**Vegetarian Meals Survey Results**

Vegetarian meals have been often seen as a healthier option than ones containing meat or other animal products. The Academy of Nutrition and Dietetics states in a position paper that vegetarian diets may assist in the prevention of certain diseases.1 The California Legislature passed an Assembly Concurrent Resolution titled “California’s Healthy School Lunch Resolution” that promotes vegetarian meals in school to improve the health of California’s children.2 This resolution encourages schools to offer a vegetarian meal option every day. According to O’Toole, et al, approximately 79 percent of schools had vegetarian students in 2006, and of those schools, 66 percent offered vegetarian accommodations.3 However, this paper did not provide any more information on this topic. There is a need for more information on how schools offer vegetarian meals or options. The purpose of this survey was to determine availability of vegetarian meals in school nutrition programs, challenges to serving vegetarian meals, and resources used to plan vegetarian menus in school nutrition programs in California.

A web link to the Vegetarian Meals and Whole Grains Survey was sent to all subscribers to the SNP listserv maintained by the California Department of Education. The first survey notice was sent to the listserv on May 12, 2015, and reminder emails were sent on May 20 and May 26. Over 600 respondents initiated the online survey (n=640). Of these, 136 did not meet inclusion criteria. Therefore, the maximum possible number of respondents is 504. The SNP listserv has 2,572 subscribers, of which 1,218 are sponsors. This resulted in a response rate of 41.4 percent if only sponsors are considered eligible for the survey. However, if the response rate is calculated based on all listserv subscribers, the response rate drops to 19.6 percent. Most questions have fewer respondents than 504, due to skipped questions (either intentionally or unintentionally), skip logic, or participants discontinuing the questionnaire before completion.

The average respondent was a school nutrition director in a district with less than 2,500 students and a free and reduced price eligibility of 75 to 100 percent (Table 1).

**Table 1: Job title and district characteristics of respondents.**

|  |  |
| --- | --- |
|  | % |
| Job Title (n=408)  Director or Assistant Director  Other | 68.6  31.4 |
| District Enrollment (n=401)  Less than 2,500 students  2,500 – 9,999 students  10,000 – 39,999 students  40,000 or more students | 50.4  25.7  21.4  2.5 |
| School Types in District (n=518)  Elementary  Middle or Junior High  High School | 89.3  77.3  60.0 |
| Free and Reduced Price Meal Eligibility (n=494)  Less than 25%  25 – 49%  50 – 74%  75 – 100% | 11.1  19.4  28.9  40.6 |

**Vegetarian Options and Meals Offered in Schools**

Almost half of respondents reported serving vegetarian options alongside options containing meat every day or almost every day (Figure 1). A small number of respondents also reported frequently serving entirely vegetarian menus (Figure 2). Depending on frequency of serving vegetarian options or menus, respondents were directed down two possible questioning paths. Respondents in districts that served vegetarian meals at least once or twice per week, or vegetarian menus at least once a month were asked about vegetarian options in their district. Those that reported serving vegetarian options less than once a week or vegetarian menus less than once a month were asked about barriers to serving vegetarian options or menus.

**Figure 1: Frequency of serving vegetarian options alongside options containing meat, poultry, seafood by percentage of respondents.**

**Figure 2: Frequency of serving only vegetarian options by percentage of respondents.**

**Respondents in Districts that Serve Vegetarian Meals**

Vegan options were also served in the districts of almost of a quarter of respondents (Figure 3). The majority serve vegetarian meals at all the schools in the district (Figure 4). Among those who serve vegetarian meals at some rather than all schools, the most common type of school was high school, with 71.4 percent.

**Figure 4: Vegetarian menus offered by percentage of respondents.**

**Figure 3: Vegan options offered by percentage of respondents.**

Many also adapt recipes to be vegetarian that contain meat. To meet the meal pattern requirement for meat or meat alternates (M/MA), several alternates were reported to be utilized by respondents, the most common of which are beans (Figure 5). Several resources were commonly used to plan vegetarian meals. The most common of which was the USDA website, with 73 respondents. Colleagues and other districts were seen as another resource for advice, recipes, and menu ideas (n=32). Many relied on other websites, particularly the Humane Society (n=17) and the Center for Ecoliteracy (n=6). Books that were mentioned by several respondents included Vegan in Volume (n=12), and Food for Fifty (n=10).

**Figure 5: Meat alternates used by percentage of respondents.**

Respondents were asked to share the three most popular vegetarian entrees offered in their school or district. Respondents reported a significant amount of variety. Of the 335 respondents, 182 reported bean or bean and cheese burritos were among their three most popular items. Pizza was reported by 127 respondents. The next most popular item, macaroni and cheese, was reported approximately half as frequently as pizza (n=72). Grilled cheese, and pasta dishes (such as vegetable lasagna or spaghetti with marinara) were reported by 66 and 64 respondents, respectively. Other common popular items were peanut butter or seed butter sandwiches (n=57), salads or salad bars (n=56), yogurt or yogurt parfaits (n=53) and quesadillas (n=37). Of entrees using meat substitutes, only veggie burgers (n=21) and “chicken” nuggets (n=6) were reported by more than one respondent.

The majority of respondents have been serving vegetarian options for several years or more (Figure 6), but have not noticed a change in participation as a result of serving vegetarian options (Figure 7). However, a large proportion indicated increased interest from parents and students for more vegetarian options or menus (Figure 8).

**Figure 6: Number of years offering vegetarian options by percent of respondents.**

**Figure 8: Increased interest from parents and students by percent of respondents.**

**Figure 7: Change in participation due to vegetarian offerings by percent of respondents.**

Marketing or promotion of vegetarian options occurs in the districts of about a third of respondents (Table 2). Respondents (n=100) shared the ways in which they market or promote vegetarian options. Nearly all highlight these options on their menus (n=99). It was also common for respondents to use their department or district website to identify or promote vegetarian options (n=16). Posters, signage or bulletin boards were used by 11 respondents. Most do not use outside resources to market their vegetarian meals (Table 2). Among those that do, the most common resources used to market were Humane Society resources, including Meatless Monday materials (n=16) and Team Nutrition materials (n=10). Very few have received media recognition about their vegetarian options or menus (Figure 9).

**Table 2: Response percentages to questions regarding**

**Figure 9: Media recognition by percentage of respondents.**

**outside funding and use of resources available at no cost.**

|  | *Yes*  *(%)* | *No*  *(%)* |
| --- | --- | --- |
| Do you promote or market your plant-based, vegetarian, or vegan options as such? (n=343) | 32.4 | 67.6 |
| Do you use any free outside resources to market them? (n=109) | 26.6 | 73.4 |

Districts that serve vegetarian options or menus have not been without challenges. While the majority reported that they face no challenges (54 percent) or weren’t sure (14.7 percent), just under one-third agreed that they had. Of these (n=103), student acceptance was the greatest challenge (n=44). Other challenges included cost (n=20), appealing to students were are not vegetarians (n=13), meeting the meal pattern requirement (n=12), and availability of products (n=11).

Respondents did offer advice to districts that are interested to offering vegetarian options or menus. Offering samples or taste tests was a key recommendation from respondents (n=33). It was also suggested to rely on student input (n=29). Offering familiar options (n=24) and starting slowly with one option or one day a week (n=12) were also advice from several respondents. Several did not offer advice other than encouragement, such as “Just do it!” (n=13). Some of the more creative advice offered included “…use the idea of ‘Try Day, Friday’ and have all the schools make any new recipes and offer it in sample portions for the customers to try” and to “Talk and gain support of the principals at the school sites.”

**Respondents in Districts that Rarely Serve Vegetarian Meals**

When asked “Are any of the following reasons why you do not serve vegetarian meals more often?” the primary reason reported by respondents was lack of interest from students and/or parents (Table 3).

**Table 3: Response percentages when ask “Are any of the following reasons why you do not serve vegetarian meals more often?”**

|  | *Yes*  *(%)* |
| --- | --- |
| Lack of interest from students an‎d‎/or parents | 72.7 |
| Lack of interest from staff | 19.2 |
| We served them in the past, but they were not popular with students | 24.2 |
| Cost constraints | 10.1 |
| Not a priority to provide vegetarian meals | 33.3 |
| Unsure how to prepare vegetarian meals | 5.1 |
| Unfamiliar with vegetarian recipes | 10.1 |
| Regulations make it too complex to offer vegetarian meals | 18.2 |

In addition to above, respondents (n=45) were asked to share the biggest barrier to serving vegetarian meals. By far, the biggest barrier was lack of interest from students, with over half of respondents providing this as a response (n=24). Other than this, only concern over meal pattern requirements, and preparation time were reported by more than 10 percent (n=5).

When asked if there were any resources that would encourage them to serve vegetarian meals more frequently, out of 33 responses, most answered that there were none (n=18). A few requested a “How-To Guide” (n=5), and vegetarian recipes (n=3).

Consistent with above, most respondents report “None” when asked what would be helpful to learn in a webinar (n=20). Information such as recipes (n=7), sample menus (n=5), success stories (n=5), how to meet the Meat/Meat Alternate meal pattern requirement (n=4), and products (n=4) were requested by multiple respondents.

**References:**

1. Craig WJ, Mangels AR; American Dietetic Association. Position of the American Dietetic Association: vegetarian diets. J Am Diet Assoc. 2009 Jul;109(7):1266-82.
2. Report to the Governor, Legislature, and the Legislative Analyst’s Office on Assembly Concurrent Resolution (ACR) No. 16: Nutrition: Vegetarian School Lunches. Prepared by the California Department of Education, Nutrition Services Division, November 2011: http://www.cde.ca.gov/ls/nu/lr/documents/legreportacr16.pdf. Accessed February 16, 2015.
3. O'Toole TP, Anderson S, Miller C, Guthrie J. Nutrition services and foods and beverages available at school: results from the School Health Policies and Programs Study 2006. J Sch Health. 2007 Oct;77(8):500-21.