


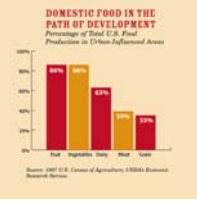


## DIETARY GUIDELINES AND A SUSTAINABLE FOOD SYSTEM

Michael W. Hamm  
CS Mott Professor of Sustainable Agriculture  
Michigan State University

## Built environment trends





Farming on the Edge  
High Quality Farmland in the Face of Development




**DOMESTIC FOOD IS THE PATH OF DEVELOPMENT**  
Percentage of Total U.S. Food Production in Other Influential Areas

Area	Percentage
High Quality Farmland & Rural Development	98%
High Quality Farmland & Low Development	85%
Urban Areas	15%

Farming on the Edge Report, American Farmland Trust (1997)

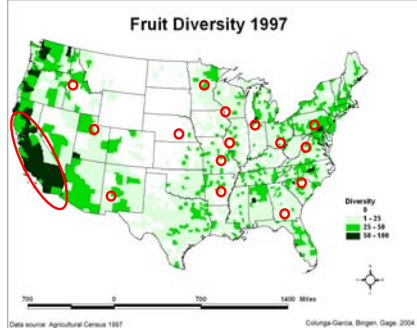


## Does Sustainability of Our Food Supply Relate to the Dietary Guidelines?


## What We Have – What We Need

### Fruit Diversity 1997



Diversity  
0  
1 - 25  
25 - 50  
50 - 100


Data source: Agricultural Census 1997  
Colunga-Garcia, Bengt, Ciga 2004



## Maximum crop acreage adjustments implied by full adoption of select recommendations from the 2005 Dietary Guidelines for Americans

Crop	Average harvested area, 1999-2003	Adjustments in acreage	Acreage needed to meet Guidelines
Million acres			
Fruit	3.5	4.1	7.6
Vegetables:	6.5	8.9	15.3
Dark green	0.3	0.5	0.8
Orange	0.2	0.4	0.6
Legumes	2.0	8.8	10.8
Starchy	2.3	-0.8	1.5
Other	1.7	--	1.7
Wheat (example for whole grains)	22.6	-5.6 <sup>2</sup>	17.04
Dairy <sup>3</sup>	NA	NA	NA
Total <sup>4</sup>	32.6	7.4	39.9

J. C. Buzby, H. Farah Wells, and G. V. Possible Implications for U.S. Agriculture From Adoption of Select Dietary Guidelines (ERS Report #31, 2006)



## Should We Think About More than Food as Nutrition...But Also Consider Other Food Attributes?




## Sustainability in our Food System as a 'Wicked Problem'

What would it 'look like'?

- Locally Integrated
- Community Based
- Food Secure Communities
- An Opportunity to Connect to Other Issues
  - Healthy
  - Diverse



## Is 'Local' Healthier or More Nutritious?



## Locally-Integrated Food Systems

A dynamic blend of local direct; local indirect; regional; national and global



With criteria for "local"

- If we can we should
- If we can't, can we substitute?
- If from outside are the same values transparent in the food



## Maybe Yes....Maybe No! We Really Don't Know



## High Tunnel Production: Sustainably Expanding the Season



## Can We Link Economic Development to Public Health Issues Related to Food?



## Opportunity: Jobs

WHAT IF... Michigan's residents bridged the "Public Health Gap"?

- Shift from current consumption to public health recommendations
- Eating more of what people currently eat
- Get it from MI when available fresh with typical technology
- Need approximately 37,000 more acres of production

**\$211 Million increased net income;  
1,800 off-farm jobs**

From: Conner, D.S., Knudson, W., Peterson, H.C., Hamm, M.W.  
*Journal of Human & Environmental Nutrition*, 2008.



## First and Last Month of Market Attendance Measured by Dot Posters (number of shoppers giving each response)

	January or February	March or April	May or Later
<b>Earliest Actual</b>	95	88	235
<b>Earliest Willing</b>	300	114	28
	July or Aug	September or October	November or December
<b>Latest Actual</b>	17	118	209
<b>Latest Willing</b>	1	37	402

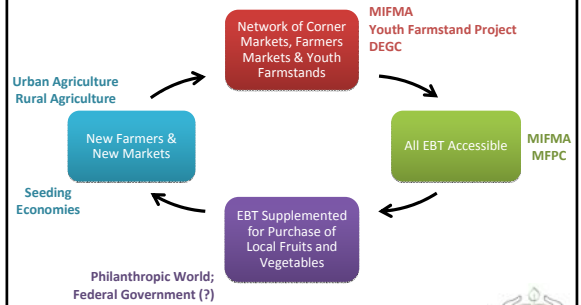
D. Conner, A. Montri, D. Montri and M. Hamm (2008) In preparation



## High Tunnel Production: Sustainably Expanding the Season



## Linkage of Effort



David Conner, Adam Montri, John Biernbaum, Mike Hamm



## Summary

Most of activity around enhancing sustainability of the food system in U.S. can be considered an opportunity with respect to the Dietary Guidelines and can help achieve America's goals in this regard.





[mhamm@msu.edu](mailto:mhamm@msu.edu)  
517-432-1611



**The End**