Nutrition Professionals
and
Food & Agriculture Policy

Susan L. Roberts JD, MS, RD
Drake University Agricultural Law Center

29th National Databank Conference
June 23-26, 2004
Iowa City, Iowa

INTRODUCTION

FOOD – CENTER OF A STORM

- Viability of family farm
- Security/Safety food supply
  - Food Scares
  - Bioterrorism
  - Hunger
- Genetically engineered crops
- Corporations tightening hold over world food supply
- Health – obesity epidemic

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

INTRODUCTION

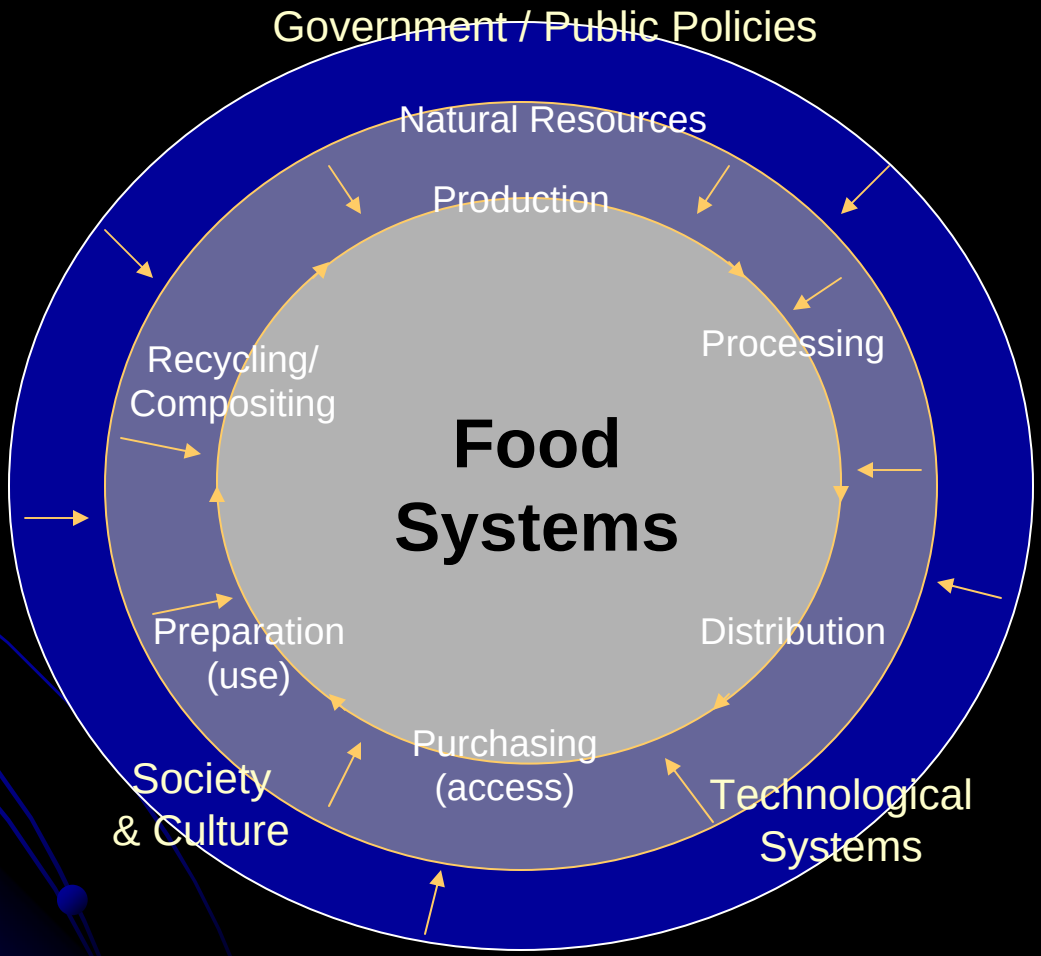
PRESENTATION GOALS

- Look at nutrition/nutrients from food system approach
- Look at how policies/actions at each step of food system affects
  - foods andnutrient composition
  - food intake
  - health
- Challenges/questions to nutrient database experts

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

INTRODUCTION

FOOD SYSTEM - OVERVIEW



Adapted from K. Dahlberg, 1993

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - OVERVIEW

Food Policy

Decisions made (not made) by government or institutions (federal, state, local) which shape:

- Type foods available/used
- Cost foods available/used
- Opportunities for farmers

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

POLICY

Support conventional over organic production

Mid 90's organic research = 1/10 of 1% total research[1]

1. M. Lipson, Searching for the "O-Word", OFRF, 1997

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

ORGANIC[1]

Core tenets– ban on synthetic fertilizers, pesticides, & herbicides; use of technique which nourish & protect soil

Other tenets– animal welfare, energy efficiency, social justice, small farms growing for local communities

[1] Nature 428: 796, 2004

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

ORGANIC VS. CONVENTIONAL

- Organic Sales[1]

  Up 20% per year last 10 years

- Organic Standards[2]

  2002 Rules

  1990 Law

[1] H. Willer & M. Yussefi, The World of Organic Agriculture Statistic and Emerging Trends, 2004

[2] USDA, AMS, National Organic Food Program Standards, 7CFR Part 205, 2002

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

ORGANIC PRODUCTION ADVANTAGES

Apple Production Systems[1]

6 years; organic, conventional, integrated

Organic:

- Higher profits
- Similar yields
- Better tasting fruit
- More environmentally sustainable
- More energy efficient

[1] JP Reganold, et. al. Sustainability of Three Apple Production Systems, Nature 410:926, 2001.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

ORGANIC - NUTRIENTS

- Significantly higher phenolic metabolites

  Marrionberries, strawberries, corn[1]

  Peaches and pears[2]

- Significantly higher levels Vitamin C, iron, magnesium, phosphorus in review 41 studies[3]

[1] D.K. Asami, et. al. J Agri, Food Chem, 51:1237, 2003.

[2] M.Carbonaro, et. al. J. Agri. Food Chem, 50:5450, 2002.

[3] V. Worthington, J. Alter & Comp. Med. 7:2:161, 2001.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PRODUCTION

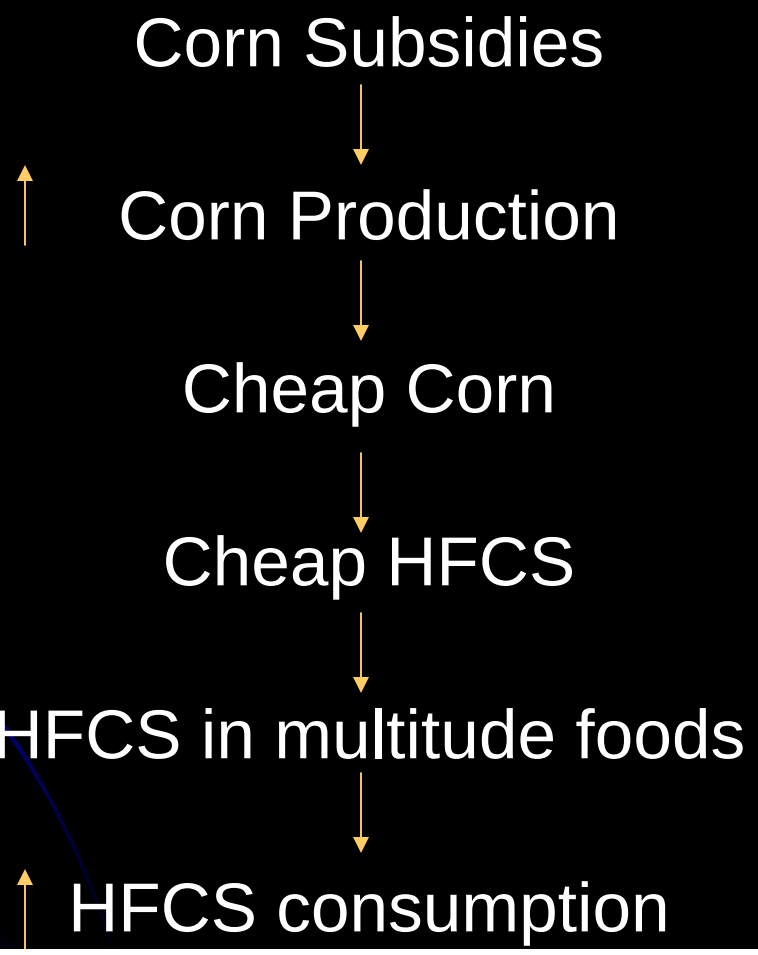
QUESTIONS

- Are there nutritional advantages of organic? What are they?
- How can this be considered in nutrient/diet analysis?
- What are health consequences of fewer pesticides in organic?
- What are health consequences of no hormone and antibiotic use in organic animal husbandry?

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PROCESSING

Policy – Extensive subsidies for corn production



S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PROCESSING

HFCS

- Inexpensive
- Easy to use in products
- Sweeter then sucrose
- Easy way to increase food consumption
  - Sweet tooth
  - Supersizing

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PROCESSING

PER CAPITA SWEETENER DELIVERIES[1]

	Refined Sugar	HFCS	Other	Total
1966	97.3#	0	15.6#	113#
2001	64.4#	62.6#	20.3#	147#

[1] S. Haley, et. al, ERS, USDA, June 2003.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PROCESSING

SWEET FOOD CONSUMPTION[1]

#1 Energy Intake – Soft Drinks

#2 Energy Intake – Sweets, Desserts

[1] G. Block, J. Food Compost Anal 17:3-4:437, June 2004

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PROCESSING

QUESTIONS

- What is the effect of HFCS on health?
- Should HFCS be analyzed separately from other sweeteners?

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - DISTRIBUTION

POLICY

Support of Global Food System (large-scale industrial farming for national and international markets) over Local Food Systems (small-scale farming for local markets)

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - DISTRIBUTION

FOOD MILES[1]

Distance food travels from where it is grown or raised to where it is ultimately purchased by the consumer or end-user.

[1] R. Pirog, A. Benjamin, Leopold Center for Sustainable Agriculture, Ames, IA, 2003.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - DISTRIBUTION

FOOD MILES[1]

California → Des Moines	>1400 miles
Chili → Des Moines	>7000 miles
Conventional Source	~1500 miles
Local Source	~50 miles

[1] R. Pirog, A. Benjamin, Leopold Center for Sustainable Agriculture, Ames, IA, 2003.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - DISTRIBUTION

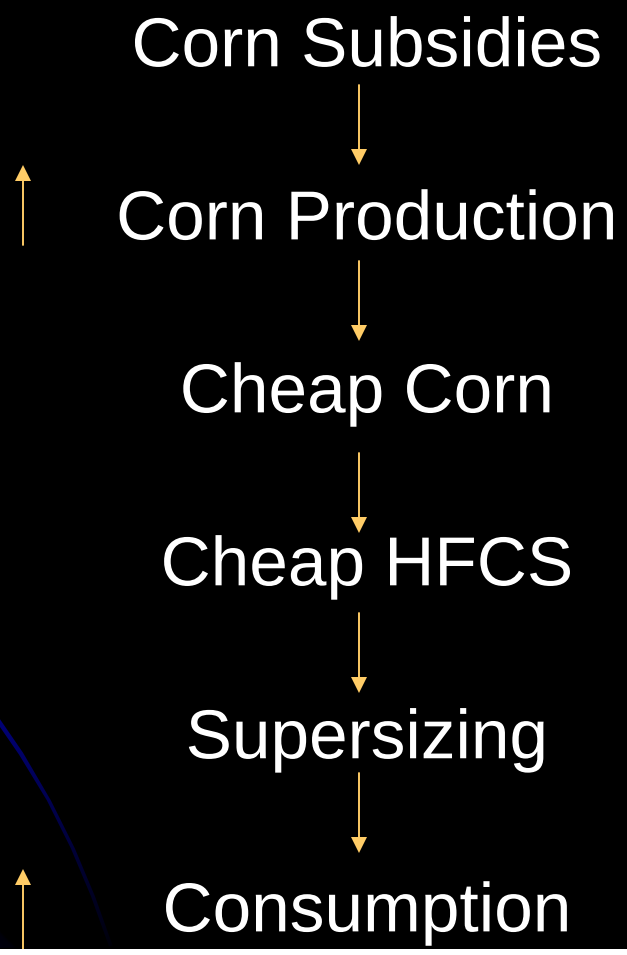
QUESTION

What is the difference in nutritional value of food, from produce to pork, grown & distributed in a local food system versus a global food system?

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PURCHASING

Policy – Subsidies for commodity crops such as corn



S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PURCHASING

SUPERSIZING

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PURCHASING

SUPERSIZING

7 Eleven Gulp Sizes[1]

	1973	2002
Smallest	12 oz	16 oz 194 calories
Largest	20 oz	64 oz 776 calories

[1] LR Young, M. Nestle, J. Am. Diet. Assoc. 103:231, 2003.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PURSHASING

QUESTIONS

- What are “normal” portion sizes?
- What are health costs of supersizing?
- How can education overcome ubiquitous “value” marketing and cheap food?

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PREPARATION

POLICY

Food and nutrition education not required in school curriculum

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PREPARATION

FOOD & NUTRITION CLASS

Des Moines Public Schools

5 - 6% Students[1]

[1] Thomas Drake, Des Moines Public Schools, June, 2004.

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

FOOD SYSTEMS - PREPARATION

QUESTIONS

- Should food and nutrition be a required class in middle or high school?
- Should schools have garden projects to teach production, processing, preparation and eating of wholesome food?

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004

S.L. Roberts JD,MS,RD
Drake Agricultural Law Center
NNDC 2004