ABSTRACT

Objectives

Objectives of this project were to provide training for Child Nutrition Program (CNP) operators and State Agency staff on development of standardized recipes, encourage students and school communities in development of recipes featuring Pennsylvania agricultural products, and provide nutrition education to students on agricultural products featured in recipes.

Description

Through funding from a FY 2021 Team Nutrition Training Grant, the Pennsylvania Department of Education, Division of Food and Nutrition, and Penn State University implemented this project to provide training on standardized recipe development and develop recipes featuring selected Pennsylvania Harvest of the Month (PA HOM) items – asparagus, beets, cabbage, mushrooms, and winter squash.

An on-line module, “USDA Recipe Standardization Process,” was developed to provide training for CNP operators and State Agency staff. This module is housed on the School Nutrition Toolbox site (www.schoolnutritiontoolbox.org).

Through a competitive application process, eight Local Education Agencies (LEAs) were selected to work with the project team and a chef to develop recipes. Each LEA was assigned one PA HOM item and tasked with engaging students in recipe development. For the purposes of this project, in order to submit recipes to USDA to be included on the Child Nutrition Recipe Box site, recipes had to meet specific nutrient standards and a student approval threshold of 85%. LEA representatives participated in a culinary training session to learn how to prepare the recipes and provide feedback.

Evaluation

More than 100 individuals successfully completed the on-line module. Fifteen LEA representatives participated in the culinary training session. An evaluation revealed that participants felt that participation in this project improved their knowledge of the recipe standardization process, taste-testing strategies, and strategies to gather student input about new recipes. Twelve recipes met the USDA nutrient standards and student approval threshold.

Conclusion and Implications

Student acceptance of recipes featuring vegetables that were somewhat unfamiliar to most students can be achieved by engaging students in the development process and strategic taste-testing techniques. Lessons learned will be shared.

OBJECTIVES

A Pennsylvania Harvest of the Month (PA HOM) (www.pharvestofthe- month.org) was developed through a FY 2019 (USDA Farm to School grant. In the process of program development, Child Nutrition Program (CNP) operators identified recipes for PA HOM items as a critical need in implementing the program. USDA’s 2021 Team Nutrition Training Grant opportunity provided funding for development of standardized recipes featuring local agricultural products.

The objectives of this project were to:

1. Build State agency capacity and sustainable infrastructure to develop and evaluate standardized recipes in accordance with USDA guidance.
2. Develop appealing standardized recipes that utilize local agricultural products and meet USDA requirements.
3. Engage students and the school community in the process of developing standardized recipes.
4. Provide nutrition education to students on local agricultural products featured in the new school meal recipes.

RESULTS

- 114 individuals successfully completed the on-line USDA Recipe Standardization Process module.
- Fifteen sub-grant representatives participated in the culinary training session.
- An evaluation revealed that participants felt that participation in this project improved their knowledge of the recipe standardization process, taste-testing strategies, and strategies to gather student input about new recipes.
- 79% of webinar participants indicated an intention to use one or more of the recipes presented during the webinar as part of a school meal or taste test.

Eleven recipes met the USDA nutrient standards and student approval threshold.

- Apple and Beet Baked Oatmeal
- Beef and Mushroom Skillet with Brown Rice
- Butternut Muffin
- Chicken Mushroom Quesadilla
- Flavorful Chicken Mushroom Parmesan
- Harvest Hashbrown
- Marinated Chicken and Asparagus Wrap
- Purple Beet Hummus
- Stewpounder Chicken Mushroom Cacciatore

METHODS

Recipe Standardization On-Line Module (Objective #1)

The project team has been developing on-line modules for CNP operators since 2000. Modules are housed on the School Nutrition Toolbox (SNT) (www.schoolnutritiontoolbox.org) website. Following participation in a recipe standardization training offered by the Culinary Institute of Child Nutrition, an on-line USDA Recipe Standardization Online Module was developed based on the content of the training and posted on the SNT site.

PA Harvest of the Month Recipe Standardization Sub-Grants (Objectives #2, #3, and #4)

Through a competitive application process, sub-grants of up to $8,000 were awarded to eight school districts to participate in recipe standardization featuring selected PA HOM items. Schools attended an orientation webinar and then worked with the project team and a chef to develop recipes featuring asparagus, beets, cabbage, mushrooms, and winter squash. These items were selected because of lack of existing recipes featuring these items (asparagus and beets) and students’ interest in these vegetables. Mushrooms were selected because of their unique association with Pennsylvania as the nation’s leading producer of mushrooms.

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- Marinated Chicken and Asparagus Wrap
- Purple Beet Hummus
- Spicy Summer Harvest Pasta Salad
- Stewpounder Chicken Mushroom Cacciatore

CONCLUSIONS/LESSONS LEARNED

Meeting USDA’s saturated fat and sodium limits was a challenge. Conducting nutrient analyses of recipes early in the development process allowed the project team to provide guidance toward achieving these requirements.

Certain ingredients (e.g. tortillas) had wide variation in sodium content depending on the variety chosen.

Sub-grant representatives valued the opportunity to connect with another one and get peer feedback during the culinary training session.

The expertise of the chef was critical in guiding the recipe development process.

Student acceptance of recipes featuring vegetables that were somewhat unfamiliar to most students can be achieved by engaging students in the development process and strategic taste-testing techniques, including the following:

- Give recipes creative names.
- Present the items attractively and at proper temperatures.
- Consider that peers (and adults) might negatively influence impressions of food items and implement strategies to limit this.
- Schedule taste tests at times when students are most likely interested in eating.
- Limit the number of items tested to no more than two.

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