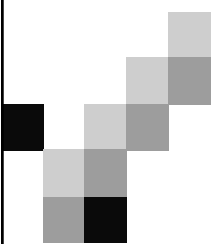




US and World Meat Production and Consumption

- ### U.S. Beef Production
- 1 million operations owned cattle
 - Montana - 13.3 thousand operations
 - Cattle Inventory as of January 2002 was 33 million head beef cattle
 - Montana 1.5 million head of beef cattle
 - Rank 6
 - 11.5 million cattle on feed
 - Montana - 60,000
 - Rank 22
 - Feedlots with >1,000 head feed 76% of the cattle
 - 26 billion pounds of beef produced in 2001

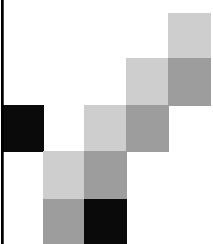


Which State has the largest number of cattle and feeds the most?

Texas

Top 5 – Beef Production

Cow/Calf States		Cattle Feeding States	
State	Head (Million)	State	Head (1000)
1. Texas	5.5	1. Texas	2730
2. Missouri	2.0	2. Nebraska	2240
3. Nebraska	1.9	3. Kansas	2160
4. Oklahoma	1.8	4. Colorado	1160
5. South Dakota	1.7	5. Iowa	1020
Montana	1.6	Montana	60



What is the average carcass weight for steers harvested in the US?

820

Top 5 Beef Processing States

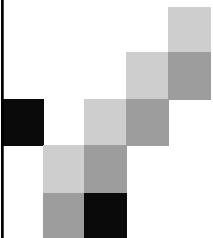
State	Million Pounds
1. Kansas	9,631
2. Nebraska	9,231
3. Texas	7,744
4. Colorado	3,325
5. Iowa	1,037
Montana	27

Swine Production

- Swine Inventory 59 million head
 - Montana - 150,000
 - Rank 28
- 18 billion pounds of pork produced
 - Montana 28 million
- average carcass weight 187 lbs.
- 50.5 % of pigs are raised in operations with >5,000 animals

US Pork Production

■ Numbers (million head)		■ Harvest (million #)	
1. Iowa	15.4	1. Iowa	5,378
2. North Carolina	9.4	2. North Carolina	1,829
3. Minnesota	5.8	3. Illinois	1,582
4. Illinois	4.2	4. Minnesota	1,559
5. Indiana	3.4	5. Nebraska	1,182
		Montana	2.8



What is the deciding factor, that makes the pork producing states where they are?

Grain Production

U.S. Sheep Production

- Inventory 7.2 million
 - Montana 415,000 head of sheep
 - Rank 7
- Harvested 3.9 million head
- 260 million pounds of lamb
 - Montana 32 million pounds of meat
- \$635 million cash receipts
 - Montana \$21 million cash receipts

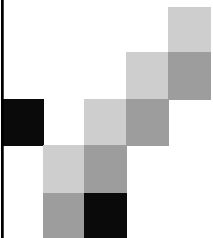
Top 10 Sheep States

Inventory (thousand head)

1 Texas	1350
2 California	810
3 Wyoming	660
4 Colorado	440
5 South Dakota	420
Montana 7 th	380

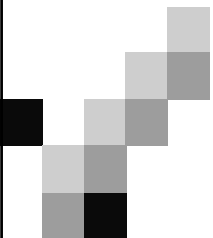
Montana Meat Industry

- Montana meat processors are mostly small, killing less than 100 cattle/week
- Several levels of inspection
 - Federal (~100)
 - State (~200)
 - Custom (?)



What is the most popular meat in the world?

Pork



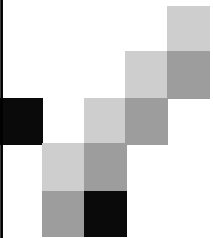
Which meat is consumed by the most people in the world?

Sheep and Goat



Which country in the world consumes the most Beef? Pork? Lamb?

Argentina
European Union
New Zealand



Meat Inspection

Meat Inspection

- Meat Inspection Act of 1906 - Covered cattle, hogs, sheep and goats, antemortem inspection, postmortem inspection, product inspection and sanitation of surroundings.
- Horse Meat Inspection Act of 1919 extended Meat Inspection Act to include horse slaughter and processing

1926 Voluntary Poultry Inspection Program

Meat Inspection

1957 - Poultry Products Inspection Act created rules similar to red meat inspection

1968 - Wholesome Poultry Products Act provided inspection of poultry and poultry products by the USDA

Human Slaughter Act 1958

- Required plants selling product to to federal agencies to slaughter animals in a humane manner
- Approved methods were chemical, mechanical and electrical
- Kosher slaughter was exempt

Meat Inspection

1967 - Wholesome Meat Act

State and Federal cooperative program under which all intrastate slaughter and processing were placed under state inspection

1967- Consolidation of Wholesome Meat Act with Federal Meat Inspection Act and amendments

This made antemortem inspection mandatory for all meat products sold

Meat Inspection

- Processed Products Inspection Improvement Act of 1986
 - allowed for discretionary inspection in processing plants with total quality control
 - NO continuous inspection
- Pathogen Reduction / Hazard Analysis Critical Control Points 1996
 - set pathogen reduction performance standards for and required plants to start testing for microorganisms

Meat Inspection

- All plants regardless of size were required to have in place written Sanitation Standard Operating Procedures (SSOP's) and slaughter plants were required to begin generic *E. coli* testing.
- Application and Enforcement
 - Food Safety Inspection Service (FSIS)
 - examination of animals and carcasses at slaughter
 - inspection at all stages of preparation of meat and meat products, equipment, buildings and grounds
 - Ingredients used in preparation of meat products
 - Identification Standards and Labeling
 - inspection of foreign meat and meat products

What are the three types of USDA Inspectors?

1. food inspectors
2. laboratory inspectors
3. veterinary medical officers

Meat Inspection

- Requirements for granting inspection
 - detailed information about products ie volume of production, type of product, hours of operation
 - detailed plant plans including information about plumbing arrangement essential equipment
 - location of plant
 - water supply
 - approved sewage system
 - adequate lighting
 - adequate ventilation
 - refrigeration
 - adequate pressurized hot water
 - approved SSOP and HACCP