GOING “GLOCAL”
A RECIPE FOR SUSTAINABLE NUTRITION

Featuring :: Katie Brown, EdD, RDN

TRANSCRIPT

Maura: I'm Maura Bowen, podcasting for Abbott Nutrition Health Institute, here with Katie Brown, EdD, RDN, Senior Vice President of Sustainable Nutrition for the National Dairy Council.

Maura: Today, we’re talking about food security—specifically, the complexity of sustainable food systems, and how to promote and incorporate healthy, simple and environmentally friendly strategies that support sustainable food systems throughout the workplace and community.

Maura: This is such an important topic. Katie, it’s great to talk to have you here today. Are you ready to get started?

Katie: Oh thanks, Maura. Yes, I sure am. Thank you for the opportunity to be here with you. I'm a big fan of the quality education programs from Abbott Nutrition Health Institute, and congratulations on launching the podcast.

Maura: We are so glad you can be a part of it because you're one of our favorites. And I'm hoping you can tell us before we get started just a little about your role with the National Dairy Council.

Katie: Oh, sure. You know I've had a pretty diverse career as a dietitian and have had a lot of experiences including working for 10 years for the Academy of Nutrition and Dietetics Foundation, and in that role, I was a National Education Director and the Global Nutrition Strategy Officer. I became really fascinated by and passionate about connecting agriculture, food, nutrition and health.

Katie: For the past two years I've been with National Dairy Council. I'm very fortunate to be able to work on behalf of America’s dairy farmers, and through that work I spend a lot of my time educating and engaging with health professionals on tough issues like feeding a growing world population with limited natural resources, and also sharing the science and evidence on dairy’s contribution to health and sustainable food systems.

Katie: And for your listeners who are not familiar with National Dairy Council, we're a nonprofit organization in the US, founded back in 1915 by dairy farmers because they believed in investing in science and educating about the benefit of how dairy foods benefit human nutrition and health. And today, National Dairy Council represents about 39,000 dairy farm families across the US. And throughout our long history we’ve been committed to science, education and partnerships. And our multidisciplinary team includes a strong science bench. We have researchers in nutrition, environment, food safety and innovation. And NDC also supports a lot scientific and educational outreach through our dietitian team. We have about 15 RDs on our national staff and about 100 dietitians in the dairy network across the country.

Maura: I think I've heard you say that nourishing a growing global population with limited resources is probably one of the most pressing challenges of our time. Can you tell us a little bit more about that?

Katie: Oh, sure. You know, it's a pretty well-known estimate that the number of people on the planet will increase

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from the current 7.7 billion today in 2019 to nearly 10 billion by 2050. That's a lot more people in just 30 years from now, and therefore this has an impact on growing and raising more food and an impact on the natural resources needed for that food production.

**Katie:** Most of the population growth is occurring in low income countries where a lot of food insecurity already exists. And the other major driver of food demand is an increase in urbanization and economic growth primarily in middle income countries. So, it’s interesting; we’re seeing as a significant rise in the global middle class—and remember, the global middle class is about the equivalent of two dollars a day US—and that global middle class is expected to triple by 2030. So, as incomes rise, so does demand for more food and more diverse types of food, including animal source proteins like meat and dairy and eggs, as well as edible source oils, fruits and vegetables. So as health professionals, we view this as a good thing because people are able to access and consume an adequate amount of calories, as well as macro nutrients and micro nutrients. But we also have to recognize that this increase in food production has to occur without increasing use of our natural resources. So, consider that the vast majority of land suitable for agriculture is already in use, and by 2050, over half the projected global population could be struggling with water scarcity.

**Maura:** What plans are in place at the policy level to help address this need for real solutions?

**Katie:** You know, we’re in an era with unprecedented attention on nutrition and sustainability at the highest levels on the global agenda. Nutrition and sustainability are at the core of the United Nations’ Sustainable Development Goals—or SDGs—17 transformative goals designed to radically improve the world, signed onto by leaders of 193 countries back in September 2016. And nutrition and sustainability are also at the core of the Decade of Action on Nutrition, which we’re in now.

**Katie:** So take, for example, SDG Goal #2, which is to end hunger, achieve food security, and improve nutrition and promote sustainable agriculture. This is an area where global, national and local action is needed and can really make a difference. Key stakeholders like farmers and health professionals can work together to move the needle.

**Maura:** I know you’ve spoken with dietitian audiences about the issue of sustainable diets being increasingly on the minds of consumers around the world. In what way, and do you think this shift in mindset could help change the game?

**Katie:** Oh, absolutely. You know, the same priorities to ensure the health of the planet, people and communities are also reflected in today’s food trends. While taste and price are still leading in driving consumer food decisions, consumers are increasingly paying more and more attention to health and sustainability. So food producers in the business community are all initiating and responding to consumer expectation in these areas. But while, you know, people are increasingly interested in where their food comes from—what’s in it, how it’s produced—most people are disconnected from the food system. Many have never visited a farm or grown a garden or even truly understand the steps involved in getting food from farm (safely and cost-effectively) to the table. And this is not discounting the consumer in any way. I’m thrilled that people are more and more interested in food and health and sustainability. People today young and old have really valid concerns or questions about climate change and green eating, and as healthcare professionals we need to be informed on the evidence and science in order to provide accurate and sound actionable guidance to our patients and clients and followers, to our friends and to our family. Because they’ll ask you.

**Katie:** You know, I bet many of your listeners have been in discussions about food and sustainability. And so, you know, we’re at this important fusion of personal health and planetary health, and to me, all this means is that there’s enormous potential to significantly accelerate progress in achieving food and nutrition security and preserve our precious natural resources.

**Maura:** How would you describe a sustainable diet?
Katie: Well, easy answer is that a sustainable diet is one that's good for people and good for the planet. Unfortunately, it's not really that simple. For one, foods with low environmental impact are often ones that don't have a lot of nutritional value.

Katie: The United Nations Food & Agriculture Organization (FAO) has the globally accepted definition of sustainable diet. It's much more thorough than the one I just said. But in it, in the FAO definition, nutrition and environment are included, of course, but it also factors in many other important aspects, as well. Do you want me to give you that full definition?

Maura: That would be great, thank you.

Katie: OK, so the FAO definition is that sustainable diets are, “...those diets with low environmental impacts which contribute to food and nutrition security and to healthy lives for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems; culturally acceptable; accessible; economically fair and affordable; nutritionally adequate; safe and healthy—all while optimizing natural and human resources.” This topic of sustainable diets was part of a focus of a workshop in a proceedings paper that was published in Frontiers in Nutrition back in 2016 called, “The Chicago Consensus on Sustainable Food Systems Science.” And in that paper, the authors categorized those elements of the FAO definition into four dimensions of sustainability: health, economics, society and environment. To me, this is a really helpful way of thinking about sustainable diets. It might be helpful if I go into that a little bit more.

- The health dimension addresses quality and safety of food supply, including producing foods that are nutrient rich, safe, accessible, appealing.
- The economics dimension of sustainability addresses the economic aspects of food supply and demand, including things like food pricing and wages and profitability.
- The societal dimension is also important because it represents the cultural, social, regional, religious factors that drive food choices. Things like cultural norms, attitudes and behaviors.
- The environmental dimension addresses the impact of the food system on land and water, energy use at both local and global levels.

Katie: So right in the middle of all that is the topic of sustainable diet—the thing we’re speaking about. The convergence of these four dimensions of sustainability. No one sector is the owner or the complete authority on sustainable diets. It requires input from experts in each of those distinct dimensions coming together, and that's where the sustainable diet discussion often lacks consistency among stakeholders.

Katie: When the perspective of one or more these dimensions is missing, then it really could result in significant unintended consequences, both of human health or planetary health.

Maura: What happens, though, when you factor in things like the burden of undernutrition and overweight and obesity and micronutrient deficiencies?

Katie: Right. Yeah, you bring up a very good point, and more of the complexity of the topic. You know, the one size fits all approach doesn't work in most situations, and it certainly doesn't work when talking about sustainable diet. You know, of course, as dietitians and health professionals we would advocate that at the most basic level assisting a food system would provide adequate and balanced nutrition to support people’s health and well-being. But unfortunately, as you pointed out, malnutrition exists in some form in every country in the world, and in some countries more than one form exists—undernutrition, overweight and obesity, micronutrient deficiencies—as you identify the triple burden of malnutrition.

Katie: So when nearly 820 million people are under nourished globally, and at the same time 2 billion adults are overweight or obese, and even more are affected by micronutrient deficiencies, addressing each of these types of
malnutrition requires different dietary approaches.

**Maura:** It seems like the dairy industry is a great case study. Can you talk for a moment about some of the ways the dairy community has addressed environmental sustainability initiatives and their impacts?

**Katie:** Oh sure. Well, of course we know we can’t improve what isn’t measured. About a decade ago, the Innovation Center for US Dairy and expert dairy researchers conducted a lifecycle assessment (or LCA) for milk in the US. A lifecycle assessment measures the environmental impact throughout a product’s lifecycle from farm to table. And you can do an LCA on any food product. But I’ll talk a little bit about the dairy LCA. It was unique in that it was unprecedented in size and scope, and it included all aspects of producing milk. So that’s everything that happens at the farm, like growing the food that the cow eats and the water it drinks, to its housing and bedding, to milking the cows and storing them up on the farm. And the dairy LCA also included the environmental impact of transporting milk to the processing plant, packaging it, distributed it to retail stores, and even including the electricity needed to refrigerate milk in the dairy case at the grocery store. So, the dairy LCA was quite comprehensive.

**Katie:** This massive undertaking indicated that US dairy accounts for 2% of total greenhouse gas emissions. And so the LCA data led to a 2009 dairy community commitment to continuous improvement, sustainability and stewardship, and to reduce our carbon footprint by 25% by 2020.

**Katie:** Caring for land and their animals is a core value to dairy farmers, and for many of them, their farm has been in their family for generations. Of course, they want the best for their farm, and they often pass it down to the children and grandchildren. So taking good care of the cows is important to them. Healthier cows and more comfortable cows are more efficient and they’re better producing high-quality milk. It’s primarily because of these types of best practices and efficiencies in cow genetics, cow care, tailored diets, that a gallon of milk today can be produced using 90% less land, 65% less water, and 63% less greenhouse gas compared to about 70 years ago.

**Maura:** That’s amazing.

**Katie:** Yeah. Yes, it’s very impressive.

**Maura:** So, the dairy community is using less land, less water, less manure, less greenhouse gas. What other reductions should the global community be driving toward?

**Katie:** Good question. And, you know, sometimes it’s about mitigating negative impacts like we talked about, like the carbon footprint, but there’s also a really exciting momentum in maximizing benefits that dairy cows can contribute. So, as a dietitian—I guess, as a human being—I never thought I would be excited about how manure. I really learned to appreciate the benefits of it for the earth through innovation and technology. Farmers are now collecting cow manure, which is rich in nutrients, and they put it into a covered pit or storage container called a methane digester, which traps the gas is inside. And then that gas can be converted to things like clean biofuel to power engines and trucks, and can be converted to electricity to power the farm and to power communities.

**Katie:** Often food waste from local restaurants, retailers and other farms go into a farm’s methane digester as well, and then the liquid that's left can be used to irrigate crops on the farm. The solids that are left can be converted to natural fertilizer, improving soil quality for crops and reducing the need for fossil fuel-based synthetic fertilizers. You know, it’s really pretty amazing.

**Maura:** With all this said, it seems like the big question is really how to take action, right? The World Health Organization and other global national organizations have outlined some rigorous action plans—you’ve kind of referred to those already. But how do we get started? What roles might healthcare professionals play in supporting healthy, sustainable food systems? And, what can consumers around the world do to help apply these measures locally?
Katie: Right, and it might sound like it would take a great deal of effort, but one area I’d really like to highlight for your listeners is food waste. Can you believe that 40% of all food that’s grown is never eaten?

Maura: Is that true?

Katie: Yes, it’s really hard to wrap your head around that. It’s, like, 40% of food that’s grown is never eaten. It’s wasted somewhere along the food system. And in the US, most food loss occurs at the consumer level, which translates to about a pound of food per person per day. That’s about 1200 calories, as well as valuable nutrients lost in that pound of food waste as well.

Katie: And then think about what happens to that food that’s thrown away and not eaten: It generates greenhouse gas. So here’s another crazy concept to contemplate: Food waste emits more greenhouse gas than was generated by every other country in the world behind China and the US. And since most of the food waste in the US occurs at the consumer level, we have a lot of control in this area.

Katie: So for health professionals, educating about and getting involved in efforts to prevent food waste and reduce food loss is a really good place an easy place to lean in and promote responsible consumption.

Katie: And there’s some good news here. Health professionals are probably already sharing tools and tips that support sustainability without even knowing it. Actionable areas like meal planning and portion control and food safety and eating on a budget—these are all important ways that we help our patients and clients manage their health and their food dollars. And these very same strategies can help reduce consumers carbon footprint as well. Encourage healthcare professionals to become more informed. Talk about it and talk with others who have expertise in this area.

Katie: We have a lot of resources in this area. You could visit us at usdairy.com, nationaldairycouncil.org, and dairygood.org to get more resources from the dairy sector.

Maura: Excellent. Katie, thank you so much. This was really excellent and important information, and really actionable ideas that I think we can all take with us. So, thank you again. And best of luck to you and the National Dairy Council as you continue to work so diligently told your sustainability goals.

Katie: Thank you, I appreciate it.