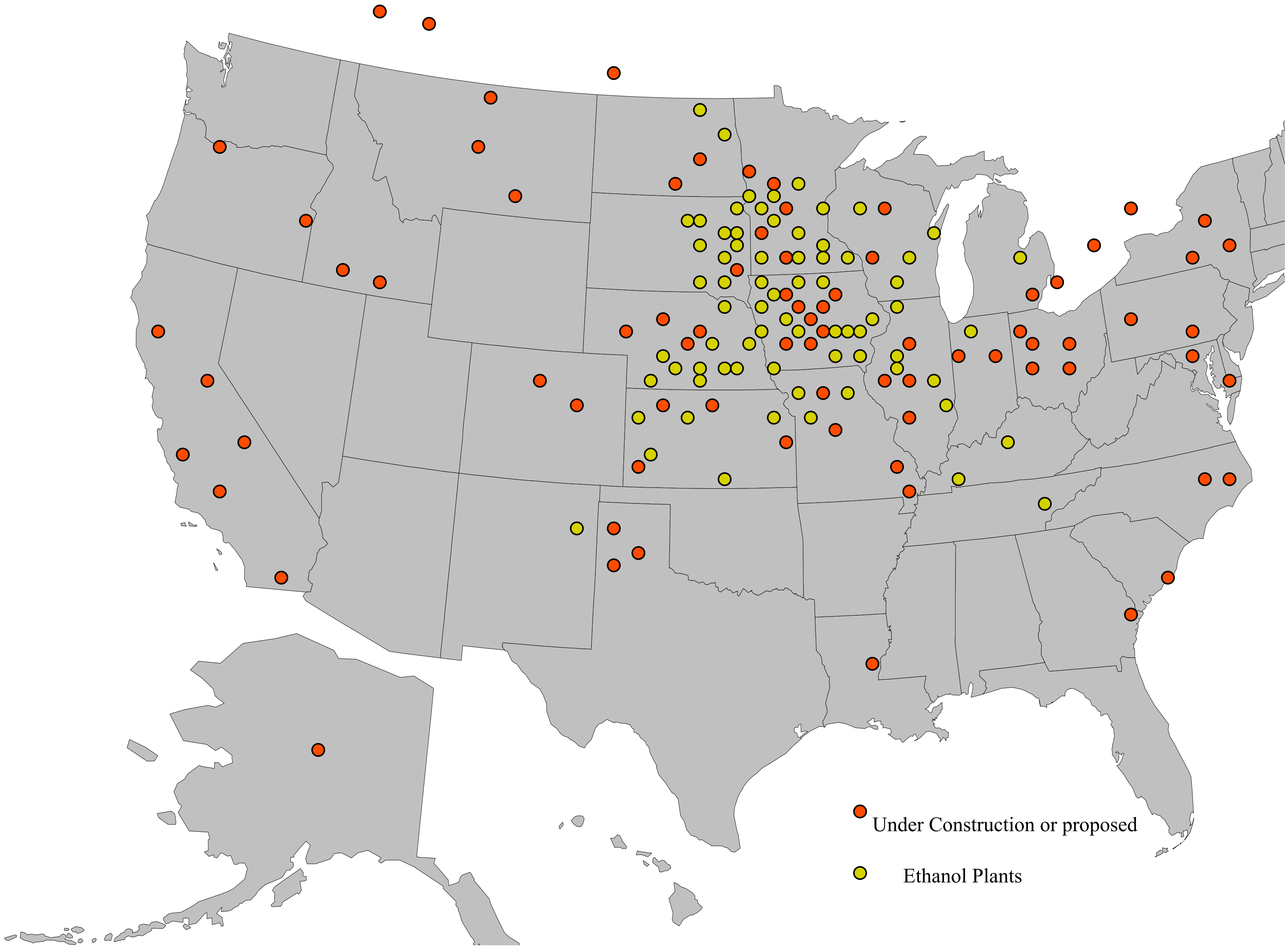
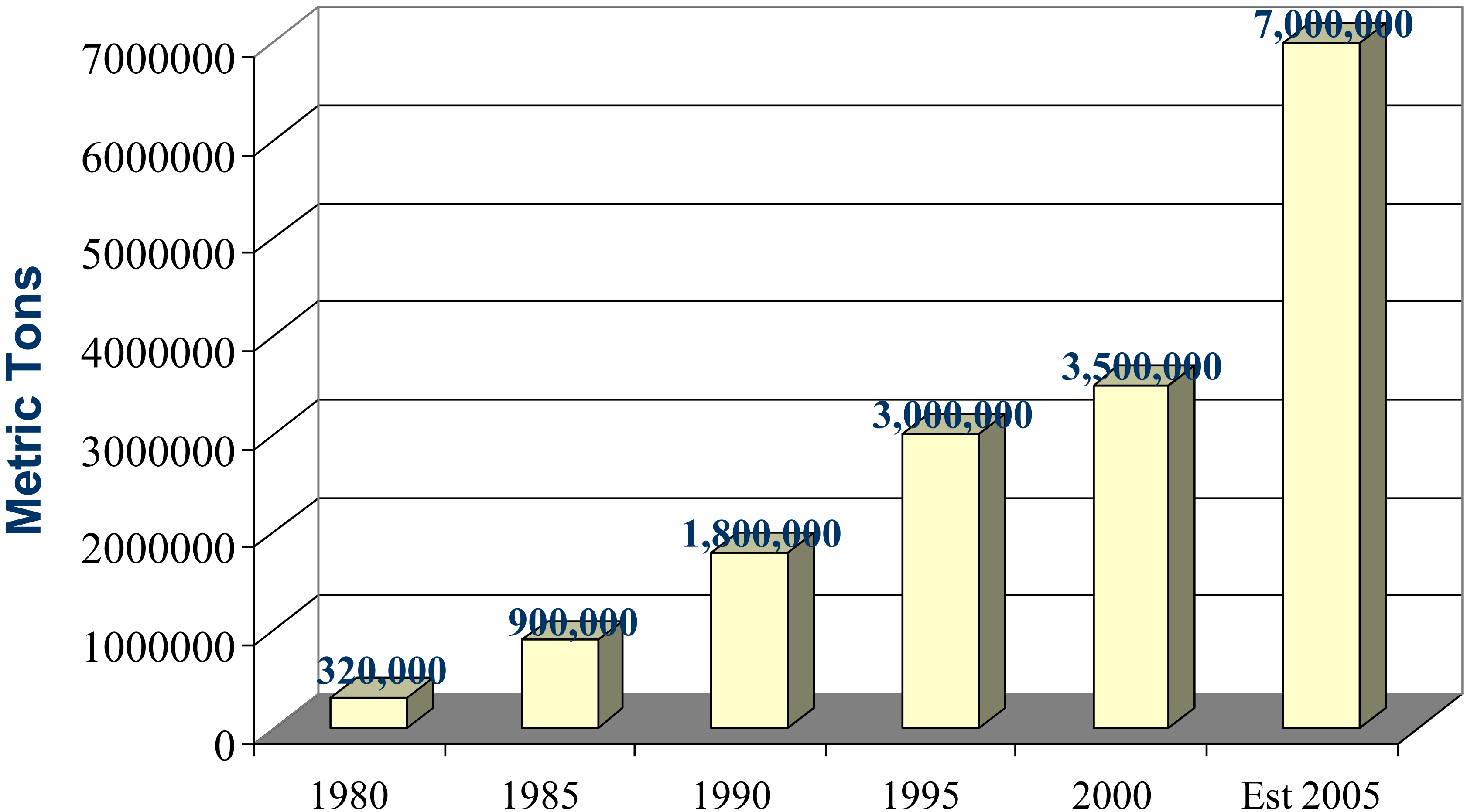
Supply and Demand of U.S. DDGS

Dr. Jerry Shurson
Department of Animal Science
University of Minnesota

Ethanol Plants in North America - June 16, 2004



U.S. DDGS Production

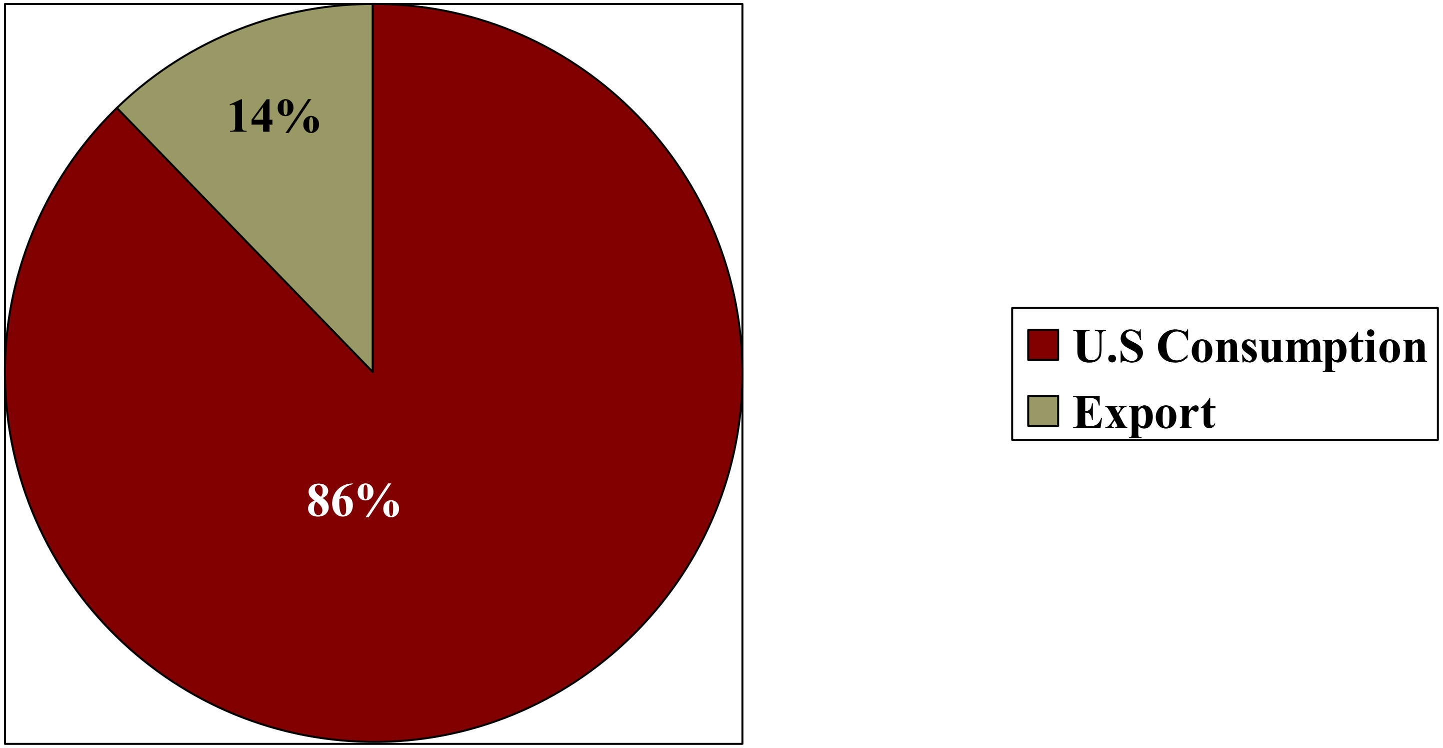


Source: Steve Markham – Commodity Specialists Company

U.S. Ethanol Industry

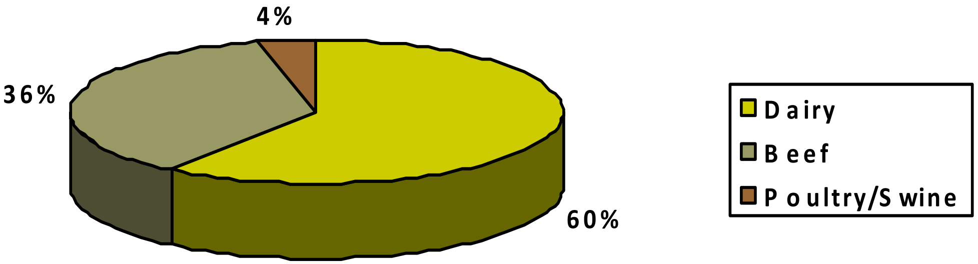
- 2004
  - 80 fuel ethanol plants
    - 3.640 billion gallons of ethanol
    - 6.928 million metric tonnes DDGS
- 2005
  - 17 new ethanol plants will expand or start production
    - 4.394 billion gallons of ethanol
    - 8.363 million metric tonnes DDGS (17% increase)
- 2006
  - DDGS production is expected to increase and additional 17-20%

DDGS Consumed by Domestic and Export Markets

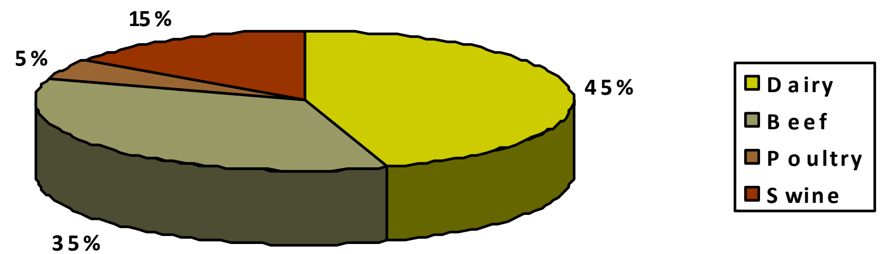


U.S. DDGS Consumption

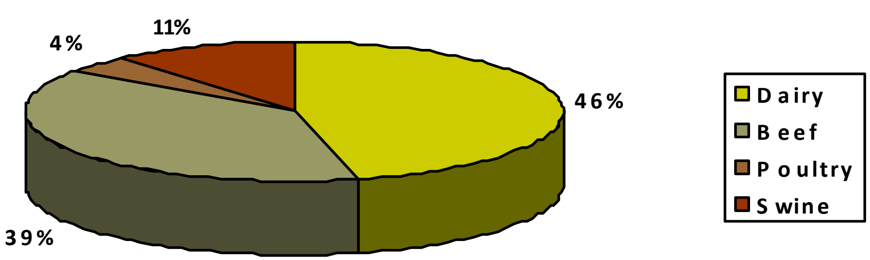
Estimate 2001



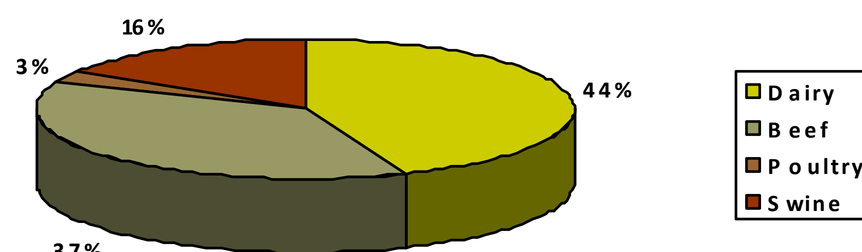
Estimate 2002



Estimate 2003

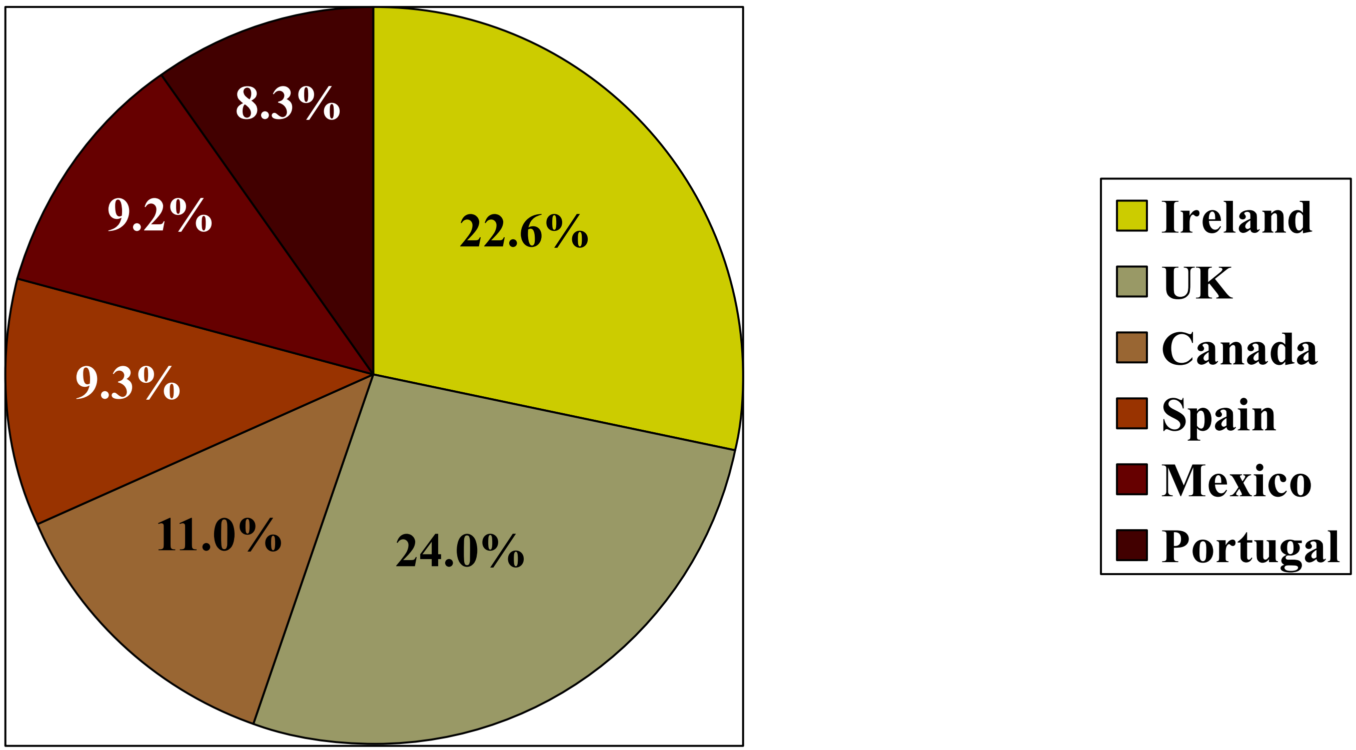


Estimate 2004

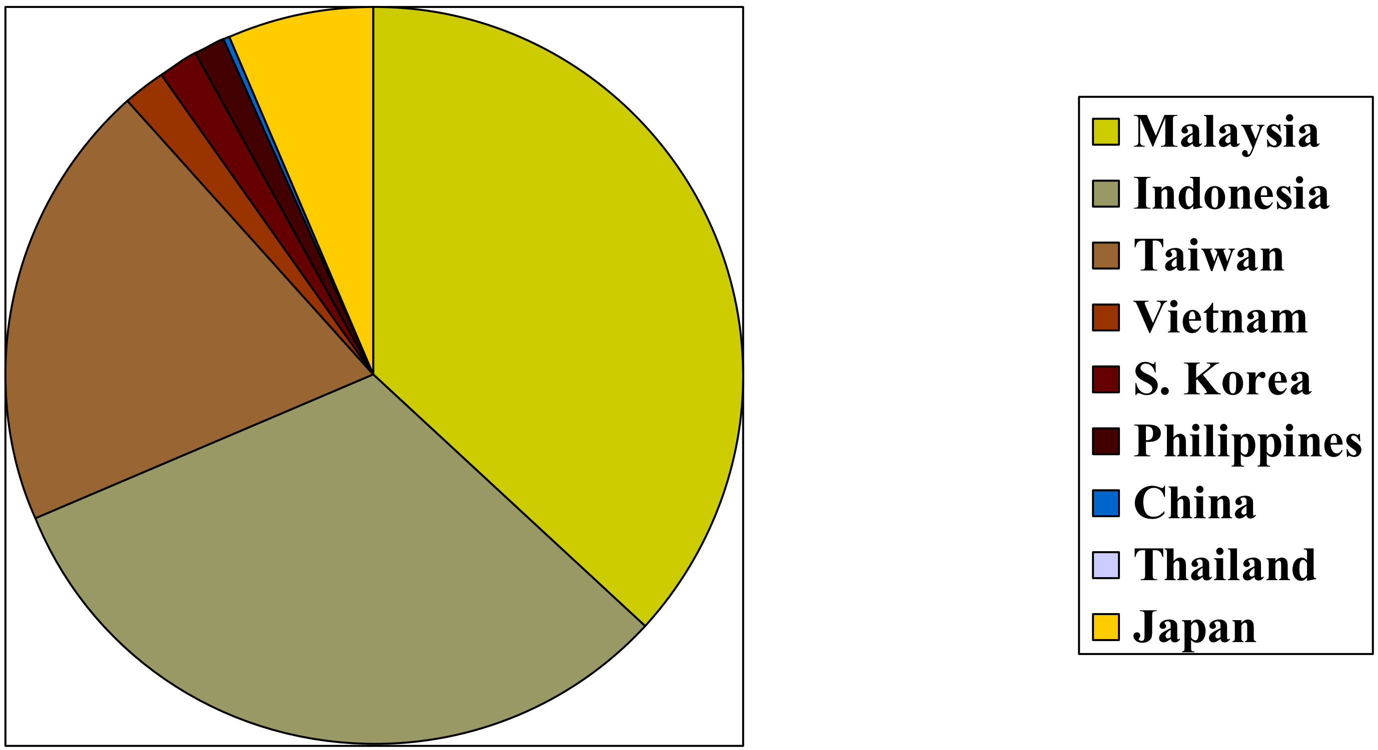


CSC 2005

Major U.S. DDGS Importing Countries (84% of Total Exports)



Asian Countries Importing U.S. DDGS (4.5% of Total Exports)



DDGS Exports

- Most countries are requesting containers
  - Difficulty in handling 5000 MT in large vessels

2005 DDGS Demand

- Factors affecting demand:
  - Soybean meal price
  - Ocean freight costs
- If export demand remains stable:
  - U.S. livestock and poultry industry would need to consume an additional 1.285 million MT
    - Require an additional 685,300 dairy cows
      - Difficult to achieve

2005 DDGS Demand

- Beef feedlots must overcome freight costs from ethanol plants located outside of the SW U.S.
- U.S. swine industry offers the greatest potential for increased consumption
  - many of the new ethanol plants are located in areas of concentrated pig production
- Increased use in U.S. poultry and aquaculture industries, but quantity consumed/animal unit is significantly less than other species

DDGS Demand

- DDGS exports must increase
  - Saturation of U.S. DDGS markets
  - Rapidly increasing supply