Nutrition and Sustainability
Eating City Summer Campus

Katie Wilson, PhD, SNS
Executive Director
Urban School Food Alliance
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“Sustainable diets contribute to providing healthy, safe, and nutritious food with low environmental impacts while encompassing social and economical goals”.

Sustainable Diets
Pamela Mason and Tim Lang
“Those diets with low environmental impacts which contribute to food and nutrition security and to healthy life 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; while optimizing natural and human resources”.
HOW THE WORLD WE LIVE IN IS DRIVING THE OBESITY EPIDEMIC

The rise of ultra-processed foods in the 1980s correlates closely with the doubling of international obesity rates.

ECONOMIC FORCES HAVE CAUSED AN EXPLOSION IN ULTRA-PROCESSED FOODS

OBESITY ISN'T JUST AFFECTING HUMANS

33% of dogs, 29% of cats and 45% of horses are now estimated to be obese.

CLIMATE CHANGE MAY BE MAKING OUR FOOD LESS NUTRITIOUS

More carbon dioxide in the atmosphere is changing the nutritional value of plants.

BABIES’ DIETS MAY PUT THEM AT RISK OF OBESITY

Protein intake in infancy influences protein needs over a lifetime, which can lead to overeating.

We need to eat more to satisfy our nutritional needs, we end up eating too many calories.
Challenges

• Scaling up to feed more people
• Cost
• Availability of growing space
• Availability of food
• Distribution
Sustainable Nutrition Practices Influence

- Dietary patterns
- The food system as a whole
- Community economics
- Public health
Complexities of Sustainable Nutrition

• “People concerned about sustainable nutrition need to explore the complexities and compromises required to move toward sustainable diets. They must be not only healthy for humans and good for the environment but also affordable and acceptable to society”.

Adam Drewnowski
University of Washington
Four Domains of Sustainable Diets

• Nutrition and health
  Energy density or calories

• Economics
  Cost of different food and food products

• Society and Culture
  Eating patterns rather than individual foods

• Environment
  Carbon Cost
Tensions and Contradictions

• Energy dense food is cheaper to purchase
• May have lower impact on environment
• Has less nutritional value
• Examples:
  Sugar
  Palm Oil
Impact of Nutrition Transitions

• Growing demand for meat

• If it continues at this rate by 2050 predicted carbon emissions will increase by more that the entire transportation sector today

• If populations would begin to increase plant-based diets the increase in carbon emissions could be lower than it is from global agriculture today.
What Is Driving Food Choices?

Private sector marketing uses a menu of ideas.

1. Limit disruptions
2. Maximize awareness in supermarket
3. Rename menu items
4. Make it trending and cool
Rabbit Hole Rescues

• Not all research is the same
• Data can be manipulated based on funders needs
• Equity was a reoccurring theme in sustainable nutrition
• Much of the change needed is behavioral
• Not everyone is going to remove meat entirely from their diet – and they don’t have to
• Increase plant-based foods intermittently or gradually
Interventions to move toward more sustainable nutrition
Nutrition Sensitive Value Chain (NSVC)

• Most conversations and research focus on food chain interventions in crop yield and farmer well being.

• NSVC focusses on nutrition values not just economic values
United States Department of Agriculture

- 1862 President Lincoln established the USDA
- Advance the realm of land cultivation, conservation, and economic development.
- Set to follow the interest of farmers and farming communities
- Now oversees all programs related to farming and nutrition
Farmer’ Markets

• 8,669 around the country
• National Farmers Market Directory
USDA Farm to School
Farm To School

The term Farm To School (F2S) encompasses efforts that connect schools with local food producers in order to serve their products to children in the school cafeterias.

$791 million dollars spent on local products from local communities
SCHOOL GARDENS
Using Gardens to Grow Healthy Habits in Cafeterias, Classrooms and Communities

Space for Gardens in All Seasons

INTEGRATING LOCAL FOODS INTO CHILD NUTRITION PROGRAMS

Entering Local

Starting Small

Supporting a School’s Salad Bar

Loving Where We Live

Farm to School Project
Results From Farm to School

- Local producers succeed: strengthening local communities
- Lower food costs
- Students understand where food comes from
- Students are willing to try new foods
- Less food waste
- Nutritional quality of school meals increases
- More students interested in farming FFA
Food Waste
Greatest Contributor to GHG Emissions
OUR APPROACH
To provide fresh, healthy and delicious meals to students, member districts work together on policy, share best practices and leverage our purchasing power to continue to drive food quality up and costs down while incorporating sound environmental practices.
- New York City Department of Education (New York)
- Los Angeles Unified School District (Los Angeles)
- Chicago Public Schools (Chicago)
- Miami-Dade County Public Schools (Miami)
- Dallas Independent School District (Dallas)
- Orange County Public Schools (Orlando),
- Broward County Public Schools (Fort Lauderdale)
- School District of Philadelphia (Philadelphia),
- Baltimore Public Schools (Baltimore)
- Boston Public Schools (Boston).
• Collectively we offer meal services to nearly 3.3 million students daily.

• Annually, we serve over 584 million meals

• Annually we spend $755 million on food and food supplies across the country.

• Local procurement is from $4.5 million to $33 million per year depending on district size.
Good Food Purchasing Program Partnership

A metric based, flexible framework that encourages large institutions to direct their buying power toward 5 core values:
Eliminating Polystyrene Trays

- Polystyrene foam trays are used to serve hot food to Baltimore students every day, which concerns us given how the plastic is manufactured. The two most well-known chemicals used are styrene and benzene. The National Institutes of Health’s National Toxicology Program deems styrene "reasonably anticipated to be a human carcinogen" and benzene a known human carcinogen. Styrene can leach into hot foods and can be found in elevated levels in human fat tissue. This is a sign of long-term absorption and not simply short-term presence in the body before excretion.

- Besides being found in polystyrene, benzene and styrene are both found in industrial manufacturing areas and are released into the environment through car tailpipe emissions and cigarette smoke. Sounds like something you want to eat food off of? We don't think so either.

  - Claire Wayner and Mercedes Thompson,
  - Students at Baltimore Polytechnic Institute
  - Baltimore Sun, February 27, 2017
LUNCH LESSONS 101

Six of the country’s largest school districts, advised by NRDC, will start using eco-friendly plates in cafeterias this month, dumping polystyrene trays.

- Made in the U.S.A. from recycled newsprint
- Compostable
- Source of pollution

Made from petroleum products

225 million clay landfills every year

Drone slot in the middle to balance and prevent bending
Composting At School
Going Forward

• Nutrition and food education in school
• Link to Urban Farmers/Food Hubs
• Food waste education in school and at super market
• Share best practices

90% food and recyclable waste diversion in Baltimore City, K-12 schools.
Local Purchasing
$4.7 million per year
our mission

Great Kids Farm engages Baltimore City Schools students at all grade levels to support classroom learning, participate in every aspect of food preparation, and prepare students for success in 21st century colleges and careers.
ELEMENTS NEEDED FOR SUSTAINABLE DIETS

VALUES

- Establish a culture of healthy living
- Embrace equitable solutions
- Encourage active citizenship to steward natural resources
- Promote transparency
- Support universal food security

CONSUMERS
- Link sustainability and healthy diets
- Achieve healthy dietary patterns
- Increase demand for sustainable food
- Minimize waste

POLICY MAKERS
- Be informed by best evidence
- Engage multiple sector stakeholders
- Implement at local, regional, national, and global levels
- Develop systems for monitoring and accountability
- Align policies to promote both health and sustainability

SUPPLY-CHAIN PARTICIPANTS
- Conserve natural resources
- Use capital and labor responsibly
- Innovate in research and technology
- Enhance biodiversity
Values
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- Encourage active citizenship to steward natural resources
- Transparency in the work
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Sustainable Diets
Community Gardens
It Takes a Village

- Health crisis belongs to all of us
- Strong public policy
- Multicomponent interventions
- Strong, committed communities
Hardest question being how to agree as individuals, as nations, and as a global community.
A leader takes people where they want to go. A great leader takes people where they don’t necessarily want to go, but ought to be.

Rosalynn Carter
Resources

- www.urbanschoolfoodalliance.org
- www.usda.gov
- www.foodtank.com
- www.sustainableamerica.org
- www.newfoodeconomy.org
- www.localfoodhub.org
- www.nrdc.org
- www.goodfoodpurchasing.org
Institute of Sustainable Nutrition
tiosn.com

Mission:

1. To grow sustainable health and nutrition from the ground up.
2. To integrate the seasonal changes in the gardens and land around us with the changing needs of the human body.
3. To nourish the soil in order to grow nutrient rich food for our health and that of our environment.
4. To bring these concepts together in the kitchen to create delicious, nourishing preparations and kitchen medicine.
5. To understand that time spent together in these tasks – steeped in traditional knowledge and wisdom, create and sustain our communities.
Research Articles

