



AMERICAN DIETETIC ASSOCIATION

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HOD BACKGROUNDER: Role of the Dietetics Professional in Supporting a Sustainable Food Supply that Is Healthful and Safe

The topic of Safety of the Food and Water Supply in the event of a disaster (intended or unintended) was to be discussed at the Spring 2005 House of Delegates (HOD) Meeting. However, this dialogue session was removed from the agenda to allow sufficient time to discuss the Dietetics Education Task Force Report. The information resulting from the electronic dialogue is currently being considered by the House Leadership Team, including whether to appoint a Task Force to look into the food/water/disaster issue so the pre-meeting work is not lost and appropriate action can be taken from the work and interest generated. The original mega issue related to Safety of the Food and Water supply was determined to be too broad to address in one House of Delegates dialogue session. Thus, the mega issue will be addressed by components. One component, and a topic for the Fall 2005 HOD meeting, is the role of dietetics professionals in supporting a sustainable food supply that is both healthful and safe.

MEGA ISSUES QUESTIONS: What is the role of the dietetics professional in supporting a sustainable food supply that is healthful and safe?

EXPECTED OUTCOMES: 1) Dietetics professionals will recognize that sustainability is about the impact of choices on the environment, food distribution systems, quality of life, and the viability of local and international communities. 2) A series of recommendations will be developed on how dietetics professionals can actively support, promote and educate the public about ways to access and value a sustainable food supply that is healthful and safe. 3) Some consideration of the global implications of sustainability will be essential to achieving outcomes identified in 1 and 2.

Knowledge-based Strategic Governance is a mechanism for consultative leadership. It recognizes that “strategy” is the necessary and appropriate link in the Board's role to govern the organization, the House's role to govern the profession and the staff's role to manage implementation. To assist you in thinking about the issue to be addressed, four key background areas are presented as standard questions used for each Mega Issue. These questions create an environment of awareness of what we know and what is unknown. A wide range of resources has been used to provide you with what is known.

Setting the Stage

- Achieving a sustainable food supply is about how individual choices and advocacy impact the environment (ecology), food distribution systems, other people, and the economic success of our local and international communities.
- Food is the most basic need for survival and social stability¹.
- Agriculture is the foundation of the food system. Food is a link to health.
- The current food system is a complex network of services that transforms and moves food from farms and ranches anywhere in the world to consumers here and abroad. In that journey, food must be produced, bought and sold, handled and delivered to where it is processed in ways that will add value.
- Americans and citizens of the world's most prosperous countries enjoy the advantages of a rich, nutritious and inexpensive array of foods².

Background Information

- U.S. public policy defines sustainable agriculture encompassing broad goals, including:

- Provide a more profitable farm income
- Promote environmental stewardship, including protecting and improving soil quality, reduce dependence on nonrenewable resources such as fuel and synthetic fertilizers and pesticides, and minimize adverse impacts on safety, wildlife, water quality and other environment resources
- Promote stable, prosperous farm families and communities.
- To achieve these goals farmers and ranchers develop and apply specific strategies, which are necessarily unique to individual operations, their environments and their communities.
- The above definition reflects consensus points. Federal directives on sustainable agriculture are consistent with this definition.
- Farming practices that are associated with sustainable agriculture include crop rotations, crop diversification, conservation tillage, integrated pest management, enhanced nutrient management, and precision agriculture, as well as organic farming or bio-engineered crops that allow production of crops in harsh conditions, or require few or no application of chemicals. In animal agriculture, methods associated with sustainability are the absence of synthetic chemicals, hormones, antibiotics, and free-range flocks and herds.
- The majority of farmers who implement farming practices associated with sustainable agriculture choose not to use the term “sustainable agriculture” to characterize their operations.
- The diverse groups working toward sustainability frequently do not agree on which goals are most important.

Question #1: What do we know about the current realities and evolving dynamics of our members, marketplace, industry, profession, that is relevant to this decision?

We begin with an overview of the U.S. food system and three principle drivers that have shaped it in the past 100 years: technological development, the rise of consumer influence in agricultural production and the increasing integration of American farming into nation and global markets³. All relate to the overall environment for food and foodstuffs – production, handling, processing and consumption.

Technology has been particularly influential in shaping today’s agriculture. Rising productivity through mechanization and inputs led to economies of scale that spurred growth in average farm size, decline in the number of farms, declines in the farm population and transformation of the rural landscape and rural communities. Today technologies are creating and tightening links towards national markets for labor, goods, services and capital. Technologies are being developed and implemented in ways to allow continued increases in output and improved qualities, while adding to profitability and environmental performance⁴. Technology, which requires often more cash but less labor, has created incentives and made it possible for farm-families to seek off-farm income. One impact of that has been the development of non-farm industries in rural areas, which has blurred what we once saw as cities and countryside.

Consumer influence has grown over the years⁵. With increased affluence, consumers have wanted products that are widely available, consistent and convenient, as well as, those that meet ethnic and health-based preferences. That is changing relationships between producers, processors and retailers – evidenced by contracting and vertical integration for supply and quality control, special-use, higher value commodities, and affecting specialization and scale. A wide variety of safe, abundant and constantly available food is taken for granted by American consumers. Few consumers think about or know who produced the food, where, when or how.

Consumers however, are considered an important force in the environmental movement. Their interest in environmentally friendly production practices has expanded markets for organic and other specialized products. USDA reports that consumer interest has expanded the environmental focus from soil conservation and fertility to include air and water quality, wildlife and landscape protection, food purity and animal welfare. Increasingly, water availability and use will be critical drivers of the food and agricultural system.

The global marketplace has been a constant factor throughout American history for agricultural products. The marketplace has become more dynamic over time introducing American farm products to new consumers, stimulating both new products and new competitors. World markets have given Americans access to buy food and foodstuffs from all parts of the world, although the vast majority of foods consumed in the United States were also produced here. The U.S. is both a major exporter and importer of food and foodstuffs. The U.S. consistently maintains trade deficits, but its agricultural trade balance generally is positive. Export sales of agricultural products contribute significantly to net farm income year in and year out. U.S. grain, oilseed, livestock, fiber and other farm product and foodstuff sales have benefited from recent trade liberalization.

The reduction of trade barriers gives both farmers and consumers here and abroad greater access to the global marketplace. Continued trade liberalization ideally can lead to economically rational production and sales of food and foodstuffs – where both producers and consumers reap economic and intrinsic benefits. Freely flowing food and foodstuffs in a perfect global marketplace can alleviate pressures to produce on the most fragile of ecosystems, thereby contributing to the sustainability of the overall environment, and preservation of genetic and other resources and helping to fill the gaps when and where local production is not available. However, the realization of these ideals is dependent upon myriad factors – including government policies around the world that affect production, processing, handling, shipping, taxes and trade – as well as forces that influence people’s choices in the marketplace for goods and services.

Hunger and famine still persist, even though the global food system has been able to produce and preserve adequate food and foodstuffs to feed the world’s population. War and civil strife are primary culprits, but so are corruption, social inequality and poverty which prevent people from getting their basic food needs met. Food assistance can diminish food crises, but it often disrupts local food production and marketing systems and delays sustained food security. Furthermore, mere food and food security are not synonymous with good nutrition – so policy experts are beginning to call for ending poverty and working to overcome all forms of malnutrition. They cite payoffs such as improved intellectual capacity and greater productivity and lifetime earnings; reducing malnutrition also is seen to free private and public health care expenditures to meet other urgent needs⁶.

Other Facts

- The U.N. Food and Agriculture Organization (FAO) expects the world's population to grow to more than 8 billion by 2030. The FAO projects that global food production must increase by 60 percent to accommodate the estimated population growth, close nutrition gaps, and allow for dietary changes over the next three decades.
- Food assistance can ameliorate but cannot eradicate hunger. A combination of local food production, and access and ability to buy food and foodstuffs is now favored as a basis for international food security. Food donations will continue to be necessary to address crises.
- Non-conventional cropping of traditional local fruits, nuts, legumes, oilseed and other fats, and production of animal foods, roots and grains are now recognized for playing positive roles in addressing human needs through local food production systems.
- Biotechnology is recognized for its potential for addressing longer term food security. Clearly, biotechnology can target micronutrient deficiencies without requiring people to make significant changes in traditional diets; this can be done by improving the nutritional profile of staple foods. Today, however, most commercially available agricultural biotechnology has primarily addressed environmental concerns.

Looking out to 2050, the global food supply is expected to “tighten” as world grain demand goes up while production slows as a result of cropland being converted to non-farm uses, rising temperatures, depleted aquifers, and irrigation water diverted to cities. For the millions of people who are spending 70 percent of their income on food, rising grain prices could be life-threatening. Population growth will further stress land use, processing, transportation and food access.

Feeding the world in the not-so-distant future remains the macro driver of the global food system. Policy makers throughout the world, multilateral institutions such as the United Nations and the World Bank, researchers in the private sector and universities, farm groups, and billions of consumers remain interested in the world's farmers being able to produce adequate supplies of foods that can be distributed to all people. And peoples' expectations are rising – they also want higher quality foods, which generally require more resources to produce, transform and purchase.

Parallel Segments

- When considering how food is produced, it is important to realize that every farm, every ranch, and even every garden is unique in soils, wind, and even how and where the sun shines. Slope of the land, weather, climate and proximity to roads and labor contribute to the uniqueness and use of every acre. And of course, every producer and every consumer is unique. Thus the food production system here and around the world is highly varied.
- The global food production system has myriad segments. We will describe only three. One is the bulk system that grows grains and oilseeds, and feeds animals for food and industrial markets that serve consumers around the world. Another parallel segment is contract growing for fruits, vegetables, specialty crops, dairy and livestock – it stresses particular quality factors, consistency, constant flows and specialized products. Consumer demand for “fresh” when not in local season also is leading to new foreign sources for fruits, vegetables, juices and other products. There also is a segment of local production of fruits and vegetables, dairies, animal feeding and butcher shops, many of which stress renewable inputs such as composted materials and manure and natural environments. Consumers also are guiding the development and growth of this segment which often calls itself “alternative” or “sustainable agriculture”.
- Generally, sustainable agriculture involves farming practices such as crop rotations, crop diversification, conservation tillage, integrated pest management, enhanced nutrient management, precision agriculture, as well as bio-engineered crops that allow production of crops in harsh conditions, or require few or no application of chemicals. Many of these practices are implemented on most American farms including those in the bulk and contract-growing segments. However, sustainable agriculture also often carries the implication of a farm operation of modest size with lower capital needs, marketing directly to consumers and reducing production costs by reducing or eliminating commercial inputs.
- Organic farming, which is defined as farming without manufactured fertilizers, pesticides, herbicides or fungicides, hormones or antibiotics, and which eschews biotechnology, is commonly associated with sustainable agriculture, even though organic production methods may or may not promote soil, water or air quality, and it restricts what may be offered to restore a sick animal to health. Organic was one of the fastest growing segments of US agriculture during the 1990s and continues to grow, especially for organic dairy products and eggs⁷. The USDA estimated the value of retail sales of organic foods in 1999 at about \$6 billion, with the number of organic farmers increasing by about 12 percent per year. The Organic Trade Association (OTA) reported that the industry reached \$10.8 billion in 2003.
- According to the Food Marketing Institute (FMI), results from this OTA survey show the category flat in total customers since 2002, with roughly half of all shoppers saying they had purchased products at least once in the past six months.
- FMI's survey “Shopping for Health 2004” reported the overall environmental impact of growing organic foods appeared to be less of a motivation in purchase decisions than other factors such as health and taste. Many buyers wrongly believe that organic food has higher nutritional value.
- While organic production remains a small percentage of total production and marketing, its growth reflects a market segment willing to seek out and buy these products.
- How does that line up with FMI's larger profile of shoppers? FMI, the trade association of supermarkets, reported the following from a 2004 survey:

- Fifty five percent of those surveyed say they are trying to eat a more healthful diet. However, the "perceived high cost of healthful foods" – along with confusing nutritional information -- conspires to prevent many shoppers from having more healthful diets.
- Food shoppers continue to focus on improving their diets as a means of achieving good health. They see healthful eating as a way to prevent health problems later in life and they increasingly see food as a better way than medicine to manage illness.
 - 41 percent strongly agree that over the past year, they have been more likely to treat themselves before seeing a doctor.
 - 56 percent strongly agree that eating healthfully is a better way to manage illness than taking medicines.
 - 59 percent strongly agree that they are trying hard to eat healthfully so they can avoid health problems in later life.
- Supermarket shoppers say they want healthful options:
 - 46 percent say they want more prepared foods that are healthful.
 - 45 percent want more foods without trans fatty acids.
 - 40 percent want more low-fat foods.
 - 39 percent want more low-carbohydrate choices
- Many shoppers claim they purchase foods that claim to be "low." Here's what food shoppers claim they've purchased in the last month or so:
 - 63 percent said they bought foods promoted as "low-fat."
 - 55 percent said they bought food promoted as "low in saturated fat."
 - 52 percent said they bought food promoted as low-calorie.
 - 48 percent said they bought food promoted as low sodium.
 - 40 percent said they bought food promoted as low-carbohydrate.
- According to the survey, 48 percent said they purchased organic food in the past six months. The Food Marketing Institute also reported that 49 percent think the government has examined the health and nutritional claims made on food packages.
- Overweight and obesity are issues that most food shoppers acknowledge.
 - FMI said 59 percent of shoppers say they want to lose weight - but few say they are making a lot of effort at it.
 - 77 percent of them say the reason to lose weight is to prevent health problems later in life.
 - 54 percent said the reason is to manage a current health problem.
 - 44 percent said the reason is to boost self confidence – this was a stronger motivator in Generations X and Y.
- The FMI study also highlighted consumers' wish for nutrition information and advice at the supermarket – a role that ADA members are ideally knowledgeable and trained to play.

Question #2: What do we know about the needs, wants and expectations of members, customers and other stakeholders related to this issue?

- Consumer needs and choices shape the marketplace and significantly affect the systems that serve it, but consumers have little knowledge or thought about how food is produced, handled, processed and marketed. A study on the California Central Coast's food systems by social science researchers from the Center for Agro-ecology and Sustainable Food Systems at the University of California, Santa Cruz asked consumers what aspects of food production, processing, transportation, and retailing they were most interested in knowing more about⁸.
 - Only 15.8 percent of respondents indicated that they knew enough about how their food was grown, processed, transported, or sold (Appendix, Table 1).
 - Respondents were most interested in food safety and nutrition, and least interested in how far food travels; however, they indicated interest in environmental impacts of the food system that relate to how far food travels (Appendix, Table 2).

- Product labels were the preferred source of food information (Appendix, Table 3).
- Study results suggest that consumers want information about food when they are actually making their purchasing decisions.
- Even though dietetics professionals are experts in food and nutrition, they report that they rarely consider food systems or agriculture policy in general⁹.
- In the agricultural community, producers must consider the methods they will use every day. Sustainable practices are almost universally embraced by producers, who almost without exception consider themselves to be stewards of the land, who want to protect and preserve the natural resources on which they live and derive their income. Relatively few, however, characterize their farming operations as “sustainable agriculture” as that term frequently is associated with organic or alternative agriculture. In some areas, a “good small farm” versus “bad large farm” mentality is connoted.
- The oldest federal farm programs were inspired in the 1930s to protect the land through conservation practices, and today the focus of federal and state programs extend well beyond that. Land still is “retired” voluntarily for multiple years under Conservation Reserve and Wetlands Reserve programs, which pay farmers for foregoing use of their lands. But today there also are programs for working lands, such as the Environment Quality Incentives Programs, Wildlife Habitat Incentives Program and a new Conservation Security Program that pays producers for adopting and maintaining one or more resources of concern. There also are land preservation programs including a grassland reserve to preserve and improve native grass grazing lands through long term contracts and easements. Farmers compete to participate in many of these programs.
- Since 1985, a growing portion of total dollars directed toward agriculture are spent on conservation and resource programs. Officials admit that there are still unknowns about the long term affects of some of the current food system practices on human and environmental health, and more research is needed to show the effectiveness of most practices.
- Because environmentally friendly practices can lower production costs and improve farm income, most farmers choose to implement them without taxpayer assistance. A recent USDA study found that farmers benefit economically by voluntarily adopting environmentally beneficial practices. An efficient farm naturally minimizes unnecessary applications of pesticides and fertilizer, enhancing the bottom line as well as minimizing environmental impacts. But additional incentives may exist for farms to invest in an array of environmental management techniques. For example, those producers who accurately anticipate regulations or changes in consumer tastes for food grown with environmentally friendly technologies could gain a competitive advantage in the marketplace.
- In other words, incentives facing agriculture are not that different from those facing other firms trying to plot a sustainable growth path. The USDA study focused on crop residue management on corn acres to minimize damages from agricultural runoff. It found those producers using this technique enjoy a clear economic edge over non-CRM corn producers¹⁰.
- U.S. public policy supports sustainable agriculture practices in part because of their potential for lower environmental and social costs than conventional agriculture. Some agricultural expenses are private (such as the cost of inputs) while others have traditionally been social (such as the cost of public research). Currently, some social costs are considered externalities (for example, costs of groundwater contamination, resource depletion, and human health problems related to pesticide exposure), and are paid by society rather than individual businesses. While a goal of sustainable agriculture could be to eliminate many of these social costs, some, such as the costs of research and pesticide monitoring programs, will undoubtedly remain.
- The issues remain complex, however. Some environmentally sensitive methods result in sharply lower yields. Played out on a large scale, reduced supplies could result in higher food prices, making food less accessible to those with lower incomes. Technology development (and those that are adopted) can increase productivity, but they also will influence farm sizes, crop selections, and capital investments and reverberate throughout the nation – on farm, in rural communities, in the suburbs and the cities, where most food is consumed. Public policies that will affect agriculture include taxes, commodity programs, water subsidies, trade policy, indemnification programs, credit allocation,

environmental regulations, social policy, research and education programs, food safety and marketing regulations and international aid programs. Impacts are rarely clear cut – there are positives and negatives for every option in the food system, and unintended consequences could be enormous.

- In fact, the overall food system and all the various segments of it depend upon decision makers, structures and processes that reflect the concerns of all members of society in monumental as well as everyday choices. Everyone makes decisions that affect sustainability of the food system, whether we are conducting research, making policy, developing educational programs, adding value through processing or simply purchasing food. However, farmers all over the world are trusted and relied upon to know about and care for their land, water and ecological resources, as well as produce adequate supplies of food in forms that consumers want and need.
- For more people to play a role in consciously shaping the food system, they will need information, understanding and wisdom for making informed judgments.

Question #3: What do we know about the capacity and strategic position of ADA in terms of its ability to address this issue?

American Dietetic Association and Organizational Units

- ADA members have been interested and active in understanding consumers' needs and interests. ADA's overall body of work not only focuses on nutrition but appreciates and values food and the experience of eating. Among the statements made in ADA's body of work are:
 - That it is a fundamental right for all individuals to have safe, nutritionally adequate and personally acceptable diets.
 - Eating is more than the consumption of nutrients – it is a social, cultural, and affirming experience.
 - The U.S. food system consistently provides safe, fresh, abundant, nutritious and affordable food year round – the basis of healthy diets.
 - Nutrition knowledge and eating skills can be taught to children and adults so that they may incorporate them into a healthy lifestyle.
 - Fresh foods often taste better and enhance the eating experience.
 - Local production of food and foodstuffs contributes to the community's food security, maintains open spaces and a more balanced environment, and can contribute significantly to the community's total dietary needs.
 - Food should be produced to ensure preservation of the environment and ecosystems, and humanely.
 - Dietetics professionals bridge the science from field-to-fork and communicate with consumers about food choices.
 - Dietetics professionals can lead with sound information and approaches that help people make better sense about food, how it is supplied and its potential implications for their lives.
- Many ADA position papers address topics related to food demand. The position paper, *Dietetics Professionals Can Implement Practices To Conserve Natural Resources And Protect The Environment*, encourages environmentally responsible practices that conserve natural resources, minimize the quantity of waste, and have the least adverse affect on the health of human beings, animals and plant life and the environment¹¹. *Addressing World Hunger, Malnutrition and Food Insecurity* promotes sustainable agriculture practices.
- Several Dietetic Practice Groups have undertaken work related to food production and the environment and support locally produced fresh foods and the systems that will ensure their continued availability.
- Hunger and Environment Nutrition (HEN) Dietetic Practice Group's, mission is to promote nutrition and well being for all people, now and in the future, acknowledging the interdependence of food and water security, health, agriculture, and the environment. Its goals include:

- increasing appreciation for and understanding of food security, food production, and environmental food issues among members;
 - promoting member involvement locally, nationally, and internationally in hunger and environmental issues;
 - providing leadership both within the ADA and outside as preferred educators on issues of food security and sustainable ecosystems;
 - identifying issues, educating members, and supporting legislation and regulations related to sustainable ecosystems as they relate to current and emerging food production, processing and distribution practices.
- HEN also provides leadership on issues related to sustainable agriculture.
 - The School Food Service Dietetic Practice Group has numerous members who provide school children with healthy, nutritious school lunches by incorporating production from local farms. ADA members have prepared guides for food service professionals that explain local sourcing, supply, sanitation standards, delivery schedules, and product consistency, pricing, and preparation. ADA supports farm-to-school programs that connect schools and farmers in a mutually beneficial relationship. While some foodservice directors purchase products directly from the farmer, others use intermediaries such as their distributor, wholesalers or the Department of Defense. Approximately 165 school districts nationally regularly purchase foods directly from farmers through a “Department of Defense Fresh” distribution program. Programs may include educational activities as well such as tours of local farms and farmers’ markets; farmer visits to classrooms; school gardening; recycling and composting programs; and hands on lessons with fresh produce. These programs have the potential to have long-term impact on attitudes and behaviors about food:
 - Increased fruit and vegetable consumption;
 - Increased participation in school lunch;
 - Improved knowledge about where food comes from;
 - Decreased waste.
 - The Minnesota Dietetic Association initiated a survey of 300 MDA members in 2003 to measure their understanding of a sustainable food supply (Appendix, Table 5). That survey found:
 - 43 percent had heard of sustainable agriculture.
 - 13 percent had integrated issues of sustainability produced foods into their practice, and
 - 20 percent stated that it was likely that they would incorporate these issues within the next six months.

ADA Representations

- ADA’s advocacy centers primarily on food assistance, food and nutrition research, nutrition monitoring, nutrition education, food safety assurance and dietetics.
- On a national level, ADA has been active in several initiatives that support fresh, local, environmentally sensitive and humanely produced foods. For instance, we support:
 - Farm-to-school projects that provide grants to local districts to make infrastructure changes that allowed for local farm foods at school.
 - WIC farmer’s market program that gives farmer’s market coupons to WIC recipients to shop at local farmer’s markets.
 - Seniors farmers’ markets that awards grants to provide low-income seniors with couples for locally-grown unprepared foods at farmers’ markets, roadside stands and community supported agricultural programs.
- National groups supporting sustainable agriculture list these among other steps that consumers can take to support sustainable agriculture. In addition, USDA’s Sustainable Agriculture Research and Education (SARE) website recommends community and school gardens, community supported agriculture farms, pick-your-own and roadside stands as venues promoting fresh and local production. SARE suggests learning more about how food is grown; patronize stores, restaurants and co-ops that buy from growers using sustainable practices. Consumers can look for alternative sources for meat,

such as producers who raise livestock using free range strategies. Numerous options for food and foodstuffs produced with environmental sensitive methods are available on-line as well¹².

- As an organization, ADA has been active in supporting a more integrated food and agricultural system, but has taken no position on sustainable food systems. In preparation for the 2002 farm bill, the association recommended shifts in agricultural policies away from “supply push” to an informed “demand pull” model. In a letter to the House Committee on Agriculture prior to 2002 farm bill debate, ADA urged “thoughtful consideration of the larger context in which farm policies and programs will play out. Food production has traditionally been the heart of American agriculture policy, but economic, social and technological changes support a shift in emphasis from production and yield” to a more balanced agenda.
- ADA is active in advocating for greater investments in federal food and agriculture, conservation, environmental, nutrition and related research that can meet ever-growing demands for food, foodstuffs and fiber, and sustaining natural resources to promote and ensure continued high quality of life to all people. The association is a member of National C-FAR, whose mission is to enhance public investment in the entire spectrum of food and agricultural research, extension and education.
- While ADA’s expertise is most recognized in areas related to food safety and nutrition, the association has directed attention to “how federal programs affect the production, processing and consumption choices made in the marketplace.” In 2005, ADA will be asked to join a national coalition of agricultural and conservation organizations who are working to redirect agricultural spending from commodity production to conservation. This decision and other public policy issues are the responsibility of ADA’s Legislative and Public Policy Committee, which is guided by principles and values approved by the association’s Board of Directors.

Practitioner Possibilities

- There are many roles that dietetics professionals can play in support of the concepts associated with sustainable food systems. For example, the U.S. Dietary Guidelines, with its recommendations for increased consumption of fruits and vegetables and the proportional recommendations of the MyPyramid provide another compelling platform for foods produced and sold locally. Because they often are minimally processed, minimally packaged and may be fresher, these foods:
 - fit more easily into a healthful diet as they are naturally higher in fiber, lower in fat, salt, sugar and additives;
 - tend to retain valuable nutrients,
 - bypass energy costs of food processing,
 - reduce packaging waste.
- If local production results in increased diversity of varieties of foods, there may be benefits such as:
 - improved resistance to potential hazards to crops (decrease use of pesticides);
 - increased nutrition variety;
 - decreased overuse by one variety on the soil/environment (decrease use of fertilizer).
- Literature suggests many possibilities for practitioners who see local foods or foods produced with particular production methods as more healthful. Here are a few:
 - Healthful Sustainable Diets¹³
 - Recommend that a certain portion of the weekly grocery money be used exclusively for foods that are produced locally and sold in farmers markets or through farms that establish membership with local residents.
 - Learn about and promote seasonal foods that can be grown locally in the consumer’s own region
 - Teach people how to cook locally grown foods.
 - Have your own backyard garden and encourage public organizations, schools, hospitals, etc, to build community gardens and use the foods grown for feeding programs.
 - Food Policy Councils¹⁴
 - Role of food policy councils:

- ▶ address issues like food access, transportation, viability of small- and medium-sized family farms and food quality;
 - ▶ advise state and local government;
 - ▶ advance the goals of sound nutrition.
- Dietetics professionals' academic training and professional experiences make their participation in food policy initiatives a natural fit.
- Council members are often culled from farming, business, anti-hunger and governmental organizations.
- Food policy councils benefit from the input of dietetics professionals since they:
 - ▶ provide a vital link to food quality issues and can help analyze the impact of proposed policy;
 - ▶ keep nutrition a priority of the council;
 - ▶ can provide a voice of reason.
- Buy Fresh, Buy Local: Applications for Dietetics Professionals¹⁵
 - Dietetics professionals can advocate for the use of local foods in community food service establishments and can become a catalyst in supporting their local economy and, ultimately, the health of the people in it. Dietetics professionals can also organize food campaigns by networking with others both in their community and at a national level – i.e. nonprofit organizations promoting sustainable agriculture, community economic development organizations, educators, farmers, and others.
 - Encourage and support restaurants to explore, prepare and sell local foods or those that are produced in an environmentally and humane manner.
- Farm to School¹⁶
 - With dietetics professionals as advocates, farm to school and larger “buy local” movement stands could advance in the food service sector and among communities.
 - In addition to education for individual behavior change, dietetics professionals can advocate for farm to school programs and policies as a strategy for creating model school food environments and education programs.
 - Local efforts to build projects often lack the expertise of dietetics professionals for integrating broader food systems issues and nutrition education into education standards, a significant barrier to reaching students.
- Support local food systems as an approach to conserving natural resources¹¹.
- Go beyond traditional food guidance to incorporate information that considers the effects of food choices on the long-term stability of the food system.”
- Educate consumers and institutions about the benefits of purchasing locally grown, seasonally available, and organically produced food¹⁷.
- Support food systems in transition by creating or joining multi-sector partnerships and networks that result in mutually beneficial programs and projects. For example, partnerships and networks are created by providing nutrition education at farmers’ markets and conducting research on enablers of and barriers to establishing, accessing, and participating in farmers’ markets within low-income communities¹⁸.
- Assess community food security including profiling general community characteristics and community food resources as well as assess household food security, food resource accessibility, food availability and affordability, local and regional food systems and community food production and transportation resources.
- Study the example of others who have worked in this area. Norway is an example of a country that has used integrated policy instruments to redesign its food system¹⁷.
 - Norwegians aspired to increase their domestic food self-reliance from 39% to 52% of total calories and to achieve macronutrient intakes appropriate for a healthful diet using policy tools such as production and consumer subsidies, market promotion, consumer education, and food labeling and penalties for unhealthful foods.

- By 1988, Norway had reached 50% food self-reliance and increased whole-grain consumption and the quality of locally-produced grains and potatoes.
- Greater improvements were limited by the lack of human and financial resources.
- Network with other dietetics professionals who have become knowledgeable about the food system.

Question #4: What ethical/legal implications, if any, surround the issue?

The issues surrounding sustainable food systems are complex. Food system experts may dispute the methods of production, but most agree that the world's growing populations will require more and better foods, and that per-acre productivity must rise to meet rising demand. Competition for land, water and other resources will become more intense in a more crowded world. Farms and cities are likely to exist side-by-side – so there must be accommodation to the needs of both farmers and consumers on aesthetic¹, environmental and other issues.

The experience in the development of today's highly complex and many-segmented system of agriculture built upon hundreds of millions of individual and unique units of production has placed most of the responsibility for decision-making on producers themselves. Growers or ranchers usually see themselves as ethical stewards of the land; governments around the world have relied on individual farmers to make good decisions for their investment and their livelihoods. Many nations have extension services to provide information and advice regarding production, conservation, environmental protection, plant and animal health, marketing and other relevant topics to those who produce food and fiber.

Diverse groups working toward sustainability frequently do not agree on which goals are most important. Many agree that we should sustain all human beings, both present and future generations, without degrading natural ecosystems. For some, identifying how we can live within our ecological means is critical -- that is, deciding what standard of living and dietary patterns allow adequate food and shelter for everyone without using unsustainable amounts of resources. For others, investing adequate resources to develop technologies and techniques to meet future demand is most prudent.

Answering the question of the role of the dietetics professional in supporting a sustainable food supply that is healthful and safe is also complex.

- Ethical stances, framed by a long-term view to serve the greatest good, may inspire involvement by the dietetics community in agricultural production and processing and food marketing issues – to ensure continued production and marketing of a variety of safe, nutritious, affordable, abundant food and foodstuffs.
- Ethically, dietetics professionals may be challenged by others in the food and agricultural system who may feel they know more about the production, processing and marketing of food and foodstuffs than dietitians and DTRs whose studies have focused more on nutrition and food safety.
- Reliance on the best science available related to food, nutrition and related health services presents conflicting considerations. The science today generally concludes that organic foods are not more nutritious than foods produced by farmers using purchased inputs or chemicals. Fresh or locally-grown foods are not more nutritious than fresh, canned or frozen foods that may have been grown and shipped thousands of miles. Organic, fresh and locally grown foods may pose particular food safety risks and they may incur greater labor to prepare and serve. However, fresh and locally grown may taste better, and that might play a role in encouraging consumers to choose more healthful food options in their overall diets.
- Dietetics professionals may wish to individually choose how they will advise clients on food production methods.

¹ As more urban residents leave cities to live among farm operations, farmers find themselves with more complaints about late night planting and harvesting, application of chemicals, and smells of manure and livestock.

- Ethical considerations may call for ADA to support continued research that can meet ever-growing demands for food, foodstuffs and fiber, and sustaining natural resources to promote and ensure continued high quality of life to all people.

Pragmatic approaches might call for focusing on roles where dietetics professionals provide their greatest value, responding to consumer demands for help in places where it is most valued and translating the science of nutrition for people to make their own informed choices.

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