

Reply to Miller et al, Letter to the Editor, Authors

We welcome the letter to the editor about our Society for Nutrition Education and Behavior position paper on the importance of including environmental sustainability in dietary guidance.¹ Our goal was to increase the visibility of environmental concerns in consumption decisions, and this exchange helps to accomplish that. We are glad to see that our colleagues agree with 2 of the main points of the position paper: an emphasis on food system sustainability is important for improving human and environmental health; and changes to dietary guidance and dietary choices are needed, including those that reduce excess energy intake and food waste. We seem to diverge on just 2 points. First, our colleagues disagree with our focus on the environmental dimension of sustainability, suggesting that we should have also included the health, social, and economic dimensions of sustainability in our paper. Second, they disagree with our suggestion that recommended diets should have fewer ruminant animal foods and more plant-based protein foods, citing concerns about the nutrition and health of consumers, the environment, and the social and economic repercussions of such advice.

Although we agree with the United Nations Food and Agriculture Organization's multidimensional definition of sustainable diets, we highlighted the environmental dimension in the position paper for 3 main reasons. First, global warming is a clear and present danger. Since we wrote our paper, 2 major reports have been released from the Intergovernmental Panel on Climate Change^{2,3} that

show that the situation is worse than expected and immediate action is required. Second, environmental concerns were absent in previous iterations of the Dietary Guidelines for Americans (DGA),^{4,5} unlike nutrition and health concerns, which are central to dietary guidance, or social and economic influences, which all guidance acknowledges. We considered the absence of environmental sustainability especially important because the federal government had recently excluded it from the final 2015–2020 DGA,⁶ even though it was an important part of the scientific report⁷ that underlaid the guidelines. Finally, to our knowledge, all nutritionists receive training on the social, economic, and cultural aspects of diets, but environmental sustainability is not typically addressed. For all of these reasons, we focused on environmental considerations to elevate this missing and urgent dimension of sustainability.

Our colleagues also disagree with our suggestion that diets with fewer ruminant animal foods and more plant-based protein foods would improve the nutrition and health of consumers as well as the environment. They assert that these recommendations need greater nuance and specificity. It was never our intent, nor that of the Society, to provide specific dietary guidance in this position paper. Rather, we indicated a general direction for the way diets should shift to improve both health and the environment (eg, fewer ruminant animal products, more plant-based protein). We never suggested an elimination of animal foods. This was the same approach taken by the Dietary Guidelines

Advisory Committee,⁷ and these general directions are well supported by the science. Numerous studies, for example, showed that reducing beef intake would improve both health and environmental outcomes.^{8–10} Our colleagues are concerned that increasing plant foods and reducing animal foods would lead to reductions in under-consumed nutrients, such as calcium or vitamin D. The studies they cited to support this point did not consider fortified plant-based milks, such as soy milk, which contain concentrations of these nutrients similar to those in dairy milk. It is because of this nutrient profile that the DGA includes fortified soy milk as part of the dairy group. In fact, since 2010, the DGA has provided vegetarian and vegan meal patterns that are consistent with their recommendations.^{5,6} Thus, our suggestion to move toward more plant-based foods and fewer ruminant animal foods in the American diet can be done in ways that are completely consistent with current nutritional recommendations.

We also think a more nuanced assessment is needed regarding the environmental impacts of animal agriculture as well as of the food system in general. Our colleagues pointed out the environmentally beneficial aspects of livestock, such as their ability to use human-inedible food and fiber by-products. True, but solely feeding such by-products to cattle in the US could support only about 10% of Americans' current beef consumption. Even adding use of US pasturelands could theoretically supply only 43% of current beef consumption levels.¹¹ Although we acknowledge the importance of these opportunities to integrate livestock sustainably in agricultural systems, the level of production they would support implies the need to reduce our current beef consumption substantially, perhaps in half.

We also have a different perspective on our colleagues' assertion that even complete elimination of animal

Conflict of Interest Disclosure: D. Rose has received research funding from the Wellcome Trust and the Center for Biological Diversity. M. C. Heller has received research funding from the Wellcome Trust, the Center for Biological Diversity, the Oregon Department of Environmental Quality, and Beyond Meat, and has been a consultant to the United Nations Environment Programme. C. A. Roberto has received research funding from the Wellcome Trust and Bloomberg Philanthropies.

J Nutr Educ Behav. 2020;52:206–208

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<https://doi.org/10.1016/j.jneb.2019.12.004>

products would reduce greenhouse gas emissions by only 2.6%. These potential greenhouse gas emission reductions from diet shifts appear small in comparison with the massive emissions from all sectors of the US economy, but they can represent 10% to 20% of emission reduction targets. For perspective, the suggested extreme example of eliminating livestock¹² would represent 17% of the reductions necessary for the US to meet its United Nations Framework Convention on Climate Change targets.¹³ Given the dangers of global warming and the extent of our current emissions, all sectors need to contribute to such reductions in greenhouse gases.

If nutritional and environmental concerns point to the benefits of reducing beef in the diet, should we hold back on these recommendations for economic or social reasons? There have been many examples in which scientific research updates our perspectives on the health effects of certain products. Examples include smoking and overconsumption of alcohol and sugar-sweetened beverages. In each case, there are industries that have argued they will be economically affected by recommendations to limit consumption of these health-harming products, but fear of this is not a reason to avoid educating the public about the threats to human and planetary health that some products pose.

Of course, it is important to think about the individuals employed by these industries and how they might be affected. The good news is that analyses from policies that reduced tobacco consumption showed they have no net impact on jobs, because job losses in tobacco-related sectors are offset by gains in other sectors.^{18,19} This happens, in part, because the money people no longer spend on tobacco is spent on other products or services. There are also examples in the energy industry, in which the loss of coal jobs has been replaced by employment in renewable energy.^{20,21} The grave need to address climate change means we cannot withhold advice and guidance to the public for fear that industries will be hurt, and based on existing research, policies can be put in place to offset potential job losses in 1 sector by gains in other sectors.

In their letter to the editor, our colleagues argued for a balanced approach. We agree. We never called for elimination of animal foods or recommended that dietary guidance should be based solely on foods with the lowest greenhouse gas emissions. It is clear from current evidence that action on the problem of global warming is urgently needed from all sectors. Reduction of animal products, especially ruminants, is necessary for an environmentally sustainable food system. Do we need to pay attention to what consumers substitute for these foods or how it affects workers in the food system? Absolutely. This calls for a more nuanced, systems-oriented, multidisciplinary approach to tackling these problems. Support for such an approach is possible only through broader recognition of the importance of environmental sustainability in nutritional guidance, the central tenet of our position paper.

ACKNOWLEDGMENTS

This work was supported by the Wellcome Trust (Grant No. 106854/Z/15/Z).

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Reply to Miller et al, Letter to the Editor, SNEB

The Society for Nutrition Education and Behavior (SNEB) leadership welcomes this opportunity to respond to the letter to the editor (LTE) regarding our position paper on the importance of including environmental sustainability in dietary guidance published in the January 2019 issue of JNEB.¹ The SNEB expects position papers to shape food and nutrition education, research, practice, and policy. Therefore, the Society worked closely with its Journal Committee and the JNEB Editor-in-Chief to create a rigorous process for developing position papers that are balanced, evidence-based, timely, relevant, and of interest to our membership and to the broader field of nutrition.² Position papers provide a comprehensive discussion of SNEB's policy with respect to ≥ 1 topics to provide an in-depth understanding of the issues and the reason behind the position(s) set forth by the Society. We fully concur with the response provided by Drs Rose, Heller, and Roberto and wish to expand on a few points.

Although we agree that all dimensions of sustainability are important, the urgency of environmental issues makes it essential to review this dimension of sustainability independently and adequately to understand how food systems, from production to consumption, affect natural resources and planetary boundaries. Concern over the natural resource base and environmental sustainability was foundational to the origins of sustainable development as a construct over 3 decades ago³ and gained prominence in research, practice, and policy worldwide. Now that a global consensus is building regarding the threat of climate change, in our view, food and nutrition educators have a responsibility to become more aware of food system–related climate implications, from production, processing, and transportation to food preparation, storage, consumption, and disposal. According to a 2015 United Nations Resolution, “Climate change is one of the greatest challenges of our time and

its adverse impacts undermine the ability of all countries to achieve sustainable development.”⁴ Given insufficient action to date on environmental sustainability and the pace of climate change,⁵ a focus on the natural environment is a critical starting point from which the other key dimensions of a sustainable diet can be considered.

The LTE's primary criticism centers on the position paper's discussion of meat production and consumption. Effects related to dominant meat production systems in the US merit attention. In this regard, the increasingly deleterious health, economic, and social impacts on households and communities adjacent to confined animal feeding operations need to be considered.^{6,7} The LTE authors expressed concern that

Dietary guidance to reduce animal-based foods could negatively impact the economic status of the 1.3 billion individuals whose livelihoods are tied to animal agriculture, many of whom live in the U.S. or depend on trade with the U.S.

This may be true in certain parts of the world. However, changes in US livestock production and meat-packing sectors have tended to concentrate economic benefit among a small number

Conflict of Interest Disclosure: The authors have not stated any conflicts of interest.

J Nutr Educ Behav. 2020;52:208–210

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<https://doi.org/10.1016/j.jneb.2019.12.002>