

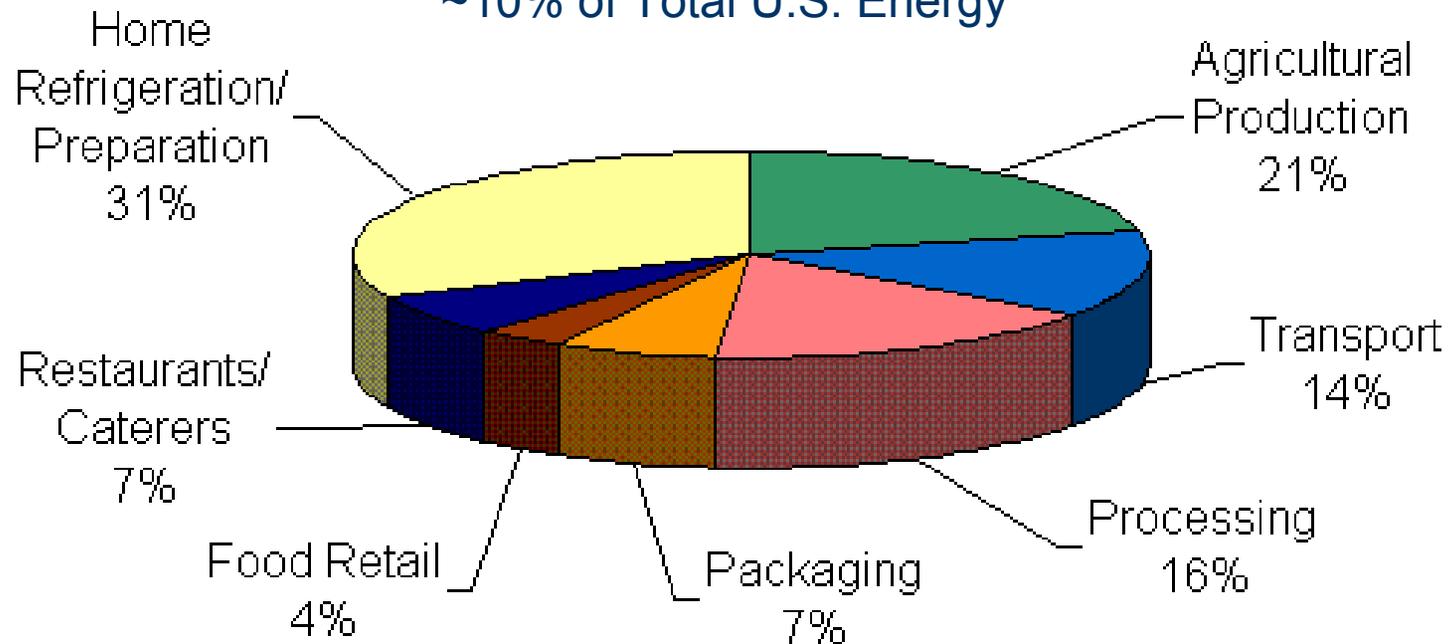
# **Food and Energy**

## **Some Interesting Facts**

## United States Food System Energy Use

Total = 10.25 Quadrillion Btu

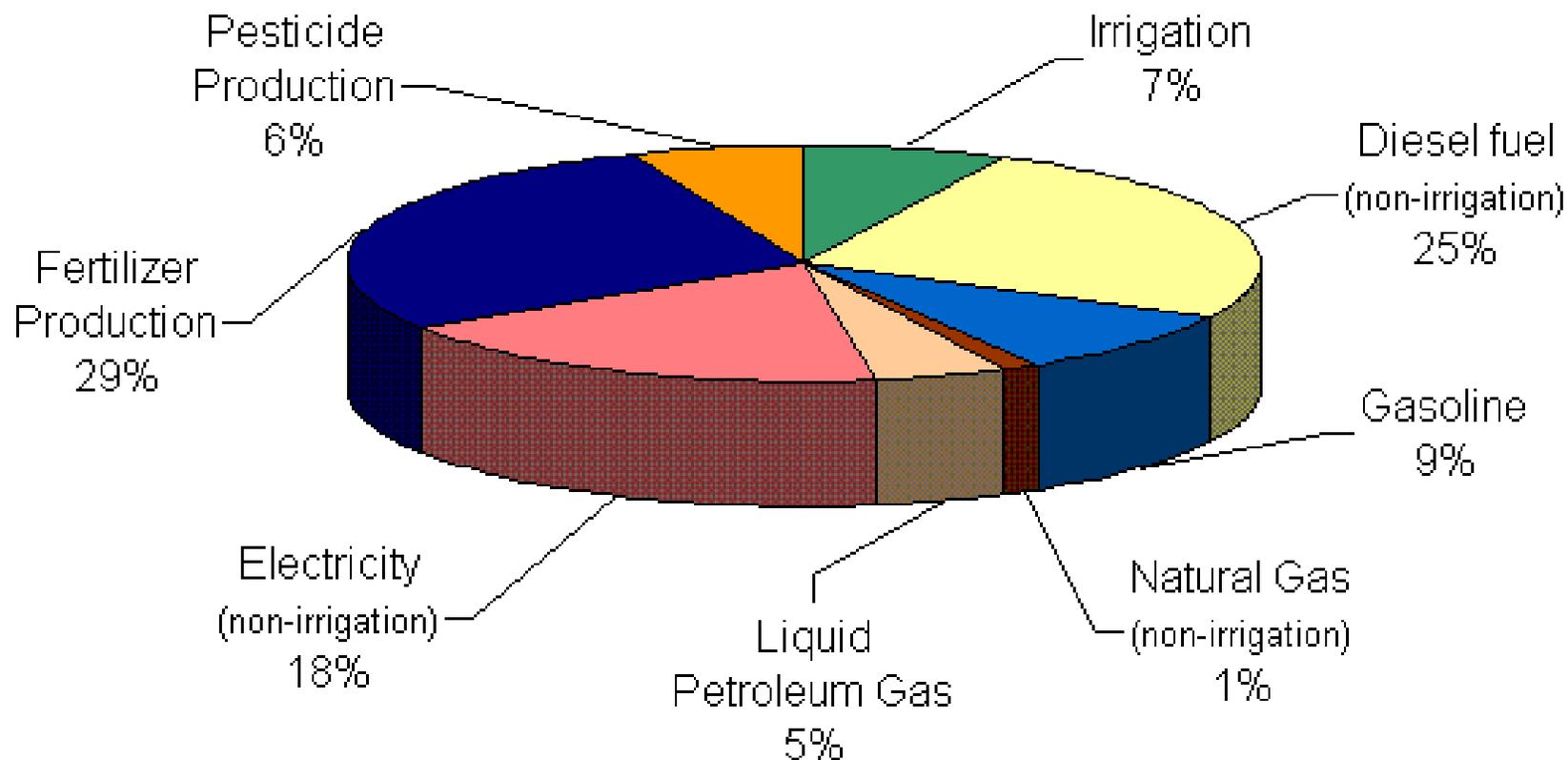
~10% of Total U.S. Energy



Source: Heller and Keoleian

## U.S. Farm Energy Use, 2002

~75% Petroleum (assuming electric Irrigation)



# True costs of industrial food production system

- 1,000 tons of water are consumed to produce one ton of grain
- 10 energy units are spent for every energy unit of food on our dinner table
- 1,000 energy units are used for every energy unit of processed food
- 17% of the total energy use in the United States goes into food production & distribution, accounting for more than 20% of all transport within the country; this excludes energy used in import & export
- 20% of all greenhouse gases in the world come from current agriculture
- US\$318 billion of taxpayer's money was spent to subsidize agriculture in OECD countries in 2002
- 90% of the agricultural subsidies benefit corporations and big farmers growing food for export; while 500 family farms close down every week in the United States

# Some benefits of sustainable food production systems

- 2- to 10-fold energy saving on switching to low-input/organic agriculture
- 50 to 92% reduction in carbon dioxide emission from the soil on switching from conventional tillage to no-till agriculture
- 5 tons of carbon dioxide emission disappear with every ton of nitrogen fertilizer phased out
- Organic farming performs as well or slightly better than conventional industrial farming in the US
- Small farms are 2 to 10 times more productive than larger farms
- Organic foods contain more vitamins, minerals and other micronutrients than conventionally produced foods
- 1000 or more community-supported farms across US and Canada bring \$36m income per year directly to the farms
- Buying food in local farmers' market generates twice as much for the local economy than buying food in supermarkets chains
- Money spent with a local supplier is worth four times as much as money spent with non-local supplier

# Pineapples to Des Moines



**By sea from Costa Rica  
0.3 gallons**



**By air from Hawaii  
2.8 gallons**

# Apples to Des Moines



**From within Iowa  
1.7 teaspoons**



**From Washington state  
1 cup**

# Grapes to Des Moines



**From California**  
**1.9 cups by truck**

**From Chile**  
**2.2 cups by sea & truck**

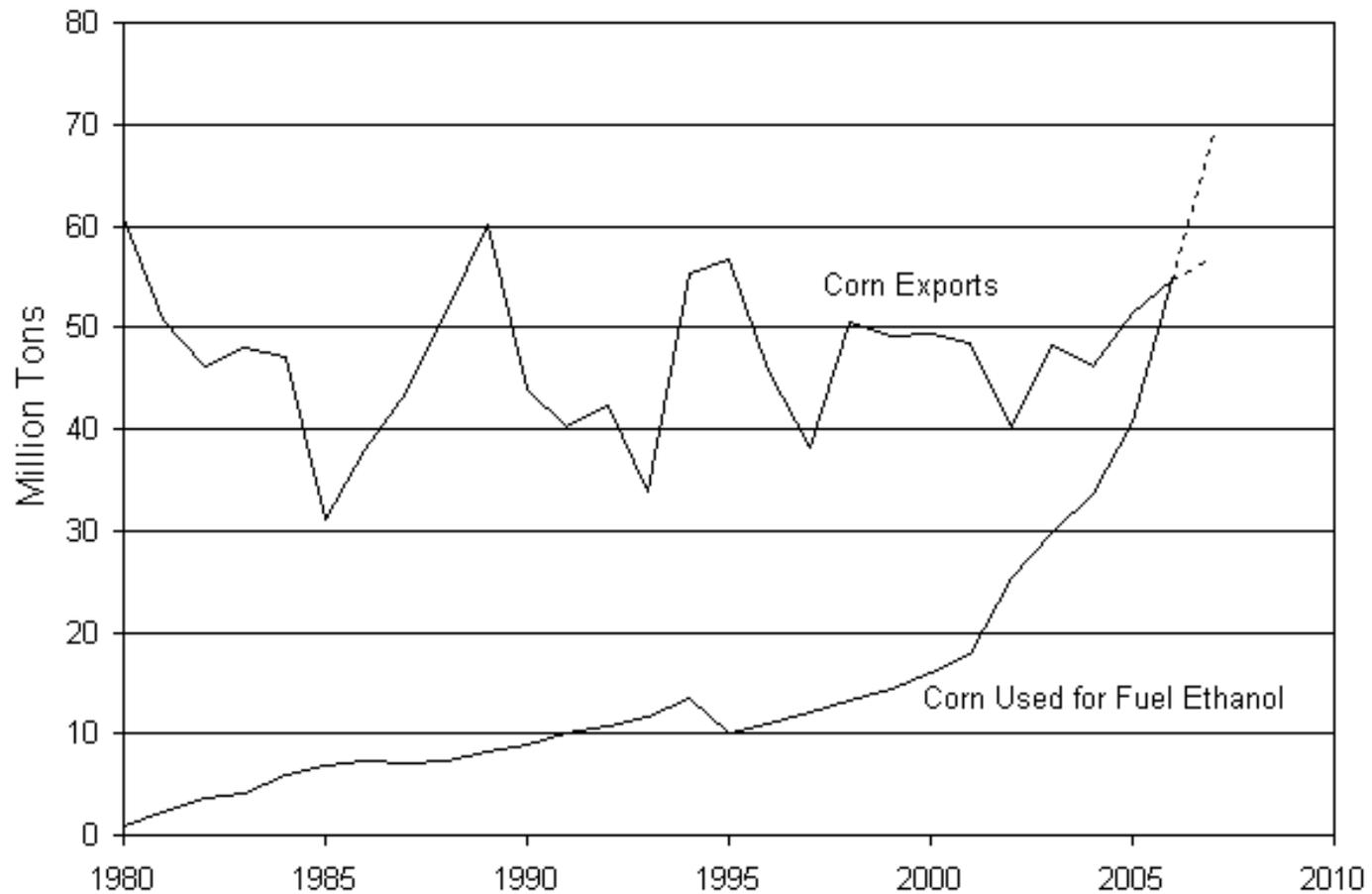
# Potatoes to Des Moines



**From North Dakota**  
**0.6 cups**

**From Idaho**  
**1.3 cups**

## U.S. Corn Use for Fuel Ethanol and for Export, 1980-2006, with Projection to 2007



Source: USDA