DINNER PALTE TO THE FARM GATE: HOW WILL NEW DIETARY DIRECTIONS AFFECT FARMING?

Vic Lechtenberg
Dean
School of Agriculture, Perdue University
Dinner Plate to the Farm Gate:

How Will New Dietary Directions affect Farming?

Vic Lechtenberg, Dean – School of Agriculture – February 20, 2004
Topics

• Recent trends in production agriculture
• Consumer influences on the system
• Potential targets and impacts of dietary shifts
  – Products
  – Processes
• Research and technology needs
Recent trends in U.S. farming

• Farms are growing
  – Larger Farms
    • Farms with sales > $500,000 increased 4X in 20 years
    • Farms with sales $100,000 - $500,000 up 35%
    • Farms with sales $50,000 - $100,000 down 40%

  – Fewer (total) Farms
    • Actual farms have decreased 20-25% over 20 years
Recent trends in U.S. farming

- Markets are changing
  - More specialized products
    - Differentiated products
  - More contract marketing
    - Poultry – nearly all
    - Hogs – 65-75% and growing
    - Cattle – much less
    - Crops – varies greatly – 10-80%
Impact of Affluence

• Emergence of two food systems
  – Commodity-based system (*what*)
    • Decisions up and down the chain based on cost
      – Low cost producers reign supreme
  – Differentiated system (*what & how*)
    • Decisions based on more than cost
      – Product plus a service element/something other than cost
      – Convenience
Production Chain & Targets for Diet Impacts

Inputs
- Seed/Genetics
- Fertility
- Pest Management

Farm
- Crop/Animal
- Enterprise Mix
- Identity
- Assurance
- Quality
- Assurance
- Market Systems

Processing

Products
- More Protein
- More Iron
- Less Carbs
- Less Fat
- Modified Fats – unsaturated
- – Omega-3
- More Calcium
- Vitamin E

Diet Trends
Impacts of Dietary Changes on Products

• System is responsive to market signals
  – Current high protein/low carbohydrate trend
    • Increased demand for animal products
    • Decreased demand for grain and sugar products
    • Increased demand for feed grains
  – Higher calcium – more milk
Impacts of Dietary Changes on Products

• Differs depending on crop or animal
  – High protein favors more animal and legumes
  – Low carbohydrate negative to food grains

• Wheat more negatively impacted than corn
  – Specific fatty acids – could favor soybeans
Impacts of Dietary Changes on Processes

• Impacts will favor:
  – Differentiated products
  – Contract marketing
  – Foolproof identity preservation technology
  – Quality assurance systems
  – Labeling standards
Research and Technology Needs

• Clear identification of dietary targets
• Targeted breeding and genetics research
  – High iron
  – High calcium
  – Omega-3 fatty acids
  – Low available carbohydrates
  – Vitamin E

• Quality and safety measuring and detection
  – Quick test methods
  – Low cost labeling and tagging and tracking systems
  – Reasonable purity standards
Summary

• Food supply system will respond to consumer market signals

• Dietary shifts will likely lead to:
  – More differentiated products
  – Many new food products (raw materials)
  – More integration
  – Better, more sophisticated identity preservation
  – Effective farm level tracking systems
  – Labeling technologies
Thanks!