



Consumer Focus

► by K-State Research and Extension

What Does 'The Sustainable American Dinner Plate' Look Like?

A term common in food production today, sustainability has been difficult to define. Even so, several major food companies have promised to only use and sell products that are raised in a sustainable manner.

Defining sustainable

While many definitions of “sustainable” exist, one of the most common definitions used comes from the United Nations (www.un.org/en/sustainablefuture/sustainability.shtml).

It’s a definition that traces back nearly 30 years and connects social, environmental and economic components.

“In general, [sustainable] means meeting the food and fiber needs of people today without harming the environment,” said Mary Lee Chin, a nutrition educator and consultant, and a registered dietitian, “and, not only meeting these needs for today but into the future, too, so that we protect the environment for future generations.”

Chin, a native of Denver, spoke Aug. 26 at Kansas State University (K-State) in Manhattan to K-State Research and Extension family and consumer science professionals about “The Sustainable

American Dinner Plate” and the revolution of foods and food choices on the American dinner table.

Along with protecting the environment, she said, being sustainable means taking the needs of producers and consumers of food into account.

“Another factor involves the people

who produce the food, that they produce it in a manner they can make a living wage,” Chin said. “Then going along the food production line, it also means that the food that is produced so it is affordable for people as well.”

In addition to addressing the challenge of defining sustainability, Chin also discussed food labeling and nutrition, and how to meet the nutrition needs of a world population that is expected to reach 9 billion by 2050, among other production agriculture challenges.



Food labeling and nutrition

While foods might bear many labels, not all of the labels are standardized or regulated, Chin said. This can lead to confusion among consumers.

“If something is labeled ‘organic,’ that is certified, and there are standards for that,” she said. “But, if something is labeled ‘local’ or ‘natural,’ there is no standardization.”

A “local” label is often more important to consumers than any other food label, Chin said, as consumers feel as if they are buying fresh foods and supporting their local economies. However, a “local” label could mean the product was produced in the immediate community or trucked from within the state or brought in from the region.

Research recently published in the *International Food and Agribusiness Management Review* (<http://ageconsearch.umn.edu/bitstream/167903/2/220130036.pdf>) has shown that nearly a quarter of consumers from the United States and Canada often confuse the terms “local” and “organic.” Retail sales of both local and organic products have seen increasing demand during the last decade, according to the research, and although locally produced foods can be raised organically, not all locally raised foods are organic.

Other research has shown that consumers are also confused about the meaning of “natural”-labeled food products. A recent study by *Consumer Reports* has shown that 59% of consumers check whether the products they are buying are “natural,” despite that no verified label for the term exists.

The USDA, the regulatory agency for meat, poultry and egg products, said that any meat item can be called “natural” if it contains no artificial ingredients or added color, and it is only minimally processed. The U.S. Food and Drug Administration (FDA), which regulates all other foods, does not currently have a definition for “natural.”

Consumers should educate themselves about what different labels mean, Chin said. The nutrition labels are separate from any label indicating how the product was raised.

“When it comes to nutrition labeling, we take a look at the nutrients contained



► Mary Lee Chin, a nutrition educator and registered dietitian, talked to K-State Research and Extension family and consumer science agents and specialists about sustainable food production and the nutritional aspects of foods grown in a variety of ways.

within that food,” she said. “So, it tells you the amount of calories, carbohydrates, fats, protein, vitamins and minerals — things that are important to your nutritional health. So, nutrition labeling, according to the FDA, means the actual content of what’s in the food, not how it was produced.”

People have extensively discussed genetically modified, or genetically engineered, foods and labeling those foods recently. According to the FDA, food and food ingredients from genetically engineered plants were introduced into the food supply in the 1990s. Genetic engineering means that scientists introduce new traits or characteristics to an organism to enhance the growth or nutritional value of food products.

An example of a genetically engineered food product is Golden Rice, which was developed to help prevent vitamin A deficiency, a condition that can cause irreversible blindness and even death, Chin said. Another example would be modifying specific proteins that give the peanut its allergenicity, which is under study currently. It could potentially eliminate the threat of peanut allergies.

The FDA has reported that foods produced through genetic engineering are as safe and nutritious as any other foods, so they do not have to be specially labeled. However, food manufacturers can voluntarily label whether foods have or have not been developed through genetic engineering.

Food production challenges

Chin said it will take growing food in a variety of ways to meet the food needs of 9 billion people worldwide in less than 40 years.

“We have many people arguing these days on which is better, which is worse, which way is good and bad for the environment,” she said. “My perspective is we have to use the best practices of every single type of food production method and agricultural technology that suits the system, that suits the producer and that suits the eventual consumer, in order to produce food for that number of people.”

A nutrition educator explains the revolution of foods and food choices on the American dinner table.

She said the comparison of food production practices — organic, conventional and genetically engineered as examples — shows that they are many times more alike than they are different when it comes to using no-till, crop rotation, fertilizers and pesticides. Each method has its advantages and risks.

“It’s great that people want to buy organic,” Chin said. “It produces nutritious foods, and it does have advantages in terms of biodiversity and soil health. A lot of people are also in support of biotechnology, or genetically modified foods that can produce higher yields, pest resistance, or meet climate changes, like drought or flood tolerance.”

“Because of the different agricultural challenges and consumers’ wants and desires, we need to harness every type of technology to produce food that is appropriate for the consumer and the producer,” she added.

Producers will need to find ways to grow more food to feed more people, Chin said, all while using limited farmland, water and other resources, and combating drought, flooding and other natural disasters.

Much of the general public, she said, doesn’t understand production agriculture and these many challenges.

“I think the crux of the problem is that 50-60 years ago, there were many people involved with food production and agriculture,” Chin said. “Today, less than 2% of people are involved in food production. Many people don’t understand that, just like every other industry in our country now, it’s highly technical.”

For example, she said the agricultural industry is using more precision farming — technologies such as global positioning systems in tractors — to produce more food safely with fewer inputs, which is highly desired. If people could understand farmers and farm production methods, they might have a more realistic perspective on food production.

For more information about food production and nutrition, Chin recommends visiting the International Food Information Council website (www.foodinsight.org/). More information is also available through your local extension office or K-State Research and Extension online (www.ksre.k-state.edu/p.aspx?tabid=23).



Editor’s Note: This article is provided by K-State Research and Extension.



► A video interview with Chin is available at <http://youtu.be/Fyb3DhvkmlA>.