

Enhancing Culinary Skills of School Foodservice Workers by Chef RDNs Increases Acceptability of Local Foods and Helps to Implement New Nutrition Standards

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Learning Outcome: Upon completion, participants will be able to identify training strategies to implementing newly developed standardized recipes and forthcoming updates to nutrition standards of School Meal Programs.

Background: In 2021, the Louisiana Department of Education received a Team Nutrition Training Grant to support use of standardized recipes within school meals. Improving culinary skills emphasizing local foods enhances school foodservice workers' familiarity with locally grown products. Newly developed recipes focusing on a wider variety of scratch-cooked based menu items will help to meet forthcoming updates to school meal nutrition standards. The Recipe Standardization Process is critical to making adjustments to sugar, sodium and fat in recipes.

Methods: School foodservice workers (n=96) from twenty Louisiana parishes were invited to participate in a one-day culinary training taught by Chef RDNs. Pre- and post-training evaluations about knife, measuring and portioning skills, food presentation, how closely recipes are followed and questions regarding use of local produce were included. Participants prepared newly developed recipes, including at least one locally grown item.

Results: Pre/post training skill-based evaluations indicated competency in knife and measuring skills increased from 19% to 60% and 30% to 68%, respectively; that program participants follow recipe instructions increased slightly 47% to 51%. Participants (39%) indicated Louisiana foods were served in their cafeterias and 92% believe those recipes reflect cultural/regional preferences of students. 83% of training attendees agree that it is easy to encourage students to try local products.

Conclusion: Usage and confidence in culinary skills leads to consistent quality/quantity school meals and facilitates promotion of local foods and their nutrient contribution with students. One-day hands-on culinary trainings by Chef RDNs are cost-effective, efficient, fun, and offer professional standards training to employees.

Funding Source: FY21 School Meal Recipe Development, Team Nutrition Training Grant, Food and Nutrition Service, United States Department of Agriculture.

Evaluating Feasibility of an Intergenerational Nutrition Assistance and Education Project with Older Adults at Subsidized Housing and College Students in Kentucky

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Learning Outcome: Upon completion, participants will be able to understand the process of planning, implementing, and evaluating an initiative connecting college students and older adults through meals, nutrition education, and intergenerational interactions.

Abstract: Kentucky ranks 46-49 of 50 states in food insecurity, fruit and vegetable consumption, and physical and mental distress, with the highest national food insecurity rate among Kentuckians aged 55-59 years. Undressed issues pertaining to food insecurity, including limited healthy food access and proper utilization, can lead to negative health consequences, particularly among those who are ineligible or unable to receive governmental nutrition assistance and social support. In 2022, the Campus Kitchen at the University of Kentucky (CKUK), a student-led organization within the Feeding America Network that aims to reduce food waste, promote nutrition equity, and empower community, evaluated feasibility of an intergenerational nutrition assistance and education project. Up to four times a week, trained CKUK students under advisors' supervision: 1) recover surplus foods including fresh fruits and vegetable from an area hospital and grocery stores, 2) transform them into healthy meals appropriate for older adults' health conditions, 3) provide freshly prepared meals and nutrition education to residents at subsidized senior housing, and 4) interact with seniors. Processes, operations, and perceived importance of this project was formatively evaluated. In Fall 2022, 155 students dedicated over 182 hours to this project and 132 older adults received 2,503 healthy meals. Students shared how they enjoyed intergenerational interactions and relationships while seniors expressed how much they appreciated students. Preliminary findings on perceived importance of meals and intergenerational interactions were promising and warrant continued project adaptations. Since nutrition assistance and education programs show importance to aging populations, continued research on health-related outcomes could be valuable.

Funding Source: University of Kentucky Student Sustainability Council.

Everpro as the Missing Piece in the Plant Protein Portfolio to Aid the Transformation to Sustainable Food Systems

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Learning Outcome: Explore and discuss the potential of EverPro, a BSG protein isolate, as a nutritional, multi-functional, and sustainable plant protein source.

Abstract: Plant proteins are gaining popularity due to increased consumer emphasis on health, along with the global movement towards developing sustainable food systems and reducing environmental impact. Brewer's spent grain (BSG) is the most abundant by-product of the brewing industry and represents an ideal raw material for protein isolate production. In this study, the nutritional and techno-functional properties of EverPro, a BSG protein isolate, were investigated and compared to pea and soy protein. The nutritional and amino acid compositions of each protein were determined, along with physicochemical characteristics including protein solubility, foaming capacity, emulsifying properties, and rheological properties. With a protein content of >85%, EverPro meets or surpasses the requirement of each essential amino acid per g protein, with the exception of lysine, while pea and soy are deficient in methionine and cysteine. EverPro is fully soluble in water (101.7%), far exceeding the solubility of pea (22%) and soy (52%) protein isolates. EverPro also has a high fat absorption capacity (182.4%), and a superior foaming capacity (112.68%) compared to pea or soy. Furthermore, EverPro does not cause changes in viscosity during heating and cooling of dispersions, such as beverages. Besides its outstanding nutritional and functional characteristics, life cycle assessment analysis showed that production of EverPro has a lower impact on global warming compared to soy protein isolate, pea protein isolate, whey protein isolate, and egg white powder. This study highlights the efficacy of EverPro as a nutritious, multi-functional and sustainable ingredient with the potential to enrich a variety of plant-based foods.

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Food as Medicine: Bringing a Produce Rx Program to a College Student Population

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Learning Outcome: Upon completion participants will be able to evaluate the design and effectiveness of a pilot fruit and vegetable prescription program in addressing health and food security in a college-aged population.

Abstract: Low food security in college student populations is a growing concern that negatively affects physical and mental health. Fruit and vegetables prescription programs are frequently used in food-scarce family populations, but not college populations. Program feasibility and acceptance of a 12-week fruit and vegetable prescription (F/V Rx) pilot program on a small, rural, primarily undergraduate college campus was investigated. The "prescription," provided by the health center or campus food pantry, was \$10 worth of produce vouchers or "veggie bucks" redeemable at the on-campus weekly farm stand and a weekly free farm stand veggie grab bag. To increase access, students were not formally enrolled in the program. Descriptive data was gathered using a weekly farm stand survey addressing the perception of health, fruit and vegetable intake, and food security. F/V Rx participants were food insecure (66%) with low intake of vegetables (57% <3 to 4 servings/day) and 19% reported poor health. Barriers to increasing fruit and vegetable consumption were cost, lack of time to prepare, and access. The redemption rate of F/V Rx was 60%; the program received positive feedback from F/V Rx providers and participants with a relatively low cost to administer. Veggie grab bags increased access, 514 total were provided. Students with multiple visits to the farm stand (average 6.14 ± 3.85) tended to have increased vegetable consumption (52% less than 3-4 servings per day). Limitations of the F/V Rx program included limited farm stand hours and the need for additional venues to redeem veggie bucks.

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