

May 8, 2015

Friends of the Earth Comments on the 2015 Scientific Report on Dietary Guidelines

Summary

Friends of the Earth urges HHS and USDA to embrace the Scientific Report's recommendations regarding sustainability, and develop clear guidance on the need for reduced consumption of animal products and more plant-based foods for the sake of public health and the environment.

In our comment, we highlight four key points:

First, food security is a fundamental basis of nutrition. Food choices today directly impact the food security of current and future generations.

Second, there is overlapping and strong scientific evidence that a more plant-centered, less resource-intensive diet is both better for the environment and our nation's health outcomes, while generating large cost savings.

Third, the public overwhelmingly supports the inclusion of recommendations on sustainability, less meat and more plants in the (DGA) as evidenced by:

- the overwhelming numbers of public comments in favor of sustainability
- more than 150,000 signatories on petitions in support of sustainability (FOE petition with 41,500 signatories attached)
- a letter delivered to the agencies with support from 49 public interest groups (attached)
- a letter (attached) with support from more than 500 health professionals

Fourth, the report mentions that production practices are a critical component of sustainability, yet fails to highlight the well-documented health, environmental, and economic benefits of pastured, grassfed and organic production practices. We urge you to consider and inform Americans of these benefits in the 2015 USDA Dietary Guidelines.

Finally, the dietary guideline recommendations are an historic opportunity to bring alignment and coherence across USDA's and HHS' key economic, health and environmental goals.

May 8, 2015

The Honorable Sylvia Mathews Burwell
Secretary of Health and Human Services
200 Independence Avenue, SW
Washington DC, 20201

The Honorable Thomas J. Vilsack
Secretary of Agriculture
1400 Independence Avenue, SW
Washington DC, 20250

Dear Secretaries Burwell and Vilsack,

Friends of the Earth (FOE) commends the Dietary Guidelines Advisory Committee (DGAC) for its visionary leadership in guiding our nation's food policy in a direction that will ensure a healthy, nutritious and adequate food supply for current and future generations. Specifically, we applaud the DGAC for incorporating sustainability and natural resource concerns into the Scientific Report on the 2015 Dietary Guidelines. Given the need to protect food security into the future and the general public's limited knowledge about the widely varying ecological footprint of different foods, it is vital that the Dietary Guidelines for Americans (DGA) provide mutually reinforcing information and guidance on food choices that are better for the planet and human health.

Friends of the Earth therefore urges the U.S. Departments of Health and Human Services (HHS) and Agriculture (USDA) to fully embrace the Scientific Report's recommendations regarding sustainability, and develop clear dietary guidance on the need for reduced consumption of animal products and more plant-based foods for the sake of public health and the environment. As you move forward to consider the evidence, we encourage your agencies to resist food industry pressure and let science, not politics, guide your decision-making about the Dietary Guidelines.

In Friends of the Earth's comment to the DGAC on September 10, 2014 we provided extensive scientific evidence on why the DGA needs to include recommendations about sustainability, less meat and more plants to protect the planet's finite resources and public health. That explanation can be found in comment #697 archived at this link: <http://www.health.gov/dietaryguidelines/dga2015/comments/readArchivedCommentDetails.aspx?CID=697>.

In the face of extensive lobbying and misinformation provided by the food industry on these issues, below we provide additional justification for taking this approach. USDA and HHS should not be misled or swayed by the self-interested rhetoric from the industrial meat lobby, which continues to try to raise the specter of doubt, despite overwhelming science showing that less meat and more plants is better for public health and the environment.

In addition to our September comment, we also provided [oral testimony](#) on March 24, 2015 Providing consumers the information they need to make more eco-conscious food choices and

shift towards plant-based diets must play a key role in our efforts to feed more people with fewer resources while curbing greenhouse gas emissions and reducing air and water pollution—especially given the large quantities of water, pesticides, fuel, and fertilizer that go into industrial meat and dairy production.

1) Sustainability is Fundamental to Food Security and Nutrition

Mr. Vilsack has said that considering sustainability as part of the DGAs could be “coloring outside the lines.” Yet, there are no lines between nutrition and food security. Access to food is the cornerstone of nutrition. In essence, to deny that food security is part of nutrition is to miss the fundamental point that having access to food is what allows us to benefit from its nutrients.

As the Scientific Report points out, *“Linking health, dietary guidance, and the environment will promote human health and the sustainability of natural resources and ensure current and long-term food security. The availability and acceptability of healthy and sustainable food choices will be necessary to attain food security for the U.S. population over time.”* Many reports on sustainability and nutrition that have been published by domestic non-governmental organizations such as the Institute of Medicine, the Academy of Nutrition and Dietetics, and the National Research Council.^{1,2,3,4}

Mr. Vilsack’s narrow and erroneous interpretation of the guidelines’ mandate could jeopardize our nation’s food producing resources, putting at risk not only our nutritional well-being, but the economic security of America’s farmers and food businesses, who depend on a well maintained base of natural resources, especially soil and water.

Food security now, and in the future is founded on the availability of an adequate, robust, and resilient natural resource base. Yet, America’s current food production system, grounded in resource intensive consumption and production patterns, is rapidly depleting and degrading key natural resources upon which future production, our food security, and access to adequate nutrition, depends. Industrially produced animal products (meat, dairy, eggs) are among the most resource-intensive foods, requiring large quantities of land, water and fuel.

As the 2015 DGAC made clear: *“Foods vary widely in the type and amount of resources required for production, so as population-level consumer demand impacts food production (and imports), it will also indirectly influence how and to what extent resources are used. Individual and population-level adoption of more sustainable diets can change consumer demand away from more resource-intensive foods to foods that have a lower environmental impact.”*

The science is clear that plant-based proteins require far fewer resources per unit of protein.^{5,6,7} For example, it takes 4-6 times as much water to produce a gram of beef protein as it does to produce a gram of lentil protein.⁸ On a per pound basis, beef requires 46 times as much water as does the same amount of broccoli.⁹ Overall, meat has been shown to contribute 37% to the food-related water footprint of an average American citizen.¹⁰

At a time when an unprecedented drought is gripping the nation’s critical food producing areas, shifting diets away from animal products and reducing demand for these water intensive foods

must play a key role in our efforts conserve water and to feed people in an increasingly water scarce environment. This is not just an environmental issue. This is a clear food security and nutrition issue.

Today, a quarter of California’s precious and rapidly declining water supply is going to crops that are fed to animals. And in the Midwest, an even larger portion of scarce irrigation water is going to thirsty animal feed crops like corn.¹¹ That water would go much further if it were used to irrigate nutritious plant proteins such as legumes—or healthy vegetables like broccoli—which 80% of Americans fail to consume at adequate levels.

With the acceleration of climate change, we will only have less, not more water available for the production of water intensive animal foods. As the 2012 US State Department Global Water Security Assessment pointed out: “during the next 10 years the depletion of groundwater supplies in some agricultural areas—owing to poor management—will pose a risk to both national and global food markets.”¹² This will directly affect people’s ability to afford and access healthy, nutritious food.

Reduced food waste is a key feature of more sustainable diets. Roughly 30 percent of our food ends up in the garbage, with an annual economic loss of \$165 billion.¹³ Informing people and institutions about how to minimize food waste is therefore one of the most important strategies for reducing the unnecessary use of water, fuel and other chemical inputs.

As scientific data presented here has shown, reducing consumption of resource-intensive animal products will reduce pressure on finite water and other resources that are vital for safeguarding America’s food supply in the near and long term, especially in the context of a changing climate, increased drought, resource shortages, changes in global dietary patterns, and population growth.

Improving production practices in ways that reduce resource degradation will also play a key role in safeguarding our food supply. We discuss in greater detail below in section 4 why production practices belong in the Dietary Guidelines.

2) Reduced Meat Consumption is Good for the Planet and Our Health

The science is clear that a diet with less meat and more plant protein is better for our health and better for the planet. It is also better for our nation’s economy and productivity given the soaring health care costs that are directly related to high consumption levels of animal products.

Americans consume significantly more meat than is recommended by USDA guidelines and far more than the rest of the world.¹⁴ This high consumption of industrially produced meat, especially red and processed meat, is associated with increased risks of diet-related disease (heart disease¹⁵, diabetes¹⁶, and cancer¹⁷), large quantities of energy-intensive inputs (pesticides, fertilizer and fuel) and ingestion of harmful pesticides and cancer-causing dioxin¹⁸.

We therefore urge that the 2015 DGA include a recommendation to lower or even limit red meat and processed meat intake. We also suggest explicitly listing common food names as found in the supermarket to guide consumers. We also urge the DGA to not include the message to

“choose lean meats” as to do so would only undermine the important health-promoting message to lower red meat and processed meats. Similarly, guidance in the DGA to increase non-animal protein sources, including legumes, soy products, wheat gluten, seeds, and nuts, should be coupled with the recommendation to reduce red and processed meats.

Since half of all meals are consumed outside the home, it will be important to highlight the important role of food service, including restaurants and governmental feeding programs, in reducing meat portion sizes and putting more plant protein dishes on the menu.

a. Health and economic benefits of less meat and more plant consumption

There is a strong body of scientific evidence indicating that a diet with less meat and more plant-based foods is better for our health and our pocketbooks. Three of the four leading causes of preventable death--heart disease, cancer, and stroke—are diet related. And heavy meat consumption, especially red and processed meat, is associated with increased risks of heart disease, diabetes and some cancers, while plant-based diets are associated with decreased risks of all three.¹⁹

There is strong evidence that diets high in red meat (beef, pork, lamb) and processed meat (hot dogs, bacon, sausage, deli meats, etc.) increase the risk for colorectal cancer.²⁰ Many epidemiologic studies have reported a modest but significant association between high intakes of processed meats and red meats and increases in cancer incidence and mortality in a dose-response relationship, as well as death from other causes.^{21 22 23}

Given that chronic, preventable diseases now account for an estimated 75 percent of all healthcare costs,^{24,25} with total costs of just heart disease and stroke estimated at \$315.4 billion in 2010²⁶, a shift toward more plant-based foods will save the nation billions of dollars in health care costs and is essential to our nation’s health and economic prosperity.

Some industry groups argue that the current American diet is too far from the DGAC recommendations for a shift to be realistic. HHS and USDA should not fall for such specious claims, as providing science-based recommendations for Americans on the most nutritious diet is the role of the DGA. Both the American Institute for Cancer Research (AICR)’s Recommendations for Cancer Prevention²⁷ and the American Cancer Society’s guidelines mention the importance of nutrition and physical activity for cancer prevention²⁸

Plants: more nutrients, fewer harmful components

Claims that red meat and processed meats are “nutrient dense” are misleading because they ignore all the harmful components of meat, and the fact that plants are often nutritionally superior. High consumption of industrially produced meat is also associated with ingestion of harmful pesticides and cancer-causing dioxin,²⁹ an important omission in the Scientific Report. According to Environmental Protection Agency 95 percent of our exposure to cancer causing dioxin like compounds (DLC) come from meat, dairy, fish and shellfish.³⁰ The Food and Drug Administration, the Environmental Protection Agency, World Health Organization and the National Academy of Sciences all agree that the best way to lower personal dioxin levels is to reduce dietary exposure to dioxins by lowering animal fat intake and increasing consumption of fruits, vegetables, and whole grains.³¹ Given the significant health concerns, the 2015 Dietary

Guidelines should highlight the little known fact that most of our exposure to cancer-causing dioxin-like compounds (DLC) come from meat, dairy, fish and shellfish.

Industrially-produced meat contains other components harmful for our health. For example, Trimethylamine N-Oxide (produced when a compound found in red meat called L-carnitine is metabolized) is associated with inflammation, atherosclerosis, heart attack, stroke and death.³² Neu5GC, a sugar molecule found in red meat, metabolically accumulates³³ and has been found to promote chronic inflammation.³⁴ In addition, when meat is cooked, compounds called polycyclic aromatic hydrocarbons (PAHs),³⁵ heterocyclic amines (HCAs),³⁶ and advanced glycation end products (AGEs)³⁷ are formed. These compounds, which are carcinogenic, pro-inflammatory and pro-oxidative, contribute to chronic disease.

There are other significant public health concerns with the massive amounts of meat produced in the US. Seventy to eighty percent of antibiotic use³⁸ in the United States is administered to healthy livestock animals to avoid infections caused by the cramped and unsanitary environments of animal confinement facilities. This inappropriate use of antibiotics is a major contributor to the increasingly virulent antibiotic-resistant infections that sickened 2 million and killed 23,000 Americans in 2013.³⁹

While most Americans will not solely choose a vegetarian diet, it is important to emphasize that a plant-based diet is a nutritionally appropriate alternative that is beneficial to health and the environment. The USDA,⁴⁰ American Dietetic Association⁴¹ and other top health organizations agree that a well-planned vegetarian or vegan diet can provide all necessary nutrients.

b. Environmental benefits of consuming fewer animal products

The science is clear that less meat production and consumption translates into significant environmental benefits including cleaner water (fewer pesticides, hormones, nitrates and manure toxins); a smaller carbon footprint; significant water savings; more habitats for bees, butterflies and other essential organisms; and more land available for food production.

The industrial production of meat in the U.S. – at roughly 55 billion lbs. per year (167 lbs. per capita)⁴² – from 9 billion animals requires massive amounts of pesticides, chemical fertilizer, fuel, feed, land and water. In the process, it emits large amounts of greenhouse gas emissions and generates mountains of manure, fertilizer run-off, and other pollutants that contaminate our air and water. Animal agriculture is a major driver of climate change, habitat destruction and deforestation.

For the first time, a recent report issued by the UN Intergovernmental Panel on Climate Change (IPCC) identified the vital role that reduced meat consumption can play in mitigating climate change and addressing other environmental issues, pointing out that “changes in human diet can have a significant impact on GHG emissions.” One of the most important findings in the IPCC report is that “the potential to reduce GHG emissions through changes in consumption (that include some meat, fish and eggs) was found to be substantially higher than that of technical mitigation measures.”⁴³

Friends of the Earth’s earlier comments on the environmental impacts of our diet choices can be

found [here](#).

3) The public strongly supports USDA and HHS in including sustainability, less meat and more plant-based food recommendations as part of the DGA.

The public overwhelmingly supports the inclusion of recommendations on sustainability, less meat and more plants in the (DGA). The public's passion around this issue is reflected in the large number of comments submitted, more than ten times the comments submitted in the past. Of the more than 22,500 comments submitted at the time of this writing, the majority are clearly in favor of sustainability and less meat and more plant-based food consumption.

In addition, with this comment, Friends of the Earth brings the voices of more 41,500 people who joined a total of over 150,000 signatories to a petition supporting the DGAC's call for a diet with more plant-based foods and fewer animal products for the sake of public health and the environment. The petition was promoted by a coalition of more than a dozen organizations representing millions of members. The large number of signatories on this petition stands in stark contrast to the 2,493 (as of 5/8/15) signatures on a change.org petition, "Hands Off My Hot Dog", by the Meat Institute.

The March 24, 2015 public hearing showed a similar trend in public support. I was one of more than a third of the speakers advocating strongly in support of sustainability recommendations. As [Agripulse](#) reported, "supporters of the provisions came out in full force calling for sustainability language to ultimately be included in the 2015 Dietary Guidelines for Americans"

Further sign of significant public support is evidenced by the [sign-on letter](#) to Secretaries Burwell and Vilsack from 49 public interest group and public health signatories (attached).

Additionally, a joint statement, signed by more than 100 prominent organizations and experts, in support of sustainability, less meat and more plant-based foods in the DGA, was featured in full-page [advertisements](#) in the *New York Times*, *Washington Post* and *Politico* on March 24, 2015. Since then, the statement has garnered at least 50 more signatures at [myplatemyplanet.org](#).

In a major show of support, the health community has rallied around these recommendations. More than 500 health professionals—including experts such as, Dr. Mark Hyman, Dr David Katz, Dr. Walter Willett, Dr. Caldwell Esselstyn, Dr. Debra Shapiro and Dr. Neil Barnard, have signed a letter (attached) endorsing "the Dietary Guidelines Advisory Committee's (DGAC) recommendations to reduce consumption of animal foods and shift toward a more plant-based diet, as well as its "recognition of sustainability as an essential component of federal dietary guidance." These experts understand the science, treat Americans affected by diet-related diseases and work hard to protect public health. This letter will remain open after the May 8 comment deadline; we include it here to show the clear support from the health community for this shift in the DGA.

In addition, consumer trends and attitudes support the Scientific Report's recommendations for shifts towards more plant-based diets. While one in ten Millennials follow a vegetarian diet,⁴⁴ it's not just vegetarians who are seeking healthier foods. Research suggests that 36 percent of U.S. consumers prefer milk and meat alternatives, and that between 26 and 41 percent of Americans

have eaten less meat over the past year.⁴⁵ The trend toward “flexitarian” diets indicates that more Americans need guidance on how to eat less meat and more plant-based foods.

A March 13, 2015 report from the Oklahoma State University’s Department of Agricultural Economics’ “FoodS” survey found that nearly 53% of people responded “True” to the following statement: “The committee’s dietary recommendations should consider impacts on the environment,” while just over 21% responded “false,” and another nearly 26% responded “I don’t know.”

4) PRODUCTION METHODS

The use of more sustainable production practices is critical for safeguarding American’s food supply and ensuring food security in the longer term. *As the Scientific Report pointed out: “Meeting current and future food needs will depend on ... developing agricultural ... practices that reduce environmental impacts and conserve resources, while still meeting food and nutrition needs.”* Unfortunately, the report failed to differentiate the significant differences in meat production practices and the significant benefits to public health, the environment and animal welfare of choosing organic and sustainably produced animal products over industrially produced meat, eggs and dairy.

Besides urging less animal product consumption, the Dietary Guidelines should also stress the health and ecological benefits of pasture-raised and organically-produced meat and dairy products. When people eat less meat, they can afford better meat that has been raised on pasture and/or raised organically without the use of antibiotics, hormones, synthetic pesticides and chemical fertilizers.

Current production practices, especially industrial chemical-intensive, grain-fed meat production, that rely on intensive monoculture production, generates substantial greenhouse gas emissions, degrades soil, destroys biodiversity and pollinator habitat and produces significant air, land and water pollution. These impacts not only compromise our nation’s ability to produce healthy and abundant food in the long term, they also generate major costs for other sectors of the economy.

In contrast, more sustainable, humane and organic food production methods that do not rely on the routine use of antibiotics, hormones, chemical fertilizers and toxic pesticides are better for public health, workers, and the environment.

Many studies have shown that organic and sustainable production methods deliver cleaner water (Poudel et al., 2002 and Dalgaard et al., 1998), healthier soils (Bulluck et al., 2002), fewer toxins, and greater biodiversity and pollinator habitat (Tuck et al. 2014), when compared to conventional, chemical-intensive industrial production. Pastured animals, especially are an integral part of a healthy agricultural system. Well-managed grazing builds healthy, fertile soil, sequesters carbon⁴⁶, and increases the moisture-holding capacity of the soil, especially important in this time of increasing drought.

Grass fed and pastured meat and dairy provide a dense source for many of the shortfall nutrients identified in the 2015 recommendations, including calcium, iron, and A, E, and B vitamins.

Grass-fed meat is leaner than that produced in the grain-fed commodity system and, in the case of both meat and dairy, the fat profile is healthier than that of its grain fed counterparts. A 2010 review of three decades of research found that grass-fed beef provides higher levels of nutrients, including Omega-3 fats, beta-carotene, conjugated linoleic acid and Vitamin E than grain-fed beef.⁴⁷ A 2013 study published in PLoS ONE found that grass-fed organic dairy has far higher levels of Omega-3 fats than grain-fed dairy.⁴⁸

Besides urging less animal product consumption, the Dietary Guidelines should also stress the health and ecological benefits of pasture-raised and organically-produced meat and dairy products. When people eat less meat, they can afford better meat that has been raised on pasture and/or raised organically without the use of antibiotics, hormones, synthetic pesticides and chemical fertilizers.

Thank you for considering our views on the Dietary Guidelines for Americans.

Sincerely,

Kari Hamerschlag
Senior Program Manager
Friends of the Earth

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