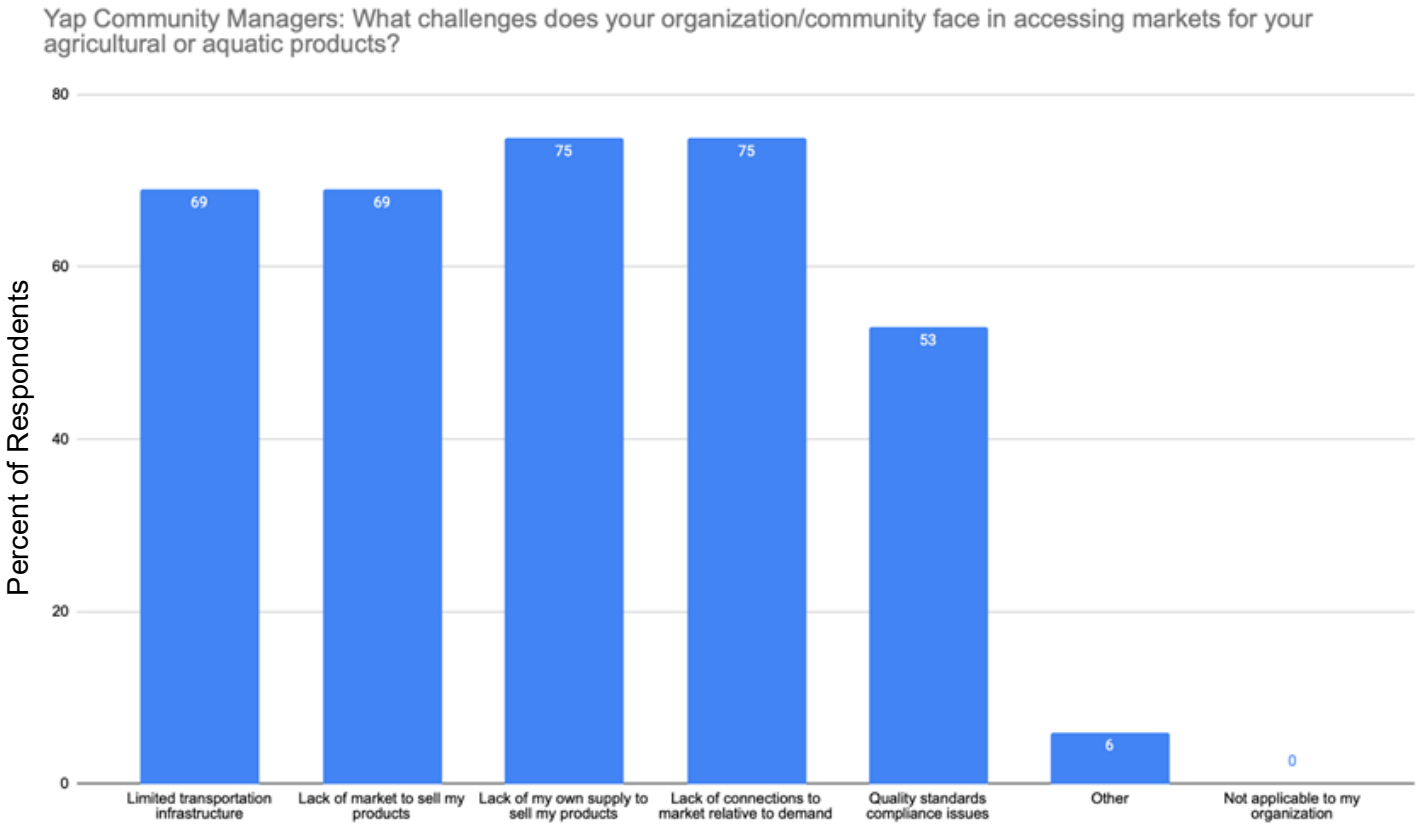
Community Management

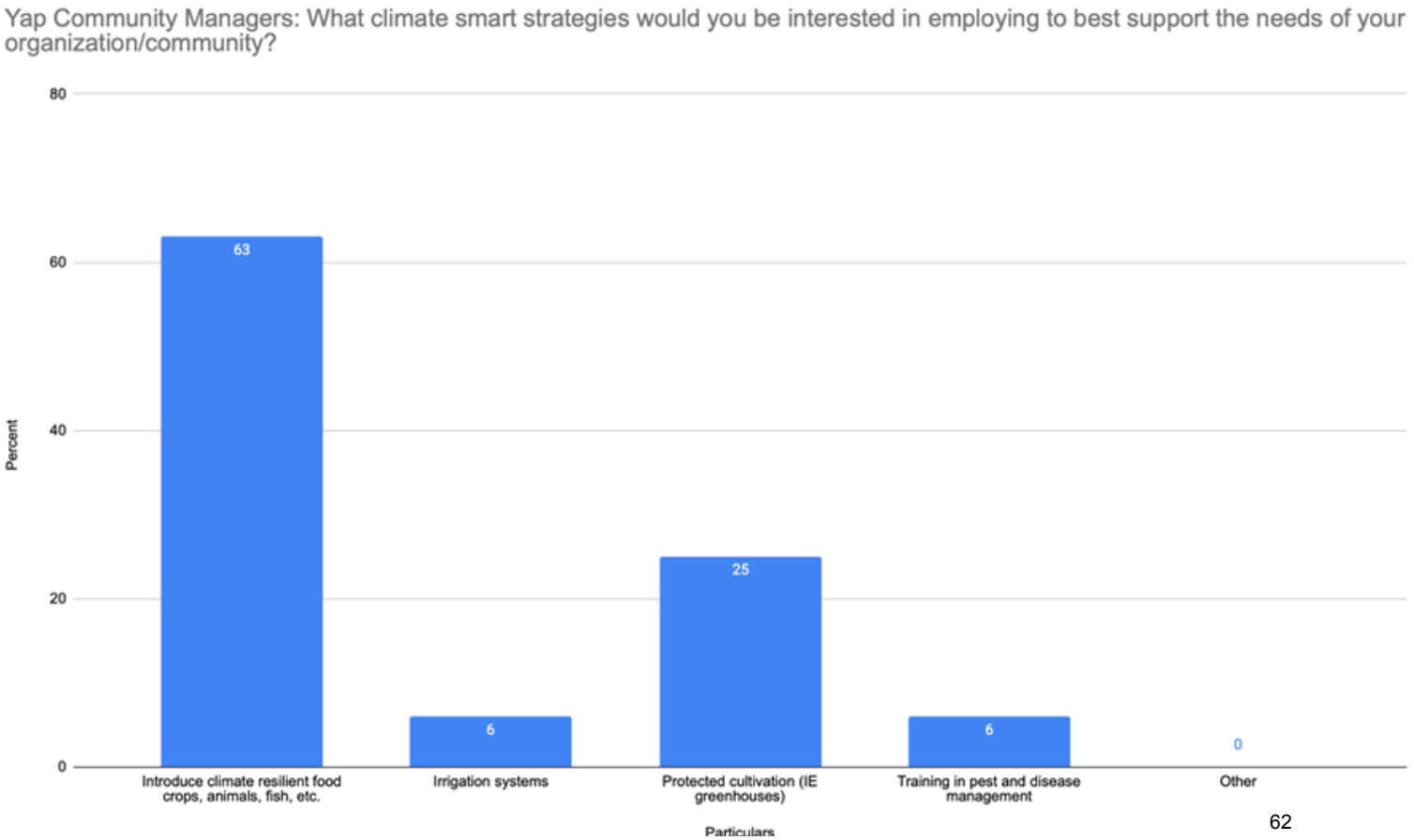

Yap Community Managers: What type of organization/group (NGOs) do you represent?
Percent
50
40
30
20
10
0
13
0
0
13
6
0
44
19
6
Agricultural producer organization
Aquaculture producer organization
Small-scale fishing organization
Traditional leadership group
Municipal officials (mayors, council, etc.)
Faith-based leaders (church, etc.)
Underrepresented (Women's, youth, disability) group
Other NGOs
other

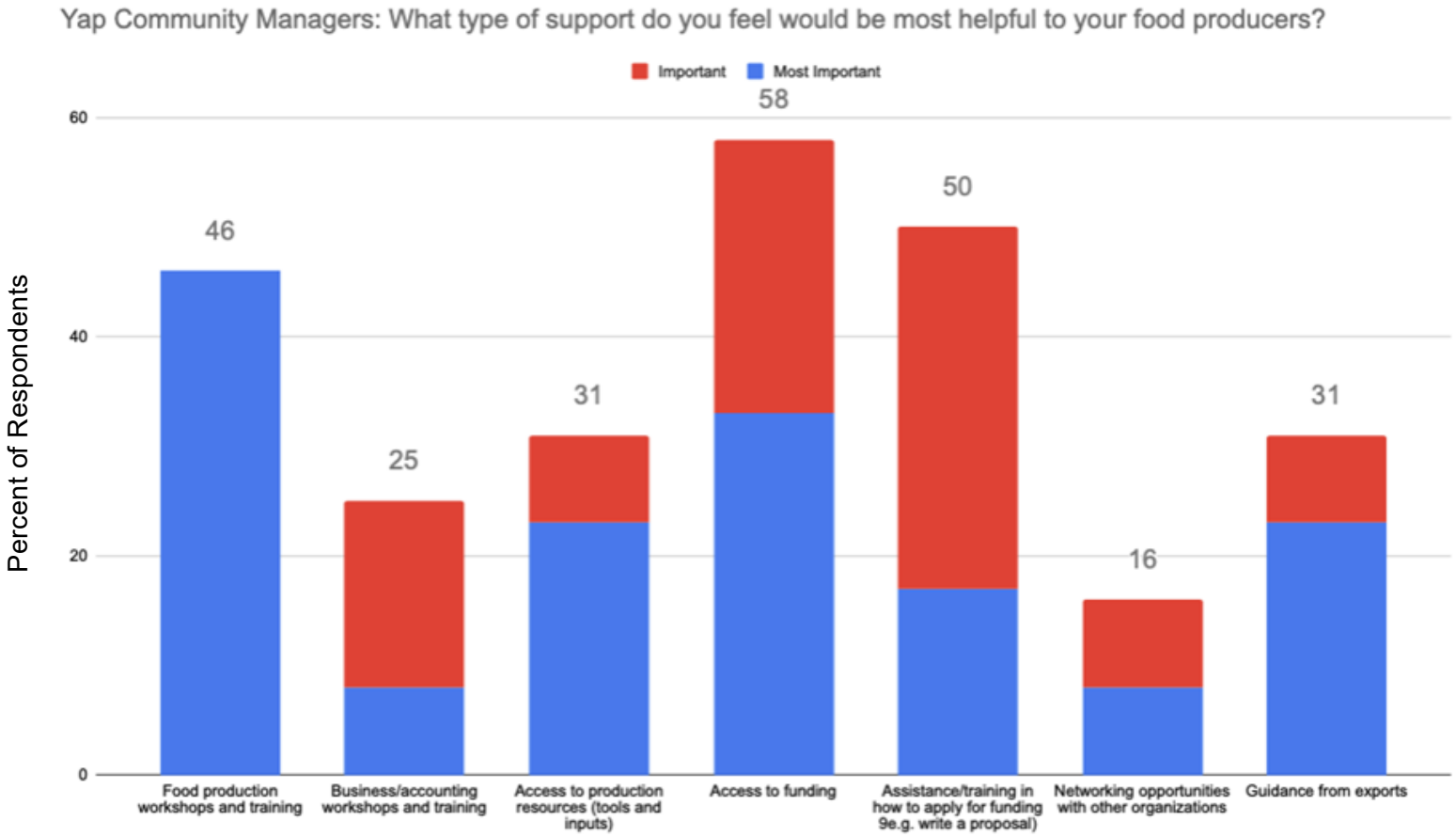

Yap Community Managers: What areas do you think your organization/community may need support for more effective management of your farming families and food producers?
Percent of Respondents
100
75
50
25
0
69
69
75
88
75
13
Government training (leadership)
Technical food production assistance in farming/fishing techniques
Value chain development (transportation/packaging/food storage etc.)
Environmental conservation practices
Economic, marketing and business management
Other

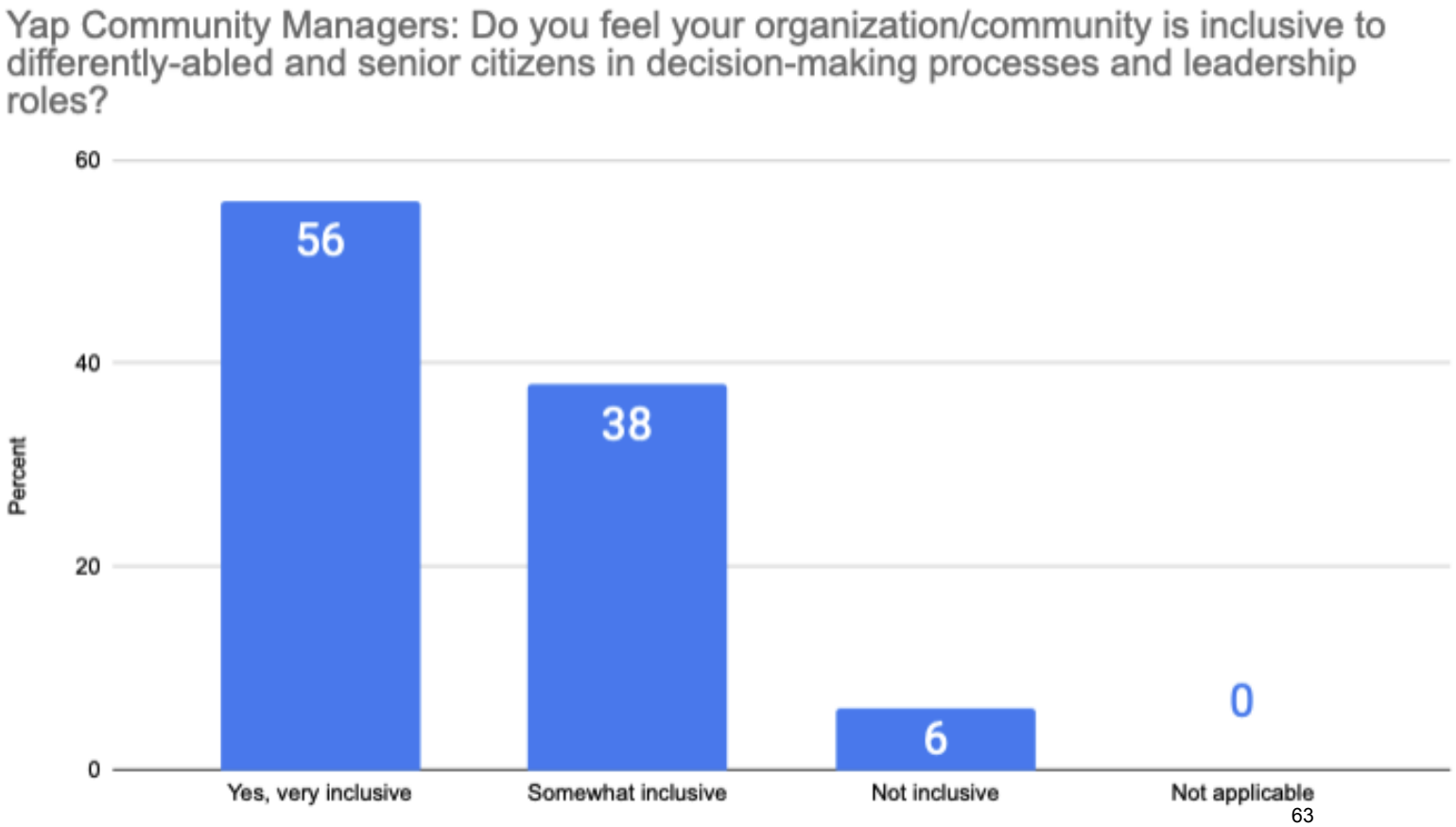

Yap Community Managers: What food production challenges/needs are your organization/community members bringing to you seeking assistance?
Percent of Respondents
100
75
50
25
0
69
44
38
63
69
38
56
81
25
0
Need for increased communication
Access to affordable feed
Access to clean water
Access to food production inputs (see...
Access to climate resilient plants/crops
Affordable transportation
Food production (agriculture/fishing) t...
Road Maintenance
Post-Harvest Storage
We don't need food security assistance


Yap 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?
Percent of Respondents
100
75
50
25
0
75
81
69
75
81
75
0
Increases food security
Increases health and nutrition
Job Creation
Increases traditional practices
Strengthens local economy
Reduces dependence on imported foods
I do not think a local Food Processing Plant would benefit my community

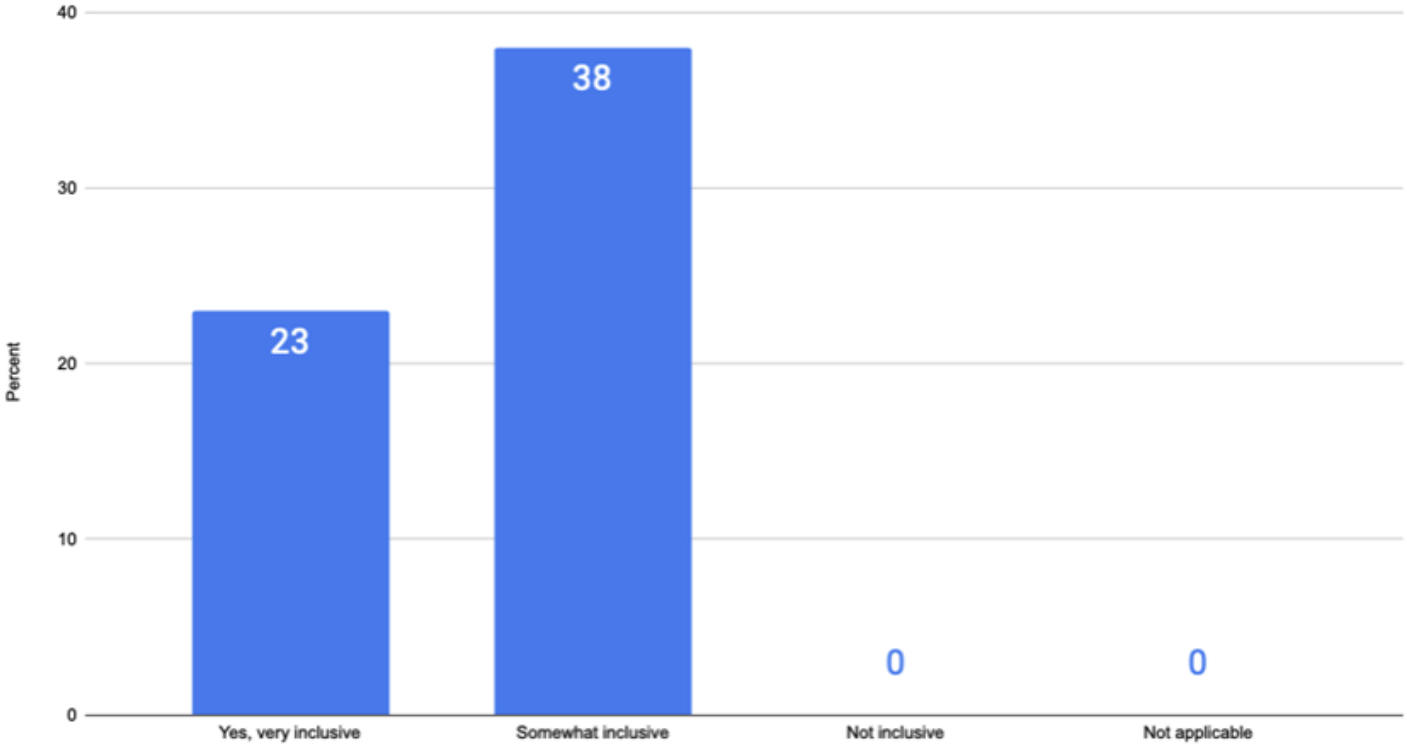

Yap Community Managers: What challenges does your organization/community face in accessing markets for your agricultural or aquatic products?
Percent of Respondents
80
60
40
20
0
69
69
75
75
53
6
0
Limited transportation infrastructure
Lack of market to sell my products
Lack of my own supply to sell my products
Lack of connections to market relative to demand
Quality standards compliance issues
Other
Not applicable to my organization


Yap Community Managers: What climate smart strategies would you be interested in employing to best support the needs of your organization/community?
Percent
80
60
40
20
0
63
6
25
6
0
Introduce climate resilient food crops, animals, fish, etc.
Irrigation systems
Protected cultivation (IE greenhouses)
Training in pest and disease management
Other
Particulars


Yap Community Managers: What type of support do you feel would be most helpful to your food producers?
Important
Most Important
Percent of Respondents
60
40
20
0
46
25
31
58
50
16
31
Food production workshops and training
Business/accounting workshops and training
Access to production resources (tools and inputs)
Access to funding
Assistance/training in how to apply for funding 9e.g. write a proposal)
Networking opportunities with other organizations
Guidance from exports


Yap Community Managers: Do you feel your organization/community is inclusive to differently-abled and senior citizens in decision-making processes and leadership roles?
Percent
60
40
20
0
56
38
6
0
Yes, very inclusive
Somewhat inclusive
Not inclusive
Not applicable

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



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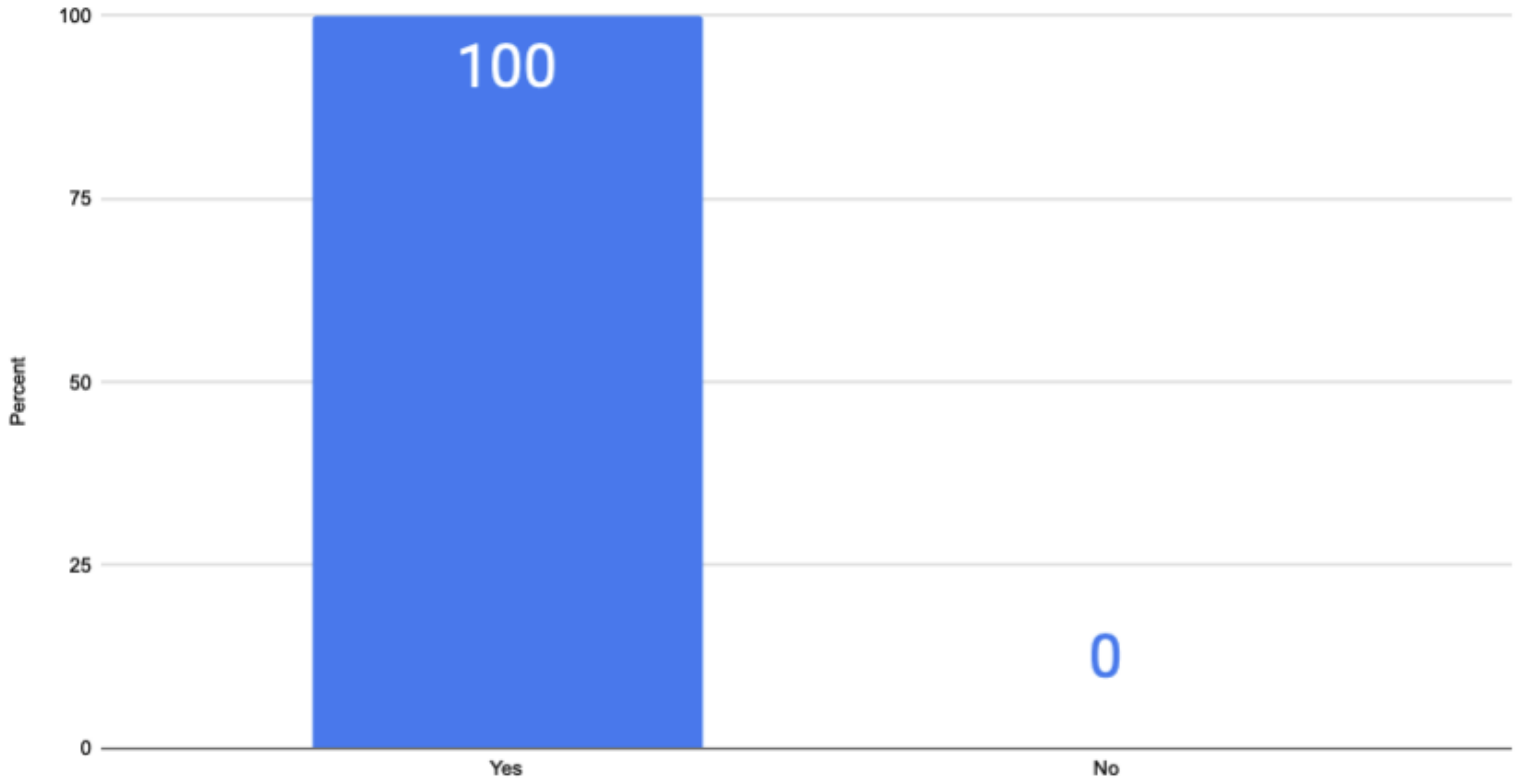
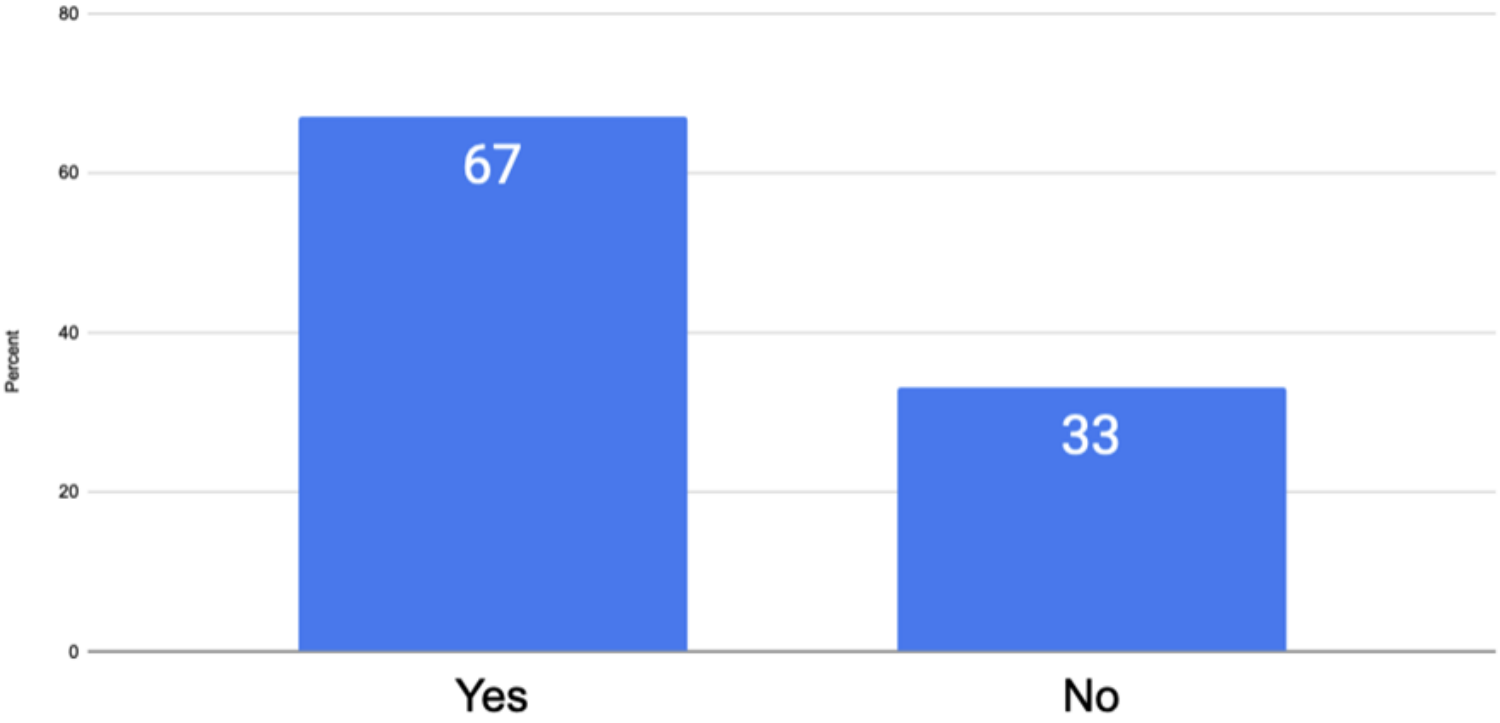
Yap State
IIP and IT

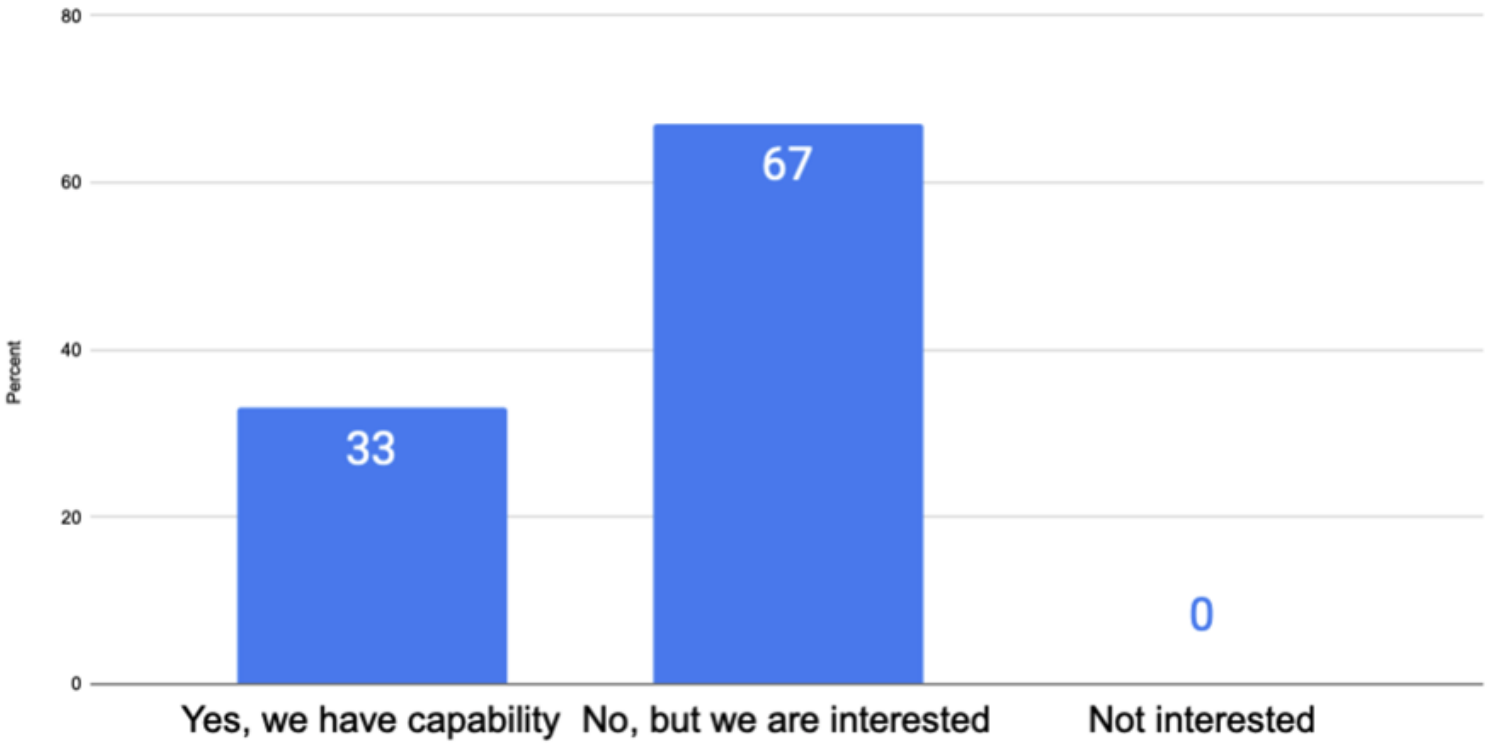
Yap IIP and IT: Do you now use cloud-based solutions to enhance scalability and accessibility?



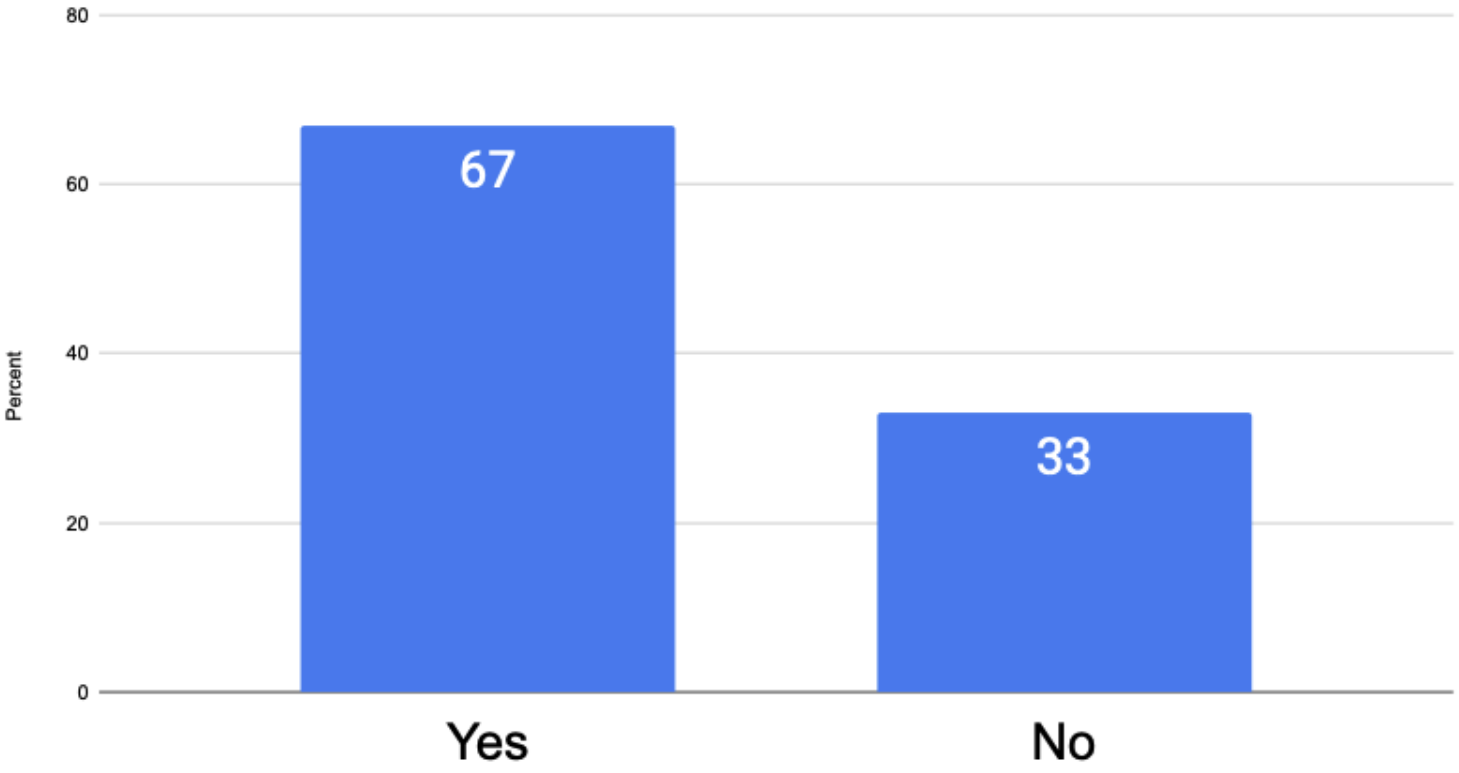
Yap IIP and IT: Does your company have plans to recommend the implementation of traffic management techniques, such as quality of service (QoS), to prioritize agricultural information dissemination over non-critical data?



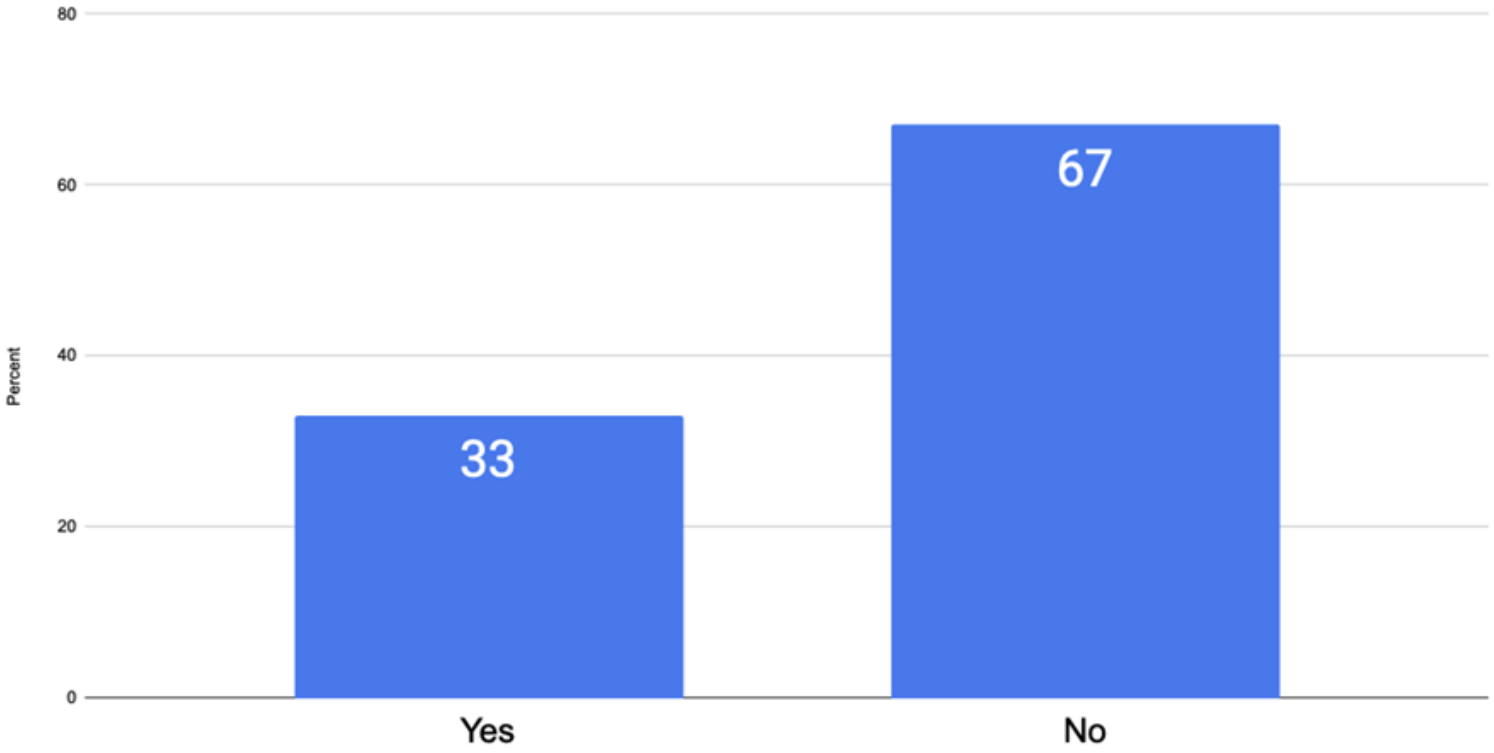
Yap IIP and IT: Do you have capability and interest in SMS-based systems to deliver agricultural information, market updates, and weather forecasts to growers and residents?



Yap 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?

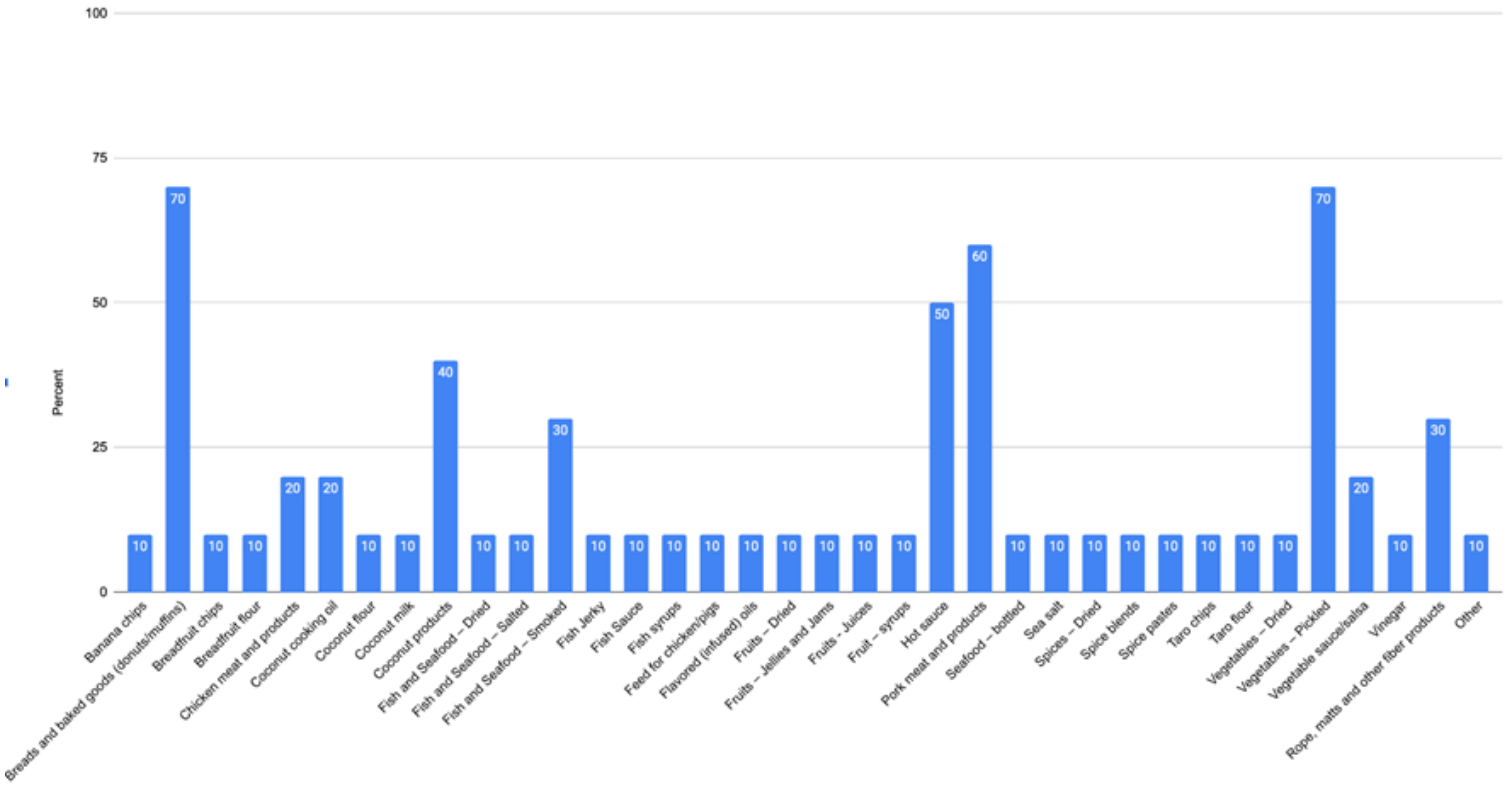


Yap IIP and IT: Is there now (using Emergency Responders or other specialized means) a way to utilize content delivery networks (CDNs), for example to distribute agricultural content across servers closer to the islands, reducing the distance data needs to travel?

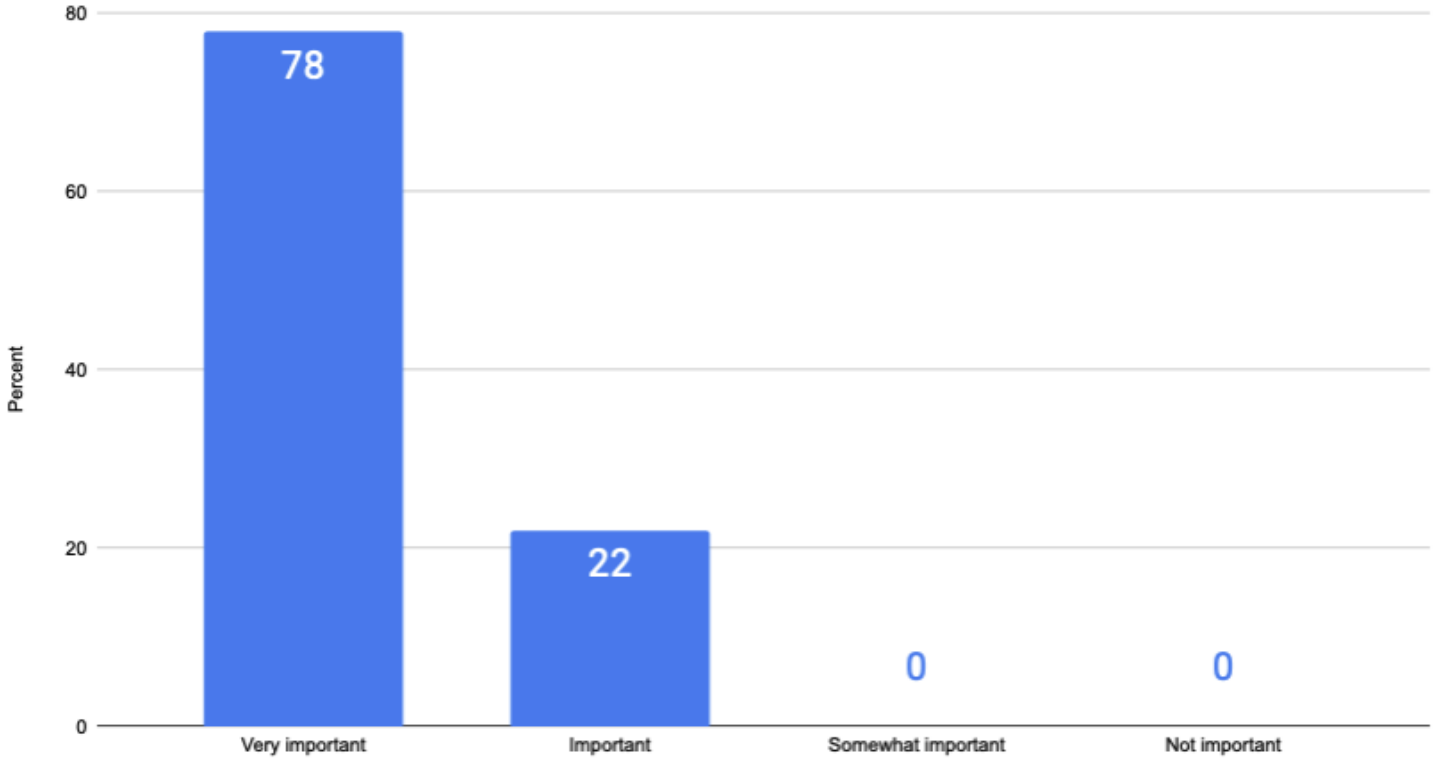


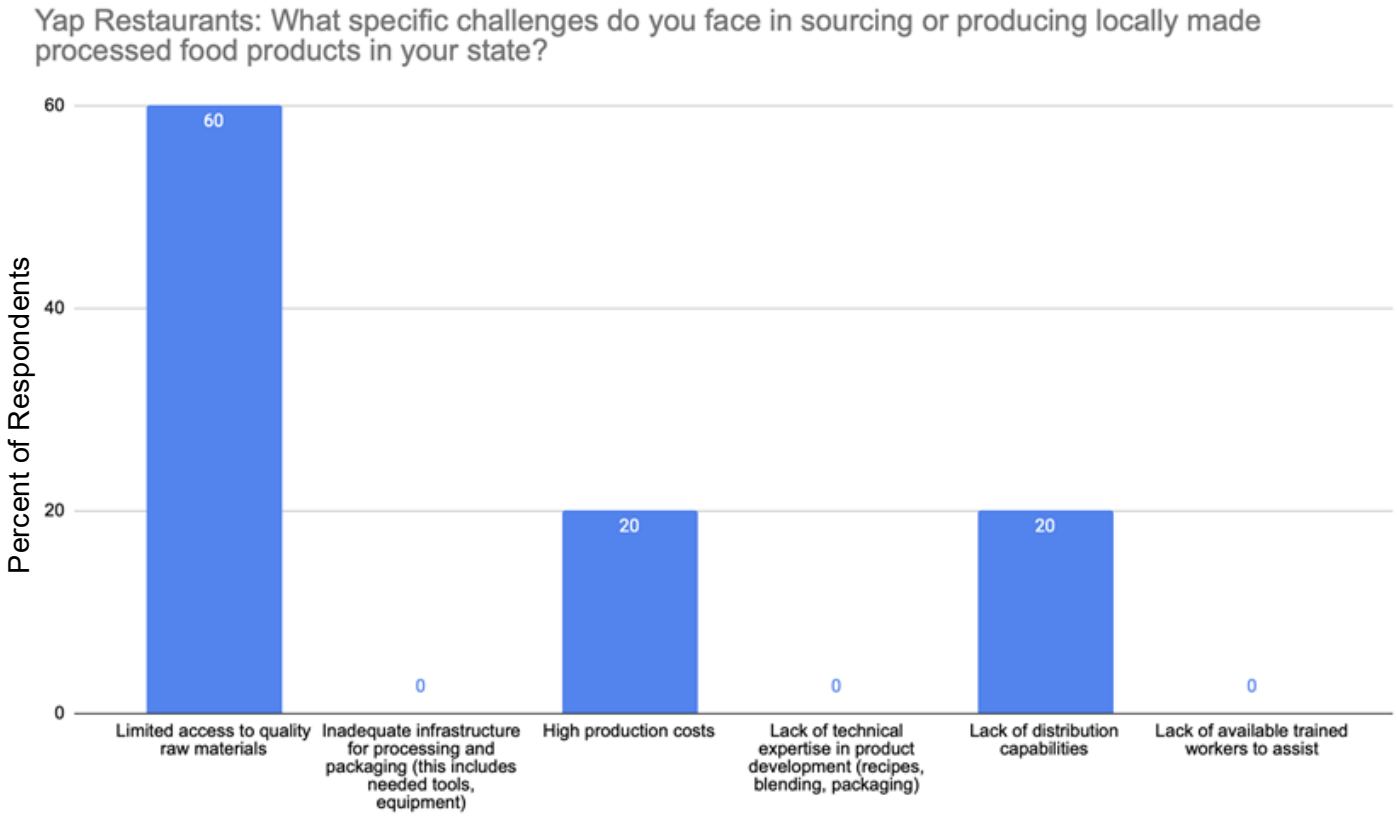
Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
Restaurants

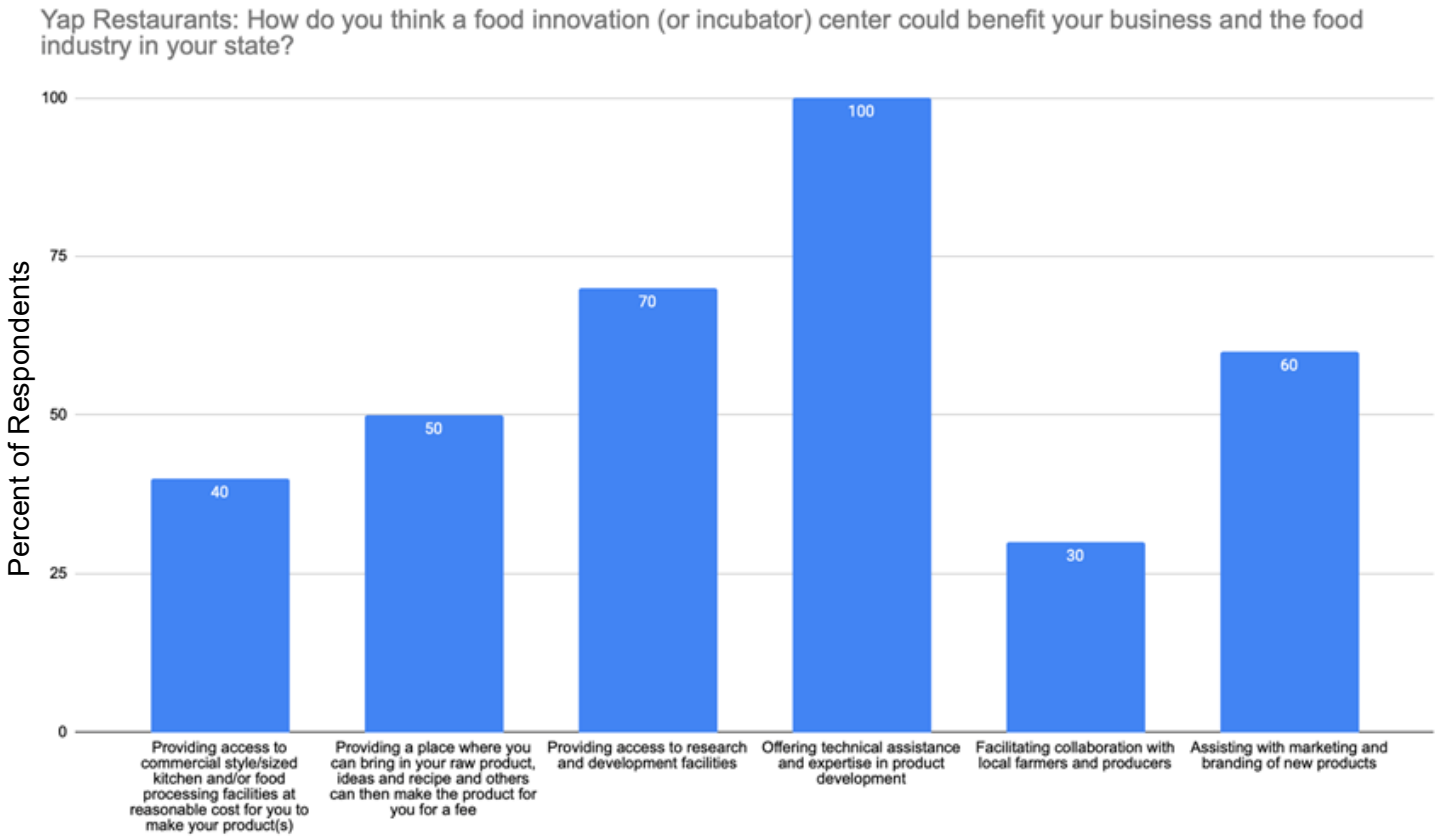
Yap Restaurants: What type of locally made processed food products does your business currently sell?

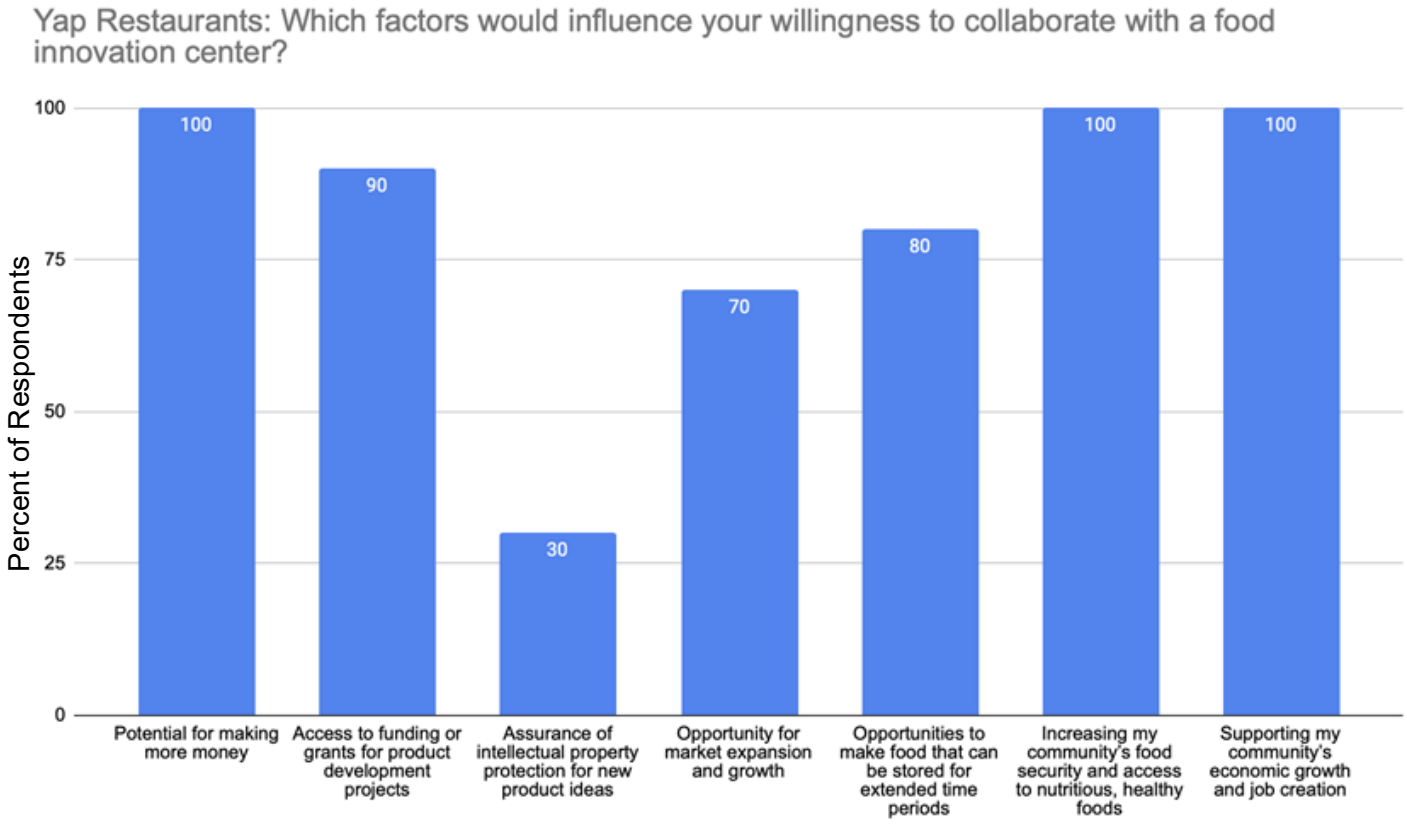


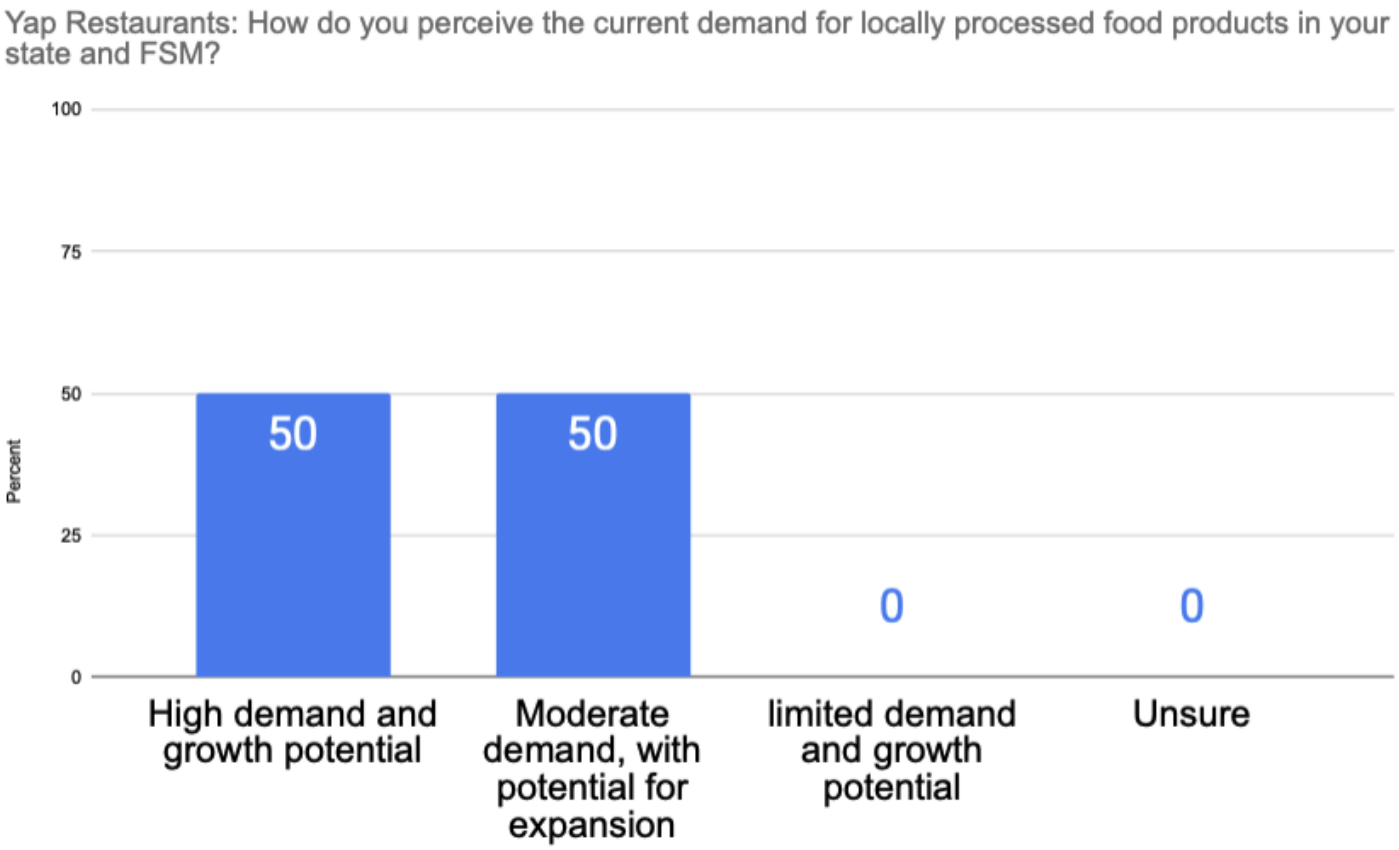
Yap Restaurants: How important do you believe making available locally made processed food products for the food industry in your state?



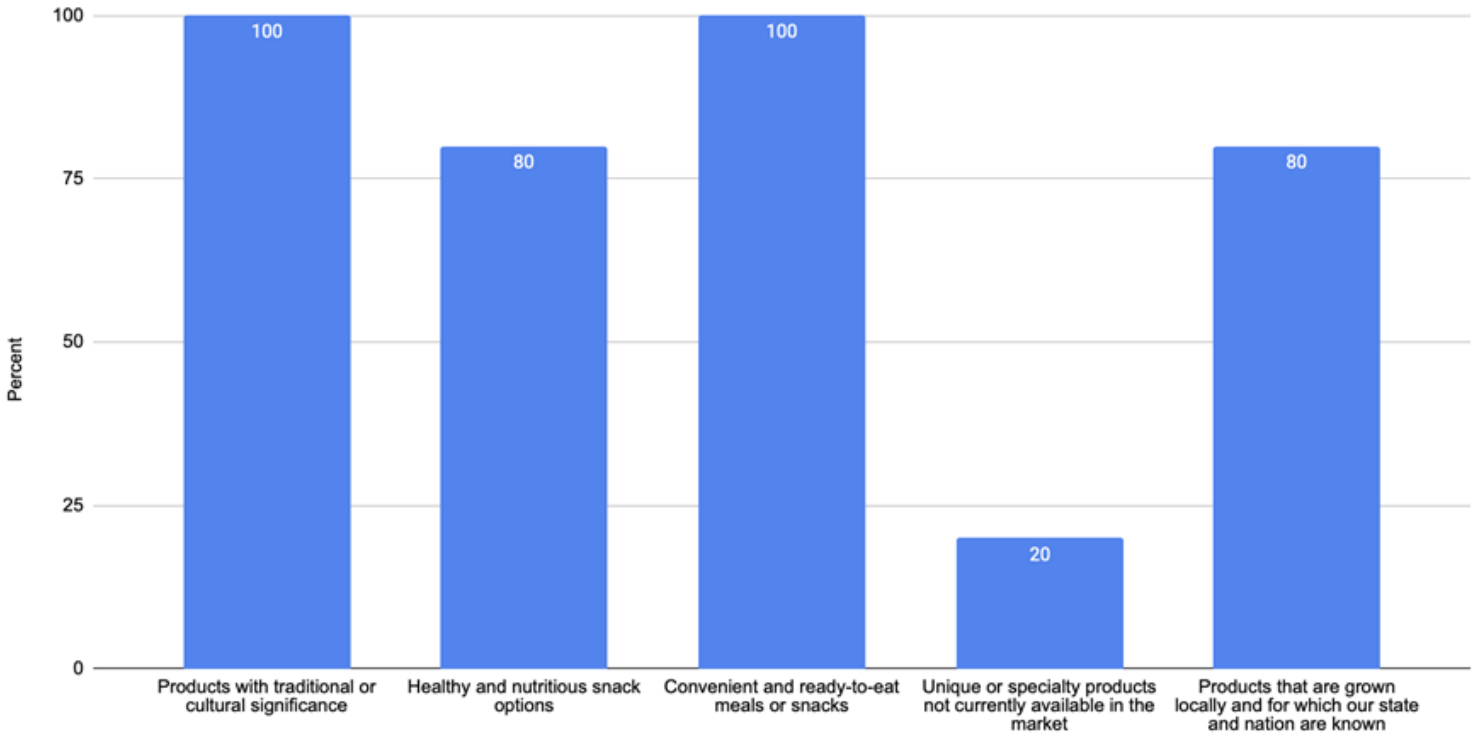

Yap Restaurants: What specific challenges do you face in sourcing or producing locally made processed food products in your state?
Percent of Respondents
60
40
20
0
60
0
20
0
20
0
Limited access to quality raw materials
Inadequate infrastructure for processing and packaging (this includes needed tools, equipment)
High production costs
Lack of technical expertise in product development (recipes, blending, packaging)
Lack of distribution capabilities
Lack of available trained workers to assist


Yap Restaurants: How do you think a food innovation (or incubator) center could benefit your business and the food industry in your state?
Percent of Respondents
100
75
50
25
0
40
50
70
100
30
60
Providing access to commercial style/sized kitchen and/or food processing facilities at reasonable cost for you to make your product(s)
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
Providing access to research and development facilities
Offering technical assistance and expertise in product development
Facilitating collaboration with local farmers and producers
Assisting with marketing and branding of new products

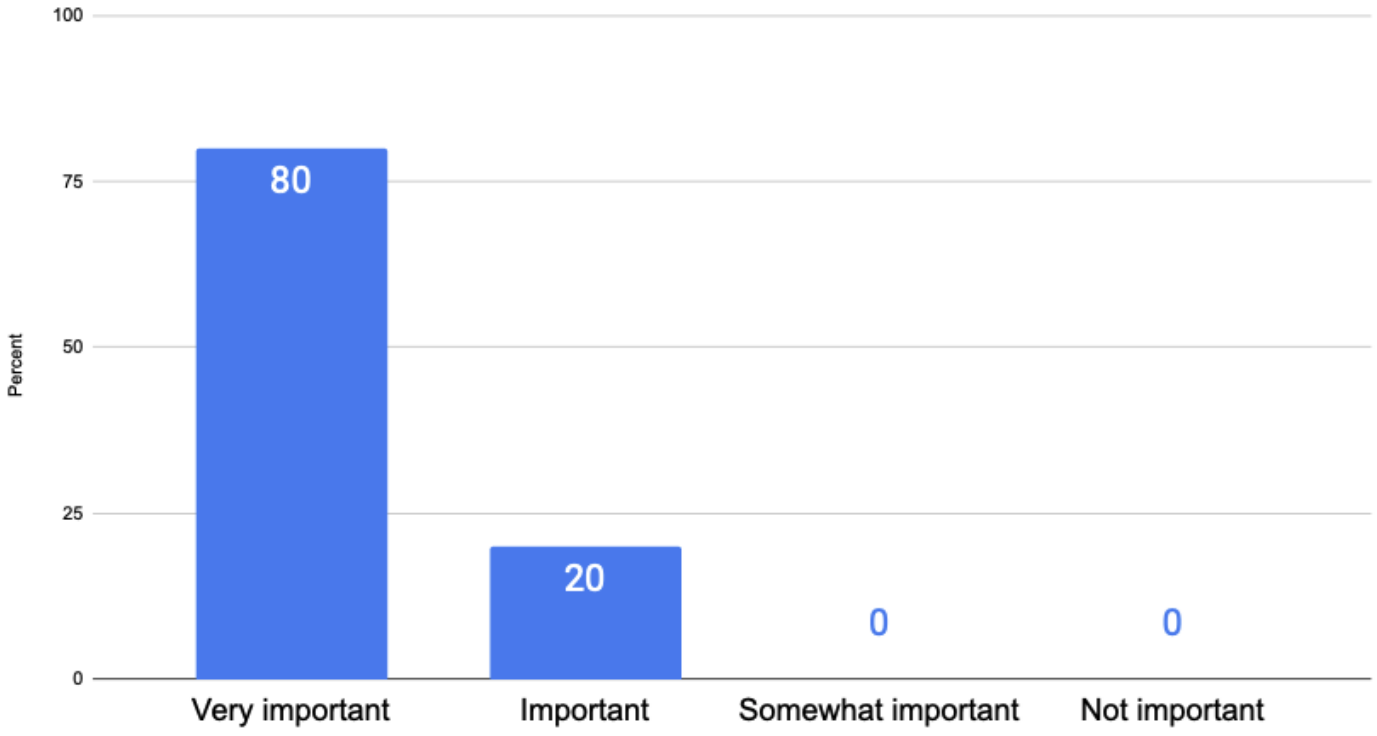

Yap Restaurants: Which factors would influence your willingness to collaborate with a food innovation center?
Percent of Respondents
100
75
50
25
0
100
90
30
70
80
100
100
Potential for making more money
Access to funding or grants for product development projects
Assurance of intellectual property protection for new product ideas
Opportunity for market expansion and growth
Opportunities to make food that can be stored for extended time periods
Increasing my community's food security and access to nutritious, healthy foods
Supporting my community's economic growth and job creation


Yap Restaurants: How do you perceive the current demand for locally processed food products in your state and FSM?
Percent
100
75
50
25
0
50
50
0
0
High demand and growth potential
Moderate demand, with potential for expansion
limited demand and growth potential
Unsure

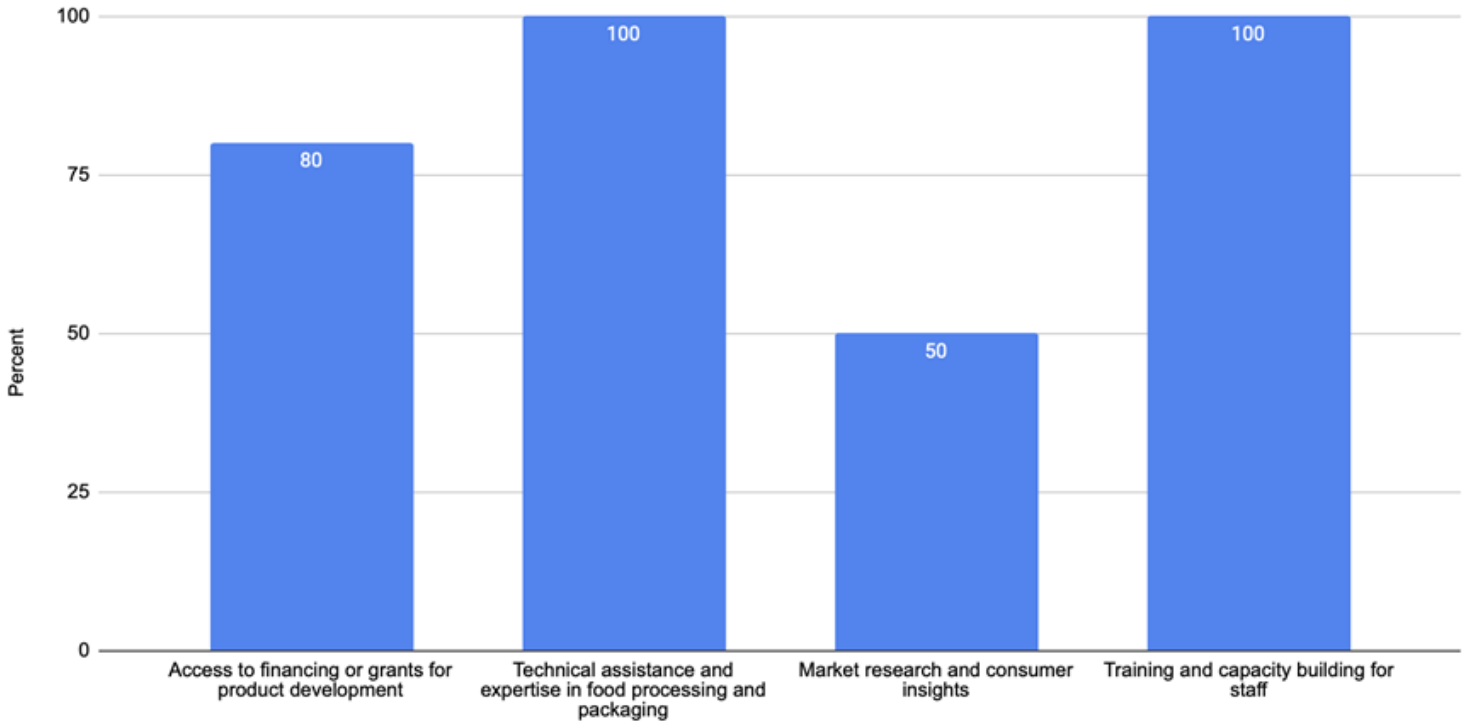
Yap Restaurants: What types of locally processed food products do you believe have the highest potential for success in your state and in the FSM market?



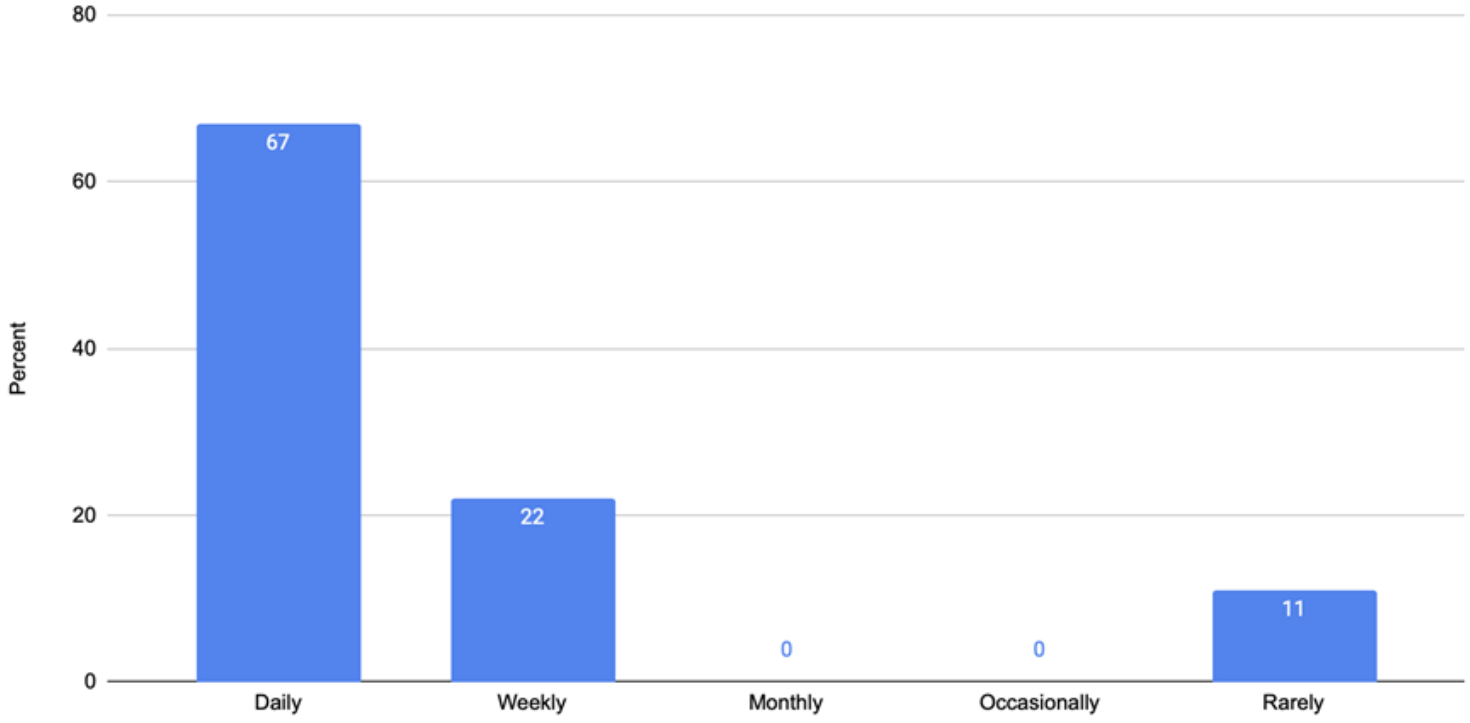
Yap Restaurants: How important do you think it is for locally made processed food products to incorporate locally sourced ingredients or flavors?

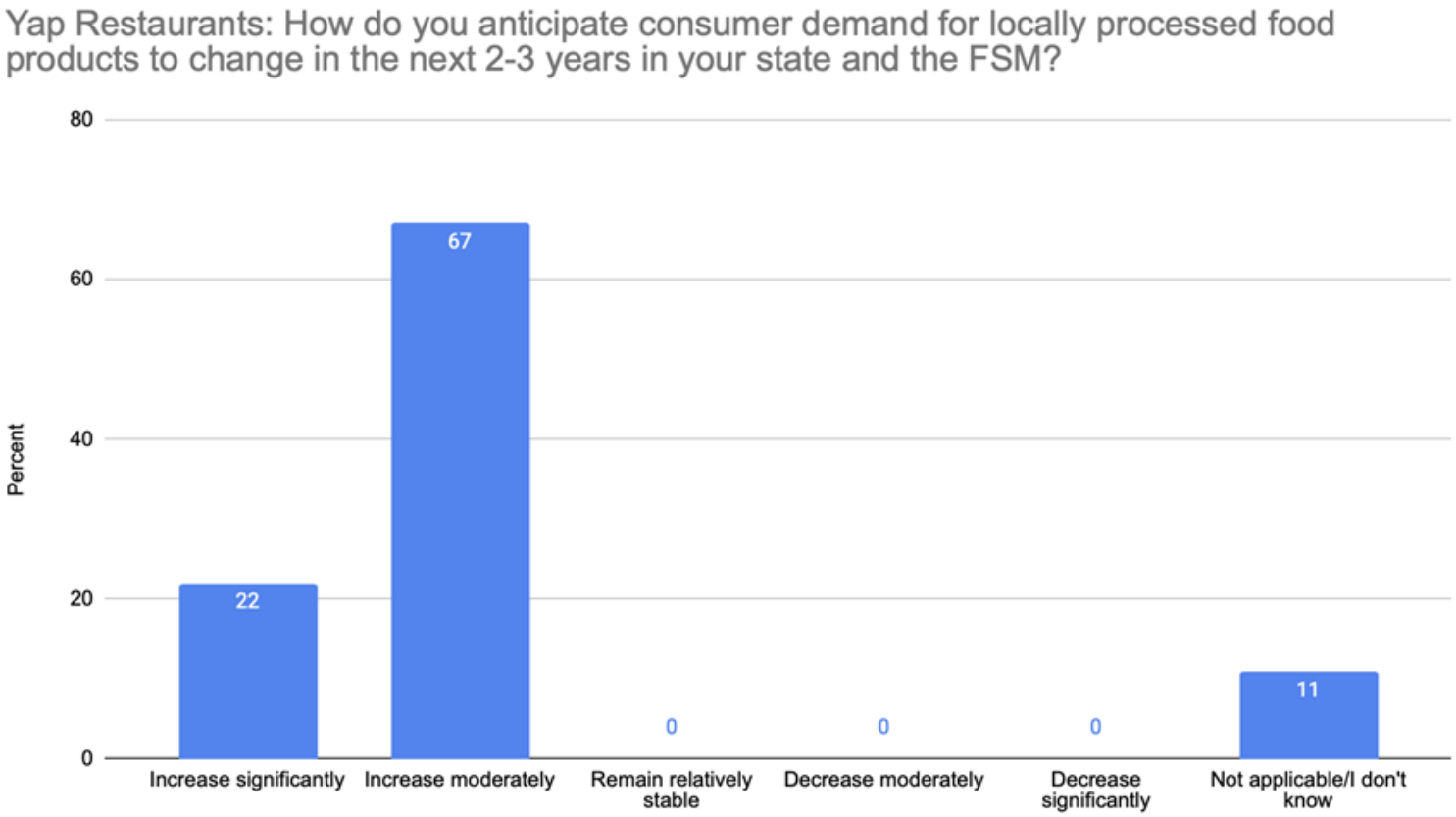


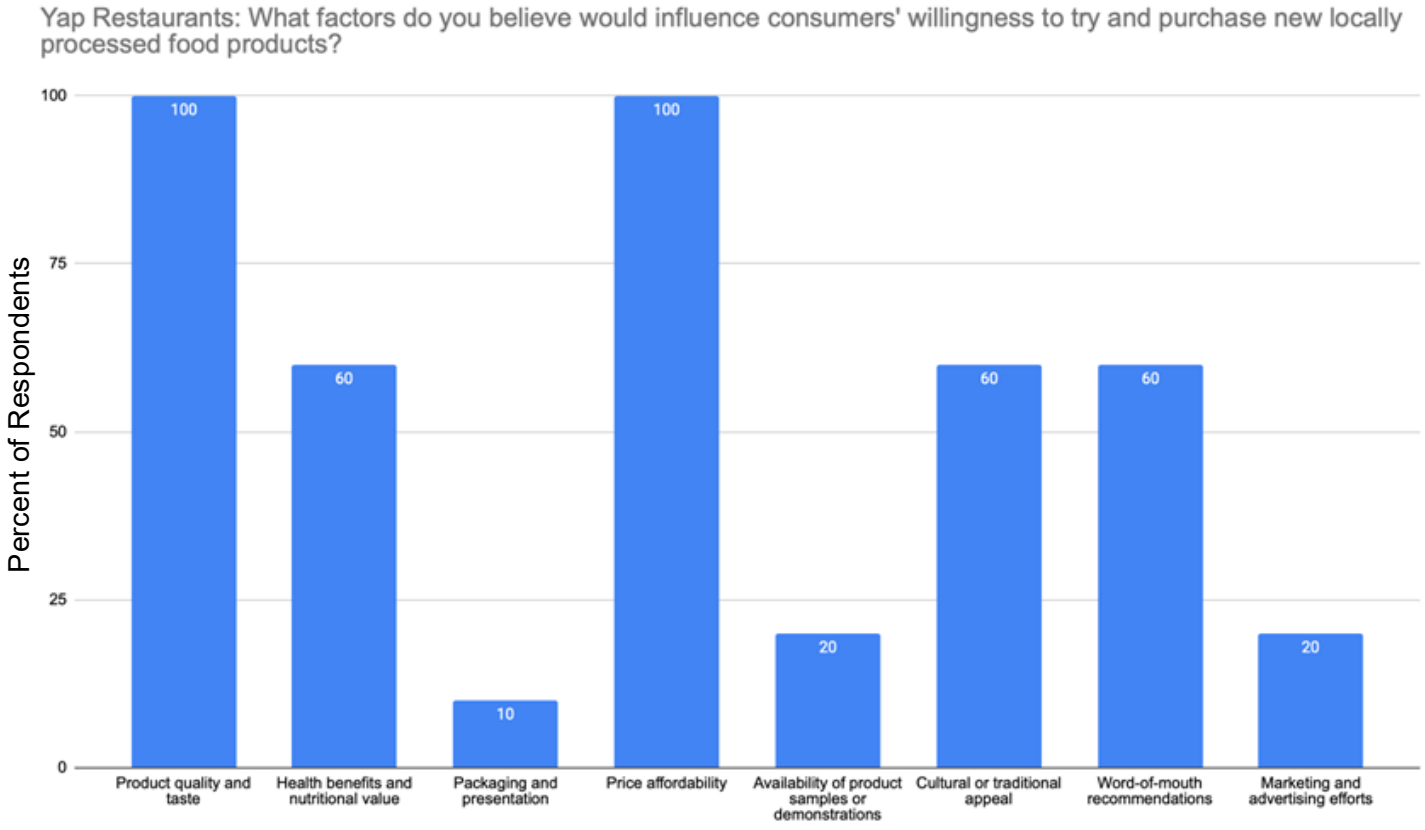
Yap Restaurants: What support or resources do you believe would be most beneficial for your business in developing and marketing new locally processed food products?



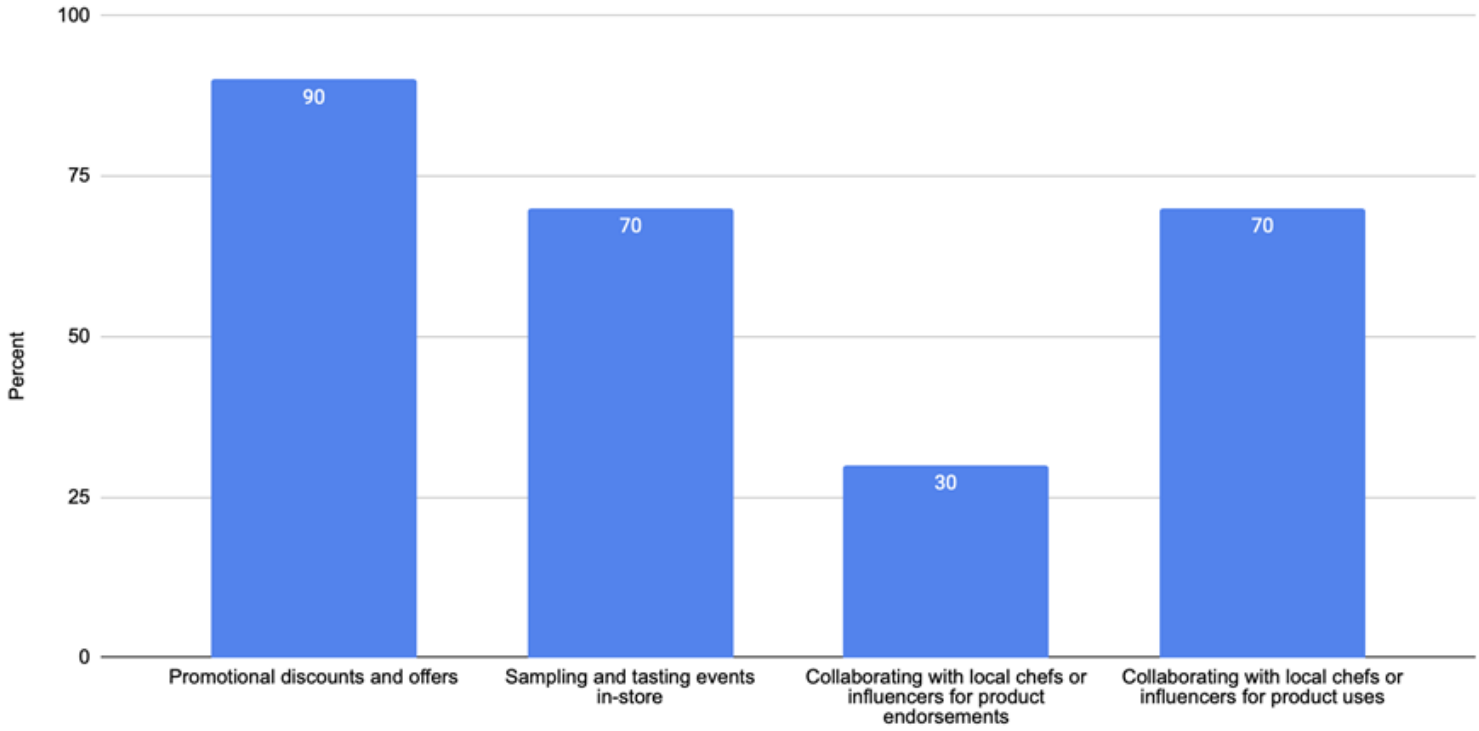
Yap Restaurants: On average, how frequently do your customers purchase locally processed food products from your store(s)?



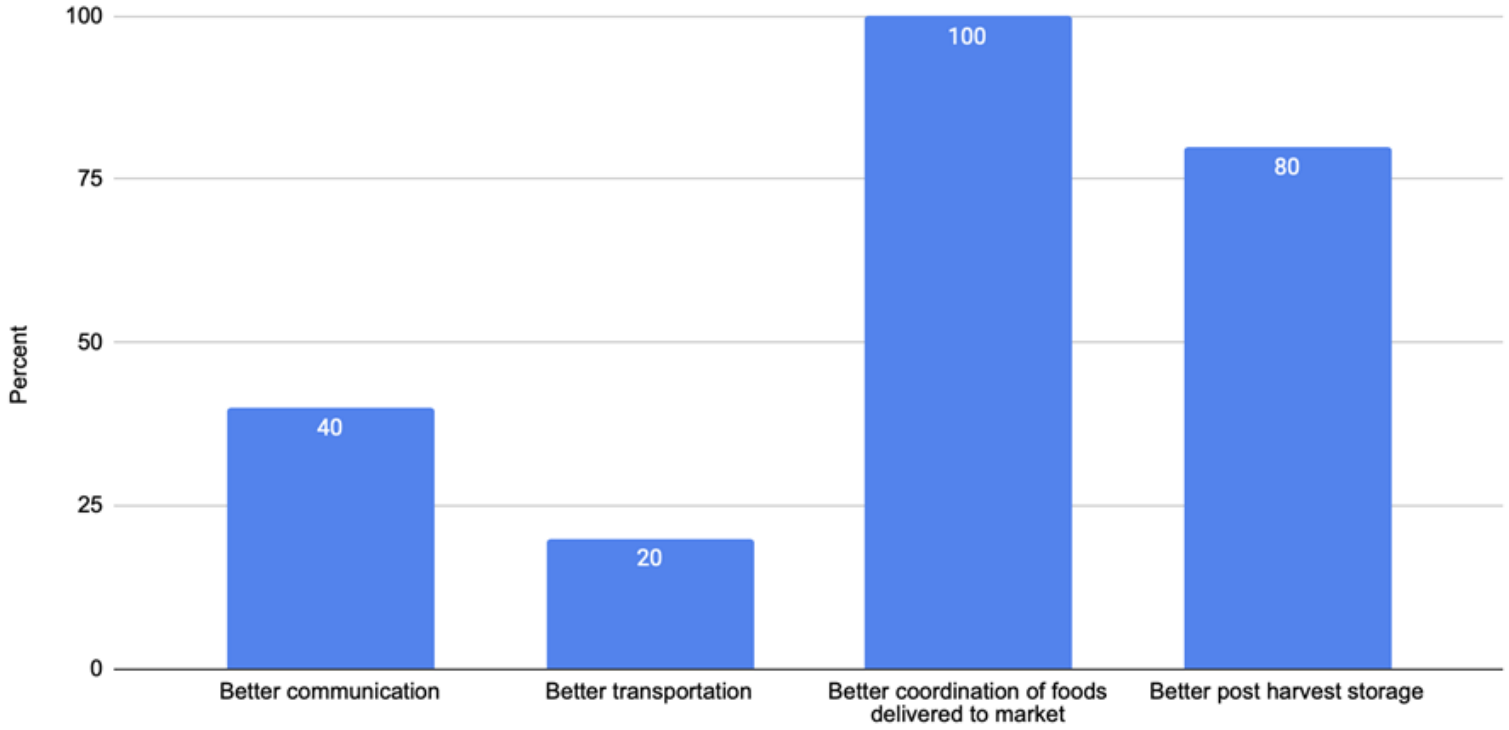

Yap Restaurants: How do you anticipate consumer demand for locally processed food products to change in the next 2-3 years in your state and the FSM?
Percent
80
60
40
20
0
22
67
0
0
0
11
Increase significantly
Increase moderately
Remain relatively stable
Decrease moderately
Decrease significantly
Not applicable/I don't know


Yap Restaurants: What factors do you believe would influence consumers' willingness to try and purchase new locally processed food products?
Percent of Respondents
100
75
50
25
0
100
60
10
100
20
60
60
20
Product quality and taste
Health benefits and nutritional value
Packaging and presentation
Price affordability
Availability of product samples or demonstrations
Cultural or traditional appeal
Word-of-mouth recommendations
Marketing and advertising efforts

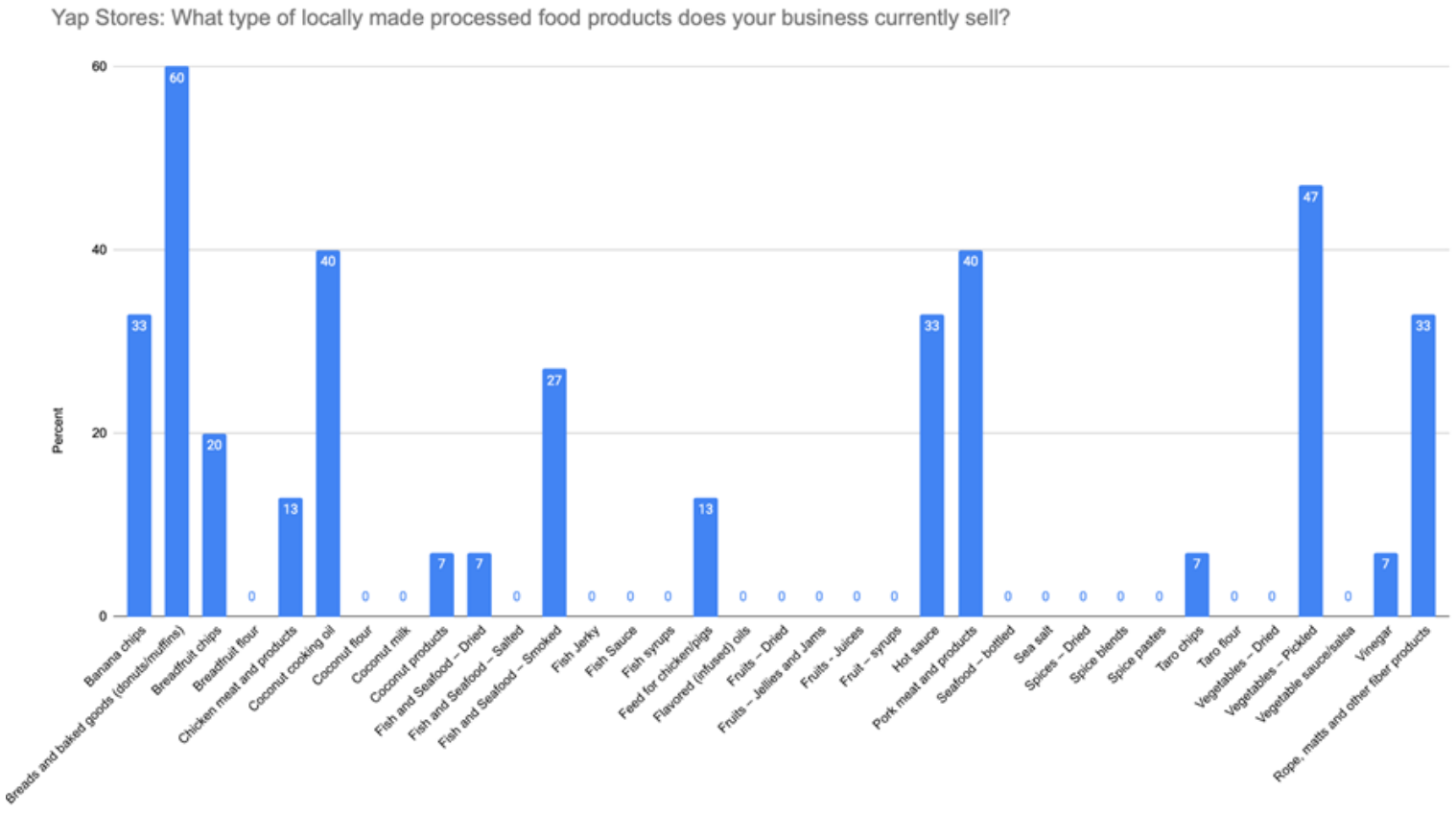
Yap Restaurants: What strategies would you recommend to increase consumer awareness and acceptance of new locally processed food products in FSM?

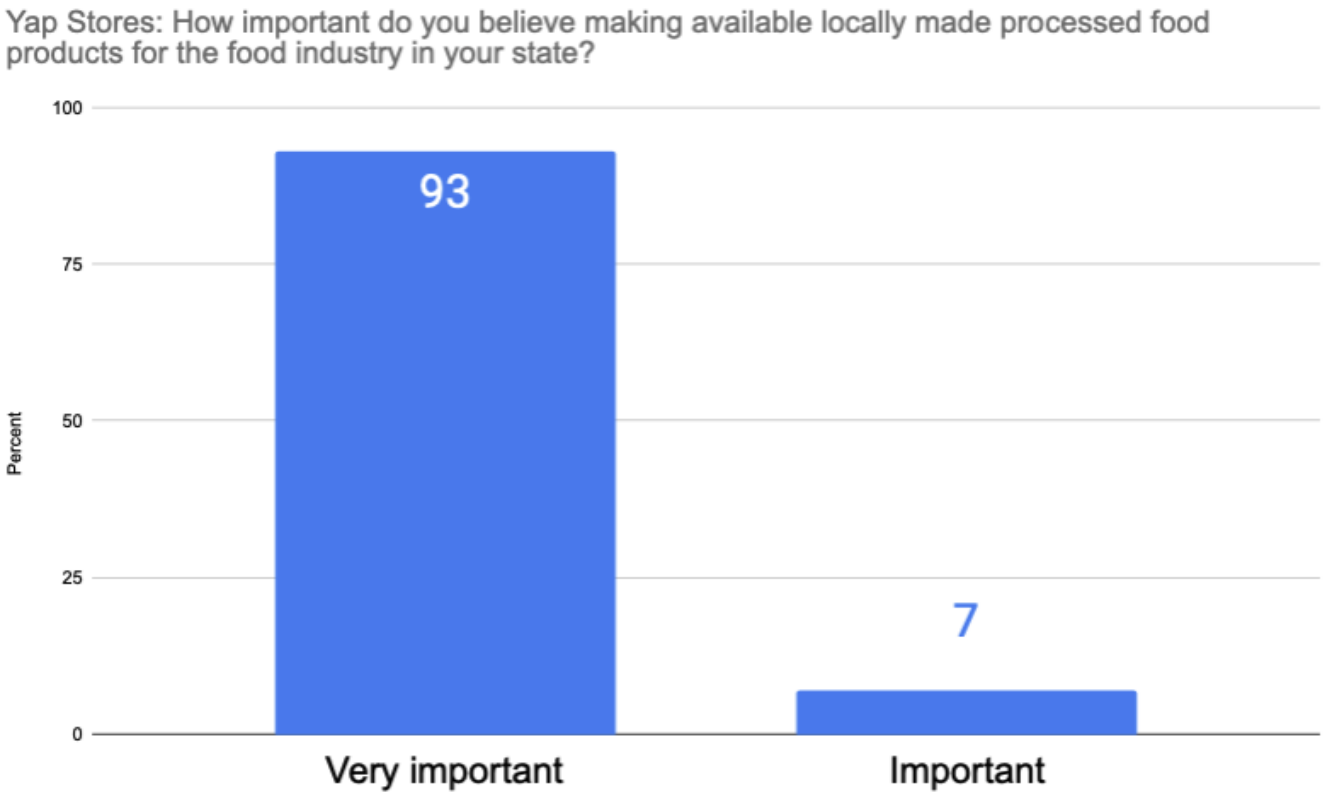


Yap Restaurants: What do you feel would strengthen your partnership with local food producers?

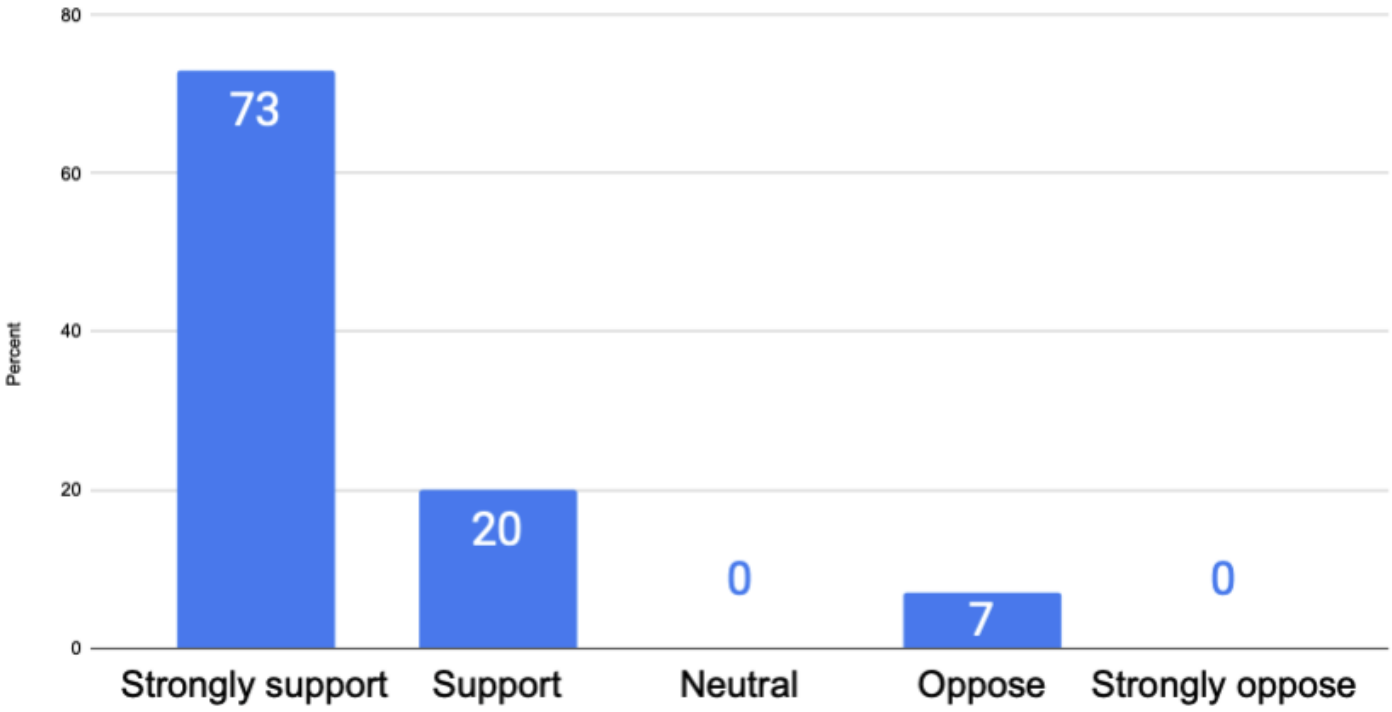


Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
Stores

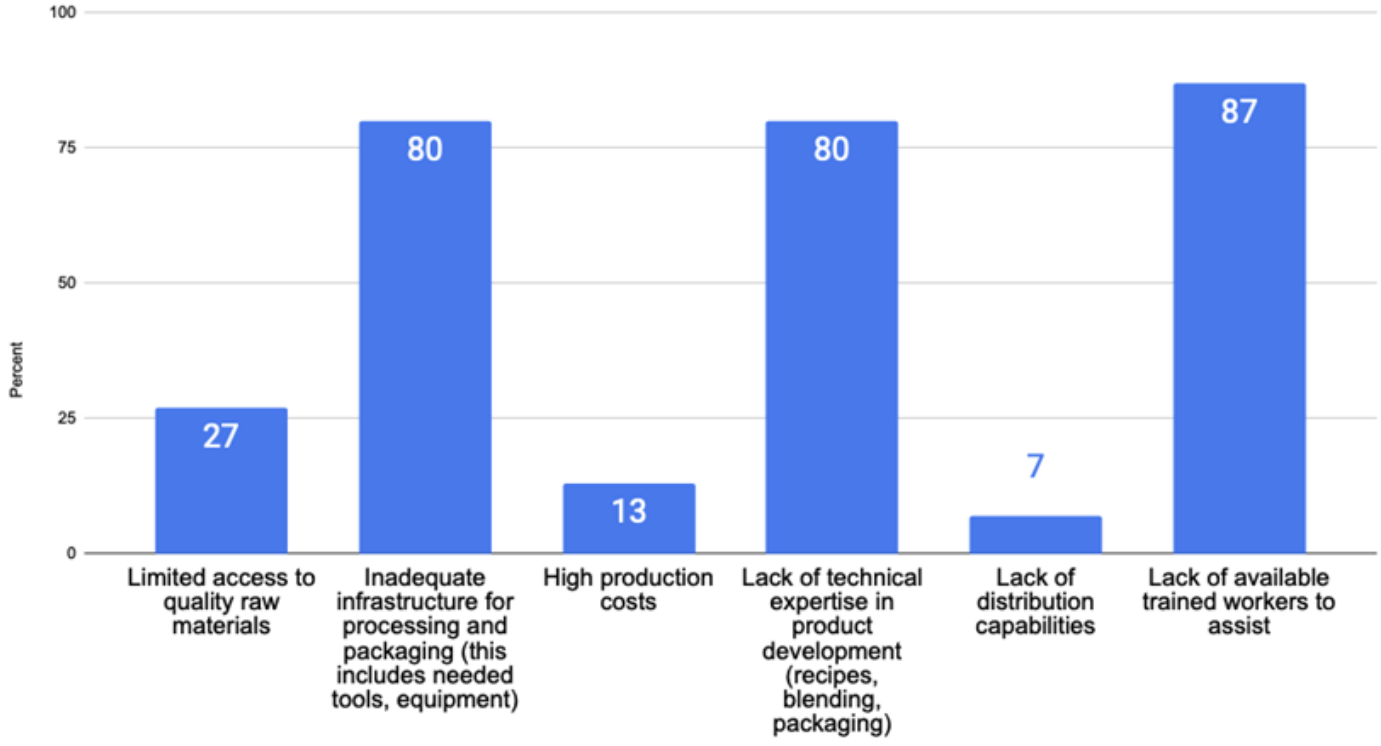

Yap Stores: What type of locally made processed food products does your business currently sell?
Percent
60
40
20
0
33
60
20
0
13
40
0
0
7
7
0
27
0
0
0
13
0
0
0
0
0
33
40
0
0
0
0
0
7
0
0
47
0
7
33
Banana chips
Breads and baked goods (donuts/muffins)
Breadfruit chips
Breadfruit flour
Chicken meat and products
Coconut cooking oil
Coconut flour
Coconut milk
Coconut products
Fish and Seafood – Dried
Fish and Seafood – Salted
Fish and Seafood – Smoked
Fish Jerky
Fish Sauce
Fish syrups
Feed for chickenpigs
Flavored (infused) oils
Fruits – Dried
Fruits – Jellies and Jams
Fruits - Juices
Fruit – syrups
Hot sauce
Pork meat and products
Seafood – bottled
Sea salt
Spices – Dried
Spice blends
Spice pastes
Taro chips
Taro flour
Vegetables – Dried
Vegetables – Pickled
Vegetable sauce/salsa
Vinegar
Rope, matts and other fiber products

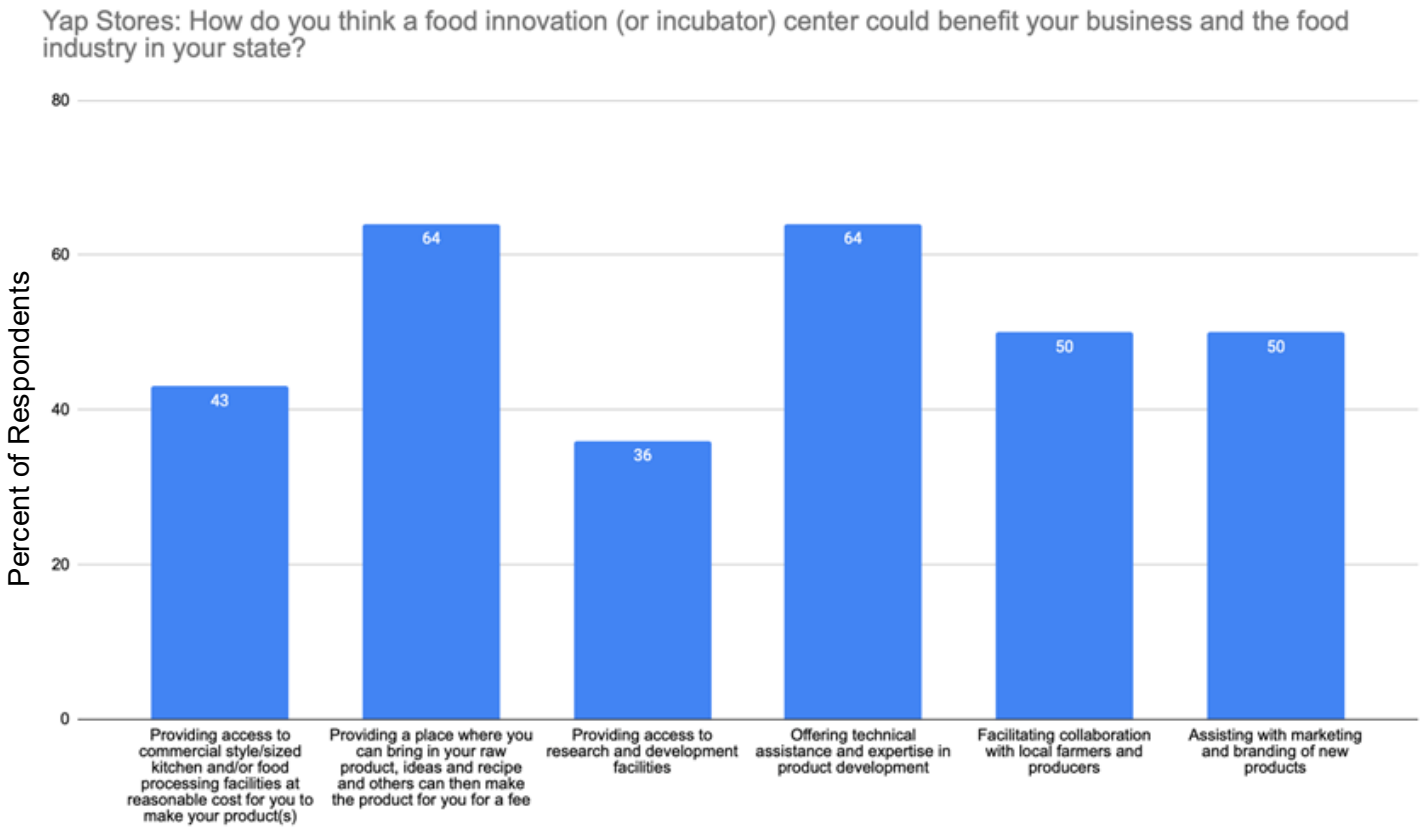

Yap Stores: How important do you believe making available locally made processed food products for the food industry in your state?
Percent
100
75
50
25
0
93
7
Very important
Important

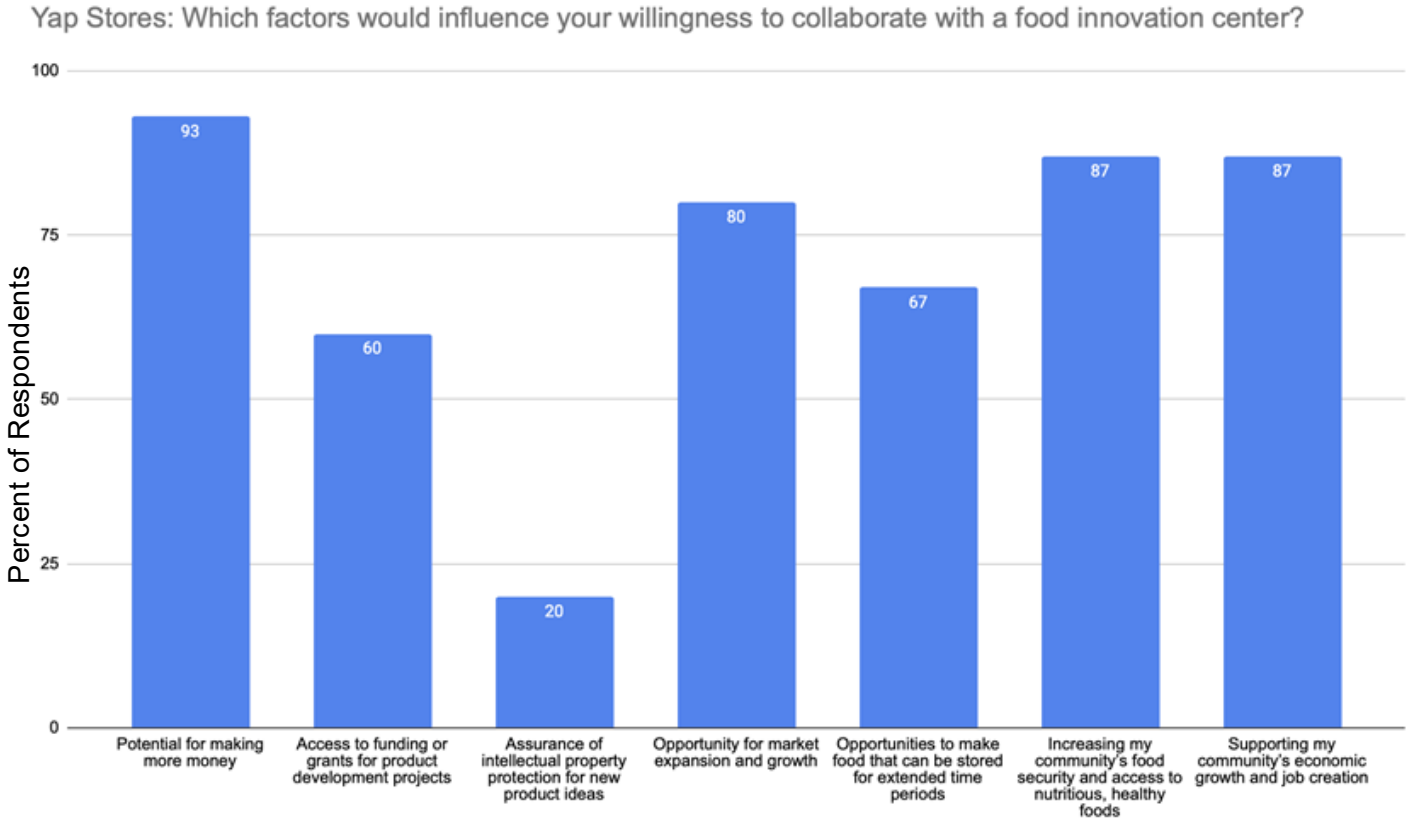
Yap Stores: Would you support the establishment of a food innovation (or incubator/shared commercial kitchen) center in your state focused on developing new locally made processed food products and/or assisting you and others in processing and producing local food products?

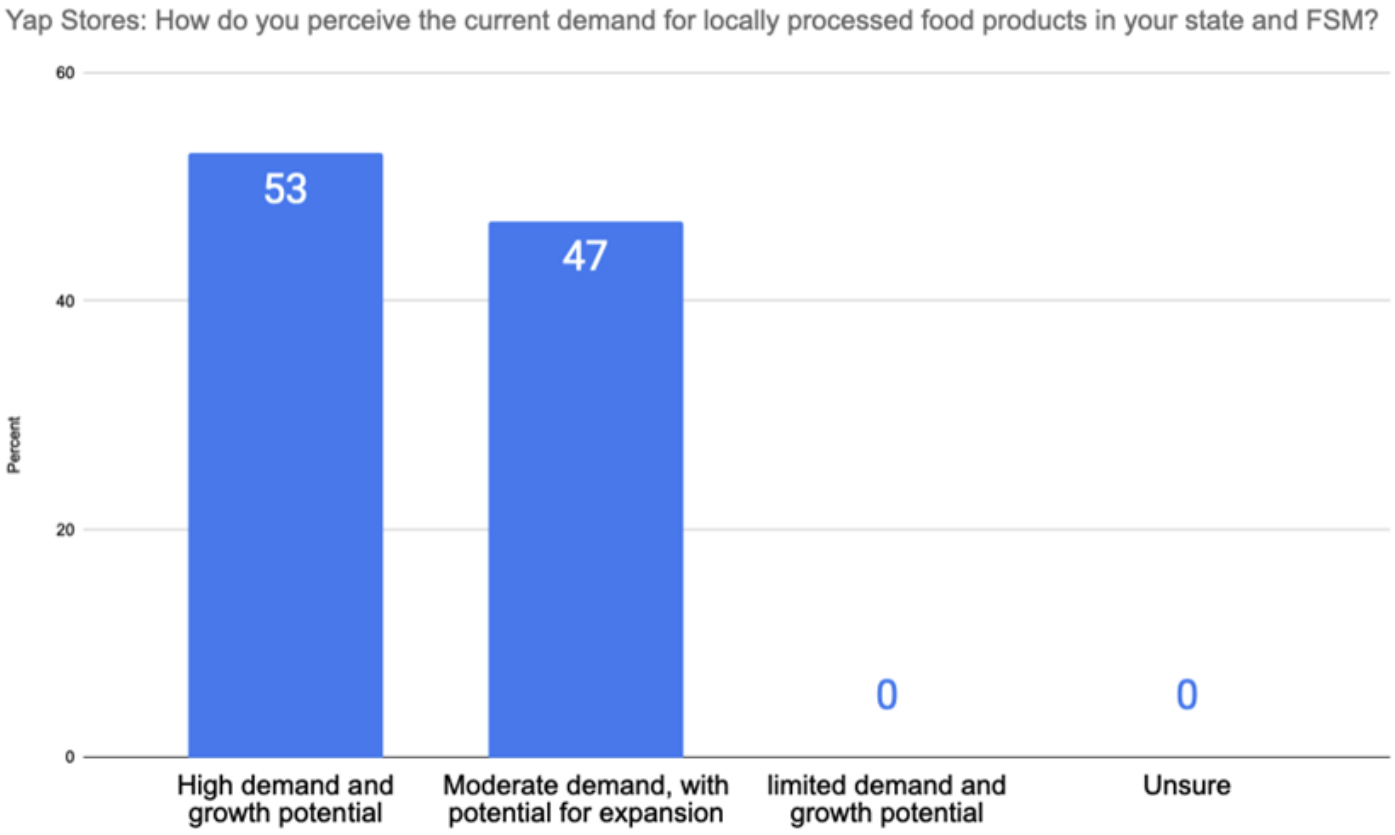


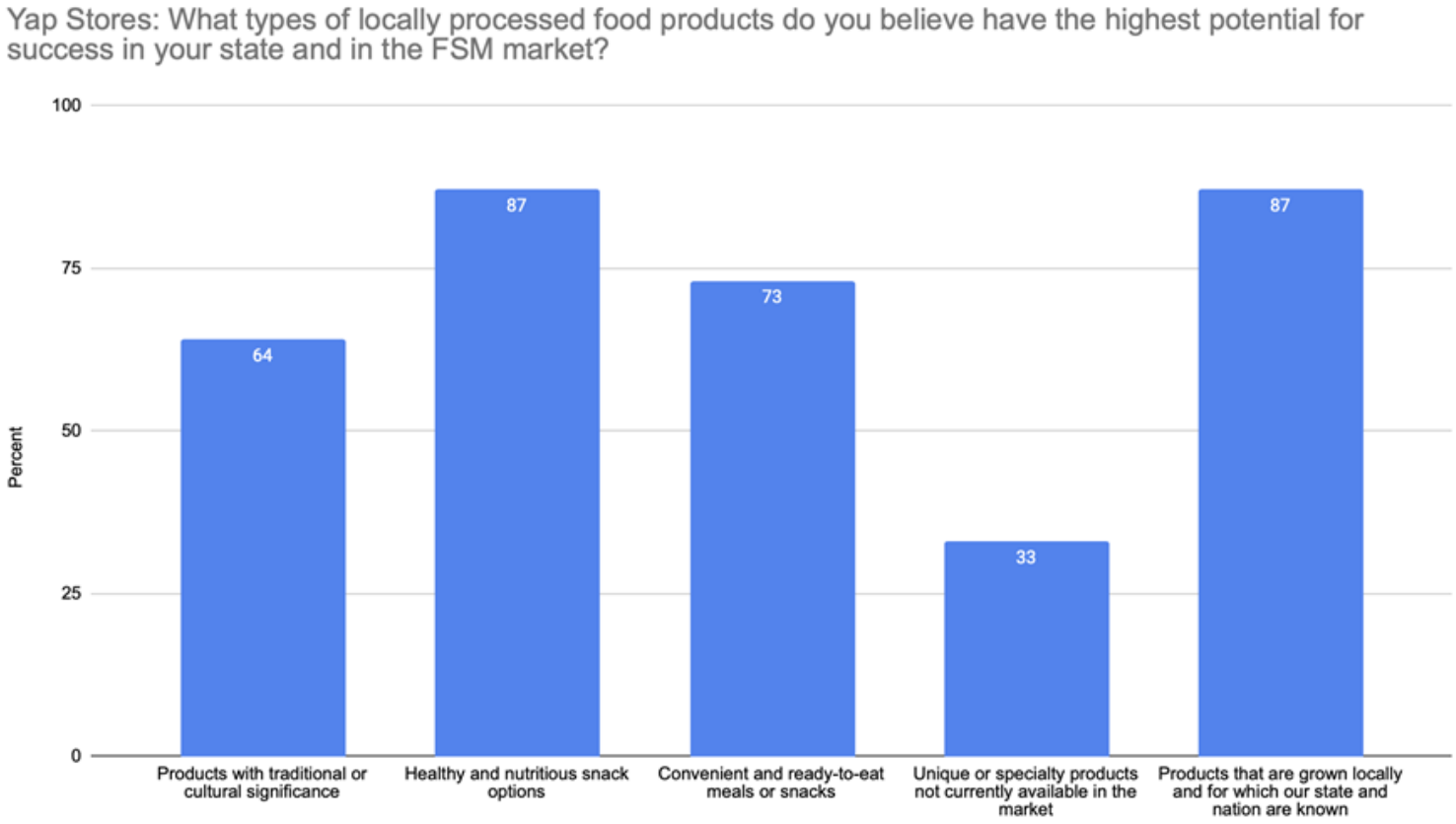
Yap Stores: What specific challenges do you face in sourcing or producing locally made processed food products in your state?



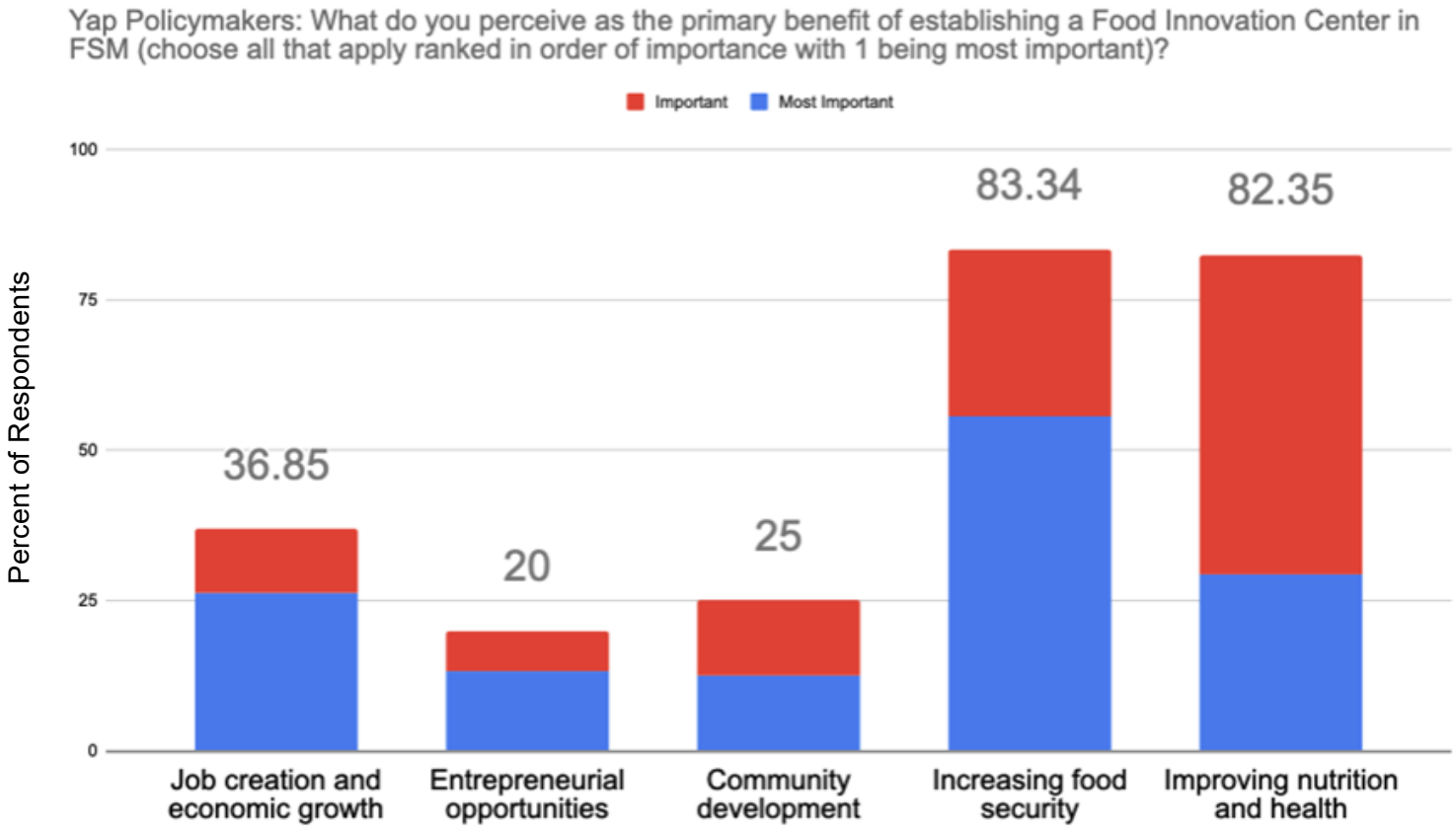

Yap Stores: How do you think a food innovation (or incubator) center could benefit your business and the food industry in your state?
Percent of Respondents
80
60
40
20
0
43
64
36
64
50
50
Providing access to commercial style/sized kitchen and/or food processing facilities at reasonable cost for you to make your product(s)
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
Providing access to research and development facilities
Offering technical assistance and expertise in product development
Facilitating collaboration with local farmers and producers
Assisting with marketing and branding of new products

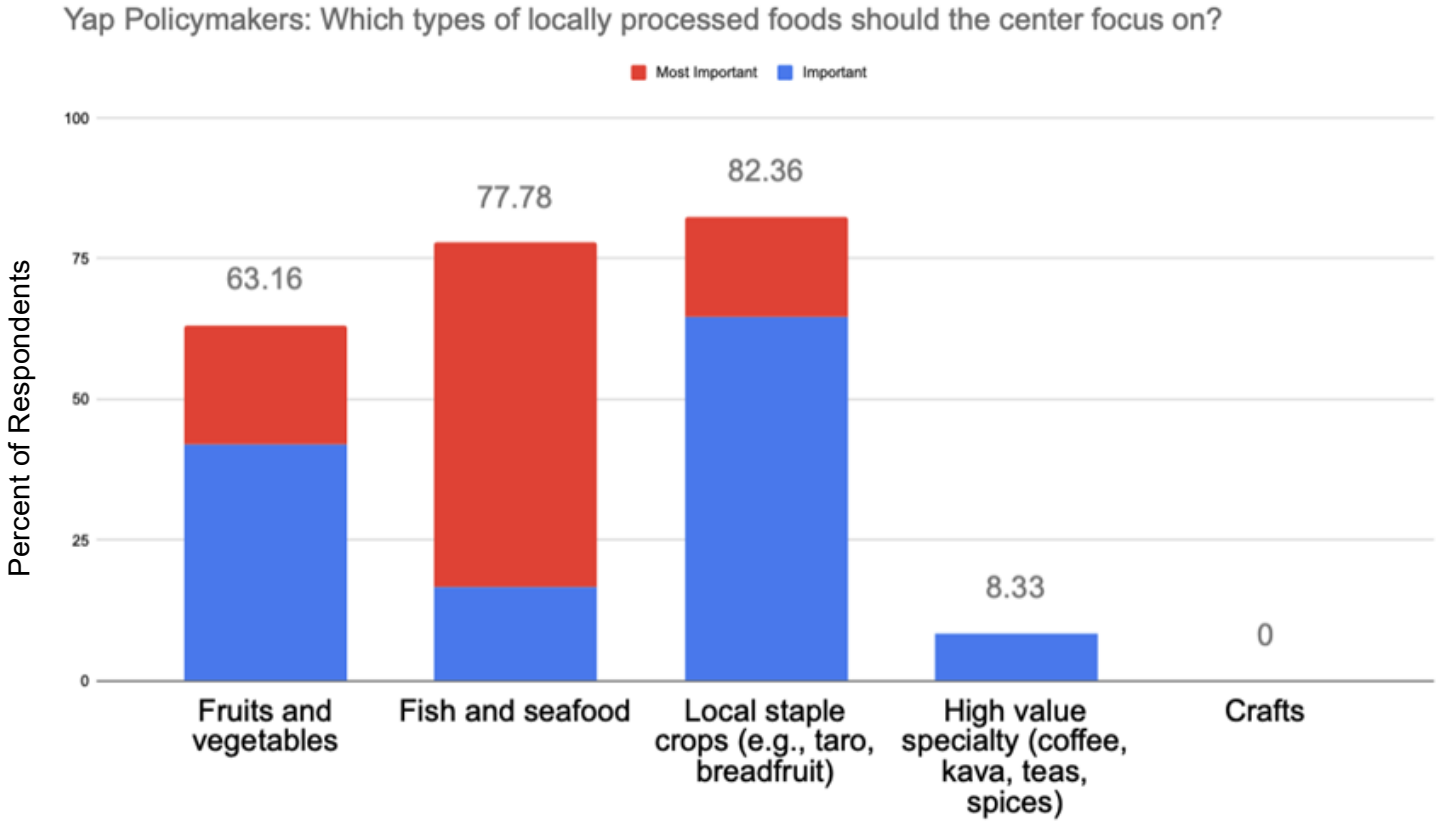

Yap Stores: Which factors would influence your willingness to collaborate with a food innovation center?
Percent of Respondents
100
75
50
25
0
93
60
20
80
67
87
87
Potential for making more money
Access to funding or grants for product development projects
Assurance of intellectual property protection for new product ideas
Opportunity for market expansion and growth
Opportunities to make food that can be stored for extended time periods
Increasing my community's food security and access to nutritious, healthy foods
Supporting my community's economic growth and job creation

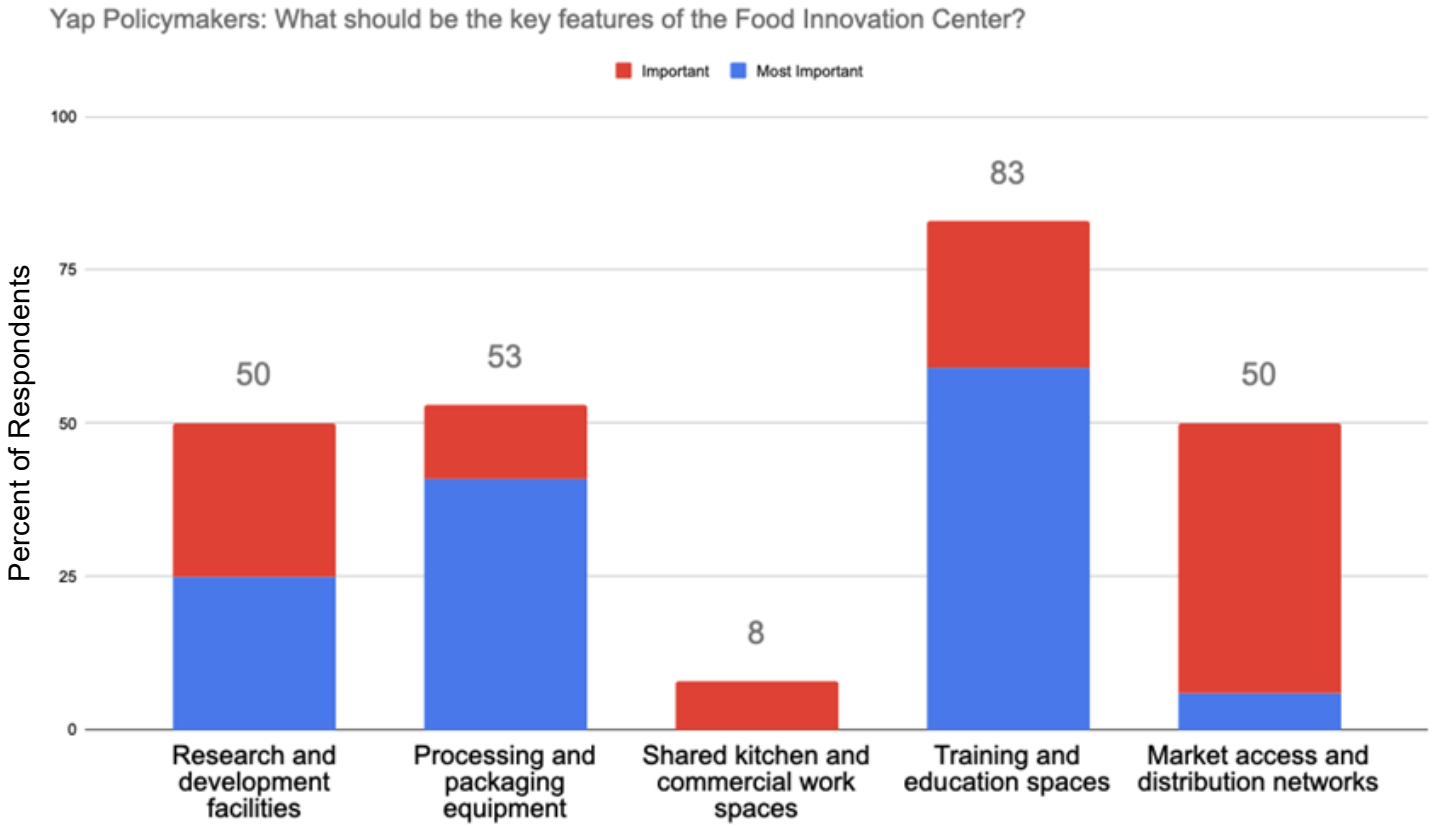

Yap Stores: How do you perceive the current demand for locally processed food products in your state and FSM?
Percent
60
40
20
0
53
47
0
0
High demand and growth potential
Moderate demand, with potential for expansion
limited demand and growth potential
Unsure

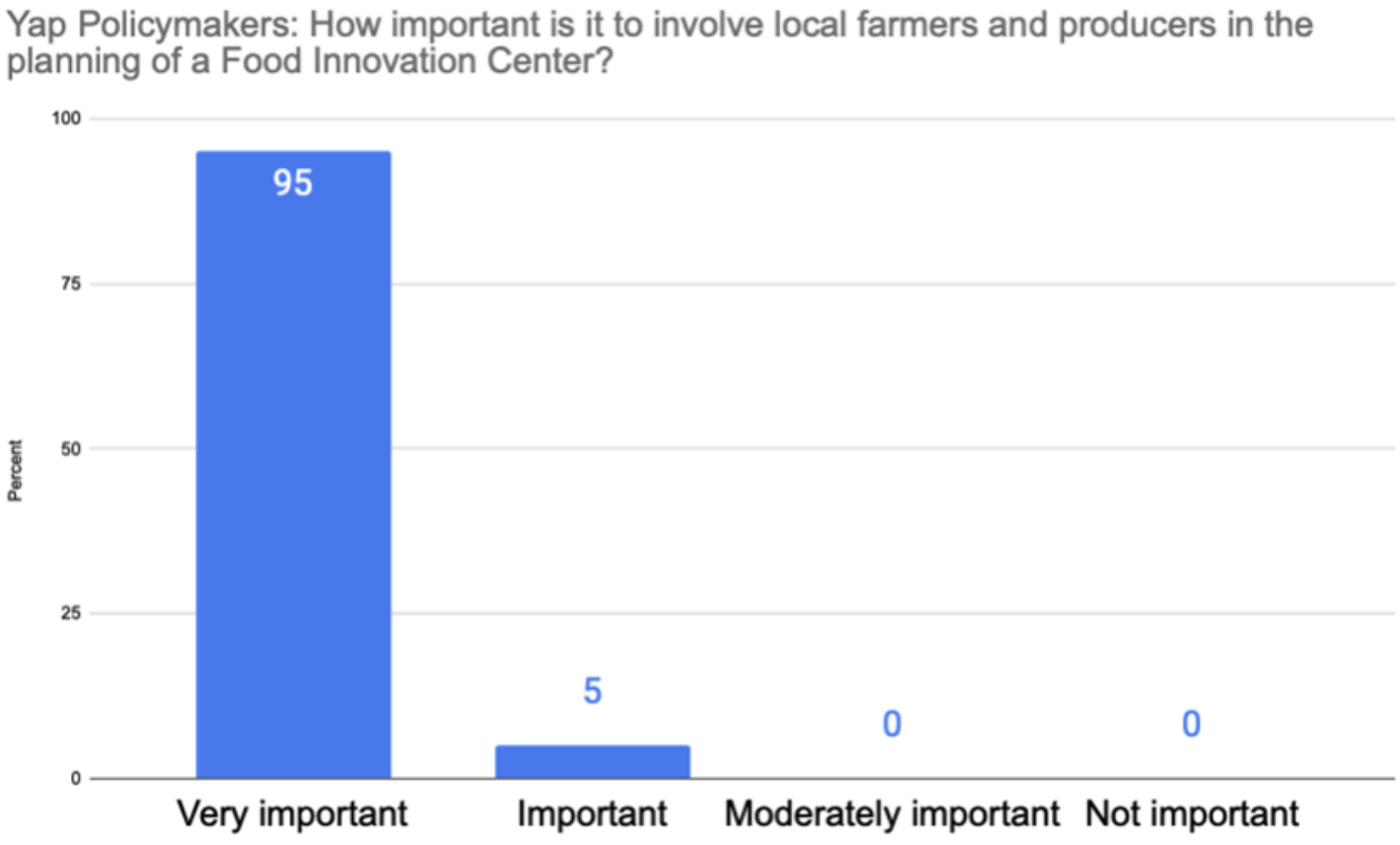

Yap Stores: What types of locally processed food products do you believe have the highest potential for success in your state and in the FSM market?
Percent
100
75
50
25
0
64
87
73
33
87
Products with traditional or cultural significance
Healthy and nutritious snack options
Convenient and ready-to-eat meals or snacks
Unique or specialty products not currently available in the market
Products that are grown locally and for which our state and nation are known

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

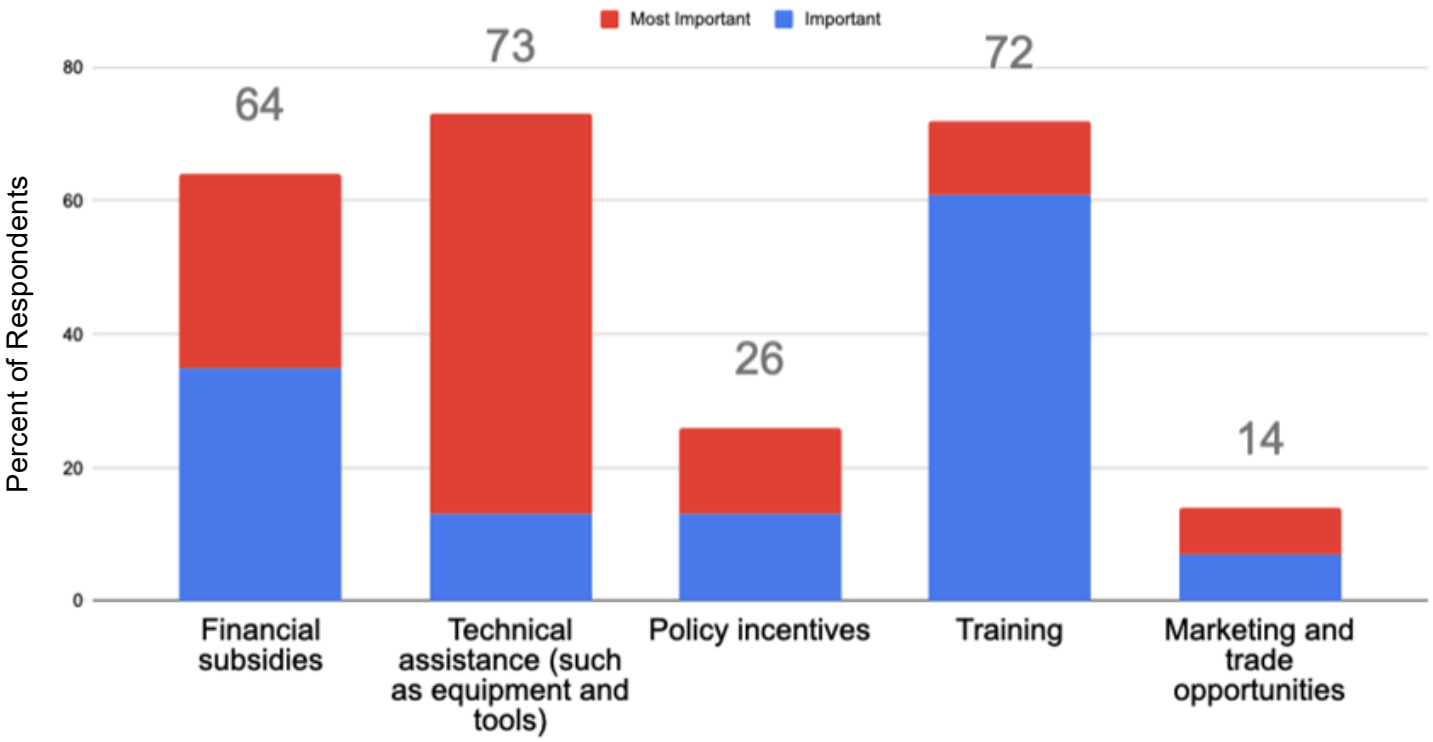

Yap Policymakers: What do you perceive as the primary benefit of establishing a Food Innovation Center in FSM (choose all that apply ranked in order of importance with 1 being most important)?
Important
Most Important
Percent of Respondents
100
75
50
25
0
36.85
20
25
83.34
82.35
Job creation and economic growth
Entrepreneurial opportunities
Community development
Increasing food security
Improving nutrition and health


Yap Policymakers: Which types of locally processed foods should the center focus on?
Most Important
Important
Percent of Respondents
100
75
50
25
0
63.16
77.78
82.36
8.33
0
Fruits and vegetables
Fish and seafood
Local staple crops (e.g., taro, breadfruit)
High value specialty (coffee, kava, teas, spices)
Crafts

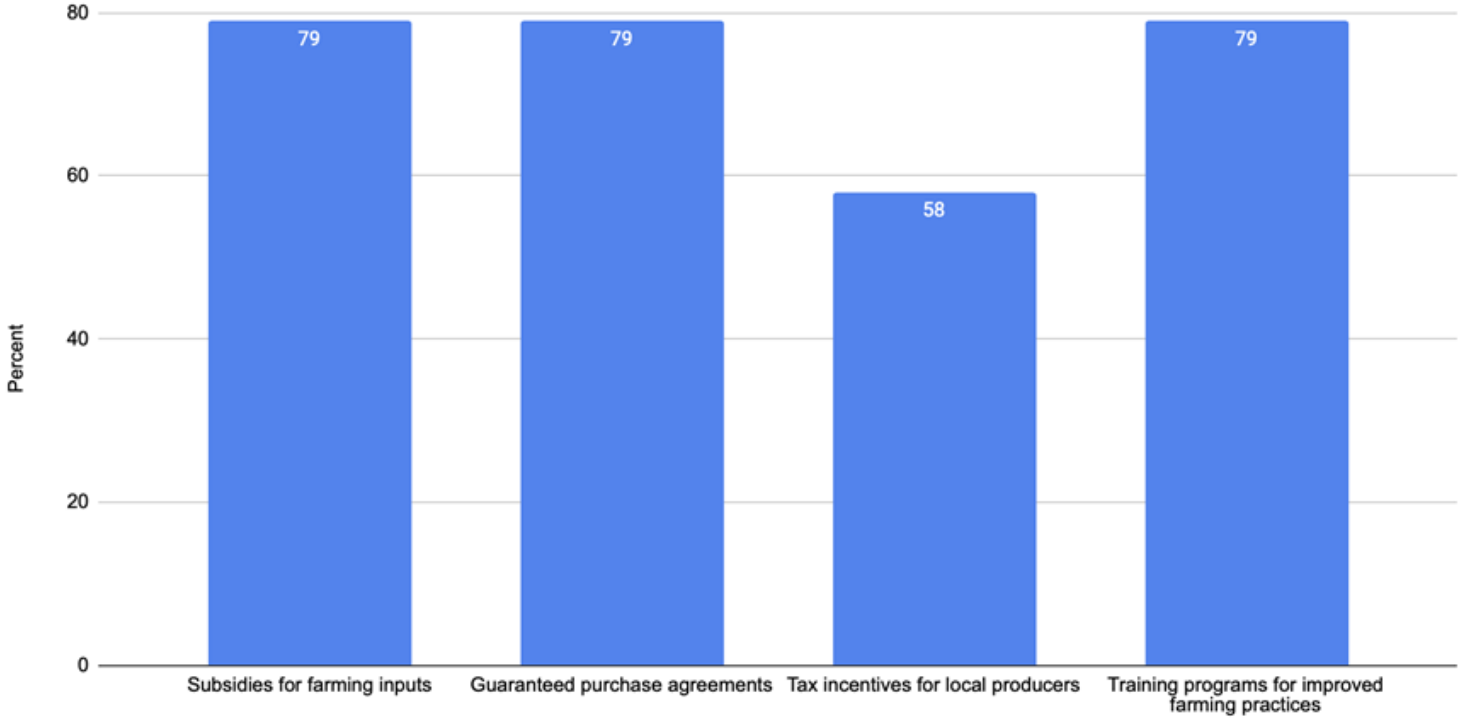

Yap Policymakers: What should be the key features of the Food Innovation Center?
Important
Most Important
Percent of Respondents
100
75
50
25
0
50
53
8
83
50
Research and development facilities
Processing and packaging equipment
Shared kitchen and commercial work spaces
Training and education spaces
Market access and distribution networks

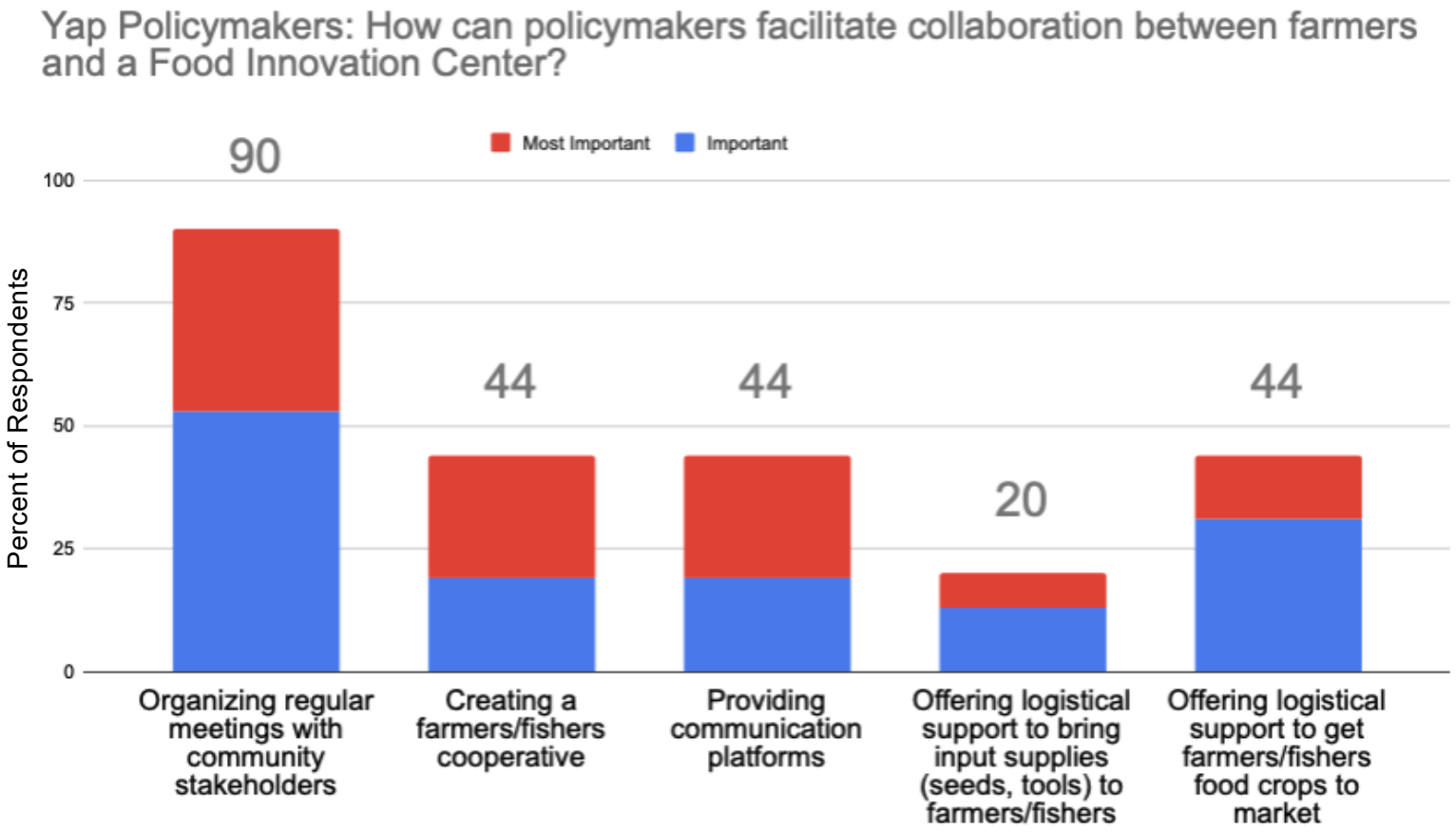

Yap Policymakers: How important is it to involve local farmers and producers in the planning of a Food Innovation Center?
Percent
100
75
50
25
0
95
5
0
0
Very important
Important
Moderately important
Not important

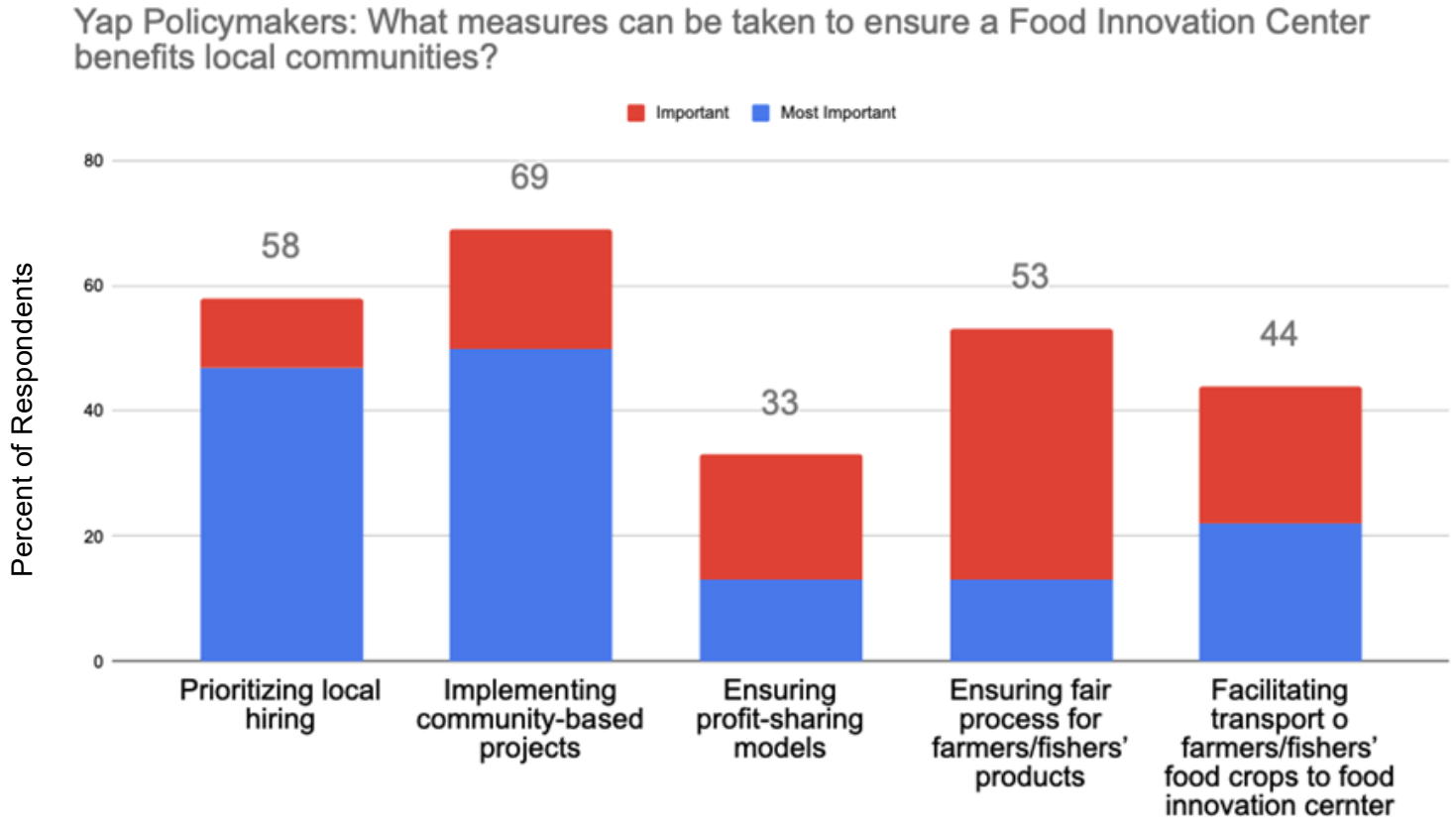
Yap Policymakers: What kind of support do you believe the government should provide to a Food Innovation Center?

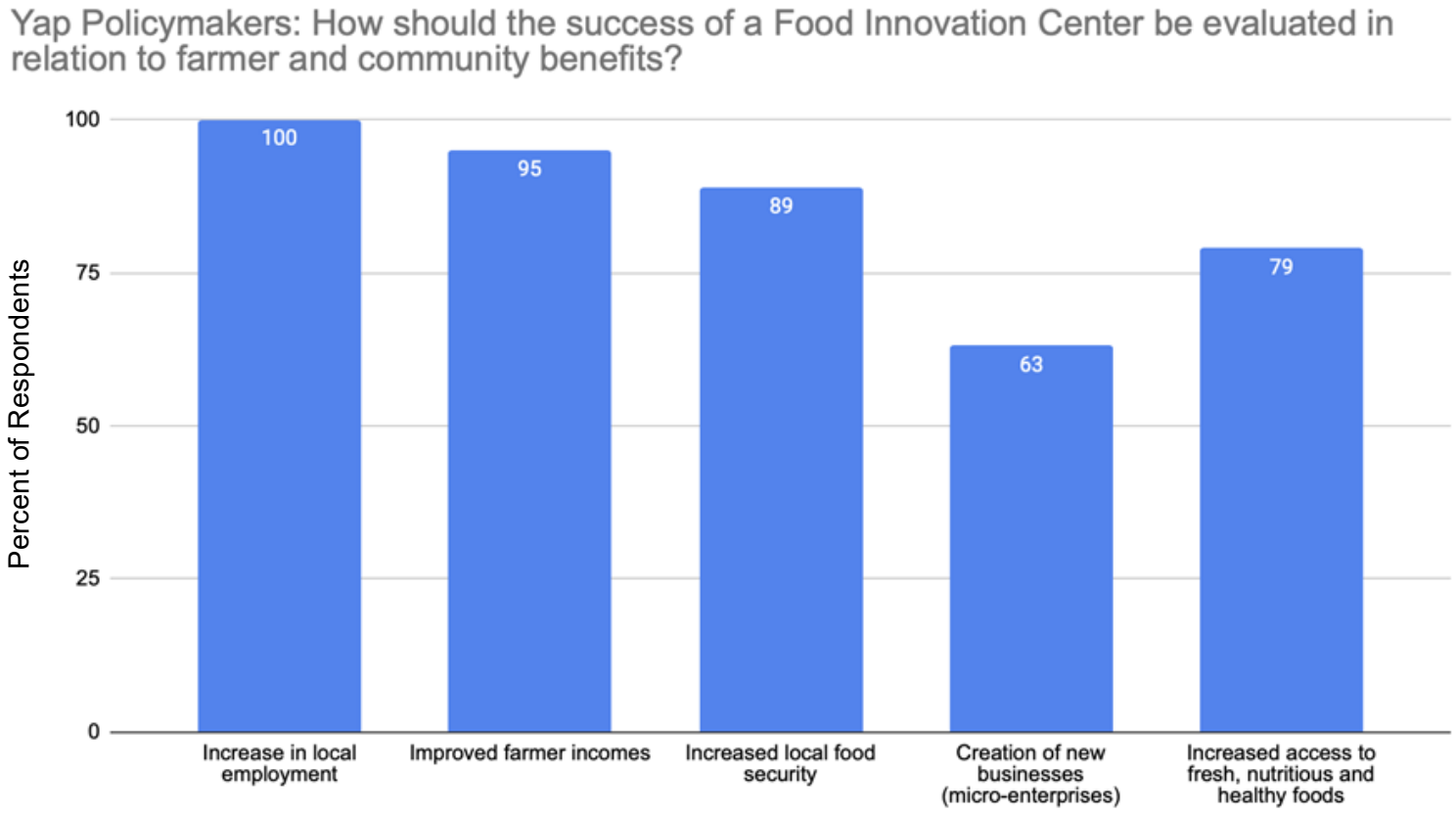


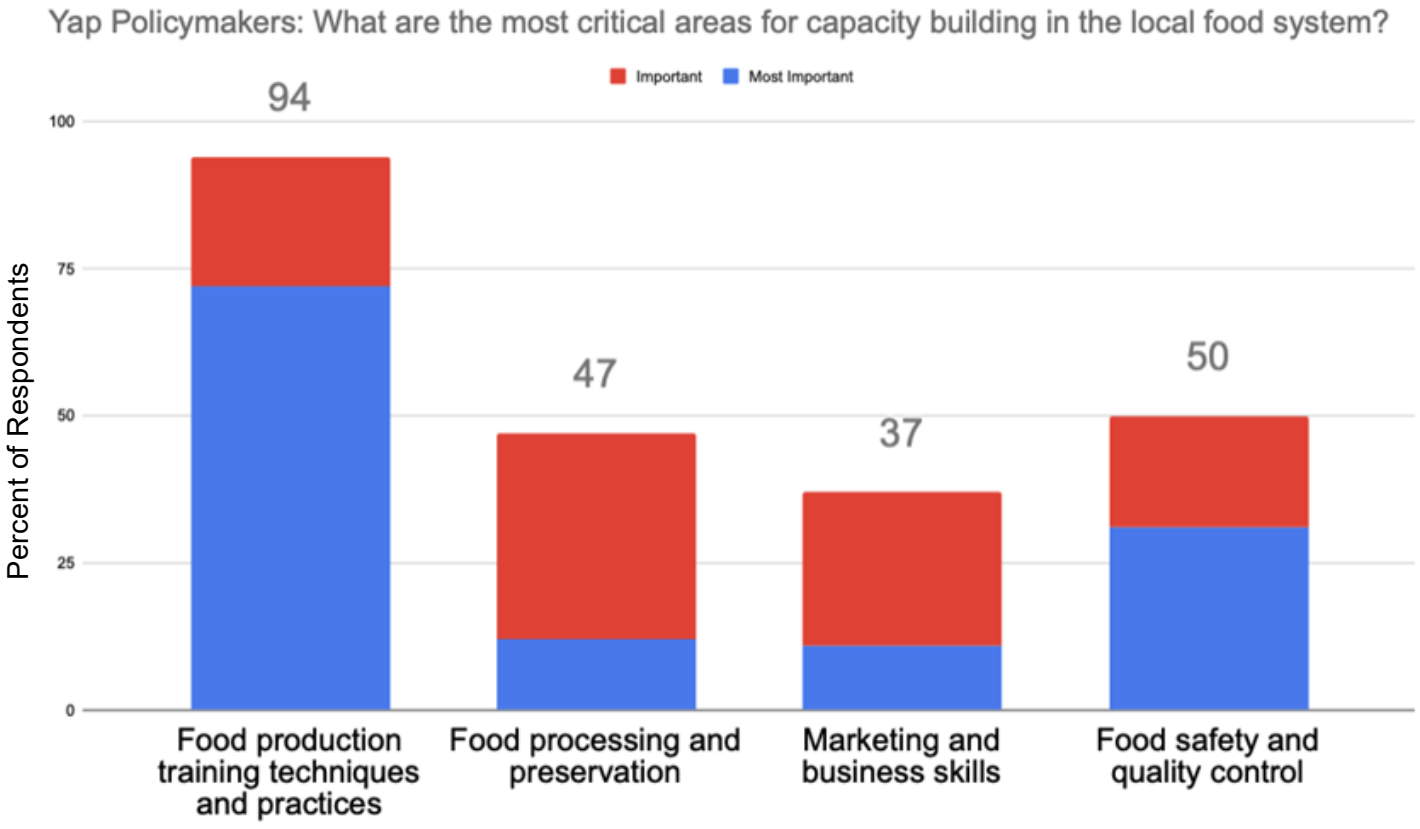
Yap Policymakers: What specific policies can support farmers in supplying raw materials to a Food Innovation Center?

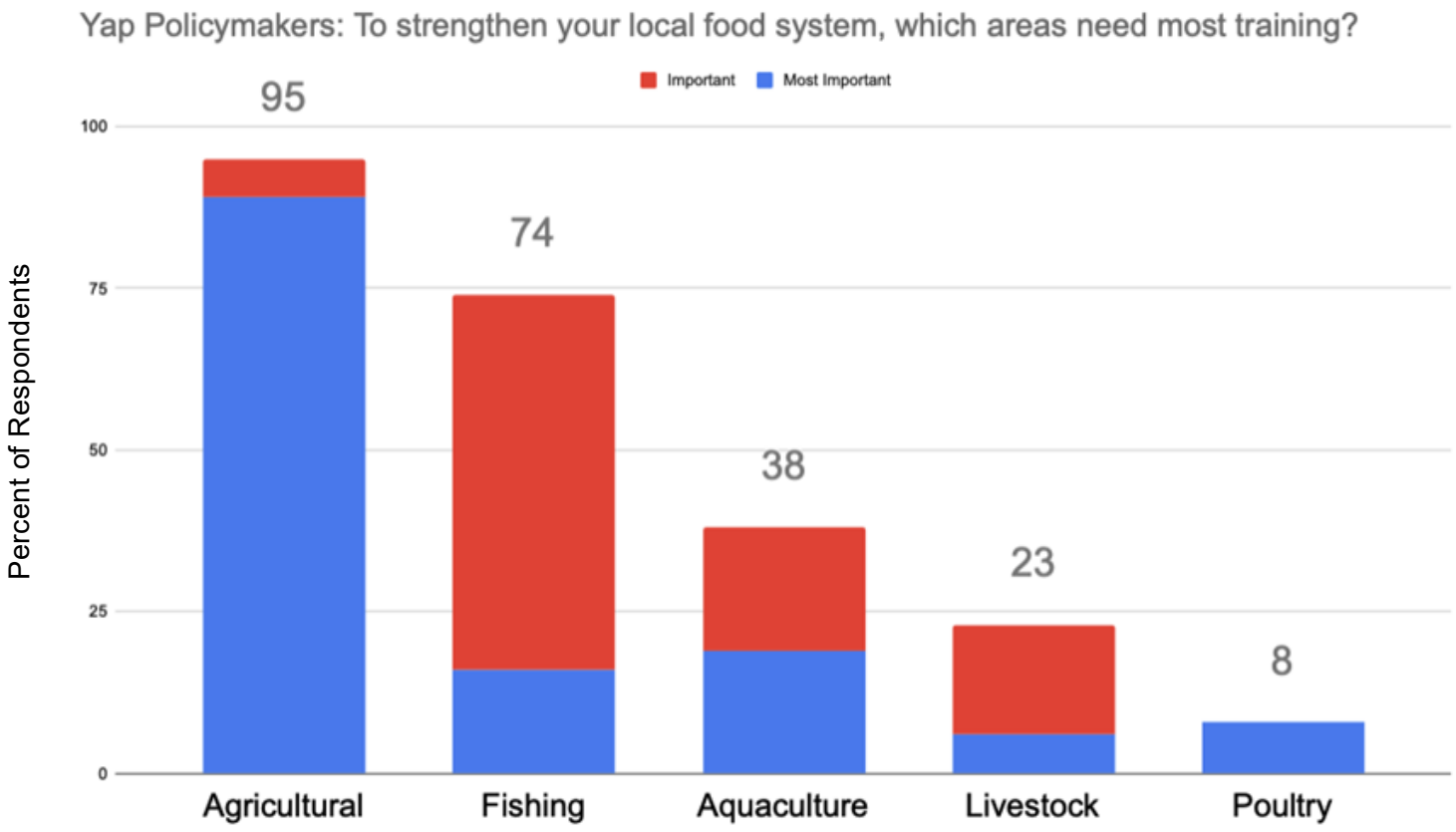


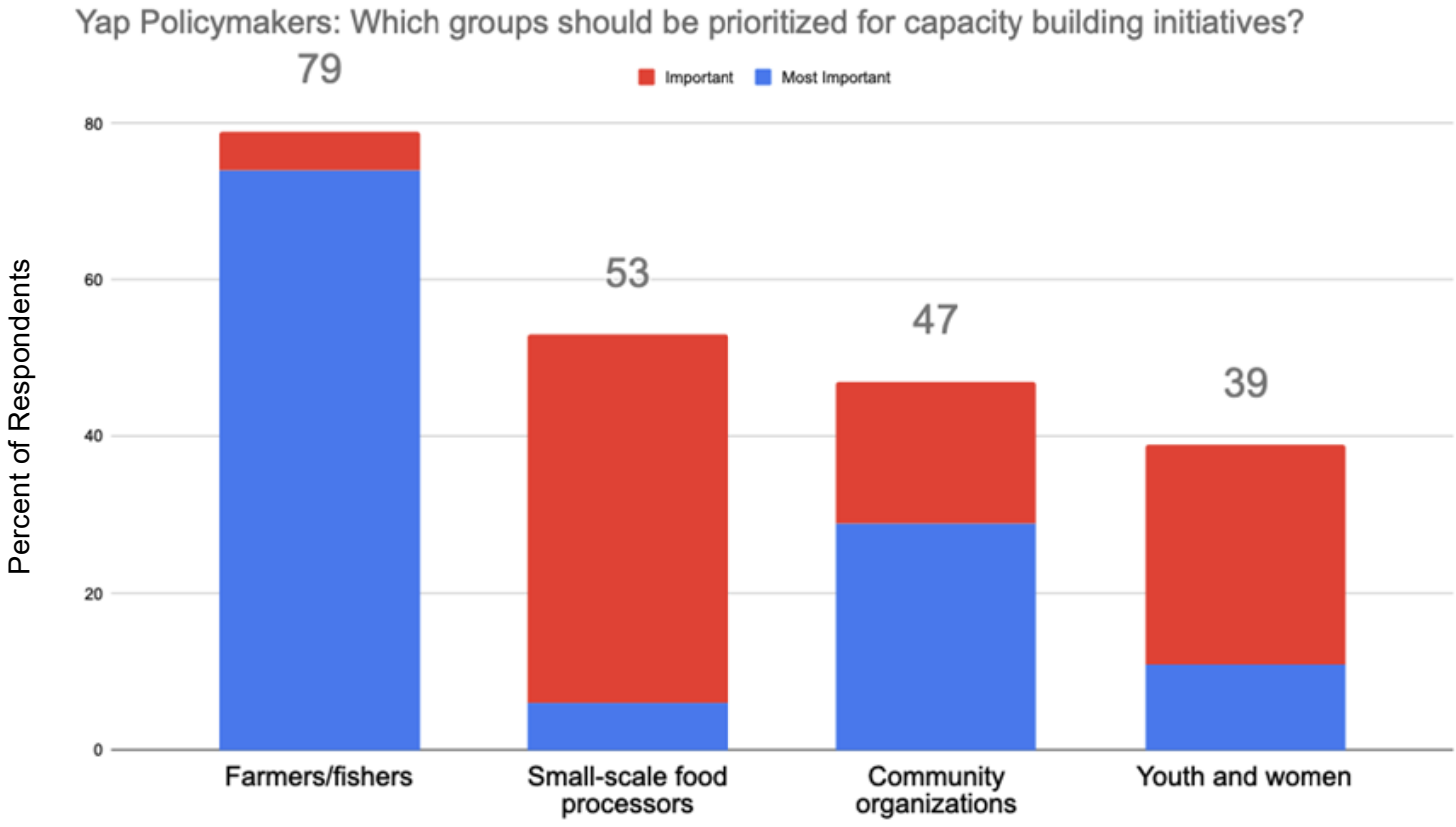

Yap Policymakers: How can policymakers facilitate collaboration between farmers and a Food Innovation Center?
Most Important
Important
Percent of Respondents
100
75
50
25
0
90
44
44
20
44
Organizing regular meetings with community stakeholders
Creating a farmers/fishers cooperative
Providing communication platforms
Offering logistical support to bring input supplies (seeds, tools) to farmers/fishers
Offering logistical support to get farmers/fishers food crops to market

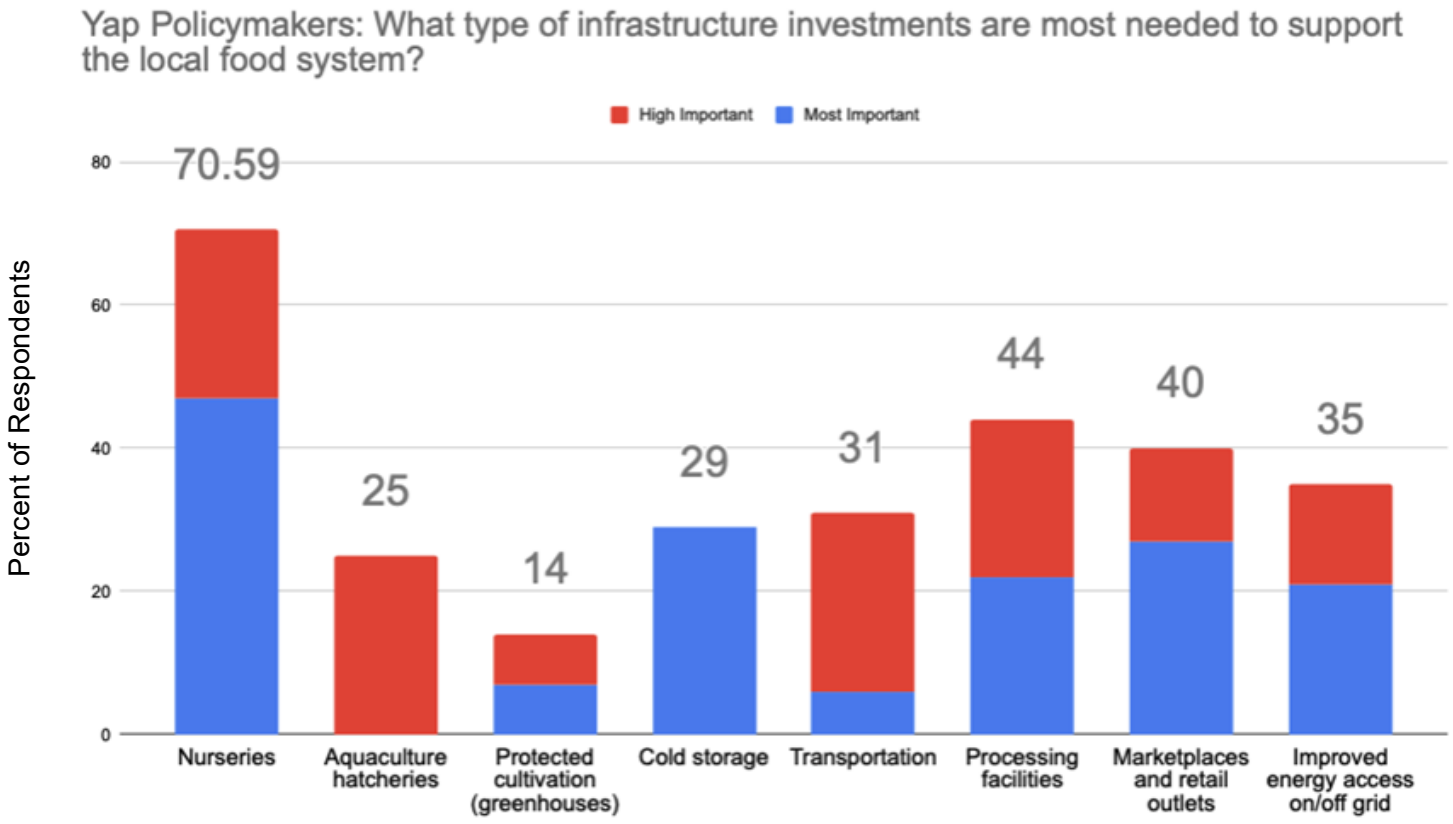

Yap Policymakers: What measures can be taken to ensure a Food Innovation Center benefits local communities?
Important
Most Important
Percent of Respondents
80
60
40
20
0
58
69
33
53
44
Prioritizing local hiring
Implementing community-based projects
Ensuring profit-sharing models
Ensuring fair process for farmers/fishers' products
Facilitating transport o farmers/fishers' food crops to food innovation cernter

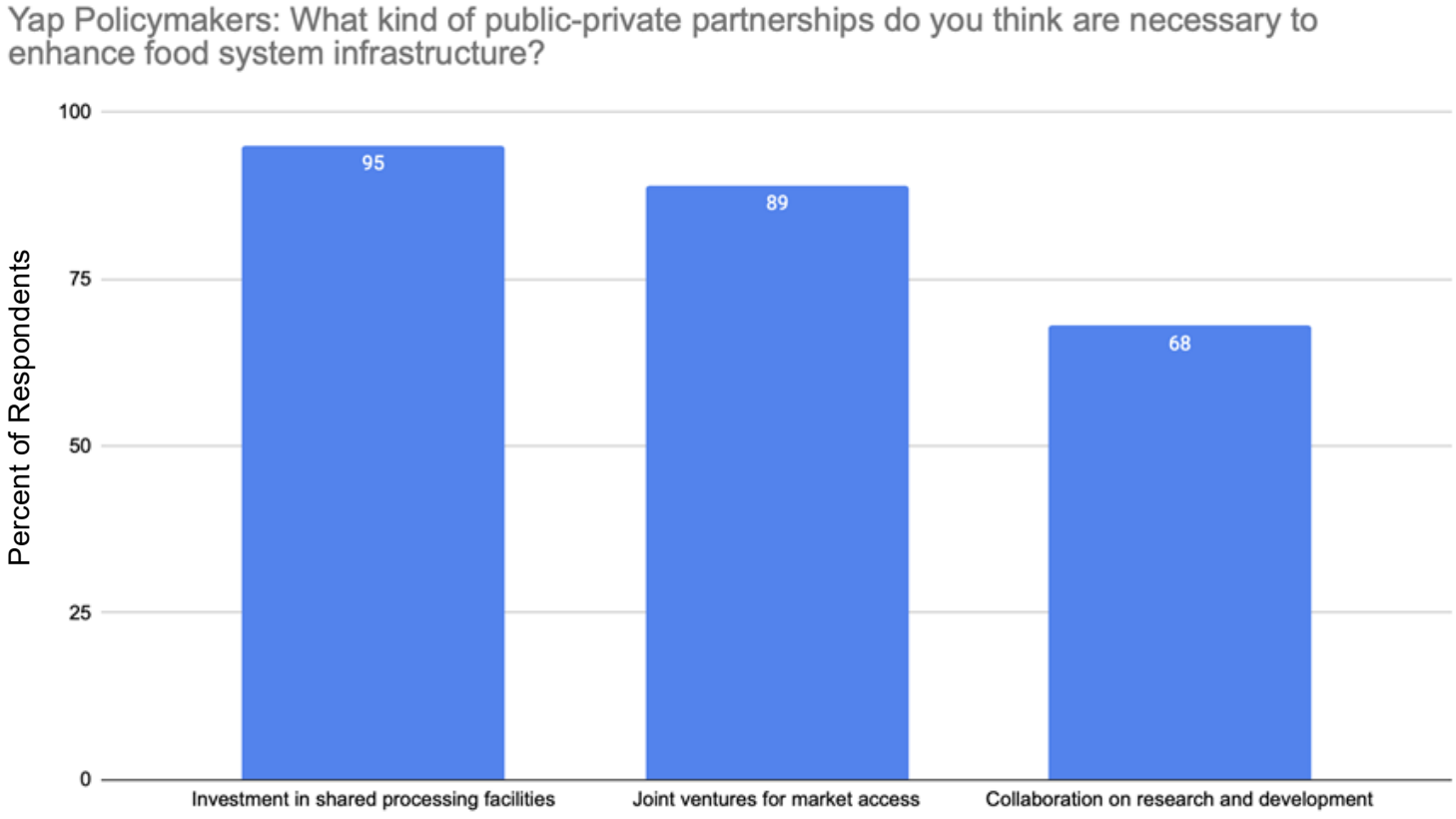

Yap Policymakers: How should the success of a Food Innovation Center be evaluated in relation to farmer and community benefits?
Percent of Respondents
100
75
50
25
0
100
95
89
63
79
Increase in local employment
Improved farmer incomes
Increased local food security
Creation of new businesses (micro-enterprises)
Increased access to fresh, nutritious and healthy foods


Yap Policymakers: What are the most critical areas for capacity building in the local food system?
Important
Most Important
Percent of Respondents
100
75
50
25
0
94
47
37
50
Food production training techniques and practices
Food processing and preservation
Marketing and business skills
Food safety and quality control

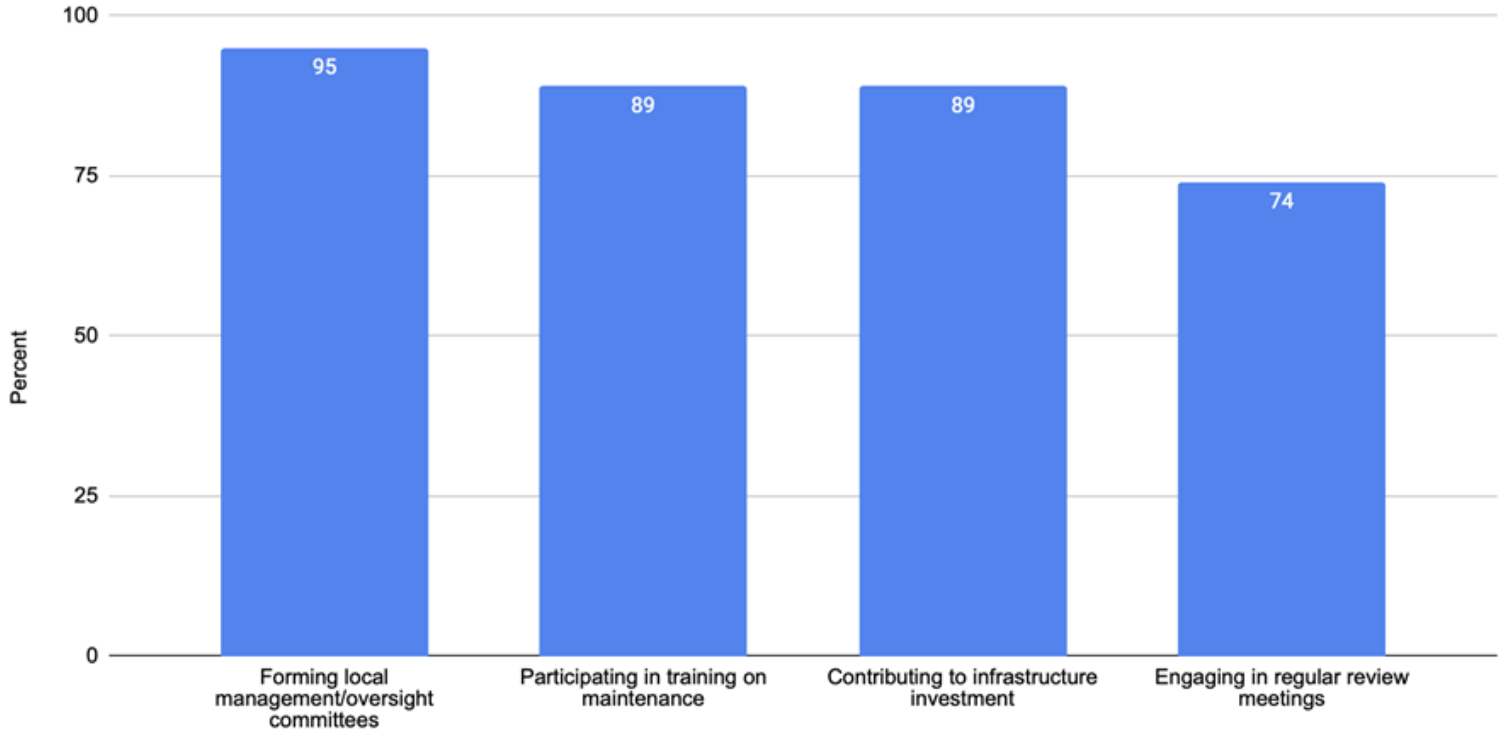

Yap Policymakers: To strengthen your local food system, which areas need most training?
Important
Most Important
Percent of Respondents
100
75
50
25
0
95
74
38
23
8
Agricultural
Fishing
Aquaculture
Livestock
Poultry


Yap Policymakers: Which groups should be prioritized for capacity building initiatives?
Important
Most Important
Percent of Respondents
80
60
40
20
0
79
53
47
39
Farmers/fishers
Small-scale food processors
Community organizations
Youth and women

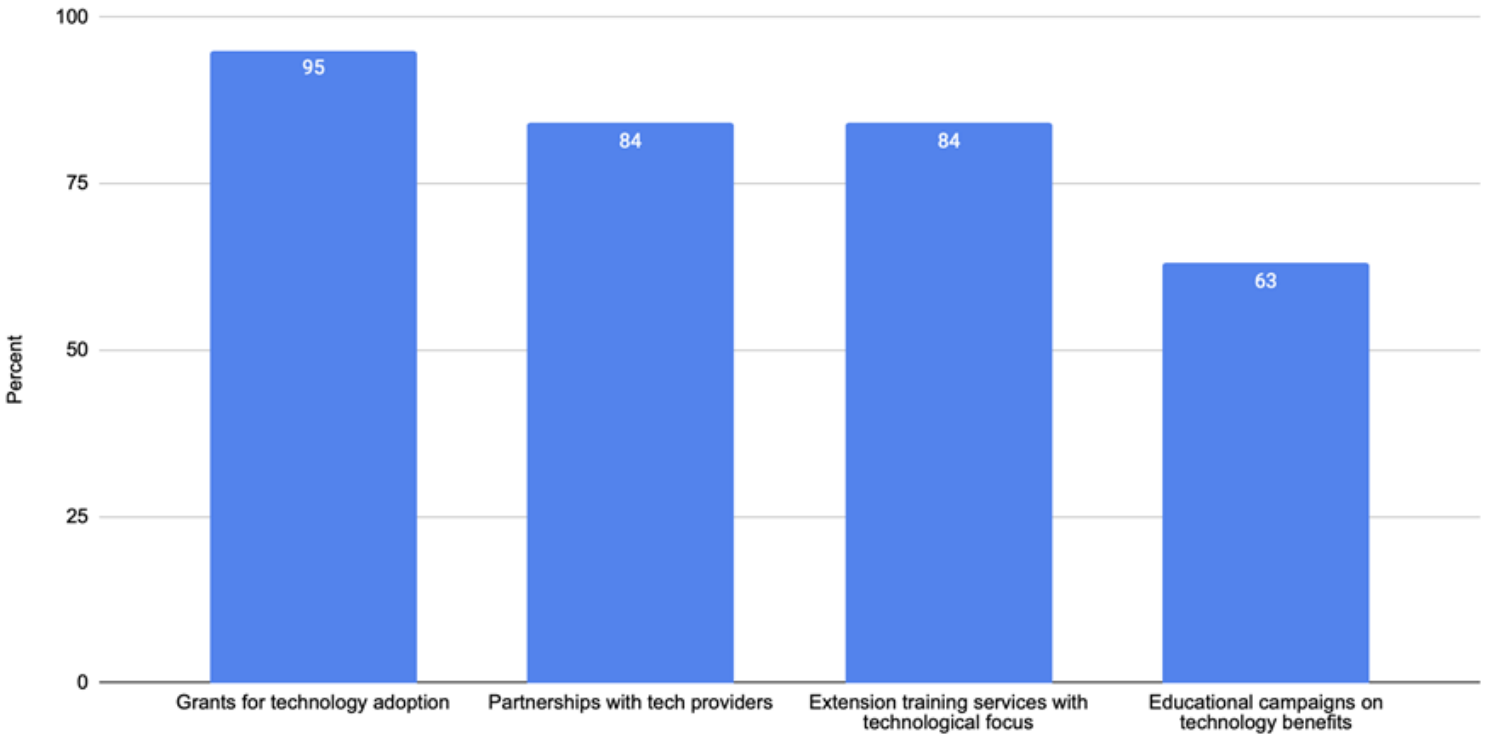

Yap Policymakers: What type of infrastructure investments are most needed to support the local food system?
High Important
Most Important
Percent of Respondents
80
60
40
20
0
70.59
25
14
29
31
44
40
35
Nurseries
Aquaculture hatcheries
Protected cultivation (greenhouses)
Cold storage
Transportation
Processing facilities
Marketplaces and retail outlets
Improved energy access on/off grid


Yap Policymakers: What kind of public-private partnerships do you think are necessary to enhance food system infrastructure?
Percent of Respondents
100
75
50
25
0
95
89
68
Investment in shared processing facilities
Joint ventures for market access
Collaboration on research and development

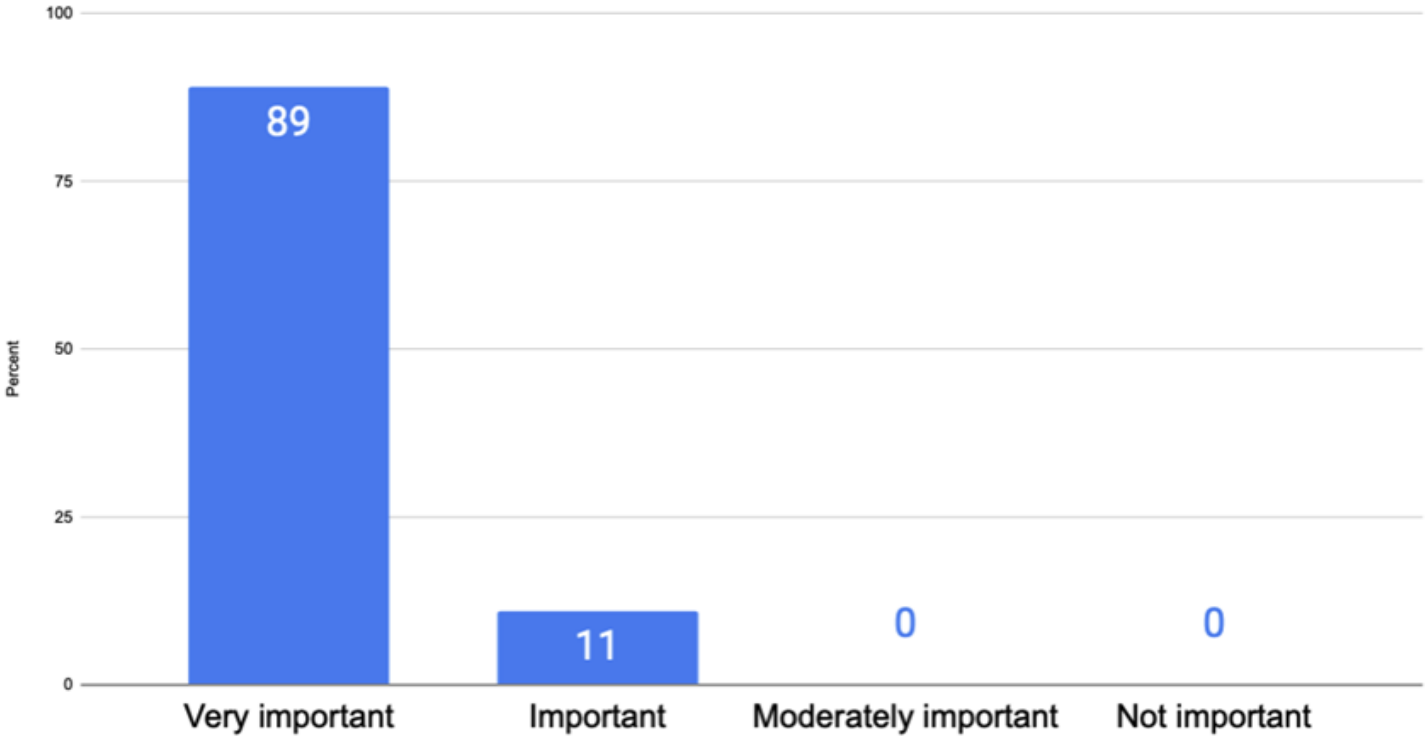
Yap Policymakers: What role should local communities play in the maintenance and management of new infrastructure?



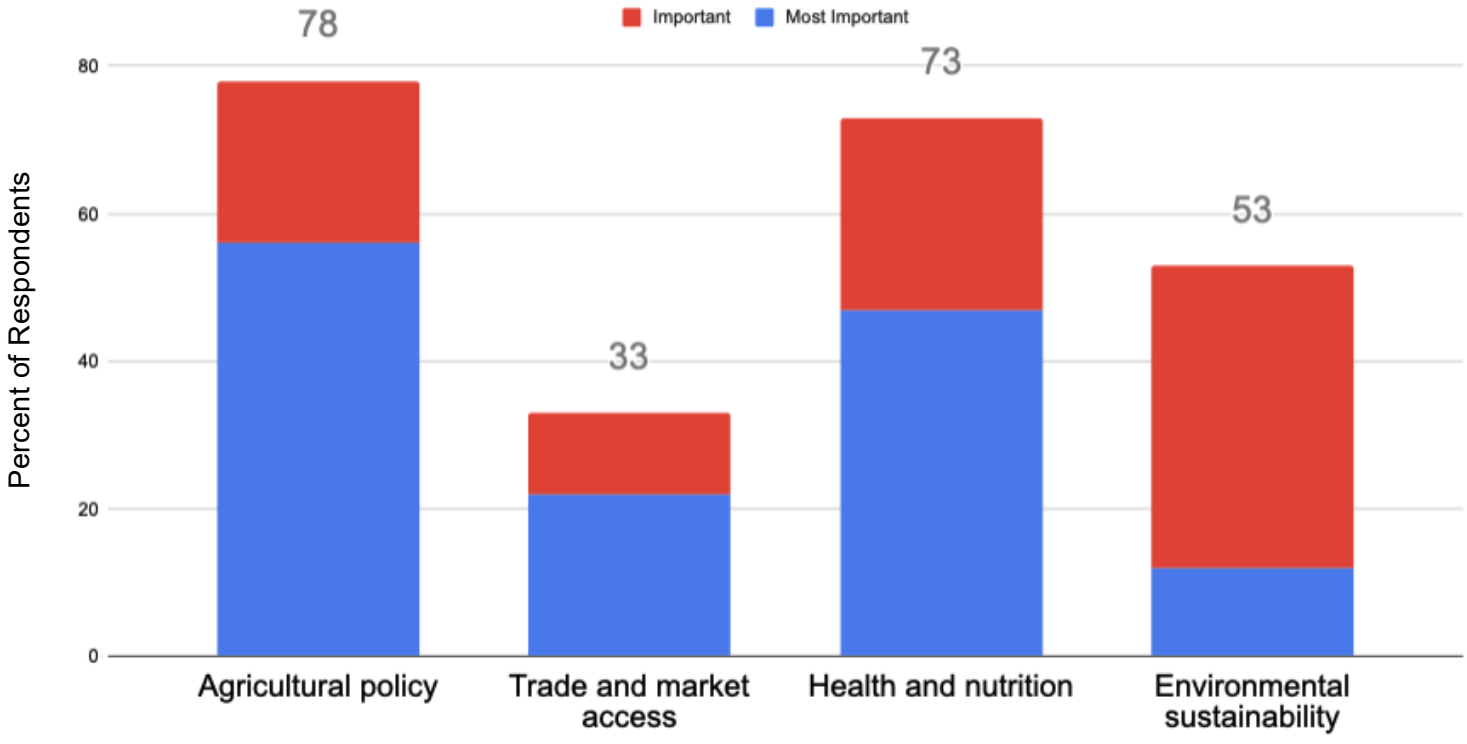
Yap Policymakers: What policies can promote the use of technology and innovation among local farmers?



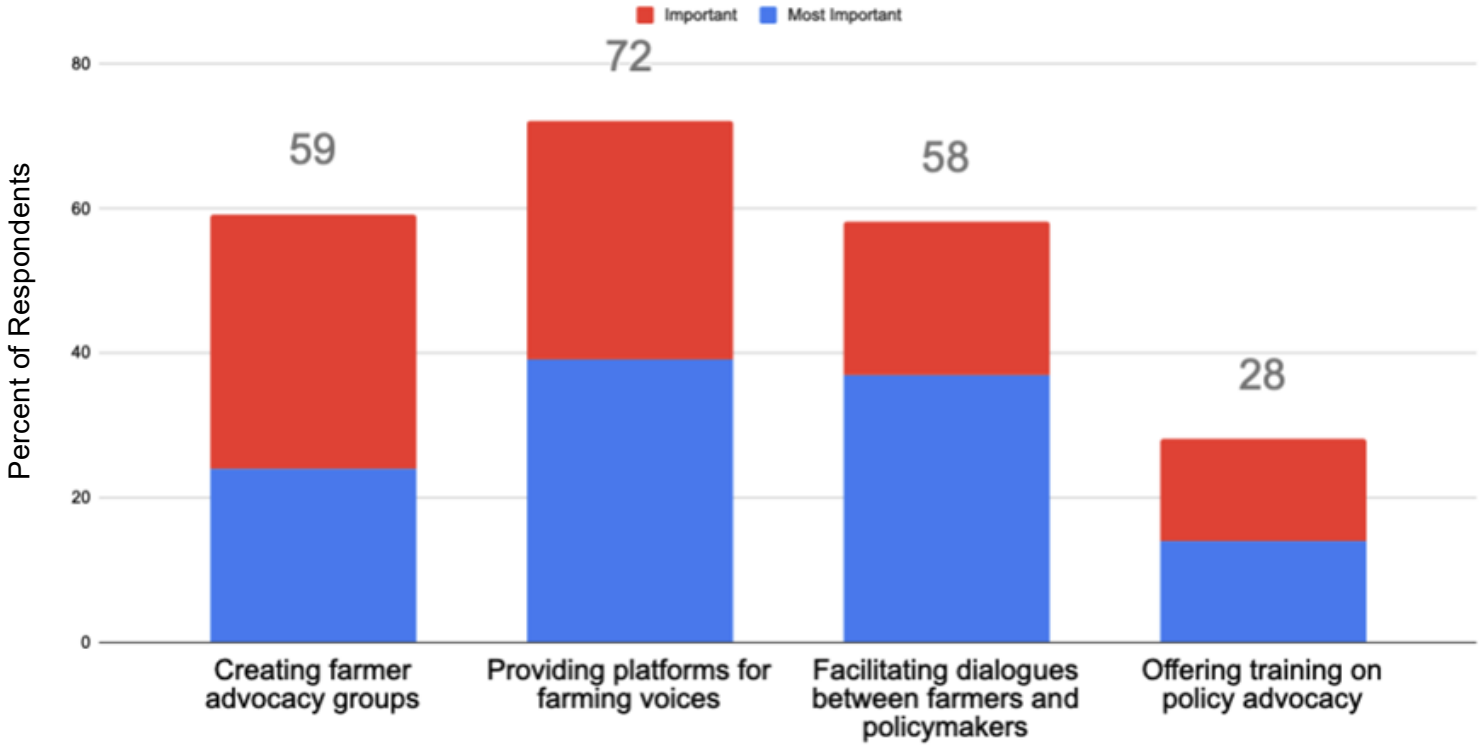
Yap Policymakers: How important is policy advocacy for successful and sustainable food system development?



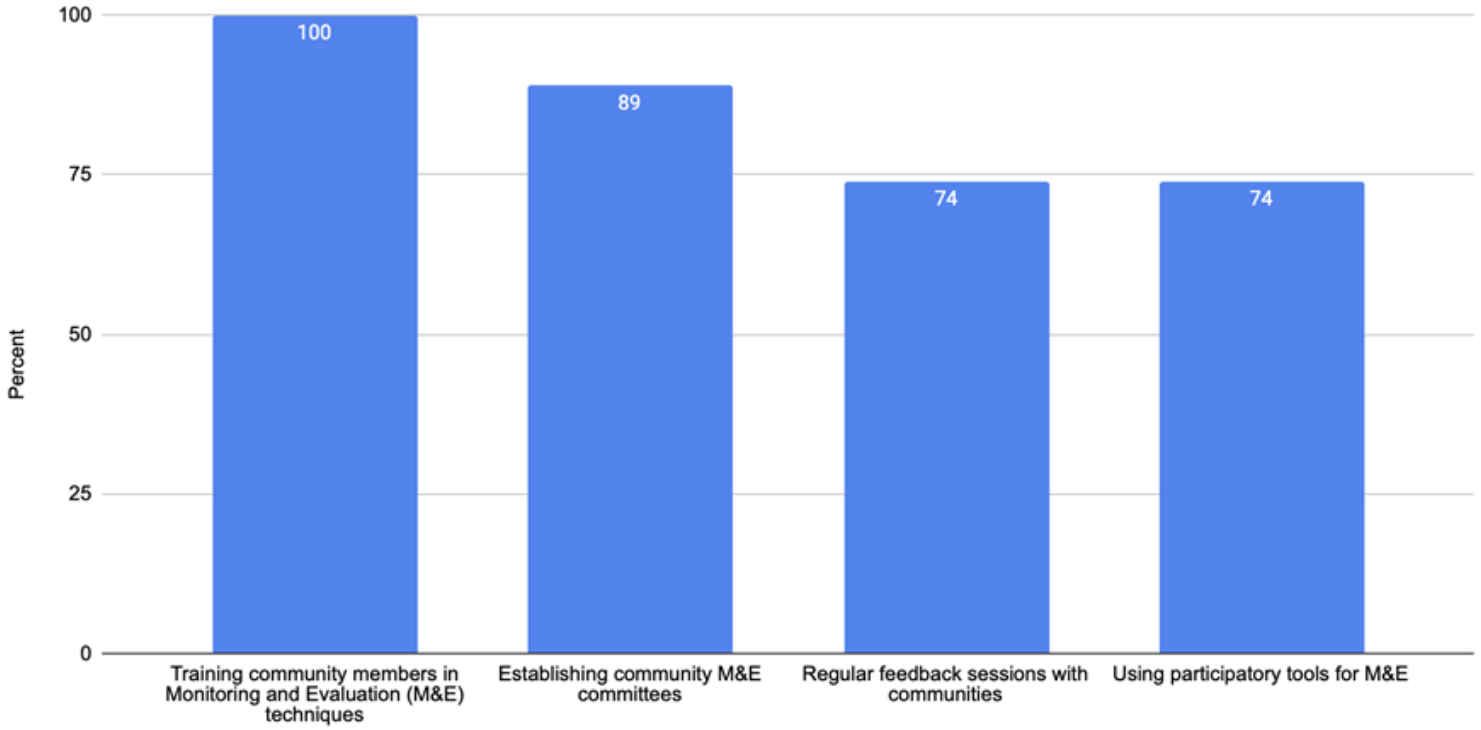
Yap Policymakers: Which policy areas should be prioritized to support successful and sustainable food system development?

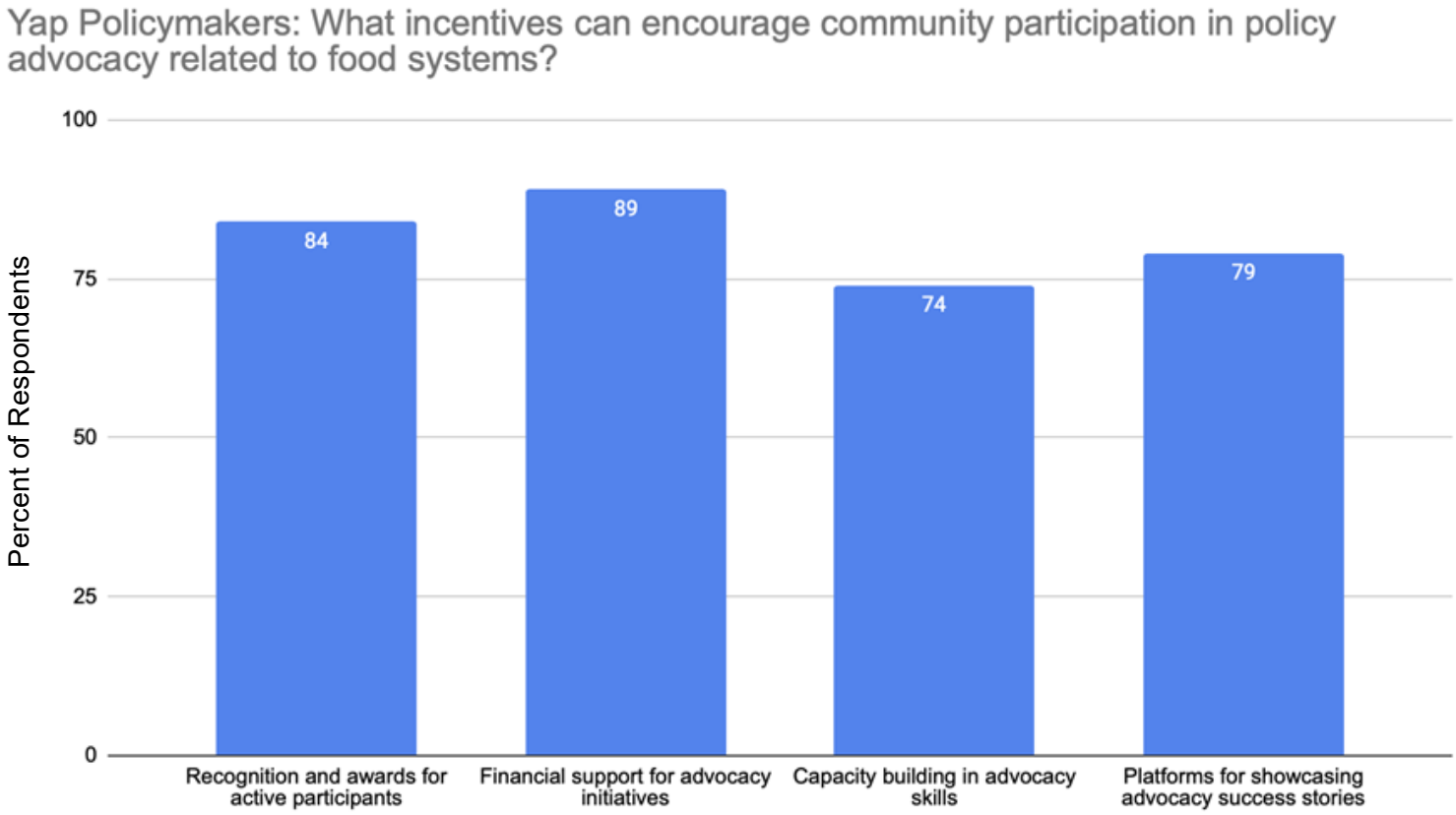


Yap Policymakers: How can policymakers assist farmers in advocating for better agricultural policies?

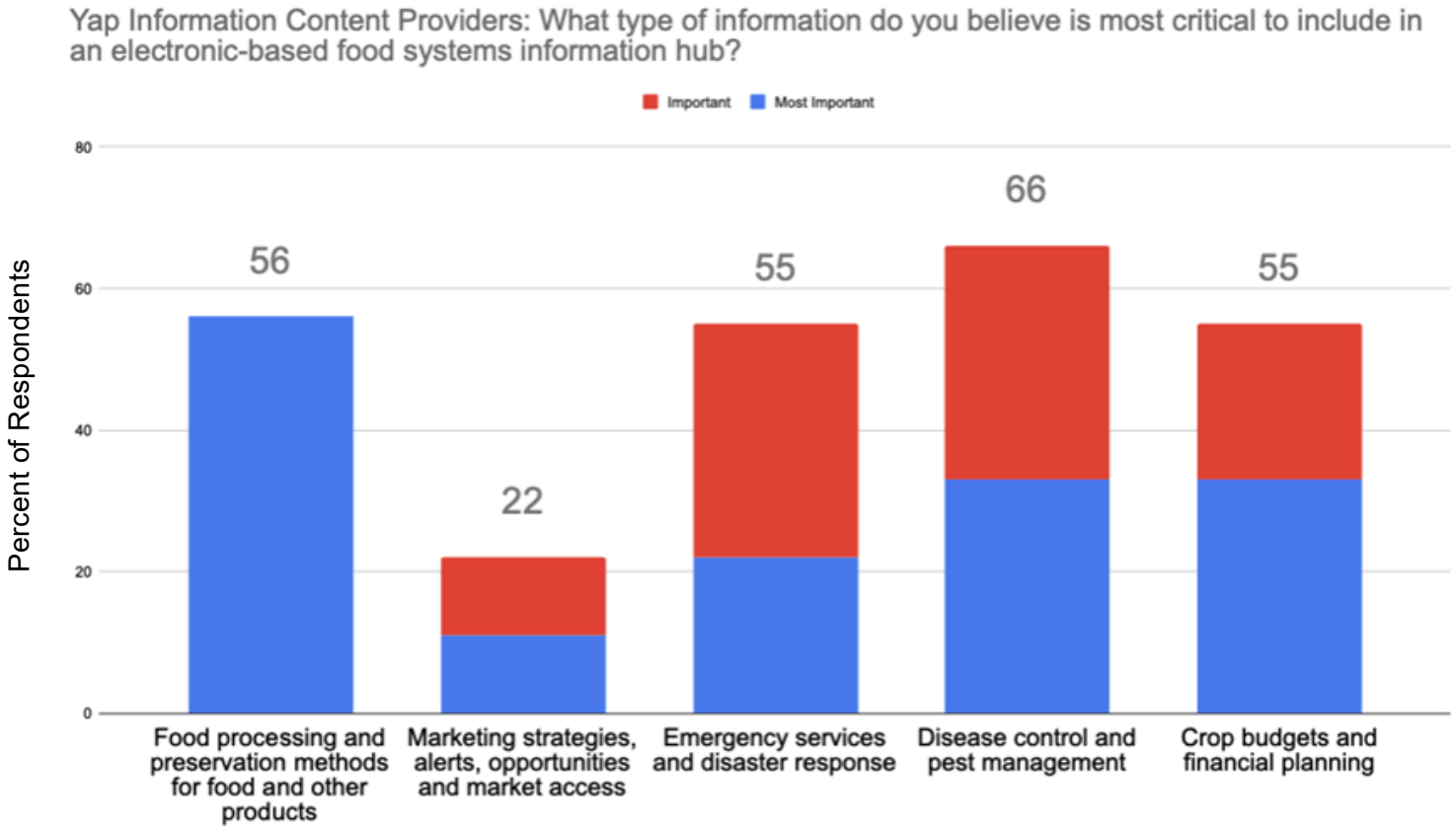


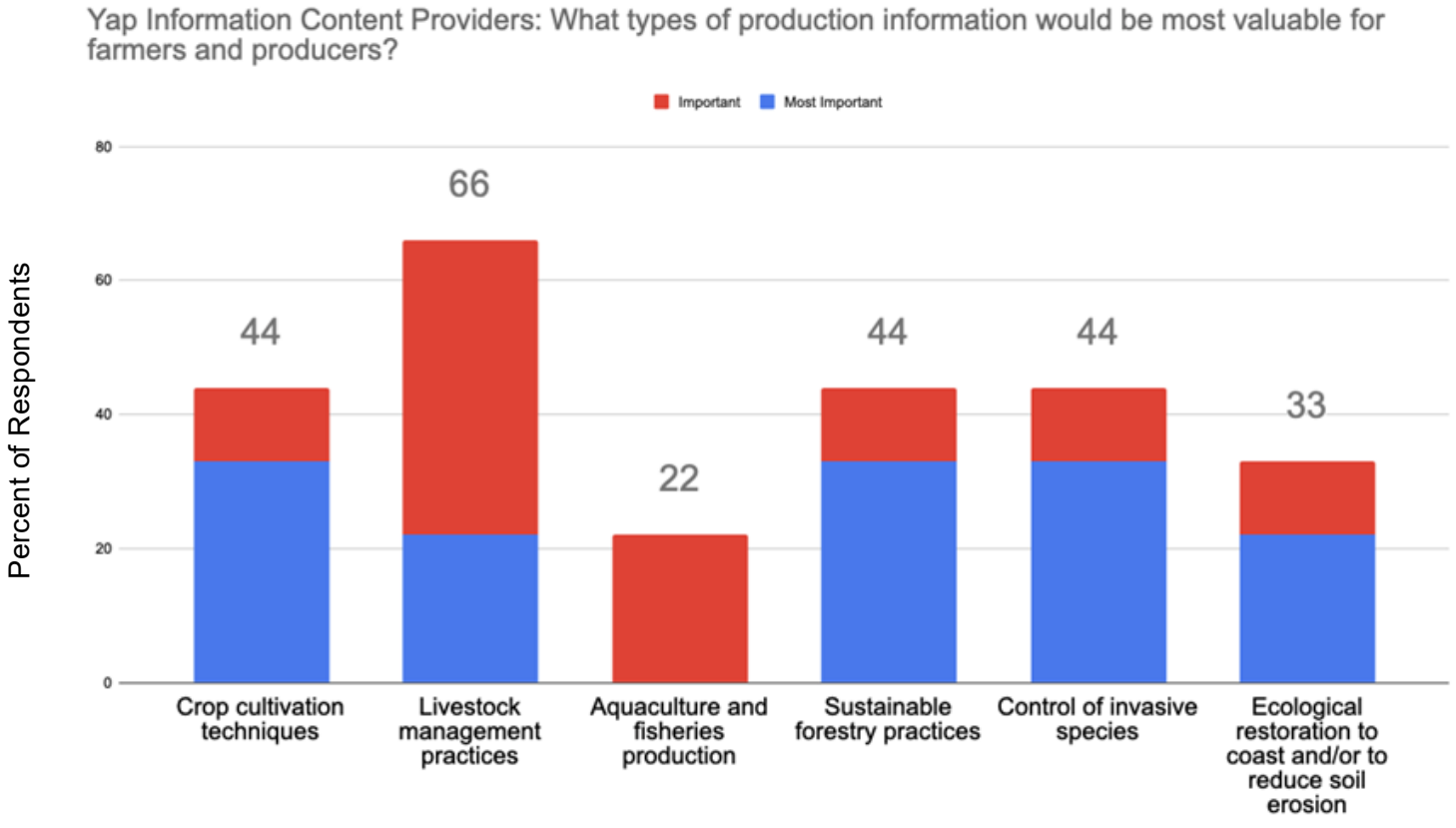
Yap Policymakers: How can community-based monitoring and evaluation be integrated into the project?

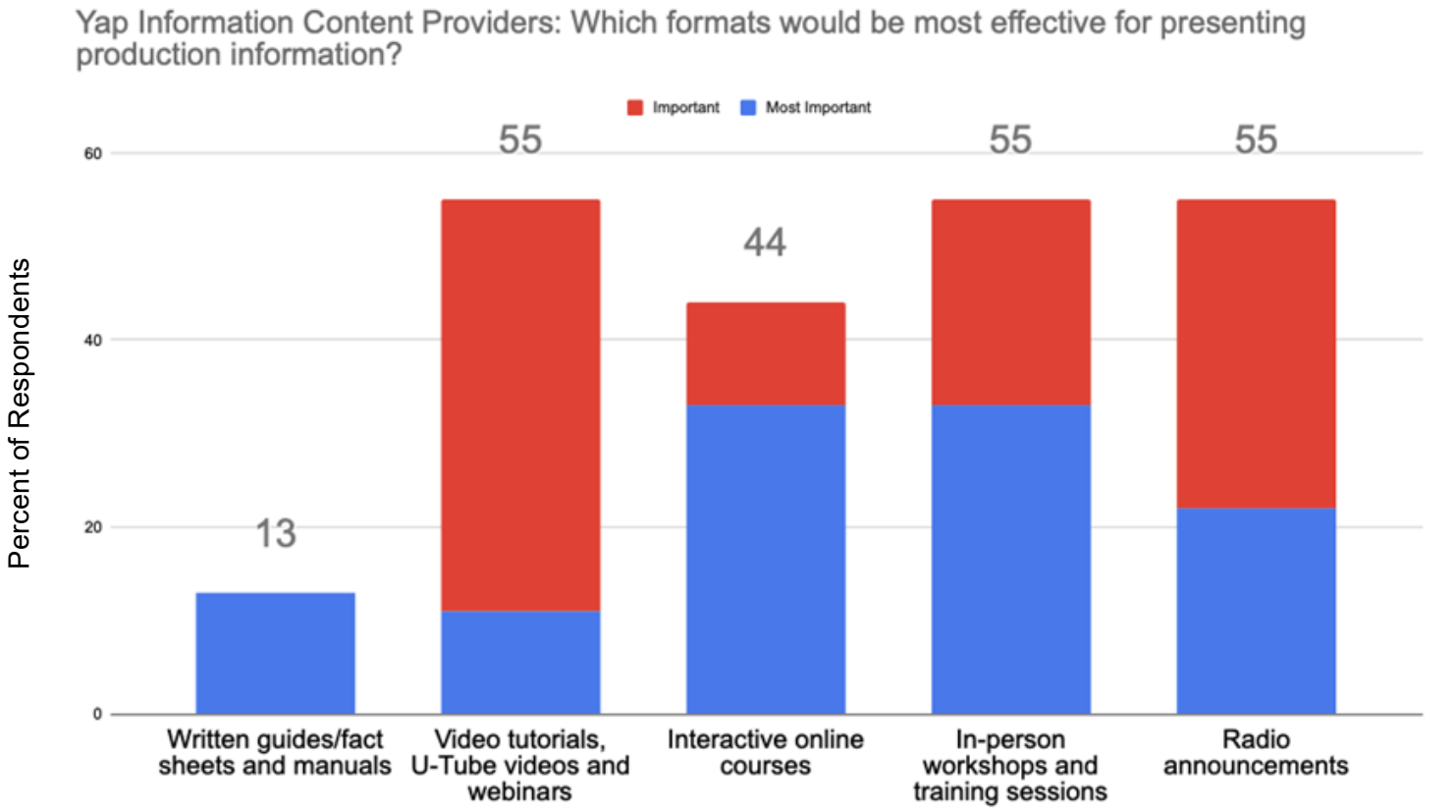


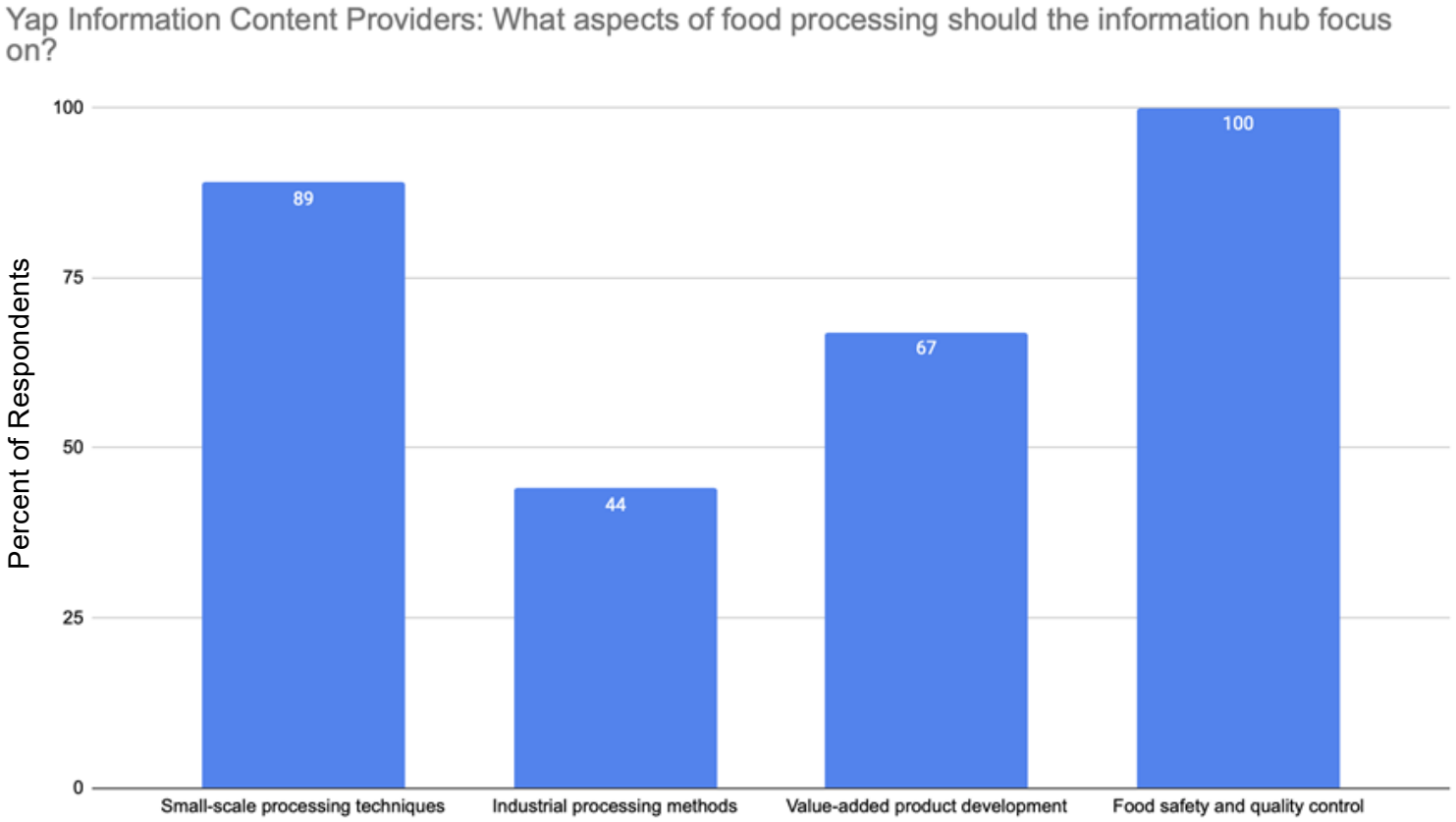

Yap Policymakers: What incentives can encourage community participation in policy advocacy related to food systems?
Percent of Respondents
100
75
50
25
0
84
89
74
79
Recognition and awards for active participants
Financial support for advocacy initiatives
Capacity building in advocacy skills
Platforms for showcasing advocacy success stories

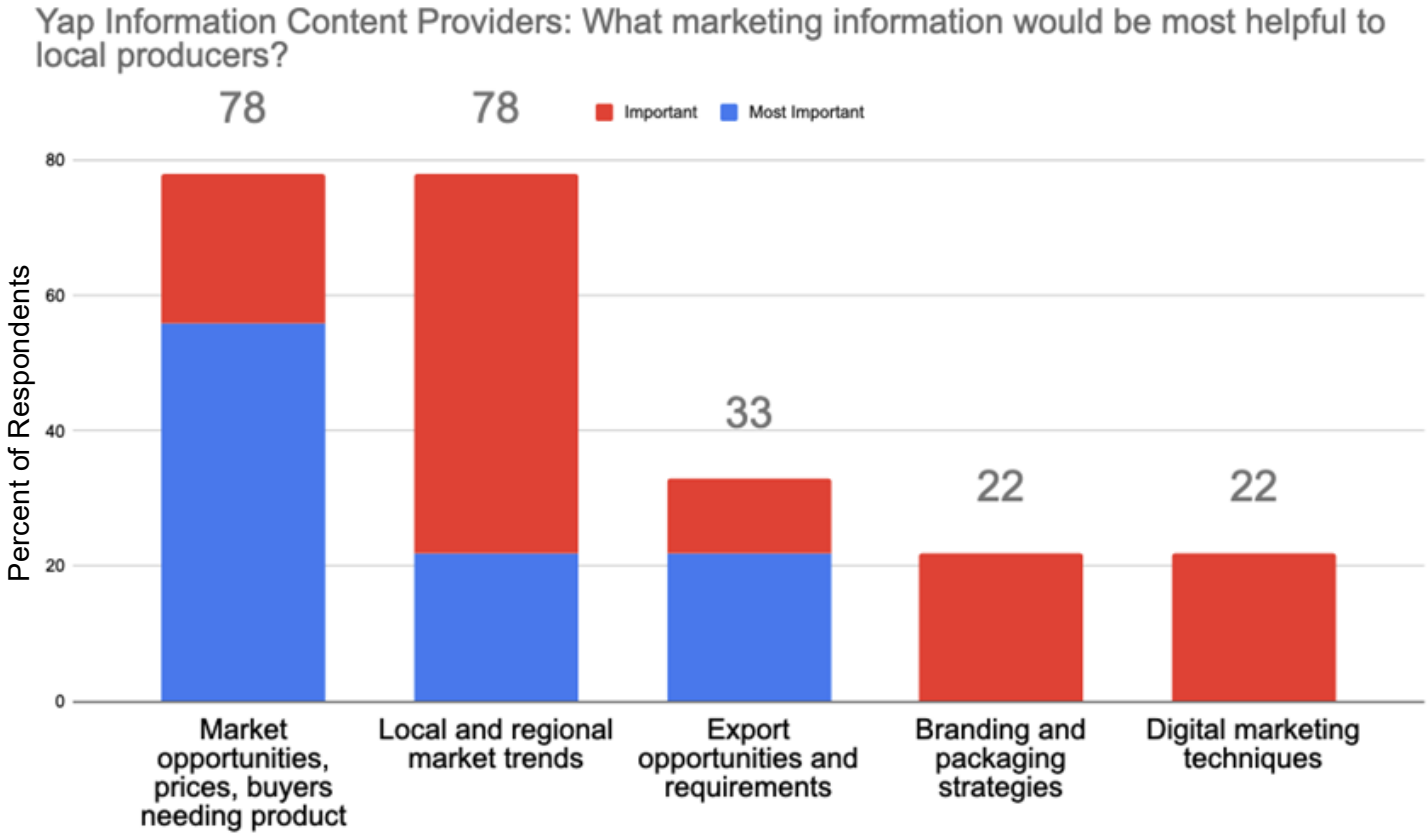
Federated States of Micronesia
Food Systems Solutions Project
FSS Survey Data Tables and Charts
Yap State
Information Content Providers

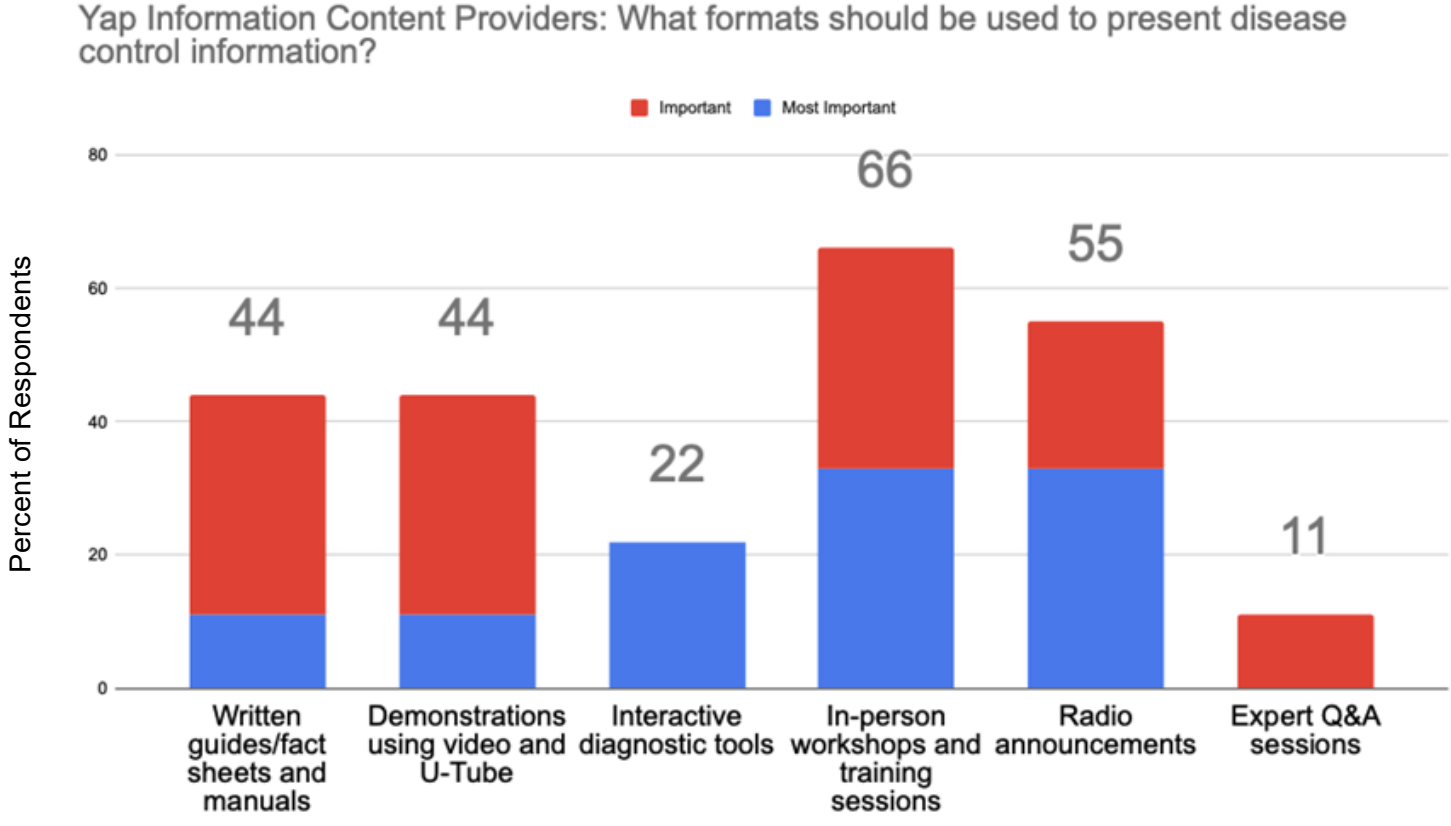

Yap Information Content Providers: What type of information do you believe is most critical to include in an electronic-based food systems information hub?
Important
Most Important
Percent of Respondents
80
60
40
20
0
56
22
55
66
55
Food processing and preservation methods for food and other products
Marketing strategies, alerts, opportunities and market access
Emergency services and disaster response
Disease control and pest management
Crop budgets and financial planning

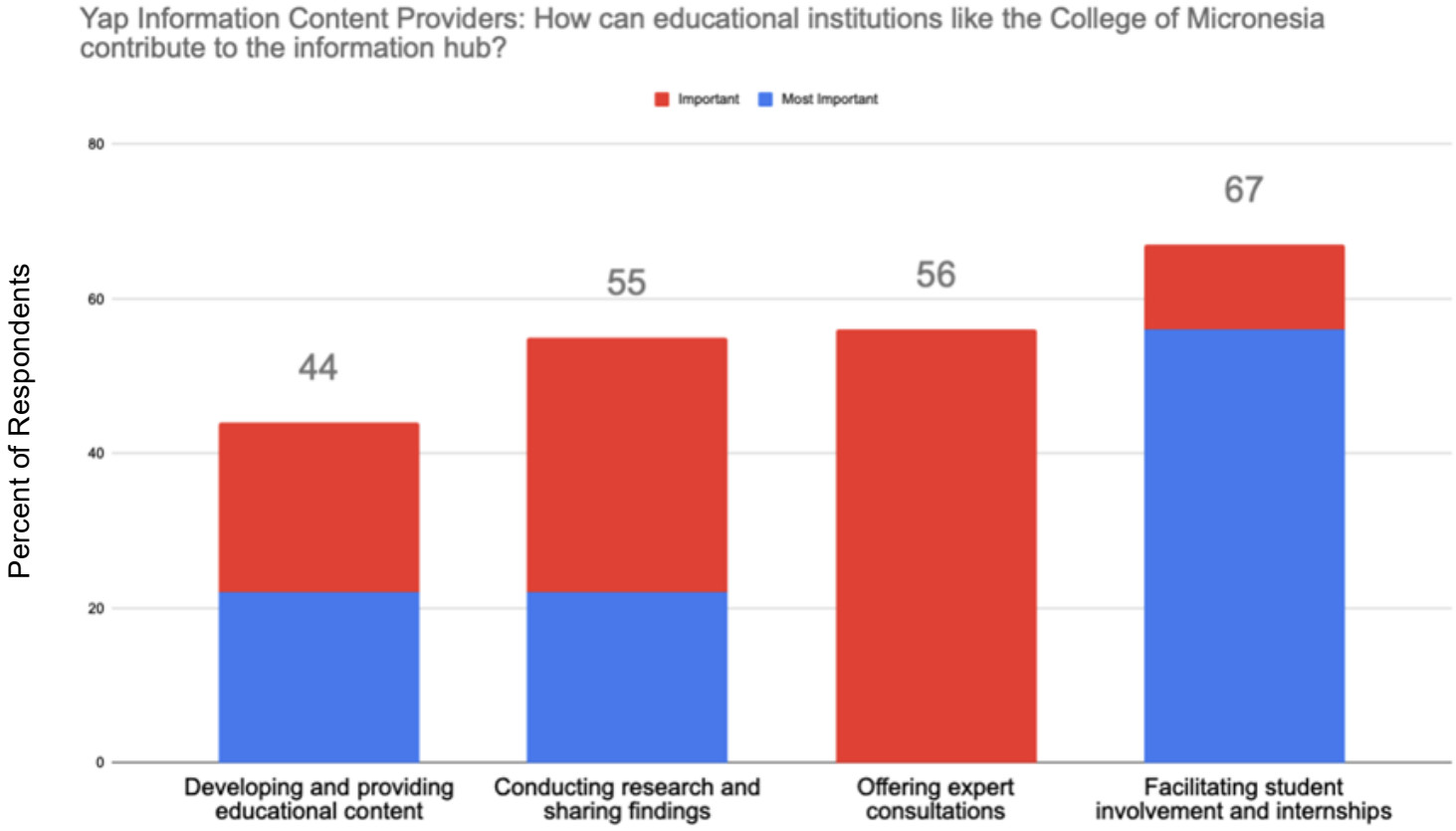

Yap Information Content Providers: What types of production information would be most valuable for farmers and producers?
Important
Most Important
Percent of Respondents
80
60
40
20
0
44
66
22
44
44
33
Crop cultivation techniques
Livestock management practices
Aquaculture and fisheries production
Sustainable forestry practices
Control of invasive species
Ecological restoration to coast and/or to reduce soil erosion

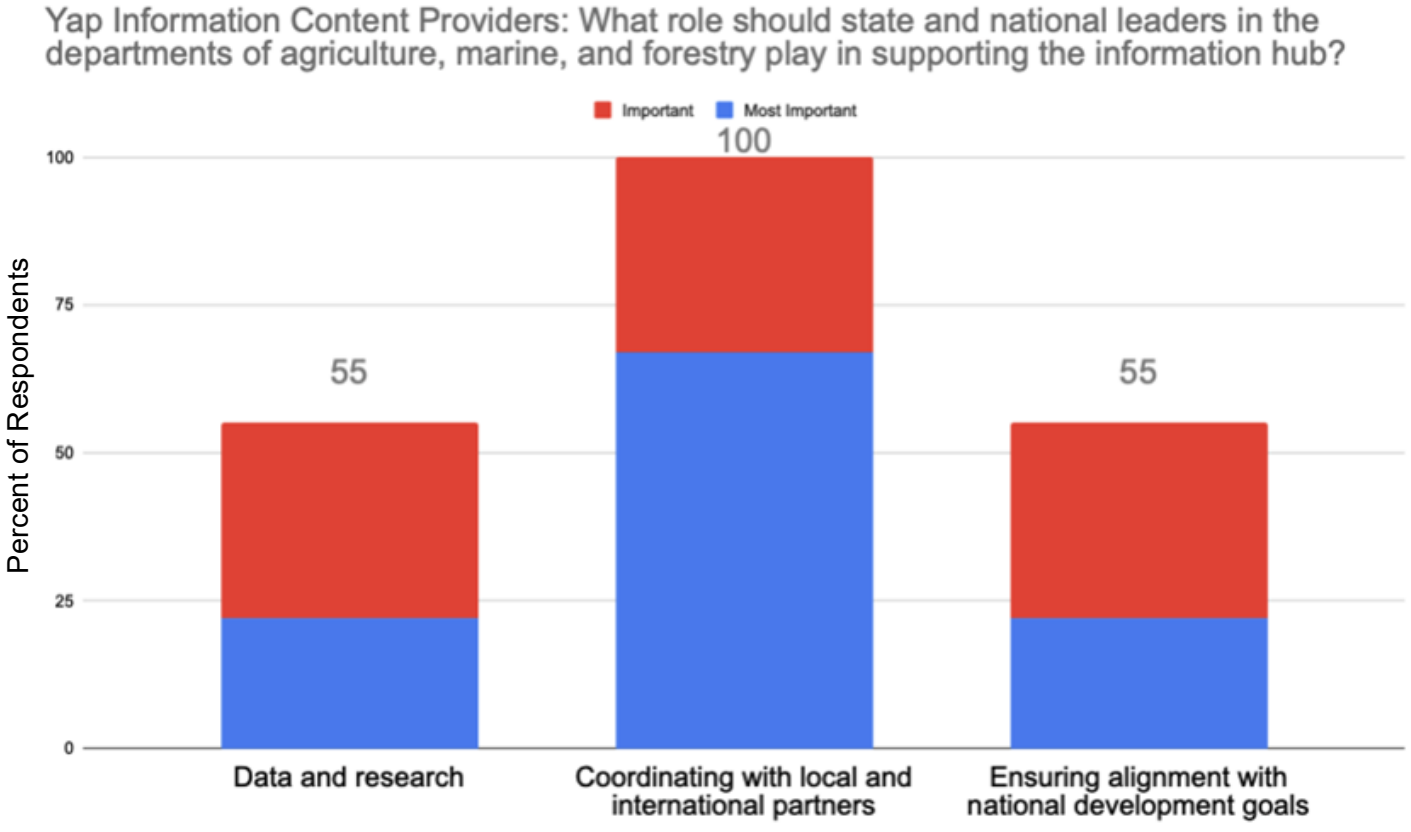

Yap Information Content Providers: Which formats would be most effective for presenting production information?
Important
Most Important
Percent of Respondents
60
40
20
0
55
55
55
44
13
Written guides/fact sheets and manuals
Video tutorials, U-Tube videos and webinars
Interactive online courses
In-person workshops and training sessions
Radio announcements

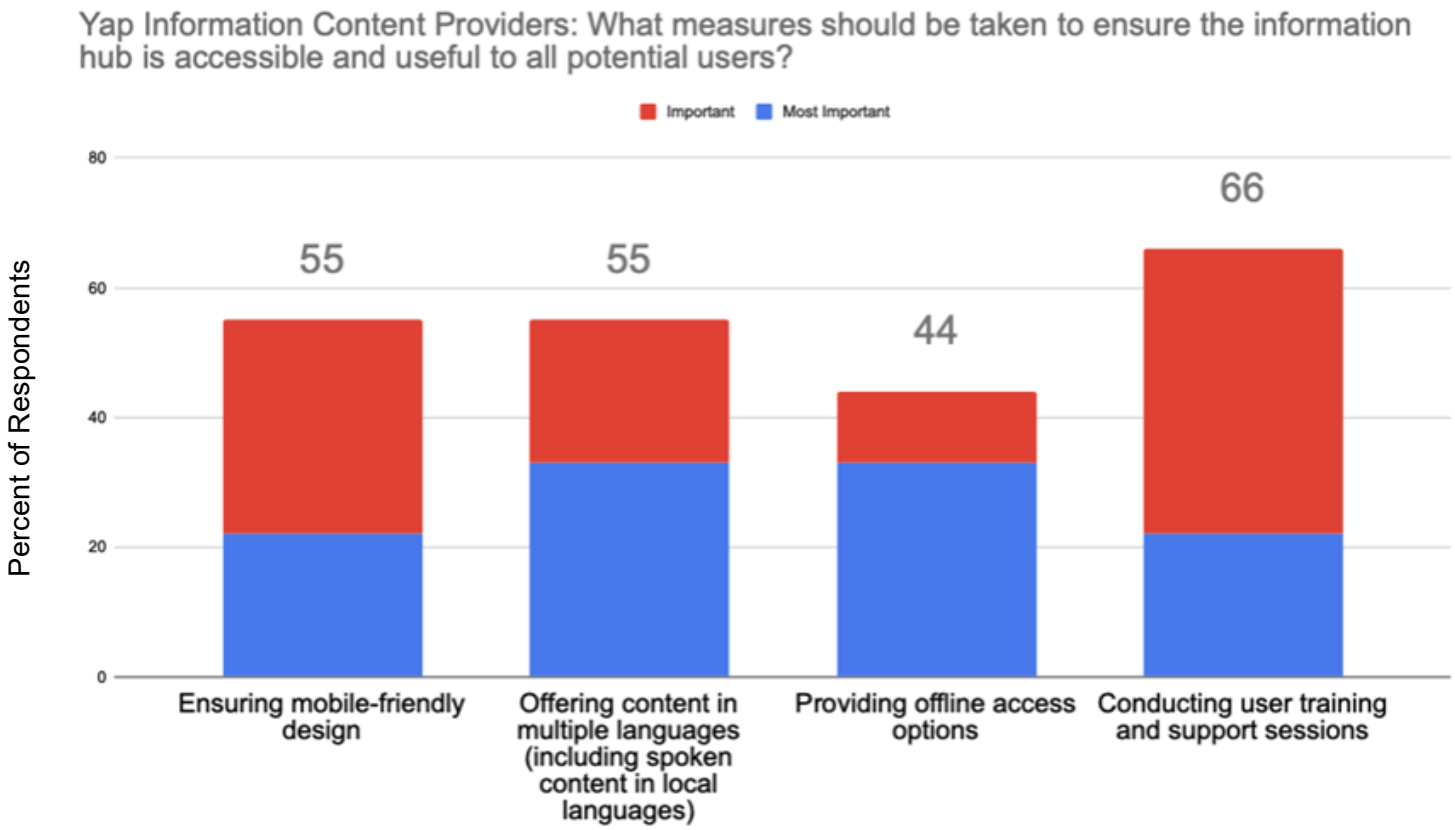

Yap Information Content Providers: What aspects of food processing should the information hub focus on?
Percent of Respondents
100
75
50
25
0
89
44
67
100
Small-scale processing techniques
Industrial processing methods
Value-added product development
Food safety and quality control


Yap Information Content Providers: What marketing information would be most helpful to local producers?
Important
Most Important
Percent of Respondents
0
20
40
60
80
78
78
33
22
22
Market opportunities, prices, buyers needing product
Local and regional market trends
Export opportunities and requirements
Branding and packaging strategies
Digital marketing techniques


Yap Information Content Providers: What formats should be used to present disease control information?
Important
Most Important
Percent of Respondents
0
20
40
60
80
44
44
22
66
55
11
Written guides/fact sheets and manuals
Demonstrations using video and U-Tube
Interactive diagnostic tools
In-person workshops and training sessions
Radio announcements
Expert Q&A sessions


Yap Information Content Providers: How can educational institutions like the College of Micronesia contribute to the information hub?
Important
Most Important
Percent of Respondents
80
60
40
20
0
44
55
56
67
Developing and providing educational content
Conducting research and sharing findings
Offering expert consultations
Facilitating student involvement and internships


Yap Information Content Providers: What role should state and national leaders in the departments of agriculture, marine, and forestry play in supporting the information hub?
Important
Most Important
Percent of Respondents
100
75
50
25
0
55
100
55
Data and research
Coordinating with local and international partners
Ensuring alignment with national development goals


Yap Information Content Providers: What measures should be taken to ensure the information hub is accessible and useful to all potential users?
Important
Most Important
Percent of Respondents
80
60
40
20
0
55
55
44
66
Ensuring mobile-friendly design
Offering content in multiple languages (including spoken content in local languages)
Providing offline access options
Conducting user training and support sessions

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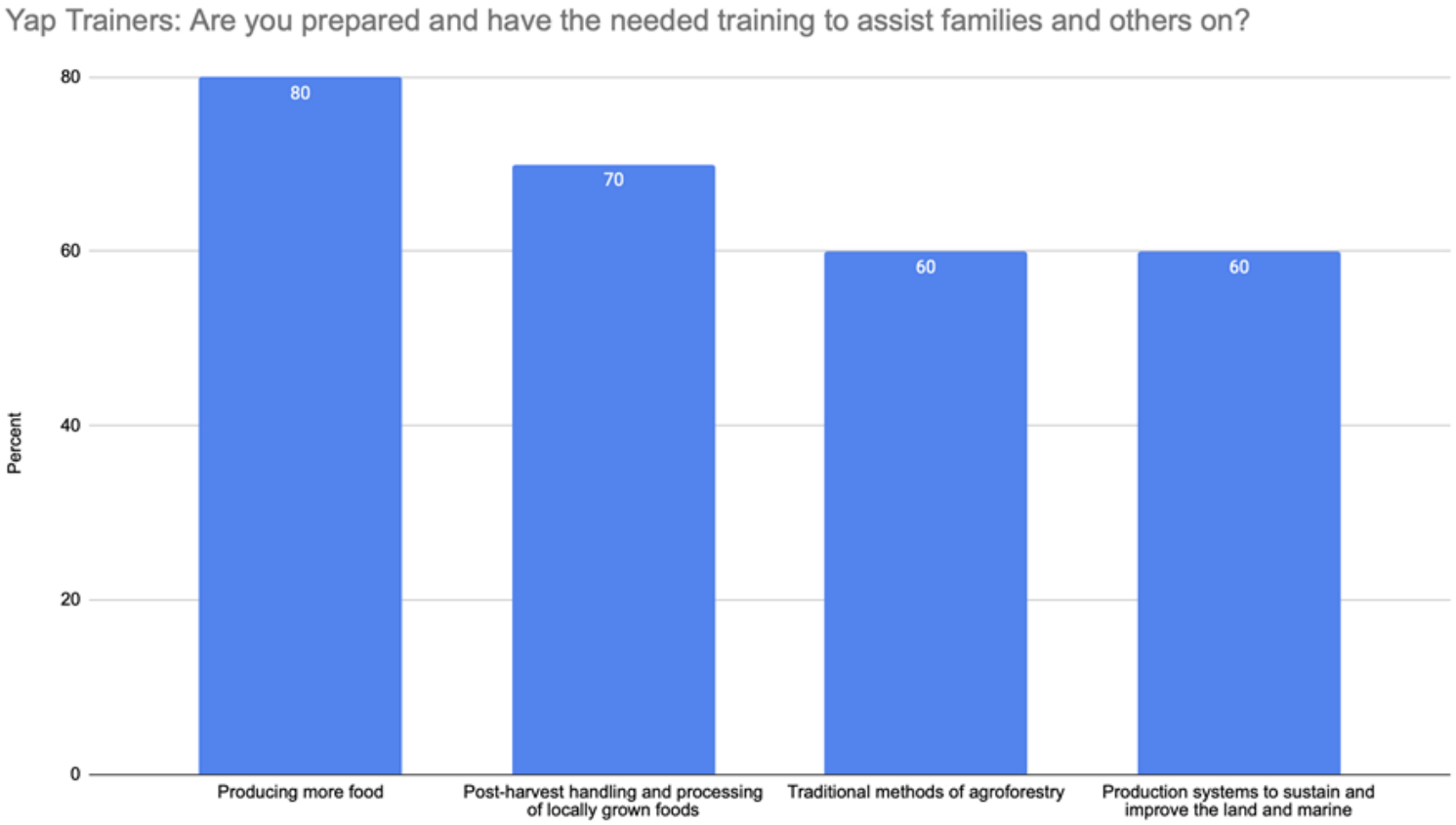
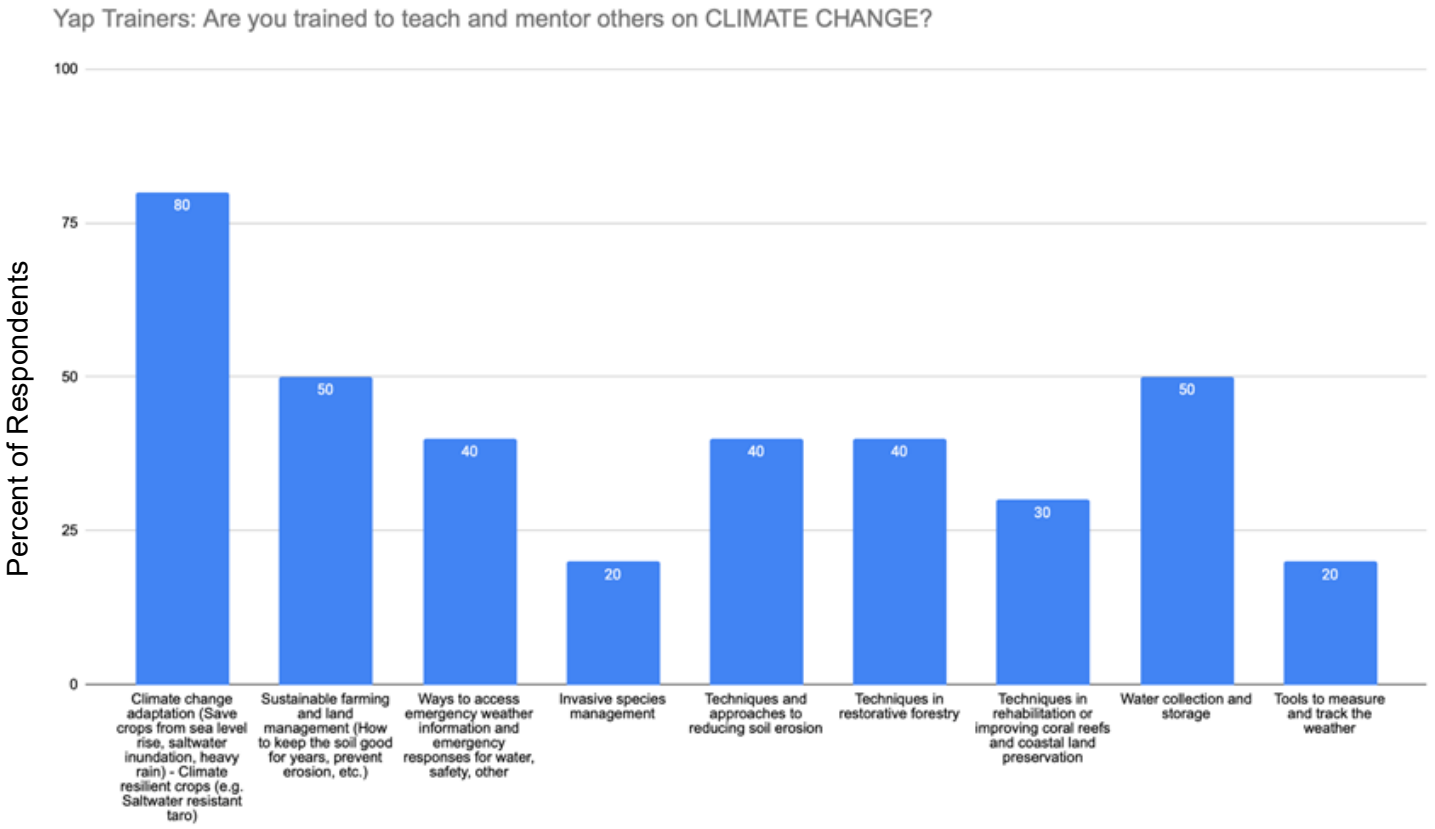
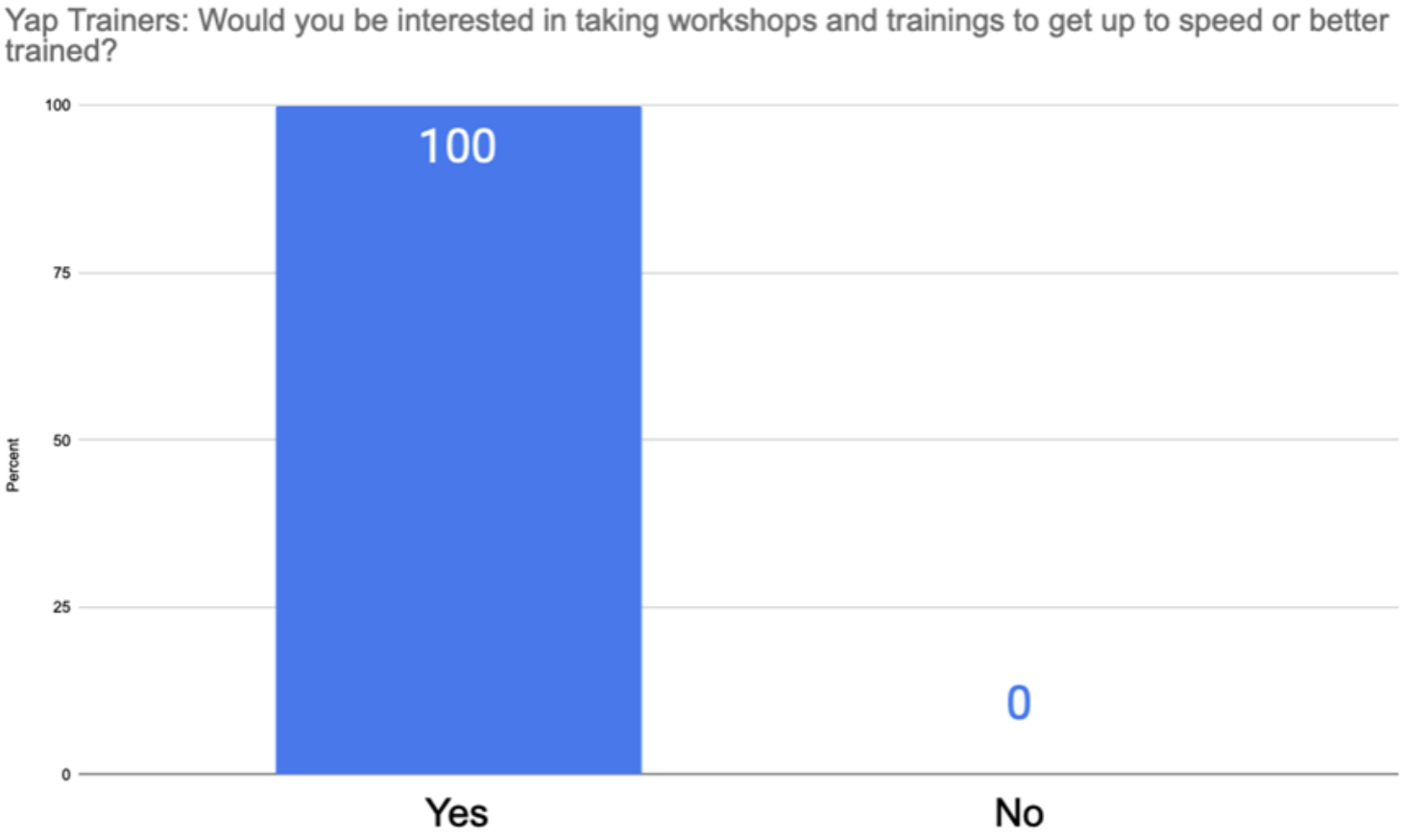
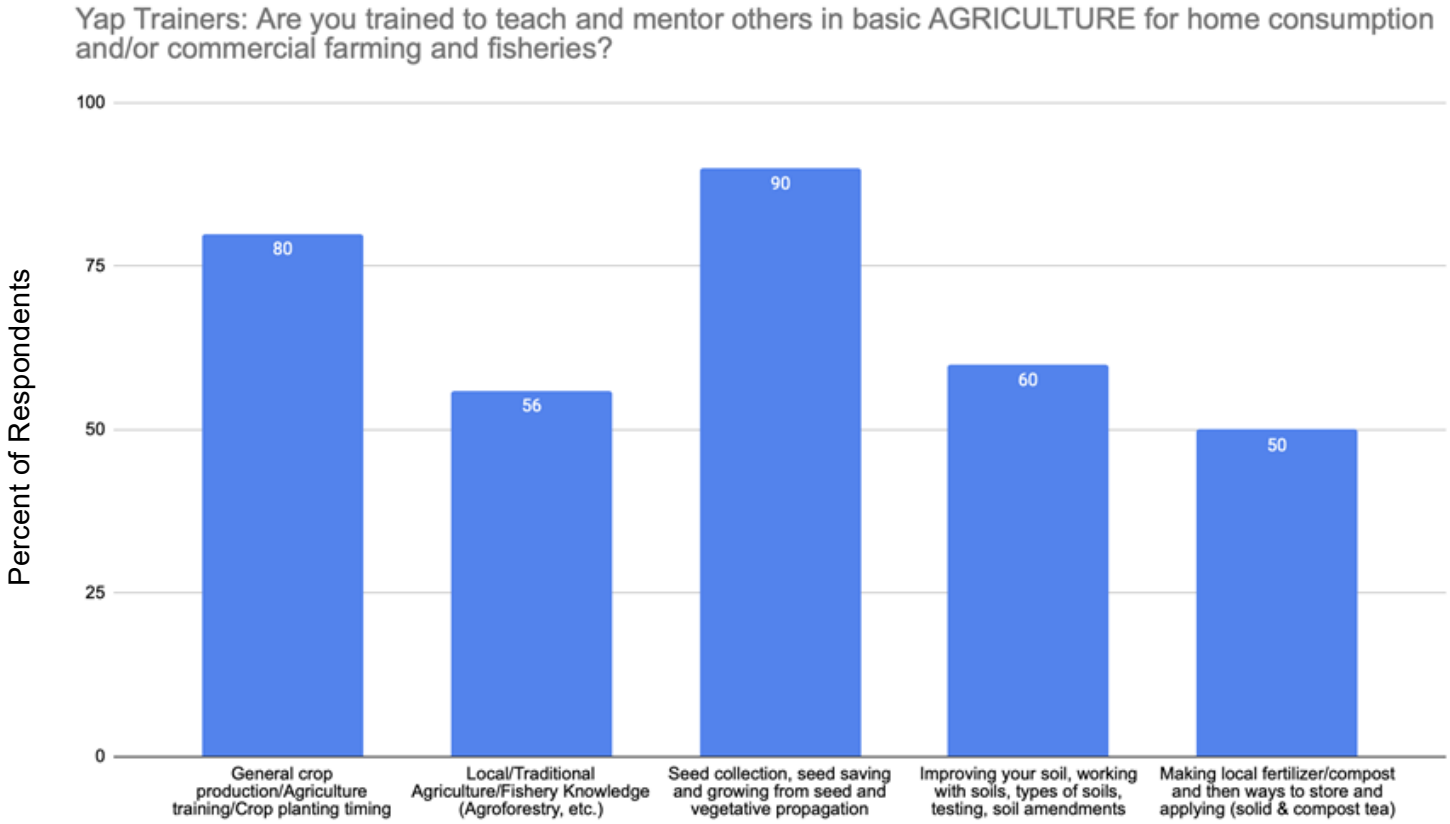
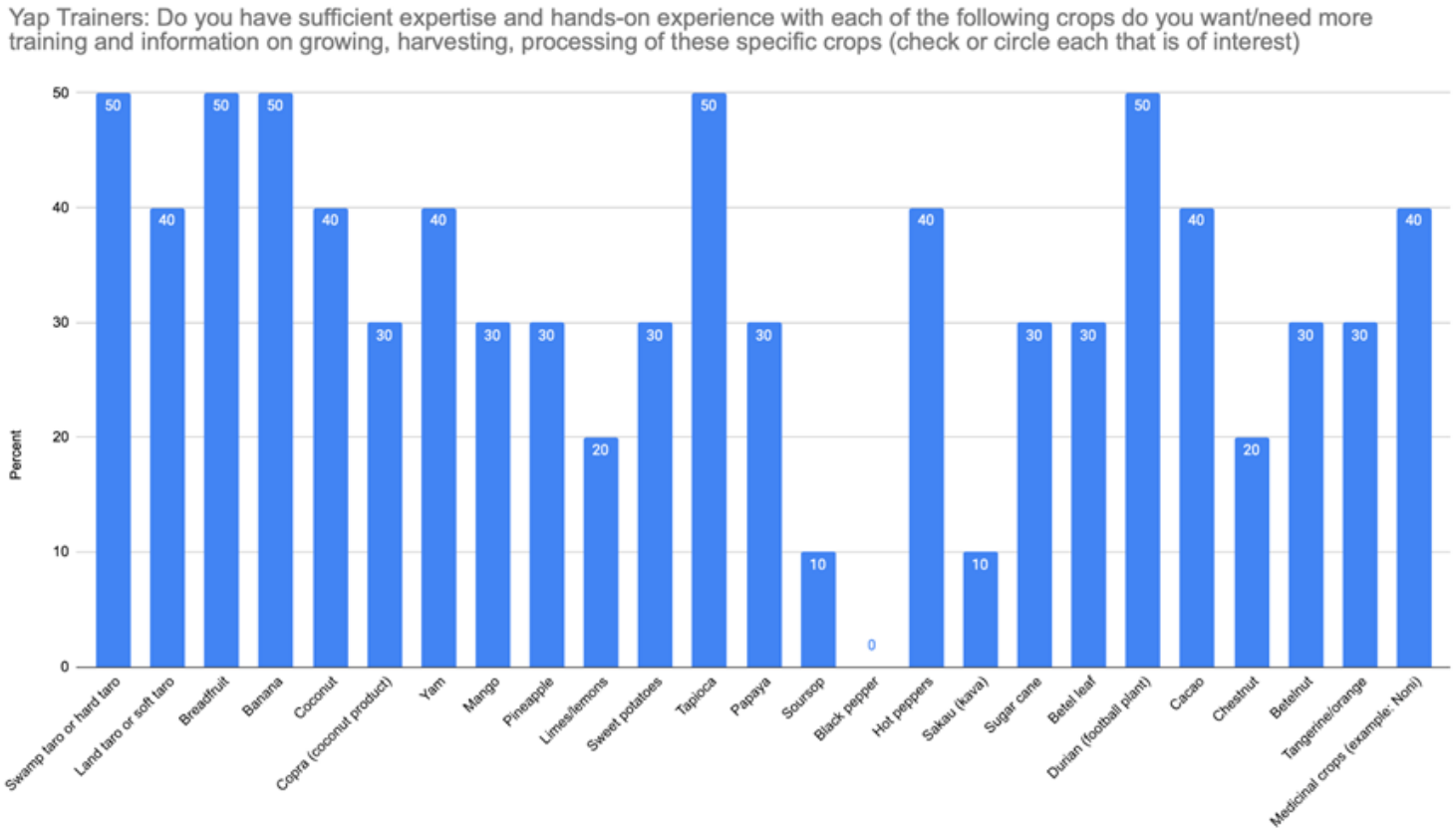
Yap State
Trainers

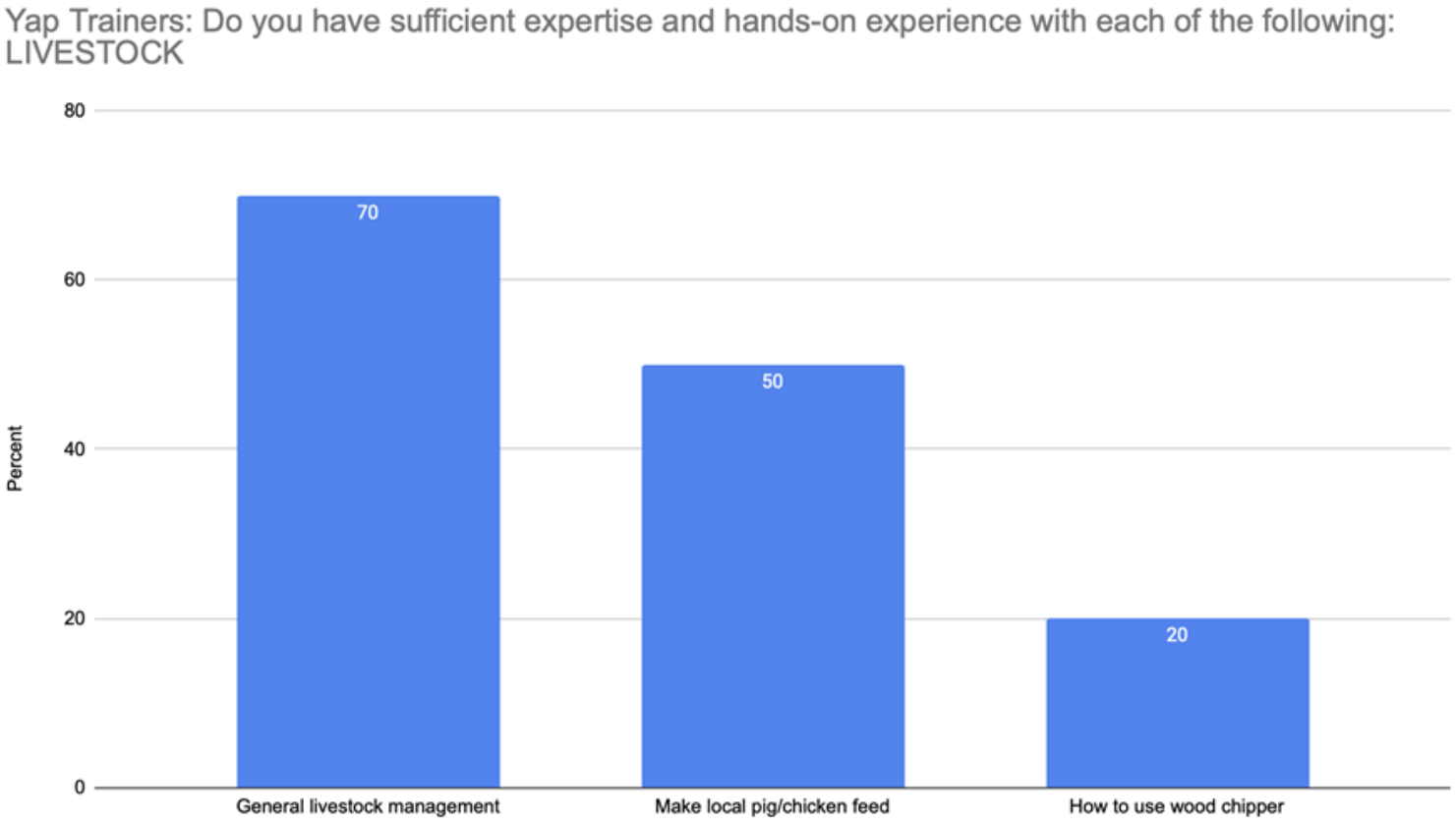

Yap Trainers: Are you prepared and have the needed training to assist families and others on?
Percent
80
60
40
20
0
80
70
60
60
Producing more food
Post-harvest handling and processing of locally grown foods
Traditional methods of agroforestry
Production systems to sustain and improve the land and marine

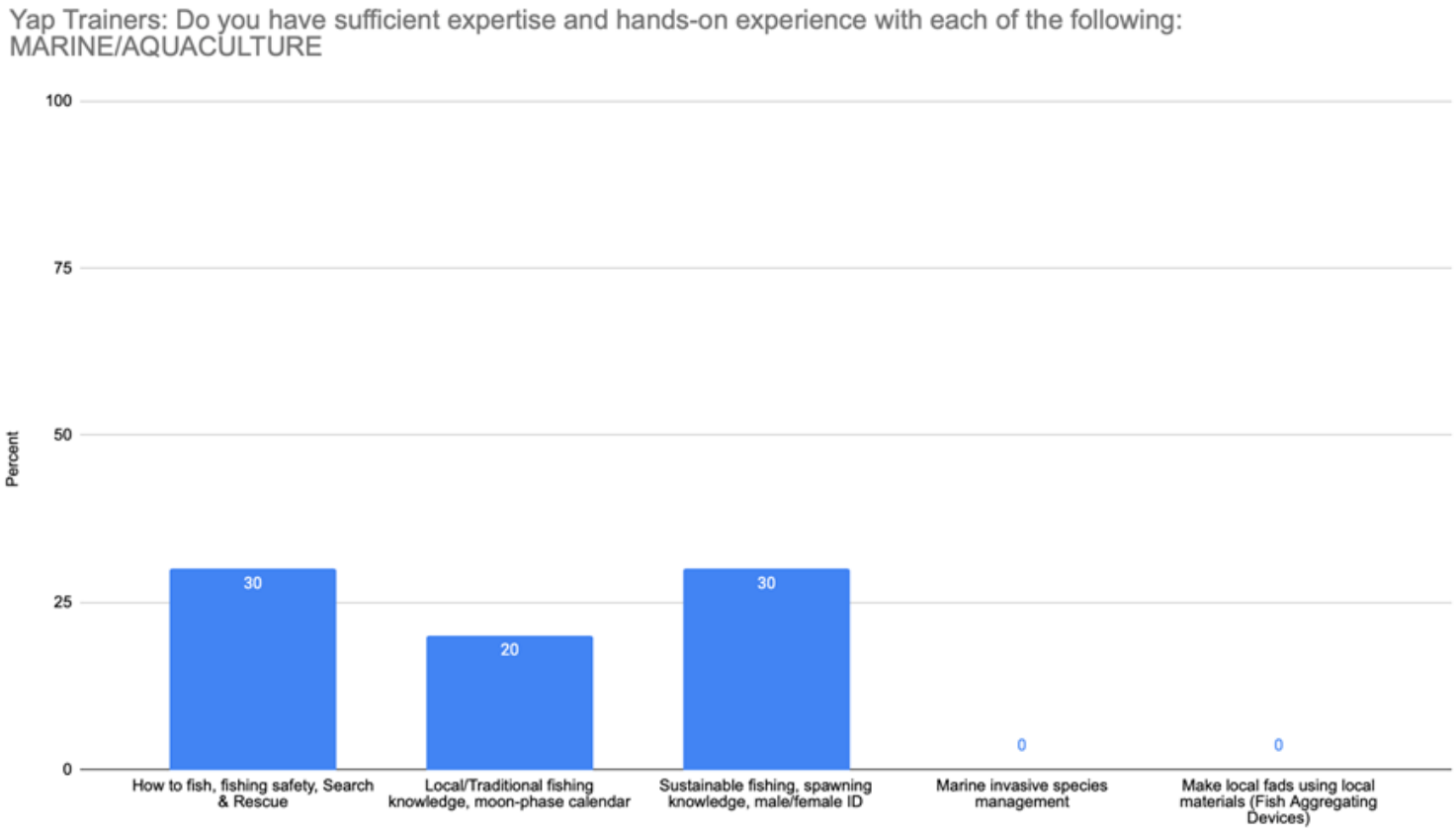

Yap Trainers: Are you trained to teach and mentor others on CLIMATE CHANGE?
Percent of Respondents
100
75
50
25
0
80
50
40
20
40
40
30
50
20
Climate change adaptation (Save crops from sea level rise, saltwater inundation, heavy rain) - Climate resilient crops (e.g. Saltwater resistant taro)
Sustainable farming and land management (How to keep the soil good for years, prevent erosion, etc.)
Ways to access emergency weather information and emergency responses for water, safety, other
Invasive species management
Techniques and approaches to reducing soil erosion
Techniques in restorative forestry
Techniques in rehabilitation or improving coral reefs and coastal land preservation
Water collection and storage
Tools to measure and track the weather

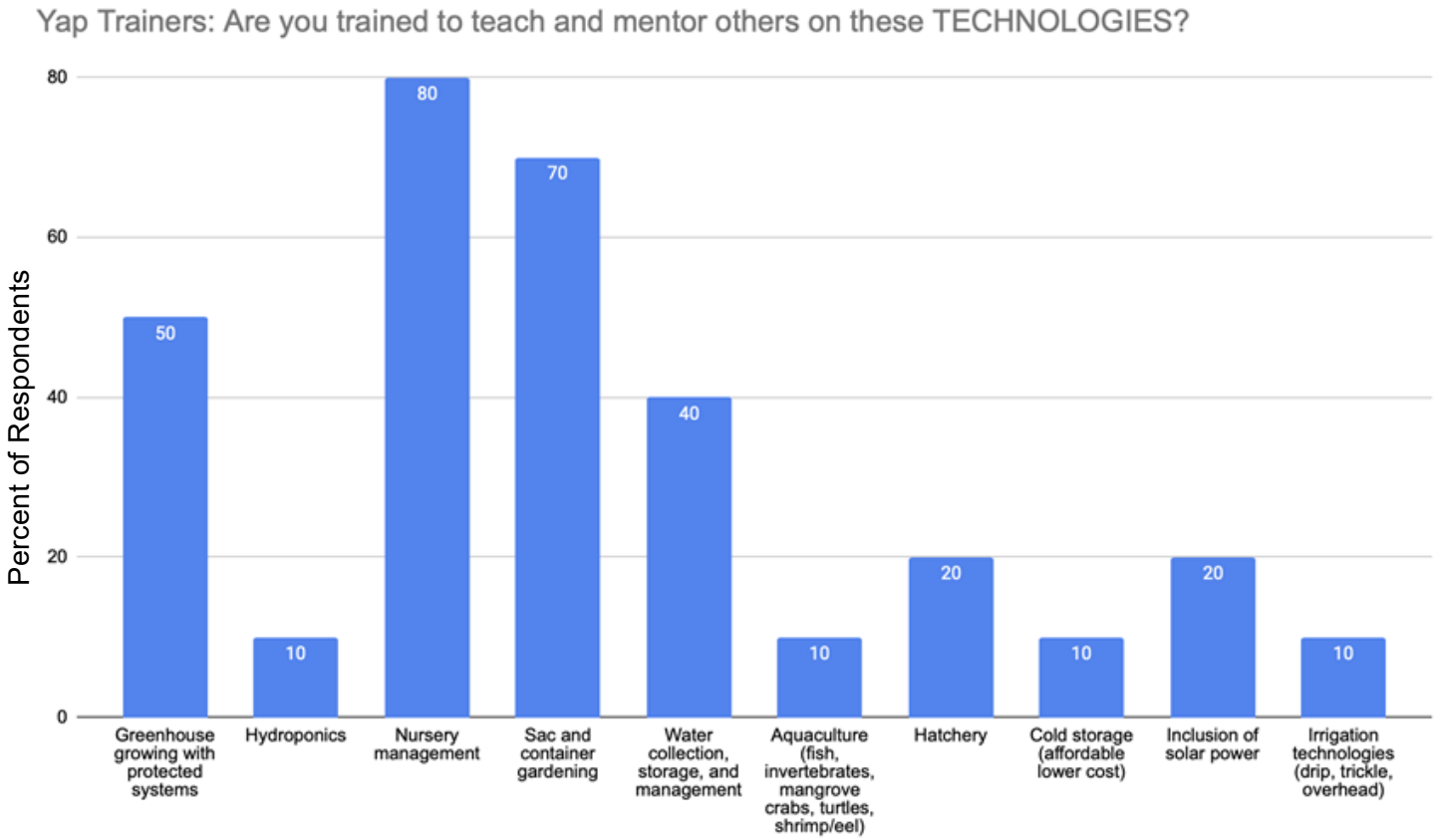

Yap Trainers: Would you be interested in taking workshops and trainings to get up to speed or better trained?
100
75
50
25
0
Percent
100
0
Yes
No

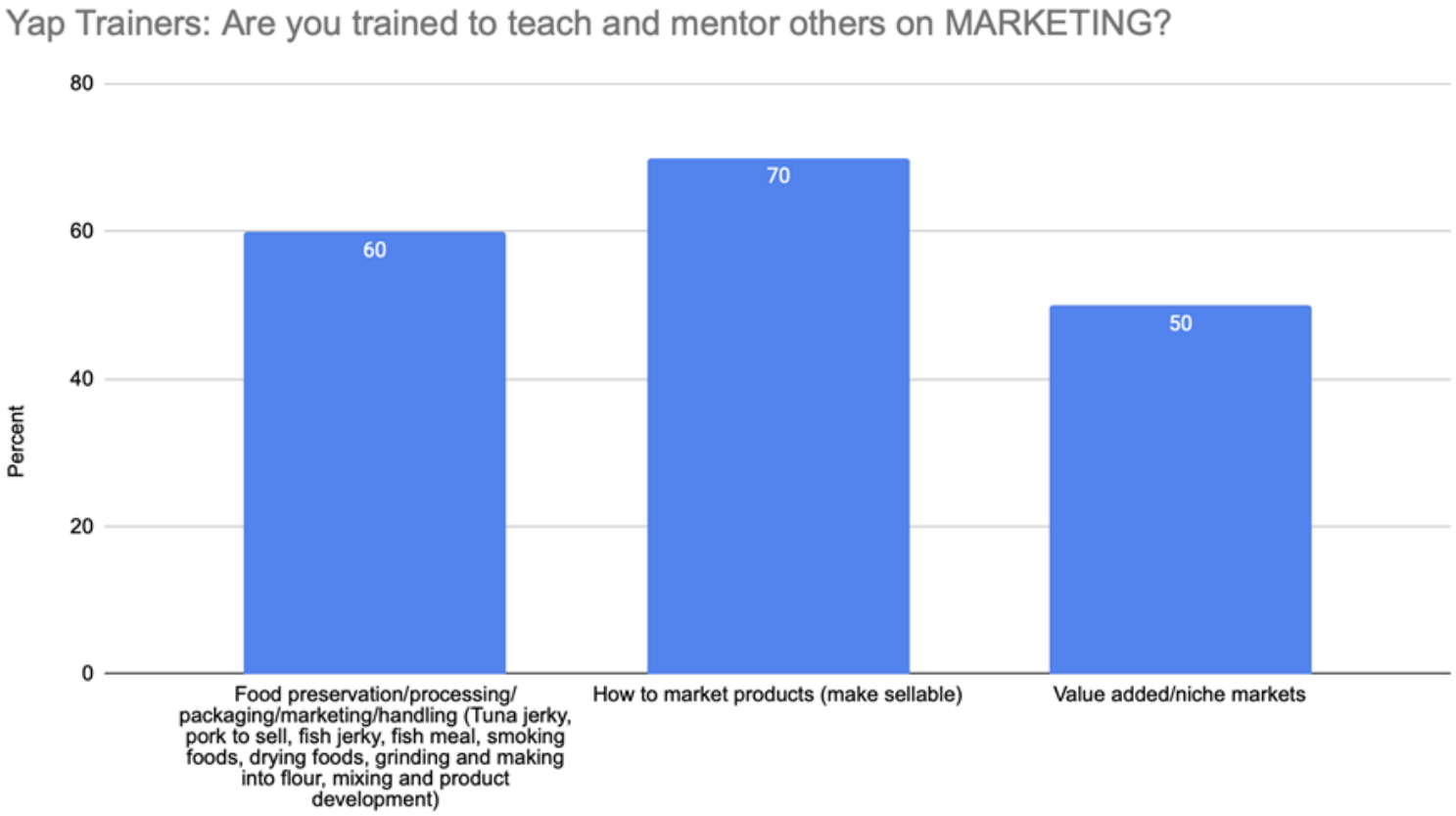

Yap Trainers: Are you trained to teach and mentor others in basic AGRICULTURE for home consumption and/or commercial farming and fisheries?
Percent of Respondents
100
75
50
25
0
80
56
90
60
50
General crop production/Agriculture training/Crop planting timing
Local/Traditional Agriculture/Fishery Knowledge (Agroforestry, etc.)
Seed collection, seed saving and growing from seed and vegetative propagation
Improving your soil, working with soils, types of soils, testing, soil amendments
Making local fertilizer/compost and then ways to store and applying (solid & compost tea)

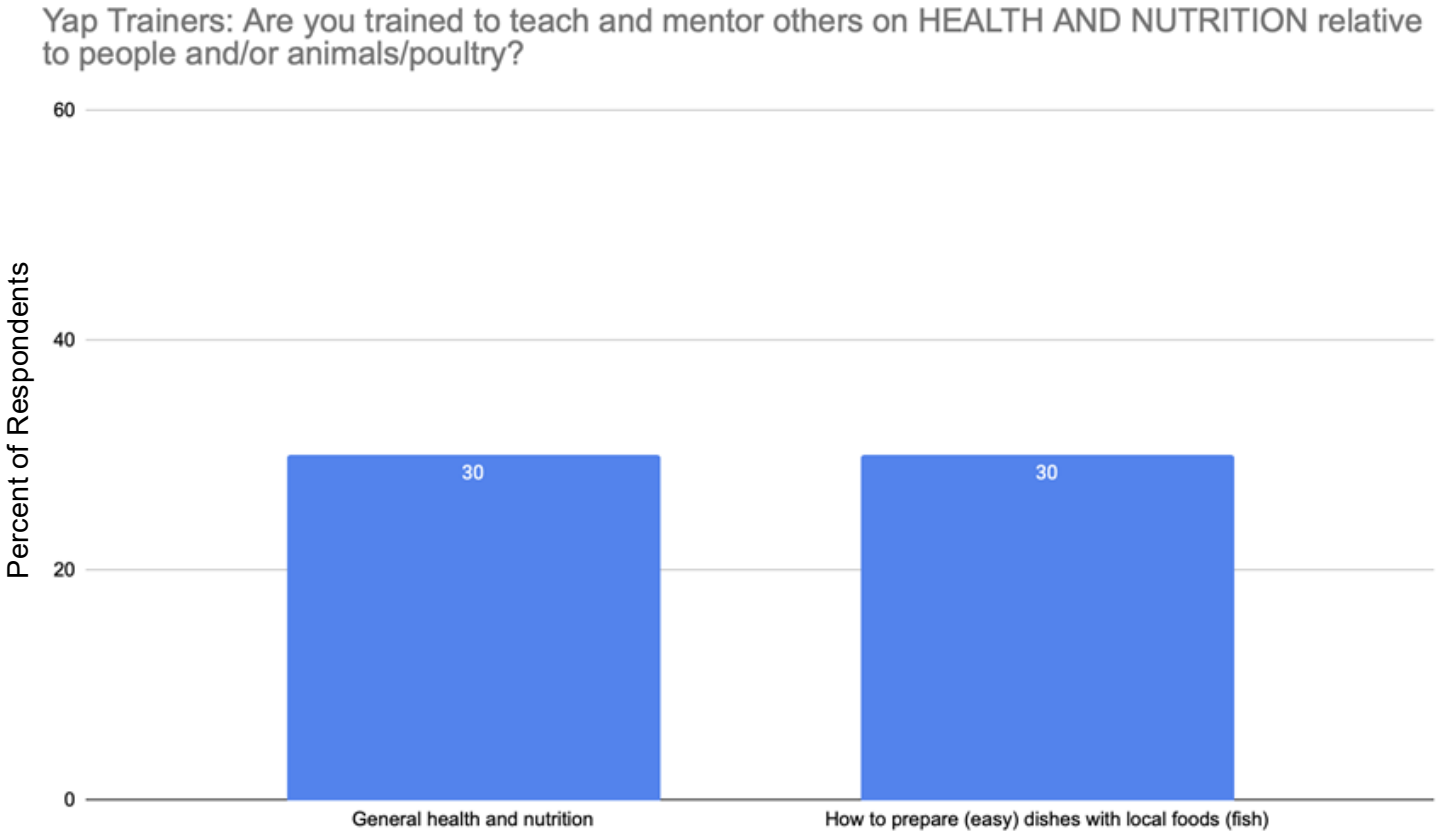

Yap Trainers: Do you have sufficient expertise and hands-on experience with each of the following crops do you want/need more training and information on growing, harvesting, processing of these specific crops (check or circle each that is of interest)
Percent
0
10
20
30
40
50
Swamp taro or hard taro
Land taro or soft taro
Breadfruit
Banana
Coconut
Copra (coconut product)
Yam
Mango
Pineapple
Limes/lemons
Sweet potatoes
Tapioca
Papaya
Soursop
Black pepper
Hot peppers
Sakau (kava)
Sugar cane
Betel leaf
Durian (football plant)
Cacao
Chestnut
Beteinut
Tangerine/orange
Medicinal crops (example: Noni)

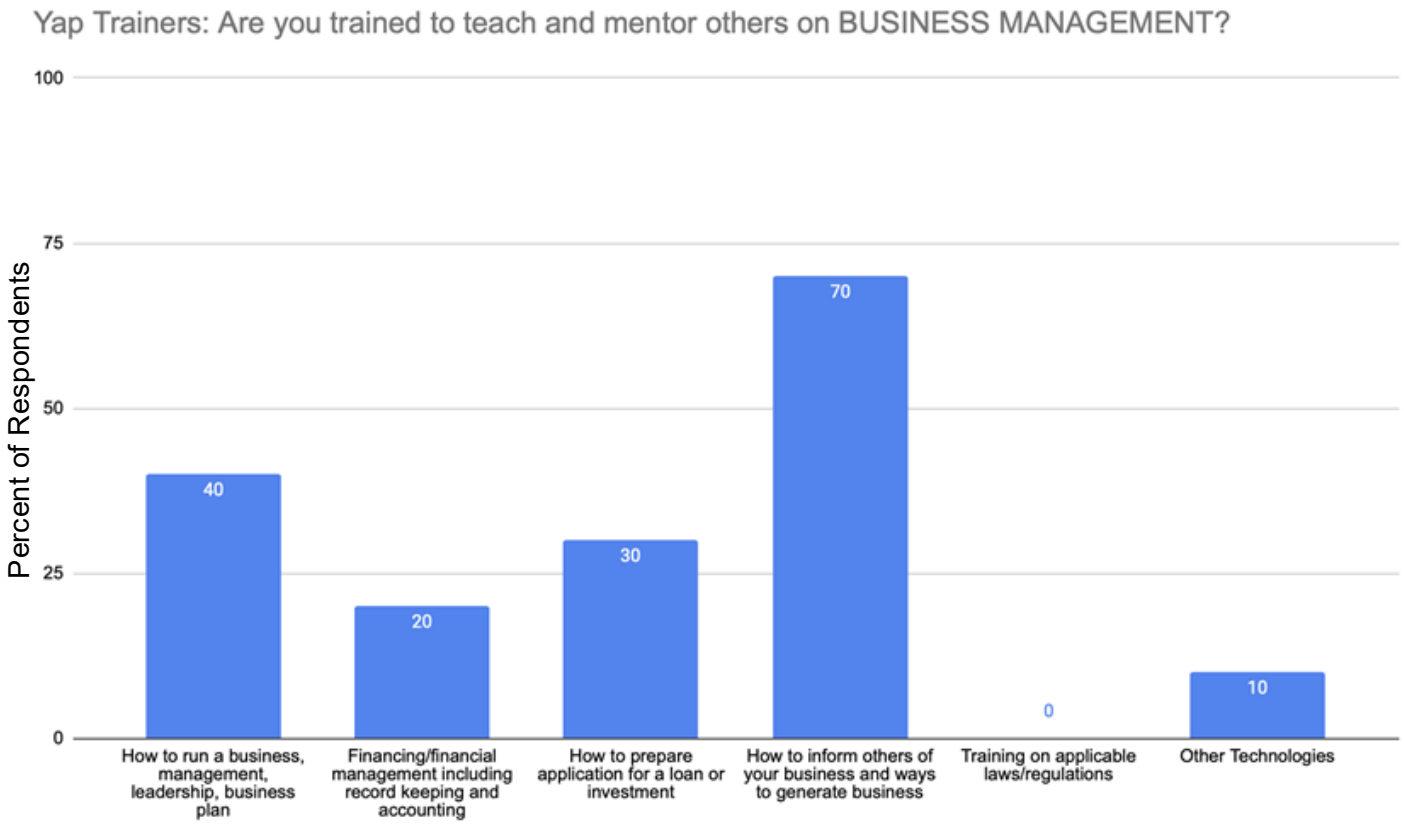

Yap Trainers: Do you have sufficient expertise and hands-on experience with each of the following: LIVESTOCK
Percent
0
20
40
60
80
70
50
20
General livestock management
Make local pig/chicken feed
How to use wood chipper

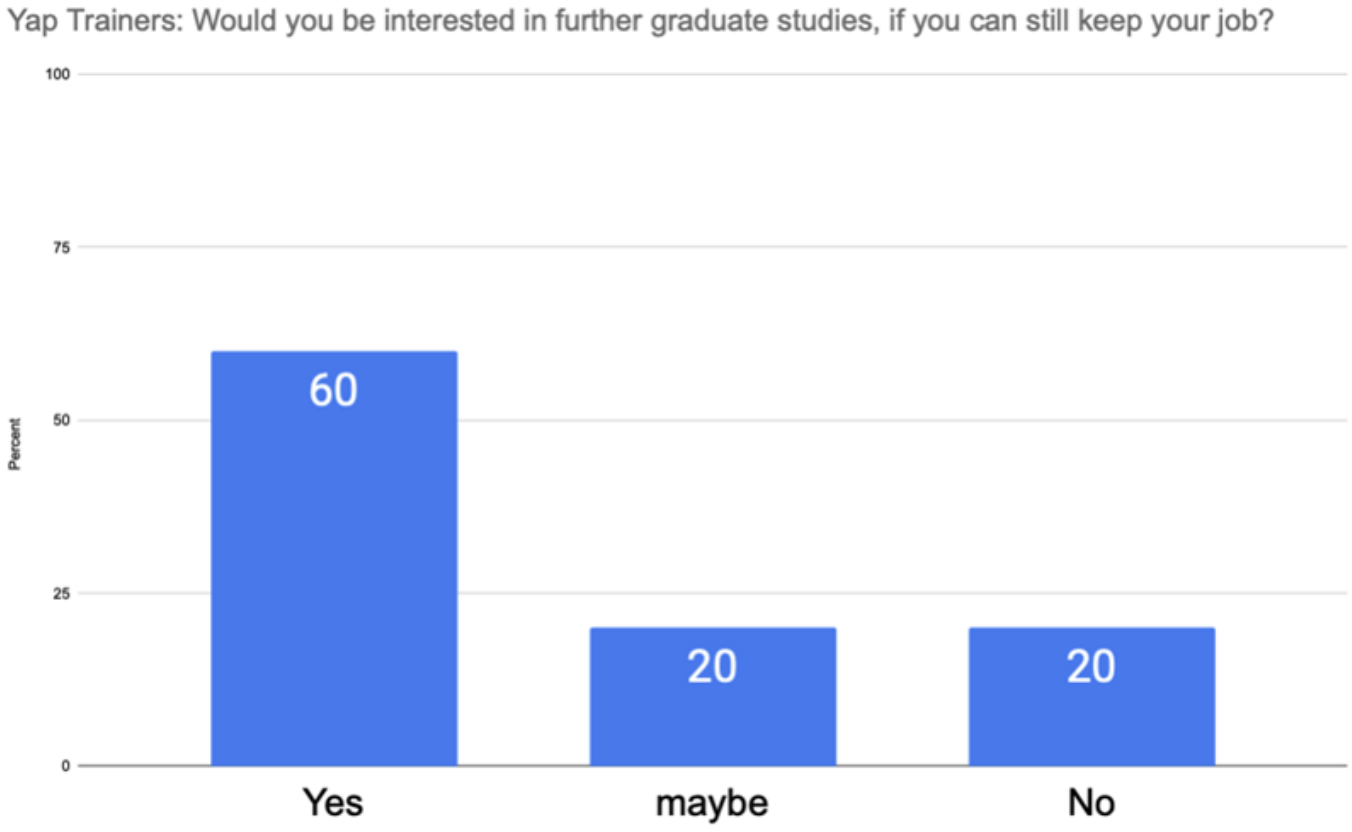

Yap Trainers: Do you have sufficient expertise and hands-on experience with each of the following: MARINE/AQUACULTURE
Percent
100
75
50
25
0
30
20
30
0
0
How to fish, fishing safety, Search & Rescue
Local/Traditional fishing knowledge, moon-phase calendar
Sustainable fishing, spawning knowledge, male/female ID
Marine invasive species management
Make local fads using local materials (Fish Aggregating Devices)


Yap Trainers: Are you trained to teach and mentor others on these TECHNOLOGIES?
Percent of Respondents
80
60
40
20
0
50
10
80
70
40
10
20
10
20
10
Greenhouse growing with protected systems
Hydroponics
Nursery management
Sac and container gardening
Water collection, storage, and management
Aquaculture (fish, invertebrates, mangrove crabs, turtles, shrimp/eel)
Hatchery
Cold storage (affordable lower cost)
Inclusion of solar power
Irrigation technologies (drip, trickle, overhead)

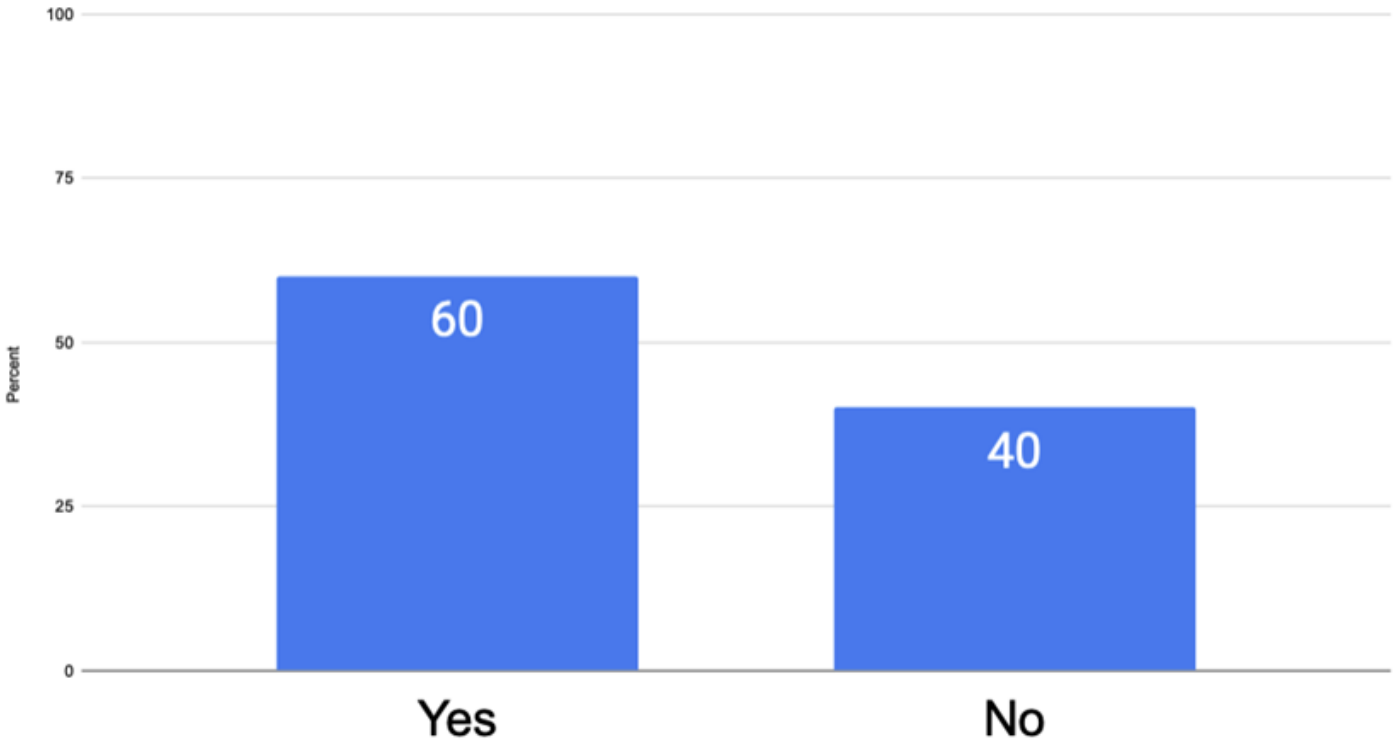

Yap Trainers: Are you trained to teach and mentor others on MARKETING?
Percent
80
60
40
20
0
60
70
50
Food preservation/processing/ packaging/marketing/handling (Tuna jerky, pork to sell, fish jerky, fish meal, smoking foods, drying foods, grinding and making into flour, mixing and product development)
How to market products (make sellable)
Value added/niche markets


Yap Trainers: Are you trained to teach and mentor others on HEALTH AND NUTRITION relative to people and/or animals/poultry?
Percent of Respondents
60
40
20
0
30
30
General health and nutrition
How to prepare (easy) dishes with local foods (fish)

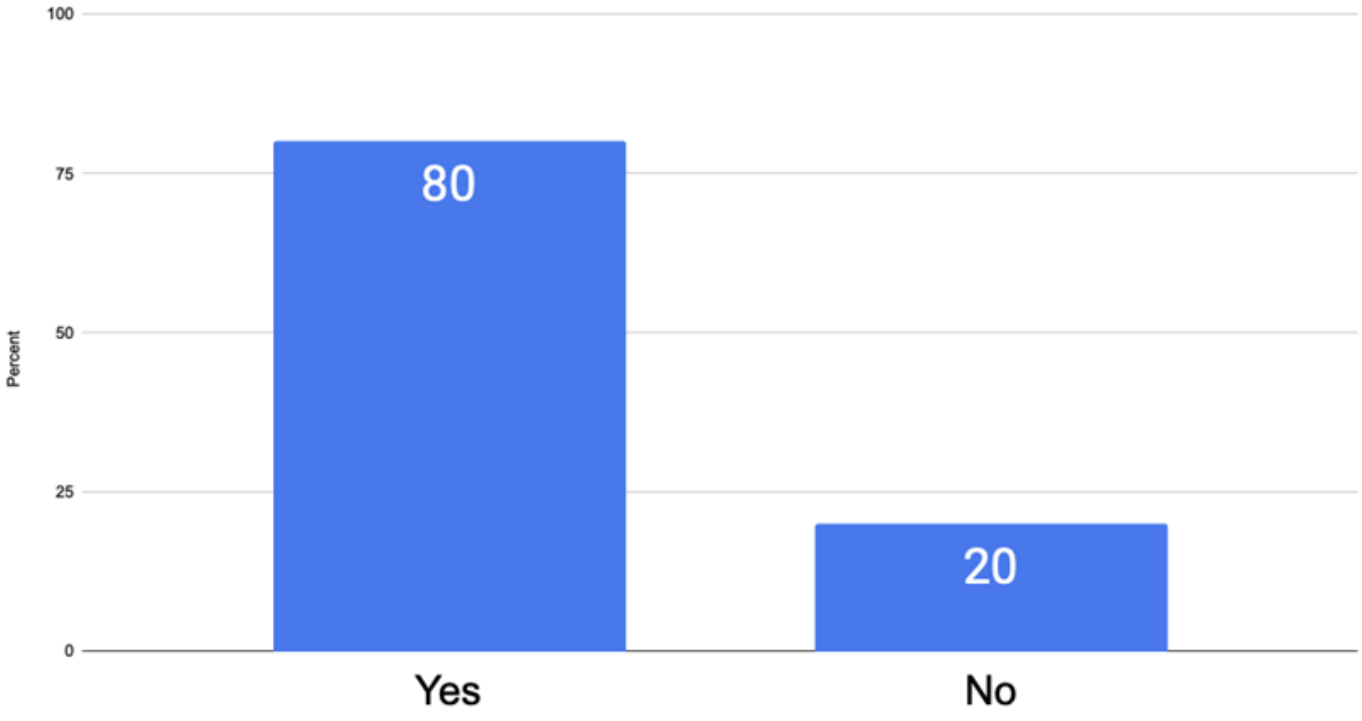

Yap Trainers: Are you trained to teach and mentor others on BUSINESS MANAGEMENT?
Percent of Respondents
100
75
50
25
0
40
20
30
70
0
10
How to run a business, management, leadership, business plan
Financing/financial management including record keeping and accounting
How to prepare application for a loan or investment
How to inform others of your business and ways to generate business
Training on applicable laws/regulations
Other Technologies


Yap Trainers: Would you be interested in further graduate studies, if you can still keep your job?
Percent
100
75
50
25
0
60
20
20
Yes
maybe
No

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



Yap 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
Summary of Survey Data Results
Yap State

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

1. Food System Information

This section explores key aspects of food system information among food producers, including their access to and utilization of data on crop planning, weather conditions, pest and disease monitoring, market prices, and emergency notifications. The insights gathered reflect both the existing practices and the additional needs of producers in accessing and applying essential information for effective decision-making and operational planning.

Demographics

A total of 70 respondents contributed to the results of this survey, which was distributed to food producers in the FSM, including FSM farmers who harvest/grow foods by way of agroforestry, cultivated farming, fishing, aquaculture, and/or raise poultry for eggs or meat and/or raise livestock. Out of the 70 respondents, 54 percent identified as male, and 46 percent as female. The majority of respondents (40 percent) were between the ages of 31 and 45, while 30 percent of respondents were between 18 and 30, 21 percent were between 56 and 60, and only 9 percent were over 60 years old.

1.1 Crop Planning and Production Data

Access to crop planning and production data is a valuable resource for farmers as it supports them in planning, forecasting yields, and managing resources. The data reveals that only 46 percent of producers currently have access to crop planning and production information, leaving 54 percent without such resources. This gap indicates a pressing need for more accessible tools and resources that can offer insights into crop production patterns, input availability, and potential yield outcomes. For those with access, usage patterns show that about 20 percent rely on this information daily, while higher proportions, a combined 74 percent, access it on a weekly or monthly basis. Such frequency highlights the periodic nature of farming cycles and suggests that a weekly or monthly update on crop production and planning might align well with the needs of the majority. However, desired access levels indicate a higher demand, with 24 percent of respondents wanting daily updates, 32 percent weekly, and 32 percent monthly. These findings show a clear preference for more frequent access to crop-related data, underscoring a gap in the availability of timely, detailed crop planning information.

1.2 Weather Information

Weather information is essential for producers to plan for and mitigate risks associated with adverse weather conditions. The survey data indicates that 74 percent of producers currently

have access to weather information, a significantly higher proportion compared to access levels for crop planning data. The current frequency of access among users shows a high reliance on weekly updates, with 47 percent accessing this data weekly and 40 percent daily. Monthly access is less common, with only 11 percent using it on a monthly basis, while a smaller proportion accesses it seasonally. Producers' preferences for weather information access show a clear inclination towards daily updates, as 53 percent indicate a need for daily access to this information. Meanwhile, 35 percent are satisfied with weekly access, and smaller percentages find monthly or seasonal updates sufficient. The demand for daily weather updates highlights the importance of responsive weather services that can provide real-time data to producers, enabling them to adapt quickly to changes in weather patterns and minimize potential damage to their crops or livestock.

1.3 Pest and Disease Monitoring

Pest and disease monitoring is another critical area where access to timely information can significantly impact production outcomes. According to the data, just over half of the producers (53 percent) have access to information on pest and disease outbreaks, with the remaining 47 percent lacking this vital resource. For those who do access pest and disease information, the frequency of usage varies significantly. Most producers currently access this data on a monthly basis, reflecting 53 percent, while 24 percent use it daily. The reliance on monthly information may be due to the periodic nature of pest infestations or disease cycles, yet producers express a need for more frequent access. Approximately 21 percent of respondents would like daily updates on pest and disease information, while a similar proportion prefers weekly updates. Monthly updates remain the most requested frequency, with 54 percent indicating it as their preferred level of access. These preferences suggest that producers need consistent monitoring tools that can provide them with timely updates to detect and control pest outbreaks or diseases as they arise.

1.4 Market Prices

Access to market price information plays a key role in producers' decision-making and profitability, as it enables them to respond to market demand and optimize their sales strategies. The survey findings show that access to market price information is limited, with only 48 percent of respondents currently able to access this information. This limited access may hinder producers' ability to make informed decisions about when and where to sell their products. Among those with access, monthly and seasonal updates are the most common, with 41 percent using monthly updates and 22 percent relying on seasonal information. Producers' preferences for access reveal a need for more frequent updates, with 15 percent desiring daily information, 30 percent weekly, and 41 percent monthly. These preferences underscore the value of timely market insights, which can help producers to adapt their strategies in response to price fluctuations and seasonal demand.

1.5 Online Market Forecasting for Food Product Outputs

In addition to market prices, producers benefit from forecasting tools that can help them anticipate future demand for food products and plan their output accordingly. This includes

forecasting calls for specific products on designated market days and notifications for when certain products are needed for processing. Half of the producers surveyed currently have access to online market forecasting tools, while the other half do not. This balanced distribution highlights the importance of making these forecasting tools more widely available to meet the demand across the entire producer community. Of those who use these tools, monthly access is the most common at 53 percent, with smaller groups accessing it weekly or daily. However, producers' expressed preferences reveal a desire for more frequent forecasting information, with 23 percent wanting daily updates, and 27 percent wanting weekly updates. These figures suggest that producers recognize the value of regular, forward-looking insights that can help them plan for peak demand periods and optimize their market engagement.

1.6 Online Information on Food Production Inputs

Producers also rely on online information about food production inputs, such as seeds, feed, live plants, and other essential supplies. The availability of such information is crucial for their operational planning and productivity. In this regard, 61 percent of producers have access to input-related information online, whereas 39 percent lack access. This gap indicates a need for expanded resources to ensure that all producers have equal access to critical input data. The majority of those who use this information access it weekly or monthly, with 31 percent using it weekly and 44 percent monthly. Producers' preferences for access reveal a desire for more frequent updates, with 18 percent wanting daily updates and 29 percent weekly, while the majority—39 percent—prefer monthly updates. These insights indicate that, while monthly information on inputs may be sufficient for many, a notable portion of producers would benefit from weekly or daily updates to stay informed of availability and seasonal input demands.

1.7 Online Policy Updates

Policy updates, including changes to state and national regulations, are crucial for producers to remain compliant and leverage any new opportunities in the food production sector. The survey shows that only 42 percent of producers currently have access to online policy updates, leaving 58 percent without this vital information. This limited access may hinder producers' ability to adapt quickly to regulatory changes, affecting their compliance and eligibility for certain market opportunities. Among those who access policy updates, monthly updates are the most common, used by 36 percent, with smaller groups accessing this information on a yearly or seasonal basis. The preferred frequency of access for policy information indicates a more diverse range of needs, with 36 percent favoring monthly updates, while others see value in yearly or seasonal notifications. These preferences reflect a recognition that while immediate updates may not be necessary for all policy matters, consistent access to policy information is essential for long-term compliance and planning.

1.8 Emergency Notifications

Emergency notifications regarding disease epidemics, safety issues, environmental hazards, and other adverse events are crucial for ensuring the safety and preparedness of producers. The data indicates that 69 percent of producers currently receive emergency notifications, while 31 percent do not have access to this critical information. For those who do access emergency alerts,

monthly updates are the most common, used by 56 percent of respondents, although smaller proportions rely on daily or weekly notifications. Preferences for emergency notification frequency reveal a strong demand for real-time or near real-time access, with 22 percent of respondents indicating a need for daily updates and 19 percent for weekly alerts. These preferences underscore the importance of timely information to help producers respond to sudden risks and protect their crops, livestock, and resources in the face of environmental challenges.

1.9 Online Risk Management Training

Producers also expressed interest in risk management training, including ongoing education on business strategies and other topics that can enhance their resilience and skill set. Approximately 53 percent of producers currently have access to risk management training resources, while 47 percent do not. The majority of those with access use it on a monthly basis, reflecting the periodic nature of such training sessions. Producers' preferences reflect that 47 percent would prefer monthly training opportunities, with 21 percent wanting weekly, and 14 percent wanting daily access to risk management resources. These insights suggest a demand for more comprehensive, accessible training programs that can equip producers with the knowledge and tools to minimize risk and improve their operational efficiency.

1.10 Notifications for Training Opportunities

Access to notifications on available training opportunities, such as cooking classes, seedling training, and other skill-building sessions, is an area of interest for producers. The survey shows that 54 percent currently receive notifications for training, while 46 percent do not. For those with access, monthly updates are the most common, with 39 percent relying on them, while a smaller group receives daily or weekly notifications. Producers' preferences reveal a significant demand for regular training notifications, with 9 percent requesting daily alerts, 25 percent weekly, and 44 percent monthly. This preference distribution highlights the value that producers place on consistent updates, which allow them to seize training opportunities that align with their schedules and skill development needs.

1.11 Cell Phone and Internet Access

A majority, 93 percent, of producers currently have their own cell phone. Only 7 percent are lacking cell phone access and, of that 7 percent, 38 percent have access to someone else's cell phone, and 63 percent do not. This reflects an ability to reach most producers by cell phone, however if a producer does not have a cell phone, there may be difficulties in reaching them. Of those that own a cell phone, most producers (21 percent) spend between 10 and 20 dollars per month on cellular data, about 20 percent spend between 5 and 10 dollars per month, and 17 percent spend nothing at all. Most producers, 96 percent, have internet access, with 66 percent of these producers spending between 20 and 40 dollars per month on WiFi. Most producers access the internet through cell phones and work computers. Those who do not have internet access reported either that they cannot afford it, do not know how to use it, don't have access to it, or lack connection where they live. This demonstrates a need for increased connectivity across the

state, as well as a potential need for community centers with access to WiFi or computers that are open to those without internet access.

2. Food Innovation Center

The Food Innovation Center plays a pivotal role in supporting local producers in developing and processing a variety of food products. This section provides an analysis of producers' interests, preferences, and expectations regarding locally processed foods, focusing on potential products, production methods, pricing, packaging, and more. The insights gained offer valuable guidance for structuring support services at the Center, aligning with the needs and goals of the local agricultural community.

2.1 Interest in Locally Processed Foods

The survey reveals a diverse range of interests among producers in developing locally processed foods. Banana chips, for instance, attract significant interest, with 64 percent of respondents indicating an intention to produce them. Similarly, breadfruit chips are sought by 57 percent, indicating that processed snacks made from local ingredients are in demand. Additionally, there is interest in producing breadfruit flour (43 percent), which could diversify product offerings and tap into markets looking for gluten-free or alternative flours. Coconut-based products are also popular, with 37 percent interested in producing coconut oil and 26 percent interested in producing coconut flour. Coconut milk, another traditional product, is favored by 36 percent of respondents, while 31 percent are interested in general coconut products, reflecting the multi-purpose use of coconut in traditional food processing and modern diets.

Other noteworthy interests include dried fish and seafood (30 percent), salted fish (37 percent), and smoked fish (43 percent). These preserved seafood products highlight the significant role of fish in the local diet and the potential for expanding into markets where these products are valued. There is also moderate interest in producing fish jerky and fish sauce, with 26 and 29 percent interest respectively, while fish syrups attract less interest at only 14 percent. In addition to seafood, producers express an interest in pork and other livestock-based products, with 39 percent indicating they would be interested in producing pork products. Other innovative products, such as flavored oils, dried fruits, jellies, jams, and hot sauces, also capture the interest of a considerable portion of producers, reflecting the diversity of products that could be developed with proper training and access to processing facilities.

2.2 Preferred Processing Methods

When it comes to the preferred methods for processing these locally sourced foods, producers largely lean towards small-scale methods that utilize traditional tools, with 74 percent indicating a preference for this approach. This choice likely stems from the accessibility of traditional tools and techniques that producers are already familiar with, which also align with cultural practices. However, many producers express a desire to utilize their own processing equipment, with 49 percent stating they would prefer to process foods on their own land using personal equipment.

This preference for independence in processing reflects a desire for greater control over production quality, timing, and costs.

In addition, a smaller group of producers, about 14 percent, prefers to use shared or local processing equipment at a central facility, indicating that while most producers wish for self-sufficiency, some are open to using centralized resources. This group would benefit from access to community-based processing facilities that offer shared equipment, reducing the need for individual investment. Another 31 percent of respondents are open to providing fresh products to larger industrial-scale processors who would handle processing and marketing. This collaborative model could allow producers to focus on cultivation and primary production while relying on established processors to market and sell the final products. Lastly, 39 percent of producers express a preference for a cooperative model where they could contribute fresh produce to shared processing operations. This approach underscores the value that many producers see in collective processing and market engagement, especially when resources such as equipment and labor can be pooled.

2.3 Consumer Price Expectations

Pricing plays a critical role in making locally processed foods accessible while ensuring fair returns for producers. Producers estimate that consumers would be willing to pay within a range of prices depending on the type of product and its perceived value. The majority believe that the most appropriate price range for locally processed foods falls between $1 and $5 per unit, with 39 percent of respondents selecting this range. This suggests that producers are aiming for affordability, ensuring that products remain accessible to local consumers while still generating income. A smaller but substantial group of producers anticipates that some consumers would be willing to pay slightly higher prices; 33 percent estimate the willingness to pay between $6 and $10 per unit. This could reflect higher-value items such as specialty foods, packaged seafood, or coconut-based products, which might command a premium price due to processing costs or unique attributes. A minority of producers, approximately 13 percent, believe that certain products could be priced above $20 per unit, possibly reflecting luxury items or those requiring intensive labor or unique ingredients. These pricing expectations highlight the need for market research to identify optimal price points for various products, helping producers balance affordability with profitability.

2.4 Packaging Preferences

The choice of packaging is critical not only for preserving the quality of processed foods but also for enhancing their appeal in the market. The survey results indicate a strong interest in eco-friendly packaging solutions among producers, with 61 percent preferring biodegradable materials, such as banana leaves. This reflects a growing awareness of environmental sustainability and a desire to reduce plastic usage in the food processing sector. In addition, 61 percent of producers favor vacuum-sealed pouches, a practical option that can help extend product shelf life and maintain freshness. These pouches are particularly suitable for dried or smoked products, where airtight packaging is essential for quality preservation.

Glass jars also receive considerable support, with 39 percent of respondents favoring them. Glass is perceived as an eco-friendly, durable option, particularly for jams, sauces, and pickled items, where product visibility and presentation are valued. In contrast, plastic bags and containers are less popular, with only 36 percent supporting plastic bags and 29 percent preferring plastic containers. These responses indicate that while plastic remains a feasible option, producers are prioritizing sustainable materials that align with consumer expectations for environmentally friendly packaging.

2.5 Use of Local Ingredients

An overwhelming majority of producers prioritize using local ingredients in their processed food products, with 81 percent expressing a strong commitment to local sourcing. This preference underscores the value producers place on supporting the local economy and reducing dependence on imported goods. Local ingredients not only help in cost reduction but also ensure that products resonate with local consumers by aligning with traditional flavors and ingredients they are familiar with. Furthermore, using local ingredients can enhance the sustainability of the food processing sector by minimizing the environmental impact associated with transportation and importation. However, 19 percent of respondents remain undecided, perhaps due to concerns over the consistent availability and quality of local ingredients. This uncertainty highlights a need for infrastructure improvements that can support local ingredient supply chains, ensuring reliability and quality throughout the year.

2.6 Perceived Market Potential

The perceived market potential for locally processed foods reflects producers' optimism about consumer demand and growth prospects. Approximately 40 percent of producers believe that there is a high demand for locally processed foods, with significant growth potential both within and beyond the local market. This view suggests that many producers are confident in the appeal of their products, particularly those that emphasize traditional or culturally significant ingredients. Another 37 percent of respondents perceive moderate demand, envisioning steady but not exponential growth. This group may recognize the niche appeal of certain products that could gain traction among specific consumer groups rather than broad market acceptance. Conversely, 24 percent of respondents see limited demand and growth potential, indicating that some producers may be cautious about the viability of locally processed foods. This view may stem from perceived barriers, such as competition from imported goods, price sensitivity among local consumers, or logistical challenges in distribution.

2.7 Infrastructure and Equipment Needs

Producers identify a range of infrastructure and equipment needs to support efficient food processing. Commonly mentioned items include dehydrators, mixers, and ovens, which are essential for producing a variety of dried, baked, and preserved foods. Cold storage facilities are also critical, particularly for seafood and other perishable items, to ensure product quality and safety. Other needs mentioned include facilities for packaging, such as vacuum sealers and labeling machines, which would allow producers to streamline their processing operations. Many producers also note the need for local spaces, such as community processing centers equipped

with shared tools and equipment. These centers could provide producers with access to resources that might be financially out of reach individually, thus supporting small-scale or start-up processors who are entering the market.

2.8 Challenges in Production and Processing

Several barriers currently limit producers' ability to expand their operations. Limited infrastructure and access to necessary equipment are among the most significant challenges. Some producers also mention the cost and time associated with processing foods, especially for those who are balancing agricultural production with other responsibilities. Additionally, the seasonal availability of certain ingredients poses a challenge, as producers must work around natural growing cycles and weather conditions. Labor constraints are another concern, as many producers report difficulties in finding skilled labor or managing production independently. These limitations underscore the need for more accessible infrastructure and shared resources that can reduce the burden on individual producers, making it easier for them to scale their production.

2.9 Training and Technical Assistance

71 percent of producers express strong interest in training programs that can enhance their processing skills and improve product quality. 24 percent of producers noted that they might be interested in these training programs, indicating a need for more specified information before these producers commit to training sessions. Many are particularly interested in learning about quality control, packaging, and product development, which are essential for establishing a reputable and marketable product line. Technical assistance in business planning and marketing is also in demand, as producers recognize the importance of reaching broader markets and positioning their products competitively. Furthermore, regulatory compliance training is crucial, as many producers may be unfamiliar with the legal standards required for food safety and labeling. Providing producers with comprehensive training resources can empower them to navigate the complexities of food processing and marketing, fostering a more robust and competitive local food industry.

2.10 Distribution and Marketing Channels

The primary distribution channels envisioned by producers include local markets and supermarkets, with 87 percent seeing local markets as the most viable outlet. This high level of interest in local markets aligns with the community-oriented nature of the producers, who often prioritize accessibility for local consumers. Supermarkets and grocery stores also attract significant interest, with nearly half of respondents seeing these as potential outlets. However, only a small percentage of producers (14 percent) view specialty food stores or online platforms as viable distribution channels. This indicates that while there is some recognition of alternative markets, most producers focus on traditional, in-person sales. Direct sales, such as farm stands, also receive considerable support, underscoring the importance of maintaining direct relationships with consumers.

2.11 Export Potential

Interest in exporting locally processed foods is moderate, with 33 percent of producers seeing clear potential for expanding into other states within the FSM or even beyond. Another 33 percent are open to the idea but recognize the need for further exploration of the logistical and regulatory challenges involved. Some producers prefer to focus on the local market, either due to familiarity with local demand or the logistical constraints associated with export. This cautious interest in export highlights the potential for growth but also the need for resources and guidance to help producers navigate the complexities of exporting food products.

The Food Innovation Center serves as an essential support system for local producers, helping them capitalize on opportunities in food processing and market development. The data highlights the diversity of products that producers are interested in, with preferences for traditional processing methods and local ingredient sourcing. There is strong interest in eco-friendly packaging and a high level of awareness regarding market potential, though challenges such as equipment needs, labor constraints, and regulatory compliance persist. By providing targeted support in infrastructure, training, and market access, the Food Innovation Center can play a transformative role in building a sustainable and profitable food processing industry in the region. This section underscores the Center's potential impact on fostering innovation, preserving traditional food practices, and expanding market opportunities for local producers.

3. Training and Infrastructure Development

The "Training" section provides an in-depth look at producers' training needs and interests, focusing on commercial food processing, food safety, and agricultural skills that can enhance food production. This section also examines the connection between training and infrastructure development, as effective training initiatives require adequate facilities and resources to ensure long-term benefits. Analyzing these training needs offers insights into how infrastructure can be designed to support skill development and improve productivity among local producers.

3.1 Interest in Commercial Food Processing Training

The survey data shows a high level of interest in training for commercial food processing, with 87 percent of producers expressing a desire to learn these skills. This interest highlights the producers' awareness of the potential value added to local food products through processing, which could enhance marketability, increase product shelf life, and improve income generation. Commercial food processing training would be beneficial for producers by equipping them with practical skills in handling, packaging, and preserving foods in ways that meet market standards.

To support this training, well-equipped processing facilities are essential. Infrastructure that includes processing stations, commercial-grade ovens, refrigerators, and food-safe packaging systems can serve as practical training sites, allowing producers to apply their new skills immediately. A dedicated space for training in food processing could also support group workshops, where producers can collaborate, share insights, and develop best practices collectively. This approach to training not only imparts technical skills but fosters a community

of knowledge exchange, empowering producers to advance food processing at both an individual and regional level.

3.2 Essential Skills for Food Safety

Food safety training is a primary area of interest, with 88 percent of producers showing interest in this essential skill. Food safety is a crucial component of food production, as it ensures the health and wellbeing of consumers while protecting the reputation of producers. Producers recognize that mastering food safety principles will enable them to produce safe, high-quality food products that meet both local and international standards. Food safety training would likely cover topics such as contamination prevention, proper storage techniques, and compliance with regulatory standards, all of which are essential for successful commercial food production.

For effective food safety training, the infrastructure should include hygienic processing facilities with stainless steel surfaces, ample washing stations, and temperature-controlled storage rooms. Such an environment would allow producers to implement food safety measures in real time, learning through hands-on experience rather than theoretical instruction alone. Additionally, ongoing access to food safety equipment, such as sanitizers and thermometers, would help producers maintain these standards independently. Training facilities that emphasize hygiene and safety serve as models that producers can replicate or adapt within their own processing areas, supporting a culture of food safety that contributes to consumer trust and product quality.

3.3 Quality Control and Food Sorting

A majority of producers also show interest in developing skills related to quality control and food sorting, with 62 percent indicating this as a priority. Quality control training is essential for ensuring that products meet specific standards and are uniform in quality and appearance, which is important for customer satisfaction and brand consistency. Training in quality control would involve learning about product grading, sorting techniques, and defect identification, helping producers ensure that only the best products reach the market.

For effective quality control, infrastructure that includes inspection tables, sorting belts, and grading tools would enable producers to practice sorting and quality assessment in a controlled environment. Furthermore, refrigeration units or cold storage facilities can extend the freshness of products waiting to be sorted or processed, particularly for perishable items like fruits and vegetables. A processing center with dedicated space for quality control training can serve as a model for producers who aim to establish similar standards on their farms or in local cooperatives, ensuring product consistency across the community.

3.4 Food Preparation and Preservation

Interest in food preparation and preservation is widespread, with 66 percent of producers indicating a desire to learn food preparation techniques, while 77 percent express interest in preservation methods. Food preparation training provides foundational skills necessary for creating processed foods that are safe and palatable, while preservation techniques enable producers to extend product shelf life, reduce waste, and diversify their product offerings.

Training on preservation methods such as drying, pickling, and canning would be particularly valuable for producers looking to create products that meet consumer demands for longer-lasting foods.

Supporting food preparation and preservation training requires infrastructure that includes drying equipment, food dehydrators, and storage containers suitable for different preservation methods. Additionally, vacuum sealers and other packaging equipment are essential for ensuring that preserved foods maintain quality over time. By providing access to this equipment within a training facility, producers can experiment with different preservation techniques, gaining confidence in their ability to process foods that are both safe and appealing. Such infrastructure investments would enable producers to scale up their operations, providing a wider range of products to the market while minimizing the spoilage of perishable items.

3.5 Cooking and Packaging Skills

Cooking and packaging skills are also of high interest, with 71 percent of producers showing interest in cooking techniques and 66 percent in packaging. Cooking training would allow producers to diversify their products, offering ready-to-eat or pre-prepared foods that appeal to convenience-focused consumers. Meanwhile, packaging training would empower producers to create aesthetically appealing and functional packaging that preserves product quality and meets consumer expectations. Effective packaging is a key factor in product differentiation, particularly in competitive markets where presentation can impact consumer choice.

For these training areas, infrastructure should include industrial-grade cooking appliances, such as ovens, steamers, and grills, as well as various types of packaging machines, including vacuum sealers and labeling equipment. A training center with these facilities would enable producers to learn and apply cooking techniques directly, gaining practical experience in a setting that mimics real production environments. Packaging equipment would allow producers to experiment with different materials and styles, helping them understand how packaging choices impact product presentation and longevity. Investing in infrastructure that supports cooking and packaging training creates pathways for producers to diversify their offerings and enhance product appeal.

3.6 Additional Training in Agriculture and Sustainable Practices

In addition to food processing, producers express a strong interest in agricultural training, with 91 percent indicating a desire for assistance in increasing food production. Specific areas of interest include climate adaptation, sustainable farming, and soil management techniques. For example, 67 percent of respondents are interested in climate-resilient crop training, which is essential as they face increasing risks from sea level rise, saltwater intrusion, and other climate impacts. Sustainable farming practices, such as crop rotation and soil conservation, are also high priorities, with 57 percent of producers indicating interest. This training would help producers maintain long-term soil health, optimize resource use, and ensure sustainable yields.

To support these agricultural training goals, infrastructure such as demonstration plots, greenhouses, and soil testing labs would be valuable additions to a training center. Demonstration plots would allow producers to observe sustainable practices in action, including

climate-resilient techniques and innovative planting methods. Greenhouses can provide controlled environments for practicing crop production methods that may not be feasible outdoors due to weather constraints. Soil testing labs can enable producers to assess soil health and tailor their practices to optimize growth, demonstrating the tangible benefits of sustainable practices. Infrastructure that supports agricultural training ensures that producers not only learn theoretical concepts but also develop practical skills in managing their land and resources sustainably.

3.7 Local and Traditional Agriculture Knowledge

There is also substantial interest in traditional agricultural knowledge, with 51 percent of producers interested in learning about local agroforestry and fishery practices. Traditional knowledge provides valuable insights into sustainable, community-centered approaches to food production, offering techniques that align with local environmental conditions and cultural practices. Training in these areas would help producers preserve and integrate traditional methods, enhancing both biodiversity and resilience in food systems.

Infrastructure that supports traditional knowledge training could include forested areas for agroforestry demonstrations and aquaculture facilities for practicing fishery techniques. Access to traditional tools and materials within a training setting would also allow producers to learn and apply these methods effectively. Incorporating spaces that honor and replicate traditional practices can facilitate knowledge transfer among generations, empowering producers to adopt holistic approaches that support food security and ecological stewardship.

3.8 Livestock Management and Feed Production

Interest in livestock management training is notable, with 47 percent of respondents seeking skills in general livestock care, and 63 percent expressing interest in local feed production for pigs and chickens. Training in livestock management would provide producers with the skills needed to improve animal health, productivity, and welfare, which are essential for sustainable and ethical food production. Feed production training would further reduce dependency on external inputs, enabling producers to create balanced, locally-sourced diets for their livestock.

For effective training in these areas, infrastructure that includes dedicated livestock facilities and feed production equipment, such as feed grinders and mixers, would be beneficial. These facilities would provide hands-on learning opportunities, allowing producers to practice feeding, breeding, and health management techniques. Access to feed production tools also supports self-sufficiency, as producers can reduce costs by producing their own animal feed using locally available materials. Infrastructure investments in livestock management create a foundation for sustainable animal husbandry, ensuring that producers can maintain healthy livestock populations while managing resources effectively.

3.9 Marine and Aquaculture Skills

Marine and aquaculture training is another area of interest, especially for producers involved in fisheries. Training in this area would cover safe fishing practices, stock management, and basic

aquaculture techniques, helping producers optimize yields and maintain sustainable fishing practices. Producers who participate in marine training gain skills that are critical for managing aquatic resources responsibly, which benefits both the environment and the fishing community.

Supporting infrastructure for marine training could include access to coastal training sites, fish ponds, and hatcheries where producers can learn and apply aquaculture techniques. Coastal facilities would allow for hands-on experience in managing marine resources and practicing safe, sustainable fishing methods. With infrastructure that supports both training and practice, producers can develop their aquaculture skills in a realistic setting, making it easier to apply these practices in their own operations.

3.10 The Role of Infrastructure in Supporting Training Initiatives

The infrastructure required to support these training programs goes beyond traditional classrooms, incorporating real-world processing, agricultural, and marine environments where producers can learn by doing. Investing in multi-functional facilities that provide hands-on training opportunities not only enhances learning outcomes but also strengthens the local food processing sector. By equipping producers with the skills and tools they need to expand their production, infrastructure development supports long-term sustainability and resilience.

Such investments allow producers to develop their skills in a supportive environment, where they can experiment with new techniques and receive guidance from experts. This practical training infrastructure also promotes innovation, enabling producers to test new methods and adapt them to local conditions. Moreover, community-based training centers equipped with processing and agricultural facilities foster collaboration, encouraging producers to work together, share insights, and build a stronger, more resilient food system. Through the combination of targeted training and well-developed infrastructure, the Food Innovation Center can play a transformative role in empowering local producers to increase their productivity, diversify their offerings, and improve their livelihoods.

The training needs identified in this section underscore the importance of developing comprehensive, infrastructure-supported programs that cater to both current demands and long-term growth. Producers are eager to learn a wide array of skills, from food safety and processing techniques to sustainable farming and livestock management. These skills are essential for producing high-quality, market-ready products, but they require infrastructure that supports practical learning and hands-on application. By investing in multi-functional facilities and resources, the Food Innovation Center can ensure that training initiatives have a lasting impact, equipping producers to meet both local and broader market demands while promoting sustainability and innovation in the food processing sector.

4. Community Management and Policy Advocacy

The "Community Management and Policy Advocacy" section emphasizes the importance of community support, sustainable practices, policy guidance, and infrastructure that can assist

producers in advancing their food processing operations. This section examines the various ways producers engage with their community, their perceptions of sustainable practices, the support they require from government bodies, and the feedback mechanisms that guide their decisions. Additionally, it reviews producers' need for shared resources, such as storage facilities and processing equipment, that enhance community cooperation and optimize production.

4.1 Community Involvement in Food Production

Community involvement plays a crucial role in the success of food production and processing activities, as it strengthens collaboration, promotes knowledge sharing, and fosters collective resilience. According to the data, 66 percent of producers consider community support to be "very important" in their vision for food production. This perspective reflects a strong desire for community-centered approaches that prioritize local development and shared resources. By involving the community in food production, producers can tap into a network of mutual support, which is particularly valuable for small-scale producers who may lack the individual resources needed for expansion.

A further 16 percent of respondents find community involvement important but not a top priority, suggesting that while they value collective efforts, they may focus more on individual or business-specific objectives. Meanwhile, 3 percent of producers believe that community involvement is not important, preferring to focus solely on production. This small minority may highlight a segment of producers who prioritize efficiency and autonomy, possibly due to limited time or resources to engage actively with the community. Regardless, the overall data shows that community engagement is widely valued, and initiatives to strengthen this involvement could benefit the majority of producers, enhancing both food security and economic opportunities in the region.

4.2 Sustainable Practices and Environmental Responsibility

Sustainability is a high priority for the majority of producers, as 71 percent report that sustainable practices, such as waste reduction, resource conservation, and local ecosystem support, are essential to their food production processes. This commitment to sustainability demonstrates a forward-looking approach among producers, who recognize that environmentally responsible practices contribute to the long-term health of their communities and natural resources. Sustainable practices might include methods such as recycling waste materials, minimizing water use, and selecting production techniques that limit environmental impact. By integrating sustainability into their production processes, producers can also differentiate their products in the market, appealing to consumers who prioritize environmentally friendly goods.

Another 21 percent of respondents believe sustainability is somewhat important but not their primary focus. These producers may practice sustainable methods selectively, possibly due to resource constraints or competing priorities. A small portion, 9 percent, report uncertainty about the importance of sustainable practices. This group may require additional guidance or education on the benefits of sustainability, particularly how it can improve soil health, support biodiversity, and reduce costs over time. Infrastructure that promotes sustainable practices—such as composting systems, rainwater collection, and solar-powered processing equipment—could

support these producers in adopting eco-friendly methods, making sustainable practices more accessible and feasible.

4.3 Government Support and Policy Advocacy

Producers express a strong need for government support to enhance their production capabilities and navigate regulatory requirements. Financial assistance, such as grants and loans, is the most desired form of support, with 71 percent of producers identifying it as the most beneficial type of government aid. This need for financial support reflects the high costs associated with expanding operations, acquiring equipment, and meeting compliance standards. Technical support and training, selected by 10 percent of respondents, also play an essential role in helping producers meet quality and safety standards. Training can empower producers with skills in food processing, packaging, and regulatory compliance, making it easier to enter markets and improve profitability.

Another 10 percent of producers believe that access to markets would be the most beneficial type of government assistance. This group may benefit from initiatives that facilitate connections with local and regional markets, ensuring that they can sell their products consistently and at fair prices. A smaller portion, 7 percent, indicate that regulatory simplification is a priority, suggesting that complex regulations may pose challenges to certain producers. Simplified regulations, coupled with clear guidance, would make it easier for producers to comply with legal standards, reduce production delays, and focus more on quality and innovation. Overall, these findings highlight the importance of a multi-faceted approach to government support, with a focus on both financial resources and capacity-building initiatives.

4.4 Feedback Mechanisms and Market Insights

Producers utilize various feedback mechanisms to gather insights from consumers, helping them improve product quality and align with market preferences. The most common method is direct consumer feedback, such as in-person surveys or focus groups, used by 67 percent of producers. This approach allows producers to engage with consumers firsthand, gaining valuable insights into customer preferences, satisfaction levels, and potential areas for improvement. Direct feedback also builds trust between producers and consumers, creating a foundation for loyalty and repeat business.

In addition to direct feedback, 16 percent of producers use social media to monitor consumer opinions and engage with customers. Social media platforms provide a convenient way to reach a broad audience, gather feedback, and promote products, making it a valuable tool for producers who wish to expand their market presence. Another 12 percent rely on sales data analysis to gauge consumer demand, using metrics such as purchase frequency, seasonal demand, and product popularity to make informed production decisions. A smaller group of producers, 6 percent, participate in fairs and cooking competitions to gather feedback. These events offer an opportunity to showcase products, attract new customers, and assess consumer reactions in real-time. Collectively, these feedback mechanisms allow producers to stay attuned to consumer preferences, adapt their offerings, and strengthen their market position.

4.5 Shared Resources: Storage Facilities and Equipment

Shared resources, such as storage facilities, play an essential role in supporting community-based food production. According to the data, 74 percent of producers would use a food storage facility if one were provided in their municipality or community. The availability of storage facilities addresses a critical need for producers, allowing them to preserve their products for longer periods, reduce waste, and manage inventory more effectively. Producers indicate a preference for different types of storage, with 76 percent expressing interest in dry storage, 83 percent favoring cold storage, and 79 percent interested in frozen storage. These preferences reflect the diverse needs of producers, as each storage type caters to different products, from fresh produce to frozen seafood.

A storage facility equipped with these options would enable producers to maintain product quality, manage inventory across seasons, and reduce spoilage. For perishable goods like fruits, vegetables, and dairy, cold and frozen storage are crucial, especially for producers seeking to extend product shelf life and meet market demand during off-peak periods. In addition, a communal storage facility fosters cooperation among producers, who can share resources, reduce individual costs, and support one another in managing inventory. Access to shared storage not only benefits individual producers but strengthens the overall resilience of the local food system, as products can be stored safely until they are ready for market distribution.

4.6 Interest in Collaborations and Joint Processing Initiatives

Collaboration among producers is widely viewed as beneficial, with 73 percent expressing interest in working with other local stakeholders for joint processing or marketing initiatives. This interest in collaboration reflects producers' awareness of the advantages that come from pooling resources, sharing knowledge, and leveraging each other's strengths. Collaborative processing and marketing initiatives can reduce operational costs, enhance product quality, and expand market reach, making it easier for small-scale producers to compete in larger markets. In a collaborative setting, producers can work together to optimize processing efficiency, streamline distribution, and increase production volumes, ultimately resulting in higher profits and improved product availability.

A smaller portion, 23 percent, are open to collaboration but remain cautious, indicating that they might need further guidance on how joint initiatives can benefit their operations. These producers may be concerned about managing shared responsibilities or retaining control over their products. However, with structured partnerships and clear roles, these concerns can be mitigated, making collaboration a viable and attractive option. For these collaborative efforts to succeed, community infrastructure such as shared processing facilities, marketing resources, and distribution networks is essential. Such infrastructure not only facilitates cooperation but also provides producers with access to equipment and resources that might otherwise be cost-prohibitive.

4.7 Challenges in Sourcing Local Ingredients

Producers face several challenges in sourcing local ingredients, which impacts their ability to produce food consistently. Limited availability of certain ingredients is a significant issue, with 71 percent of producers indicating that this affects their production. This limitation may arise due to seasonal fluctuations, geographic constraints, or inconsistent supply chains, which can make it difficult for producers to plan and manage their operations. In addition, 61 percent of producers report that seasonal fluctuations in ingredient availability pose a challenge, as certain crops may only be available during specific times of the year. These seasonal cycles can disrupt production schedules, forcing producers to rely on alternative ingredients or adjust their product offerings.

Limited or no storage options present further difficulties, with 45 percent of producers noting this as a challenge. Without adequate storage, producers may struggle to stockpile ingredients or preserve surplus products, leading to increased waste and lost revenue. Transportation issues also hinder ingredient sourcing, as reported by 43 percent of producers, who may find it challenging to transport ingredients from farms to processing facilities or markets. Additionally, maintaining consistency in the quality of raw materials is a challenge for 39 percent of producers, which can impact product quality and customer satisfaction. Financial constraints also affect ingredient sourcing, as 59 percent of respondents report a lack of cash to purchase and store products. Addressing these challenges requires coordinated efforts to improve infrastructure, streamline supply chains, and provide financial support to ensure that producers have reliable access to high-quality ingredients.

4.8 Openness to Innovation and Consumer Preferences

Producers show a strong interest in exploring innovative techniques or recipes for locally processed foods, with 63 percent reporting that they are always open to innovation. This openness to new methods reflects a proactive approach to meeting evolving consumer preferences, as producers recognize the value of adapting their products to align with market trends. Innovation in food processing could include experimenting with new recipes, introducing unique flavors, or using alternative ingredients that appeal to health-conscious or environmentally aware consumers. Furthermore, 32 percent of producers are open to innovation depending on feasibility and market demand, indicating a cautious but flexible approach to adopting new techniques. Only 4 percent prefer to stick to traditional methods, perhaps due to familiarity with established practices or a preference for maintaining cultural authenticity in their products.

Supporting producers' openness to innovation requires a policy environment that encourages experimentation and provides resources for product development. Infrastructure such as test kitchens, research labs, and pilot processing facilities can enable producers to experiment with new methods safely and efficiently. Access to grants or subsidies for product development could further encourage producers to pursue innovation, helping them differentiate their products and appeal to diverse consumer segments.

The data underscores the critical role of community support, sustainable practices, government assistance, and collaboration in strengthening the local food processing sector. Producers demonstrate a strong interest in community involvement, sustainability, and collaboration, all of which contribute to building a resilient food system that benefits both producers and consumers.

To support these goals, investment in infrastructure such as shared processing facilities, storage units, and transportation networks is essential. These resources not only reduce operational costs but foster cooperation among producers, allowing them to overcome challenges related to ingredient sourcing, production efficiency, and market access.

Government policy should focus on providing financial assistance, technical training, and regulatory guidance to producers. Simplified regulations and market access facilitation would also benefit producers, particularly those new to commercial food production. Feedback mechanisms, including direct consumer interactions, social media, and sales data analysis, provide producers with valuable insights that guide product development and quality control efforts. Establishing support systems that allow producers to collect and respond to feedback effectively will ensure that they can continuously improve their offerings and meet market demand.

A well-coordinated approach to community management and policy advocacy can create a thriving, sustainable food processing sector that empowers local producers. By investing in infrastructure and aligning policies with producer needs, stakeholders can support economic growth, enhance food security, and foster a vibrant food culture within the community. The findings in this section underscore the importance of a collaborative, resource-supported framework that allows producers to thrive and adapt in an evolving market environment.

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

Consumer Preferences and Willingness to Pay for Locally Processed Products

Introduction

The proposed Food Innovation Center in Yap aims to support local food processing and empower the community by offering products that align with consumer preferences and values. This report delves into the demographics of potential consumers, their product and packaging preferences, price expectations, purchasing attitudes, and willingness to support social causes through their purchases. The insights gathered from this survey reflect an opportunity to create a sustainable and culturally integrated food processing initiative that meets the unique needs of Yap's consumers.

1. Demographic Profile of Respondents

The demographic breakdown of survey respondents provides an essential foundation for understanding their preferences. Out of the total respondents, 43 percent are male, and 57 percent are female, indicating a slight overrepresentation of women in the consumer survey. Age-wise, nearly half of the respondents, at 49 percent, are between the ages of 31-45, followed by 22 percent in the 56-60 age range. Respondents aged 18-30 make up 21 percent, while only 7 percent are over 60. This age distribution shows a consumer base predominantly in their working and family-rearing years, likely with disposable income for food purchases. This demographic profile suggests a potentially strong market for local, nutritious food products designed to appeal to health-conscious individuals, as well as those seeking convenient food options that align with local food traditions and values.

2. Consumer Interest in Locally Processed Food Products

Consumer interest in locally processed foods is diverse, with significant interest in products that align with traditional diets. Banana chips emerged as one of the most popular items, with 70 percent of respondents expressing interest in purchasing them. Other highly favored items include coconut milk (61 percent), breadfruit chips (55 percent), and bread and baked goods (60 percent). Chicken products also showed considerable interest at 58 percent, while 67 percent expressed interest in fruit juices, demonstrating a demand for both traditional snacks and cooking ingredients that are easy to integrate into daily meals.

Products with comparatively lower interest include coconut flour, sea salt, and taro flour, each drawing positive responses from less than 30 percent of respondents. Fish and seafood products also showed mixed levels of interest, with only 38 percent expressing interest in dried fish and 31 percent in salted fish, suggesting a need for innovations or quality improvements in these areas. A category-specific breakdown reveals interest in culturally significant items such as rope and fiber products, with 62 percent expressing interest, hinting that the integration of cultural products alongside food items may broaden the appeal of the Food Innovation Center's offerings.

3. Packaging Preferences and Important Packaging Features

Yap consumers demonstrate clear preferences for certain types of packaging, placing high importance on both durability and environmental sustainability. Bottled packaging was the most popular choice, with 70 percent of respondents preferring it, followed closely by vacuum-sealed pouches at 69 percent, and bagged options at 67 percent. Jarred options were somewhat less popular, with only 48 percent indicating preference, and sachets had the lowest interest at 40 percent. These preferences for specific packaging types reflect a desire for options that support product freshness and durability, important in a climate where storage conditions may vary widely.

Respondents also highlighted the importance of environmentally friendly packaging, with 51 percent identifying it as the most important feature and 31 percent rating it as important. Convenience, such as easy-to-open or resealable packaging, was another priority, with 28 percent rating it as the most important feature and 22 percent as important. Attractive packaging was a lower priority, with only 11 percent considering it most important, and 56 percent regarding it as somewhat important, indicating that practical considerations around cost and sustainability significantly outweigh visual appeal.

4. Pricing Expectations and Factors Affecting Purchase Decisions

Price sensitivity among Yap consumers is evident, as most respondents expressed a preference for affordable pricing in locally processed foods. Forty-nine percent consider $5 or less per unit as reasonable, while another 37 percent are comfortable with prices between $5-$10. Only 12 percent were interested in products priced between $10 and $20, and just 1 percent found prices over $20 acceptable. This preference for affordable price points suggests a need for the Food Innovation Center to balance product quality with competitive pricing to ensure accessibility and regular purchases.

In terms of factors influencing purchasing decisions, price was overwhelmingly the top priority, with 65 percent rating it as the most important factor. Quality was the next most crucial consideration, with 48 percent identifying it as essential. Nutritional value also holds importance, with 22 percent rating it as most important. Conversely, factors like brand reputation and convenience scored lower, suggesting that consumers are primarily motivated by affordability and quality. This finding indicates that any pricing strategy should focus on maximizing value while maintaining quality, as these aspects strongly impact consumers' purchase decisions.

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

Consumers in Yap place high value on fresh, locally sourced ingredients, with 76 percent considering it very important that locally processed foods use fresh, local sources, and an additional 14 percent rating it as important. Health benefits also resonate strongly, with 72 percent highlighting that local foods should contribute to a healthy diet, while 24 percent consider this important. These insights suggest that the Food Innovation Center should prioritize locally sourced and minimally processed ingredients to align with consumer expectations of quality and freshness, thereby enhancing the perceived value and authenticity of the products.

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

The likelihood of consumers purchasing locally processed foods increases when these products are convenient and accessible, with 60 percent of respondents very likely to buy such products if they are easy to access, and an additional 21 percent likely to do so. Traditional flavors hold particular appeal, with 78 percent of respondents showing preference for traditional flavors over exotic or imported ones. Sweet and spicy flavors are also popular, each preferred by 61 percent of respondents. Other desired flavors include hot spicy and savory, with each flavor profile appealing to over half of respondents. These preferences underscore the importance of offering easily accessible products with flavors that align with traditional tastes while also catering to diverse flavor interests within the community.

7. Frequency and Location of Purchase

The frequency of purchase for locally processed foods is promising, as nearly half (48 percent) of respondents indicated they would likely buy these foods weekly, while 43 percent suggested they would buy daily. This purchasing pattern reveals a potential for high demand and frequent consumption if locally produced foods meet consumer expectations on quality, affordability, and convenience. In terms of preferred purchase locations, local markets stand out as the primary choice, with 79 percent preferring these venues over supermarkets or roadside stands. This preference underscores the importance of accessible, community-focused distribution channels in ensuring the success of locally processed foods.

8. Willingness to Support Social Causes and Pay Extra

There is a strong willingness among Yap consumers to support locally processed products that contribute to social causes, such as empowering women’s groups or supporting local farmers. Ninety percent of respondents expressed willingness to buy such products, with 87 percent prepared to pay up to 10 percent more for items that contribute to social causes, and 9 percent willing to pay more than this. This inclination toward socially responsible purchases suggests a viable strategy for the Food Innovation Center to market its products as community-focused and impactful, enhancing appeal and encouraging consumer loyalty.

9. Payment Preferences and Importance of Product Shelf Life

Cash remains the overwhelmingly preferred payment method for Yap consumers, with 97 percent of respondents indicating a preference for cash transactions. Credit or debit card use, as well as mobile payment options, had minimal support, highlighting the need for cash-based sales

to accommodate consumer preferences. Alongside payment methods, the importance of product shelf life was evident, with 79 percent rating it as very important that locally processed foods have a long shelf life, while 19 percent considered it important. These preferences indicate a need for durable, well-preserved products and straightforward payment methods that align with local practices.

10. Awareness and Preference for Local Over Imported Products

Consumer awareness of locally processed products available in Yap is relatively high, with 62 percent reporting they are somewhat aware, and 28 percent stating they are very aware. This level of awareness underscores a growing familiarity with local products, potentially supporting greater adoption of Food Innovation Center products. In terms of preference, 42 percent of respondents stated they always prioritize local products over imported options, with another 33 percent occasionally doing so. Furthermore, 61 percent of respondents indicated they would be very likely to choose locally processed foods over imported goods if price and quality were comparable. This preference for local products highlights an existing consumer base receptive to local initiatives and represents a favorable environment for the Food Innovation Center's efforts to promote locally produced foods.

This comprehensive analysis of consumer preferences, attitudes, and values suggests strong support for a Food Innovation Center in Yap. Consumers show clear preferences for culturally resonant products, sustainable and convenient packaging, fresh ingredients, and reasonable pricing. Affordability and quality are critical considerations, while environmental and social values also play a significant role in consumer choices. Consumers' willingness to support community-driven initiatives and health-focused products indicates that the Food Innovation Center can find success by aligning its offerings with these values. By prioritizing accessibility, sustainability, and cultural relevance, the Food Innovation Center has the potential to enhance local economic growth and contribute positively to the community well-being in Yap.

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

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

Introduction

This report examines the community management landscape in Yap, focusing on the needs, challenges, and strategies identified by community organizations that support farming families and food producers. Data gathered from community leaders through a comprehensive survey reveal insights into governance practices, resource needs, environmental resilience, and inclusivity. Addressing these needs can empower communities to build a sustainable future, enhance food security, and promote economic resilience in Yap.

1. Demographic Profile and Organizational Representation

The survey respondents provide a demographic snapshot that sheds light on the community leadership composition in Yap. Of the respondents, 31 percent were male, and 69 percent were female, indicating high female participation in community organizations. Age distribution among leaders shows that 38 percent fall within the 31-45 and 56-60 age brackets, while only 6 percent are in the 18-30 age range and 19 percent are over 60. This mature demographic suggests an experienced leadership base engaged in community advocacy.

In terms of organizational affiliation, the largest representation came from underrepresented groups, including women's and youth groups, accounting for 44 percent of respondents. Other participants represented agricultural producer organizations, traditional leadership, municipal authorities, and NGOs. Additionally, smaller groups such as the NIWA (Neighboring Island Women Association) and land and sea management associations also participated, highlighting the diversity of community leadership in Yap. However, no representatives from aquaculture or fishing organizations responded, pointing to a potential gap in representation within these sectors. This variety in organizational types reflects the multi-dimensional nature of Yap's community structure.

2. Frequency and Regularity of Meetings

Community organizations in Yap prioritize regular engagement with members, with half of the respondents reporting that their organizations meet monthly. A further 31 percent meet quarterly, and 19 percent meet annually. Notably, no organization meets weekly, which may indicate the

challenges of consistent meeting logistics or geographic constraints in Yap. Monthly meetings suggest a sustained effort to engage with community members, discuss pressing issues, and implement ongoing projects. This engagement structure reflects the level of organization necessary for effective management and responsiveness to community needs.

3. Identified Needs for Effective Community Management

Respondents identified several areas where they believe their organizations need additional support to enhance management effectiveness. Leadership training was noted by 69 percent of respondents as a key requirement, emphasizing a need for stronger governance skills among community leaders. Technical assistance in farming and fishing was also significant, with 69 percent identifying it as a priority, which reflects a need for knowledge in sustainable food production practices.

Additionally, value chain development, including transportation, packaging, and food storage, was highlighted by 75 percent, as these logistical aspects directly impact the viability of local products in reaching broader markets. Environmental conservation practices were another priority, with 88 percent of respondents citing it as critical. Economic management and marketing skills were also essential, with 75 percent identifying these as crucial for effective community management. This diverse range of needs underscores the necessity for holistic support that combines leadership training, technical expertise, environmental practices, and economic skills.

4. Food Production Challenges and Community Needs

The survey reveals specific challenges in food production that community members often bring to their leaders. Sixty-nine percent reported that increased communication is needed among community members to improve coordination and information sharing. A lack of access to production inputs, including seeds, tools, and livestock, was also identified as a key issue, with 63 percent expressing a need for these resources. Clean water and affordable transportation were also major concerns, cited by 38 percent each, highlighting infrastructure limitations in supporting sustainable agriculture.

Further, climate-resilient crops and training in agricultural techniques were important needs, as 69 percent of respondents noted these areas as necessary for overcoming environmental challenges. Road maintenance also emerged as a pressing issue, with 81 percent of respondents identifying it as essential for supporting food production logistics. These challenges point to a need for both physical infrastructure improvements and technical assistance to foster resilient and sustainable food systems.

5. Perceptions of Good Governance

Respondents described good governance through a lens of transparency, accountability, and community-centered action. Responses underscored the importance of collaboration, with one respondent noting that “working as one” toward shared goals is vital to successful governance. Other responses emphasized transparency, with some stating that governance should operate

with clear communication, responsibility, and inclusiveness. Leaders also emphasized the need for public awareness of policies and decisions, reflecting a commitment to making informed choices that reflect community needs.

These principles suggest that Yap's leaders value governance structures that prioritize service, inclusivity, and accountability. The consensus on transparency and service to the people illustrates the commitment of community organizations to fulfill their responsibilities effectively and maintain trust within the community.

6. Supporting Local Food Producers and Addressing Community Challenges

The survey identified various challenges organizations face in supporting food producers. Climate change was a major issue, with respondents mentioning its impact on crop yields, seasonal droughts, and the increased need for adaptation. Manpower limitations, inadequate equipment, and lack of funding were frequently cited as barriers to effective support. One respondent from Fais highlighted the historical impact of phosphate mining, which has resulted in degraded agricultural land, compounding the challenge of food security.

Additional challenges included limited market access, poor marketing skills, and inadequate knowledge among community members, which restrict economic opportunities for local producers. These responses indicate that communities require significant support in both infrastructure and education to overcome environmental and economic challenges impacting food production.

7. Community Interest in Producing for a Food Processing Plant

Interest in producing food for a local processing plant is high, with 88 percent of respondents indicating that their members would be interested. However, 75 percent noted that training would be essential for members to participate effectively, reflecting a need for capacity-building initiatives. Only 6 percent of respondents stated that their members farm only for home consumption, and none indicated that farming is undesirable. These responses suggest an openness within the community to expand agricultural activities and produce food for commercial purposes if given the necessary resources and training.

8. Anticipated Benefits of a Local Food Processing Plant

The potential benefits of establishing a food processing plant were widely recognized by respondents. Seventy-five percent believe that a processing plant could enhance food security and support traditional practices, while 81 percent anticipate improvements in health, nutrition, and economic strength. Other benefits cited include job creation, as noted by 69 percent, and reduced dependence on imported foods, highlighted by 75 percent. No respondents felt that a food processing plant would be detrimental, reflecting widespread support for such an initiative to bolster local food systems and economies.

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

Market access remains a significant barrier for many organizations, with limited transportation infrastructure affecting 69 percent of respondents. Insufficient supply to meet market demand and compliance with quality standards were also challenges, with 75 percent and 53 percent, respectively, identifying these issues. Respondents cited limited connections to markets and a lack of structured pathways to reach broader consumer bases, underscoring the need for investment in transportation and supply chain development.

Regarding decision-making, community participation was generally moderate to low, with only 13 percent indicating high participation levels. This finding highlights a need for stronger engagement strategies to ensure that community members actively participate in decisions affecting food production and resource management. Improved decision-making inclusivity could foster a greater sense of ownership and encourage more effective community management practices.

10. Inclusivity, Educational Programs, and Climate Resilience Efforts

The survey reflects a commitment to inclusivity and sustainable practices among community organizations. Seventy-five percent of respondents believe that gender equality is incorporated into leadership roles and decision-making, while 56 percent see their organizations as inclusive of differently-abled individuals and senior citizens. Youth involvement is also prioritized, with 63 percent indicating that their organizations actively engage youth in training and participation. These figures underscore the emphasis on equitable representation across different community groups in Yap.

Educational programs on sustainable food production, however, are limited, with only 13 percent of respondents reporting regular training. Occasional programs were noted by 20 percent, and 67 percent stated that no programs were available. This gap indicates an opportunity for government or NGOs to provide targeted training in sustainable agriculture practices.

The community also demonstrates a proactive approach to climate resilience, employing strategies like water conservation (44 percent) and crop diversification (25 percent). Additional methods include disaster preparedness, with some respondents utilizing Marine Protected Areas (MPAs) to manage marine resources. Despite these efforts, only 50 percent feel moderately prepared for climate-related disasters, highlighting a need for improved resources and training in disaster readiness and environmental resilience.

This assessment provides a detailed view of the community management landscape in Yap. Key areas identified for support include infrastructure development, leadership training, market access, and climate resilience initiatives. The findings highlight a strong community commitment to sustainability, inclusivity, and the preservation of traditional practices. Addressing these needs will empower Yap’s community organizations to build sustainable, resilient food systems and strengthen the region's capacity to address the challenges of climate change and economic development. By supporting these organizations, Yap can foster a future where local food production, community engagement, and environmental stewardship are integral to its sustainable development and resilience.

Federated States of Micronesia

Food Systems Solutions Project

Yap Information Infrastructure Providers & IT Specialists Survey Results

1. Introduction and Demographics of Information Providers

The development and maintenance of information infrastructure in Yap are critical to addressing the unique connectivity needs of the region. As an island state within the Federated States of Micronesia (FSM), Yap faces specific challenges related to geography, population distribution, and limited resources. The survey conducted reflects the insights of information infrastructure providers and IT specialists, all of whom are male (100%) and aged between 31 and 45 years. This demographic suggests a concentrated group of mature professionals with a significant level of experience in the field, which is crucial for handling the technical and logistical demands associated with Yap's infrastructure projects. The experience level within this group bodes well for future developments, as these providers possess the practical knowledge needed to navigate both technological and regulatory landscapes in Yap.

2. Expected Impact of Underwater Cable on Connectivity and Affordability

One of the most transformative projects currently impacting FSM’s infrastructure is the deployment of an underwater cable, designed to enhance connectivity across the state, including Yap. Survey responses indicate that 33% of participants believe the cable will improve communication between FSM’s smaller states, which is vital for inter-state cooperation and economic development. Another 33% of respondents anticipate that the cable will increase capacity and reliability, which would provide Yap with a more stable and consistent internet connection. The remaining 33% expect that this added connectivity will expand access without necessarily affecting affordability. These projections underscore the cable’s potential to dramatically improve Yap’s digital infrastructure by enabling faster, more reliable communications and reducing the state’s reliance on costly satellite connections. In the long term, this cable could reduce Yap’s digital divide, connecting more citizens and potentially fostering economic opportunities through enhanced digital access.

3. Connectivity Gaps Affecting Outer Island Communities

Despite advancements in connectivity on the main island, Yap’s outer islands still experience significant barriers to reliable internet access. According to survey data, 33% of respondents pointed to the lack of stable connections and inadequate equipment as major issues, which hinders consistent communication across the islands. Another 33% mentioned that only the main island currently has access to a submarine fiber link, with outer islands relying on expensive satellite connections, which are unaffordable for most individuals. Finally, the remaining 33%

indicated that some outer communities continue to depend on SSB radios, which, while affordable, have inconsistent reception and limited reach. These connectivity gaps reflect broader socioeconomic challenges, as individuals in more isolated communities are unable to benefit from the same digital services as those on the main island. Improving connectivity in these outer islands is essential to ensure digital equity, promote education, and support social and economic inclusion across Yap.

4. Planned Solutions for Improving Connectivity in Remote Areas

In response to the pressing need for reliable connectivity in Yap's remote areas, several initiatives are in progress. The survey shows that 33% of respondents reported plans to install ISP-level satellite links specifically designed for the outer islands. This approach aims to reduce reliance on costly individual satellite connections, creating more stable, community-wide access. Another 33% are advocating for increased capacity from the National Telecommunications and Information Administration (TC&I), seeking additional bandwidth and technical resources to support Yap's growing internet needs. The remaining 33% are exploring partnerships with Starlink and other regional ISPs, which could provide new, innovative options for remote connectivity. These strategies represent a proactive approach to infrastructure expansion, focusing on solutions that are both feasible and sustainable within Yap's geographic and economic context. By enhancing connectivity in these areas, Yap aims to facilitate better access to education, healthcare, and economic opportunities for all residents.

5. Assessment of Current Internet Infrastructure and Quality

While Yap's current internet infrastructure provides a foundation for digital connectivity, survey responses indicate a need for further upgrades to meet evolving demands. One-third (33%) of respondents consider the infrastructure to be robust but in need of additional spectrum to increase capacity and accommodate higher traffic loads. Another 33% noted that they primarily rely on the iBoom ISP for both office and home connections, suggesting limited provider options within Yap. The final 33% felt that while the infrastructure was adequate for basic needs, there is still room for improvement to enhance reliability and speed. Expanding the existing infrastructure to meet the growing digital needs of Yap's residents is essential, as is exploring ways to diversify ISP options to foster competition. Future investments should focus on increasing bandwidth, improving resilience, and ensuring that all parts of the state benefit from reliable and high-quality service.

6. Internet Service Barriers and Strategies for Bandwidth Optimization

Enhancing internet service quality is a priority in Yap, particularly in terms of optimizing bandwidth allocation to ensure equitable access. According to the survey, 33% of respondents recommend expanding GPON (Gigabit Passive Optical Network) technology to more communities, which would increase connectivity reach and reduce congestion in areas with slower speeds. Another 33% mentioned the importance of infrastructure support from the Open Access Entity (OAE), an organization that aids in providing foundational infrastructure for internet carriers in FSM. The remaining 33% highlighted the importance of financial contributions from internet users, which could support the sustainable expansion and

maintenance of bandwidth resources. By implementing these measures, Yap aims to improve bandwidth availability across all communities, thereby supporting faster and more reliable internet access for residents in underserved areas. These strategies are integral to ensuring that Yap's digital landscape can meet the demands of a modern information society.

7. Challenges in Specific Locations and Planned Connectivity Improvements

Certain areas within Yap, such as high-terrain regions and outer islands, experience notably slow internet speeds due to geographic challenges. The survey data reveals that 33% of respondents identified high-terrain areas as requiring additional towers to improve signal reach and quality. Another 33% reported ongoing efforts to expand GPON coverage to outer islands, with a targeted completion date set for the end of the year. The final 33% noted that Satawal, a remote island community, has already implemented Starlink, funded by local contributions, to improve its internet access. These targeted improvements aim to overcome the specific connectivity challenges faced by residents in remote or geographically complex areas. By expanding tower infrastructure and leveraging community resources to introduce new technology, Yap seeks to establish a more uniform level of connectivity across its islands, ensuring that even the most isolated communities have access to digital resources.

8. Hardware, Software, and Data Management Needs

Beyond physical infrastructure, Yap's IT sector requires skilled personnel and efficient systems for effective data management. According to the survey, 33% of respondents highlighted the need for organized data management solutions, such as filing forms electronically, to streamline communication and information flow. Another 33% noted that while hardware is accessible, skilled staff are essential to maintain and operate the systems effectively. The final 33% stressed the importance of collaboration between state and national governments to strengthen technical infrastructure and support efficient data collection, storage, and analysis. These needs underscore the necessity for capacity-building initiatives and training programs to enhance the technical skills of the workforce. Addressing these challenges will be vital for Yap as it seeks to leverage technology for improved administrative processes and decision-making.

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

Cloud-based technology has become an essential tool for Yap's information infrastructure, with 100% of survey respondents confirming its use. The adoption of cloud services offers scalability and accessibility, supporting Yap's remote work capabilities and enabling real-time data access for government and private sectors alike. Furthermore, 67% of respondents indicated plans to implement traffic management techniques, such as Quality of Service (QoS), to prioritize essential data, particularly for the agricultural sector. This prioritization is expected to benefit Yap's agrarian economy by ensuring that critical information reaches farmers and rural communities quickly. The remaining 33% reported no immediate plans to adopt traffic management. Together, these initiatives reflect Yap's commitment to enhancing data accessibility and ensuring that crucial services are prioritized, which is vital for economic growth and community resilience.

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

Content Delivery Networks (CDNs) and caching systems present additional opportunities to improve data access in Yap, especially in remote regions. According to survey results, 33% of respondents use caching servers to store frequently accessed content, which helps reduce dependence on external internet connections and improve service speed. Another 33% of respondents stressed the need to establish static systems that support local networks, which would facilitate faster internal data transfer across Yap's islands. The final 33% emphasized the necessity for IT training and skills development to support these systems, ensuring they remain sustainable. Additional infrastructure challenges include the need for a redundancy line to Yap to ensure continuity in service during outages, as well as improved health education resources. Addressing these broader issues, alongside implementing CDN and caching solutions, will be essential for supporting a resilient and reliable digital infrastructure. These improvements promise to reduce data access latency and support a more connected, informed society.

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

1. Introduction to Yap's Food Retail Industry

Yap's food retail sector plays a crucial role in supporting both the local economy and the community's cultural and dietary preferences. The Food System Solutions (FSS) survey captures insights from food distributors and retail sellers, with a focus on the types of locally made processed foods available, challenges faced by retailers, and the perceived future of local food production. This report synthesizes the survey data to present a comprehensive view of Yap's food retail environment, highlighting key trends, obstacles, and opportunities. The results reveal strong community support for local foods and a demand for facilities and infrastructure that could elevate the local food industry's capabilities and reach.

2. Demographic Insights of Survey Respondents

The demographic composition of survey respondents provides a window into the characteristics of Yap's food retail sector. Out of the total respondents, 60 percent were female and 40 percent male, reflecting a significant presence of women in the retail landscape. Additionally, the age distribution of respondents highlights an experienced demographic: 60 percent of respondents are between 31-45 years old, while 40 percent fall into the 56-60 age range. No respondents were younger than 31 or older than 60. This age and gender profile suggests that food retail in Yap may be shaped by experienced, mid-career individuals who bring both knowledge and a personal commitment to the industry.

3. Types of Locally Processed Food Products Sold

The survey delves deeply into the types of locally processed foods that Yap's businesses sell. Baked goods such as donuts and muffins are the most commonly available local products, sold by 70 percent of businesses, whereas other items like banana chips, breadfruit chips, and breadfruit flour are far less common, available in only 10 percent of businesses. Additionally, items like pork products and hot sauce show moderate popularity, with 60 percent and 50 percent of businesses offering these products, respectively. Coconut-based products, including coconut milk, flour, and oil, are only available in 10-20 percent of stores. Traditional foods like dried fish, smoked seafood, and dried fruits also see low availability, with 10-30 percent of businesses offering these items. This distribution reflects a market that has room to expand its local product offerings, particularly in traditional and culturally significant foods that currently have limited availability.

4. Importance of Locally Made Processed Food Products

There is a strong consensus on the importance of locally made processed food products for Yap's food industry. A significant 78 percent of respondents believe that these products are "very important," while the remaining 22 percent regard them as "important." No respondents indicated that locally processed foods were of low importance. This clear agreement underscores the community's appreciation for local foods, not only for their cultural and nutritional value but also for their potential to foster economic growth and reduce reliance on imported foods. This prioritization aligns with global trends emphasizing local food resilience and food security.

5. Support for a Food Innovation Center

A food innovation center could provide much-needed facilities for food production, product development, and marketing in Yap. The survey reveals unanimous support for such an initiative, with 50 percent of respondents indicating "strong support" and the other 50 percent showing "support." This center would offer a shared commercial kitchen and other processing facilities, which could aid local businesses in overcoming the technical and logistical barriers currently limiting their production. The enthusiasm for this idea reflects retailers' desire for structured support to expand local food production, enhance product quality, and bring a greater variety of products to the Yap market. Such a center could also facilitate skill-building, collaboration, and innovation within the local food industry.

6. Challenges in Sourcing and Producing Local Food Products

Yap's retailers face multiple challenges in sourcing and producing local food products, impacting the variety and availability of items in stores. The most significant issue identified by respondents is limited access to quality raw materials, which affects 60 percent of businesses. Production costs are another critical barrier, with 20 percent citing high costs as an obstacle. Similarly, 20 percent of businesses struggle with distribution capabilities, limiting their ability to reach a wider market. Notably, challenges related to infrastructure and technical expertise are minimal, as no respondents indicated issues with processing facilities or knowledge of product development. This focus on raw material limitations and costs highlights the need for supply chain improvements to better support local producers and retailers in Yap.

7. Perceived Benefits of a Food Innovation Center

The survey identifies specific ways that a food innovation center could benefit Yap's businesses. For 40 percent of respondents, the primary benefit would be access to a commercial-sized kitchen and other processing facilities, which could enable small-scale producers to process larger quantities of goods. Fifty percent expressed interest in a facility where they could bring raw ingredients and have others prepare products for a fee. Research and development facilities were identified as beneficial by 70 percent of respondents, while technical assistance for product development was desired by all respondents. Marketing support, such as branding and product promotion, was also valued by 60 percent. These responses underscore the multifaceted role a food innovation center could play in supporting local businesses, from product development to market expansion.

8. Factors Influencing Collaboration with a Food Innovation Center

Retailers' willingness to collaborate with a food innovation center hinges on several key factors. All respondents cited financial gain as a motivator, indicating that profitability would be essential for sustained collaboration. Access to funding and grants was also crucial for 90 percent of respondents, highlighting the importance of financial support in enabling businesses to take risks and innovate. Furthermore, 70 percent were interested in market expansion opportunities, while 80 percent valued the ability to produce shelf-stable foods, which could reduce spoilage and increase product longevity. The potential to enhance community food security and support economic growth was universally important, showing that retailers are motivated by both personal and communal benefits. These insights reflect the dual focus on profitability and social impact among Yap's food retailers.

9. Consumer Demand and Price Sensitivity for Locally Processed Foods

The survey reveals that Yap's consumers exhibit high price sensitivity toward locally processed food products, with 90 percent of respondents indicating that price significantly impacts purchasing decisions. Only 10 percent reported that customers prioritize quality and uniqueness over price. Furthermore, purchasing frequency is high for local foods, with 67 percent of respondents noting daily purchases by customers, while 22 percent report weekly purchases. This trend indicates that while there is consistent demand for local foods, retailers must price their products affordably to ensure widespread consumer access. The reliance on price as a purchasing factor points to the need for cost-efficient production practices to maintain competitiveness.

10. Future Demand, Market Potential, and Recommendations

Looking toward the future, Yap's food retailers anticipate growth in consumer demand for locally processed foods. A majority (67 percent) expect moderate demand increases over the next two to three years, while 22 percent foresee significant growth. All respondents believe that products with cultural significance, and convenient ready-to-eat foods have the highest potential for market success in Yap. Eighty percent of respondents report that healthy and nutritious snack options will have the highest potential for success. Strategies to raise consumer awareness include promotional discounts and in-store sampling events, which 90 percent and 70 percent of respondents, respectively, recommended as effective ways to encourage product trials. Additional recommendations include partnerships with local chefs and influencers to boost product visibility and appeal. The survey concludes with an optimistic outlook for Yap's local food industry, emphasizing the potential for sustained growth and the role of community-oriented strategies in building consumer acceptance and trust.

The Food Retailer Survey for Yap reveals a vibrant but challenged food retail landscape, with local retailers committed to expanding the availability and variety of locally made processed foods. There is clear support for a food innovation center, seen as a solution to many of the sourcing and production obstacles that currently limit market growth. While price sensitivity among consumers is a consideration, the high purchasing frequency reflects a steady demand that could increase with the right support. By addressing raw material limitations, production costs, and distribution capabilities, Yap's food retail industry has the potential to thrive, bringing cultural and economic benefits to the community. The future of Yap's local food industry is

promising, driven by both community demand and a shared commitment to fostering a robust, self-reliant food system.

Federated States of Micronesia

Food Systems Solutions Project

Yap Food Retailer Survey - Stores Results

1. Demographics of Survey Respondents

The demographic profile of survey respondents provides a window into the composition of Yap's food retail sector. Out of the 15 respondents surveyed, 10 were female, comprising 67% of the sample, while 5 were male, making up the remaining 33%. This gender distribution highlights the active role of women in the local food retail industry, suggesting that women may be integral to retail operations and possibly to the community's food sourcing and supply chains. Age distribution further indicates that the sector is predominantly operated by middle-aged individuals, as 60% of respondents fall within the age group of 31-45 years. Thirteen percent are younger, aged between 18-30 years, while 20% are between 56-60 years, and just one respondent, representing 7%, is over 60 years old. This spread reveals that the primary drivers of food retail in Yap are individuals in their 30s and 40s, who may bring experience and maturity to business operations while still being young enough to innovate and adapt to industry changes. The engagement of these age groups indicates a workforce that may be stable, experienced, and capable of contributing actively to the growth and improvement of the food retail industry in Yap.

2. Availability of Locally Made Processed Foods

The survey highlights the range of locally made processed foods currently available through retailers in Yap, shedding light on consumer preferences, demand, and production challenges. Many products, particularly traditional foods, have limited availability. For example, only 33% of businesses offer banana chips, while 20% sell breadfruit chips, suggesting that there may be interest in these products but possibly not enough demand or production capability to make them widely accessible. Breads and baked goods, such as donuts and muffins, are more commonly available, with 60% of retailers stocking these items, indicating a demand for these locally produced baked goods, perhaps because of their convenience or appeal as daily staples.

Other traditional items like breadfruit flour and coconut milk have very low availability; none of the surveyed retailers offer these products, highlighting potential opportunities for new product lines if demand increases. Meat products, too, are limited, with only 13% of retailers offering chicken products and 40% providing pork meat. Coconut-based products such as coconut cooking oil are more accessible, with 40% of retailers carrying them, while other coconut derivatives like coconut flour and milk are notably absent. For seafood, smoked fish is the most common option, available at 27% of outlets, but other types like dried fish and fish syrups are rare, indicating a gap in seafood product diversity. The data reveals that some items, like hot sauce, taro chips, vinegar, and rope or mat products, have modest availability, each being stocked by only a few retailers. These findings suggest potential growth areas within the market, especially for products with traditional appeal and local ingredients.

3. Importance of Local Processed Foods in Yap

The survey indicates a strong community-wide consensus on the importance of locally processed food products in Yap. A substantial 93% of respondents rated these products as very important, while the remaining 7% also regarded them as important. This indicates broad recognition of the role that local food products play, not only in sustaining cultural heritage but also in strengthening the local economy by keeping revenue within the community. Locally processed foods likely provide Yap with unique products that align with traditional dietary preferences, which are increasingly valued in light of globalized diets and imported goods. Additionally, locally produced food items could enhance food security by reducing reliance on imported goods, which is particularly relevant for island communities like Yap. These results underscore that there is a shared belief in Yap's food industry that local food production is valuable for the community's well-being, cultural continuity, and economic health.

4. Support for a Food Innovation Center

Support for establishing a food innovation center in Yap is overwhelmingly positive among survey respondents. With 73% strongly supporting the initiative and an additional 20% offering general support, only 7% opposed the idea. This level of enthusiasm reflects the community's desire for a centralized facility that could provide resources and tools to support food production, encourage local business growth, and foster innovation in product development. A food innovation center could serve as a hub where retailers and producers collaborate to create and market new locally processed foods, benefiting both local businesses and consumers. The support for such a facility indicates a readiness within the community to explore avenues for product development, quality improvement, and potentially even new food processing methods. This innovation center could also provide a means for retailers to scale up their production by providing access to commercial-grade kitchens, professional packaging equipment, and training for entrepreneurs. In doing so, the center would help address some of the current constraints facing local producers and create a more diverse food offering for Yap's consumers.

5. Key Challenges in Local Food Production and Sourcing

Retailers in Yap face several challenges that impact their ability to source and produce locally made food products, as revealed by the survey results. One of the primary obstacles is inadequate infrastructure, with 80% of respondents citing insufficient processing and packaging equipment. This lack of infrastructure limits retailers' ability to produce on a scale that would meet local demand and compete with imported goods. Another significant challenge is the shortage of technical expertise in product development, as also reported by 80% of respondents. Without skilled personnel, it becomes difficult to create, refine, or expand product lines, which stifles growth and diversification within the local food industry. Additionally, 87% of respondents mentioned a shortage of trained workers, reflecting a workforce gap that may further hinder productivity and the consistent quality of local products. A further challenge reported by 27% of respondents is limited access to quality raw materials, which may affect the consistency and quality of the final products available to consumers. Together, these challenges highlight the critical areas that need attention to ensure a thriving local food processing sector in Yap.

6. Potential Benefits of a Food Innovation Center

The establishment of a food innovation center in Yap is seen as having numerous potential benefits for local businesses and the wider food industry. A significant 43% of respondents expect that access to a commercial-style kitchen and food processing facilities would help them increase production capacity and streamline their operations. Another 64% believe that a food innovation center would provide essential technical assistance, which could help in areas like recipe formulation, packaging, and ensuring product quality. Half of the respondents emphasized the value of potential collaboration with local farmers, as well as marketing support, which could assist them in connecting with the local market and expanding consumer awareness. Access to a food innovation center would thus help address the challenges related to infrastructure, expertise, and distribution, providing local businesses with the tools to improve product quality, increase volume, and ultimately meet consumer demand more effectively.

7. Collaboration with a Food Innovation Center

Respondents identified several factors that would motivate them to collaborate with a food innovation center, with financial incentives such as funding or grants for product development projects ranking as the top motivator. Ninety-three percent of respondents cited this need, underscoring the importance of financial support in enabling new product development and expansion. Market growth potential is another incentive, with 80% indicating that they would collaborate if it provided opportunities to reach a wider market. Additionally, 87% of respondents valued contributions to community food security and economic development, suggesting that they see the innovation center as a platform for supporting broader community goals. The combination of financial, social, and market-oriented incentives highlights a collaborative spirit among Yap's food retailers, who are keen to work with an innovation center to advance both their business objectives and community welfare.

8. Demand and Market Potential for Local Food Products

The data from this survey suggest a favorable outlook for the demand and growth potential of locally processed food products in Yap. More than half of the respondents (53%) noted high demand for these products, while the remaining 47% observed moderate demand. This consensus on demand suggests a robust market in Yap that could benefit from an increase in locally made products. Respondents also highlighted specific product types that they believe have the highest potential for success. Eighty-seven percent of respondents said healthy and nutritious snack options had the highest potential for success. A substantial 64% identified products with cultural or traditional significance as having strong market potential, while 73% noted that convenient, ready-to-eat foods could also perform well. These findings indicate that the market is receptive to culturally significant and easily accessible foods, though unique or specialty products are viewed as less impactful, with only 33% of respondents citing these as high-potential items.

9. Factors Influencing Consumer Acceptance and Preferences

The survey reveals that consumer acceptance of new locally made food products is influenced by several critical factors, with quality and taste emerging as the most important. Eighty-seven

percent of respondents cited these characteristics as essential for driving consumer interest. Affordability is also crucial, with 93% of respondents indicating that price significantly impacts consumer willingness to purchase. Health benefits and nutritional value further influence consumer decisions, as noted by 93% of respondents, reflecting a preference for foods that support well-being. Cultural appeal is another important factor, suggesting that products aligning with traditional tastes and values are likely to be more readily accepted by consumers. Despite the relevance of these factors, packaging and presentation received less emphasis, with only 33% highlighting its importance, suggesting that other attributes take precedence in consumer choices.

10. Strategies to Enhance Awareness and Promote Local Products

Respondents offered several strategies to boost consumer awareness and acceptance of locally made food products. Sampling and tasting events emerged as the most popular strategy, with 87% supporting in-store trials, highlighting the importance of allowing consumers to experience products firsthand. Promotional discounts were also widely endorsed, with 80% of respondents advocating for these offers as a way to attract consumers and drive purchases. Another effective strategy identified was collaborating with local chefs or influencers, with 80% of respondents noting the potential benefits of chefs or influencers demonstrating product uses. These promotional approaches underscore the need for experiential marketing, which can help build consumer trust, generate interest, and ultimately expand the market for locally processed food products in Yap.

This survey provides a comprehensive look into Yap's food retail sector, emphasizing the strong local demand for culturally relevant food products, the challenges facing the industry, and the potential solutions that a food innovation center could offer. The data highlights the willingness of retailers to engage with such a center to overcome infrastructural limitations and address production challenges, ultimately positioning the local food industry for future growth.

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

1. Demographics of Policymakers

The demographic profile of policymakers in Yap underscores a predominantly male composition, with 95% of respondents being male and only 5% female. This significant gender disparity suggests that men hold most policymaking positions, which could affect policy perspectives and priorities. The age distribution of respondents indicates a well-experienced policymaking body; 63% of the participants are over 60 years old, while 26% are in the 56-60 age range. Only 11% fall within the 31-45 age range, and no respondents are under 30. This distribution implies that Yap's policymakers bring substantial experience to their roles. However, the lack of younger policymakers may limit fresh perspectives, which could be vital for fostering policies that address the future needs of the food system and broader community. This demographic insight into Yap's policymaking body highlights both a strength in experience and a potential gap in generational diversity, which may impact the direction and adaptability of future policies.

2. Perceived Benefits of a Food Innovation Center

Policymakers in Yap identified various benefits of establishing a Food Innovation Center, with the highest priority placed on increasing food security. This benefit was considered "most important" by 56% and "important" by 28%, reflecting a broad agreement that food security is essential in Yap. A Food Innovation Center could strengthen local food production, reducing reliance on imported foods and enhancing resilience against global supply chain disruptions. Improving nutrition and health was also a priority, with 29% rating it as "most important" and 53% as "important." By supporting local processing of nutritious foods, the center could promote healthier dietary options and improve public health outcomes. Job creation and economic growth received varied responses; 26% rated it as "most important," but 42% saw it as "less important." This suggests that while economic benefits are valued, they may be secondary to food security and health. Community development and entrepreneurial opportunities were viewed as "moderately important," and "somewhat important" by 63% and 60%, respectively. Overall, the responses reflect a vision for the center that prioritizes food security and public health while also supporting economic and social growth.

3. Priorities for Locally Processed Foods

The survey sought policymakers' views on which locally processed foods should be prioritized by the Food Innovation Center. Local staple crops like taro and breadfruit emerged as the highest priority, with 65% rating them as "most important." These staples hold cultural significance and form a dietary foundation in Yap, so developing processing techniques for them could support

traditional food habits and enhance food security. Fruits and vegetables were also a priority, with 42% of respondents marking them as "most important" and 21% as "important." Focusing on these items aligns with a trend toward promoting healthier diets and locally grown produce. Fish and seafood, another local staple, received strong support as well, with 61% rating it as "important." In contrast, high-value specialty products such as coffee, kava, and spices were deemed "less important" by 75%, and crafts were similarly viewed as lower priorities. This emphasis on staples and locally grown produce suggests a policy direction focused on self-sufficiency and dietary traditions, with less focus on niche or luxury items.

4. Key Features of a Food Innovation Center

Policymakers emphasized the need for specific features in the proposed Food Innovation Center to ensure its effectiveness. Training and education spaces were identified as the top priority, with 59% rating this feature as "most important." This reflects the need to build skills in food processing, quality control, and product development, empowering local producers to develop high-quality products. Processing and packaging equipment was also prioritized, with 41% of respondents considering it "most important." Access to such equipment could help local producers maintain quality and comply with food safety standards, boosting consumer trust in local products. Research and development facilities were also valued, with 25% marking them as "most important" and another 25% as "important." These facilities could foster innovation by allowing experimentation with new products, recipes, and processing techniques. Shared kitchen spaces and market access were somewhat less critical, though they are likely beneficial for collaboration and distribution. Together, these features support a comprehensive approach to food innovation that includes training, infrastructure, and product development.

5. Importance of Involving Local Farmers and Producers

Involving local farmers and producers in the planning and operation of the Food Innovation Center was overwhelmingly supported by policymakers. Ninety-five percent rated their involvement as "very important," and the remaining 5% as "important." This consensus reflects an understanding that local knowledge and firsthand experience are essential for creating a center that effectively addresses community needs. By incorporating input from those directly engaged in food production, the center can ensure its programs, facilities, and resources are aligned with the practical challenges faced by farmers and producers. This involvement could foster a sense of ownership and increase community engagement, making the center more likely to succeed. Additionally, engaging farmers and producers early in the process could help tailor training programs, processing equipment, and infrastructure to specific local crops and products, enhancing the center’s relevance and impact.

6. Types of Government Support for the Food Innovation Center

Policymakers identified the types of government support they believed would be most beneficial for a Food Innovation Center. Financial subsidies were seen as the top form of support, with 35% rating them as "most important" and 29% as "important." This suggests that direct financial assistance is viewed as essential for the center’s establishment and operation, particularly given the potential high costs of equipment and facilities. Technical assistance, such as providing

equipment and tools, was also highly valued, with 60% marking it as "important." Training support was another priority, with 61% rating it as "most important." This support reflects a need to develop skills in food processing and product development, which are critical for the center's success. Policy incentives and marketing assistance were also seen as beneficial but were ranked lower, with mixed responses regarding their importance. Together, these types of support reflect a commitment to equipping the center with the necessary financial, technical, and human resources to meet community needs effectively.

7. Policies Supporting Farmers in Supplying Raw Materials

Policymakers highlighted key policies to support farmers in providing raw materials to the Food Innovation Center. The strongest support was for subsidies for farming inputs, with 79% of respondents backing this policy, reflecting the view that reducing input costs could help farmers increase production and supply. Guaranteed purchase agreements were similarly supported by 79%, which could offer farmers financial security and encourage consistent production. Training programs were also endorsed by 79%, underscoring the importance of skill development in farming practices. Tax incentives for local producers received support from 58%, although it was less prioritized than direct subsidies and training. These policies collectively highlight a strategy of financial and technical assistance aimed at strengthening local agriculture and ensuring a steady supply of raw materials for the center.

8. Strategies to Facilitate Collaboration Between Farmers and the Center

Policymakers emphasized the importance of facilitating collaboration between farmers and the Food Innovation Center, with a preference for organizing regular meetings with stakeholders. Fifty-three percent rated these meetings as "most important," and 37% as "important," highlighting a belief that consistent communication is key to aligning the center's objectives with farmers' needs. Creating a farmers/fishers cooperative was another suggested strategy, allowing producers to collaborate and potentially increase bargaining power, although it received mixed levels of importance. Providing communication platforms and logistical support to bring supplies and crops to the center were also mentioned, though responses were varied. These strategies suggest that policymakers value structured communication and support systems to ensure the center serves as a resource that meets farmers' needs.

9. Indicators of Success for the Food Innovation Center

Policymakers identified specific metrics for evaluating the success of the Food Innovation Center, with a strong emphasis on local employment. One hundred percent of respondents agreed that an increase in local jobs would be a primary indicator of success, reflecting the center's role in supporting economic development. Improved farmer incomes were also highly valued, with 95% seeing this as an essential metric. This focus on income highlights the center's potential to strengthen the local economy by increasing profitability for farmers and other food producers. Other critical indicators included increased food security, with 89% support, and access to fresh, nutritious food, endorsed by 79%. Sixty-three percent identified the creation of new businesses as an additional success metric, underscoring the center's role in fostering entrepreneurial

growth. These indicators reflect a holistic approach to evaluating the center's impact, focusing on both economic and health outcomes for the community.

10. Infrastructure and Capacity Building for the Local Food System

Policymakers identified critical infrastructure investments and capacity-building initiatives to support the local food system. Nurseries were rated as the "most important" infrastructure need by 47% of respondents, highlighting a focus on developing strong agricultural foundations. Cold storage was also prioritized, with 29% rating it as "most important," which could enable local producers to store and preserve perishable items, reducing post-harvest losses. Processing facilities and transportation infrastructure were also considered essential for expanding the capacity of the local food system. Capacity building was viewed as equally important, with food production training marked as "most important" by 72% of respondents. Food safety and processing skills were also valued, with a substantial number seeing these as key areas for development. Additionally, public-private partnerships were highlighted as vital, with 95% supporting shared processing facilities and 89% backing joint ventures for market access. These responses reflect a comprehensive strategy for strengthening Yap's food system, emphasizing foundational infrastructure and skill development to promote sustainable growth.

This report highlights policymakers' priorities for establishing a Food Innovation Center in Yap, with a strong emphasis on food security, economic development, and community engagement. By focusing on local staples, supporting training and infrastructure, and facilitating collaboration, policymakers envision a center that meets the practical needs of farmers and producers. Through government support and effective policies, the center can create local employment, improve farmer incomes, and contribute to a sustainable and resilient food system for Yap.

Federated States of Micronesia
Food Systems Solutions Project
Yap Information Content Provider Survey Results

1. Demographics of Information Content Providers

The demographic breakdown of information content providers in Yap shows a balanced representation of genders, with 56% of respondents being male and 44% female. This balance suggests that both men and women are actively engaged in roles that involve providing food-related information to the community, which may help bring diverse perspectives to the content and delivery styles. Age-wise, 56% of respondents are in the 31-45 age range, making this the largest group, followed by 33% in the 18-30 range. Only one respondent, representing 11%, is between 56-60 years, and none are over 60. This age distribution suggests that a significant portion of information providers are young to middle-aged, likely contributing both fresh ideas and seasoned approaches to content. The involvement of younger individuals, in particular, might reflect a drive for more modern approaches to disseminating information, including digital formats. Overall, the demographic profile points to a group of providers well-positioned to address current food-related challenges in Yap with energy, experience, and innovative thinking.

2. Priority Information for an Electronic Food Systems Hub

When asked about the types of information that an electronic food systems hub should prioritize, respondents highlighted several key areas. "Food processing and preservation methods" was rated as "most important" by 56% of respondents, indicating a significant demand for knowledge on ways to maintain food quality and extend shelf life, which are crucial for food security. Disease control and pest management also emerged as a high priority, with 33% rating it as "most important" and another 33% as "important." This suggests a need for up-to-date information on protecting crops from pests and diseases, especially given the challenges posed by Yap’s climate and isolated location. Emergency services and disaster response were similarly valued, with 22% identifying it as "most important" and 33% as "important." This reflects the need for preparedness information to ensure resilience against natural disasters, which can disrupt food supply chains. Marketing strategies, alerts, and market access information were seen as moderately important, with 33% rating them as such. These priorities illustrate a broad focus on both technical agricultural practices and risk management, aiming to support the entire food production cycle.

3. Preferred Update Frequency for Information Hub

To keep the information hub relevant and timely, content providers were asked how often it should be updated. Weekly updates were the most popular choice, favored by 56% of respondents, suggesting that regular refreshes are necessary to maintain engagement and keep

information current. Daily updates were preferred by 22%, likely for rapidly changing areas like market prices, pest alerts, and weather-related information that could immediately impact food production decisions. Monthly updates and "only as needed" were each chosen by 11%, indicating that some types of information, such as long-term best practices, may not require as frequent updating. This variety in preferences highlights the need for a flexible update system that can cater to different content types—some requiring immediate, real-time updates, and others benefiting from less frequent, scheduled refreshes. An adaptive approach could help keep the information hub efficient and targeted to users' needs, providing timely information when it's most critical.

4. Essential Production Information for Farmers and Producers

The survey responses pointed to specific types of production information that are deemed most valuable for farmers and producers in Yap. "Crop cultivation techniques" emerged as a top priority, with 33% rating it as "most important" and 44% as "moderately important." This focus indicates a need for guidance on effective cultivation practices to optimize crop yields and maintain soil health. Livestock management practices also ranked highly, with 22% rating it as "most important" and 44% as "important," reflecting the role of animal husbandry in the local food system. Sustainable forestry practices and invasive species control were also emphasized, each rated "most important" by 33% of respondents. These areas highlight an awareness of environmental sustainability and the importance of managing natural resources carefully. Responses on aquaculture and ecological restoration showed mixed importance, suggesting that while these areas are relevant, they may serve more specialized needs. Overall, these insights suggest that a successful information hub should focus on diverse production techniques that cater to both plant and animal farming as well as ecological practices, supporting Yap's multifaceted food production landscape.

5. Preferred Formats for Presenting Production Information

The survey explored preferred formats for delivering production information to farmers and producers. In-person workshops and training sessions were rated as the most effective, with 33% rating them as "most important" and another 33% as "important." This preference indicates that hands-on learning is highly valued, allowing participants to interact directly with experts and practice skills. Interactive online courses also received strong support, with 33% of respondents marking it as "most important," reflecting the potential for digital engagement, especially among younger producers. Video tutorials, webinars, and written guides or fact sheets were rated as beneficial but with varying levels of importance, suggesting that different producers may prefer diverse methods of consuming information. Radio announcements were also recognized, with 22% rating them as "most important," indicating that traditional media still plays a role in information dissemination. This range of preferences emphasizes the need for a multimodal approach to reach the widest possible audience in Yap, combining hands-on, digital, and traditional formats to accommodate diverse learning preferences and accessibility needs.

6. Food Processing and Safety Information Needs for the Hub

Respondents emphasized the importance of specific aspects of food processing and safety for the information hub. "Small-scale processing techniques" were rated highly, with 89% indicating their relevance, aligning with the needs of local producers who may lack access to large-scale industrial facilities. Ensuring "food safety and quality control" was seen as essential by 100% of respondents, highlighting a universal priority on safe food handling practices to protect consumer health. "Value-added product development" also garnered support, with 67% marking it as beneficial, reflecting an interest in diversifying products to increase their market value. Industrial processing methods were viewed as relevant by only 44%, suggesting that most respondents favor small-scale, practical approaches to food processing that local producers can readily apply. This focus on safe, small-scale processing aligns with the operational realities in Yap, where small producers may benefit most from low-cost, accessible methods.

7. Marketing and Sales Information for Local Producers

When asked about the marketing information that would be most useful to producers, respondents highlighted practical, market-oriented insights. "Market opportunities, prices, and buyer needs" were rated "most important" by 56%, underscoring the demand for information on how to connect with buyers and determine fair prices. Understanding "local and regional market trends" was also considered helpful, with 22% rating it as "most important" and 56% as "important," suggesting that producers want to stay informed about market dynamics that could influence their business strategies. "Export opportunities and requirements" were relevant to some respondents, with 22% marking it as "most important," although 33% considered it "not important," likely reflecting that exports may not be as relevant for all producers in Yap. Branding, packaging strategies, and digital marketing techniques were rated as lower priority, perhaps reflecting a preference for practical, actionable marketing information over long-term brand-building or digital engagement strategies. These responses indicate that local producers prioritize access to real-time market data and sales channels, focusing on the immediate, actionable aspects of marketing.

8. Tools and Resources to Support Marketing and Sales Efforts

Content providers also identified essential tools and resources that would support producers in their marketing and sales efforts. "Market analysis reports" were considered the most beneficial, with 44% rating them as "most important," indicating a need for data-driven insights to inform sales strategies. "Networking and partnership opportunities" were also highly valued, with 33% marking them as "most important" and 44% as "important," reflecting the role of relationship-building in boosting sales. Improved "market spaces" and access to "marketing plan templates" also received moderate support, providing practical tools that could enhance producers' ability to connect with consumers. Online marketing platforms, however, were rated as less important, with over half of respondents marking them as "not important," which may reflect limitations in internet access or a stronger reliance on in-person sales channels. These responses emphasize a need for traditional and data-driven marketing resources that align with Yap's infrastructure and market realities, supporting producers in reaching their customer base effectively.

9. Emergency Services and Disease Management Information

In the context of emergency services, respondents highlighted essential areas for the information hub. "Natural disaster preparedness and response," "food supply chain disruptions," “water issues,” “presence and notification of serious pest and diseases,” and "public health emergencies" were universally supported, with 100% endorsement, indicating that these topics are vital to Yap’s food system resilience. "Climate change adaptation strategies" were rated as critical, with 89% support, reflecting the importance of addressing environmental factors that could impact agriculture and food production. For disease control, respondents noted the need for information on "identification and diagnosis of common diseases," with 89% rating it as necessary. Preventative measures and treatment options were endorsed by 100% of respondents, and integrated pest management techniques were supported by 89%, highlighting a comprehensive approach to pest and disease control. These responses underscore the need for reliable, real-time information to help producers mitigate risks and maintain crop health amid both natural and biological threats.

10. Financial Planning and Support Resources for Producers

To assist producers in managing their businesses effectively, respondents identified key financial planning resources. "Access to credit and funding information" was rated "most important" by 44%, indicating that financial support is essential for helping producers invest in their operations. "Crop budget templates" and "financial management training" were also seen as valuable, with respondents recognizing the importance of financial literacy in ensuring sustainable and profitable business practices. Additionally, the hub could play a supportive role by offering "personalized financial advice" and hosting "financial planning workshops," each of which received 100% endorsement. Assistance with business plan development and sharing success stories through case studies were also seen as beneficial, with 78% support for each. These responses emphasize the need for practical financial resources that go beyond basic information, equipping producers with actionable tools and personalized guidance to navigate financial challenges effectively.

The survey responses from information content providers in Yap reflect a broad set of priorities for an information hub that could serve the needs of local food producers effectively. Key areas of focus include food processing, safety, emergency preparedness, marketing, and financial planning, each tailored to Yap’s unique context. Preferences for in-person and interactive formats highlight the need for accessible, hands-on learning opportunities, while a flexible update frequency ensures information remains timely and relevant. The results provide a roadmap for building an information hub that strengthens Yap’s food system by supporting both immediate production needs and long-term resilience strategies, positioning producers for success in a challenging and dynamic environment.

Federated States of Micronesia
Food Systems Solutions Project
Yap Technical Contacts and IT Personnel Survey Results

1. Demographic Profile of Technical Contacts and IT Personnel

The demographic profile of technical contacts and IT personnel surveyed in Yap reveals a workforce that is exclusively male, with all three respondents being men. Additionally, all respondents are between the ages of 31-45, representing a fairly young to middle-aged group. This limited diversity in gender and age could mean that the perspectives within this workforce are fairly uniform, potentially leading to shared approaches to problem-solving and system management. While a uniform group can benefit from a shared understanding of local challenges, the absence of broader age and gender representation might limit the diversity of insights that could foster innovative approaches. Nevertheless, the age group suggests that Yap's IT personnel have a balanced mix of experience and adaptability to handle evolving technical demands within the region's unique communication landscape.

2. Types of Communication Systems in Use and Monitoring Practices

Yap's technical personnel utilize a variety of communication systems, ranging from basic setups to more advanced, secure systems. One respondent reported managing a system primarily for email and phone usage, which reflects a straightforward, functional approach without high demands on security or complexity. Another respondent works with a high-quality broadband system equipped with security measures to prevent access from foreign entities, such as those blacklisted by the U.S., ensuring secure and reliable connectivity. The remaining respondent is involved in policy-focused technical work within a financial institution, indicating a more specialized application of IT services.

In terms of monitoring practices, 67% of respondents conduct regular monitoring, focusing on parameters like latency and download speeds to identify potential performance issues. Monitoring has provided these respondents with insights into system performance, allowing them to proactively address problems. However, 33% of respondents do not monitor their systems regularly, explaining that their communication needs are limited to basic email correspondence, which doesn't warrant detailed monitoring. This variation illustrates how monitoring practices align with system complexity; simpler systems may not require extensive oversight, while more sophisticated setups benefit from ongoing monitoring to ensure reliability and security.

3. Continuous Network Monitoring and Security Recommendations

Respondents highlighted the importance of continuous network monitoring and shared various security recommendations to safeguard Yap's communication infrastructure. One suggestion was

to implement monitoring at both the user level, through antivirus software, and at the network level, overseen by qualified personnel, to detect intrusions and ensure data security. Another respondent recommended proactive monitoring to prevent security breaches and ensure that the network is free from infected files or other potential risks. Some respondents noted that all monitoring activities are managed locally in Yap, with no external oversight from international entities, reinforcing a preference for self-sufficiency and control over local networks. This local approach to network monitoring reflects a focus on protecting Yap's data sovereignty, enabling the technical team to maintain system security and performance autonomously.

4. Server Performance and Suggestions for Improvement

Server performance assessment is a regular practice among 67% of respondents, who use methods such as remote monitoring and periodic penetration testing to identify and resolve vulnerabilities. Respondents engaged in performance assessments use tools like remote connections and specialized software to monitor server operations continuously, ensuring stability and security. One respondent, however, did not assess server performance, reasoning that it was unnecessary for servers used solely for internal file storage. For potential improvements, respondents recommended regularly updating server hardware, improving access controls to enhance security, and incorporating redundancy through cloud-based solutions like AWS or secondary backup servers. This emphasis on up-to-date infrastructure and redundancy reflects an awareness of the importance of resilience and security in maintaining a reliable server environment to support Yap's communication systems.

5. Offline Data Synchronization and Distribution of Content

To ensure information accessibility when connectivity is limited, all respondents indicated that they implement offline data features such as pre-downloading content, local storage, and offline synchronization. This approach enables users to access important information even when internet connectivity is intermittent, an essential capability for Yap's remote areas. However, only 33% of respondents have conducted stakeholder mapping to identify locations where residents and growers could access offline content, suggesting room for improvement in reaching underserved areas. Current content distribution methods include physical media like USB drives and DVDs, as well as printed media and websites. Although some centralized online platforms are available, these are not yet widely used. This reliance on a mix of online and offline methods reflects an adaptable strategy aimed at providing reliable access to information for all users, regardless of connectivity limitations.

6. User Feedback Collection and Communication Challenges

Collecting user feedback on communication system performance is a practice followed by only 33% of respondents, who gather data on aspects like latency and download speeds to enhance service quality. This feedback is valuable for identifying specific areas for improvement; however, most respondents (67%) do not engage in such data collection, which could limit their ability to make data-informed enhancements. A key challenge identified by respondents is reaching Yap's outer islands, where communication infrastructure is sparse and unreliable. In these regions, VHF radio remains a primary tool for sharing information at specific times, as

internet and phone connectivity are often inconsistent. One respondent noted a broader issue of limited communication and transparency from national to local entities, alongside challenges in enforcing existing regulations. These challenges underscore the logistical and regulatory hurdles of maintaining a reliable communication network across Yap's dispersed island communities.

7. Government Support and Training Needs for IT Personnel

The level of government support received by IT personnel varies, with 33% reporting access to seminars and grants, another 33% citing training on accessing information, and the remaining 33% expressing concern over limited regulatory enforcement. This mixed response highlights the need for more coordinated support, including clearer policies and better enforcement to strengthen communication systems.

Regarding training, all respondents identified essential skills, such as maintaining and operating communication systems, troubleshooting connectivity issues, performing hardware maintenance, and managing local data centers. They also noted the importance of training in helping residents use communication systems effectively, as well as accessing offline content, SMS, and voice-based services. These responses indicate a strong need for comprehensive training programs that not only address technical skills but also equip personnel to support the wider community in accessing and utilizing communication resources.

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

The survey revealed limited use of SMS-based communication, with only 33% of respondents utilizing SMS to deliver agricultural information, market updates, and weather forecasts. Similarly, just 33% optimize data by compressing message sizes to minimize the impact of slow internet connections. No respondents currently use voice-based hotlines or interactive voice response (IVR) systems to provide information, possibly due to technical or resource constraints. Expanding the use of SMS, data compression, and voice-based systems could enhance communication reach, particularly for residents in low-bandwidth areas. The limited adoption of these practices suggests opportunities to strengthen Yap's communication infrastructure by making essential information more accessible to residents with varying connectivity levels.

9. Bandwidth Management, Data Compression, and Content Delivery Networks (CDNs)

Bandwidth management practices are applied selectively, with only 33% of respondents able to modify bandwidth codecs or test voice data over slow connections, reflecting limited flexibility in managing data transmission under constrained bandwidth. However, data compression techniques are more widely used, with 67% of respondents employing compressed formats like gzip or deflate to reduce data size and improve download speeds. Additionally, all respondents confirmed their ability to compress large files, such as images and videos, before transmission, which significantly enhances accessibility by reducing load times.

In terms of content distribution, only 33% of respondents use Content Delivery Networks (CDNs) to distribute agricultural content closer to the islands, and the same proportion leverage CDN caching capabilities to provide faster access to static information, such as guides and tutorials. The limited use of CDNs indicates a potential area for improvement, as CDNs could

provide faster, more reliable access for users by reducing the distance data needs to travel. Expanding the use of CDNs and enhancing data management practices could optimize content delivery across Yap, making information more readily accessible.

10. Information Dissemination Channels and Future Opportunities

Respondents currently utilize a range of dissemination channels to reach users, including centralized platforms accessible through web portals (67%), radio broadcasts (67%), printed bulletins (67%), and mobile applications (33%). Although centralized web platforms are popular, there is limited use of tailored communication strategies, with none of the respondents developing reports or bulletins specifically targeted to distinct stakeholder groups, such as farmers or policymakers. Future opportunities to improve information dissemination include mapping distribution points for offline content across islands to ensure reach in remote areas. Additionally, respondents suggested expanding SMS and IVR usage, optimizing data compression techniques, and increasing the use of CDNs. Developing more targeted communication strategies for different audiences could also enhance the relevance and effectiveness of disseminated content. By implementing these suggestions, Yap can build a more inclusive communication network that better serves its diverse population.

This report provides a detailed overview of Yap's technical contacts and IT personnel's perspectives on the current state of their communication systems, the challenges they face, and the improvements they envision. Through a mix of system monitoring, offline data synchronization, and user-centered feedback, Yap's IT personnel demonstrate their dedication to maintaining accessible, secure communication infrastructure despite regional constraints. With continued training, expanded government support, and the adoption of data optimization, SMS, IVR, and CDN resources, Yap can work towards a more resilient, inclusive, and adaptable communication network that meets the needs of all its residents, from remote islands to more connected areas.

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

1. Demographics of Trainers

The demographic profile of trainers surveyed in Yap indicates a balanced representation of gender, with 60% female and 40% male respondents. This gender diversity reflects an inclusive workforce, which can be valuable in understanding and addressing diverse community needs. The age distribution among trainers reveals that 50% are within the 31-45 age group, 30% are younger, between 18-30 years, and 20% fall within the 56-60 age range, with no respondents over 60. This range suggests that the trainers include both early-career professionals, who may bring fresh ideas and a willingness to adopt innovative methods, and experienced trainers, who offer seasoned insights and established skills. The diversity in gender and age among trainers enhances their ability to address various training needs, as they bring both contemporary and traditional approaches to their roles.

2. Trainer Preparedness in Food Production and Handling

The survey responses provide insight into trainers' levels of preparedness in key areas of food production and handling, showing a mix of confidence and training gaps. A strong 80% of trainers felt prepared to assist families in enhancing food production, indicating a solid foundation in agricultural basics. However, 20% expressed a need for further training, suggesting an opportunity to strengthen support in community food production efforts. Regarding post-harvest handling and processing skills, 70% of trainers felt adequately trained, while 30% did not feel fully prepared, revealing a gap in knowledge related to processing practices that could maximize crop longevity and quality.

When it comes to teaching sustainable production systems, 60% of trainers felt prepared to address traditional agroforestry and integrated land and marine production. However, 40% indicated a lack of training in these areas, which may limit their ability to guide communities on traditional methods that are both culturally significant and environmentally beneficial. This distribution of responses highlights that while many trainers are well-prepared in fundamental aspects of food production, there is a need for targeted training in post-harvest handling and agroforestry to ensure comprehensive support across all stages of food production and management.

3. Training in Climate Change Adaptation and Environmental Management

The trainers' knowledge in climate change adaptation and environmental management practices shows mixed levels of confidence, with some significant areas for improvement. Eighty percent of respondents felt capable of teaching climate adaptation strategies, including cultivating

climate-resilient crops like saltwater-resistant taro. This readiness to address climate resilience is promising, given Yap's vulnerability to climate change impacts. However, only 50% of trainers felt confident in sustainable farming and land management techniques, indicating a knowledge gap that could hinder efforts to promote environmentally responsible practices within the community.

Emergency weather response training, an essential skill in the face of increasingly frequent extreme weather events, was an area where only 40% of trainers felt prepared, with 60% lacking adequate training. This limited preparedness may affect the ability to support communities during climate-related crises. Other areas like invasive species management and soil erosion control also revealed significant gaps, with only 20-40% of trainers feeling sufficiently trained. These findings underscore the need for more comprehensive training in climate adaptation and environmental management, particularly in invasive species control, erosion prevention, and emergency response to equip trainers with the skills to help communities build climate resilience.

4. Equipment and Resources for Effective Training

The survey highlighted specific equipment and resource needs that trainers believe would enhance their effectiveness. Basic presentation tools, including laptops and projectors, were frequently mentioned, as they would enable trainers to deliver structured, visual presentations during sessions. Basic agricultural tools, such as gardening equipment and environmentally friendly materials, were also requested to facilitate hands-on training. More advanced resources, like water testing kits, irrigation systems, and access to dedicated office spaces, were noted by trainers who focus on specialized topics.

Additionally, trainers identified a need for transportation resources, such as vehicles, to improve mobility when conducting outreach, especially in remote areas. This range of resource requests reflects the diversity of trainers' roles, from classroom-based instruction to practical, field-based learning. Having access to such equipment would enable trainers to deliver more comprehensive and interactive sessions, making it easier for community members to engage with the material and apply their knowledge in real-life scenarios.

5. Expertise in Agriculture and Crop Management

The trainers' responses showed high levels of confidence in general agricultural practices, with 80% indicating preparedness in mentoring others in crop production, training, and the timing of crop planting. These skills are foundational to effective farming and suggest that most trainers are equipped to support communities in optimizing crop yields. Additionally, 90% of trainers reported competence in seed saving and propagation, skills critical to ensuring crop diversity and resilience.

However, knowledge gaps emerged in specific areas of agriculture. Only 50%-60% of trainers felt equipped to teach soil management and fertilizer production, suggesting a need for further education in sustainable soil practices. This variation in agricultural expertise highlights areas where additional training could strengthen trainers' ability to support sustainable farming practices. By filling these gaps, trainers would be better positioned to promote soil health and

resource-efficient crop management strategies, ultimately supporting long-term agricultural sustainability in Yap.

6. Knowledge and Training Needs in Crop-Specific Practices

The survey assessed trainers' familiarity with a range of crops important to Yap. Trainers expressed confidence in their knowledge of swamp taro, breadfruit, banana, and tapioca, with 50% feeling prepared to provide training in these staple crops. These crops are culturally and nutritionally significant, indicating that trainers are well-positioned to support basic crop production in the community. However, confidence levels dropped for other crops: only 30-40% felt prepared to address mango, pineapple, and yam cultivation, and less than 30% of trainers were confident in their ability to teach soursop, betel leaf, or black pepper cultivation.

Crops such as sakau (kava), sugar cane, and medicinal plants like noni, had little to no trainers reporting adequate knowledge, revealing a nearly complete lack of training in these areas. These gaps highlight a need for more crop-specific training to equip trainers with knowledge of a broader range of local crops, particularly those with cultural, medicinal, or economic value. Expanding trainers' crop knowledge would enhance their ability to meet diverse agricultural needs and support a greater variety of food production options.

7. Competence in Livestock and Marine Resource Management

Trainers reported mixed levels of confidence in livestock and marine resource management skills. While 70% felt prepared in general livestock management practices, only 50% were confident in feed-making techniques for pigs and chickens, indicating a gap in nutrition-specific knowledge that could impact livestock health and productivity. Furthermore, 80% of trainers were unfamiliar with woodchipper use, and no respondents felt prepared to address marine invasive species management or create fish aggregating devices (FADs) for sustainable fishing practices.

Traditional fishing knowledge and sustainable fishing practices also presented challenges, with only 20-30% of trainers feeling adequately trained. These responses suggest significant training needs in livestock and marine resource management, particularly in areas that support Yap's food security and environmental sustainability. Enhancing trainers' expertise in these areas could enable them to support integrated food production systems that combine agriculture, livestock, and marine resources effectively.

8. Technology Use and Training in Innovative Farming Methods

Trainers demonstrated varying levels of familiarity with advanced agricultural technologies, which are increasingly important for modern, sustainable farming. Eighty percent of trainers felt confident teaching nursery management, and 70% were prepared to teach sac and container gardening, indicating familiarity with these accessible, small-scale farming methods. However, knowledge of more advanced technologies, such as greenhouse management, hydroponics, and aquaculture, was less common. Only 50% of trainers were comfortable with greenhouse techniques, while hydroponics and aquaculture knowledge were limited to 10% of trainers.

Interest in additional training was strong, with all respondents expressing a desire to improve their skills in these innovative areas. This response underscores the potential benefits of expanding trainers' access to education in advanced farming technologies, which could help diversify and enhance local food production options. Equipping trainers with the knowledge of these methods could provide Yap's communities with new techniques to boost food security and resource efficiency.

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

The survey responses indicated mixed confidence levels in marketing, food processing, and business management skills among trainers. While 60% felt prepared to teach food preservation and packaging, only 50% were confident in identifying niche or value-added markets for local products. These marketing skills are essential for helping producers find competitive market opportunities and add value to their products.

Business management skills revealed further gaps. While 70% felt capable of teaching basic product marketing, only 40% had experience in business leadership, and just 20-30% felt equipped to guide entrepreneurs in financial management, loan applications, or regulatory compliance. These findings suggest that while trainers are equipped to provide foundational marketing skills, further support in business management and financial planning would enhance their capacity to guide emerging businesses. By addressing these gaps, trainers could better assist entrepreneurs in Yap's food sector to build successful, sustainable enterprises.

10. Training Opportunities, Facilities, and Identified Knowledge Gaps

When asked about access to training and professional development, 70% of trainers indicated that their employers provided opportunities for growth, including workshops, first aid certification, and youth program involvement. However, 30% noted a lack of support, expressing interest in financial assistance for further training or access to off-island programs that could broaden their skills.

In addition to external training, trainers identified several on-the-ground resource needs, such as classroom computers, gardening tools, hatchery equipment, and up-to-date learning materials. They also highlighted significant knowledge gaps in climate change impacts, nutrition, advanced agricultural practices, and mental health awareness, which are becoming increasingly relevant in food system training. Addressing these gaps through targeted professional development programs and enhanced access to resources would strengthen trainers' abilities to support a resilient and sustainable food system in Yap, providing comprehensive and relevant training to the community.

This report provides a comprehensive view of the strengths, gaps, and resource needs of trainers in Yap, based on survey responses. While trainers show a solid foundation in general agricultural practices and a strong interest in expanding their skills, gaps in climate adaptation, crop-specific knowledge, advanced technologies, and business management are evident. Respondents' desire for training in areas like innovative farming, climate resilience, and financial management highlights their proactive approach to professional development. By investing in training

opportunities and resources for these areas, Yap can build a skilled workforce of trainers capable of supporting diverse, sustainable, and resilient food systems, ultimately benefiting the broader community.

Federated States of Micronesia
Food Systems Solutions Project
Survey Tools - Yap 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:

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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.

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 Consumer Survey

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

Principal Investigator:
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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 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

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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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Food Systems Solutions Community Management Survey

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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

Food Systems Solutions Information Infrastructure Provider Survey

INFORMED CONSENT FORM

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1. ENUMERATOR INFORMATION

Q1	Question	Response
1.1	Enumerator name	
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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) _____

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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
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	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

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RUTGERS

Food Systems Solutions Food Distributors and Retailers Survey

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	Question	Response
3	What type of locally made processed food products does your business currently sell?	**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 Sauce 14= Fish Jerky 15= Fish Sauce 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	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

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
New Brunswick, NJ 08901-8520
Tel: 848-932-9192; Fax: 732-932-8887

OR:
James E. Simon, Distinguished Professor of Plant Biology
Director, New Use Agriculture and Natural Plant Products Program (NUANPP),
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
Email: jimsimon@rutgers.edu
Tel: 848-932-6239; Fax: 732-932-9377

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 Distributors and Retailers 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
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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

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

RUTGERS

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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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 Policymaker 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
New Brunswick, NJ 08901-8520
Tel: 848-932-9192; Fax: 732-932-8887

OR:
James E. Simon, Distinguished Professor of Plant Biology
Director, New Use Agriculture and Natural Plant Products Program (NUANPP),
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
Email: jimsimon@rutgers.edu
Tel: 848-932-6239; Fax: 732-932-9377

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 Survey for Policymakers

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)
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2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

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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RUTGERS

Food Systems Solutions Information Content Provider 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 System Solutions Information Content Provider Survey

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Q1	Question	Response
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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)
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2.2	Age of informant (years)	**CIRCLE ONE** 1 = 18-30 2 = 31-45 3 = 46-60 4 = Over 60

	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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RUTGERS

Food Systems Solutions Technical Contacts and/or IT Personnel Survey

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Food System Solutions Survey for Technical Contacts or IT Personnel

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Q2	Question	Response (Enumerator may fill this in without asking)
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	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

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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.

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	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.

RUTGERS

Food Systems Solutions Food Producer Survey Short Form

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
Extension Specialist, Rutgers Cooperative Extension
Rutgers-The State University of New Jersey
55 Dudley Road
New Brunswick, NJ 08901-8520
Tel: 848-932-9192; Fax: 732-932-8887

OR:
James E. Simon, Distinguished Professor of Plant Biology
Director, New Use Agriculture and Natural Plant Products Program (NUANPP),
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
Email: jimsimon@rutgers.edu
Tel: 848-932-6239; Fax: 732-932-9377

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/Island_____ 2 = Kosrae City/Island_____ 3 = Pohnpei City/Island_____ 4 = Yap City/Island_____ 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: LOCALLY PROCESSED FOOD	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) _____

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)

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): _____

End of survey script

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