

Increasing Plant-Based Options on College Campuses to Reduce Greenhouse Gas Emissions



Gianna Minnuto
State University of New York at Geneseo

INTRODUCTION

Animal agriculture is the practice of rearing animals for the sole purpose of consuming their meat or secretions (such as milk or eggs). This practice is responsible for up to one fifth of global greenhouse gas emissions. Specifically, farming cattle contributes greatly to the emission of methane gas which can trap up to “100 times more heat in the atmosphere than carbon dioxide within a five year period” (Hsia-Kiung et al.). Additionally, raising cattle requires an immense amount of land to grow crops to feed the animals, resulting in a greater level of deforestation in areas dedicated to animal agriculture. Reducing the amount of meat consumed on a national and global scale would decrease the importance of animal agriculture in feeding the ever growing global population, thus reducing greenhouse gas emissions.

Increasing the amount of plant-based options on college campuses could lead to great decreases in carbon emissions and an improvement in student health nationwide. Expanding the plant-based options on the SUNY Geneseo campus could encourage students to convert from an omnivorous diet to a plant-based diet, which could contribute to a drastic decrease in greenhouse gas emissions from college campuses in the United States. SUNY Geneseo should consider expanding the plant-based options offered in its dining halls to better accommodate students who embrace or are interested in consuming a plant-based diet, which in turn would help decrease greenhouse gas emissions and improve student health on campus.

MATERIALS & METHODS

A survey was distributed to SUNY Geneseo students to accept responses over a 1 week period. The survey received 100 responses from undergraduate students which correlates to approximately 2.5% of the undergraduate population. Students were asked about their dietary restrictions, current eating habits, and their opinion about the dining halls related to sustainability and level of accommodation (ie. catering to veganism, cultural diets, allergens, etc.). A literature analysis was also conducted to determine the extent to which expanding plant-based options on the SUNY Geneseo campus would help to reduce greenhouse gas emissions and contribute to sustainable practices.

RESULTS

Vegetarian and vegan diets are becoming more popular on the national and global scale. According to Forbes, “Veganism is on the rise in the general population. The number of American consumers identifying as vegan grew from 1% to 6% between 2014 and 2017, according to GlobalData. [...] A quarter of Americans between the ages of 25 and 34 say they are vegans or vegetarians according to The Economist”. Forbes also stated that 39% of Americans are working to adopt a plant-based diet. As this trend creeps onto college campuses and more students adopt a vegetarian, vegan, or plant-based diet, on campus dining options will be forced to cater a larger portion of their options to fit these diets.

The administered survey revealed that 57% of students believe that SUNY Geneseo does not properly accommodate all diets and dietary restrictions (34% answered maybe and 9% answered yes). Additionally, 50% of students believe that SUNY Geneseo does not provide enough plant-based options in their dining halls (44% answered maybe and 6% answered yes). The majority of students also expressed interest in expanding the plant-based options offered in the on-campus dining halls (Figure 4). Finally, many students commented on the lack of options for students that embrace a plant-based diet or have dietary restrictions, emphasizing that there are limited options besides that of a veggie burger or a salad, which can get boring if you are forced to repeatedly consume these items. There appears to be a dire need for SUNY Geneseo to expand their menu to better cater to students who embrace a plant-based lifestyle or who must follow a specific diet such as being gluten-free.

Expanding plant-based options in the SUNY Geneseo dining halls would encourage students to explore alternative dietary patterns (vegetarian, vegan, Mediterranean, etc.) that have a lesser impact on the environment. Harvard University Sustainability states that “Shifting to a primarily plant-based diet can result in an almost 50% reduction in climate change emissions” (Hsia-Kiung et al.). Consuming less meat products can also have benefits for the individual's health such as lowering the risk of developing cardiovascular disease, cancer, obesity, Type 2 diabetes, and metabolic syndromes. Embracing a plant-based diet can also lower body mass index, blood sugar, blood pressure, cholesterol, and uric acid which can contribute to living a longer, healthier life. Ultimately, it is in the best interest of the individual and the environment to adopt a plant-based diet and to reduce one's consumption of meat, specifically red meat, when possible.

CONCLUSIONS

As more undergraduate students at SUNY Geneseo adopt this diet, the campus will be forced to expand its options to include more vegetarian and vegan friendly options. Adding these options to the on campus dining menus would also aid SUNY Geneseo in its mission to “embrace sustainability as a core value, including a commitment to its constitutive principles of ecological, social, and economic justice”. SUNY Geneseo's Sustainability webpage also states that “By minimizing the environmental impact of our institutional operations and integrating the principles of sustainability throughout our academic disciplines and co-curricular life we can begin to realize a more profound and enduring form of prosperity for current and future generations”. Encouraging students at a young age to adopt a diet that reduces carbon emissions, and minimizes the chance of developing future health complications, is one way that SUNY Geneseo can leave a lasting legacy on its students and on our planet.

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How would you rate your satisfaction with the food in SUNY Geneseo dining halls?

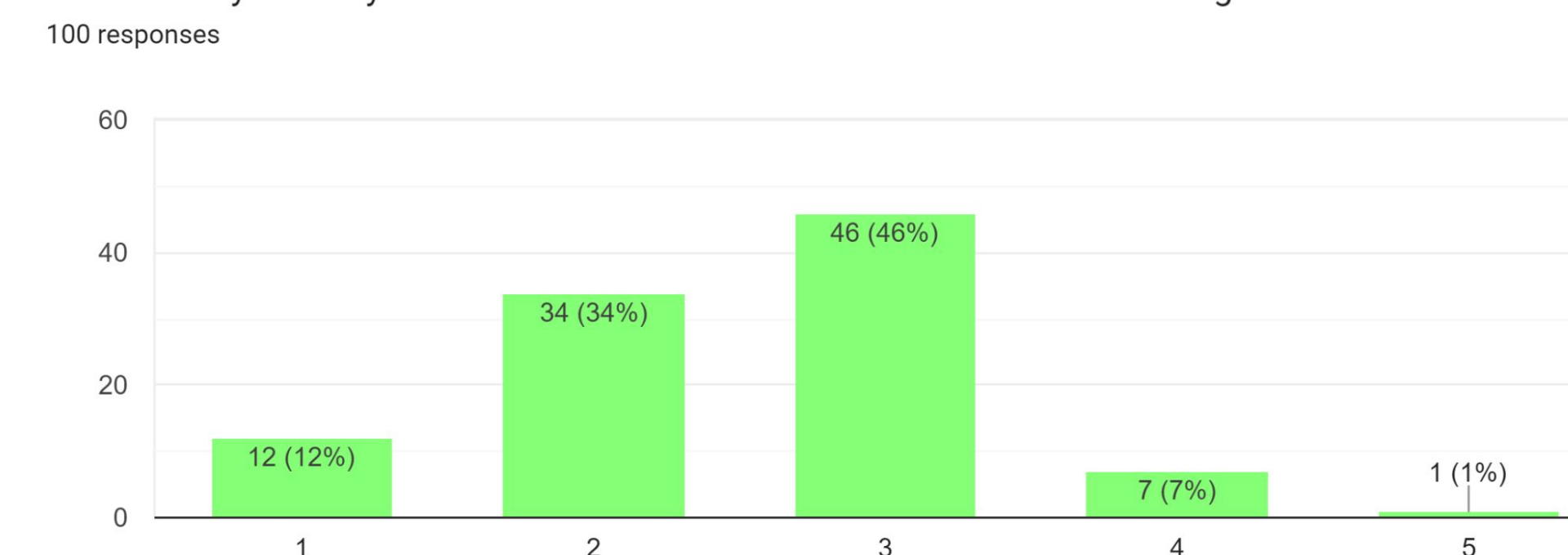


Figure 1. Student Satisfaction with SUNY Geneseo Dining Halls
Satisfaction was evaluated on a 5 point likert scale with 1 representing “not satisfied at all” and 5 representing “very satisfied”.

Do you believe that SUNY Geneseo properly accommodates all diets and dietary restrictions?

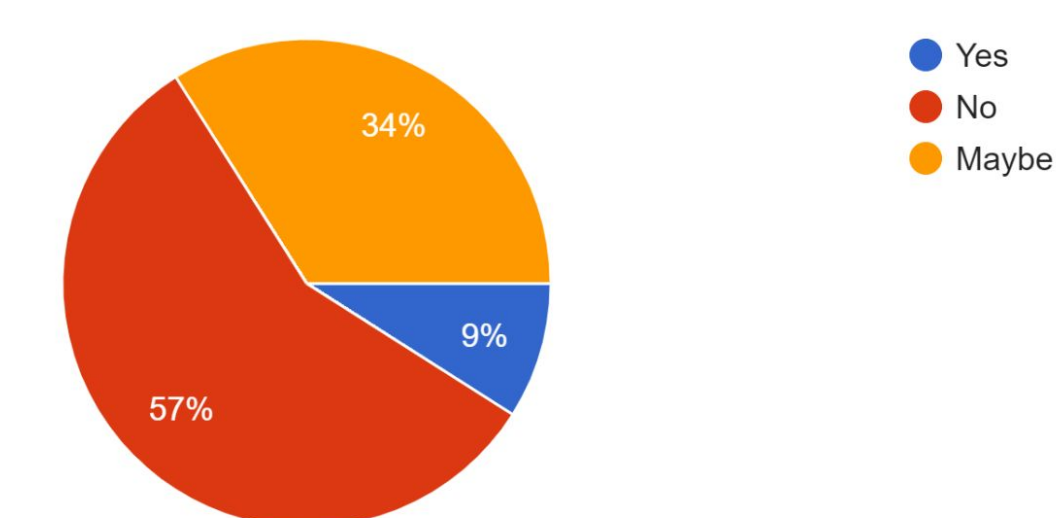


Figure 2. Student Opinion on SUNY Geneseo Dining Hall Accommodations

Do you feel that SUNY Geneseo provides enough plant-based options in the dining halls?

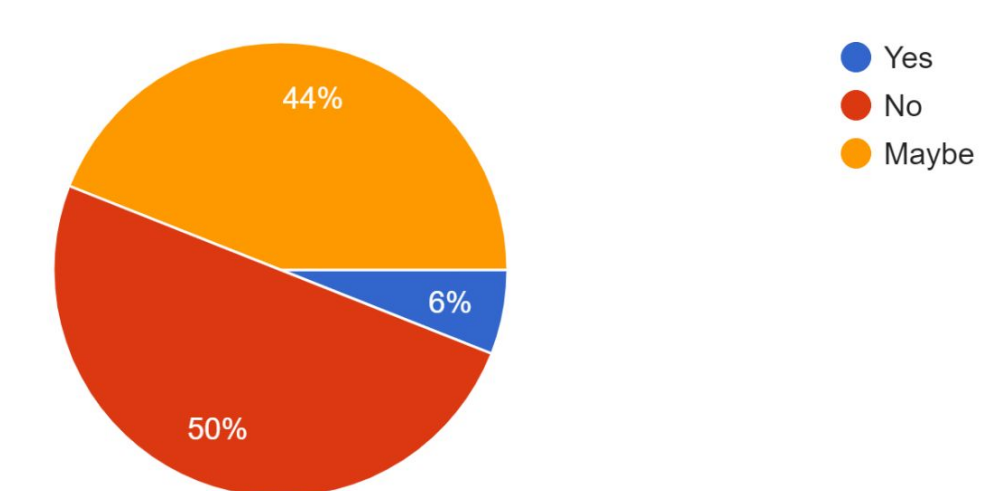


Figure 3. Student Opinion on Plant-Based Option Availability in SUNY Geneseo Dining Halls

If SUNY Geneseo chose to expand its plant-based options in its dining halls, what options would you like to see?

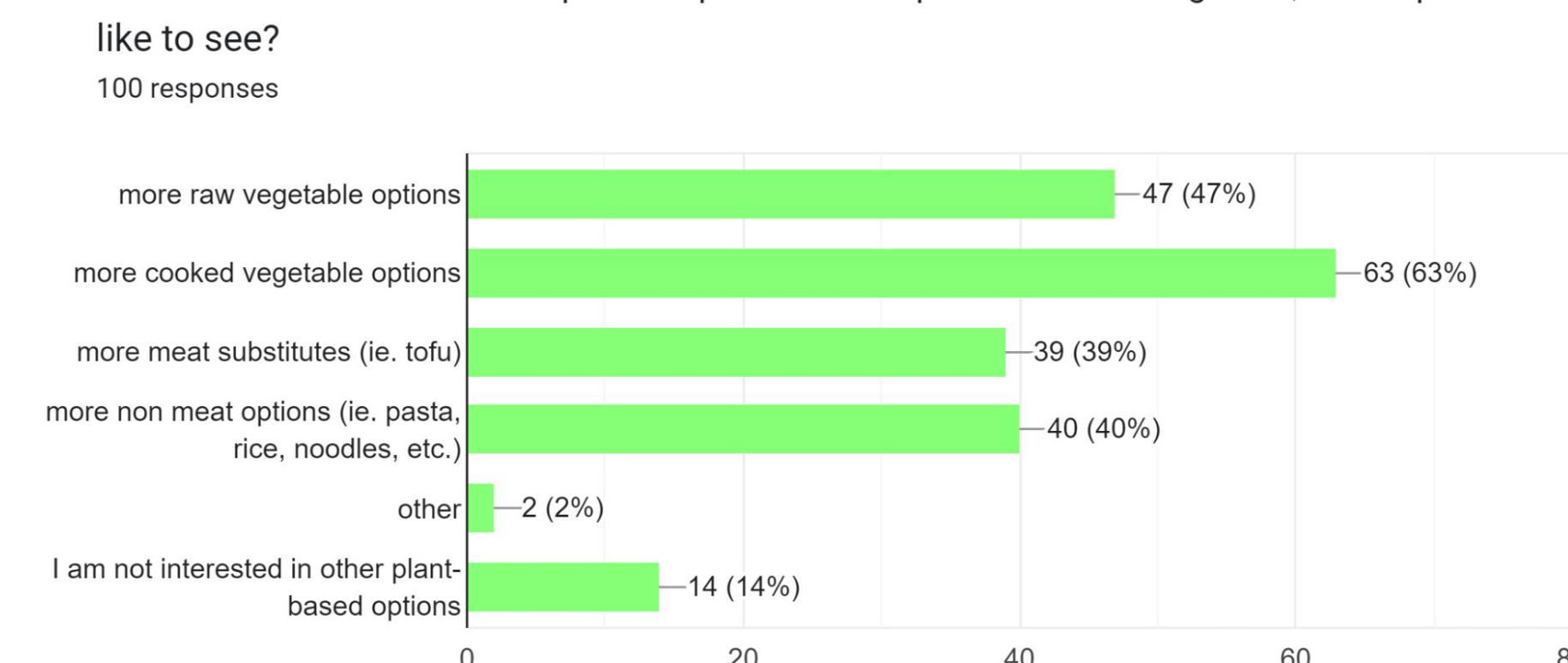


Figure 4. Student Interest in Expanding Plant-Based Options in SUNY Geneseo Dining Halls