Consumer and Industry Response to Whole Grain Recommendations

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2005 Dietary guidelines

- The United States Department of Agriculture and Department of Health and Human Services make dietary recommendations every 5 years.

- Specific dietary recommendations for whole grains added in 2005.
Past choices and grain intake

Servings (ounces) available daily

Year

Source: ERS Loss-adjusted food availability data
2005 Dietary Guidelines

Percent change from current consumption needed to meet 2005 Guidelines

Whole-grain purchases rise following release of new Dietary Guidelines

Percent change in pounds purchased

Source: ERS calculations of ACNielsen Scanner Data.
Dietary guidelines- response

Percent change in sales from fourth quarter 2004 to first quarter 2005

Source: AC Nielsen
Past choices and guidelines

Average daily per capita calories, adjusted for spoilage and waste

Source: ERS Loss-adjusted food availability data
Why?

Strong Scientific Evidence

- High in Fiber:
  - reduced risk of stroke, certain cancers
  - Improved laxation
  - Helps with weight management
- Whole grains also protect against Coronary Heart Disease and Type II Diabetes
Why?

Fits well with what we believe

• Sound healthful whole grains ~ wholesome
• In all cultures, people eat grains—only recently have they been refined
• Waning popularity of low-carb diets
• Focus is on a food, not a nutrient
Low barriers to consumption (easy to do)

- Substitutions rather than sacrifices
- Drastic changes not required-familiar foods
  - Many products were reformulated to look the same
  - People may not have even been aware they were eating whole grains
  - Can still enjoy variety and convenience
Past substitutions

U.S. per capita food availability
Dairy (individual)

Source: ERS Food availability data
Past substitutions

U.S. per capita food availability
Meat (individual)

Boneless, trimmed (edible) weight, pounds per capita per year

Source: ERS Food availability data
Introduction of new whole grain foods up after dietary guidelines

Source: Productscan database
New products and past changes

U.S. per capita food consumption

Carrots

U.S. new product introductions

Baby Carrots

Farm weight, pounds per capita per year

Reported Introductions

Source: ERS Food availability data

Source: Productscan database
New products and past changes

U.S. per capita food consumption

Spinach

Farm weight, pounds per capita per year

Source: ERS Food availability data

Pre-washed spinach

Reported Introductions

Source: Productscan database

Reported Introductions
Familiar and convenient products
Product changes and dietary change

Percent change in nutrient content per 1 oz whole-grains, SR11 to SR16-1

- Vitamin A: -54%
- Vitamin E: -40%
- Vitamin C: -58%
- Niacin: -2%
- Folate: 28%

Source: CNPP calculations of NHANES data
Why so many new products?

Why were manufacturers willing to make changes?

- Better knowledge of effect of dietary trends
- Better positioned to anticipate and accommodate changes
- How much modification in suppliers, processors or recipes was required?
Manufacturers respond to trends

[Graph showing reported introductions of low fat, low carb, and whole grain products from 1987 to 2003. The graph indicates an increase in the introduction of low carb and whole grain products.]
Upward trend before guidelines

Change in purchase of whole grain spaghetti relative to all spaghetti, 2002-2005

Source: ERS calculations of AC Nielsen data
Growers and processors respond too.

**Incidence and share of production under contract, 1969-2003**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Farms with contracts</th>
<th>Value of production under contract</th>
</tr>
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<tbody>
<tr>
<td>1969</td>
<td></td>
<td>10%</td>
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<tr>
<td>1991</td>
<td></td>
<td>20%</td>
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<tr>
<td>2001</td>
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<td>30%</td>
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<tr>
<td>2003</td>
<td></td>
<td>40%</td>
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</tbody>
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Note: Data for 1969 are drawn from the Census of Agriculture. Data for 1991 are drawn from the predecessor to ARMS, the Farm Costs and Returns Survey. Data for 2001 and 2003 are drawn from USDA's annual Agricultural Resource Management Survey (ARMS).
Seems good, but….

How do the guidelines interact with other policies?

No Standard definition of ‘whole grain’
People may not be fully aware what is or is not a ‘whole grain’ food
Just a whole lot of confusion?

Reported introductions

"Whole grain" with no whole ingredient  Multigrain, stoneground or 100% wheat

Source: Productscan database
Are people eating more healthfully?

- Possible halo effects

- ½ of all intake? Substitute whole grains for refined grains or maybe just double current intake

- Whole-grain reformulations may require more sugar, salt or fat to be palatable
Average grain servings (ounces) per day

- **Full sample**: Whole grains - 5.7, All other grains - 0.8
- **Reported no grain intake**: Whole grains - 5.6, All other grains - 1.4
- **Reported some whole grain intake**: Whole grains - 5.8

Source: ERS calculations of 1999-2002 NHANES data
Change in fiber content of grain based foods, 1999-2004 NHANES

Source: ERS calculations of NHANES data
Whole grain junk food?

Percent change in sales from 2004 to 2005

- Whole grain cookies: 1364%
- Whole grain muffins: 287%
- Whole grain buns (fresh): 26%
- Whole grain bread & baked foods: 18%
- Whole grain crackers: 10%

Source: AC Nielsen
Seems good, but….

How do the guidelines interact with other federal policies?

No labeling requirements on food away from home

May not matter--no standard definition for foods at home

Many restaurants offer some whole-grain menu items

Not as much of a credence good as nutrients
Seems good, but…. 

How do whole grain recommendations affect producers?

If we meet 2005 Dietary Guidelines-
Consumers would reduce grain intake by 27%
US wheat harvest would drop by 5.6 million acres per year
(Buzby, Wells, and Vocke-2006)
Wheat makes up bulk of our grain intake

Source: ERS Food availability data
Wheat acreage trending downward

Planted acreage (Million acres)

Source: *Wheat Outlook, ERS*
Price impacts?

Price difference between whole wheat and nonwhole wheat bread, 1997-2006

Price per pound

- White Bread: $0.29/lb
- Whole wheat bread: $0.12/lb

Source: ERS calculations of CPI data
Price impacts?

Price difference between whole wheat and nonwhole wheat spaghetti, 2005

Source: ERS calculations of AC Nielsen data
Price impacts?

Purchase of whole grain spaghetti up after dietary guidelines

Source: ERS calculations of AC Nielsen data
Seems good, but....

How do the guidelines interact with other federal policies?

Food and Nutrition Assistance Programs?
  TFP/Food Stamps
  School Meals
Things that bode well

Whole grain trend was on the rise before 2005 Guidelines

People believe that whole grain foods are healthful

People are more willing to add something healthful to their diet than cut out something they like

Manufacturers are willing to provide these foods, as long as doing so is profitable
Things that might pose a problem

Fuzzy claims could lead to customer frustration
Fuzzy logic could just cause us to eat more
Fuzzy claims could reduce incentives to actually increase whole-grain content
Reductions in domestic supply might impact prices
Price changes might make it difficult for some populations to access whole grain foods