Food, Nutrition & Health

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Food, Nutrition & Health

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	5%		25%	
502	New and Improved Food Products	5%		25%	
701	Nutrient Composition of Food	12%		10%	
702	Requirements and Function of Nutrients and Other Food Components	15%		0%	
703	Nutrition Education and Behavior	12%		10%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sourc	16%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%		10%	
724	Healthy Lifestyle	25%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual	7.7	0.0	1.7	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 149384	1890 Extension 0	Hatch 68608	Evans-Allen 0
1862 Matching 44858	1890 Matching 0	1862 Matching 1200	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

At PCC-CRE, two research projects were implemented; one on processing of root crops and the other on product development for food security. Seventy processed food products were developed utilizing root crops (taro, cassava and sweet potato comprising 34 dried, 5 frozen, 8 baked, 6 fermented and 17 cooked food products). Likewise, 21 processed foods were developed utilizing fish, banana and coconut as raw materials. All 91 food products have been undergoing storage studies using suitable packaging materials at different storage conditions such as ambient, dry, freezing, and refrigeration temperatures. Extension work was likewise conducted by holding three food technology classes, and conducting taste tests of food products serving 1023 clients, 560 of them were adults and 454 youths.

One Adult EFNEP training program was conducted for parents of Head Start students, three Youth EFNEP programs to students at two high schools and one Youth EFNEP program was conducted for the Koror State Boy Scout members. Topics taught in these training programs included choosing healthy foods using the five food groups and the new "My Pyramid", menu planning, reading food labels, home food safety, which included safe food handling and storing, personal hygiene and safety tips in the kitchen, healthy foods on limited budget, and preparation and cooking of selected healthy recipes to enable participants to put into practice the knowledge and healthy eating skills learned.

At CMI-CRE, the EFNEP staff conducted three training workshops where a total of 80 men and women participated. A total of 12 lessons and 6 recipes were presented and reinforced with cooking demonstrations of the recipes. The EFNEP staff also made presentations on nutrition and food safety at local events and continued to collect local recipes as required for her projects with the ADAP Healthy Living in the Pacific Islands (HLPI) project.

At COM-FSM-CRE, the 12 EFNEP lessons on nutrition and cooking demonstrations were the methods used for dissemination of information on food, nutrition, and human health. A range of topics presented during EFNEP training included the 3 general food groups, nutrient sources and values, functions and symptoms of protein, starch, vitamins and minerals, balanced diets, food safety, and non-communicable food related conditions such as diabetes and hypertension. In addition, all extension sites were actively collaborating with government agencies to present nutrition and health related information at hospitals, schools and at public fairs and community meetings. Agents in Pohnpei have supported the Island Food Community of Pohnpei with great success in food use surveys, nutrient analysis of Vitamin A rich local foods and food preservation through both traditional and introduced methods. Collaboration with Island Food Community of Pohnpei (IFCP) has been recognized in international publications and presentations. Group activities included healthy recipe development and practice of healthier food preparation techniques aimed at reducing NCDs and to encourage healthier lifestyles.

The 2007 Go Local campaign was spearheaded by IFCP and the collaborating agencies with the display of local foods, cooking demonstrations and posters on healthy eating, healthy lifestyle and promoted the use of local foods during the World Food Day. Agents at all sites participated in Food Handler/Food Safety training programs for hotel, restaurant, hospital, school and other public institution food handlers. Home gardening training is included in this program area as support to dietary improvement in the home.

There are serious chronic disease problems in FSM and these are considered to be epidemic proportions. Diabetic complications commonly include blindness and amputations of limbs. In Kosrae, 90% of surgical admissions are diabetic-related and amputations of limbs are common. A dietary study carried out in 2001 in Kosrae (Englberger, 2003) involving a random sample of 65 children and 65 women showed that not a single child or woman met the estimated Vitamin A requirements. The study examined food preferences and investigation for vitamin A –rich foods that might be promoted to alleviate the VA deficiency and increasing health problems in Kosrae. Provitamin A carotenoid-rich foods can protect against VA deficiency. Epidemiological research suggests that carotenoid-rich food may also protect against chronic diseases including diabetes, heart diseases and certain cancer. CES staff are concerned about the health issues and worked closely with department of Health Services, Agriculture Department and Department of Education to educate the public on importance of local food production and consumption.

By American standards, the population is very poor and poorly educated in academic and life skills. Throughout the FSM similar conditions exist. No other services provide education and training at the appropriate level to improved nutrition, balanced diets, production and identification of healthy foods and preventative measures to improve health through diets, food security and food safety.

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2. Brief description of the target audience

Target audience were participants who attended the 3 food technology training programs in Palau. The profile of the participants included a wide spectrum of groups like women in the food business, hotel/restaurant managers, employees, teachers, homemakers, farmers, and entrepreneurs. The target audience for food products include tourists, men, women, children, youth, students, parents, civic groups, church groups, micro-enterprise owners and the general public interested in food processing.

In the Marshall Islands and the FSM States, both the adult and youth EFNEP programs targeted families and individuals with limited income, young mothers with young children, individuals with little school background, food handlers, women's groups, individuals with special needs, pregnant and at-risk mothers.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	600	3000	300	1500
2007	1813	5700	1658	1910

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	**Target**
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	**Research**	**Total**
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Number of community workshops conducted.

Year	**Target**	**Actual**
2007	12	9

Output #2

Output Measure

Number of coalitions strenghten.

Year	**Target**	**Actual**
2007	6	8

Output #3

Output Measure

Number of intervention conducted to individuals or small groups.

Year	**Target**	**Actual**
2007	134	268

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of program participants who increase awareness of nutrition related health issues.
2	Number of program participants adopting recommended practices after completing educational programs.
3	Annually increase the number of healthy food snacks or lunch programs in schools and communities.

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Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area

V(H). Planned Program (External Factors)

External factors which affected outcomes

Natural Disasters (drought,weather extremes,etc.)
Economy
Appropriations changes
Public Policy changes
Government Regulations

Brief Explanation

Strict government regulations and expensive permits to obtain licenses to operate small businesses hampered entrepreneurs who would like to go into the food business right away.

The actual number of targeted clients was not met due to holidays such as Thanksgiving, Christmas and New Year, state legislators campaigns, funerals, traditional customs, public priorities such as Constitutional Day and Independence Day that involved all 16 states of Palau. Most people were occupied in preparation for exhibitions, dances, chants, arts and crafts, debates and many other things. It's very difficult to get more than 10 women together in one place for a day or a week even just for one hour. Agents are having a hard time recruiting clients and especially this year with general election coming up in November 2008.

In addition, the sea level rise has destroyed some of the staple food crops in some outer islands, which are much healthier than imported processed foods. Poverty dictates choices of foods by price and not nutrient content, and public policies, government regulations and appropriations were not always in favor of the second class citizens, as well as typhoons and other natural disasters.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

Before-After (before and after program)

During (during program)

Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Comparison between locales where the program operates and sites without program intervention

Evaluation Results

Results of formal evaluation by participants of Food Technology Classes showed that all of them benefited from the activity, for having acquired skills to process food products from local resources. During the closing ceremonies / graduation day, the participants were given opportunities to voice out their favorable comments. They also prepared the food products that they have learned from the course for visitors to comment on. Food evaluators in taste tests recorded their comments in a logbook after signing in. Most tasters commented that the products were very acceptable and promising for business ventures.

Adult in Nutrition practice: 98% of 57 participants more often planned meals in advance; 96% more often thought about healthy food choices when deciding what to feed their family; 30% more often prepared food without adding salt; 95% more often used the "Nutrition Facts" on food labels to make food choices; and 95% reported that their children ate breakfast more often. In food safety practices, 60% more often followed the recommended practices of not allowing meat and dairy food to sit out for more than two hours; 60% always follow the recommended practice and 70% more often followed the recommended practice of not thawing foods at room temperature and 70% always follow the recommended practice. For youth, 90% of 48 youth now eat a variety of foods; 93% of 173 increased knowledge of the essentials of human nutrition; 91% of 68 youth increased their ability to select low-cost and nutritious foods and 92% of 104 improved practices in food preparation and safety. 24-hour diet recall and checklist were used to evaluate adult participants and questionnaire comprised of 10 questions about nutrition and food safety was used for pre and post tests with youth.

Key Items of Evaluation

Educational level of program participants is still low, low income level is reflected in food choices, and influence of culture on food choices at home and at social functions are some areas to be considered.