

Nutrition Professionals and Food & Agriculture Policy

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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

INTRODUCTION

PRESENTATION GOALS

- ❑ Look at nutrition/nutrients from food system approach
- ❑ Look at how policies/actions at each step of food system affects

foods and nutrient composition

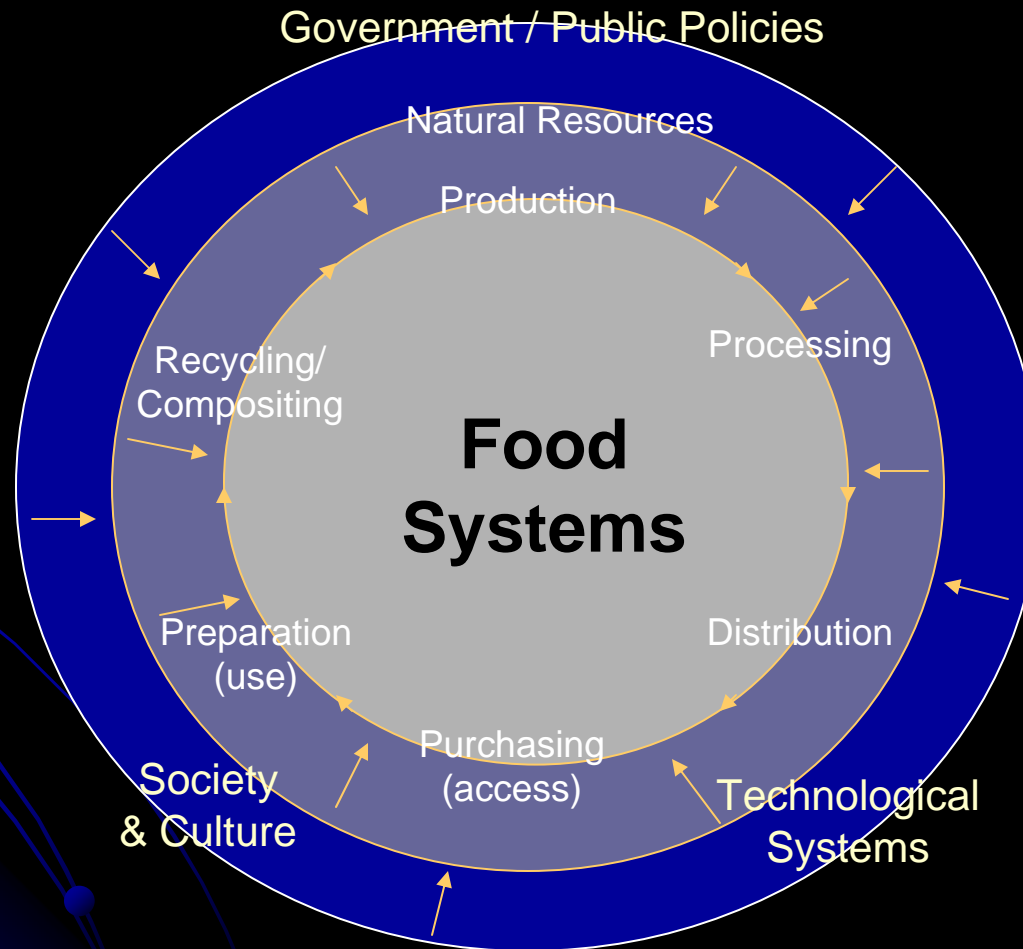
food intake

health

- ❑ Challenges/questions to nutrient database experts

INTRODUCTION

FOOD SYSTEM - OVERVIEW



Adapted from K. Dahlberg, 1993

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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

FOOD SYSTEMS - PRODUCTION

POLICY

Support conventional over organic production

Mid 90's organic research = 1/10 of 1% total research¹

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

FOOD SYSTEMS - PRODUCTION

ORGANIC¹

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

FOOD SYSTEMS - PRODUCTION

ORGANIC VS. CONVENTIONAL

❑ Organic Sales¹

Up 20% per year last 10 years

❑ Organic Standards²

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

FOOD SYSTEMS - PRODUCTION

ORGANIC PRODUCTION ADVANTAGES

Apple Production Systems¹

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.

FOOD SYSTEMS - PRODUCTION

ORGANIC - NUTRIENTS

- ❑ Significantly higher phenolic metabolites

Marrionberries, strawberries, corn¹

Peaches and pears²

- ❑ Significantly higher levels Vitamin C, iron, magnesium, phosphorus in review 41 studies³

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.

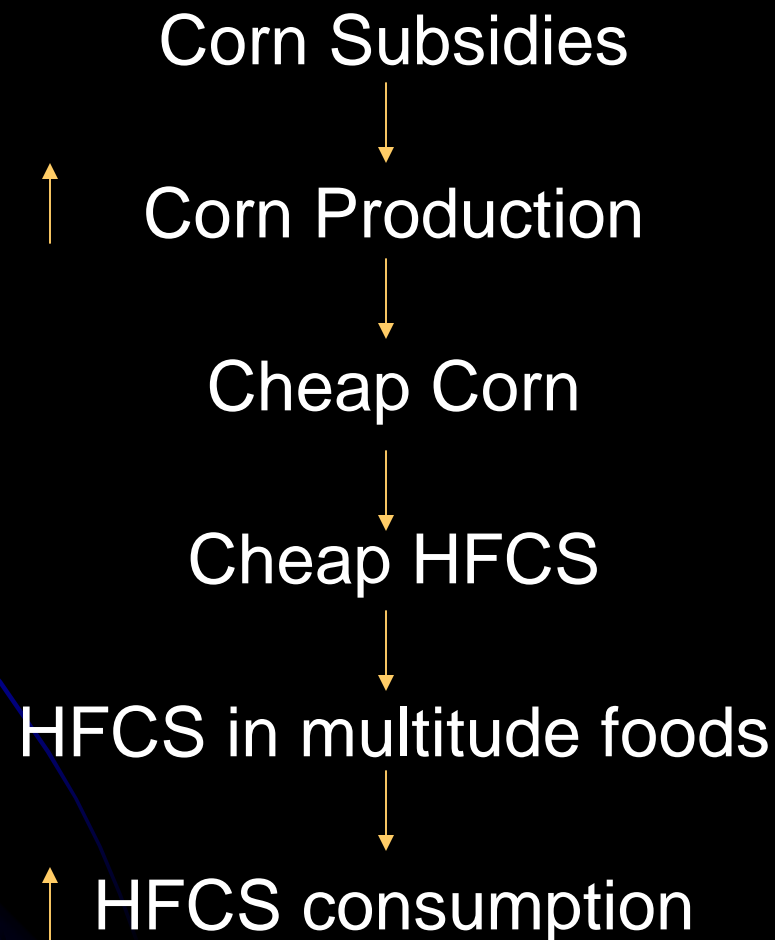
FOOD SYSTEMS - PRODUCTION

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?

FOOD SYSTEMS - PROCESSING

Policy – Extensive subsidies for corn production



FOOD SYSTEMS - PROCESSING

HFCS

- ❑ Inexpensive
- ❑ Easy to use in products
- ❑ Sweeter than sucrose
- ❑ Easy way to increase food consumption



Sweet tooth

Supersizing

FOOD SYSTEMS - PROCESSING

PER CAPITA SWEETENER DELIVERIES¹

	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.

FOOD SYSTEMS - PROCESSING

SWEET FOOD CONSUMPTION¹

#1 Energy Intake – Soft Drinks

#2 Energy Intake – Sweets, Desserts

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

FOOD SYSTEMS - PROCESSING

QUESTIONS

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

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)

FOOD SYSTEMS - DISTRIBUTION

FOOD MILES¹

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.

FOOD SYSTEMS - DISTRIBUTION

FOOD MILES¹

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.

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?

FOOD SYSTEMS - PURCHASING

Policy – Subsidies for commodity crops such as corn

Corn Subsidies



Corn Production



Cheap Corn



Cheap HFCS



Supersizing



Consumption



FOOD SYSTEMS - PURCHASING

SUPERSIZING



FOOD SYSTEMS - PURCHASING

SUPERSIZING

7 Eleven Gulp Sizes¹

	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.

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?

FOOD SYSTEMS - PREPARATION

POLICY

Food and nutrition education not required in school curriculum

FOOD SYSTEMS - PREPARATION

FOOD & NUTRITION CLASS

Des Moines Public Schools

5 - 6% Students¹

¹ Thomas Drake, Des Moines Public Schools, June, 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?



Agricultural Policy

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Food Policy

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Health Policy