

Nutrition and Sustainability Eating City Summer Campus

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EATING CITY
INTERNATIONAL PLATFORM
2010 - 2020



Sustainable Diets

Pamela Mason and Tim Lang

“Sustainable diets contribute to providing healthy, safe, and nutritious food with low environmental impacts while encompassing social and economical goals”.



Food and Agriculture Organization (FAO)

United Nations

“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



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





The Food Forum of the National Academies of Sciences, Engineering, and Medicine

August 2018

Washington D.C.

www.nationalacademies.org



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 than 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

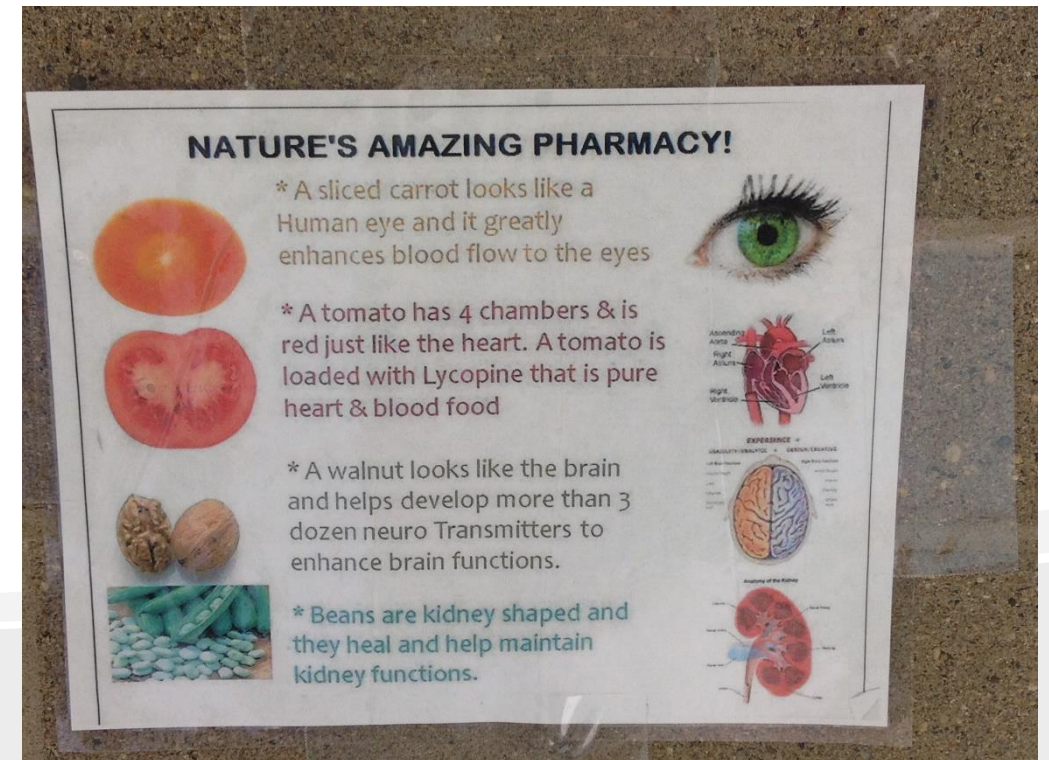
- Not all research is the same
- Data can be manipulated based on funders needs
- Equity was a reoccurring theme in sustainable nutrition
- Much of the change needed is behavioral
- Not everyone is going to remove meat entirely from their diet – and they don't have to
- Increase plant-based foods intermittently 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

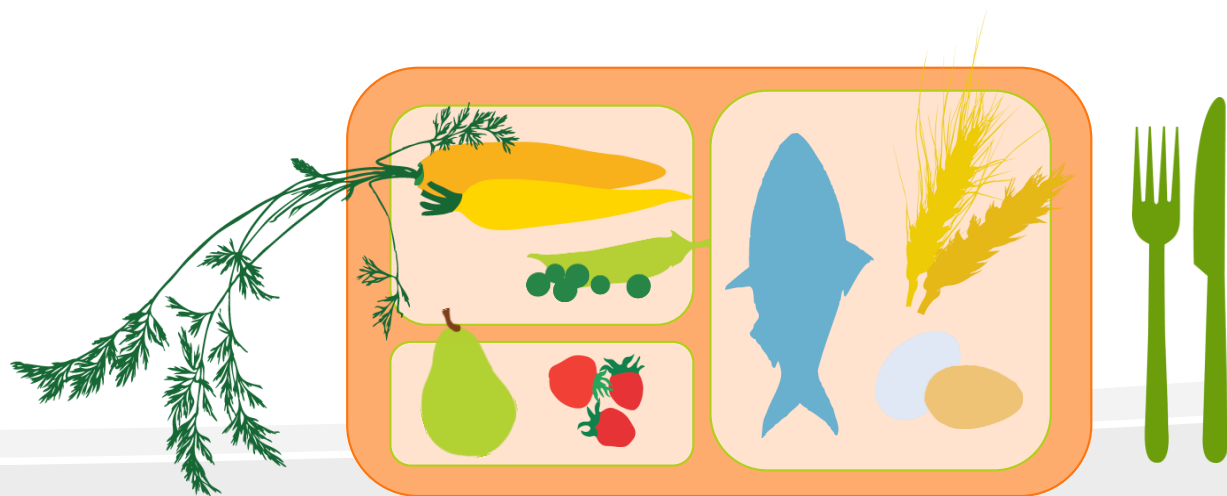




Farm To School

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





United States Department of Agriculture

SCHOOL GARDENS

Using Gardens to Grow Healthy Habits in Cafeterias, Classrooms and Communities



SCHOOL FARMS spanning acres in Minnesota, indoor tower gardens in Vermont, raised beds in New York City, aquaponic systems in the Virgin Islands, native food gardens in tribal communities...across the nation schools are growing gardens to provide food for child nutrition programs, connect children to the source of their food and create hands-on interdisciplinary classrooms.

School gardens pre-date the National School Lunch Program; the Federal government has been encouraging school gardening since the early 1900s, even building a "School Garden Army" during World War I and supporting victory gardens at schools during World War II. Today, the [2015 USDA Farm to School Census](#) indicates there are over 7,000 school gardens across the nation. USDA encourages school gardens by providing grant funding, guidance and resources, and support for food service personnel who are interested in purchasing products from a school garden.

Space for Gardens in All Seasons

School gardens come in all shapes and sizes, and districts with varying levels of land are finding ways to establish gardens both within and outside school grounds. Gardens can be as simple as a few containers on a windowsill or cover acres, and gardens can thrive in all climates. Program operators find that even small gardens help children gain familiarity and comfort with the fruits and vegetables they are seeing more of at meal times.

New York City Public Schools' Garden to Cafe program exposes students to the source of their food in the most populated city in our nation. Partnering with various non-profit organizations and community members, New York City students have classes and work in the gardens year round. School garden produce makes its way into meals and taste tests in over 50 public school cafeterias across the city.

Districts are also overcoming growing season challenges in creative and innovative ways. Even in the northern part of Vermont, where the ground is frozen much of the school year, tower gardens make it possible for students to garden all year long.

In Milton, Vermont the food service director used grant funds to purchase three indoor tower gardens for the cafeteria. Even during frigid winters, herbs grown in the towers are incorporated into school meals, and students get to see the tower gardens growing during lunch every day.

THE
FARM to SCHOOL
PROGRAM



United States Department of Agriculture

INTEGRATING LOCAL FOODS INTO CHILD NUTRITION PROGRAMS



FRUITS AND VEGETABLES, milk and cheese, whole grain breads and pastas, beans, meats, seafood, and poultry; the opportunities for serving local foods in child nutrition programs are abundant. Not only can local foods span the plate, operators can serve local foods in all types of programs – summer meal programs (Summer Food Service Program (SFSFP) and Seamless Summer Option (SSO)), afterschool and early childhood settings (Child and Adult Care Food Program (CACFP)), snack programs (Fresh Fruit and Vegetable Program (FFVP)), and National School Lunch (NSLP) and School Breakfast Programs (SBP). From childcare to afterschool settings, through the school-year and during summer months, the following steps will help program operators find, buy, and incorporate local foods into any child nutrition program.

Defining Local

It is up to you to define what local means for your program, and there are many options! Local for one program operator might mean within the county, while local for another might include the entire state and even adjacent states. Definitions of local can also vary depending on the season, type of product, and may also change by program or event.

Getting Started

When planning how to integrate local items into meals, start by reviewing your menus to see what local foods you are already serving. Talking with suppliers and checking packaging and invoices for city/state of origin may reveal that local foods are already being served. The next step is determining how to feature additional local products. Here are several ideas for incorporating local items:

Harvest of the month program: Pick one seasonal item to highlight each month your program is in operation. Feature special menu items, taste tests, or educational activities to showcase local products.

Learn More

A list of helpful menu planning and recipe resources can be found on USDA's Office of Community Food Systems website:
<http://www.fns.usda.gov/farmtoschool/farm-school-resources>

Ingredient substitution: Look for ways to trade out items in recipes to highlight local foods when they are available in your area.

Seasonal cycle menus: Plan what to serve based on the season as an excellent way to keep menus fresh and to find local foods at an affordable price.

New recipe development: Create recipes based on what is in season for a fun way to integrate new foods. For recipe ideas and cookbooks, check out the What's Cooking? USDA Mixing Bowl website.

Salad Bar: Kids love to help themselves! Feature local foods on salad bars in order to highlight local produce and allow kids to choose new foods on their own.

Themed menus for special events: Celebrate the season! Include local items to compliment special events, such as summer kick-offs, back to school BBQs, holiday harvest meals, or spring flings.

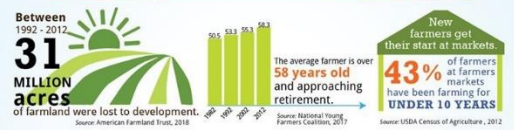
Gardens: Harvest foods from school, day care, or community gardens and feature them in the meals you serve or coordinate garden crops with what you are serving to help introduce children to new foods and understand where their food comes from. Check out the garden-based nutrition education curricula from Team Nutrition.

THE
FARM to SCHOOL
PROGRAM

NATIONAL
FARMERS MARKET WEEK
August 5-11, 2018

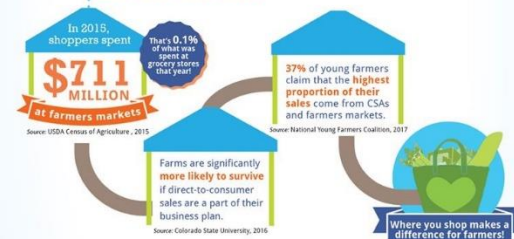
PUT YOUR MONEY WHERE YOUR FARMER IS

THE STATE OF AMERICAN FARMERS



Shop at Farmers Markets: Support Farmers

Where does your food dollar go?



Shop Local: Stimulate Your Local Economy



Shake the Hand that Feeds You

Find us online to learn more about farmers markets and find one near you!

farmersmarketcoalition.org | [Facebook](https://www.facebook.com/farmersmarketcoalition) | [Instagram](https://www.instagram.com/farmersmarketcoalition) | [YouTube](https://www.youtube.com/farmersmarketcoalition) | [LinkedIn](https://www.linkedin.com/company/farmersmarketcoalition)

New North Florida Cooperative Small Farmer Distribution Network

Go Orange & Green for Nutrition

BUTTERNUT SQUASH is an excellent way to eat healthy!

NUTRITIONAL FACTS

Butternut squash is a rich source of dietary fiber, and contains no saturated fats or cholesterol.

Butternut squash has a nutty flavor and mildly sweet taste.

Butternut squash seeds are used as nutritious snack food and are high in protein.

FUN FACTS

- Butternut squash is part of the pumpkin family.
- Butternut squash is has the highest level of vitamin A of all the pumpkins.
- The fruit, leaves, flowers, and seeds of the butternut squash plant are also edible.

You can bake, roast, steam and stuff butternut squash. Even raw butternut cubes can add special tang to salads.



FRESH FROM FARMERS FIELDS TO SCHOOL MEALS

Marianna, FL



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.



BALTIMORE CITY

PUBLIC SCHOOLS

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

National Resources Defense Council

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.

The infographic features two trays on a wooden background. On the left is a white polystyrene tray with a central 'MILK' slot. On the right is a light brown compostable plate with a central drink slot. Arrows point from descriptive text to each tray.

Polystyrene Tray (Left):

- Source of pollution →
- ↑ Made from petroleum products
- ↑ 225 million clog landfills every year

Compostable Plate (Right):

- ↓ Made in the U.S.A. from recycled newsprint
- ← Compostable
- ↗ Drink slot in the middle to balance and prevent bending

LEARN MORE: URBANSCHOOLFOODALLIANCE.ORG

NRDC

Composting At School





Going Forward

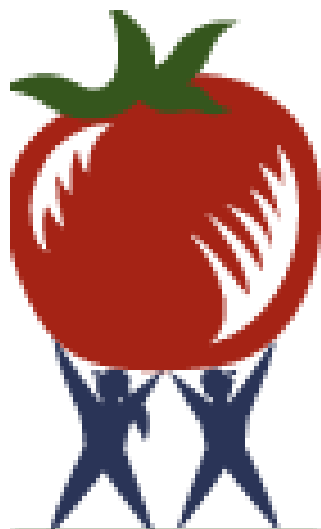
- Nutrition and food education in school
- Link to Urban Farmers/Food Hubs
- Food waste education in school and at super market
- Share best practices

90% food and recyclable waste diversion in Baltimore City, K-12 schools.

Local Purchasing

\$4.7 million per year





**GREAT
KIDS
FARM**

**BALTIMORE CITY
PUBLIC SCHOOLS**



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

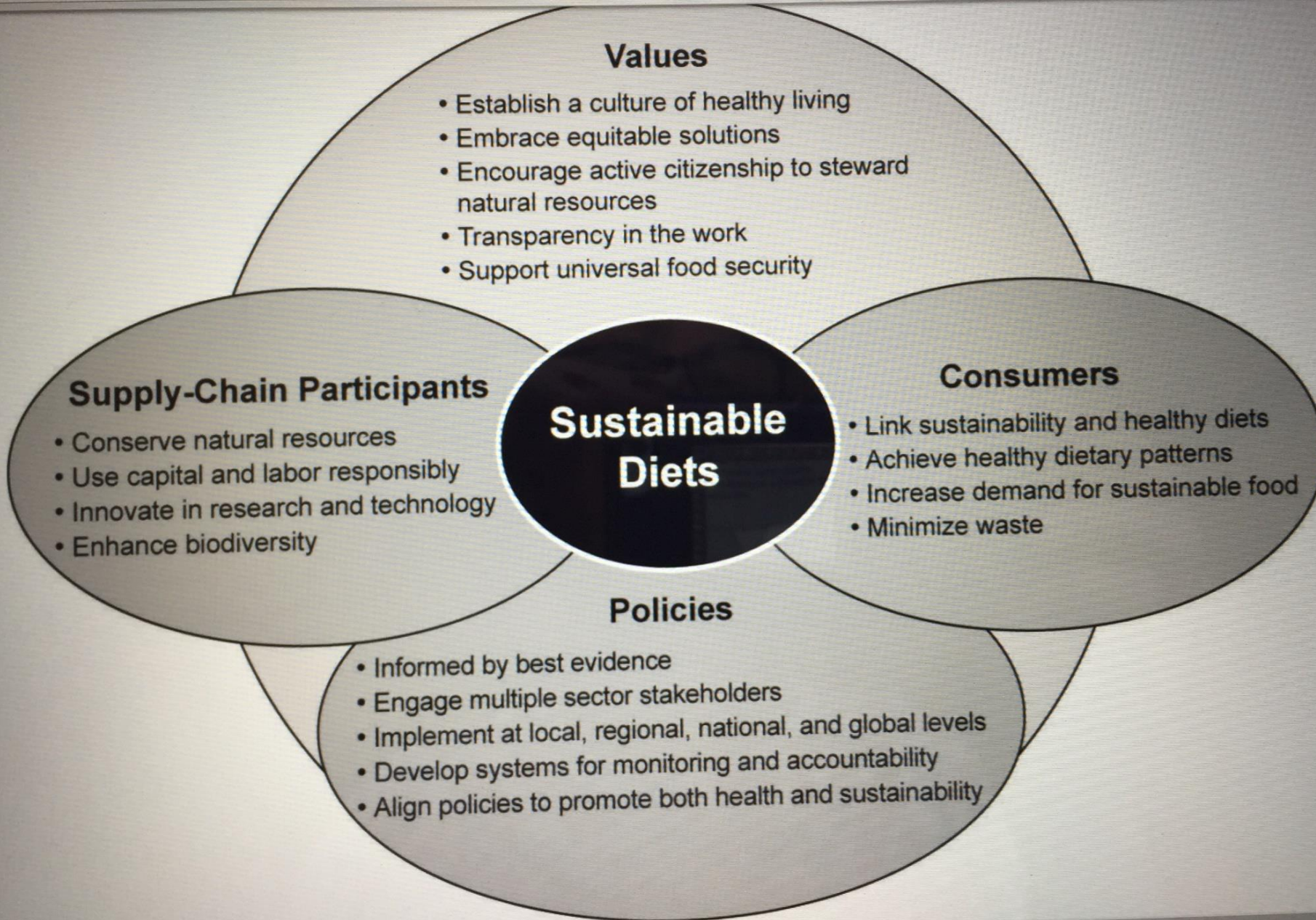
- Be informed by best evidence
- Engage multiple sector stakeholders
- Implement at local, regional, national, and global levels
- Develop systems for monitoring and accountability
- Align policies to promote both health and sustainability

SUPPLY-CHAIN



PARTICIPANTS

- Conserve natural resources
- Use capital and labor responsibly
- Innovate in research and technology
- Enhance biodiversity



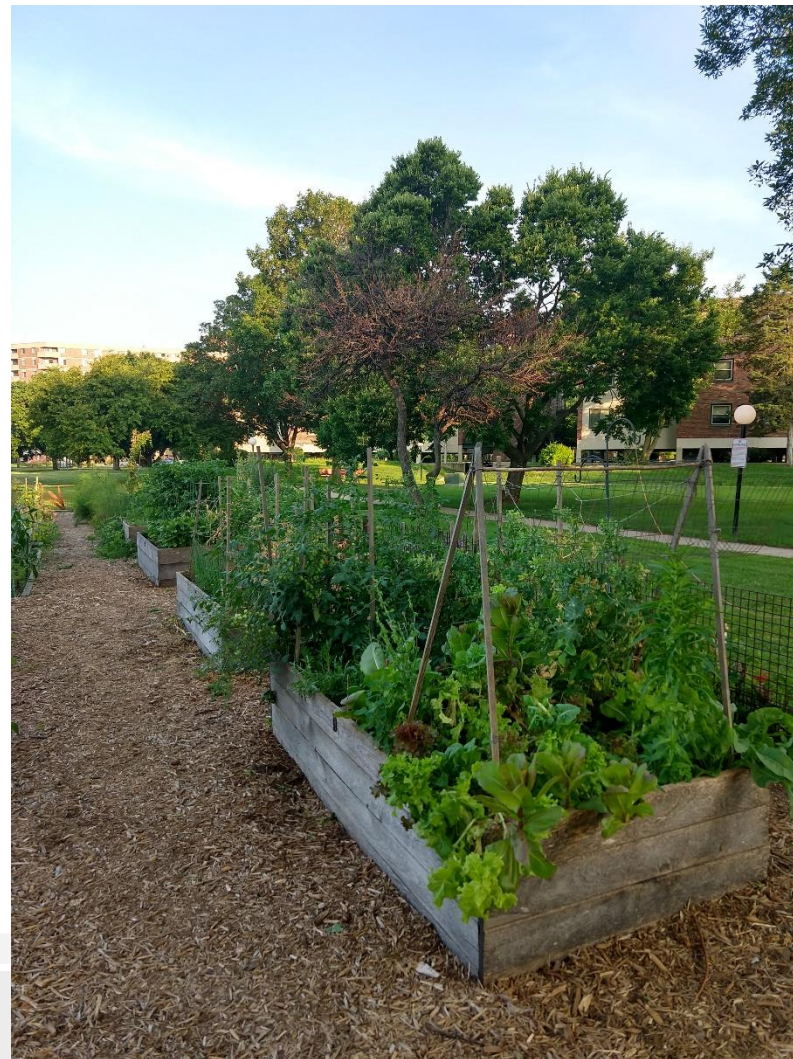


Personal Gardens





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

- Springmann, M., Wiebe, K., Mason-D'roz, D., Sulser, T.B., Rayner, M., and Scarborough, P. (2018). “Health and nutritional aspects of sustainable diet strategies and their association with environmental impacts: A global modelling analysis with country-level detail”. *The Lancet Planetary Health*, 2(10):451-461.
- Springmann, M., Godfray, H.C.J., Rayner, M., Scarborough, P. (2016). “Analysis and valuation of the health and climate change cobenefits of dietary change”. *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), 113(15): 4146-4151.
- Perignon, M., et al. (2016). “How low can dietary greenhouse gas emissions be reduced without impairing nutritional adequacy, affordability, and acceptability of the diet?: A modelling study to guide sustainable food choices”. *Public Health Nutrition* 1-13.