Agricultural Production and Food Systems

P1 Association of Sociodemographic Factors with Variety of Vegetable Intake in Rural Japan

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Background (Background, Rationale, Prior Research, and/or Theory): Some cohort studies have found that a higher variety of vegetable intake reduces the risk of type 2 diabetes.

Objective: To investigate sociodemographic factors associated with variety of vegetable intake in rural Japan.

Study Design, Setting, Participants, Intervention: This cross-sectional study using a self-administered questionnaire was conducted in September 2017. Participants were recruited from residents aged 20 years or older living in a district (114 households) located in a hilly and mountainous area of Niigata Prefecture, Japan. Two copies of the self-administered questionnaire were distributed to each household.

Outcome Measures and Analysis: Variety of vegetable intake was calculated as the total number of individual vegetable items consumed at least twice a week. The vegetables were 19 items included in the Food Composition Table of Japan. These items were ranked among the most commonly consumed vegetables by number of consumers according to the National Health and Nutrition Survey in Japan. Sociodemographic factors assessed by the questionnaire were sex, age, body mass index, occupation, smoking habit, drinking habit, household size, vegetable growing (oneself and household), and subjective economic status. Kruskal-Wallis test was used to examine the association of sociodemographic factors with variety of vegetable intake.

Results: Questionnaires were returned by 181 respondents, and the data of 167 respondents were analyzed after excluding incomplete questionnaires. Median (interquartile range [IRQ]) score for variety of vegetable intake was significantly higher in women (7 [5–10]) than in men (6 [3–8.25]). There was a possibility that recall bias was especially strong in men because the score was zero in 16.2% men compared with 1.1% women. Other sociodemographic factors were not significantly associated with variety of vegetable intake.

Conclusions and Implications: Sex was the only sociodemographic factor associated with variety of vegetable intake in this rural Japanese community. Further

investigation is needed to clarify factors related to variety of vegetable intake by sex.

Funding: None.

P2 Boosting Farmer Sales Through Point of Purchase Home Food Preservation Education

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Objective: The Point of Purchase (POP) Home Food Preservation Education project sought to increase sales and farm profitability by increasing consumer literacy and influencing POP consumer behaviors to preserve (e.g. freeze, can, dry) produce to increase local food access.

Target Audience: Consumers at farmers' markets, Pick Your Own farms and Community Supported Agriculture (CSA) shareholders.

Theory, Prior Research, Rationale: An electronic retrospective behavior survey was administered to participating consumers to assess their pre and post behaviors related to volume purchased and food preservation methods used as a result of "nudge" marketing and POP education.

Description: Through trained Master Food Preserver volunteers and staff, the University of Maine Cooperative Extension partnered with two Pick Your Own farms, two CSA farms and three farmers' markets to offer "nudge" marketing and food preservation educational displays as an intervention to influence consumers' (n = 1,000) behaviors to: purchase more fresh fruits and vegetables to preserve, use the latest methods of food preservation to reduce foodborne illness risk, and increase farm profitability and sustainability.

Evaluation: Analysis of the retrospective behavior survey indicated that 45% of consumers purchased more produce (strawberries, tomatoes, greens, green beans and apples) to preserve than they had in past growing seasons. Consumers identified freezing foods to prevent food waste as the biggest change in their food preservation behavior. Consumers also indicated greater adherence to USDA food preservation recommendations for acidification and proper processing.

Conclusions and Implications: Economic sustainability of farms is a daily issue faced by farmers. Profitable farms are sustainable farms. Consumers and their purchasing power hold the key to directly impact the profit base for farmers. Our research documents positive shifts in consumer behaviors as a result of our POP intervention that ultimately impacts farm sustainability and profitability in Maine and Maine's local food system.

Funding: Maine Food and Ag Center.