

Potential Impacts of the Dietary Guidelines for Americans – 2005 on American Agriculture

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Introduction

The Dietary Guidelines for Americans (Dietary Guidelines) provide research-based dietary advice designed to promote health and reduce risk for the major chronic conditions and diseases that affect people in the U.S., including obesity, diabetes, cardiovascular disease, high blood pressure, cancer, and osteoporosis. The Dietary Guidelines are the cornerstone of federal nutrition policy and influence the numerous food and nutrition programs of the federal government. These include the Food Stamp Program, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), National School Lunch Program and School Breakfast Program. The latest edition of the Dietary Guidelines was introduced in 2005.

Most Americans do not consume diets that are consistent with the recommendations of the *Dietary Guidelines for Americans – 2005 (DG-2005)*. Nutrition education, such as that provided by Extension educators, can help consumers make healthful food choices to meet the DG-2005, within the context of their usual food patterns and cultural preferences. A recent report from USDA's Economic Research Service (ERS) indicates that changes in food intake patterns to meet these recommendations have implications for American agriculture, which may be of interest to Extension and its partners.

Food Group Recommendations of DG-2005

The DG-2005 (1) encourages Americans to consume more fruits, vegetables (with specific recommendations for the five sub-groups of vegetables), fat-free or low-fat milk or milk products, and whole-grain products, while staying within caloric recommendations. These food group recommendations are outlined in the MyPyramid Food Guidance System, which was introduced in April 2005 (2) and which is available at <http://mypyramid.gov>. The amounts recommended constitute alterations in consumption of food from these food groups for many Americans, and thus have implications for American agriculture (3). Within USDA's Food Guidance System, food patterns are based on calorie needs. For a person consuming a 2,000 calorie per day diet, the amounts recommended from these four food groups are as follows:



Fruits: 2 cups
Vegetables: 2 ½ cups
Grains: 6 ounce equivalents (eat at least 3 ounce equivalents of whole grain foods)
Milk: 3 cups (choose fat-free or low-fat)

Note: The fifth food group is Meats and Beans, and at the 2,000 calorie per day level, the recommended intake is 5 ½ ounce equivalents. Most people consume an adequate amount of protein, one of the key nutrients provided by this food group, but eat beans infrequently, and increased intake of beans is recommended (this is included in the recommendation to increase vegetable consumption, since beans are included in both food groups).

The average American diet falls short of the daily recommendations for fruits, vegetables (except for starchy vegetables which are over-consumed), whole grains, and milk and milk products in the DG-2005 and in the supporting MyPyramid Food Guidance System. The ERS report indicates that “if Americans were to bring their diets fully in line with these recommendations, changes in the mix and quantity of foods produced in the United States would undergo some major shifts.”

What Did The Study Find?

The following findings are reprinted from the [ERS report](#) (3):

If Americans were to fully meet the Guidelines' recommendations for fruits, vegetables, total grains, and whole grains, U.S. agriculture would need to harvest 7.4 million additional acres of cropland per year, an increase of 1.7 percent of total U.S. cropland in 2002. Additionally, U.S. dairy farmers would need to raise annual production of milk and milk products by an estimated 108 million pounds (about a 65 percent increase) for Americans to meet recommendations for dairy consumption. Such an increase in dairy demand would likely require an increase in the number of dairy cows, an increase in the volume of feed grains needed, and, possibly, an increase in the acreage devoted to dairy production.

Fruit. *Americans would need to increase daily fruit consumption by 132 percent to meet the new dietary recommendations. The additional demand could require U.S. producers to more than double harvested fruit acreage to 7.6 million acres (from 3.5 million). U.S. fruit production is constrained by land, labor, and climate, making it likely that imports would continue to increase as a share of the total U.S. fruit supply.*

Vegetables. *To meet the new recommendations for vegetables, Americans' daily vegetable consumption would need to rise by about 31 percent and the mix of vegetables consumed would need to change. For example, consumption of legumes would have to increase by 431 percent, and consumption of starchy vegetables would have to decline by 35 percent. To meet this increased demand, the area harvested for vegetables in the United States would need to increase by about 135 percent from 6.5 million acres to 15.3 million acres.*

Milk and milk products. Americans would need to increase their consumption of dairy products, including fat-free or low-fat milks and equivalent milk products (e.g., nonfat yogurt) by 66 percent (requiring an additional 111 billion pounds of milk per year) to meet the new dietary recommendations. Domestic production could account for 108 billion pounds of that increase, most likely by expanding dairy cow inventories, an action counter to long-term industry trends.

Whole grains. To meet the dietary recommendations, Americans would need to increase their daily consumption of whole grains by an estimated 248 percent and reduce their consumption of total grains by about 27 percent. Because it takes less raw wheat to produce a whole-grain product than a similar refined-grain product and because of the decline in total grain intake, the overall drop in demand could translate to producers harvesting about 5.6 million fewer acres of wheat each year.

As noted above, the DG-2005 do not recommend an increase in meat consumption, and for many people, to meet the recommended intake from the Meat and Beans groups, they likely would need to decrease their meat consumption and increase consumption of legumes and fish. This ERS analysis did not include effects of meat, fats and oils, or caloric sweeteners, although one might expect possible implications for agriculture from these changes as well.

Implications for Extension

Extension has its roots in agriculture and agriculture still is a primary focus of Extension programming. The findings of this ERS report are interesting in that they bridge what may sometimes be considered a gap between Family and Consumer Sciences (FCS) (specifically Nutrition) programs and Agriculture programs in Extension. Although the focus of these programs, their target audiences, and their very nature vary, this report indicates that there is a mutual interest (or concern) that may warrant exploration.

Nutrition education programs and interventions are carried out to help consumers implement dietary guidelines that are jointly developed by the USDA and US Department of Health and Human Services for the purpose of improving the health and well-being of Americans. Programs are based on the most current research in the area of diet and health, and not based on potential impacts on agriculture at the national or even local level. Still, it is helpful for Extension FCS educators, who are primary providers of Extension nutrition education programs, to be familiar with potential implications for agriculture of the recommendations that they make as part of their nutrition programming, particularly when local commodities might be impacted. Collaborative programming with FCS and Agriculture Extension agents to explore these issues may open the door to enhanced communications between professionals in these two fields.

References

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2. U.S. Department of Agriculture. MyPyramid. 2005. Available at:
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3. Buzby JC, Hodan FW and Vocke G. *Possible Implications for U.S. Agriculture from Adoption of Select Dietary Guidelines*. Economic Research Report No. ERR-31, November 2006. Available at: <http://www.ers.usda.gov/Publications/ERR31/>.