Meat Preservation

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Why Preserve Meat???

• Delays product spoilage
• Extends life of the product
• Improves product quality

Types of Preservation Techniques

• Freezing
• Cooking
• Dehydration
• Chemical
• Fermentation
• Irradiation

Freezing

• Optimum temperature (0°F or lower)
• Works by completely stopping enzyme activity & inhibiting spoilage microorganisms
  ✓ Bacteria
  ✓ Yeasts
  ✓ Molds

How long will frozen meat last?

• Beef - 12 months
• Pork - 6 months
• Lamb - 6-9 months
• Poultry - 3-6 months

Freezing

• REMEMBER: Thaw meat at refrigeration temps or in the microwave
• DO NOT THAW AT ROOM TEMPS
### Cooking
- Works by heating products to high temperatures to kill microorganisms
- 2 types of cooking
  - Pasteurization
  - Sterilization
- Pasteurized Cooking
  - Products are cooked to 150-170°F
  - Kills most (but not all) microorganisms
  - Product must be REFRIGERATED
  - Example: “Hotdogs”

- Sterilized Cooking
  - Products cooked under pressure to 250°F
  - All microorganisms killed
  - Products are shelf stable
  - Example: Canned Hams

### Dehydration
- Oldest forms of preserving meat
- Works by removing water from the product
  - Water is required by all microorganisms to grow
  - NO WATER = NO GROWTH

### Chemical
- Chemicals inhibit microorganism growth
- Examples
  - Salt
  - Sodium Nitrite
  - Sodium Lactate
Chemical

- Other benefits:
  - Add flavor to the product
  - Improve product shelf life
  - Develop a pink cured-meat color

- All Chemicals added to meat are FDA approved

Fermentation

- Works by changing sugar into acid
- Acid prevents microorganisms from growing
- Tangy flavor and special texture developed
- Example: “Pepperoni”

Irradiation

- A new process to make food SAFER!!!!
- Works by exposing meat to radiant energy
- Destroys most (but not all) microorganisms

“Radura” sign on labels

Irradiation

- Reduces spoilage
- Irradiated meat is still nutritious
- Irradiated meat needs to be COOKED
- IRRADIATED MEAT IS SAFE TO EAT!!!!

Questions

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  OR

- Call your county extension office