

PURDUE
UNIVERSITY

Dinner Plate to the Farm Gate:

How Will New Dietary Directions affect Farming?





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%





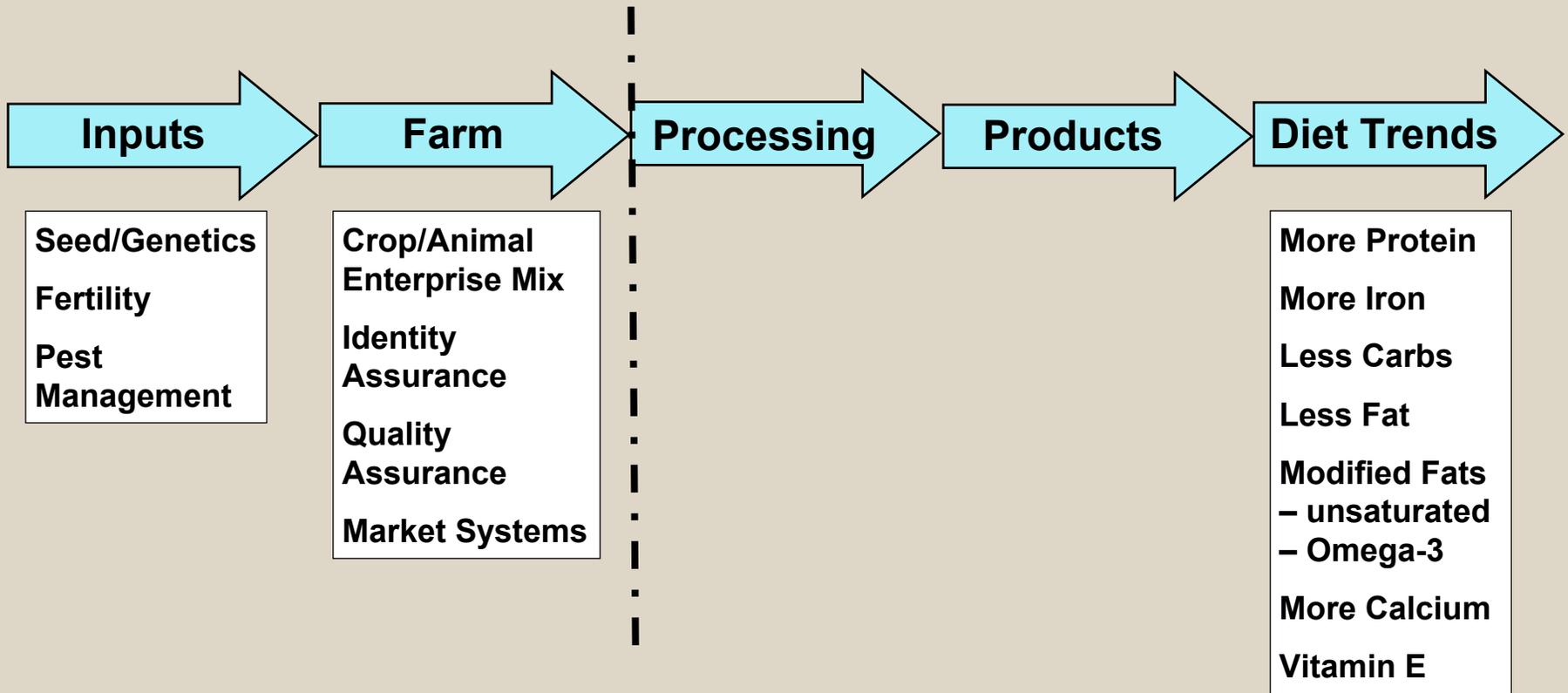
Impact of Affluence

- 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





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!

