

U.S. Farming 101

Part 1

Future of Food
Webinar

July 2014



Future of Food Archived Webinars

Archived Recordings for Public Viewing:

- Hungry and Overweight: How is it Possible?
- Contributors and Effects of Food Insecurity: Nutrition and Beyond
- School Meals and Community Partnerships: Creative Solutions against Food Insecurity
- Point A to Point B: Improving Access to Healthy Foods in Food Banks
- A Flavorful Pairing: Nutrition Education in Food Banks
- Ready, Set, Go: Preparing and Delivering Effective Nutrition Education for Audiences Facing Food Insecurity
- Making an Impact with Food Insecure Populations
- Successful Synergies

www.eatright.org/foundation/kidseatright

A Message from the Academy Foundation:



Terri Raymond,
MA, RDN, CD, FAND
Chair

Academy of Nutrition
and Dietetics
Foundation

“The Academy of Nutrition and Dietetics Foundation strongly supports this webinar series to provide educational opportunities to Academy members about agriculture. As nutrition professionals, it’s important to understand where our food comes from and to be able to communicate the facts about food and farming with consumers. Thank you for attending this webinar today and for your interest and commitment to supporting US farmers and the future of our food.”

Learning Objectives

- Increase understanding of types of farms and farmers, education level of farmers, and farming regulations
 - Raise awareness of the amount and types of foods that are imported and exported
 - Identify key farming facts RDNs should share with clients
-

Today's Speakers



Katie Brown, EdD, RDN, LD
National Education Director
Academy of Nutrition and Dietetics
Foundation



Jennie Schmidt, MS, RD
Farmer
Schmidt Farms Inc
Schmidt Vineyard Mgt LLC



Alice Henneman, MS, RD, RDN
Extension Educator
University of Nebraska-Lincoln
Extension



2012-2014 Future of Food Project

- 8 Food Insecurity Webinars
- Nutrition Solutions Working Group
- Hunger in Our Community Toolkit/mini-grants
- www.healthyfoodbankhub.org
- Developing and Assessing Nutrition Education Handouts (DANEH)
- 6 New Handouts-English & Spanish
- Food Banking/Food Insecurity Dietetic Internship Concentration

Expanding the Scope of the FOF project

- Foundation BOD support to address global food insecurity and growing consumer interest in food
- RD Farmer and Agriculture Committee of Experts
- Member survey
- Building a research, education, and communications platform

RD Farmer & Agriculture Committee of Experts

Stacey Antine, MS, RD

Michelle Berger-Marshall, RD

Dayna Green-Burgeson, RD, CDE

Mary Lee Chin, MS, RDN

Alice Henneman, MS, RDN

Abigail Copenhaver, RD

Carla Honselman, PhD, RD, LDN

Christine McCullum-Gomez, PhD, RD, LD

Amy Myrdal Miller, MS, RDN

Megan Myrdal, RDN

Dee Sandquist, MS, RD, LD, CDE

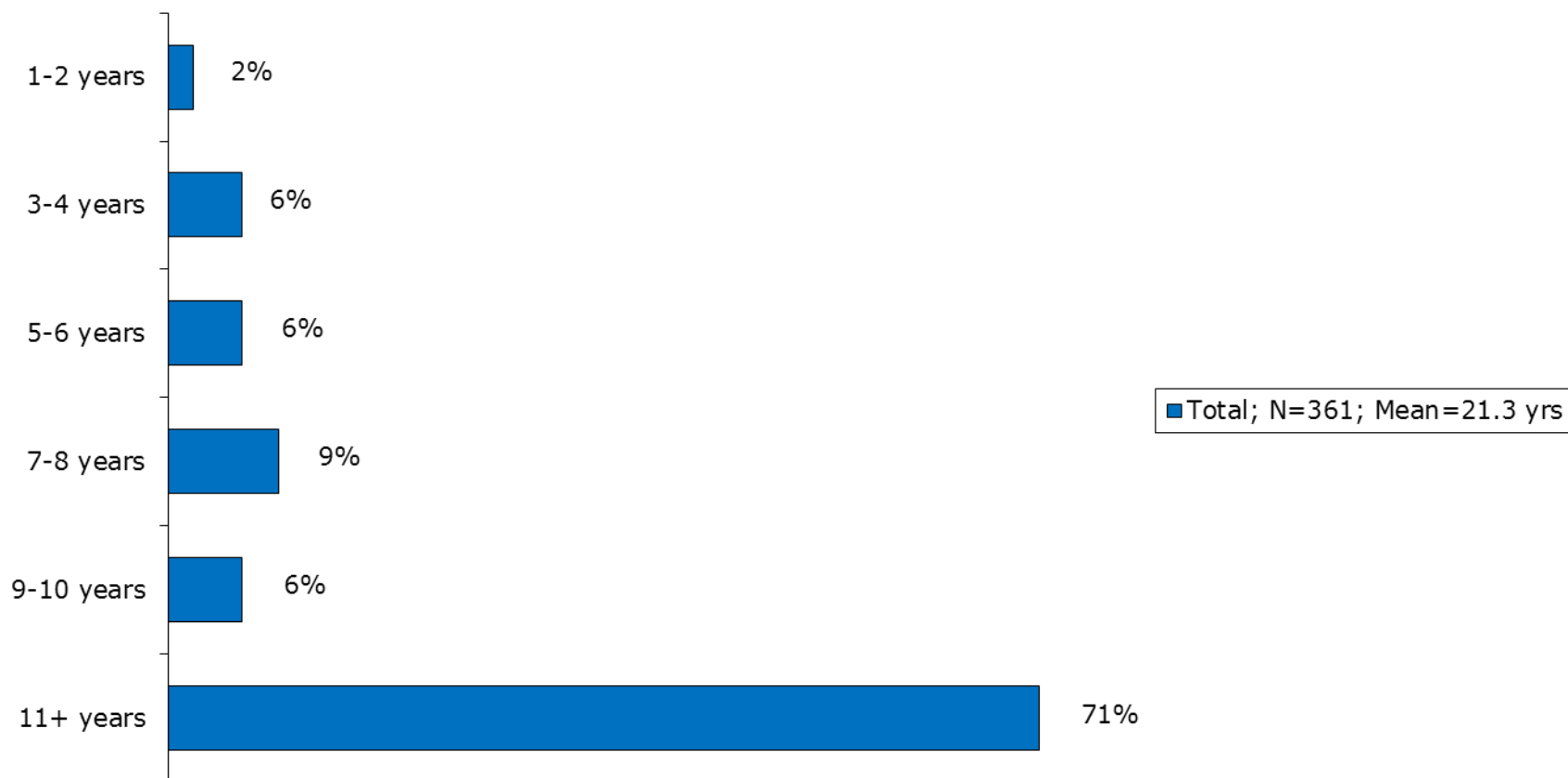
Jennie Schmidt, MS, RD



PROFESSIONAL PROFILES

Total Respondents

Majority have been Academy members for over a decade



First, how long have you been an Academy member?

PROFESSIONAL PROFILES

Total Respondents

Nearly all were registered dietitians or registered dietitian nutritionists

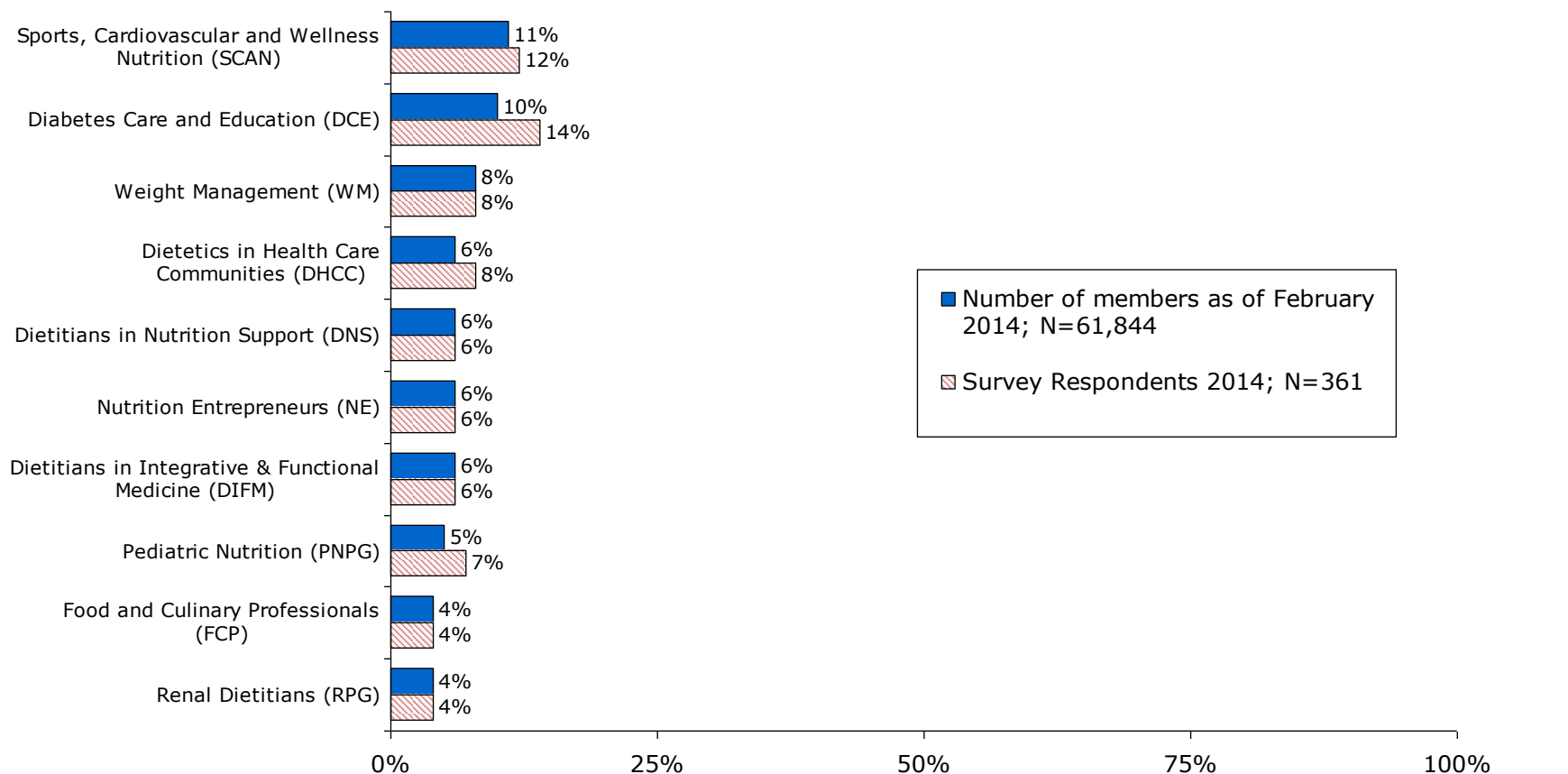


Are you a registered dietitian (RD) or registered dietitian nutritionist (RDN)?

PROFESSIONAL PROFILES

Survey Respondents vs. Actual: Top 10 Mentions

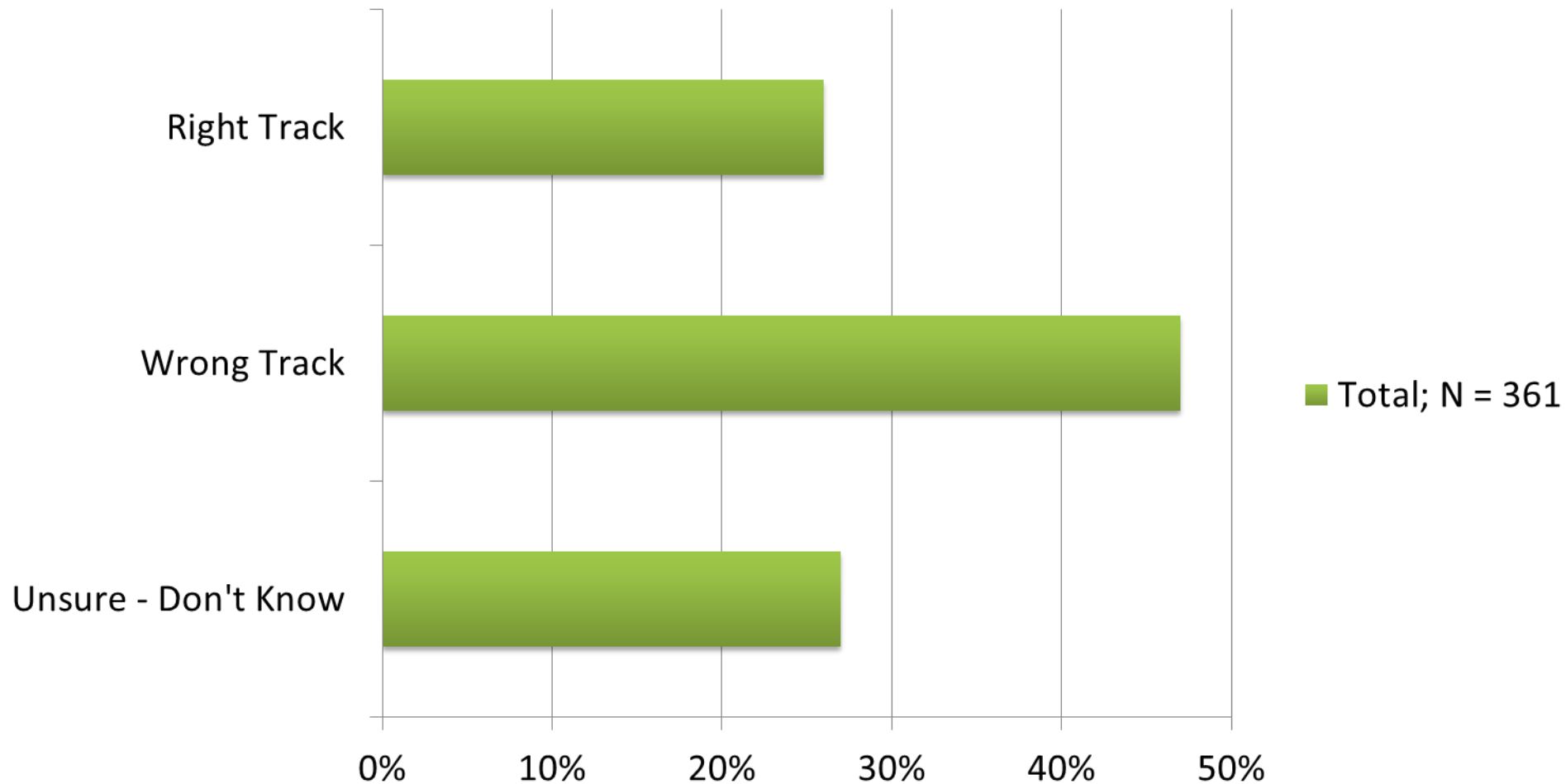
Top DPGs included “Diabetes Care and Education” and “Sports, Cardiovascular and Wellness Nutrition”



[NOTE - Multiple responses were recorded]

Which of these DPGs are you currently a member?

What's your perception of farming and food production practices in the U.S.?



Top concerns for **'Wrong Trackers'**

- GMOs
- Big Agra/factory farms
- Antibiotics and hormones
- Treatment of animals
- Pesticides, fertilizers, and agriculture chemicals

Newer members are more skeptical

- Only 12% of respondents that had been Academy members for less than 10 years believed agriculture is on the right track.
- They were also more likely to point to organic as a healthier option.

Not sure about health risks of GMOs

27% Yes

32% No

41% unsure

Members were more than twice as likely perceive that smaller farming operations compared to large ones follow standards about:

- Fulfilling the optimal rearing and nutritional needs of animals throughout their lifecycle
- Following regulations to ensure humane treatment of animals
- Prioritizing environmental concerns in their industry

RDNs want to know more

- The use of antibiotics and growth hormones administered to livestock raised for human consumption
- The challenges currently being faced in improving worldwide health as it relates to food security and nutrition
- Water management techniques
- Organic farming practices
- Soil management techniques
- GMOs used in agricultural production
- The use of heritage seeds and hybrid seeds
- Care and welfare of animals raised for human consumption

Preferred methods for learning

Over 50% responded that they would take advantage of these types of Academy-provided resources:

- Webinars/online learning
- JAND articles
- Toolkit
- Website depository for scientific resources
- Educational sessions at FNCE
- Fact sheets and client handouts
- Experiential learning opportunities

Future of Food Live Webinars

- **US Farming 101**
 - Jennie Schmidt, MS, RD
 - Alice Henneman, MS, RDN
- **US Farming 101 (Part 2!)**
 - Jennie Schmidt, MS, RD
 - Jennifer Noll Folliard, MPH, RD
- **Food Security and Nutrition: Challenges and Opportunities in Improving World Health**
 - Amie Heap, MPH, RDN
 - Stacia Nordin, RDN
- **Food Production and Our Environmental Responsibility**



Register:

www.eatright.org/foundation/kidseatright

FNCE Foundation Symposium

Saturday, October 18, 2014
11am-1pm

“The RDNs Guide to Plentiful, Nutrient Dense Food for the World”

Presenter

Dr. Robert Thompson

Panelists

Abigail Copenhaver, RD
Dayna Green-Burgeson, RD, CDE
Amy Myrdal Miller, MS, RD
Jennie Schmidt, MS, RD

Moderator

Christine McCullum-Gomez, PhD, RD, LD

Farming: The Future of Food



Jennie Schmidt, MS, RD
Schmidt Farms, Inc.

Schmidt Farms Inc.

3rd Generation in USA
2100 Acres in Maryland

- Corn (biotech & conventional production; formerly certified organic)
- Soybeans (food, feed & seed)
- Wheat (feed & seed)
- Barley (seed)
- 150 acres Roma tomatoes
- 160 acres fresh market green beans
- 80 acres processing lima beans
- 250 acres of hay
- 22 acres winegrapes
- Custom Hire Vineyard Mgt Co.



Our Farm Goal =

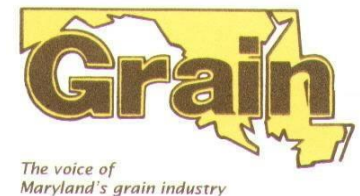
to maximize value per acre
producing safe, high quality foods,
while preserving and improving
our soils and sustaining the family
farm for the next generation



Who Am I?

Farmer, Dietitian, Promoter of Food & Farming

- 2011 America's Farm Mom of the Year
- CommonGround Volunteer
- Board Member
 - 1st Female V.P. - Maryland Grain Producers
 - US Wheat Foods Council
 - Past-Pres, MD Grape Growers Assoc.
 - Chairman, Maryland Farm Bureau Specialty Crops
- Academy of Nutrition & Dietetics –
 - HEN DPG member
 - workgroup on Advanced Food Technology



Today's farm and food...



Photo: Alice Henneman

Today's farmer¹

- In 2012, 3.2 million U.S. farmers (about 2% of population) operated 2.1 million farms on 915 million acres generating food, fuel and fiber for the U.S. and the world.
- 48% of farmers (about 1% of population) considered farming their primary occupation



Photo: Alice Henneman

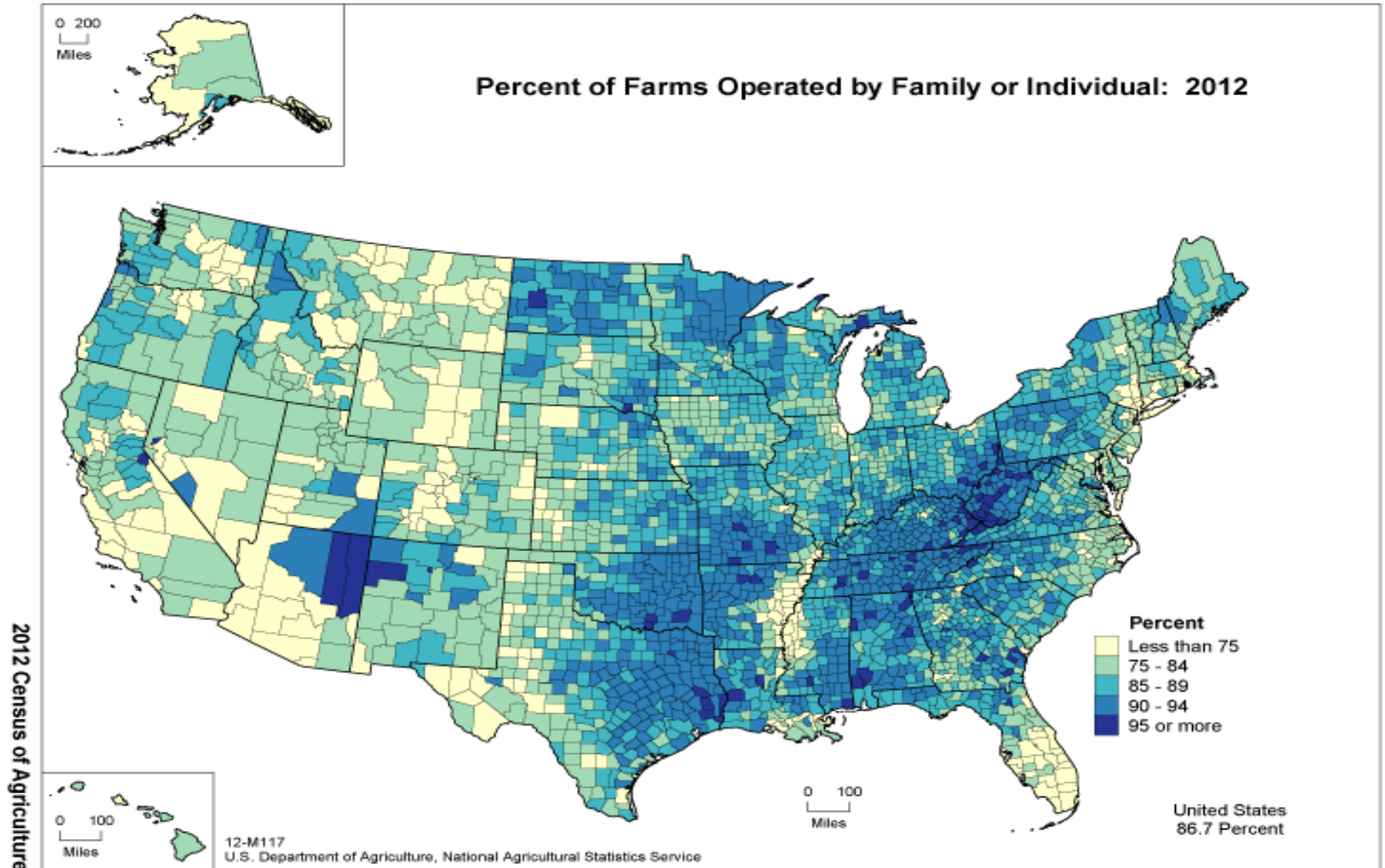
What is a farm?²

USDA definition:

"A farm is. . . .
. . . any place from which
\$1,000 or more of agricultural
products were produced and
sold, or normally would have
been sold, during the census
year."



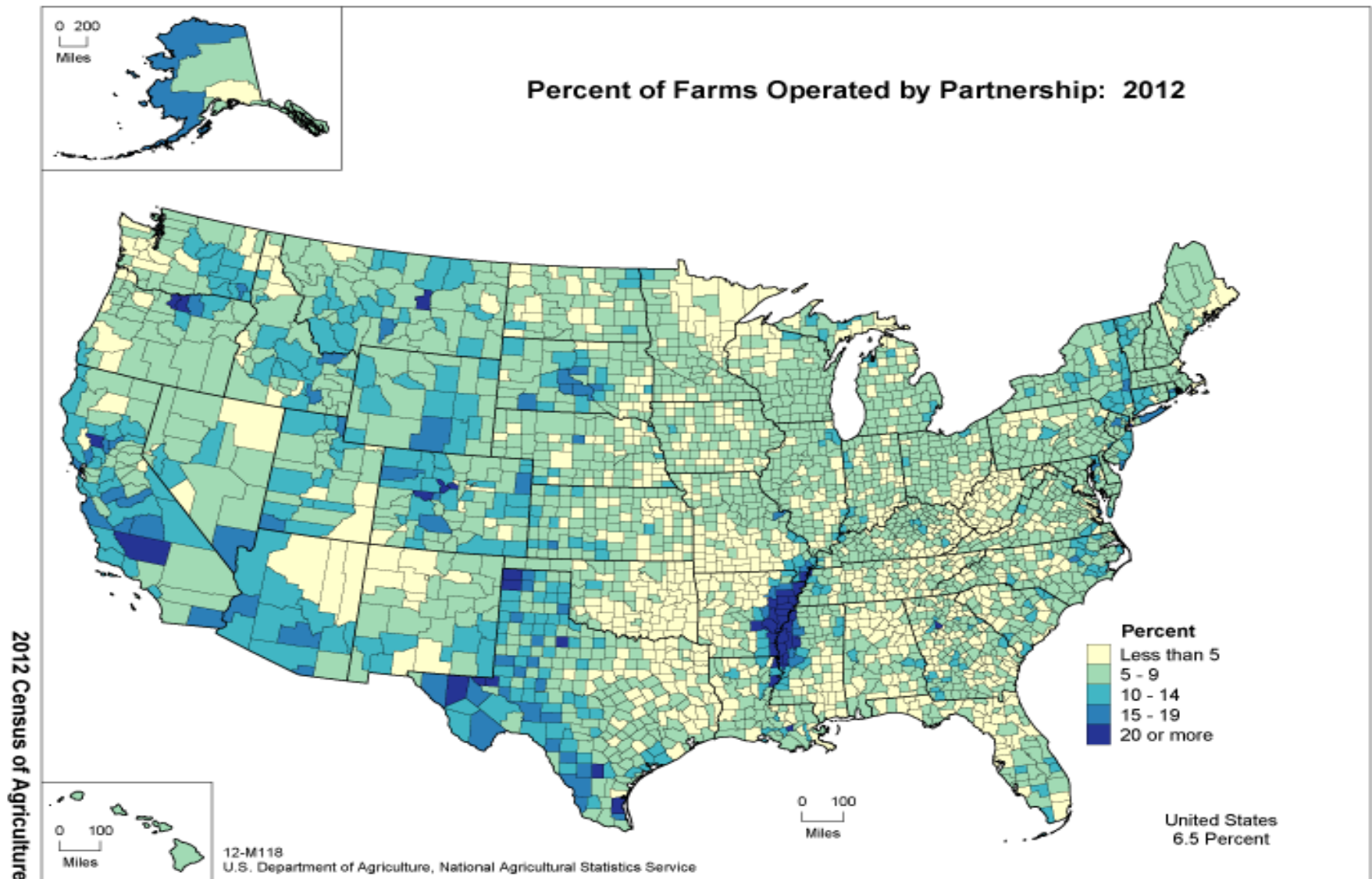
U.S. Agriculture – 87% family farms³



U.S. Agriculture—7% family partnerships³



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Corporate Farms = 5%⁴

Table 67. Summary by Legal Status For Tax Purposes: 2012

[For meaning of abbreviations and symbols, see introductory text.]

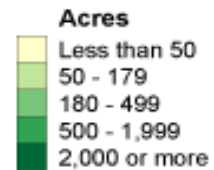
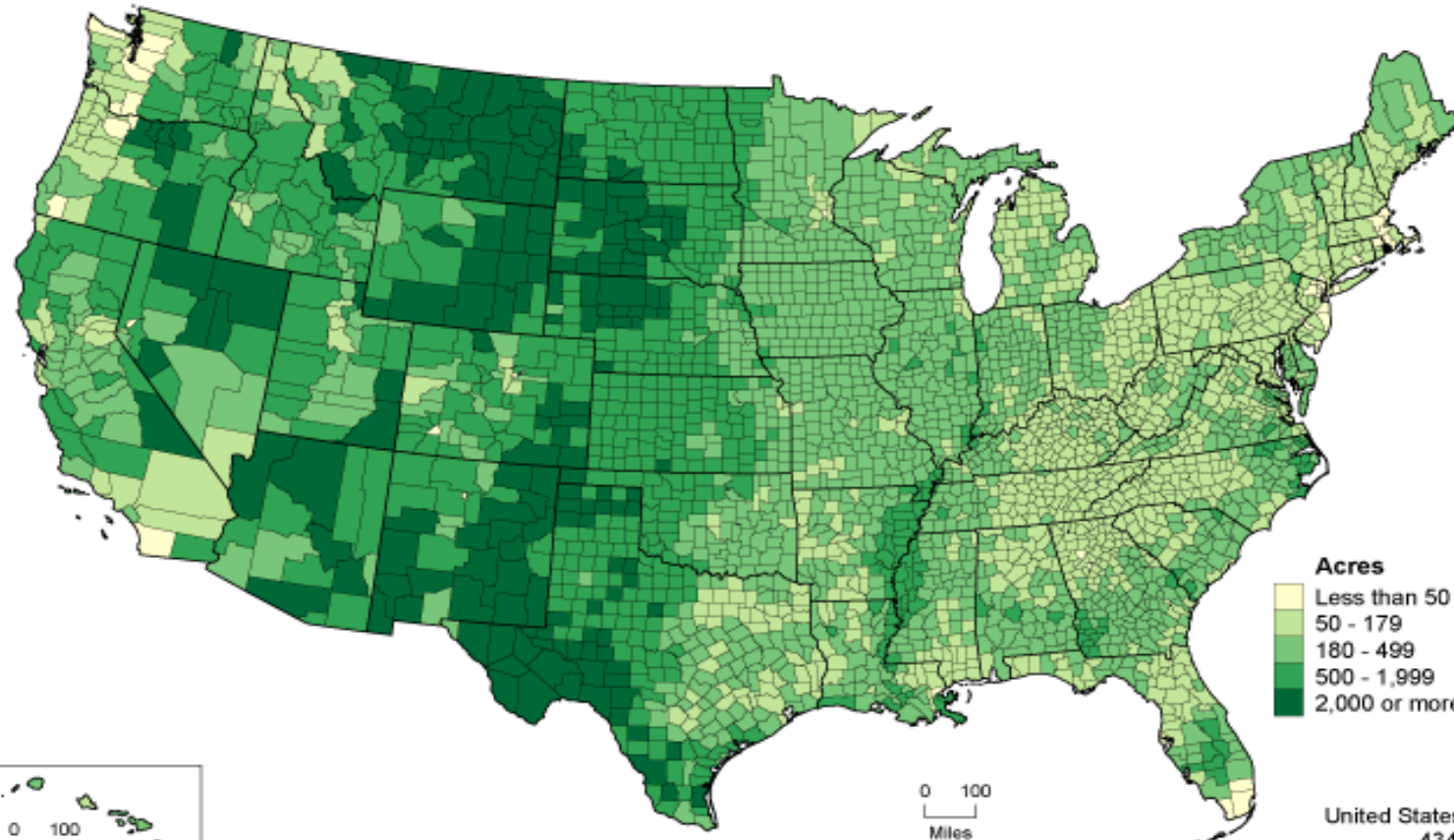
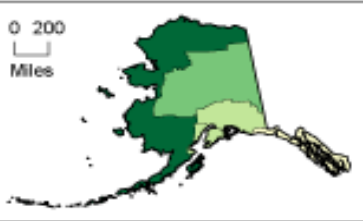
Item	Total	Family or individual	Partnership	
			Total	Registered under state law
FARMS AND LAND IN FARMS				
Farms number	2,109,303	1,828,946	137,987	98,911
..... percent	100.0	86.7	6.5	4.7
Land in farms acres	914,527,657	562,433,686	156,076,785	128,378,262
Average size of farm acres	434	308	1,131	1,298

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_US/st99_1_067_067.pdf



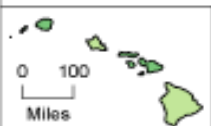
Average Farm Size³

Average Size of Farms in Acres: 2012



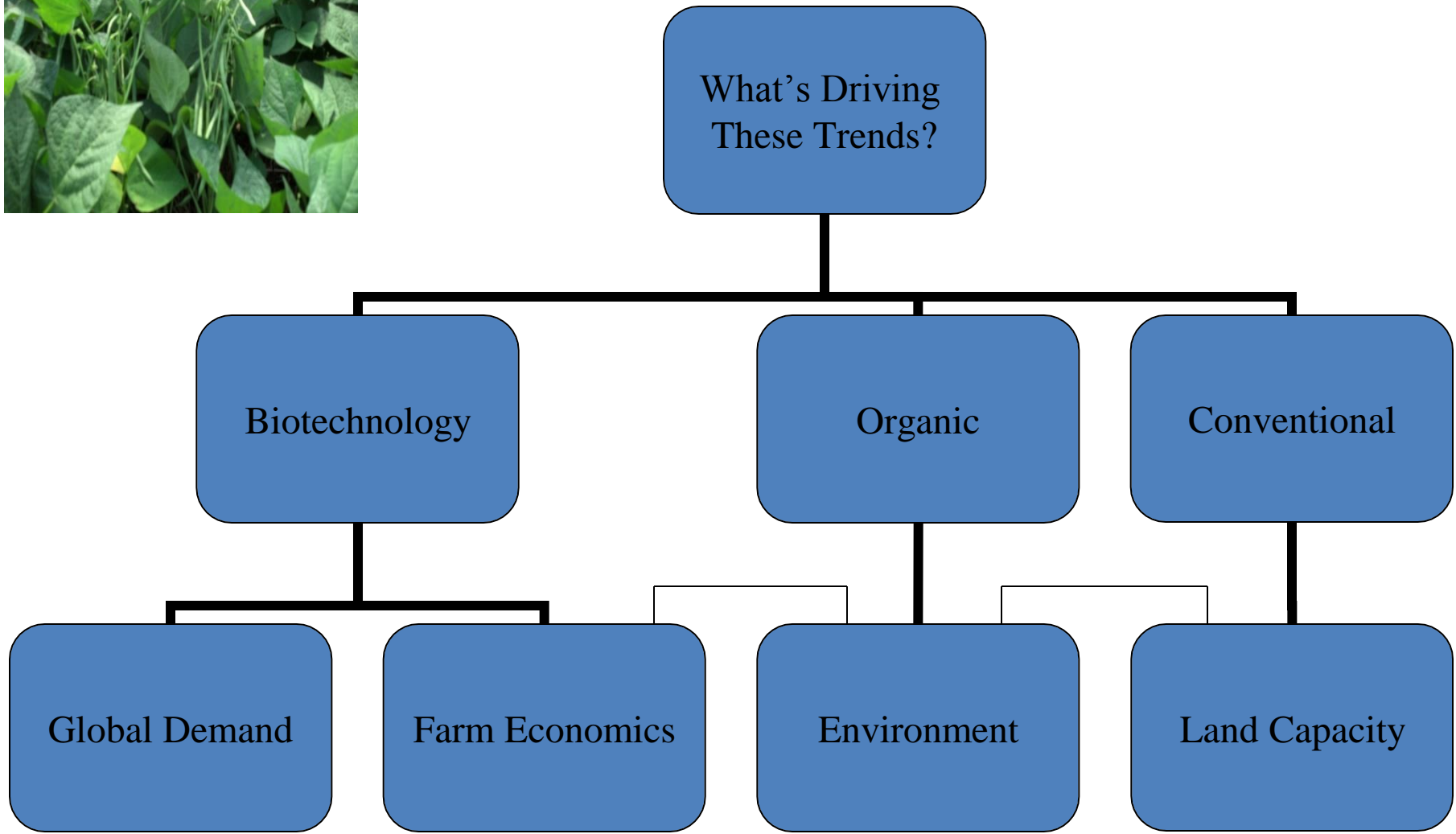
United States Average
434

2012 Census of Agriculture



12-M003
U.S. Department of Agriculture, National Agricultural Statistics Service

Consumer Influences



Let's Talk

Farming Systems ⁵



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graph TD; A[Agriculture] --> B[Conventional: uses modern technology and mechanization. Stems from green revolution.]; A --> C[Biotechnology: plant breeding techniques to develop or improve living organisms. "RoundUp/Bt/Stacked."]; A --> D[Organic: ecological production system minimizing off farm inputs; only OMRI approved materials.]
```

Agriculture

Conventional: uses modern technology and mechanization. Stems from green revolution.

Biotechnology: plant breeding techniques to develop or improve living organisms. "RoundUp/Bt/Stacked."

Organic: ecological production system minimizing off farm inputs; only OMRI approved materials.



Comparison of Practices

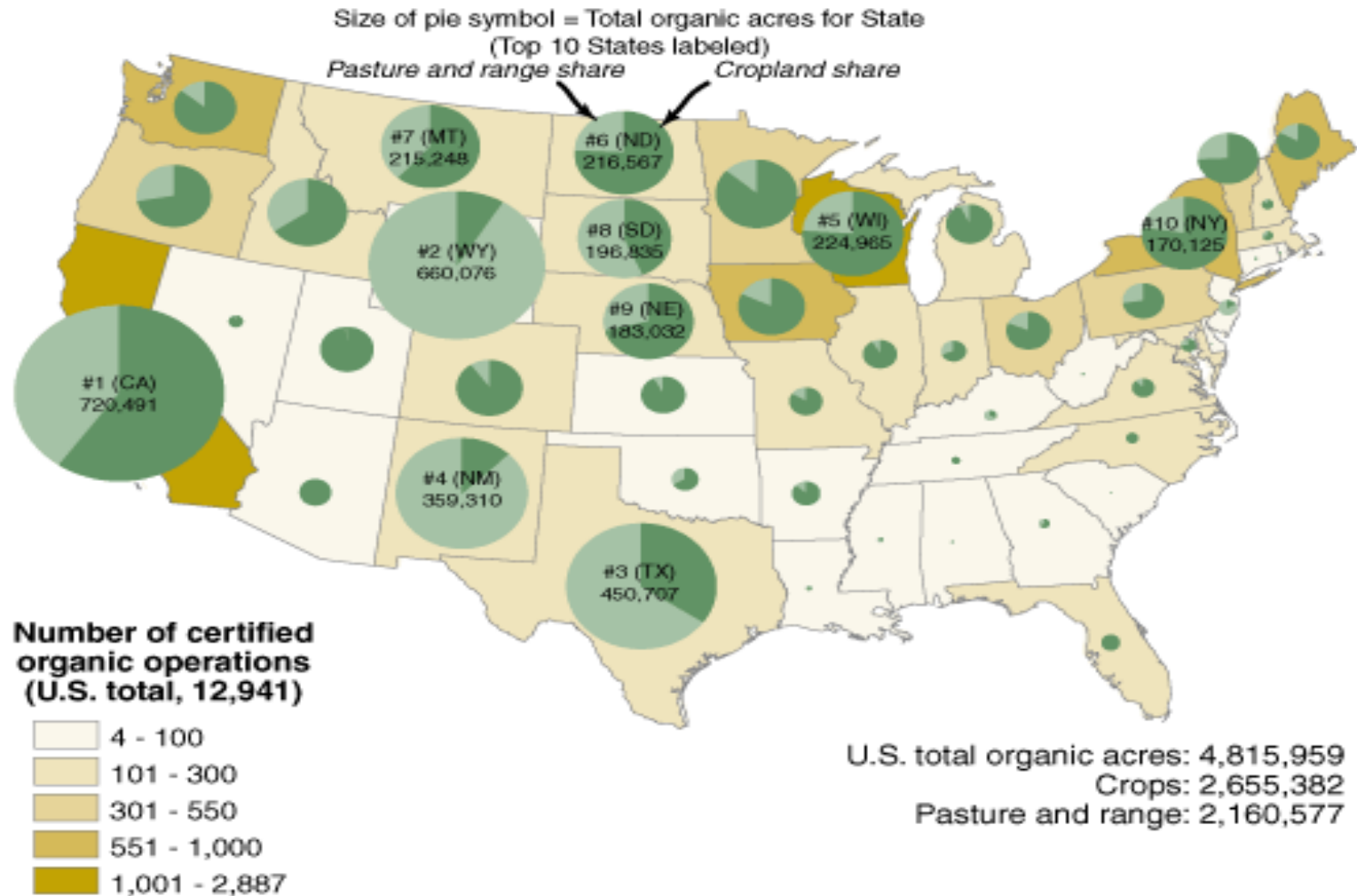
Practice	Conventional	Biotech	Organic
No-Till	√	√	
Crop Rotation	√	√	√
Cover Crop	√	√	√
Green Manure	√	√	√
IPM	√	√	√
Fertilizers	√	√	√
Pesticides	√	√	√ OMRI

Conservation vs Organic & Conventional⁶



“No-Till” (L) does not work up the ground before planting.

Organic operations accounted for less than 1 percent of total crop acreage in 2008



Source: USDA, Economic Research Service, based on information from USDA-accredited certifiers.

Current Organic Acres: 5.4 million⁷
 Total US Farm Acres: 915 million

Education of Farmers^{8,9}

Since 1983, the number of farmers holding college degrees has increased over 50%

Education of Principal Operator	Established Operations	Beginner Operations	All
Less than high school	9%	8%	9%
High school and some college	67%	62%	66%
4-year college degree or more	23%	30%	25%

Continuing Education

CEUs required for:

- Private pesticide applicators license
- Commercial pesticide applicators license.
- Nutrient Management Plans
- Commercial Drivers License

Professional Development

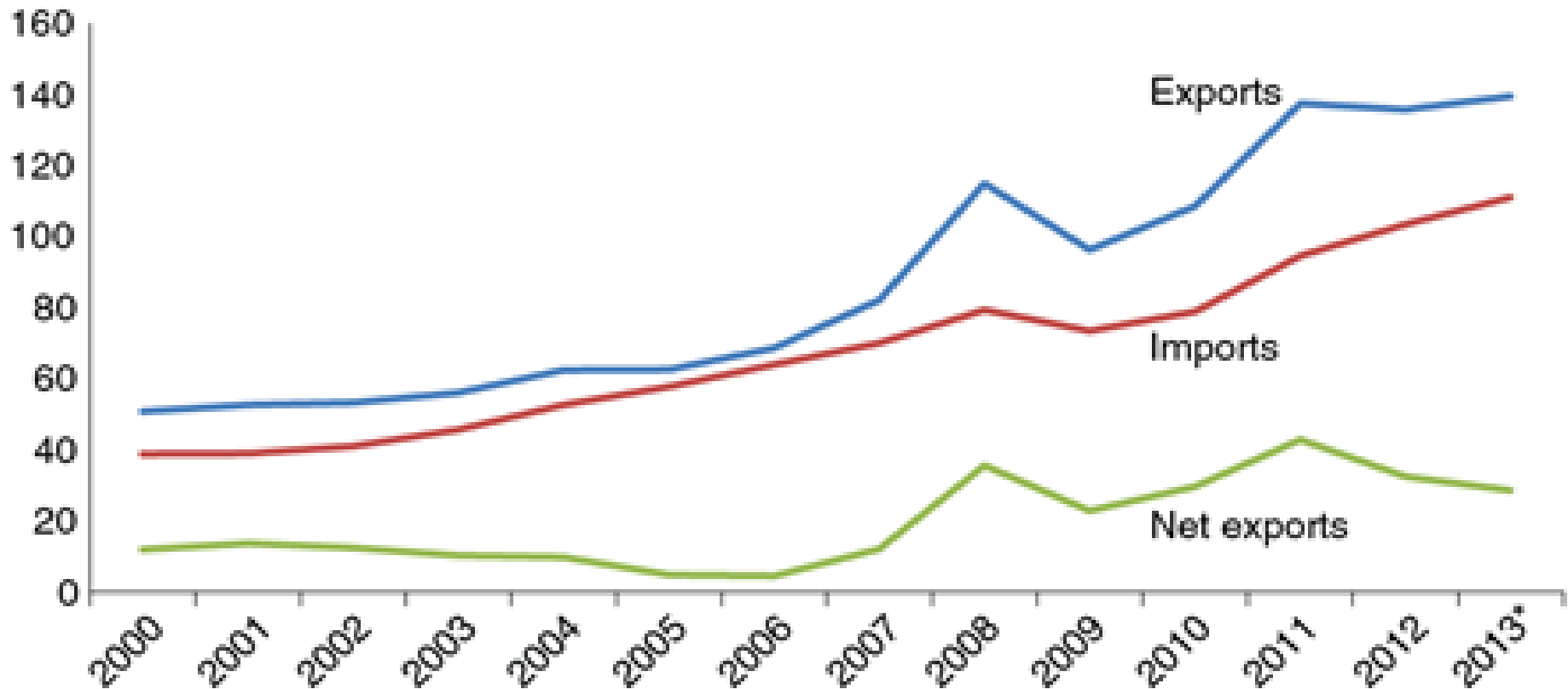
- Science
- Technology
- Business Management



U.S. Agriculture Exports^{10,11}

U.S. agricultural exports, imports, and trade balance, 2000-13*

Billion dollars

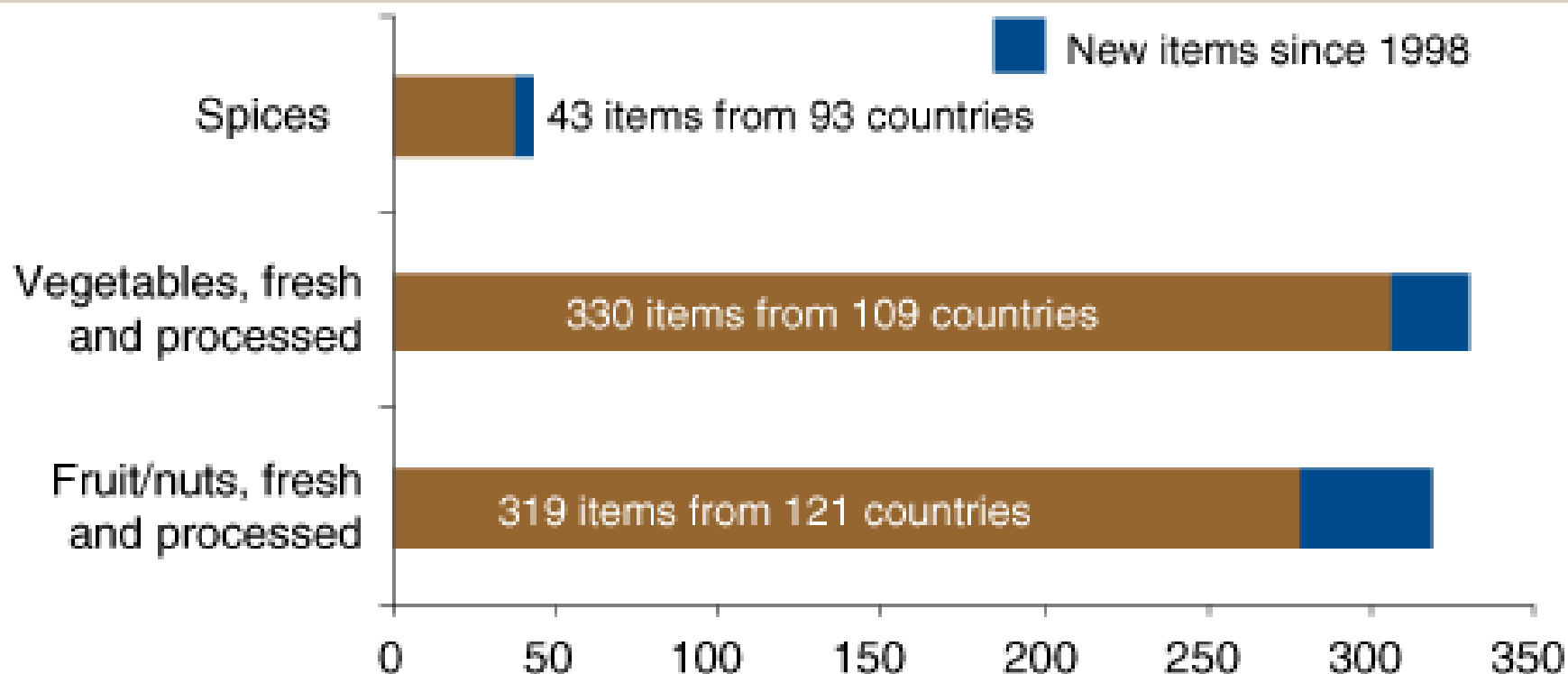


*2013 = forecast through September 2013.

Sources: USDA, Economic Research Service, Foreign Agricultural Trade of the United States;
Outlook for U.S. Agricultural Trade: May 2013.

U.S. Food Imports¹²

Wide variety of products and source countries met U.S. import demand, 1998-2007



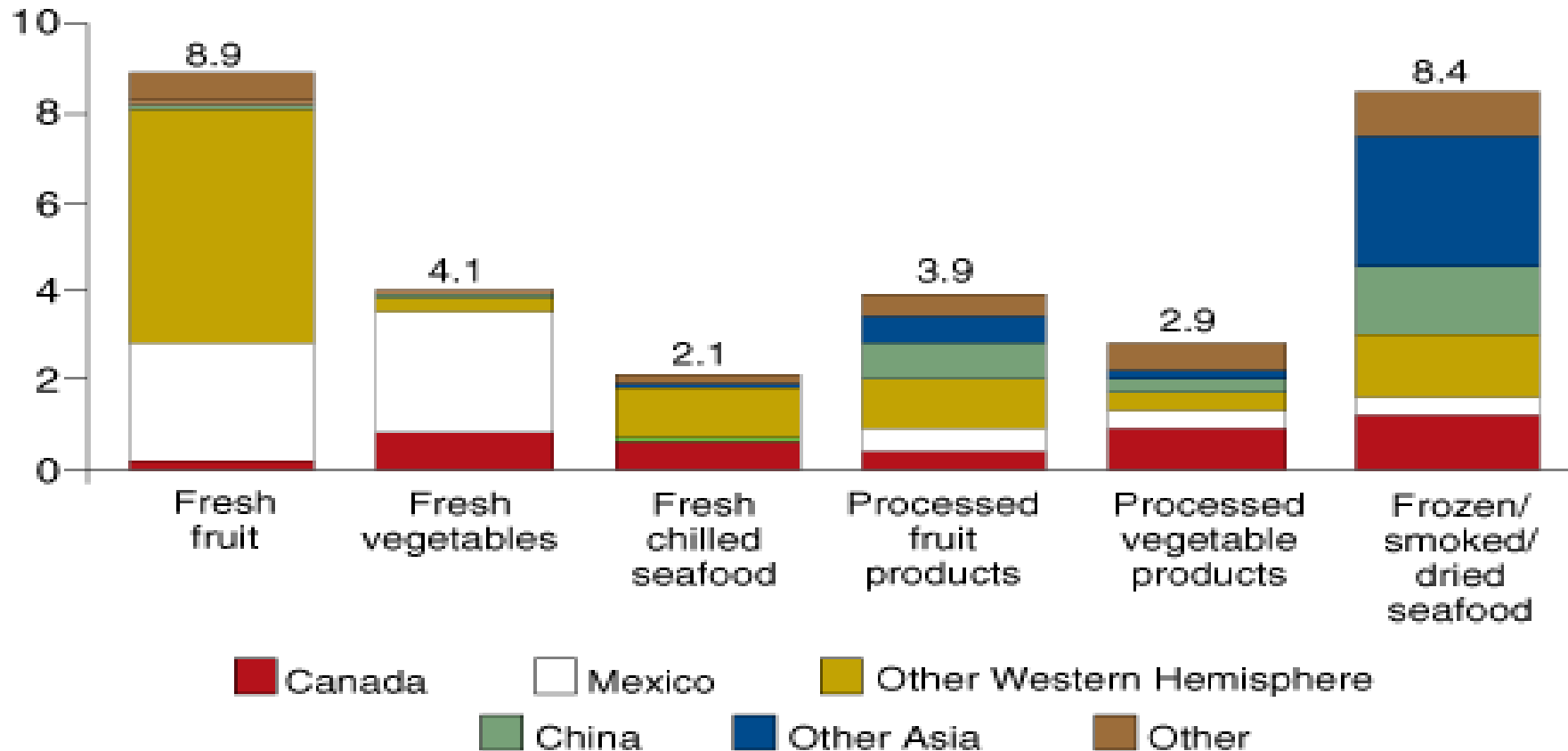
Note: Each HS-10 digit tariff line is assumed to designate an import item.

Source: USDA, Economic Research Service classification using data from U.S. Department of Commerce, Census Bureau.

U.S. Food Imports¹³

U.S. perishable food imports in 2007 mostly came from neighboring countries

Imports, billion dollars



Source: USDA, Economic Research Service classification using data from U.S. Department of Commerce, Census Bureau.

Part 1 Summary:

- Gained insight into U.S. agriculture
 - Family Farms & Corporate Farms
 - Farming Systems
 - Farming Practices
 - Professional Development
 - Science & Technology on the farm
 - The global perspective of our food supply





Thank You!

Jennie Schmidt, MS, RD

Twitter: @FarmGirlJen

Facebook: The Foodie Farmer

Email:

schmidtvineyardmgt@gmail.com

Blog:

<http://thefoodiefarmer.blogspot.com>

Background: Alice Henneman

- Grew up on one of the original 160-acre farms created by the Homestead Act of 1862
- Developer, coordinator & contributor to Univ. of Nebraska–Lincoln Extension food.unl.edu website featuring food from “farm to fork”
- Board Member
 - Buy Fresh Buy Local Nebraska
 - Past board member, Community Crops
- Academy of Nutrition & Dietetics
 - RDN Farmer Advisory Group



Getting involved¹⁴

“... the future of American agriculture rests in the hands of ninety-eight percent of the United States population who do not reside on a farm and may have little to no understanding of agriculture.”

Photo: USDA Agriculture Research Service



Addressing Common Consumer Questions + What You Can Do to Take Action



- Farm sizes



- Eating locally grown



- “Natural” foods

Farm Sizes ^{2,15}



Photo: USDA Agriculture Research Service

Types of U.S. farms operations

- 86.7% — families or individuals
- 6.5 % — partnerships
- 5.1% — corporations (4.5 % are family held and 0.5% are other than family held)
- 1.7% — cooperatives, estates, trusts, etc.

Eating Locally Grown



Photo: Alice Henneman

One definition¹⁶

“The total distance that a product can be transported and still be considered a “locally or regionally produced agricultural food product” is less than 400 miles from its origin, or within the State in which it is produced.”

Definition adopted by the U.S. Congress in the 2008 Food, Conservation, and Energy Act (2008 Farm Act)



Photo: Alice Henneman

However ...¹⁶



Photo: Alice Henneman

“There is no consensus on a definition of ‘local’ or ‘local food systems’ in terms of the geographic distance between production and consumption.”

And ...¹⁶

“... defining ‘local’ based on marketing arrangements, such as farmers selling directly to consumers at regional farmers’ markets or to schools, is well recognized.”



Photo: Alice Henneman

If you want to
know what
“locally grown”
means in a
specific setting
... ASK!



Photo: USDA SNAP-Ed Photo Gallery

Be aware ... 17

A farm can be
local, but NOT
organic or organic
and NOT local



Photo: Alice Henneman

“Natural” Foods^{18,19}

62% of Americans in a 2014 Harris Poll felt food packages advertising their wares as “natural,” “all natural” or “100% natural” was helpful in directing them to nutritious choices.



Photo: <https://www.flickr.com/photos/katerha/6133784528>
(CC License)

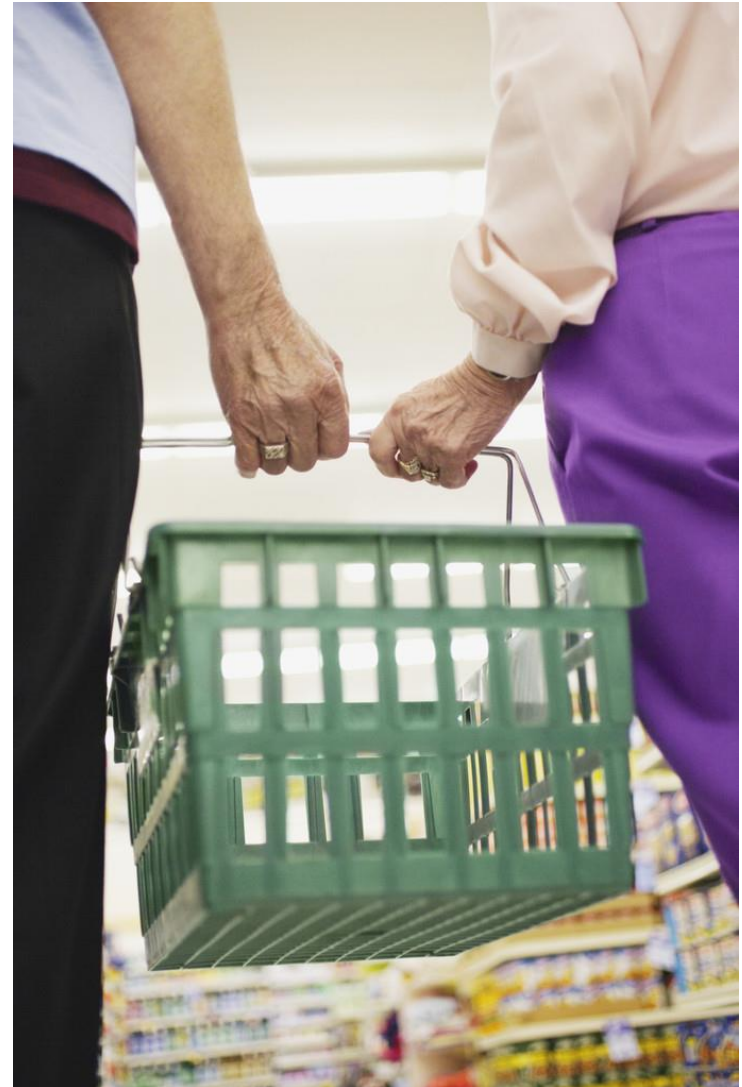
\$40 billion sold in foods labeled “natural” every year!

What does “natural” mean?²⁰



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- 59% of Americans in a 2014 Consumer Reports poll are checking to see if their food is natural when they purchase foods.



FDA definition²¹

“From a food science perspective, it is difficult to define a food product that is 'natural' because the food has probably been processed and is no longer the product of the earth. That said, **FDA has not developed a definition for use of the term natural** or its derivatives. However, the agency has not objected to the use of the term if the food does not contain added color, artificial flavors, or synthetic substances.”

USDA definition: Meat, poultry, certain egg products²²

"A product containing no artificial ingredient or added color and is only minimally processed. Minimal processing means that the product was processed in a manner that does not fundamentally alter the product. The label must include a statement explaining the meaning of the term natural (such as 'no artificial ingredients; minimally processed')."



Summary:

Key Consumer Messages

- What do I say when clients ask me about:
 - “Big Ag” vs. “Family Farm”
 - Local?
 - Natural?



Take Action: Get to know a farmer!

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Photo: USDA WIC Image Library

Reduce food waste^{23,24}



- About 40% of U.S. food supply (1500 calories / person / day) never eaten
- Resources used to produce uneaten food: 30% of fertilizer, 31% of cropland, 25% of total fresh water consumption, and 2% of total energy consumption
- Discarded food in homes and foodservice accounts for 60% of food loss and is mostly avoidable

Photo: <https://www.flickr.com/photos/nsalt/3384791127/> (CC license)

U.S. food waste solutions

- Start a public awareness campaign
- Include shopping, storage and preparation tips when distributing recipes
- Teach about food date labels and how to use
- Compost food scraps
- Donate safe, nutritious, food to food banks
- Order or buy only what you will eat—ask for and encourage restaurants to offer smaller portions
- Take restaurant leftovers home
- Get creative with leftovers from home meals
- Freeze food before it spoils, when possible
- Visit <http://homefoodsafety.org>

Support locally grown food

- Shop farmers' markets
- Teach preparation of fresh produce from farmers' markets, CSA's, etc. (demos, handouts, blogs, articles ...)
- Patronize and compliment restaurants that buy locally



Photo: Alice Henneman

Promote locally grown food



Photo: Alice Henneman

- Buy at grocery stores that sell from local growers
- Organize trips to local farms
- Produce a local foods directory

Promote locally grown food

- Teach people how to preserve locally grown foods
 - National Center for Home Food Preservation
<http://nchfp.uga.edu>
- Work with youth to grow food
- Plant a garden



Photos: National Center for Home Food Preservation

How Can I Get Involved?

- Join HEN DPG
 - <http://www.hendpg.org>
 - <http://www.hendpg.org/page/resources>
 - www.hendpg.org/docs/sustainable_primer.pdf
- Join the FCP new subgroup on Agriculture
 - www.foodculinaryprofs.org
 - <http://www.foodculinaryprofs.org/page/agriculture>
 - <http://www.foodculinaryprofs.org/page/resources-2>
- Engage in social media and follow respected agriculture organizations (view resources from HEN and FCP)
- Join Kids Eat Right
 - www.kidseatright.org/volunteer

Final food for thought ...



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**“Eating is
an
agricultural
act.”**

~ Wendell Berry, conservationist,
farmer, essayist, novelist,
professor of English and poet



Photo: USDA Agriculture Research Service

Thank You!

Alice Henneman, MS, RDN

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Blog: <http://cookitquick.org>

Website: <http://food.unl.edu>

Pinterest:

<http://www.pinterest.com/alicehenneman>

LinkedIn:

<http://www.linkedin.com/in/alicehenneman>

Flickr:

<https://www.flickr.com/photos/alicehenneman>



Next Future of Food Webinar:

Thursday, August 21, 2014
1pm-2pm CST

“US Farming 101: Part 2”

Presenters

Jennie Schmidt, MS, RD

Jennifer Noll Folliard, MPH, RD

Register at www.eatright.org/foundation/kidseatright

Q & A

View recorded webinars at
www.eatright.org/foundation/kidseatright



This document was developed with an educational grant from Elanco.

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