

Colorado F & V Agriculture

- 2,400 Fruit and Vegetable Growers
- 350 Certified Organic Operations
- \$300,000,000 in Annual F & V Sales
- 60,000 Acres in Production





Dietary Guidelines 2015

A healthy eating pattern includes:

- a variety of vegetables
- fruits, especially whole fruits
- grains, at least half of which are whole grains
- fat-free or low-fat dairy
- a variety of protein foods
- oils

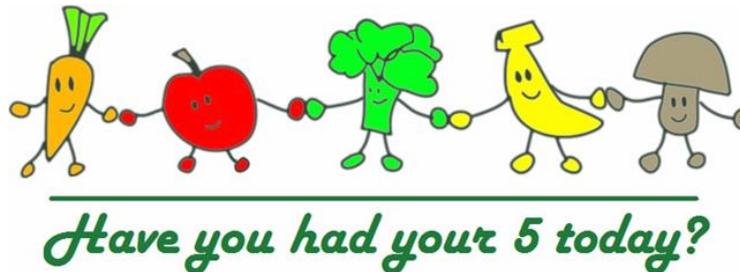




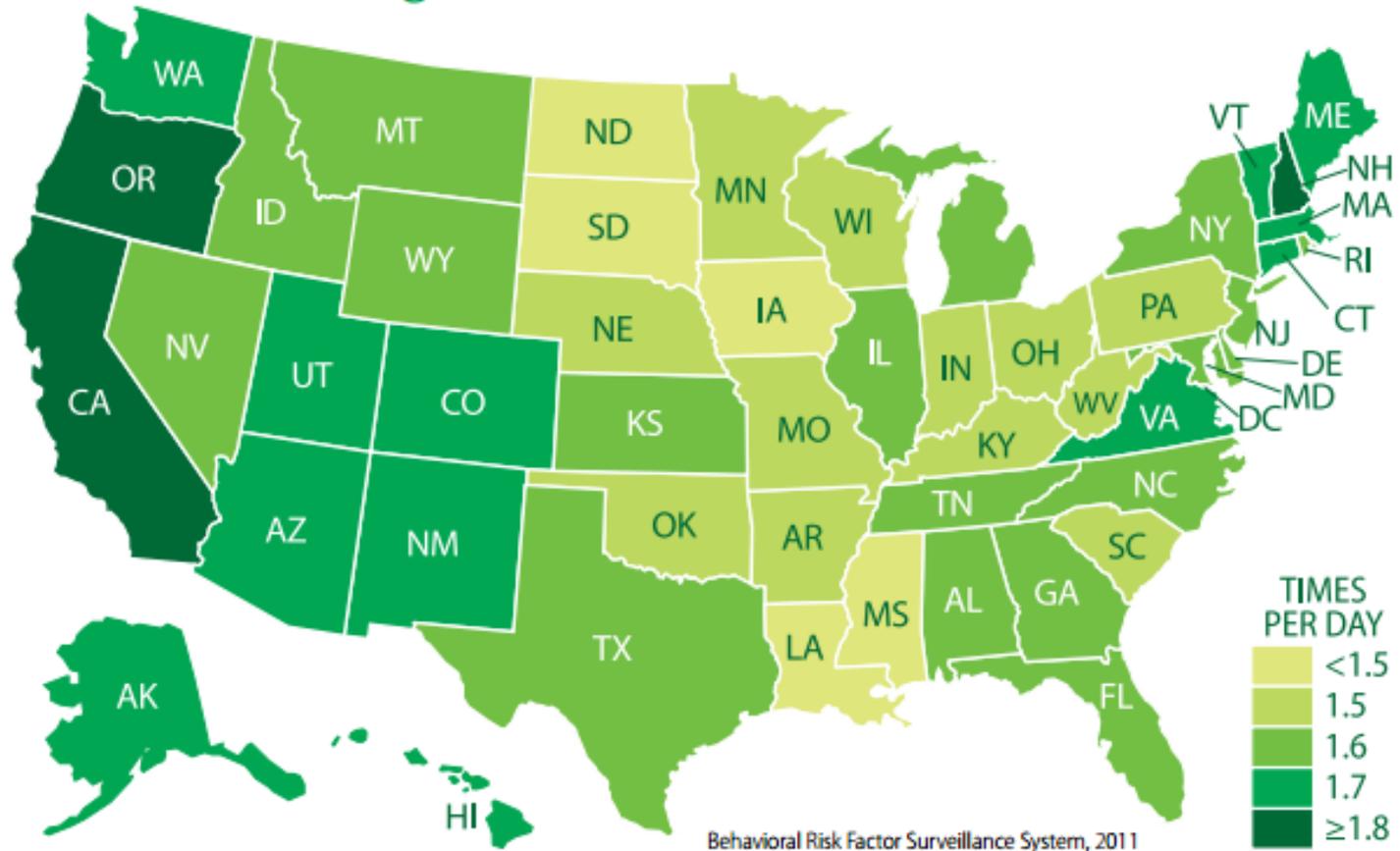
F & V Health Benefits

- Major contributors of nutrients that are under consumed in the U.S. – vitamins A, C, and K, potassium, fiber, and magnesium
- Fruits and vegetables are associated with reduced risk of many chronic diseases – cancer, heart disease, diabetes, obesity
- They are relatively low in calories, can replace high calorie foods to help in weight management

Promoting Healthful Diets

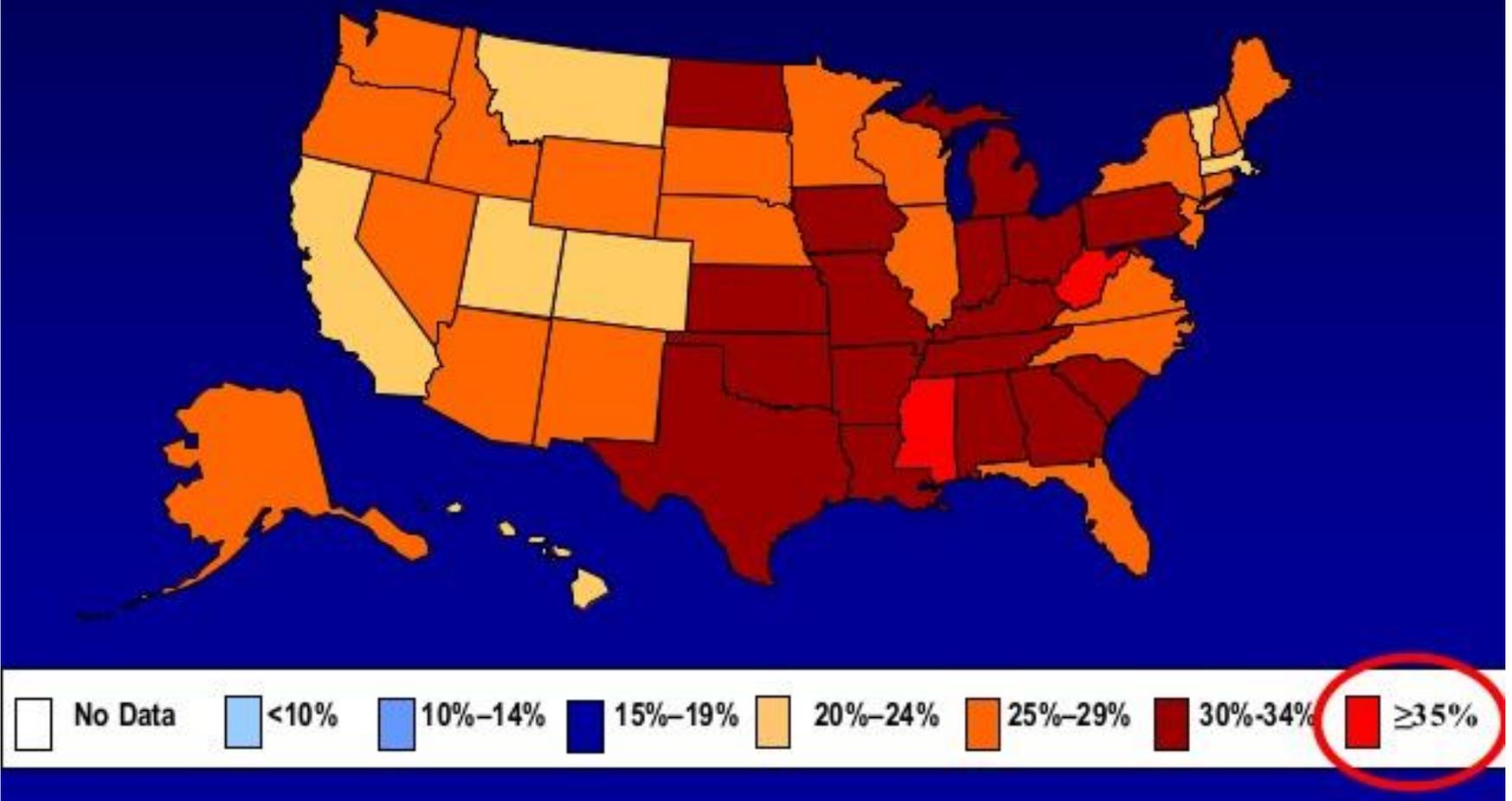


Median **Daily Vegetable Intake** Among Adults in the United States



Obesity Trends* Among U.S. Adults

CDC, 2013



(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



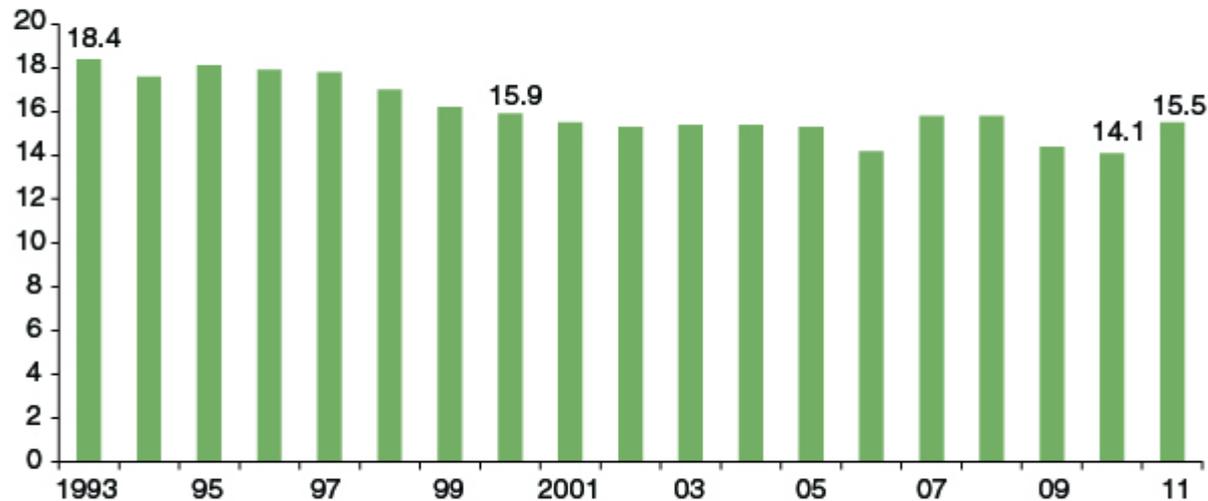
Our health is
in the farmers'
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Farm share has remained under 16 cents since 2000

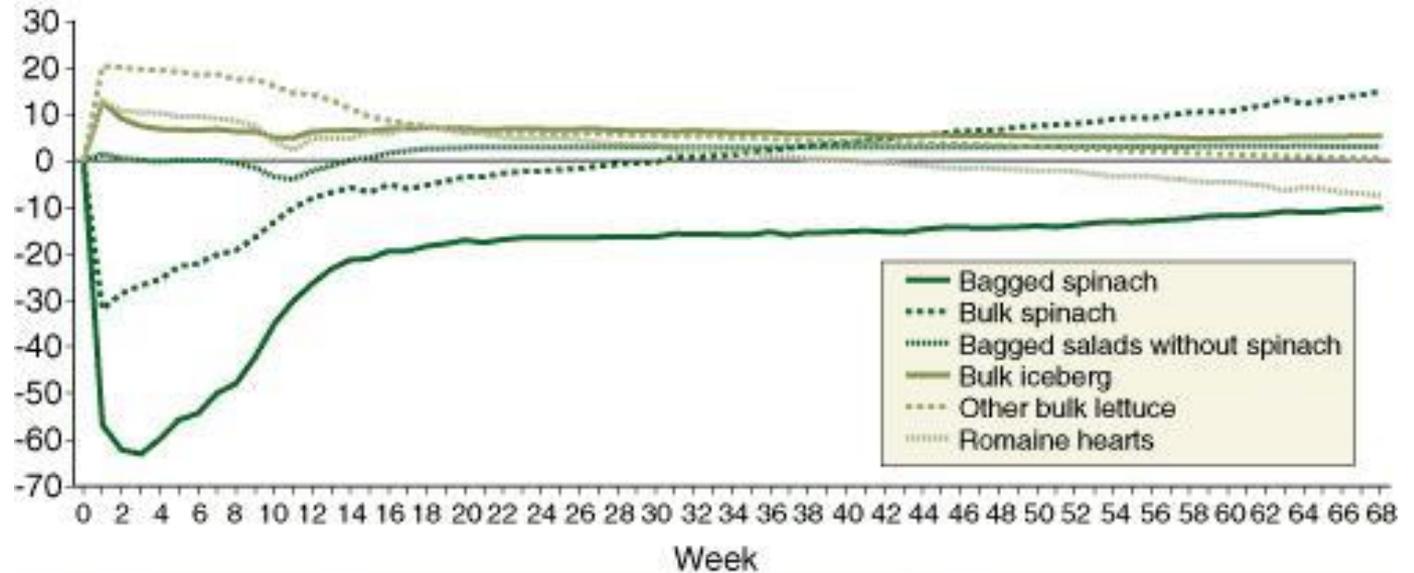
Cents per food dollar



Source: USDA, Economic Research Service.

Economic Cost: 2006 Spinach Outbreak

Consumer response to FDA outbreak announcement
(% change in consumer expenditures)



Note: Week zero is the week prior to and week 1 is the week of the announcement.
Source: USDA, Economic Research Service model results.

Economic Cost: 2006 Spinach Outbreak

In 2007, bagged spinach and salad retail sales values still lagged		
	Percent change in sales value	
	from a year ago for:	
	January 24, 2007- February 24, 2007	August 24, 2006- January 24, 2007
	<i>Percent</i>	
Bagged spinach	-27	-43
Bagged salad with spinach	-24	-42
Bagged salad without spinach	-5	-8

Source: Calvin, L. 2007. Outbreak Linked to Spinach Forces Reassessment of Food Safety

Produce Characteristics



- Grows close to soil
- Large surface area
- High moisture content
- Generally favorable pH
- Often consumed raw

Production Characteristics



- Open environment
- Proximity to livestock, wildlife, domestic animals, rodents
- Soil amendments
- Requires irrigation
- Pest management issues
- Often hand harvested

Colorado Characteristics



- High price of land
- Short growing season
- Dry climate
- Harsh environment – wind, hail, uv light
- Soil – ‘Whatever Mother Nature's gifts to Colorado -- and there are many -- rich soil is not among them. We must make our own.’
 - Clay
 - Salts & unfavorable pH

Outbreaks Originating On the Farm

Top 4 Reasons for Outbreaks to Occur at the Farm Level

1. Contaminated Irrigation or Wash Water
2. Improper Manure or Compost Management
3. Worker Hygiene and Handling
4. Animal Fecal Contamination (run-off, feral animals)





One of Your Challenges Today:

How can the cause of the outbreak be addressed effectively and precisely to prevent unintended damage to the produce industry and ultimately to the health of the public?



80 points!

- **INNOVATION**—Novel idea that addresses this food safety issue
- **POTENTIAL IMPACT**—Food safety intervention will improve the safety of this food product
- **SUITABILITY**—Cost-effective, sustainable intervention that industry will likely adopt
- **PRESENTATION**—Proposal presented to industry in a clear and concise manner



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